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April 13, 2012

Penny Reddy
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EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

Subject: **2011 Annual Progress Report – Former Fairchild Buildings 1-4**
Middlefield-Ellis-Whisman ("MEW") Area
Mountain View, California

Dear Ms. Reddy:

Attached please find the 2011 Annual Progress Report for Former Fairchild Buildings 1-4, prepared by Geosyntec Consultants on behalf of Schlumberger Technology Corporation.

This annual progress report is being submitted in accordance with U.S. Environmental Protection Agency (EPA) Section XV of the Administrative Order for Remedial Design and Remedial Action (106 Order).

If you have any questions regarding this 2011 Annual Progress Report, please feel free to call me.

Very truly yours,

Virgilio Cocianni
Remediation Manager

Attachment

CC: MEW Distribution List

Prepared for

Schlumberger Technology Corporation
225 Schlumberger Drive
Sugar Land, Texas 77478

2011 ANNUAL PROGRESS REPORT FOR FORMER FAIRCHILD BUILDINGS 1-4

MOUNTAIN VIEW, CALIFORNIA

Prepared by

Geosyntec consultants

engineers | scientists | innovators

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Project Number: WR1133

13 April 2012

2011 Annual Progress Report for Former Fairchild Buildings 1-4

515/545 Whisman Road and 313 Fairchild Drive
Middlefield-Ellis-Whisman Area
Mountain View, California

Prepared by

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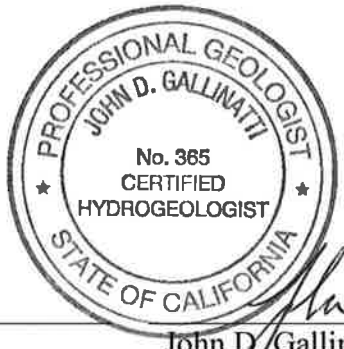

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Project Number: WR1133
13 April 2012

Geosyntec consultants

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ACRONYMS AND ABBREVIATIONS

106 Order	Section 106 Administrative Order for Remedial Design and Remedial Action
bgs	below ground surface
Buildings 1 and 2	Former Fairchild facilities at 515/545 Whisman Road
Buildings 3 and 4	Former Fairchild facilities at 313 Fairchild Drive
cis-1,2-DCE	cis-1,2-dichloroethene
EPA	United States Environmental Protection Agency
ft	feet
GSLIB	Geostatistical Software Library
GAC	granular activated carbon
Geosyntec	Geosyntec Consultants
Fairchild	Fairchild Semiconductor Corporation
K	hydraulic conductivity
µg/L	micrograms per liter
mg/kg	milligram per kilogram
MEW	Middlefield-Ellis-Whisman Area, acronym for three EPA Superfund sites bounded on the south by East Middlefield Road, on the north by the Bayshore Freeway (Highway 101), on the west by Whisman Road, and on the east by Ellis Street.
MCLs	maximum contaminant levels
NASA	National Aeronautics and Space Administration
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
PCE	tetrachloroethene
PRPs	potentially responsible parties
PLC	programmable logic controller
QA/QC	quality assurance and quality control
RAO	remedial action objective

RGRP	Regional Groundwater Remediation Program
ROD	Record of Decision
RRWs	regional recovery wells
SCRWs	source control recovery wells
Site	facilities located at 515 and 545 Whisman Road (Buildings 1 and 2) and 313 Fairchild Drive (Buildings 3 and 4) in Mountain View, California
System 1	Ground water treatment system located at 515 Whisman Road
System 3	Ground water treatment system located at 313 Fairchild Drive
STC	Schlumberger Technology Corporation
TCE	trichloroethene; trichloroethylene
VOCs	volatile organic compounds
Water Board	California Regional Water Quality Control Board - San Francisco Bay Region
Weiss	Weiss Associates

1. INTRODUCTION

This 2011 Annual Progress Report was prepared by Geosyntec Consultants (Geosyntec) with assistance from Weiss Associates (Weiss) on behalf of Schlumberger Technology Corporation (STC) for the former Fairchild Semiconductor Corporation (Fairchild) Buildings 1-4 located at 515 and 545 Whisman Road and 313 and 323 Fairchild Drive in Mountain View, California (Site) (Figures 1 and 2).

This report summarizes Site activities from 1 January through 31 December, 2011, and monitoring data from the past five years. The report is submitted in accordance with Section XV of the 1990 Administrative Order for Remedial Design and Remedial Action (106 Order) issued by the United States Environmental Protection Agency (EPA) and the EPA's correspondence prescribing Annual Report contents (EPA, 1990a, 2005, and 2011).

1.1 Site Background

The Site lies within the Middlefield-Ellis-Whisman (MEW) study area, an approximate quarter square-mile area bounded by Middlefield Road on the south, Ellis Street on the east, Whisman Road on the west, and Highway 101 on the north, in Mountain View, California (Figure 2).

From the early 1960s to 1989, Former Fairchild Buildings 1-4 functioned as facilities for chemical mixing and silicon wafer manufacturing at Fairchild Semiconductor Corporation's Linear Division. The buildings were demolished in the 1990s, and new commercial/research offices were constructed and completed by September 2000 (Jay Paul Company, 2010). The previous and current addresses of Former Fairchild Buildings 1-4 are provided below:

Previous Address	Current Address
Buildings 1 and 2 515/545 North Whisman Road	515/545 North Whisman Road
Buildings 3 and 4 313 Fairchild Drive	313/323 Fairchild Drive

The primary constituents of concern at the Site are trichloroethene (TCE) and its breakdown products, cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC).

Remedial actions for the MEW study area, including the Site, are specified in a 1989 Record of Decision (ROD) issued by the EPA and two subsequent Explanations of Significant Difference (EPA, 1989, 1990b, 1996). Remedial actions within the MEW Area include facility-specific activities by the individual potentially responsible parties (PRPs), and a Regional Groundwater Remediation Program (RGRP) that addresses commingled volatile organic compounds (VOCs) that have migrated beyond the facility-specific areas and cannot be attributed to a single source.

As specified in the ROD, groundwater cleanup included initial actions (completed) and the current long-term remedial phase (EPA, 1989).[1]

In order to prevent migration of VOCs offsite, a groundwater extraction and treatment system was installed at the Site between 1982 and 1986, and a soil-bentonite slurry wall was constructed at the Site from the ground surface to the A/B aquitard in 1986. A description of the remedy is provided in Section 1.3.

1.2 Local Hydrogeology

The Site is located within the northern portion of the Santa Clara Valley Groundwater Sub-basin, the northernmost of three interconnected groundwater basins within Santa Clara County (SCVWD, 2001). The groundwater flow direction is northerly, toward the San Francisco Bay, and generally sub-parallel to the ground slope. The hydrostratigraphy in this part of the sub-basin is divided into upper and lower water-bearing zones, separated by an extensive regional aquitard (SCVWD, 1989).

The upper water-bearing zone is subdivided into two water-bearing zones: the A Zone (roughly between 20 and 45 feet below ground surface [bgs]) and the B Zone (roughly between 50 and 160 feet bgs), which are separated by the A/B Aquitard. The B Zone is subdivided into three zones (B1, B2, and B3 Zones).

The lower water-bearing zone occurs below a depth of about 200 feet bgs. The lower water bearing zone is subdivided into the C Zone (which extends to about 240 feet bgs)

[1] The soil cleanup goals have been met at the Site (EPA, 2004). Site soil cleanup actions were completed by 1996 and included in-situ soil vapor extraction (SVE) with treatment by vapor-phase GAC, and soil excavation and treatment by aeration.

and the Deep Zone. The aquitard separating the upper and lower water-bearing zones is represented as the B/C Aquitard and is the major confining layer beneath the Site. The water-bearing zones defined at the MEW Area are summarized below:

Water Bearing Zones	Approximate Depth Interval Below Ground Surface
A[a]	0 to 45 feet
B1[b]	50 to 75 feet
B2	75 to 110 feet
B3	120 to 160 feet
C	200 to 240 feet
Deep Aquifer	>240 feet

[a] Navy and NASA refer to this zone as the A1 Zone north of Highway 101.
[b] Navy and NASA refer to this zone as the A2 Zone north of Highway 101.

The following table summarizes the estimated ranges of hydraulic conductivity (K), hydraulic gradient, and transmissivity for the A and B Zones[2].

Water-Bearing Zone	Estimated Hydraulic Conductivity (ft/day)		Approximate Horizontal Gradient (ft/ft)	Saturated Thickness (ft)	Transmissivity (ft^2/day)	
	Low	High			Low	High
A Zone	6	480	0.004	15	44	4,400
B1 Zone	20	260	0.003	25	150	2,600
B2 Zone	0.4	5	0.002 to 0.005	35	2	230
B3 Zone	0.5	5	0.001 to 0.002	40	5	130

Groundwater flow beneath the Site is generally towards the north in the A and B Zones during both non-pumping and pumping conditions. Groundwater hydraulic gradients are locally modified by the operation of groundwater recovery wells (both source control and regional recovery wells) and slurry walls, resulting in steeper gradients in the vicinity of pumping wells.

[2] Pumping tests were conducted at the MEW study area from from 1986 through 1985. References are Canonie 1986a, 1986b, 1987 and 1988; Geomatrix, 2004; HLA 1986 & 1987; Locus, 1998; PRC, 1991; Navy, 2005; and Weiss Associates 1995 and 2005.

The vertical component of groundwater flow is generally upward from the B1 Zone to the A Zone, but is locally downward in some areas of the Site. Vertical gradients below the B1 Zone are generally upward (Geosyntec et al, 2008). Groundwater extraction has likely exerted an influence on the measured vertical gradients.

1.3 Description of the Remedy

As specified in the ROD, the current Site remedy consists of slurry wall containment and groundwater extraction and treatment.

The groundwater extraction and treatment system is designed to protect local water supplies and to remediate or control groundwater that contains elevated concentrations of chemicals, including control of discharge of such groundwater to surface water.[3]

Groundwater cleanup goals are 5 micrograms per liter (µg/L) for TCE in shallow groundwater (A and B Zones) and 0.8 µg/L for TCE in deep groundwater (C and Deep Zones).[4] The ROD states that the chemical ratio of TCE to other chemicals found at the Site is such that achieving the cleanup goal for TCE will result in cleanup of the other Site chemicals to at least their respective federal maximum contaminant levels (MCLs).

A network of 20 extraction wells is used to remove groundwater from three depth intervals at the Site (Table 1). Extracted groundwater is then transported through conveyance piping to a treatment facility located at either 515 N. Whisman Road (System 1), or 313 Fairchild Drive (System 3). Once treated, the water is monitored and sampled in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit, then discharged to a storm water sewer.

Effectiveness of the remedy is evaluated using a network of monitoring wells that are currently monitored according to the schedule provided in Table 2. A construction summary for these wells is provided in Table 3.

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[3] The objectives of the groundwater remedy design are described in the ROD and the Feasibility Study (Canonie, 1988).

[4] Groundwater cleanup goals are presented in the ROD.

1.4 Summary of Site Activities and Deliverables

Ongoing Site activities include:

- Groundwater extraction and treatment;
- Operation and maintenance (O&M) of treatment systems;
- Annual sampling and semiannual water-level gauging (Table 2);
- Assessment of remedial progress;
- Planning for future remedial activities; and
- Sampling the treatment systems monthly in compliance with the general VOC permit California Regional Water Quality Control Board – San Francisco Bay Region (Water Board) Order No. R2-2009-0059 for Fairchild Treatment Systems 1 and 3. This permit is effective 1 October 2010 through September 2014 (Table 2).

Specific Site activities and deliverables by month in 2011 are listed below:

February 2011

- 15 February – Submitted the 4th Quarter 2010 NPDES Self-Monitoring Reports for Systems 1 and 3.

March 2011

- 25 March – Collected semiannual groundwater elevation measurements in Site monitoring and extraction wells.

May 2011

- 10 May – Submitted the 1st Quarter 2011 NPDES Self-Monitoring Reports for Systems 1 and 3.
- 26 May – Collected quarterly groundwater elevation measurements in Site slurry wall well pairs.

June 2011

- 15 June – Distributed the 2010 Annual Progress Report to the EPA and MEW distribution list parties.

August 2011

- 4 August – Submitted the 2nd Quarter 2011 NPDES Self-Monitoring Reports for Systems 1 and 3.

September 2011

- 1 September through October – Collected annual groundwater samples from Site wells.
- 15 September – Collected groundwater samples from Site monitoring and extraction wells.

November 2011

- 4 November – Submitted the 3rd Quarter 2011 NPDES Self-Monitoring Reports for Systems 1 and 3.
- 11 November – Collected quarterly groundwater elevation measurements in Site slurry wall well pairs.

D*ecember 2011*

- 9 December – Conducted annual settlement monitoring.

The 2011 Annual Report Remedy Performance Checklist is provided in Appendix A.

2. GROUNDWATER EXTRACTION AND TREATMENT

2.1 Extraction and Treatment System Description

The Site groundwater treatment and containment system consists of 20 extraction wells, the Buildings 1 through 4 slurry wall enclosure, and two groundwater treatment systems (System 1 and System 3) (Figure 3). Components of the groundwater extraction and treatment systems are described in the following sections.

2.1.1 Extraction Wells

Table 1 lists the groundwater zone, target flow rate, and 2011 average flow rates for the 20 extraction wells associated with the Site. Of the 20 Site recovery wells, 13 wells operated in 2011, and the remaining 7 wells have been shut off with EPA approval (RMT, 2000; EPA, 2007; Geosyntec, 2010a).

Six off-Site extraction wells are also connected with Systems 1 and 3. These wells are associated with the RGRP (38B2), and Former Fairchild Building 9 (RW-20A, RW-21A, AE/RW-9-1, and AE/RW-9-2) and Former Fairchild Building 18 (RW-25A). Because Systems 1 and 3 are located on the Buildings 1-4 Site, data related to the operation and maintenance of these wells is provided in this report. Further discussion of the off-Site extraction wells is provided in separate Annual Progress Reports (Geosyntec, 2012a, 2012b, and 2012c).

2.1.2 Treatment System 1

During 2011, System 1 included the following extraction and treatment components:

- Influent from:
  - 14 extraction wells;
  - One basement dewatering sump conveyed to treatment system from Fairchild Building 18, (Geosyntec, 2012c);
- Double-contained groundwater conveyance piping, well vaults;
- Two sediment filters in parallel;
- One pad sump, including sump pump;

- Three 5,000-pound GAC vessels in series; and,
- Electrical distribution and control panels including:
    - a programmable logic controller (PLC); and
    - an auto-dialer.

Wells associated with System 1 are listed on Table 1. The discharge of treated groundwater from the treatment system to the storm sewer is authorized by NPDES Permit CAG912003, Order No. R2-2009-0059.

2.1.3 Treatment System 3

During 2011 System 3 included the following extraction and treatment components:

- Influent from twelve extraction wells;
- Double-contained groundwater conveyance piping, well vaults;
- Two sediment filters in parallel;
- One pad sump, including sump pump;
- Three 5,000-pound GAC vessels in series; and,
- Electrical distribution and control panels including:
    - a PLC; and
    - an auto-dialer.

Wells associated with System 3 are listed in Table 1. The discharge of treated groundwater from the treatment system to the storm sewer is authorized by NPDES Permit CAG912003, Order No. R2-2009-0059.

2.2 Extraction and Treatment System Operation and Maintenance

From 1 January through 31 December, 2011, System 1 ran 96.6% of the time[5], and System 3 ran 98.4% of the time[6]. A combined total of approximately 50.1 million

[5] Of the System 1 downtime, approximately 80% was due to routine system maintenance, such as carbon change outs.

gallons of groundwater were treated and 649 pounds of VOCs removed by the Site treatment systems during this reporting period.

As required by the Site discharge permit, extraction well and treatment system flow readings are recorded weekly and the Site treatment systems are sampled monthly. Results are reported quarterly to the Water Board.

Extraction well flow rates were optimized in 2010 for all Fairchild wells (Geosyntec, 2010a). The optimized target flow rates and actual flow rates are shown in Table 1. More than 80% of the wells met or exceeded their optimized target rate. In addition, the combined average pumping rates for the wells pumping to Systems 1 and 3 totaled 40.8 and 50.3 gpm, respectively, meeting their target pumping rates of approximately 35.5 and 50.0 gpm, respectively. Monthly average flow rates and extraction totals for System 1 are provided in Tables 4 and 5, respectively. Monthly average flow rates and extraction totals for System 3 are provided in Tables 6 and 7, respectively.

Analytical results for treatment system sampling are provided in Tables 8A, 8B, 9A, and 9B. The laboratory analytical reports are provided in Appendix B, and a quality assurance/quality control (QA/QC) evaluation for samples collected at the Site during 2011 is provided in Appendix C. Treatment system discharges were within all effluent limits established by NPDES Permit CAG912003, Order No. R2-2009-0059.

Tables 10 and 11 present VOC mass removal summaries for the two Site treatment systems based on the quarterly NPDES Self-Monitoring Reports produced by Weiss (Weiss, 2011a-f, and 2012a,b). During 2011, System 1 extracted and removed approximately 26.7 million gallons of groundwater and 324 pounds of VOCs, and System 3 extracted and removed approximately 23.4 million gallons of groundwater and 325 pounds of VOCs. Cumulative groundwater extracted and mass removed by Systems 1 and 3 are illustrated in Figures 4 and 5, respectively.

A summary of routine and non-routine maintenance or operational activities performed at the Site during 2011 is provided in Tables 12 and 13. The EPA and Water Board are required to be notified of extraction well and system down-time events as follows:

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[6] Of the System 3 downtime, approximately 90% was due to routine system maintenance, such as carbon change outs.

1. EPA: The owner and/or operator of the Fairchild treatment system will make a best effort to orally notify the EPA within 24 hours of a well or system shutdown that occurs for more than 72 consecutive hours.

2. Water Board: If the treatment system is shut down for more than 120 consecutive hours, the reason(s) for shut down, proposed corrective action(s), and estimated start-up date shall be orally reported to the Water Board within five days of shut down and a written submission shall also be provided within 15 days of shut down.

As demonstrated by system downtime events for System 1 and System 3 listed on Tables 12 and 13, no notifications of well or system shut-downs were required during 2011.

At System 1, a total of 25 tons of spent carbon were generated and disposed of as nonhazardous waste. At System 3, a total of 12.5 tons of spent carbon were generated and disposed of as nonhazardous waste. Spent sediment filters generated at Systems 1 and 3 during 2011 were disposed of as hazardous waste.

2.3 Groundwater Level Monitoring

Groundwater levels were measured semi-annually for the purpose of monitoring the hydraulic performance of the Site groundwater remedy. During this reporting period, groundwater elevations were measured in Site monitoring wells on 24 March and 15 September, 2011 (Table 14). In addition, water levels were measured in 11 slurry wall well pairs quarterly on 24 March, 26 May, 15 September, and 11 November (Table 15). Table 3 summarizes the construction details for the Site monitoring and extraction wells.

Hydrographs of Site slurry wall well pairs are provided in Figures 6, 7, and 8. Figures 5 and 6 include a set of hydrographs of A Zone slurry wall well pairs showing the inward and outward gradients across the slurry wall. Figure 8 includes a set of hydrographs of slurry wall well pairs in which one well is screened inside the slurry wall in the A zone and the adjacent well pair is screened below the slurry wall in the B1 Zone.

Groundwater elevation contour maps for the Site are provided in Figures 9 through 14 and are based on facility-specific and regional data as presented in the MEW RGRP Annual Report (Geosyntec, 2012a). The groundwater elevation contour maps were

created using KT3D_H2O version 3.0, a geostatistical software package (Tonkin and Larson, 2002).[7] As opposed to most interpolation programs that require a choice between linear and logarithmic kriging, this version of KT3D allows for linear-log ordinary kriging using linear kriging in areas distant from recovery wells and point logarithmic kriging in the vicinity of recovery wells. The flow rates from the extraction wells were input to the program in order to allow for a variable radial distance of transition from linear to logarithmic kriging. A spherical variogram was specified with grid spacing of 30 feet.

2.4 Hydraulic Control and Capture Zone Analysis

The water level monitoring described in Section 2.3 provides the basis for evaluating the hydraulic performance of the Site groundwater remedies. The hydraulic capture area achieved by one or more recovery wells cannot be directly measured, but rather requires analysis and interpretation of the measured water levels and extraction rates. The following discussion summarizes the basis for estimating the capture zones.

2.4.1 Methodology

In evaluating groundwater capture for Site wells, consideration was given to the EPA guidance document *A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems* (EPA, 2008). The following steps were used to perform the hydraulic evaluation of the groundwater remedy.

- The site conceptual model, remedy objectives, slurry wall locations, and target capture zones were available from previous studies and prior annual monitoring reports;
- Water level measurements from March and September 2011 were interpolated to generate groundwater elevation contour maps as described in Section 2.3;
- Pumping rates from RRWs and SCRWs were compiled;

[7] The KT3D software package was developed as part of the Geostatistical Software Library (GSLIB) at Stanford University and was subsequently modified by S.S. Papadopulos and Associates, Inc. to include well drift (Deutsh and Journal, 1998; Tonkin and Larson, 2002).

- Hydraulic capture from each RRW and SCRW was estimated based on graphical flow-net analysis of the contour maps, guided by backward particle tracking and analytical flow solutions (Section 2.4.2);
- A water balance calculation was used to check the total width of capture estimated from the graphical analysis;
- Water level data from well clusters were analyzed for the distribution of vertical gradients; and
- VOC time-series trends in monitoring wells were reviewed for confirming evidence of hydraulic capture (Section 2.6).

2.4.2 Estimated Extraction Well Capture

Estimated capture zones for the Site recovery wells in March and September 2011 are shown in Figures 9 through 14. The capture zones were estimated by graphical flow-net analysis, using the groundwater elevation contour maps (Section 2.3). The graphical analysis was guided by backward particle tracking using TransientTracker in KT3D_H20 and calculated distances to the stagnation point and capture zone width based on the analytical solution of Javandel and Tsang (1986). All extraction wells pumping in the MEW study area were considered as part of the capture zone evaluation for the Site. The KT3D_H20 particle tracking method and analytical calculations assume homogeneous, two-dimensional groundwater flow with a single regional estimated value of transmissivity. These methods were used as supporting lines of evidence to evaluate capture together with the groundwater elevation contour maps. The final capture zones as presented in Figures 9 through 14 are based on professional judgment in consideration of the above analyses, known site conditions, and experience with similar sites.

2.4.3 Capture Width Based on Combined Flow Rate Analysis

The capture zone analysis described in 2.5.2 above was developed on a well-by-well basis. However, the net result of the combined capture zones from all Site recovery wells is an area of hydraulic capture significantly wider than the distribution of VOCs in groundwater. An independent check of the capture zones presented in Figures 9 through 14 was developed by using the combined 2011 groundwater extraction rates from the 20 Site recovery wells, to estimate the total capture width in each zone (A, B1, B2). The estimated capture widths were then compared to the distribution of TCE in

groundwater (Section 2.5, Figures 15, 19, and 23) within the site boundaries, measured in map view for each zone. In the A Zone, the wells inside the slurry wall were compared to the slurry wall width. If the estimated width of capture is greater than the trans-gradient width of the TCE distribution in groundwater, then hydraulic containment of the plume is indicated.

The calculations of capture width for each zone based on the total extraction rate, regional hydraulic gradient, hydraulic conductivity, and zone thickness are shown in Table 16.

The results indicate that the predicted capture width based on the total extraction rate is greater than the measured transgradient width of TCE in groundwater within the Site, thereby providing an additional line of evidence that hydraulic containment is achieved.

2.4.4 Comparison to Target Captures for Individual SCRWs

The target capture zones and estimated hydraulic capture for the SCRWs in each aquifer are depicted in Figures 9 through 14. The target hydraulic capture areas for individual SCRWs outside the Site slurry wall are the modeled capture zones depicted in the final remedial design document for the MEW area South of Highway 101 (Canonie, 1994; Smith, 1996). Target capture for wells inside the slurry wall was assumed to be the width of the slurry wall since the wall provides the primary containment method. As noted in Section 2.4.2, estimated hydraulic capture zones were drawn based on multiple forms of analysis, professional judgment, and known site conditions.

The estimated capture zones in Figures 9 through 14 depict complete capture of the target capture zones.

2.4.5 Horizontal and Vertical Gradients

Figures 6 through 8 illustrate head differences between slurry wall well pairs at the Site. The well pairs in Figures 6 and 7 are used to evaluate the direction of horizontal gradient across the slurry wall by comparing water levels in wells located inside the slurry wall with water levels in adjacent wells outside the slurry wall. The well pairs in Figure 8 are used to evaluate the direction of vertical gradient across the A/B Aquitard by comparing water levels in wells located inside the slurry wall (in the A Zone) with water levels in wells located below the slurry wall (in B1 Zone). Groundwater elevations were recorded quarterly in March, May, August, and November 2011 in the

slurry wall well pairs listed on Table 15. The well locations are shown in Figures 3, 6, 7, and 8.

Results of the well pair analysis at the Buildings 1-4 slurry wall indicate the following:

- Horizontal gradients were generally inward on the upgradient (south) and trans-gradient (west and east) sides of the slurry wall, and outward on the downgradient (north) side of the slurry wall.
- Inside the slurry wall, vertical gradients between the B1 Zone and A Zone were consistently upward in well pairs 115B1/124A and 119B1/133A, and downward in well pairs 20B1/33A and 60B1/118A.

The horizontal and vertical gradients recorded during this reporting period are generally consistent with historical observations. The outward and downward gradients observed at the Site do not impact Site cleanup objectives because recovery wells outside and below the slurry wall provide hydraulic containment for any groundwater that migrates out of the slurry wall containment area. Furthermore, decreasing to stable VOC concentration trends in wells downgradient and below the slurry wall provide supporting evidence for adequate plume capture (Section 2.5).

2.5 Groundwater Quality Monitoring

The 2011 Annual Groundwater Quality Sampling Event was conducted in September and October 2011. A total of 37 Site wells were sampled for VOCs in 2011. In addition, 5 MEW RGRP wells located on the Site were sampled in 2011 and are reported separately in the RGRP Annual Report (Geosyntec, 2012a). A summary of chemical analytic results for the previous five years (2007 through 2011) is presented in Table 17. Appendix B contains the analytic reports and chain-of-custody documents for samples collected in 2011, and Appendix C contains the QA/QC evaluation report and summary tables. VOCs versus time graphs for select monitoring wells are included in Appendix D.

2.5.1 Isoconcentration Contour Maps

TCE, cis-1,2-DCE, vinyl chloride, and tetrachloroethene (PCE) isoconcentration contour maps were created for the 2011 annual sampling event. The 2011 TCE contour maps were based on the existing 2010 TCE contour maps (Geosyntec, 2011) with contours modified as needed to reflect decreases or increases in TCE concentrations

from 2010 to 2011. Similarly, the cis-1,2-DCE and vinyl chloride contour maps were based on and modified from the regional 2009 cis-1,2-DCE and vinyl chloride contour maps (Geosyntec, 2010b). The PCE contour maps were generated by hand and based on professional judgment in consideration of known Site conditions. All wells in the MEW study area sampled for VOCs in 2011 were included in isoconcentration contouring as presented in the MEW RGRP Annual Progress Report (Geosyntec, 2012a). The 2011 isoconcentration contour maps for the Site are presented for the A Zone, B1 Zone, and B2 Zone in Figures 15 through 26.

2.5.2 Remedy Performance

In conjunction with the hydraulic analysis described in Section 2.4, the VOC monitoring data provides an additional line of evidence for assessing remedy performance.

In the 2011 annual monitoring event, all of the Site wells sampled had TCE concentrations that were within or below historical ranges.

Selected VOCs versus time graphs are presented in Appendix D. In addition to the creation of time series graphs, a Mann-Kendall statistical analysis was performed in order to evaluate VOC concentration trends in the Site wells[8] (Table 18). Based on the Mann-Kendall statistical analysis the TCE concentrations are stable, decreasing, or have no trend in all but one of the Site wells (127A). Approximately 51% of Site wells display decreasing TCE concentration trends, and 46% show no trend or are stable.

Although the 10 year Mann-Kendall analysis shows an increasing trend for TCE in monitoring well 127A, VOC time series graphs show that the TCE concentration in this well has decreased by an order of magnitude since 1989 (Appendix D, Figure D-15). Additionally, TCE concentrations in 127A appear to be stable or slightly decreasing over the last 4 years.

The spatial distribution of VOC monitoring data can also be used to assess remedy performance. Figures 15, 19, and 23 present maps of the A Zone, B1 Zone, and B2

[8] A Mann-Kendall statistical analysis was performed on all Site wells using the TCE, cis-1,2-DCE and vinyl chloride concentration data from 2002 to 2011 to evaluate the concentration trends. Wells with insufficient data (< 4 sampling events) were not included in the trend analysis evaluation.

Zone, respectively, with the September 2011 hydraulic capture zones (Section 2.4) overlain on the September/October 2011 TCE isoconcentration maps. These figures illustrate complete hydraulic capture, within the site boundaries.

The VOC time series data and VOC monitoring data indicate that the combined Site remedies are performing as designed to control or remediate VOCs in groundwater.

2.6 Compliance

The system operated within the effluent limits established by the NPDES permits for the entire period. VOC results from samples collected for NPDES compliance are summarized in Tables 8A and 9A.

3. OTHER ACTIVITIES

3.1 Air/Vapor Intrusion

The EPA issued a ROD amendment on 16 August 2010 to address vapor intrusion. The MEW parties continued to work with the EPA and local entities to implement the ROD amendment during 2011. In accordance with the Statement of Work for the Vapor Intrusion ROD Amendment, an annual report summarizing the status of the vapor intrusion remedy will be submitted under separate cover (Haley and Aldrich, 2012).

3.2 Soil Settlement Survey

An annual soil settlement survey was performed on 9 December 2011. The purpose of these annual measurements is to evaluate any potential adverse effects on the Site facilities, and whether long-term remedial groundwater extraction could affect soil settlement in the MEW study area A qualified Geotechnical Engineer reviewed the historical settlement and water level elevation data and concluded that the measured values of ground elevation change do not appear to be related to groundwater extraction operations. Additional information on the settlement survey can be found in the RGRP 2011 Annual Progress Report (Geosyntec, 2012a).

4. PROBLEMS ENCOUNTERED

Tables 12 and 13 provide a summary of all non-routine operations and maintenance (O&M) events that occurred at the System 1 and System 3 Treatment Systems. No other problems related to Buildings 1-4 Site were encountered.

5. TECHNICAL ASSESSMENT

The following assessment of the groundwater remedy performance was made based on data collected through 2011.

- The remedy is functioning as intended. Based on 2011 data reviewed, the groundwater remedy is generally functioning as intended. The 2011 Annual Report Remedy Performance Checklist is included as Appendix A.
- The capture zones are adequate. Groundwater elevations, graphical flow net analysis, capture zone width calculations, and VOC concentration trends provide converging lines of evidence that the Site extraction wells are achieving adequate horizontal and vertical capture. The concentration trends in downgradient wells indicate supporting evidence for adequate plume control within the Site slurry wall enclosure.
- VOC concentrations are steady to decreasing over time. Table 13 shows that TCE concentrations in a majority of the Site wells either have no trend or have a stable to decreasing trend over the last ten years.

The remedial actions meet the remedial action objectives (RAOs) for groundwater.

6. CONCLUSIONS AND RECOMMENDATIONS

Approximately 50 million gallons of groundwater were treated and 649 pounds of VOCs were removed by the Site treatment systems during 2011. From 1 January through 31 December 2011, Site Treatment Systems 1 and 3 operated on a nearly continuous basis (96.6% and 98.4%, respectively), with the majority of downtime related to planned system shutdowns for routine maintenance. No significant problems related to system operations were noted in 2011.

The Buildings 1-4 remedy is performing as intended. The estimated capture zones from March and September 2011 meet or exceed target capture areas based on converging lines of evidence, including graphical flow net analysis and concentration trends.

The Fairchild wells connected to Treatment System 1 are currently addressed in three separate Annual Progress Reports for the Former Fairchild Facilities: Former Fairchild Buildings 1-4, Former Fairchild Building 18, and Former Fairchild Building 9. Given the proximity of these Sites to one another, and the fact that they share a treatment system, it is recommended that future Annual Progress Reports for Former Fairchild Buildings 9, 1-4, and 18 be combined and submitted as a single Annual Progress Report.

7. UPCOMING WORK IN 2012 AND PLANNED FUTURE ACTIVITIES

January	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES)
February	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES) • Submit 4th Quarter and Annual NPDES report
March	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES) • Groundwater level measurements
April	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES) • Submit Annual Progress Report to EPA
May	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES) • Semi-annual system influent sampling (NPDES) • Submit 1st Quarter NPDES report
June	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES)
July	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES)
August	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES) • Submit 2nd Quarter NPDES report
September	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES) • Annual Groundwater sampling • Groundwater level measurements
October	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES) • Annual system effluent sampling (NPDES) • Annual Groundwater sampling • Triennial system effluent sampling (NPDES)
November	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES) • Semi-annual system influent sampling (NPDES) • Submit 3rd Quarter NPDES report
December	• Pump and Treat System O&M • Monthly system effluent sampling (NPDES)

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TABLES

Table 1
Target and 2011 Average Recovery Well Flow Rates
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Extraction Wells	2011 Target Flow Rate[1] (gpm)	Average 2011 Flow Rate[2] (gpm)
System 1		
A/A1 Zone		
AE/RW-9-1 (FFB9)	4.0	4.5
AE/RW-9-2 (FFB9)	2.0	1.8
RW-3A[3]	off	off
RW-4A	3.0	4.0
RW-16A[3]	off	off
RW-20A (FFB9)	4.0	4.7
RW-21A (FFB9)	7.0	7.2
RW-25A (FFB18)	5.5	5.7
RW-28A[3]	off	off
B1/A2 Zone		
RW-3(B1)[3]	off	off
RW-4(B1)	5.5	7.1
B2 Zone		
RW-3(B2)[3]	off	off
RW-4(B2)	0.5	0.9
38B2 (RGRP)	4.0	4.9
System 3		
A/A1 Zone		
RW-5A	2.5	2.9
RW-7A	10.0	11.0
RW-9A (RGRP)	5.0	5.6
RW-18A	6.5	5.4
RW-27A	5.5	3.9
B1/A2 Zone		
RW-5(B1)	4.0	4.4
RW-7(B1)	2.0	2.0
RW-9(B1)R (RGRP)	6.0	6.1
RW-12(B1)	5.5	5.5
B2 Zone		
RW-5(B2)[3]	off	off
RW-7(B2)[3]	off	off
RW-9(B2) (RGRP)	3.0	3.4

Notes:

Wells shown in **bold** are associated with the Site remediation program

1.Target flow rates were adjusted in 2010 as a result of EPA comments to the 2008 optimization evaluation (Geosyntec, 2010).

2. Average 2011 flow rates were calculated by dividing the total volume of groundwater recovered by the time in minutes between the totalizer readings. System totalizer readings were recorded on 29 December 2010 and 28 December 2011.

3. Well is offline with EPA approval (RMT, 2000; Geosyntec, 2010).

(FFB9) = Former Fairchild Building 9 recovery well connected to System 1 for treatment. Further discussion of this well is provided in the Former Fairchild Building 9 Annual Progress Report (Geosyntec, 2012b)

(FFB18) = Former Fairchild Building 18 recovery well connected to System 1 for treatment. Further discussion of this well is provided in the Former Fairchild Building 18 Annual Progress Report (Geosyntec, 2012c).

(RGRP) = Regional Groundwater Remediation Program well connected to System 1 or System 3 for treatment. Further discussion of this well is provided in the MEW RGRP 2011 Annual Progress Report (Geosyntec, 2012a)

gpm = gallons per minute

Table 2
2011 Monitoring and Reporting Schedule
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Monitoring and Sampling		
Well	**Sample Frequency**	**Water Level Gauging Frequency**
A/A1 Zone		
33A[1]	Every 5 Years	Quarterly
46A	Annually (September or October)	Semiannually (March, September)
51A[1]	Every 5 Years	Semiannually (March, September)
57A[1]	Every 5 Years	Semiannually (March, September)
59A[1]	Every 5 Years	Quarterly
61A	Annually (September or October)	Semiannually (March, September)
62A (RGRP)	Annually (September or October)	Semiannually (March, September)
67A[1]	Every 5 Years	Semiannually (March, September)
68A[1]	Every 5 Years	Semiannually (March, September)
76A	Annually (September or October)	Quarterly
84A[1]	Every 5 Years	Quarterly
118A	Annually (September or October)	Quarterly
121A[1]	Every 5 Years	Quarterly
124A[1]	Every 5 Years	Quarterly
127A	Annually (September or October)	Quarterly
128A		Quarterly
129A		Quarterly
130A	Annually (September or October)	Quarterly
133A[1]	Every 5 Years	Quarterly
156A	Annually (September or October)	Quarterly
157A	Annually (September or October)	Quarterly
REG-MW-2A (RGRP)	Annually (September or October)	Semiannually (March, September)
RW-3A	Annually (September or October)	Semiannually (March, September)
RW-4A	Annually (September or October)	Semiannually (March, September)
RW-5A	Annually (September or October)	Semiannually (March, September)
RW-7A	Annually (September or October)	Semiannually (March, September)
RW-9A (RGRP)	Annually (September or October)	Semiannually (March, September)
RW-16A	Annually (September or October)	Semiannually (March, September)
RW-18A	Annually (September or October)	Semiannually (March, September)
RW-27A	Annually (September or October)	Semiannually (March, September)
RW-28A	Annually (September or October)	Semiannually (March, September)
B1/A2 Zone		
2B1	Annually (September or October)	Semiannually (March, September)
20B1	Every 5 Years	Quarterly
60B1	Annually (September or October)	Quarterly
67B1	Annually (September or October)	Semiannually (March, September)
115B1	Annually (September or October)	Quarterly
119B1 (RGRP)	Annually (September or October)	Quarterly
147B1	Annually (September or October)	Semiannually (March, September)
RW-3(B1)	Annually (September or October)	Semiannually (March, September)
RW-4(B1)	Annually (September or October)	Semiannually (March, September)
RW-5(B1)	Annually (September or October)	Semiannually (March, September)
RW-7(B1)	Annually (September or October)	Semiannually (March, September)
RW-9(B1)R (RGRP)	Annually (September or October)	Semiannually (March, September)
RW-12(B1)	Annually (September or October)	Semiannually (March, September)
B2 Zone		
10B2	Annually (September or October)	Semiannually (March, September)
11B2	Annually (September or October)	Semiannually (March, September)
113B2 (RGRP)	Annually (September or October)	Semiannually (March, September)
118B2	Annually (September or October)	Semiannually (March, September)
148B2	Annually (September or October)	Semiannually (March, September)
RW-3(B2)	Annually (September or October)	Semiannually (March, September)
RW-4(B2)	Annually (September or October)	Semiannually (March, September)
RW-5(B2)	Annually (September or October)	Semiannually (March, September)
RW-7(B2)	Annually (September or October)	Semiannually (March, September)
RW-9(B2) (RGRP)	Annually (September or October)	Semiannually (March, September)

Table 2
2011 Monitoring and Reporting Schedule
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Monitoring and Sampling - System 1	
System Component	**Sample Frequency**
System 1 Influent	Quarterly
System 1 Midpoint	Monthly
System 1 Effluent	Monthly
Monitoring and Sampling - System 3	
System Component	**Sample Frequency**
System 3 Influent	Quarterly
System 3 Midpoint	Monthly
System 3 Effluent	Monthly
Reporting	
Report	**Due Date**
Quarterly NPDES	February 15, May 10, August 4, November 4
EPA Annual Progress Report	April 15

Notes:

Wells shown in **bold** are located onsite and associated with the Fairchild Operation & Maintenance program (RMT, 2003).

1. Wells are sampled every five years and will be sampled next in 2012.

(RGRP) = Regional Groundwater Remediation Program well associated with the Former Fairchild Buildings 1-4 Site. Additional discussion of this well is provided in the MEW RGRP 2011 Annual Progress Report (Geosyntec, 2012)

EPA = = United States Environmental Protection Agency

NPDES = National Pollutant Discharge Elimination System

RGRP = Regional Groundwater Remediation Program

Slurry wall well pair water levels are measured on a quarterly basis.

(RGRP) = Regional Groundwater Remediation Program well connected to System 1 or 3 for treatment. Further discussion of this well is provided in the MEW RGRP 2011 Annual Progress Report (Geosyntec, 2012)

Table 3
Extraction and Monitoring Well Construction Summary
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Well ID	Year Installed	Reference Elevation[1] (ft msl)	Diameter (inches)	Total Well Depth (ft btoc)	Top of Screened Interval (ft btoc)	Bottom of Screen Interval (ft btoc)	Top of Sand Pack (ft btoc)	Bottom of Sand Pack (ft btoc)	Well Type
A/A1 Zone									
33A	1982	43.74	2	34	14	34	14	34	Mon
46A	1982	42.10	2	34	14	34	14	34	Mon
51A	1982	44.22	2	34	14	34	12	34	Mon
57A	1982	39.21	2	35	15	35	12	35	Mon
59A	1982	39.56	2	30	15	30	12	30	Mon
61A	1982	37.18	2	31	16	31	10	31	Mon
62A (RGRP)	1982	37.88	2	30	10	30	10	30	Mon
67A	1982	39.77	4	31	21	31	10	31	Mon
68A	1982	43.26	4	31	21	31	10	31	Mon
76A	1985	40.08	4	20	10	20	7.5	22	Mon
84A	1985	43.38	4	28	18	28	15	30	Mon
118A	1986	39.78	4	20.5	10.5	20.5	6	21	Mon
121A	1986	41.82	4	36	26	36	12	38	Mon
124A	1986	38.86	4	24	14	24	19	26	Mon
127A	1986	43.81	4	20	15	20	13	22	Mon
128A	1986	43.38	4	28	18	28	16	30	Mon
129A	1986	43.75	4	38	26	36	12	38	Mon
130A	1986	41.60	4	29	14	29	11	31	Mon
133A	1986	43.75	4	30	15	30	13	32	Mon
156A	1993	40.22	4	29.5	19.5	29.5	37	55	Mon
157A	1993	40.50	4	29.5	19.5	29.5	15	30	Mon
REG-MW-2A (RGRP)	---	38.11	---	---	18.5	15	25	---	Mon
RW-3A	1985	43.34	6	30.5	19.6	29.6	11	32	Ext
RW-4A	1986	42.61	6	29	18	28	11	32	Ext
RW-5A	1985	36.86	6	30.5	19.5	29.5	11	32	Ext
RW-7A	1985	36.29	6	36	15	35	11	37	Ext
RW-9A (RGRP)	1985	37.83	6	25	13	23	10	25	Ext
RW-16A	1988	43.89	8	33	22	32	11	33.5	Ext
RW-18A	1987	37.53	6	36	25	35	11	37	Ext
RW-27A	1997	38.41	6	25	15	25	12	27.5	Ext
RW-28A	2000	42.33	6	28	18	28	15	31	Ext
B1/A2 Zone									
2B1	1982	43.43	4	59	47	59	47	60	Mon
20B1	1985	43.89	4	67	57	67	55	68	Mon
60B1	1985	39.64	4	73	63	73	60	75	Mon
67B1	1985	36.93	4	62	56	62	52	67	Mon
115B1	1986	38.76	4	64	59	64	57.5	65	Mon
119B1 (RGRP)	1986	42.96	4	62	52	62	50	34	Mon
147B1	1995	37.82	6	61	50	60	47	62	Mon
RW-3(B1)	1985	43.28	6	57	46	56	41	59	Ext
RW-4(B1)	1985	42.66	6	61	50	60	49	63	Ext
RW-5(B1)	1985	37.87	6	59	0	0	40	62	Ext
RW-7(B1)	1985	38.76	6	66	55	65	45	67	Ext
RW-9(B1)R (RGRP)	1986	38.59	6	69	59	69	58	72	Ext
RW-12(B1)	1995	40.51	6	62	52	62	49	63	Ext

Table 3
Extraction and Monitoring Well Construction Summary
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Well ID	Year Installed	Reference Elevation[1] (ft msl)	Diameter (inches)	Total Well Depth (ft btoc)	Top of Screened Interval (ft btoc)	Bottom of Screen Interval (ft btoc)	Top of Sand Pack (ft btoc)	Bottom of Sand Pack (ft btoc)	Well Type
B1/A2 Zone									
10B2	1985	43.90	2	90	85	90	83	95	Mon
11B2	1985	37.19	2	92	87	92	85	92	Mon
113B2 (RGRP)	1986	39.01	4	86	69	84	67	86	Mon
118B2	1986	43.21	4	89	84	89	81	91	Mon
148B2	1995	37.72	6	86	75	85	72	87	Mon
RW-3(B2)	1985	42.96	6	92	76	91	69	94	Ext
RW-4(B2)	1985	41.79	6	90.5	74.5	89.5	72	93	Ext
RW-5(B2)	1985	37.98	6	95	84	94	67	97.5	Ext
RW-7(B2)	1986	37.18	6	90	80	90	76	93	Ext
RW-9(B2) (RGRP)	1985	37.88	6	92.6	82.6	92.6	80	95	Ext

Notes:

Water levels for extraction wells are taken from a 2" piezometer located next to the well.

1. Reference Elevations are in National Geodetic Vertical Datum from 1929 (NGVD 29).

--- = data not available

ft msl = feet mean sea level

ft btoc = feet below top of casing

Ext = extraction well

Mon = monitoring well

(RGRP) = Regional Groundwater Remediation Program well associated with the Former Fairchild Buildings 1-4 Site. Additional discussion of this well is provided in the MEW RGRP 2011 Annual Progress Report (Geosyntec, 2012)

Table 4
Monthly Average Recovery Well Flow Rates, System 1
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Extraction Well	2011 Average Monthly Flowrate[1] (gpm)											
	January	February	March	April	May	June	July	August	September	October	November	December
A/A1 Zone												
AE/RW-9-1 (FFB9)	4.22	4.29	4.30	4.29	4.46	4.56	4.45	4.70	4.22	4.66	4.96	4.72
AE/RW-9-2 (FFB9)	2.27	1.76	1.53	2.27	2.16	2.81	2.04	1.10	1.17	1.47	1.40	1.28
RW-3A[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-4A	3.94	3.95	3.92	3.92	4.09	4.13	4.01	4.20	3.69	4.04	4.41	4.14
RW-16A[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-20A (FFB9)	4.75	4.86	4.87	4.94	5.10	5.07	4.52	4.68	4.38	4.64	4.70	4.23
RW-21A (FFB9)	6.70	6.82	6.79	6.71	7.26	7.67	7.32	7.53	6.69	7.27	7.70	7.24
RW-25A (FFB18)	5.29	5.18	5.17	5.05	5.72	6.30	6.00	6.11	5.33	5.87	6.37	5.64
RW-28A[2]	--	--	--	--	--	--	--	--	--	--	--	--
B1/A2 Zone												
RW-3(B1)[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-4(B1)	5.33	5.25	4.83	5.03	5.17	6.12	7.25	7.96	7.03	8.80	12.01	10.20
B2 Zone												
RW-3(B2)[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-4(B2)	0.92	0.96	0.94	0.95	1.04	0.95	0.91	0.91	0.71	0.76	0.84	0.78
38B2 (RGRP)	4.52	4.48	4.32	3.83	4.45	5.39	5.30	5.35	4.64	5.20	5.58	5.11
Total	37.95	37.55	36.68	37.00	39.45	43.00	41.82	42.54	37.86	42.71	47.96	43.35

Notes:

1. Monthly average extraction well flow rates were calculated by dividing the volume of groundwater extracted at each well by the time (minutes) between the effluent totalizer readings (generally taken last Wednesday of each month).

2. Well is offline with EPA approval (RMT, 2000; Geosyntec, 2010).

(FFB9) = Former Fairchild Building 9 recovery well connected to System 1 for treatment. Further discussion of this well is provided in the Former Fairchild Building 9 Annual Progress Report (Geosyntec, 2012b)

(FFB18) = Former Fairchild Building 18 recovery well connected to System 1 for treatment. Further discussion of this well is provided in the Former Fairchild Building 18 Annual Progress Report (Geosyntec, 2012c).

(RGRP) = Regional Groundwater Remediation Program well connected to System 1 for treatment. Further discussion of this well is provided in the MEW RGRP 2011 Annual Progress Report (geosyntec, 2012)

-- = well was off this month

EPA = United States Environmental Protection Agency

gpm = gallons per minute

Table 5
Monthly Extraction Totals, System 1
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Extraction Well	2011 Monthly Volume Extracted[1] (gallons)											
	January	February	March	April	May	June	July	August	September	October	November	December
A/A1 Zone												
AE/RW-9-1 (FFB9)	170,099	172,820	216,539	173,063	179,706	229,840	179,609	236,971	170,234	187,870	249,810	190,404
AE/RW-9-2 (FFB9)	91,420	71,077	77,279	91,677	86,936	141,803	82,286	55,626	47,118	59,256	70,362	51,607
RW-3A[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-4A	158,873	159,073	197,751	157,930	164,760	208,129	161,649	211,896	148,826	162,903	222,408	167,037
RW-16A[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-20A (FFB9)	191,719	195,996	245,686	199,266	205,487	255,357	182,428	235,649	176,475	186,996	236,710	170,485
RW-21A (FFB9)	270,331	274,968	342,034	270,477	292,835	386,413	295,300	379,282	269,878	293,082	388,168	291,891
RW-25A (FFB18)	213,469	208,806	260,330	203,778	230,804	317,721	242,042	307,990	215,059	236,477	320,935	227,439
RW-28A[2]	--	--	--	--	--	--	--	--	--	--	--	--
B1/A2 Zone												
RW-3(B1)[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-4(B1)	214,789	211,874	243,572	202,669	208,566	308,346	292,275	401,031	283,347	354,988	605,230	411,253
B2 Zone												
RW-3(B2)[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-4(B2)	37,291	38,856	47,531	38,426	41,899	47,852	36,821	45,925	28,756	30,487	42,570	31,493
38B2 (RGRP)	182,162	180,473	217,898	154,439	179,531	271,905	213,823	269,404	186,886	209,815	281,241	206,197
Total[3]	1,965,500	2,102,900	2,982,000	1,685,500	2,191,400	2,531,100	2,183,780	2,344,120	1,889,250	1,547,900	3,215,400	2,061,450

Notes:

1. Monthly volumes of groundwater extracted are based on effluent totalizer readings at each well (generally taken last Wednesday of each month).

2. Well is offline with EPA approval (RMT, 2000; Geosyntec, 2010).

3. Total values are calculated from the system effluent meter, therefore the sum of the well extraction totals is not equal to the total value reported. This discrepancy is attributed to inherent errors associated with comparing these two independently measured values.

(FFB9) = Former Fairchild Building 9 recovery well connected to System 1 for treatment. Further discussion of this well is provided in the Former Fairchild Building 9 Annual Progress Report (Geosyntec, 2012b)

(FFB18) = Former Fairchild Building 18 recovery well connected to System 1 for treatment. Further discussion of this well is provided in the Former Fairchild Building 18 Annual Progress Report (Geosyntec, 2012c).

(RGRP) = Regional Groundwater Remediation Program well connected to System 1 for treatment. Further discussion of this well is provided in the MEW RGRP 2011 Annual Progress Report (Geosyntec, 2012a)

-- = well was off this month

EPA = United States Environmental Protection Agency

Table 6
Monthly Average Recovery Well Flow Rates, System 3
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Extraction Well	2011 Average Monthly Flowrate[1] (gpm)											
	January	February	March	April	May	June	July	August	September	October	November	December
A/A1 Zone												
RW-5A	2.27	2.23	2.33	2.80	3.32	3.42	3.28	3.30	3.00	2.80	2.95	2.81
RW-7A	10.97	10.66	11.34	11.58	11.57	11.57	10.60	11.34	11.43	9.71	10.28	10.94
RW-9A (RGRP)	5.10	4.95	5.31	5.67	5.90	6.16	5.87	6.18	6.02	5.54	5.40	5.18
RW-18A	6.81	5.46	5.56	6.58	6.86	6.76	5.94	5.57	3.18	2.44	3.07	6.37
RW-27A	3.77	4.84	2.86	2.50	2.71	4.19	4.74	4.67	4.23	4.24	3.75	4.91
B1/A2 Zone												
RW-5(B1)	4.56	4.34	4.35	4.33	4.35	4.57	4.32	4.56	4.54	4.28	4.42	4.37
RW-7(B1)	2.11	1.95	1.91	1.88	2.48	2.27	2.16	1.91	1.54	1.42	2.26	2.17
RW-9(B1)R (RGRP)	5.87	5.62	5.44	6.08	6.57	6.74	6.23	6.40	6.54	5.86	6.00	5.73
RW-12(B1)	5.44	5.30	4.13	4.22	5.43	5.12	5.48	6.20	6.28	6.06	6.63	6.30
B2 Zone												
RW-5(B2)[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-7(B2)[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-9(B2) (RGRP)	3.38	3.20	3.27	3.51	3.47	3.53	3.35	3.51	3.42	3.11	3.31	3.31
Total	50	49	46	49	53	54	52	54	50	45	48	52

Notes:

1. Monthly average extraction well flow rates werecalculated by dividing the volume of groundwater extracted at each well by the time (minutes) between the effluent totalizer readings (generally taken last Wednesday of each month).

2. Well is offline with EPA approval (RMT, 2000).

(RGRP) = Regional Groundwater Remediation Program well connected to System 3 for treatment. Further discussion of this well is provided in the MEW RGRP 2011 Annual Progress Report (Geosyntec, 2012)

-- = well was off this month
gpm = gallons per minute

Table 7
Monthly Extraction Totals, System 3
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Extraction Well	2011 Monthly Volume Extracted[1] (gallons)											
	January	February	March	April	May	June	July	August	September	October	November	December
A/A1 Zone												
RW-5A	91,462	90,004	117,391	112,987	133,969	172,321	132,236	166,304	121,087	112,972	148,780	113,219
RW-7A	442,355	429,710	571,399	466,842	466,404	582,921	427,390	571,535	460,779	391,704	518,052	441,276
RW-9A (RGRP)	205,438	199,590	267,429	228,447	237,987	310,654	236,683	311,409	242,566	223,392	271,976	208,799
RW-18A	274,704	219,971	280,137	265,433	276,420	340,719	239,537	280,546	128,303	98,220	154,517	256,896
RW-27A	151,959	195,198	144,386	100,739	109,295	211,366	191,236	235,125	170,478	171,031	188,900	198,128
B1/A2 Zone												
RW-5(B1)	183,941	174,966	219,042	174,450	175,588	230,521	174,262	229,928	183,111	172,714	222,950	176,095
RW-7(B1)	85,024	78,775	96,245	76,000	99,866	114,550	87,222	96,208	62,036	57,154	113,694	87,505
RW-9(B1)R (RGRP)	236,843	226,776	273,950	245,106	265,029	339,824	251,229	322,353	263,739	236,443	302,176	230,859
RW-12(B1)	219,160	213,779	207,913	170,082	218,758	257,962	221,067	312,257	253,368	244,507	334,318	254,146
B2 Zone												
RW-5(B2)[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-7(B2)[2]	--	--	--	--	--	--	--	--	--	--	--	--
RW-9(B2) (RGRP)	136,091	129,084	164,594	141,326	140,010	178,156	135,161	177,056	138,066	125,370	166,981	133,413
Total[3]	1,853,300	1,894,300	2,178,100	1,743,700	1,876,400	2,194,900	1,945,590	2,277,160	1,721,675	1,617,775	2,226,300	1,853,900

Notes:

1. Monthly volumes of groundwater extracted are based on effluent totalizer readings at each well (generally taken last Wednesday of each month).

2. Well is offline with EPA approval (RMT, 2000; Geosyntec, 2010).

3. Total values are calculated from the system effluent meter, therefore the sum of the well extraction totals is not equal to the total value reported. This discrepancy is attributed to inherent errors associated with comparing these two independently measured values.

(RGRP) = Regional Groundwater Remediation Program well connected to System 3 for treatment. Further discussion of this well is provided in the MEW RGRP 2011 Annual Progress Report (Geosyntec, 2012)

-- = well was off this month

EPA = United States Environmental Protection Agency

Table 8A

VOC Sampling Results Summary, System 1

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)											
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	1,1,1-TCA	TCE	PCE	Vinyl Chloride	1,4-Dioxane[1]
Influent	2/10/2011	<8.3	**7.7**	<4.2	**5.4**	**400**	**7.8**	<17	**11**	**610**	<4.2	**5.0**	NA
Influent	4/14/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Influent	5/12/2011	<8.3	**16**	<4.2	**8.5**	**540**	**28**	<17	**19**	**1200**	<4.2	**7.0**	**1.4**
Influent	8/11/2011	<7.1	**7.7**	<3.6	**6.6**	**560**	**17**	<14	**11**	**930**	<3.6	**5.2**	NA
Influent	11/3/2011	<14	**12**	<7.1	<7.1	**480**	**27**	<29	**13**	**930**	<7.1	<7.1	NA
Midpoint 1	1/13/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	2/10/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	3/16/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	4/5/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	5/12/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	6/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	7/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	8/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	9/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	9/19/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	10/10/2011	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
Midpoint 1	11/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	12/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 2	2/10/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 2	5/12/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 2	8/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 2	11/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	1/13/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	2/10/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	3/16/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	4/5/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	5/12/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<1.0
Effluent	6/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	7/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
NPDES Trigger Levels		*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*3*
Effluent Limitations:		*5*	*5*	*0.5*	*0.11*	*5*	*5*	*5*	*5*	*5*	*5*	*0.5*	*NE*

Table 8A

VOC Sampling Results Summary, System 1

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)											
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	1,1,1-TCA	TCE	PCE	Vinyl Chloride	1,4-Dioxane[1]
Effluent	8/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	9/9/2011	<1.0	<0.5	<0.5	<0.5	**1.5**	<0.5	<2.0	<0.5	**3.2**	<0.5	<0.5	NA
Effluent	9/19/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	10/10/2011	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
Effluent	11/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.98
Effluent	12/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	2/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	3/16/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	5/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	7/29/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	9/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	9/27/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	9/28/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	10/6/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	10/7/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	11/4/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	12/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
NPDES Trigger Levels		*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*3*
Effluent Limitations:		*5*	*5*	*0.5*	*0.11*	*5*	*5*	*5*	*5*	*5*	*5*	*0.5*	*NE*

Notes:

All Parameters are within effluent limits specified in NPDES permit order no. R2-2009-0059, NPDES permit no. CAG912003

The NPDES permit requries semiannual sampling of 1,4-Dioxane if the chemical is known to be in the influent. In May 2011, the influent was sampled for 1,4-Dioxane. Because it was not detected, sampling the effluent for the chemical is not required.

In accordance with the NPDES permit, if reporting limit for 1,1-DCE is greater than the effluent limit, the permit specifies that non-detect using a 0.5 µg/L reporting limit will not be deemed to be out of compliance.

Effluent limitations are maximum daily effluent limitations on discharge to drinking water areas as specified in Order No. R2-2009-0059, VOC General NPDES Permit No. CAG912003.

1,1-DCA = 1,1-Dichloroethane
1,2-DCA = 1,2-Dichloroethane
1,1-DCE = 1,2-Dichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
Freon 113 = trichlorotriflourethane
trans-1,2-DCE = trans-1,2-Dichloroethene
PCE = Tetrachloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
TCE = Trichloroethene

(1) 1,4-dioxane analyzed by method 8270C SIM
< indicates analyte not detected above the reported detection limit
NA indicates the sample wasn't analyzed for the given analyte
CT = Curtis and Tompkins Laboratories, Berkeley, CA
Midpoint 1 = sample collected between the primary and secondary carbon vessels
Midpoint 2 = sample collected between the secondary and tertiary carbon vessels
NE = Not Established
NPDES = National Pollutant Discharge Elimination System
µg/L = micrograms per liter

Table 8B
Inorganic Sampling Results Summary, System 1
MEW Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Se[1] (µg/L)	Rainbow Trout Acute Toxicity[2] (% survival)
Influent	02/10/11	7.24	19.1	1091	---	---	---
Influent	05/12/11	7.13	20.1	1040	---	---	---
Influent	08/11/11	7.19	20.6	859	---	---	---
Influent	11/03/11	7.14	20.1	765	---	---	---
Midpoint 1	01/13/11	7.15	18.4	1070	---	---	---
Midpoint 1	02/10/11	7.12	19.7	1071	---	---	---
Midpoint 1	03/16/11	7.05	18.7	1284	---	---	---
Midpoint 1	04/05/11	7.20	19.2	822	---	---	---
Midpoint 1	05/12/11	7.07	19.6	1053	---	---	---
Midpoint 1	06/02/11	7.22	19.6	1061	---	---	---
Midpoint 1	07/11/11	7.11	21.9	760	---	---	---
Midpoint 1	08/11/11	7.09	20.7	860	---	---	---
Midpoint 1	09/09/11	6.91	22.4	906	---	---	---
Midpoint 1	10/10/11	7.35	19.9	794	---	---	---
Midpoint 1	11/03/11	7.06	20.1	755	---	---	---
Midpoint 1	12/02/11	6.92	19.3	843	---	---	---
Midpoint 2	02/10/11	7.12	20.1	1061	---	---	---
Midpoint 2	05/12/11	7.15	19.8	1041	---	---	---
Midpoint 2	08/11/11	7.17	20.7	856	---	---	---
Midpoint 2	11/03/11	7.15	19.6	765	---	---	---
Effluent	01/13/11	7.25	18.4	1067	---	---	---
Effluent	02/10/11	7.49	19.8	1073	---	---	---
Effluent	03/16/11	7.45	18.2	1270	---	**6.3**	---
Effluent	04/05/11	7.25	19.0	816	---	---	---
Effluent	05/12/11	7.13	19.7	1061	---	**6.4**	---
Effluent	06/02/11	7.36	18.9	1029	---	---	---
Effluent	07/11/11	7.09	22.3	758	---	---	---
Effluent	08/11/11	7.19	20.3	850	---	**7.7**	---
Effluent	09/09/11	6.89	21.8	678	---	---	---
Effluent	10/10/11 - 10/12/11	7.27 / 7.34	20.1 / 19.1	790 / 784	---	---	100
Effluent	11/03/11	6.98	19.2	786	<0.02	4.6	---
Effluent	12/02/11	7.14	18.9	970	---	---	---
NPDES Trigger Levels:		---	---	---	5	5	---
Effluent Limitations:[3]		6.5 to 8.5	NE	NE	NE	NE	70

General Notes:

All parameters are within effluent limits specified in NPDES permit order no. R2-2009-0059, NPDES permit no. CAG912003.
Per Order No. R2-2009-0059, VOC General NPDES Permit No. CAG912003, pH, temperature, electrical conductivity, and turbidity are now required to be reported on an annual basis but pH, temperature, and conductivity readings are collected on a monthly basis. System effluent was analyzed for turbidity in November.
Sampling for hardness and salinity is required in a single annual sample in the receiving water only if trigger levels for Cadmium, Chromium (total), Copper, Lead, Nickel, Silver, or Zinc are exceeded. System samples are analyzed for these metals, mercury, and cyanide every three years and sampling was last performed in October 2009. The next triennial sampling will be conducted in 2012.
BOLD = Analyte is above the trigger limit in the NPDES permit. Trigger levels are not effluent limitations; instead, they are levels above which additional investigation is required to determine further actions. Selenium in the MEW Area is a result of ambient background concentrations as documented in the fourth quarter 2010 NPDES report.

Notes:

1. Selenium effluent monitoring was accelerated to quarterly in the second quarter of 2010.
2. Rainbow trout acute toxicity, 96-hr static, percent survival; sampled in October of each year coincident with effluent sampling.
3. Effluent limitation in system discharge as specified in Order No. R2-2009-0059, VOC General NPDES Permit CAG912003.

--- = not applicable, not required
ºC = degrees Celsius
Midpoint 1 = sample collected between the primary and secondary carbon vessels
Midpoint 2 = sample collected between the secondary and tertiary carbon vessels
µS/cm = micro Siemens per centimeter
NE = not established
NPDES = National Pollutant Discharge Elimination System
NTU = nephelometric turbidity unit
VOC = volatile organic compound
Se = selenium

Table 9A
VOC Sampling Results Summary, System 3
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)											
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	1,1,1-TCA	TCE	PCE	Vinyl Chloride	1,4-Dioxane[1]
Influent	1/12/2011	<13	**11**	<6.3	**12**	**580**	**22**	<25	<6.3	**1100**	<6.3	**1.8**	**3.1**
Influent	1/26/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	**3.3**
Influent	2/10/2011	<14	**11**	<7.1	**12**	**590**	**17**	<29	<7.1	**1100**	<7.1	<7.1	**2.5**
Influent	5/9/2011	<14	**12**	<7.1	**12**	**590**	**35**	<29	<7.1	**1100**	<7.1	<7.1	**3.0**
Influent	8/11/2011	<14	**8.6**	<7.1	**11**	**530**	**23**	<29	<7.1	**1000**	**7.5**	<7.1	**2.1**
Influent	11/3/2011	<14	**9.5**	<7.1	**12**	**610**	**22**	<29	<7.1	**970**	**18**	**2.2**	**3.0**
Midpoint 1	1/12/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	2/10/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	3/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	4/5/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	5/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	6/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	7/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	**1.9**	NA
Midpoint 1	8/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	9/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	10/10/2011	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**1.6**	NA
Midpoint 1	11/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 1	12/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 2	2/10/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 2	5/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 2	8/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Midpoint 2	11/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	1/12/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.94
Effluent (D)	1/12/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	1/26/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.99
Effluent	2/10/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.98
Effluent (D)	2/10/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.97
Effluent	3/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	**1.4**
Effluent (D)	3/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	**1.4**
NPDES Trigger Levels		*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*3*
Effluent Limitations:		*5*	*5*	*0.5*	*0.11*	*5*	*5*	*5*	*5*	*5*	*5*	*0.5*	*NE*

Table 9A
VOC Sampling Results Summary, System 3
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)											
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	1,1,1-TCA	TCE	PCE	Vinyl Chloride	1,4-Dioxane[1]
Effluent	4/5/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.96
Effluent (D)	4/5/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.96
Effluent	5/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	**1.6**
Effluent (D)	5/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	**1.5**
Effluent	6/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent (D)	6/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Effluent	6/10/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.99
Effluent (D)	6/10/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<1.0
Effluent	7/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	**2.5**
Effluent (D)	7/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	**2.5**
Effluent	8/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.98
Effluent (D)	8/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.98
Effluent	9/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	**2.0**
Effluent (D)	9/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	**2.0**
Effluent	10/10/2011	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**2.8**
Effluent (D)	10/10/2011	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**2.6**
Effluent	11/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.98
Effluent (D)	11/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.98
Effluent	12/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.93
Effluent (D)	12/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.93
Travel Blank	1/12/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	2/10/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	3/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	4/5/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	5/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	6/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	7/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	8/11/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	9/9/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	9/28/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
NPDES Trigger Levels		*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*3*
Effluent Limitations:		*5*	*5*	*0.5*	*0.11*	*5*	*5*	*5*	*5*	*5*	*5*	*0.5*	*NE*

Table 9A

VOC Sampling Results Summary, System 3

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)											
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	1,1,1-TCA	TCE	PCE	Vinyl Chloride	1,4-Dioxane[1]
Travel Blank	9/29/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	9/30/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	10/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	10/4/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	10/10/2011	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	NA
Travel Blank	11/3/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
Travel Blank	12/2/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	NA
NPDES Trigger Levels		*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*NE*	*3*
Effluent Limitations:		*5*	*5*	*0.5*	*0.11*	*5*	*5*	*5*	*5*	*5*	*5*	*0.5*	*NE*

Notes:

All Parameters are within effluent limits specified in NPDES permit order no. R2-2009-0059, NPDES permit no. CAG912003

The NPDES permit requries semiannual sampling of 1,4-Dioxane if the chemical is known to be in the influent. In May 2011, the influent was sampled for 1,4-Dioxane. Because it was not detected, sampling the effluent for the chemical is not required.

In accordance with the NPDES permit, if reporting limit for 1,1-DCE is greater than the effluent limit, the permit specifies that non-detect using a 0.5 µg/L reporting limit will not be deemed to be out of compliance.

Effluent limitations are maximum daily effluent limitations on discharge to drinking water areas as specified in Order No. R2-2009-0059, VOC General NPDES Permit No. CAG912003.

1,1-DCA = 1,1-Dichloroethane
1,2-DCA = 1,2-Dichloroethane
1,1-DCE = 1,2-Dichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
Freon 113 = trichlorotriflourethane
trans-1,2-DCE = trans-1,2-Dichloroethene
PCE = Tetrachloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
TCE = Trichloroethene

(1) 1,4-dioxane analyzed by method 8270C SIM
< indicates analyte not detected above the reported detection limit
NA indicates the sample wasn't analyzed for the given analyte
CT = Curtis and Tompkins Laboratories, Berkeley, CA
Midpoint 1 = sample collected between the primary and secondary carbon vessels
Midpoint 2 = sample collected between the secondary and tertiary carbon vessels
NE = Not Established
NPDES = National Pollutant Discharge Elimination System
µg/L = micrograms per liter

Table 9B
Inorganic Sampling Results Summary, System 3
MEW Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)	Rainbow Trout Acute Toxicity[1] (% survival)
Influent	01/12/11	7.00	19.4	1020	---	---
Influent	01/26/11	7.15	19.0	1066	---	---
Influent	02/10/11	7.13	19.9	1028	---	---
Influent	05/09/11	6.92	20.4	1026	---	---
Influent	08/11/11	7.06	20.9	851	---	---
Influent	11/03/11	7.33	19.9	795	---	---
Midpoint 1	01/12/11	6.90	19.2	1020	---	---
Midpoint 1	02/10/11	7.18	19.9	1026	---	---
Midpoint 1	03/09/11	7.22	20.0	762	---	---
Midpoint 1	04/05/11	7.36	20.5	787	---	---
Midpoint 1	05/09/11	7.14	20.1	1037	---	---
Midpoint 1	06/02/11	7.35	19.9	1021	---	---
Midpoint 1	07/11/11	7.11	26.6	729	---	---
Midpoint 1	08/11/11	7.16	20.8	851	---	---
Midpoint 1	09/09/11	7.07	21.6	776	---	---
Midpoint 1	10/10/11	7.20	20.6	776	---	---
Midpoint 1	11/03/11	7.17	21.0	754	---	---
Midpoint 1	12/02/11	6.58	19.2	787	---	---
Midpoint 2	02/10/11	7.30	20.0	1019	---	---
Midpoint 2	05/09/11	6.79	20.3	1035	---	---
Midpoint 2	08/11/11	7.12	20.7	847	---	---
Midpoint 2	11/03/11	7.05	21.0	762	---	---
Effluent	01/12/11	7.05	18.8	1008	---	---
Effluent	01/26/11	7.32	18.0	1068	---	---
Effluent	02/10/11	7.90	20.3	1023	---	---
Effluent	03/09/11	7.17	20.1	746	---	---
Effluent	04/05/11	7.26	19.9	778	---	---
Effluent	05/09/11	6.84	20.5	1033	---	---
Effluent	06/02/11	7.28	20.0	1026	---	---
Effluent	07/11/11	7.49	21.7	717	---	---
Effluent	08/11/11	7.11	20.3	850	---	---
Effluent	09/09/11	7.02	22.1	792	---	---
Effluent	10/10/11 - 10/12/11	7.35 / 7.16	20.5 / 19.4	777 / 766	---	100
Effluent	11/03/11	7.16	20.9	759	<0.02	---
Effluent	12/02/11	6.71	19.3	717	---	---
NPDES Trigger Levels:		---	---	---	5	---
Effluent Limitations:[2]		6.5 to 8.5	NE	NE	NE	70.0

General Notes:

All parameters are within effluent limits specified in NPDES permit no. CAG912003 and order no. R2-2009-0059.
Per Order No. R2-2009-0059, VOC General NPDES Permit No. CAG912003, pH, temperature, electrical conductivity, and turbidity are now required to be reported on an annual basis but pH, temperature, and conductivity readings are collected on a monthly basis. System effluent was analyzed for turbidity in November.
Sampling for hardness and salinity is required in a single annual sample in the receiving water only if trigger levels for Cadmium, Chromium (total), Copper, Lead, Nickel, Silver, or Zinc are exceeded. System samples are analyzed for these metals, mercury, and cyanide every three years and sampling was last performed in October 2009. The next triennial sampling will be conducted in 2012.

Referenced Notes:

1. Rainbow trout acute toxicity, 96-hr static, percent survival; sampled in October of each year coincident with effluent sampling.
2. Effluent limitation in system discharge as specified in Order No. R2-2009-0059, VOC General NPDES Permit No. CAG912003.

--- = not applicable, not required
ºC = degrees Celsius
Midpoint 1 = sample collected between the primary and secondary carbon vessels
Midpoint 2 = sample collected between the secondary and tertiary carbon vessels
µS/cm = micro Siemens per centimeter
NE = not established
NPDES = National Pollutant Discharge Elimination System
NTU = nephelometric turbidity unit
VOC = volatile organic compound

Table 10
Monthly VOC Mass Removal, System 1
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

	Total Groundwater Extracted[1] (gallons)	Influent VOC Concentration[1,2] (mg/L)	Total VOC Mass Removed[1,3] (pounds)
January	1,965,500	1.05	17.1
February	2,102,900	1.05	18.3
March	2,982,000	1.05	26.0
April	1,685,500	1.82	25.5
May	2,191,400	1.82	33.2
June	2,531,100	1.82	38.3
July	2,183,780	1.54	28.0
August	2,344,120	1.54	30.0
September	1,889,250	1.54	24.2
October	1,547,900	1.46	18.8
November	3,215,400	1.46	39.1
December	2,061,450	1.46	25.1
2011 Cumulative[1]	26,700,300		323.8

Notes:
1. Total groundwater extracted, influent VOC concentrations, total VOC mass removed, and 2011 cumulative totals were obtained from the 2011 quarterly NPDES reports (Weiss, 2011a,b,c, and 2012a).
2. System influent samples are analyzed quarterly for System 1.
mg/L = milligrams per liter
NPDES = National Pollutant Discharge Elimination System
VOC = Volatile Organic Compound

Table 11
Monthly VOC Mass Removal, System 3
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

	Total Groundwater Extracted[1] (gallons)	Influent VOC Concentration[1,2] (mg/L)	Total VOC Mass Removed[1] (pounds)
January	1,853,300	1.7	26.7
February	1,894,300	1.7	27.3
March	2,178,100	1.7	31.4
April	1,743,700	1.75	25.4
May	1,876,400	1.75	27.3
June	2,194,900	1.75	32.0
July	1,945,590	1.58	25.6
August	2,277,160	1.58	30.0
September	1,721,675	1.58	22.7
October	1,617,775	1.64	22.1
November	2,226,300	1.64	30.5
December	1,853,900	1.64	25.4
2011 Cumulative[1]	23,383,100		325.4

Notes:
1. Total groundwater extracted, influent VOC concentrations, total VOC mass removed, and cumulative totals were obtained from the NPDES quarterly reports (Weiss, 2011d,e,f, and 2012b).
2. System influent samples are analyzed quarterly for System 3.

mg/L = milligrams per liter
NPDES = National Pollutant Discharge Elimination System
VOC = Volatile Organic Compound

Table 12
Summary of 2011 Routine and Non-Routine Maintenance and Operational Activities, System 1
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

2011	Component	Off-line Time	Event/Alert	Diagnosis and Response	Regulatory Notification[1]
January 11 – 12	Treatment System	24 hours	Carbon change.	System was restarted.	Not Required
February 3-4	Treatment System	21 hours	Carbon change.	System was restarted.	Not Required
March 1 – 2	Treatment System	24 hours	Carbon change.	System was restarted.	Not Required
March 15	Treatment System	< 1 hour	Sump high level alert.	Alert was tested during quarterly O&M testing. System was restarted.	Not Required
March 22 – 23	Treatment System	20 hours	Carbon change.	System was restarted.	Not Required
March 31 – April 1	Treatment System	8 hours	Multiple vault high level alerts.	Alerts were tested during annual vault inspections. System was restarted.	Not Required
April 5	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during monthly O&M testing. System was restarted.	Not Required
April 19 – 20	Treatment System	27 hours	Carbon change.	System was restarted.	Not Required
April 28	Building 18[2]	2 hours	Pump replacement.	Building 18 system was restarted.	Not Required
May 1 – May 2	AE/RW-9-2	35 hours	Low flow alert.	The flow meter fouled. The paddle wheel and the piping in the vault were cleaned and the well was restarted.	Not Required
May 3	Building 18[2]	1 hour	Multiple alerts.	Alerts were caused by a power service interruption. The Building 18 system was restarted.	Not Required
May 18 – 19	Treatment System	22 hours	Carbon change.	System was restarted.	Not Required
May 24	AE/RW-9-2	1 hour	Low flow alert	The flow meter paddle wheel fouled. It was cleaned and the well was restarted.	Not Required
May 31	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during quarterly O&M testing. System was restarted.	Not Required
June 10	AE/RW-9-2	8 hours	Low flow alert.	The flow meter paddle wheel fouled. It was cleaned and the well was restarted.	Not Required
June 22	Treatment System, 38B2	1 hour	Vault high level alert.	The high level alert was triggered by irrigation water. The water was pumped out of the vault and the vault was sealed.	Not Required
June 27	RW-4(B2)	1 hour	Low flow alert.	Well was restarted.	Not Required
June 28	Treatment System, RW-3(B1)	< 1 hour	Vault high level alert.	The high level alert was triggered by rain. Water was removed from the vault.	Not Required
July 2	AE/RW-9-2	8 hours	Low flow alert.	The flow meter paddle wheel had fouled. It was cleaned and the well was restarted.	Not Required
July 5	Treatment System	< 1 hour	Multiple alerts.	Alerts were set off during routine O&M. System was restarted.	Not Required
July 12 – 13	Treatment System	18 hours	Carbon change.	System was restarted.	Not Required
July 18	Treatment System	< 1 hour	Sump high level alert.	Alerts were set off during monthly O&M testing. System was restarted.	Not Required
July 24 – 25	AE/RW-9-2	20 hours	Low flow alert.	The flow meter paddle wheel had fouled. It was cleaned and the well was restarted.	Not Required
August 11	Treatment System	< 1 hour	Sump high level alert.	Alerts were set off during monthly O&M testing. System was restarted.	Not Required
August 24 – 25	AE/RW-9-2	17 hours	Low flow alert.	The flow meter paddle wheel had fouled. It was cleaned and the well was restarted.	Not Required
September 8 – 9	Treatment System	21 hours	Carbon change.	System was restarted.	Not Required
September 15	RW-4(B2)	26 hours	Low flow alert.	Pump saver was reprogrammed, and well was restarted.	Not Required
September 19 – 21	Treatment System	49 hours	Manual shut down.	TCE and cis-1,2-DCE were detected in an effluent sample at concentrations below the discharge limits. A confirmation sample was collected and the treatment system was shut down. The system was restarted when the confirmation sample showed no TCE or cis-1,2-DCE.	Not Required
September 21	AE/RW-9-2	2 hours	Low flow alert.	The pump failed and was replaced. Well was restarted.	Not Required
September 21	Treatment System	13 hours	Sump high level alert.	The sump pump was not running after the manual shutdown. Sump pump and treatment system were restarted.	Not Required
September 29	Treatment System	< 1 hour	Sump high level alert.	Alerts were set off during quarterly O&M testing. System was restarted.	Not Required

Table 12
Summary of 2011 Routine and Non-Routine Maintenance and Operational Activities, System 1
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

2011	Component	Off-line Time	Event/Alert	Diagnosis and Response	Regulatory Notification[1]
October 7	Treatment System	< 1 hour	Sump high level alert.	Alerts were set off during monthly O&M testing. System was restarted.	Not Required
October 19 – 20	Treatment System	24 hours	Carbon change.	System was restarted.	Not Required
October 20	RW-4(B1)	< 1 hour	Low flow alert.	Alert was cleared and well was restarted.	Not Required
October 22	AE/RW-9-2	42 hours	Low flow alert.	The flow meter paddle wheel had fouled. It was cleaned and the well was restarted.	Not Required
November 3	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during annual O&M testing. System was restarted.	Not Required
November 11	AE/RW-9-2	1 hour	Low flow alert.	The flow meter paddle wheel had fouled. The paddle wheel was cleaned, and the well was restarted.	Not Required
December 2	Treatment System	< 1 hour	Sump high level alert.	Alerts were set off during quarterly O&M testing. System was restarted.	Not Required
December 10 –13	AE/RW-9-2	71 hours	Low flow alert.	Pump failed and was replaced. Well was restarted.	Not Required
December 20 – 21	Treatment System	24 hours	Carbon change.	System was restarted.	Not Required

Notes:

1. The EPA is required to be notified if the treatment system or an extraction well is shut down for 72 consecutive hours. The Water Board is required to be notified if the treatment system is shut down for more than 120 consecutive hours.
2. Groundwater extracted from Former Fairchild Building 18 is treated at System 1. Hence, Building 18 alerts are reported along with System 1 alerts.

Gray shading represents non-routine maintenance or non-routine events

cis-1,2-DCE = cis-1,2-dichloroethene

EPA = United States Environmental Protection Agency

O&M = operation and Maintenance

TCE = trichloroethene

Table 13
Summary of 2011 Routine and Non-Routine Maintenance and Operational Activities, System 3
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

2011	Component	Off-line Time	Event/Alert	Diagnosis and Response	Regulatory Notification[1]
February 3-4	Treatment System	30 hours	Carbon change.	The system was restarted.	Not Required
February 25	Treatment System	1 hour	Multiple vault high level alerts.	Alerts were set off during annual vault inspections. System was restarted.	Not Required
February 25	Treatment System	1 hour	Sump high level alert.	The sump pump had become air locked, preventing it from pumping the water. Air was released, and the float switch was relocated. System was restarted.	Not Required
March 3	Treatment System	2 hours	Multiple vault high level alerts.	Alerts were set off during annual vault inspections. System was restarted	Not Required
March 11	Treatment System, RW-12(B1)	14 hours	Vault high level alert.	Vault was flooded with irrigation water. Water was pumped out, and system was restarted.	Not Required
March 15	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during quarterly O&M testing. System was restarted.	Not Required
March 22-23	Treatment System	22 hours	Carbon change.	The system was restarted.	Not Required
April 5	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during monthly O&M testing. System was restarted.	Not Required
April 15-18	RW-7(B1)	64 hours	Transmitter malfunctioned.	The transmitter was replaced, and the well was restarted.	Not Required
April 27-28	Treatment System	< 1 hour	Sump high level alert.	The filters plugged and the sump pump could not pump. The flow was diverted to filter housing F-1, and filter cartridges in filter housing F-2 were changed.	Not Required
May 9	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during monthly O&M testing. System was restarted.	Not Required
May 18-19	Treatment System	26 hours	Carbon change.	The system was restarted.	Not Required
May 31	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during quarterly O&M testing. System was restarted.	Not Required
July 12-13	Treatment System	22 hours	Carbon change.	System was restarted.	Not Required
July 18	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during monthly O&M testing. System was restarted.	Not Required
August 12	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during monthly O&M testing. System was restarted.	Not Required
August 17	Treatment System	< 1 hour	Vault high level alert.	Alert was set off during testing of the vault level switch. System was restarted.	Not Required
September 9	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during quarterly O&M testing. System was restarted.	Not Required
October 7	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during monthly O&M testing. System was restarted.	Not Required
October 19-20	Treatment System	20 hours	Carbon change.	System was restarted.	Not Required
October 25	Treatment System	< 1 hour	Sump high level alert.	The filters plugged, and the sump pump could not pump. The flow was diverted to filter housing F-2, and filter cartridges in filter housing F-1 were changed.	Not Required
November 3	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during annual O&M testing. System was restarted.	Not Required
December 2	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during quarterly O&M testing. System was restarted.	Not Required
December 16	Treatment System	< 1 hour	Sump high level alert.	Alert was set off during sump pump maintenance. System was restarted.	Not Required

Notes:

1. The EPA is required to be notified if the treatment system or an extraction well is shut down for 72 consecutive hours. The Water Board is required to be notified if the treatment system is shut down for more than 120 consecutive hours.

Gray shading represents non-routine maintenance or non-routine events

EPA = United States Environmental Protection Agency

O&M = operations and maintenance

Table 14

Groundwater Elevations, January Through December 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Well ID	TOC Elevation (ft msl)	24 March 2011		15 September 2011	
		Depth To Water (feet)	Groundwater Elevation (ft msl)	Depth To Water (feet)	Groundwater Elevation (ft msl)
A/A1 Zone					
33A	43.74	9.21	34.53	10.21	33.53
46A	42.10	10.02	32.08	11.20	30.90
51A	44.22	15.41	28.81	17.12	27.10
57A	39.21	10.59	28.62	12.60	26.61
59A	39.56	11.66	27.90	13.45	26.11
61A (RGRP)	37.18	9.00	28.18	10.78	26.40
62A	37.88	12.90	24.98	14.26	23.62
67A	39.77	12.68	27.09	15.30	24.47
68A	43.26	12.05	31.21	13.51	29.75
76A	40.08	15.74	24.34	17.34	22.74
84A	43.38	9.44	33.94	10.70	32.68
118A	39.78	15.85	23.93	16.18	23.60
121A	41.82	13.86	27.96	15.51	26.31
124A	38.86	12.99	25.87	14.50	24.36
127A	43.81	8.88	34.93	9.73	34.08
128A	43.38	8.93	34.45	9.59	33.79
129A	41.47	12.24	29.23	13.24	28.23
130A	41.60	12.51	29.09	14.16	27.44
133A	43.75	11.29	32.46	12.75	31.00
156A	40.22	15.08	25.14	18.60	21.62
157A	40.50	13.81	26.69	16.66	23.84
REG-MW-2A (RGRP)	38.11	10.27	27.84	11.55	26.56
RW-3A	43.34	8.98	34.36	10.05	33.29
RW-4A	42.66	13.24	29.42	14.80	27.86
RW-5A	36.86	11.50	25.36	11.95	24.91
RW-7A	37.18	15.59	21.59	17.26	19.92
RW-9A	37.83	15.26	22.57	18.18	19.65
RW-16A	43.89	13.84	30.05	15.57	28.32
RW-18A	37.53	15.10	22.43	12.45	25.08
RW-27A	38.41	14.45	23.96	17.39	21.02
RW-28A	42.33	14.00	28.33	15.48	26.85
A2/B1 Zone					
2B1	43.43	13.45	29.98	15.01	28.42
20B1	43.89	9.44	34.45	10.75	33.14
60B1	39.64	15.39	24.25	17.81	21.83
67B1	36.93	7.25	29.68	8.97	27.96
115B1	38.76	11.83	26.93	13.75	25.01
119B1 (RGRP)	42.96	9.57	33.39	10.89	32.07
147B1	37.82	10.83	26.99	12.21	25.61
RW-3(B1)	43.28	9.12	34.16	10.43	32.85
RW-4(B1)	42.61	13.81	28.80	14.98	27.63
RW-5(B1)	37.87	12.09	25.78	12.23	25.64
RW-7(B1)	36.29	21.02	15.27	21.68	14.61
RW-9(B1)R (RGRP)	38.59	29.89	8.70	33.55	5.04
RW-12(B1)	40.51	12.99	27.52	21.52	18.99

Table 14

Groundwater Elevations, January Through December 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Well ID	TOC Elevation (ft msl)	24 March 2011		15 September 2011	
		Depth To Water (feet)	Groundwater Elevation (ft msl)	Depth To Water (feet)	Groundwater Elevation (ft msl)
B2 Zone					
10B2	43.90	7.45	36.45	8.71	35.19
11B2	37.19	6.99	30.20	8.39	28.80
113B2 (RGRP)	39.01	12.19	26.82	14.11	24.90
118B2	43.21	7.41	35.80	9.00	34.21
148B2	37.72	7.18	30.54	8.64	29.08
RW-3(B2)	42.96	6.20	36.76	7.82	35.14
RW-4(B2)	41.79	68.88	-27.09	11.70	30.09
RW-5(B2)	37.98	6.91	31.07	8.50	29.48
RW-7(B2)	38.76	11.13	27.63	11.89	26.87
RW-9(B2) (RGRP)	37.88	46.81	-8.93	53.45	-15.57

Notes:
ft msl = Feet Mean Sea Level
TOC = Top of Casing
RGRP = Regional Groundwater Remediation Program

Table 15

Groundwater Elevations, Slurry Wall Well Pairs, January 2007 Through December 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Date	Well ID (Outside)	Groundwater Elevation (ft msl)	Well ID (Inside)	Groundwater Elevation (ft msl)	Difference	Flow Direction
Southern Wall - Upgradient Well Pairs						
3/22/2007	127A	34.56	33A	33.99	0.57	Inward
5/24/2007	127A	34.18	33A	33.32	0.86	Inward
8/23/2007	127A	34.30	33A	33.73	0.57	Inward
11/15/2007	127A	34.49	33A	34.03	0.46	Inward
3/27/2008	127A	34.41	33A	33.86	0.55	Inward
5/22/2008	127A	34.46	33A	35.34	-0.88	Outward
8/28/2008	127A	34.21	33A	33.66	0.55	Inward
11/20/2008	127A	33.81	33A	33.28	0.53	Inward
3/26/2009	127A	34.46	33A	33.99	0.47	Inward
5/21/2009	127A	34.36	33A	34.24	0.12	Inward
8/27/2009	127A	33.76	33A	33.24	0.52	Inward
11/19/2009	127A	33.50	33A	33.02	0.48	Inward
3/25/2010	127A	34.48	33A	34.00	0.48	Inward
5/27/2010	127A	34.34	33A	33.80	0.54	Inward
8/26/2010	127A	34.00	33A	33.46	0.54	Inward
11/18/2010	127A	33.48	33A	33.05	0.43	Inward
3/24/2011	127A	34.93	33A	34.53	0.40	Inward
5/26/2011	127A	34.39	33A	33.83	0.56	Inward
9/15/2011	127A	34.08	33A	33.53	0.55	Inward
11/10/2011	127A	33.82	33A	33.27	0.55	Inward
3/22/2007	128A	34.52	84A	32.76	1.76	Inward
5/24/2007	128A	33.97	84A	32.64	1.33	Inward
8/23/2007	128A	34.00	84A	32.97	1.03	Inward
11/15/2007	128A	34.35	84A	33.44	0.91	Inward
3/27/2008	128A	34.43	84A	33.28	1.15	Inward
5/22/2008	128A	34.48	84A	33.33	1.15	Inward
11/20/2008	128A	33.64	84A	33.02	0.62	Inward
3/26/2009	128A	34.38	84A	33.38	1.00	Inward
5/21/2009	128A	34.27	84A	33.09	1.18	Inward
8/27/2009	128A	33.58	84A	32.58	1.00	Inward
11/19/2009	128A	33.74	84A	32.22	1.52	Inward
3/25/2010	128A	34.28	84A	33.38	0.90	Inward
5/27/2010	128A	34.06	84A	33.05	1.01	Inward
8/26/2010	128A	33.71	84A	32.79	0.92	Inward
11/18/2010	128A	34.20	84A	32.12	2.08	Inward
3/24/2011	128A	34.45	84A	33.94	0.51	Inward
5/26/2011	128A	34.27	84A	33.05	1.22	Inward
9/15/2011	128A	33.79	84A	32.68	1.11	Inward
11/10/2011	128A	33.55	84A	32.39	1.16	Inward
3/22/2007	136A	33.08	133A	32.09	0.99	Inward
5/24/2007	136A	32.32	133A	31.21	1.11	Inward
8/23/2007	136A	32.37	133A	31.34	1.03	Inward
11/15/2007	136A	33.06	133A	32.06	1.00	Inward
3/27/2008	136A	32.83	133A	31.82	1.01	Inward
5/22/2008	136A	32.78	133A	31.78	1.00	Inward

Table 15

Groundwater Elevations, Slurry Wall Well Pairs, January 2007 Through December 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Date	Well ID (Outside)	Groundwater Elevation (ft msl)	Well ID (Inside)	Groundwater Elevation (ft msl)	Difference	Flow Direction
8/28/2008	136A	32.48	133A	31.47	1.01	Inward
11/20/2008	136A	32.02	133A	31.05	0.97	Inward
3/26/2009	136A	32.88	133A	31.93	0.95	Inward
5/21/2009	136A	32.53	133A	31.82	0.71	Inward
8/27/2009	136A	32.03	133A	31.05	0.98	Inward
11/19/2009	136A	31.80	133A	30.85	0.95	Inward
3/25/2010	136A	32.94	133A	31.95	0.99	Inward
5/27/2010	136A	32.40	133A	31.41	0.99	Inward
8/26/2010	136A	32.04	133A	31.01	1.03	Inward
11/18/2010	136A	32.25	133A	30.50	1.75	Inward
3/24/2011	136A	34.19	133A	32.46	1.73	Inward
5/26/2011	136A	32.49	133A	31.37	1.12	Inward
9/15/2011	136A	32.01	133A	31.00	1.01	Inward
11/10/2011	136A	31.78	133A	30.72	1.06	Inward
Western Wall - Crossgradient Well Pairs						
3/22/2007	130A	28.29	59A	27.69	0.60	Inward
5/24/2007	130A	27.67	59A	26.66	1.01	Inward
8/23/2007	130A	27.74	59A	26.67	1.07	Inward
11/15/2007	130A	28.18	59A	27.32	0.86	Inward
3/27/2008	130A	27.98	59A	27.01	0.97	Inward
5/22/2008	130A	27.94	59A	26.95	0.99	Inward
8/28/2008	130A	27.60	59A	26.74	0.86	Inward
11/20/2008	130A	27.40	59A	26.56	0.84	Inward
3/26/2009	130A	28.15	59A	27.14	1.01	Inward
5/21/2009	130A	27.70	59A	26.64	1.06	Inward
8/27/2009	130A	27.50	59A	26.44	1.06	Inward
11/19/2009	130A	27.26	59A	26.21	1.05	Inward
3/25/2010	130A	28.19	59A	27.19	1.00	Inward
5/27/2010	130A	27.75	59A	26.58	1.17	Inward
8/26/2010	130A	27.76	59A	26.56	1.20	Inward
11/18/2010	130A	27.46	59A	25.68	1.78	Inward
3/24/2011	130A	29.09	59A	27.90	1.19	Inward
5/26/2011	130A	27.63	59A	26.39	1.24	Inward
9/15/2011	130A	27.44	59A	26.11	1.33	Inward
11/10/2011	130A	27.22	59A	25.92	1.30	Inward
Eastern Wall - Crossgradient Well Pairs						
3/22/2007	129A	29.44	121A	28.05	1.39	Inward
5/24/2007	129A	28.67	121A	26.89	1.78	Inward
8/23/2007	129A	28.44	121A	26.91	1.53	Inward
11/15/2007	129A	29.35	121A	27.82	1.53	Inward
3/27/2008	129A	28.70	121A	27.52	1.18	Inward
5/22/2008	129A	28.77	121A	27.42	1.35	Inward
8/28/2008	129A	28.65	121A	27.17	1.48	Inward
11/20/2008	129A	28.33	121A	26.89	1.44	Inward
3/26/2009	129A	29.02	121A	27.72	1.30	Inward
5/21/2009	129A	28.58	121A	27.24	1.34	Inward

Table 15

Groundwater Elevations, Slurry Wall Well Pairs, January 2007 Through December 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Date	Well ID (Outside)	Groundwater Elevation (ft msl)	Well ID (Inside)	Groundwater Elevation (ft msl)	Difference	Flow Direction
8/27/2009	129A	28.26	121A	26.92	1.34	Inward
11/19/2009	129A	28.11	121A	26.77	1.34	Inward
3/25/2010	129A	29.03	121A	27.78	1.25	Inward
5/27/2010	129A	28.59	121A	26.74	1.85	Inward
8/26/2010	129A	28.31	121A	26.45	1.86	Inward
11/18/2010	129A	28.33	121A	25.82	2.51	Inward
3/24/2011	129A	29.23	121A	27.96	1.27	Inward
5/26/2011	129A	28.61	121A	26.54	2.07	Inward
9/15/2011	129A	28.23	121A	26.31	1.92	Inward
11/10/2011	129A	28.14	121A	26.21	1.93	Inward
Northern Wall - Downgradient Well Pairs						
3/22/2007	156A	22.94	157A	25.59	-2.65	Outward
5/24/2007	156A	21.91	157A	24.32	-2.41	Outward
8/23/2007	156A	21.84	157A	24.26	-2.42	Outward
11/15/2007	156A	22.55	157A	25.19	-2.64	Outward
3/27/2008	156A	22.29	157A	24.69	-2.40	Outward
5/22/2008	156A	22.06	157A	24.62	-2.56	Outward
8/28/2008	156A	21.82	157A	24.38	-2.56	Outward
11/20/2008	156A	21.62	157A	24.15	-2.53	Outward
3/26/2009	156A	22.22	157A	24.88	-2.66	Outward
5/21/2009	156A	21.78	157A	24.40	-2.62	Outward
8/27/2009	156A	21.82	157A	24.30	-2.48	Outward
11/19/2009	156A	21.21	157A	24.06	-2.85	Outward
3/25/2010	156A	22.37	157A	24.93	-2.56	Outward
5/27/2010	156A	22.08	157A	24.53	-2.45	Outward
8/26/2010	156A	22.01	157A	24.36	-2.35	Outward
11/18/2010	156A	22.23	157A	24.81	-2.58	Outward
3/24/2011	156A	25.14	157A	26.69	-1.55	Outward
5/26/2011	156A	21.87	157A	24.04	-2.17	Outward
9/15/2011	156A	21.62	157A	23.84	-2.22	Outward
11/10/2011	156A	21.59	157A	23.73	-2.14	Outward
3/22/2007	76A	26.09	118A	25.78	0.31	Inward
5/24/2007	76A	23.30	118A	23.98	-0.68	Outward
8/23/2007	76A	23.05	118A	24.49	-1.44	Outward
11/15/2007	76A	25.75	118A	25.01	0.74	Inward
3/27/2008	76A	23.58	118A	24.95	-1.37	Outward
5/22/2008	76A	23.31	118A	24.68	-1.37	Outward
8/28/2008	76A	23.20	118A	24.53	-1.33	Outward
11/20/2008	76A	23.09	118A	24.53	-1.44	Outward
3/26/2009	76A	23.53	118A	24.88	-1.35	Outward
5/21/2009	76A	23.06	118A	24.63	-1.57	Outward
8/27/2009	76A	22.83	118A	24.28	-1.45	Outward
11/19/2009	76A	22.86	118A	24.49	-1.63	Outward
3/25/2010	76A	23.51	118A	24.97	-1.46	Outward
5/27/2010	76A	23.34	118A	24.78	-1.44	Outward
8/26/2010	76A	23.07	118A	24.29	-1.22	Outward

Table 15

Groundwater Elevations, Slurry Wall Well Pairs, January 2007 Through December 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Date	Well ID (Outside)	Groundwater Elevation (ft msl)	Well ID (Inside)	Groundwater Elevation (ft msl)	Difference	Flow Direction
11/18/2010	76A	22.51	118A	24.15	-1.64	Outward
3/24/2011	76A	24.34	118A	23.93	0.41	Inward
5/26/2011	76A	22.97	118A	23.88	-0.91	Outward
9/15/2011	76A	22.74	118A	23.60	-0.86	Outward
11/10/2011	76A	22.73	118A	23.6	-0.87	Outward
Vertical Gradient Well Pairs						
3/22/2007	115B1	28.02	124A	26.46	1.56	Upward
5/24/2007	115B1	27.25	124A	25.01	2.24	Upward
8/23/2007	115B1	26.08	124A	25.03	1.05	Upward
11/15/2007	115B1	26.94	124A	25.88	1.06	Upward
3/27/2008	115B1	25.81	124A	25.11	0.70	Upward
5/22/2008	115B1	26.00	124A	25.41	0.59	Upward
8/28/2008	115B1	25.50	124A	25.20	0.30	Upward
11/20/2008	115B1	25.12	124A	25.04	0.08	Upward
3/26/2009	115B1	27.26	124A	25.66	1.60	Upward
5/21/2009	115B1	25.65	124A	25.21	0.44	Upward
8/27/2009	115B1	25.41	124A	24.91	0.50	Upward
11/19/2009	115B1	24.98	124A	24.81	0.17	Upward
3/25/2010	115B1	26.13	124A	25.80	0.33	Upward
5/27/2010	115B1	25.67	124A	24.63	1.04	Upward
8/26/2010	115B1	25.68	124A	25.20	0.48	Upward
11/18/2010	115B1	24.90	124A	25.02	-0.12	Downward
3/24/2011	115B1	26.93	124A	25.87	1.06	Upward
5/26/2011	115B1	25.57	124A	24.55	1.02	Upward
9/15/2011	115B1	25.01	124A	24.36	0.65	Upward
11/10/2011	115B1	25.13	124A	24.29	0.84	Upward
3/22/2007	119B1	33.15	133A	32.09	1.06	Upward
5/24/2007	119B1	32.42	133A	31.21	1.21	Upward
8/23/2007	119B1	32.42	133A	31.34	1.08	Upward
11/15/2007	119B1	33.12	133A	32.06	1.06	Upward
3/27/2008	119B1	32.80	133A	31.82	0.98	Upward
5/22/2008	119B1	32.81	133A	31.78	1.03	Upward
8/28/2008	119B1	32.51	133A	31.47	1.04	Upward
11/20/2008	119B1	32.01	133A	31.05	0.96	Upward
3/26/2009	119B1	32.91	133A	31.93	0.98	Upward
5/21/2009	119B1	32.55	133A	31.82	0.73	Upward
8/27/2009	119B1	32.11	133A	31.05	1.06	Upward
11/19/2009	119B1	31.83	133A	30.85	0.98	Upward
3/25/2010	119B1	32.94	133A	31.95	0.99	Upward
5/27/2010	119B1	32.48	133A	31.41	1.07	Upward
8/26/2010	119B1	32.17	133A	31.01	1.16	Upward
11/18/2010	119B1	31.55	133A	30.50	1.05	Upward
3/24/2011	119B1	33.39	133A	32.46	0.93	Upward
5/26/2011	119B1	32.48	133A	31.37	1.11	Upward
9/15/2011	119B1	32.07	133A	31.00	1.07	Upward
11/10/2011	119B1	31.81	133A	30.72	1.09	Upward

Table 15

Groundwater Elevations, Slurry Wall Well Pairs, January 2007 Through December 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Date	Well ID (Outside)	Groundwater Elevation (ft msl)	Well ID (Inside)	Groundwater Elevation (ft msl)	Difference	Flow Direction
3/22/2007	20B1	33.80	33A	33.99	-0.19	Downward
5/24/2007	20B1	33.28	33A	33.32	-0.04	Downward
8/23/2007	20B1	33.46	33A	33.73	-0.27	Downward
11/15/2007	20B1	33.99	33A	34.03	-0.04	Downward
3/27/2008	20B1	33.74	33A	33.86	-0.12	Downward
5/22/2008	20B1	33.79	33A	35.34	-1.55	Downward
8/28/2008	20B1	33.44	33A	33.66	-0.22	Downward
11/20/2008	20B1	32.98	33A	33.28	-0.30	Downward
3/26/2009	20B1	33.79	33A	33.99	-0.20	Downward
5/21/2009	20B1	33.55	33A	34.24	-0.69	Downward
8/27/2009	20B1	32.99	33A	33.24	-0.25	Downward
11/19/2009	20B1	32.72	33A	33.02	-0.30	Downward
3/25/2010	20B1	33.39	33A	34.00	-0.61	Downward
5/27/2010	20B1	33.51	33A	33.80	-0.29	Downward
8/26/2010	20B1	33.15	33A	33.46	-0.31	Downward
11/18/2010	20B1	32.58	33A	33.05	-0.47	Downward
3/24/2011	20B1	34.45	33A	34.53	-0.08	Downward
5/26/2011	20B1	33.53	33A	33.83	-0.30	Downward
9/15/2011	20B1	33.14	33A	33.53	-0.39	Downward
11/10/2011	20B1	32.86	33A	33.27	-0.41	Downward
3/22/2007	60B1	25.61	118A	25.78	-0.17	Downward
5/24/2007	60B1	24.75	118A	23.98	0.77	Upward
8/23/2007	60B1	23.56	118A	24.49	-0.93	Downward
11/15/2007	60B1	24.13	118A	25.01	-0.88	Downward
3/27/2008	60B1	22.48	118A	24.95	-2.47	Downward
5/22/2008	60B1	22.49	118A	24.68	-2.19	Downward
8/28/2008	60B1	21.99	118A	24.53	-2.54	Downward
11/20/2008	60B1	21.55	118A	24.53	-2.98	Downward
3/26/2009	60B1	23.94	118A	24.88	-0.94	Downward
5/21/2009	60B1	22.38	118A	24.63	-2.25	Downward
8/27/2009	60B1	22.29	118A	24.28	-1.99	Downward
11/19/2009	60B1	21.56	118A	24.49	-2.93	Downward
3/25/2010	60B1	22.83	118A	24.97	-2.14	Downward
5/27/2010	60B1	22.57	118A	24.78	-2.21	Downward
8/26/2010	60B1	22.36	118A	24.29	-1.93	Downward
11/18/2010	60B1	22.48	118A	24.15	-1.67	Downward
3/24/2011	60B1	24.25	118A	23.93	0.32	Upward
5/26/2011	60B1	22.14	118A	23.88	-1.74	Downward
9/15/2011	60B1	21.83	118A	23.60	-1.77	Downward
11/10/2011	60B1	22.12	118A	23.6	-1.48	Downward

Notes:
ft msl = Feet Mean Sea Level

Table 16
Calculation of Predicted Capture Widths Based on Combined Flow Rate
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, CA

Parameter	A-Zone[1]	A-Zone Slurry Wall[2]	B1-Zone[1]	B2-Zone[1]
Q = Combined pumping rate (gpm)	10	23	18	4
b = saturated aquifer thickness (ft)	15	15	25	35
i = regional hydraulic gradient (ft/ft)	0.004	0.004	0.003	0.004
K = hydraulic conductivity (ft/day)[3]	40	40	40	5
Calculated Capture Width (ft) = Q/(K x b x i)	800	1900	1200	1200
Measured plume width at widest point (ft)[4]	647	590	647	647

Notes:

1. The combined pumping rate equals the summed average 2011 flow rates of all extraction wells located within the Former Fairchild Buildings 1-4 Site that are outside the slurry wall.

2. The combined pumping rate equals the summed average 2011 flow rates of all extraction wells located within the Former Fairchild Buildings 1-4 Site slurry wall.

3. Hydraulic conductivity values used for each aquifer zone are from the numerical model included as Appendix B to the 2008 Optimization Report (Geosyntec, 2008).

4. Measured plume width at widest point is not continued past Site boundaries, site width is ~ 647 feet

1 cubic foot = 7.48 gallons

1 day = 1440 minutes

gpm = gallons per minute

ft = feet

Assumptions:

1. Homogeneous, isotropic, confined aquifer of infinite extent

2. Uniform regional horizontal hydraulic gradient

3. No net recharge (or net recharge is accounted for in the regional hydraulic gradient)

4. Uniform aquifer thickness

5. Fully penetrating extraction well

6. Steady-state flow

7. Negligible vertical gradient

Table 17
VOC Analytical Results
Five Year Summary, January 2007 through December 2011
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
A/A1 Zone														
33A	11/19/2007	<1.0	**1.2**	<0.5	**2.4**	**12**	<0.5	**8.5**	<20	<0.5	**4.0**	**61**	<0.5	NA
46A	11/21/2007	<1.0	**0.6**	<0.5	**1.2**	**0.6**	<0.5	<0.5	<20	<0.5	**1.2**	**3.4**	<0.5	NA
46A	11/14/2008	<1.0	**1.3**	<0.5	**2.3**	**0.7**	<0.5	**1.2**	<20	<0.5	**1.7**	**20**	<0.5	NA
46A	11/12/2009	<1.0	**1.1**	<0.5	**1.3**	<0.5	<0.5	<2.0	<20	<0.5	**1.5**	**14**	<0.5	NA
46A	11/11/2010	<1.0	**1.0**	<0.5	**1.4**	**0.6**	<0.5	<2.0	<2.0	<0.5	**1.2**	**14**	<0.5	NA
46A	9/29/2011	<1.0	**0.9**	<0.5	**1.4**	**0.5**	<0.5	<2.0	<2.0	<0.5	**1.1**	**14**	<0.5	NA
51A	11/8/2007	<20	**19**	<10	**26**	**1300**	**34**	<10	<400	<10	<10	**11**	<10	NA
57A	11/19/2007	<50	**36**	<25	**31**	**4100**	**210**	<25	<1000	<25	<25	**76**	<25	NA
59A	11/21/2007	<1.0	**14**	<0.5	**9.1**	**8.1**	<0.5	<0.5	<20	**0.5**	**8.1**	**37**	**0.5**	NA
61A (RGRP)	11/21/2007	<1.0	**1.6**	<0.5	**2.3**	**0.7**	<0.5	**0.8**	<20	<0.5	**1.6**	**19**	<0.5	NA
61A (RGRP)	11/14/2008	<1.0	**0.6**	<0.5	**0.8**	<0.5	<0.5	<0.5	<20	<0.5	**1.2**	**3.5**	<0.5	NA
61A (RGRP)	11/2/2009	<1.0	<0.5	<0.5	**1.0**	<0.5	<0.5	<2.0	<20	<0.5	**1.1**	**3.6**	<0.5	NA
61A (RGRP)	11/15/2010	<1.0	**0.6**	<0.5	**1.2**	<0.5	<0.5	<2.0	<2.0	<0.5	**1.5**	**3.4**	<0.5	NA
61A (RGRP)	9/21/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	**4.8**	<0.5	NA
62A	11/12/2007	<130	<63	<63	<63	**7000**	<63	<63	<2500	<63	<63	**71**	<63	NA
62A D	11/12/2007	<83	<42	<42	**46**	**8000**	**47**	<42	<1700	<42	<42	**80**	<42	NA
62A	11/6/2008	<250	<250	<250	<250	**6000**	<250	<250	<250	<250	<250	<250	<250	NA
62A	11/17/2009	<5.0	**12**	<2.5	**30**	**4500**	**73**	<10	<100	<2.5	<2.5	<25	**3.1**	NA
62A	11/23/2010	<50	<25	<25	**38**	**4900**	**47**	<100	<100	<25	<25	**41**	<25	NA
62A	9/22/2011	<63	<31	<31	<31	**4200**	**120**	<130	<130	<31	<31	<31	<31	NA
67A	11/13/2007	<10	**7.1**	<5.0	**11**	**990**	**9.8**	**7.9**	<200	<5.0	<5.0	**200**	<5.0	NA
68A	11/21/2007	<7.1	**4.1**	<3.6	**5.1**	**350**	**7.6**	<3.6	<140	<3.6	**4.6**	**180**	<3.6	NA
76A	12/11/2008	<2.5	**2.4**	<1.3	**2.1**	**140**	**2.3**	**4.4**	<50	<1.3	**1.3**	**300**	<1.3	NA
76A	11/4/2009	<1.0	**3.9**	<0.5	**3.1**	**190**	**3.0**	**2.8**	<20	<0.5	**1.5**	**350**	<0.5	NA
76A	11/16/2010	<1.4	**0.8**	<0.7	**0.9**	**29**	**1.2**	<2.9	<2.9	<0.7	**0.9**	**120**	<0.7	NA
76A	9/16/2011	<1.0	**0.8**	<0.5	**0.8**	**29**	<0.5	<2.0	<2.0	<0.5	**0.9**	**120**	<0.5	NA
84A	11/19/2007	<1.0	**3.0**	<0.5	**0.9**	**1.8**	<0.5	<0.5	<20	<0.5	**4.4**	**1**	<0.5	NA
118A	12/11/2008	<7.1	**18**	<3.6	**8.7**	**210**	**22**	**7.7**	<140	**4.2**	**4.7**	**970**	<3.6	NA

Table 17
VOC Analytical Results
Five Year Summary, January 2007 through December 2011
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
A/A1 Zone														
118A	11/4/2009	**3.1**	**20**	<0.5	**11**	**220**	**13**	**2.9**	<20	**3.5**	**4.9**	**740**	**1.6**	NA
118A	11/16/2010	<10	**23**	<5.0	**20**	**300**	**17**	<20	<20	<5.0	<5.0	**790**	<5.0	NA
118A	9/16/2011	<13	**23**	<6.3	**16**	**370**	**24**	<25	<25	<6.3	<6.3	**810**	<6.3	NA
121A	11/8/2007	<25	<13	<13	<13	**1500**	**61**	<13	<500	<13	<13	**42**	<13	NA
121A	11/8/2010	<5.0	**8.0**	<5.0	**10**	**1300**	**14**	<20	<200	<5.0	<5.0	**43**	<5.0	NA
124A	11/8/2007	<83	<42	<42	**42**	**4400**	<42	<42	<1700	<42	<42	**240**	<42	NA
127A	11/7/2007	<1.0	**1.5**	<0.5	**3.0**	**19**	<0.5	**11**	<20	<0.5	**4.4**	**71**	<0.5	NA
127A	11/6/2008	**0.65**	**2.5**	<0.50	**4.8**	**38**	<0.50	**18**	<0.50	<0.50	**7.1**	**95**	<0.50	NA
127A	11/16/2009	<1.0	**1.5**	<0.5	**3.1**	**45**	<0.5	**9.7**	<20	<0.5	**4.0**	**76**	<0.5	NA
127A	11/11/2010	<1.4	<0.7	<0.7	**1.7**	**29**	<0.7	**3.7**	<2.9	<0.7	**1.8**	**86**	<0.7	NA
127A	9/29/2011	<1.0	**0.7**	<0.5	**2.0**	**24**	<0.5	**4.1**	<2.0	<0.5	**1.9**	**83**	<0.5	NA
129A	11/17/2010	<4.0	**6.7**	<2.0	**7.0**	**160**	**2.3**	<8.0	<8.0	<2.0	<2.0	**340**	<2.0	NA
130A	11/7/2007	<2.0	**1.9**	<1.0	**2.3**	**14**	<1.0	<1.0	<40	**3.6**	**2.1**	**130**	<1.0	NA
130A	11/12/2008	<2.0	**1.9**	<1.0	**3.0**	**12**	<1.0	<1.0	<40	**5.5**	**2.9**	**140**	<1.0	NA
130A	11/3/2009	<2.0	**2.5**	<1.0	**2.8**	**10**	<1.0	<4.0	<40	**8.3**	**3.0**	**120**	<1.0	NA
130A	11/16/2010	<1.4	**3.1**	<0.7	**4.1**	**11**	<0.7	<2.9	<2.9	**7.2**	**3.0**	**110**	**0.8**	NA
130A	9/23/2011	<2.0	**2.6**	<1.0	**2.9**	**11**	<1.0	<4.0	<4.0	**7.4**	**2.6**	**92**	<1.0	NA
133A	11/8/2007	<3.3	**3.5**	<1.7	**3.8**	**72**	**3.0**	**16**	<67	<1.7	**2.8**	**260**	<1.7	NA
133A	11/3/2010	<1.7	**3.5**	<1.7	**4.4**	**74**	**2.6**	**15**	<67	<1.7	**2.5**	**250**	<1.7	NA
156A	11/7/2007	<33	<17	<17	<17	**1700**	**43**	<17	<670	<17	<17	**80**	<17	NA
156A	11/11/2008	<1.0	**4.7**	<0.5	**11**	**1300**	**12**	**1.0**	<20	<0.5	<0.5	**61**	**0.6**	NA
156A	11/5/2009	<17	<8.3	<8.3	<8.3	**1400**	**45**	<33	<330	<8.3	<8.3	**43**	<8.3	NA
156A	11/17/2010	<14	<7.1	<7.1	**13**	**1300**	**13**	<29	<29	<7.1	<7.1	**37**	<7.1	NA
156A	9/23/2011	<14	<7.1	<7.1	<7.1	**1000**	**17**	<29	<29	<7.1	<7.1	**47**	<7.1	NA
157A	11/19/2007	<25	**51**	<13	**34**	**1800**	**25**	**20**	<500	**13**	<13	**2000**	<13	NA
157A	12/11/2008	<13	**52**	<6.3	**27**	**1500**	**33**	**20**	<250	**6.5**	<6.3	**1100**	<6.3	NA
157A D	12/11/2008	<7.1	**56**	<3.6	**18**	**1500**	**86**	**15**	<140	**5.0**	<3.6	**1200**	<3.6	NA
157A	11/5/2009	<1.0	**60**	<0.5	**37**	**1800**	**11**	**20**	<20	**10**	**0.7**	**1700**	**1**	NA
157A D	11/5/2009	<1.0	**55**	<0.5	**33**	**1700**	**9.0**	**18**	<20	**8.5**	**0.7**	**1600**	**0.9**	NA

Table 17
VOC Analytical Results
Five Year Summary, January 2007 through December 2011
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
A/A1 Zone														
157A D	11/17/2010	<33	**59**	<17	**41**	**1900**	<17	<67	<67	<17	<17	**1300**	<17	NA
157A	11/17/2010	<25	**61**	<13	**42**	**2000**	<13	<50	<50	<13	<13	**1300**	<13	NA
157A	9/23/2011	<20	**39**	<10	**21**	**1600**	**14**	<40	<40	<10	<10	**1300**	<10	NA
REG-MW-2A (RGRP)	11/9/2007	<50	<25	<25	<25	**2700**	**40**	<25	<1000	<25	<25	**670**	**31**	NA
REG-MW-2A (RGRP)	11/13/2008	<6.3	**8.4**	<3.1	**12**	**850**	**12**	**9.6**	<130	<3.1	<3.1	**900**	**11**	NA
REG-MW-2A (RGRP)	11/16/2009	<6.3	**11**	<3.1	**18**	**4300**	**59**	<13	<130	<3.1	<3.1	**110**	**53**	NA
REG-MW-2A (RGRP)	11/22/2010	<10	**8.1**	<5.0	**13**	**880**	**12**	<20	<20	<5.0	<5.0	**940**	**25**	NA
REG-MW-2A (RGRP)	10/6/2011	<13	**8.2**	<6.3	**7.3**	**1200**	**18**	<25	<25	<6.3	<6.3	**1100**	**27**	NA
RW-3A	8/8/2007	<1.0	**0.8**	<0.5	**1.8**	**9.4**	<0.5	**5.4**	<20	<0.5	**2.1**	**51**	<0.5	NA
RW-3A	11/16/2007	<1.0	**1.1**	<0.5	**1.7**	**16**	<0.5	**7.3**	<20	<0.5	**3.6**	**65**	<0.5	NA
RW-3A	11/15/2008	<1.0	**1.8**	<0.5	**3.5**	**28**	<0.5	**16**	<20	<0.5	**5.3**	**83**	<0.5	NA
RW-3A	11/13/2009	<1.0	**1.5**	<0.5	**3.7**	**41**	<0.5	**11**	<20	<0.5	**4.1**	**82**	<0.5	<0.99
RW-3A	12/10/2010	<1.0	**0.7**	<0.5	**1.9**	**24**	<0.5	**4.4**	<2.0	<0.5	**2.0**	**72**	<0.5	NA
RW-3A	10/11/2011	<0.50	**0.54**	<0.50	**1.2**	**16**	<0.50	**2.6**	<5.0	<0.50	**1.3**	**60**	<0.50	NA
RW-4A	8/8/2007	<1.0	**2.2**	<0.5	**2.6**	**20**	<0.5	**0.7**	<20	**8.7**	**4.2**	**96**	**2.2**	NA
RW-4A	11/16/2007	<1.0	**1.9**	<0.5	**1.5**	**30**	**0.5**	<0.5	<20	**3.7**	**2.3**	**49**	**5.6**	NA
RW-4A	11/15/2008	<1.0	**1.5**	<0.5	**0.9**	**15**	**0.5**	<0.5	<20	**3.1**	**1.7**	**42**	**3.1**	NA
RW-4A	11/24/2009	<1.0	**1.6**	<0.5	**1.1**	**19**	**0.7**	<2.0	<20	**3.1**	**1.6**	**38**	**2.1**	<0.96
RW-4A	11/15/2010	<1.0	**2.4**	<0.5	**2.6**	**42**	**0.8**	<2.0	<2.0	**5.1**	**3.2**	**87**	**0.6**	NA
RW-4A	9/15/2011	<1.0	**2.0**	<0.5	**2.2**	**30**	**0.6**	<2.0	<2.0	**5.1**	**2.4**	**75**	**2.3**	NA
RW-5A	8/8/2007	<25	**32**	<13	**24**	**1100**	**110**	<50	<500	**79**	**13**	**1400**	**15**	NA
RW-5A	11/14/2007	<25	**44**	<13	**30**	**1300**	**130**	<13	<500	**81**	**21**	**1700**	**25**	NA
RW-5A	11/14/2008	<14	**36**	<7.1	**26**	**980**	**100**	<7.1	<290	**85**	**17**	**1500**	**21**	NA
RW-5A	11/4/2009	<20	**27**	<10	**19**	**710**	**71**	<40	<400	**76**	**15**	**1300**	**18**	**2.5**
RW-5A	11/17/2010	<10	**29**	<5.0	**26**	**790**	**73**	<20	<20	**57**	**13**	**1100**	**27**	NA
RW-5A	9/9/2011	<20	**23**	<10	**20**	**850**	**70**	<40	<40	**56**	**11**	**1000**	**15**	NA
RW-7A	8/8/2007	<14	**16**	<7.1	**14**	**640**	**24**	**6.4**	<290	**8.9**	<7.1	**880**	<7.1	NA
RW-7A	11/12/2007	<17	**17**	<8.3	**16**	**750**	**18**	**8.6**	<330	<8.3	<8.3	**1000**	<8.3	NA
RW-7A	11/4/2008	<13	**13**	<6.3	**17**	**500**	**20**	**7.1**	<250	**7.6**	<6.3	**890**	<6.3	NA
RW-7A	11/5/2009	<13	**15**	<6.3	**14**	**580**	**16**	<25	<250	**9.3**	<6.3	**870**	<6.3	**2.7**

Table 17
VOC Analytical Results
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MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
A/A1 Zone														
RW-7A	11/16/2010	<8.3	**18**	<4.2	**20**	**640**	**17**	<17	<17	**8.5**	**4.5**	**710**	**4.5**	NA
RW-7A	9/15/2011	<5.0	**17**	<2.5	**14**	**680**	**18**	<10	<10	**6.3**	**3.8**	**630**	<2.5	NA
RW-9A	8/8/2007	<7.1	<3.6	<3.6	<3.6	**350**	**4.9**	**4.8**	<140	<3.6	<3.6	**520**	<3.6	NA
RW-9A	11/16/2007	<10	**6.2**	<5.0	**7.7**	**720**	**16**	**12**	<200	<5.0	<5.0	**850**	<5.0	NA
RW-9A	11/15/2008	<13	<6.3	<6.3	**6.4**	**880**	**10**	**8.3**	<250	<6.3	<6.3	**410**	<6.3	NA
RW-9A	11/17/2009	<20	<10	<10	**18**	**2700**	**18**	<40	<400	<10	<10	**470**	**12**	**6.6**
RW-9A	11/22/2010	<3.3	**3.3**	<1.7	**4.2**	**250**	**3.9**	<6.7	<6.7	<1.7	<1.7	**440**	<1.7	NA
RW-9A	10/6/2011	<5.0	**3.2**	<2.5	<2.5	**340**	**4.7**	<10	<10	<2.5	<2.5	**340**	<2.5	NA
RW-16A	8/8/2007	<5.0	**5.8**	<2.5	**11**	**110**	<2.5	**15**	<100	<2.5	**3.4**	**430**	<2.5	NA
RW-16A	11/13/2007	<6.3	**7.5**	<3.1	**11**	**110**	<3.1	**7.9**	<130	<3.1	<3.1	**320**	<3.1	NA
RW-16A	11/15/2008	<1.4	**9.8**	<0.7	**17**	**150**	**1.2**	**7.6**	<29	<0.7	**3.8**	**280**	**1.2**	NA
RW-16A	11/13/2009	<1.0	**5.7**	<0.5	**10**	**89**	**1**	**6.9**	<20	**0.8**	**3.0**	**240**	<0.5	**1.2**
RW-16A	11/3/2010	<2.0	**9.0**	<2.0	**15**	**170**	<2.0	<8.0	<80	<2.0	**3.1**	**320**	<2.0	NA
RW-16A	10/14/2011	<4.0	**5.4**	<2.0	**5.4**	**190**	<2.0	<8.0	<8.0	<2.0	**2.3**	**290**	**3.0**	NA
RW-18A	8/8/2007	<10	**12**	<5.0	**13**	**610**	**9.7**	**5.2**	<200	<5.0	<5.0	**660**	<5.0	NA
RW-18A	11/19/2007	<8.3	**7.8**	<4.2	**9.9**	**340**	**9.3**	**6.8**	<170	<4.2	<4.2	**520**	<4.2	NA
RW-18A	11/14/2008	<6.3	**9.0**	<3.1	**8.9**	**380**	**13**	<3.1	<130	<3.1	<3.1	**500**	<3.1	NA
RW-18A	11/3/2009	<6.3	**8.7**	<3.1	**8.7**	**380**	**14**	<13	<130	<3.1	<3.1	**490**	<3.1	**2.5**
RW-18A D	11/4/2010	<2.5	**11**	<2.5	**12**	**480**	**8.5**	<10	<100	<2.5	<2.5	**470**	<2.5	NA
RW-18A	11/4/2010	<2.5	**11**	<2.5	**13**	**490**	**8.1**	<10	<100	<2.5	<2.5	**460**	<2.5	NA
RW-18A	9/15/2011	<5.0	**10**	<2.5	**9.4**	**480**	**8.6**	<10	<10	<2.5	<2.5	**410**	<2.5	NA
RW-27A	8/8/2007	<20	**19**	<10	**18**	**590**	**21**	**6.5**	<400	<10	<10	**1300**	<10	NA
RW-27A	11/14/2007	<20	**17**	<10	<10	**730**	**41**	<10	<400	<10	<10	**1300**	<10	NA
RW-27A	11/4/2008	<20	**17**	<10	**16**	**580**	**14**	<10	<400	<10	<10	**1200**	<10	NA
RW-27A	11/4/2009	<17	**19**	<8.3	**14**	**570**	**9.7**	<33	<330	<8.3	<8.3	**1000**	<8.3	**4.8**
RW-27A	11/16/2010	<10	**26**	<5.0	**23**	**610**	**14**	<20	<20	<5.0	<5.0	**920**	**7.5**	NA
RW-27A	10/4/2011	<17	**20**	<8.3	**15**	**530**	**20**	<33	<33	<8.3	<8.3	**790**	<8.3	NA
RW-28A	8/8/2007	<7.1	**10**	<3.6	**12**	**420**	**20**	**3.5**	<140	**4.2**	<3.6	**590**	<3.6	NA
RW-28A D	8/8/2007	<13	**12**	<6.3	**11**	**440**	**21**	**3.4**	<250	<6.3	<6.3	**610**	<6.3	NA
RW-28A	11/13/2007	<10	**9.5**	<5.0	**15**	**330**	**18**	<5.0	<200	**5.7**	<5.0	**740**	<5.0	NA

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Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
A/A1 Zone														
RW-28A	11/15/2008	<8.3	**9.7**	<4.2	**12**	**800**	**15**	<4.2	<170	<4.2	<4.2	**41**	**12**	NA
RW-28A	11/3/2009	<8.3	**12**	<4.2	**12**	**960**	**31**	<17	<170	<4.2	<4.2	**150**	**11**	**2.5**
RW-28A	11/9/2010	<5.0	**14**	<5.0	**14**	**760**	**8.8**	<20	<200	<5.0	<5.0	**350**	**11**	NA
RW-28A	10/14/2011	<6.3	**7.4**	<3.1	**11**	**460**	**12**	<13	<13	<3.1	<3.1	**420**	**4.9**	NA
A2/B1 Zone														
2B1	11/8/2007	<7.1	**5.3**	<3.6	**6.5**	**110**	**3.8**	**5.6**	<140	<3.6	<3.6	**500**	<3.6	NA
2B1	11/6/2008	<0.50	**5.5**	<0.50	**8.7**	**93**	**0.99**	**5.4**	<0.50	<0.50	<0.50	**470**	<0.50	NA
2B1	11/17/2009	<4.0	**3.4**	<2.0	**3.1**	**65**	**6.4**	<8.0	<80	<2.0	<2.0	**270**	<2.0	NA
2B1	11/11/2010	<5.0	**3.4**	<2.5	**3.0**	**80**	**3.3**	<10	<10	<2.5	<2.5	**320**	<2.5	NA
2B1	10/3/2011	<6.3	**3.5**	<3.1	**4.2**	**89**	<3.1	<13	<13	<3.1	<3.1	**350**	<3.1	NA
60B1	11/12/2007	<50	<25	<25	<25	**160**	<25	**64**	<1000	<25	<25	**3400**	<25	NA
60B1	11/11/2008	<1.0	**4.3**	<0.5	**14**	**240**	**2.8**	**56**	<20	**1.4**	**0.5**	**3000**	<0.5	NA
60B1	11/4/2009	<6.3	<3.1	<3.1	<3.1	**54**	<3.1	<13	<130	<3.1	<3.1	**420**	<3.1	NA
60B1	11/4/2010	<5.0	<5.0	<5.0	<5.0	**100**	<5.0	<20	<200	<5.0	<5.0	**930**	<5.0	NA
60B1	9/16/2011	<40	<20	<20	<20	**350**	<20	<80	<80	<20	<20	**2500**	<20	NA
60B1 D	9/16/2011	<5.0	**4.3**	<2.5	**10**	**460**	**6.1**	**31**	<10	<2.5	<2.5	**2800**	<2.5	NA
67B1	11/27/2007	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**0.9**	<20	<0.5	<0.5	**9.5**	<0.5	NA
67B1	11/12/2008	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**	<20	<0.5	**0.5**	**14**	<0.5	NA
67B1	11/2/2009	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<20	<0.5	<0.5	**14**	<0.5	NA
67B1	11/15/2010	<1.0	<0.5	<0.5	**0.6**	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	**13**	<0.5	NA
67B1	9/26/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	**14**	<0.5	NA
115B1	11/8/2007	<50	<25	<25	<25	**220**	<25	**49**	<1000	<25	<25	**4500**	<25	NA
115B1	11/18/2008	<100	<50	<50	**79**	**500**	<50	**160**	<2000	<50	<50	**7600**	<50	NA
115B1	11/6/2009	<100	<50	<50	**60**	**560**	<50	<200	<2000	<50	<50	**6300**	<50	NA
115B1	11/8/2010	<42	<42	<42	**52**	**590**	<42	<170	<1700	<42	<42	**5800**	<42	NA
115B1	9/16/2011	<130	<63	<63	**71**	**560**	<63	<250	<250	<63	<63	**9100**	<63	NA
115B1 D	9/16/2011	<100	<50	<50	**71**	**550**	<50	<200	<200	<50	<50	**9100**	<50	NA
119B1 (RGRP)	11/8/2007	<13	<6.3	<6.3	<6.3	**93**	<6.3	<6.3	<250	<6.3	<6.3	**640**	<6.3	NA
119B1 (RGRP)	11/11/2008	<6.3	<3.1	<3.1	**3.2**	**84**	<3.1	**5.2**	<130	<3.1	<3.1	**620**	<3.1	NA

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Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
A2/B1 Zone														
119B1 (RGRP)	11/23/2009	<6.3	<3.1	<3.1	<3.1	**50**	<3.1	<13	<130	<3.1	<3.1	**380**	<3.1	NA
119B1 (RGRP) D	11/23/2009	<5.0	<2.5	<2.5	<2.5	**71**	**3.2**	<10	<100	<2.5	<2.5	**390**	<2.5	NA
119B1 (RGRP)	11/23/2010	<5.0	**2.8**	<2.5	**4.5**	**59**	<2.5	<10	<10	<2.5	<2.5	**460**	<2.5	NA
119B1 (RGRP)	10/6/2011	<8.3	<4.2	<4.2	<4.2	**59**	<4.2	<17	<17	<4.2	<4.2	**390**	<4.2	NA
147B1	11/7/2007	<13	<6.3	<6.3	<6.3	**33**	<6.3	**6.6**	<250	<6.3	<6.3	**790**	<6.3	NA
147B1	11/18/2008	<1.0	<0.5	<0.5	<0.5	**56**	<0.5	<0.5	<20	<0.5	<0.5	**16**	<0.5	NA
147B1	11/3/2009	<1.0	<0.5	<0.5	<0.5	**66**	**0.6**	<2.0	<20	<0.5	<0.5	**19**	<0.5	NA
147B1	11/15/2010	<13	<6.3	<6.3	**6.7**	**120**	<6.3	<25	<25	<6.3	<6.3	**1300**	<6.3	NA
147B1	9/21/2011	<25	<13	<13	<13	**120**	<13	<50	<50	<13	<13	**1200**	<13	NA
RW-3(B1)	8/8/2007	<3.3	<1.7	<1.7	**1.8**	**10**	<1.7	**15**	<67	<1.7	**6.7**	**270**	<1.7	NA
RW-3(B1)	11/16/2007	<5.0	<2.5	<2.5	**2.5**	**9.6**	<2.5	**13**	<100	<2.5	**5.2**	**380**	<2.5	NA
RW-3(B1)	11/15/2008	<2.0	**1.2**	<1.0	**2.9**	**15**	<1.0	**21**	<40	<1.0	**8.3**	**340**	<1.0	NA
RW-3(B1)	11/13/2009	<3.3	<1.7	<1.7	**2.8**	**23**	<1.7	**20**	<67	<1.7	**10**	**260**	<1.7	<0.99
RW-3(B1)	12/23/2010	<4.0	<2.0	<2.0	**2.3**	**17**	<2.0	**12**	<8.0	<2.0	**5.5**	**260**	<2.0	NA
RW-3(B1)	10/11/2011	<0.90	<0.90	<0.90	**1.3**	**14**	<0.90	**9.4**	<5.0	<0.90	**3.2**	**250**	<0.90	NA
RW-4(B1)	8/8/2007	<33	<17	<17	<17	**230**	**110**	**9.2**	<670	<17	<17	**2200**	<17	NA
RW-4(B1)	11/27/2007	<40	<20	<20	<20	**330**	<20	<20	<800	<20	<20	**2100**	<20	NA
RW-4(B1)	11/18/2008	<33	<17	<17	<17	**840**	<17	<17	<670	<17	<17	**2000**	<17	NA
RW-4(B1)	11/6/2009	<1.0	**1.6**	<0.5	**8.4**	**390**	**8.8**	<2.0	<20	<0.5	<0.5	**2600**	**1.6**	<0.94
RW-4(B1)	11/17/2010	<20	<10	<10	<10	**140**	**57**	<40	<40	<10	<10	**1400**	<10	NA
RW-4(B1)	9/15/2011	<10	<5.0	<5.0	<5.0	**270**	**90**	<20	<20	<5.0	<5.0	**1500**	<5.0	NA
RW-5(B1)	8/9/2007	<33	<17	<17	<17	**1800**	**160**	<67	<670	<17	<17	**1900**	<17	NA
RW-5(B1)	11/14/2007	<40	<20	<20	<20	**1900**	**180**	<20	<800	<20	<20	**2200**	<20	NA
RW-5(B1)	11/13/2008	<14	**7.2**	<7.1	**9.3**	**1300**	**140**	<7.1	<290	<7.1	<7.1	**1400**	<7.1	NA
RW-5(B1)	11/4/2009	<25	<13	<13	<13	**1200**	**110**	<50	<500	<13	<13	**1500**	<13	**1.9**
RW-5(B1)	11/17/2010	<20	<10	<10	**17**	**1400**	**130**	<40	<40	<10	<10	**1400**	<10	NA
RW-5(B1)	9/9/2011	<25	<13	<13	<13	**1300**	**140**	<50	<50	<13	<13	**1600**	<13	NA
RW-7(B1)	8/9/2007	<63	<31	<31	<31	**310**	<31	**24**	<1300	<31	<31	**3400**	<31	NA
RW-7(B1)	11/12/2007	<71	<36	<36	<36	**240**	<36	<36	<1400	<36	<36	**3400**	<36	NA
RW-7(B1)	11/4/2008	<50	<25	<25	<25	**140**	<25	<25	<1000	<25	<25	**2700**	<25	NA

Table 17
VOC Analytical Results
Five Year Summary, January 2007 through December 2011
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
A2/B1 Zone														
RW-7(B1)	11/6/2009	<33	<17	<17	<17	**190**	<17	<67	<670	<17	<17	**2800**	<17	**1.5**
RW-7(B1)	11/16/2010	<33	<17	<17	**20**	**180**	<17	<67	<67	<17	<17	**2800**	<17	NA
RW-7(B1)	9/15/2011	<25	<13	<13	<13	**210**	<13	<50	<50	<13	<13	**2400**	<13	NA
RW-9(B1)R (RGRP)	11/12/2007	<63	<31	<31	<31	**720**	<31	**82**	<1300	<31	<31	**3400**	<31	NA
RW-9(B1)R (RGRP)	11/4/2008	<40	<20	<20	<20	**610**	<20	**45**	<800	<20	<20	**3000**	<20	NA
RW-9(B1)R (RGRP)	11/16/2009	<1.0	**6.3**	<0.5	**26**	**850**	**7.7**	**62**	<20	**2.3**	**0.7**	**2300**	**0.9**	**3.4**
RW-9(B1)R (RGRP)	11/4/2010	<17	<17	<17	<17	**780**	<17	<67	<670	<17	<17	**2200**	<17	NA
RW-9(B1)R (RGRP)	10/6/2011	<3.3	**2.8**	<1.7	**7.6**	**650**	**3.0**	**20**	<6.7	<1.7	<1.7	**1700**	<1.7	NA
RW-12(B1)	8/9/2007	<13	<6.3	<6.3	<6.3	**100**	**7.2**	**7.2**	<250	<6.3	<6.3	**780**	<6.3	NA
RW-12(B1)	11/16/2007	<20	<10	<10	<10	**190**	<10	<20	<400	<10	<10	**1500**	<10	NA
RW-12(B1)	11/15/2008	<20	<10	<10	<10	**330**	<10	<10	<400	<10	<10	**1300**	<10	NA
RW-12(B1)	11/6/2009	<17	<8.3	<8.3	<8.3	**54**	<8.3	<33	<330	<8.3	<8.3	**1100**	<8.3	<0.96
RW-12(B1)	11/16/2010	<10	<5.0	<5.0	**9.1**	**100**	**7.5**	<20	<20	<5.0	<5.0	**640**	<5.0	NA
RW-12(B1)	9/15/2011	<6.3	**4.5**	<3.1	**4.7**	**120**	**6.9**	<13	<13	<3.1	<3.1	**570**	<3.1	NA
B2 Zone														
10B2	11/7/2007	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.7**	<0.5	NA
10B2	11/18/2008	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**1.6**	<0.5	NA
10B2	11/18/2009	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<20	<0.5	<0.5	**1.7**	<0.5	NA
10B2	11/12/2010	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	**0.6**	<0.5	NA
10B2	9/22/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	**0.6**	<0.5	NA
11B2	11/7/2007	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	NA
11B2	11/11/2008	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.8**	<0.5	NA
11B2	11/2/2009	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<20	<0.5	<0.5	<0.5	<0.5	NA
11B2	11/15/2010	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5	NA
11B2	9/21/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5	NA
113B2 (RGRP)	11/9/2007	<25	<13	<13	<13	**79**	<13	<13	<500	<13	<13	**1300**	<13	NA
113B2 (RGRP)	11/18/2008	<33	<17	<17	<17	**220**	<17	**27**	<670	<17	<17	**2000**	<17	NA
113B2 (RGRP)	11/16/2009	<8.3	<4.2	<4.2	**11**	**330**	**16**	**22**	<170	<4.2	<4.2	**2700**	<4.2	NA
113B2 (RGRP)	11/15/2010	<0.7	<0.7	<0.7	**0.9**	**9.2**	<0.7	<2.9	<29	<0.7	<0.7	**260**	<0.7	NA

Table 17
VOC Analytical Results
Five Year Summary, January 2007 through December 2011
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
B2 Zone														
113B2 (RGRP)	9/22/2011	<4.0	<2.0	<2.0	<2.0	**13**	<2.0	<8.0	<8.0	<2.0	<2.0	**220**	<2.0	NA
118B2	11/8/2007	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**2.0**	<0.5	NA
118B2	11/6/2008	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	**0.59**	<0.50	NA
118B2	11/12/2009	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<20	<0.5	<0.5	**0.8**	<0.5	NA
118B2	11/11/2010	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	**0.5**	<0.5	NA
118B2	9/29/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	**0.7**	<0.5	NA
148B2	11/13/2008	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	NA
148B2	11/2/2009	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<20	<0.5	<0.5	<0.5	<0.5	NA
148B2	11/15/2010	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5	NA
148B2	9/21/2011	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5	NA
RW-3(B2)	11/16/2007	<14	<7.1	<7.1	**15**	**1100**	**21**	<7.1	<290	<7.1	<7.1	**300**	**400**	NA
RW-3(B2)	11/15/2008	<20	<10	<10	**12**	**1300**	**20**	<10	<400	<10	<10	**50**	**500**	NA
RW-3(B2)	11/13/2009	<1.0	<0.5	<0.5	**23**	**140**	**20**	<2.0	<20	<0.5	<0.5	**2100**	**3.1**	<0.99
RW-3(B2)	12/23/2010	<25	<13	<13	**14**	**69**	**14**	<50	<50	<13	<13	**1800**	<13	NA
RW-3(B2)	10/11/2011	<4.0	<4.0	<4.0	**8.0**	**90**	**8.8**	<4.0	<5.0	<4.0	<4.0	**970**	<4.0	NA
RW-4(B2)	11/14/2007	<200	<100	<100	<100	**6800**	<100	<100	<4000	<100	<100	**11000**	<100	NA
RW-4(B2)	11/7/2008	<170	<83	<83	<83	**6900**	<83	<83	<3300	<83	<83	**10000**	<83	NA
RW-4(B2)	11/24/2009	<140	<71	<71	<71	**7200**	**86**	<290	<2900	<71	<71	**10000**	<71	<0.96
RW-4(B2)	11/17/2010	<130	<63	<63	<63	**6300**	**78**	<250	<250	<63	<63	**10000**	<63	NA
RW-4(B2)	10/4/2011	<170	<83	<83	<83	**5100**	<83	<330	<330	<83	<83	**9200**	<83	NA
RW-5(B2)	11/20/2007	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	NA
RW-5(B2)	11/15/2008	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	NA
RW-5(B2)	11/24/2009	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<20	<0.5	<0.5	<0.5	<0.5	<0.96
RW-5(B2)	12/27/2010	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<2.0	<0.5	<0.5	<0.5	<0.5	NA
RW-5(B2)	10/14/2011	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	<0.50	<0.50	<0.50	<0.50	NA
RW-7(B2)	11/16/2007	<1.0	<0.5	<0.5	<0.5	**9.7**	<0.5	**1.2**	<20	<0.5	<0.5	**12**	<0.5	NA
RW-7(B2)	11/18/2008	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	NA
RW-7(B2)	11/24/2009	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<20	<0.5	<0.5	**3.8**	<0.5	<0.96
RW-7(B2) D	11/24/2009	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.96
RW-7(B2)	12/27/2010	<1.0	<0.5	<0.5	<0.5	**3.0**	<0.5	<2.0	<2.0	<0.5	<0.5	**9.5**	<0.5	NA

Table 17

VOC Analytical Results

Five Year Summary, January 2007 through December 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Sample Location	Sample Date	Constituent (concentration in µg/L and method is 8260B)												
		Chloroform	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	Freon 113	Methylene Chloride	PCE	1,1,1-TCA	TCE	Vinyl Chloride	1,4-Dioxane
B2 Zone														
RW-7(B2) D	12/27/2010	<1.0	<0.5	<0.5	<0.5	**2.1**	<0.5	<2.0	<2.0	<0.5	<0.5	**9.8**	<0.5	NA
RW-7(B2)	10/14/2011	<0.50	<0.50	<0.50	<0.50	**5.2**	<0.50	**0.57**	<5.0	<0.50	<0.50	**8.6**	<0.50	NA
RW-9(B2) (RGRP)	11/12/2007	<8.3	<4.2	<4.2	**7.5**	**280**	**6.1**	**13**	<170	<4.2	<4.2	**610**	<4.2	NA
RW-9(B2) (RGRP)	11/4/2008	<5.0	<2.5	<2.5	**6.0**	**230**	**5.1**	**9.0**	<100	<2.5	<2.5	**660**	<2.5	NA
RW-9(B2) (RGRP)	11/16/2009	<2.0	<1.0	<1.0	**6.1**	**200**	**13**	**9.6**	<40	<1.0	<1.0	**600**	<1.0	<0.94
RW-9(B2) (RGRP)	11/22/2010	<7.1	<3.6	<3.6	**8.0**	**180**	**5.4**	<14	<14	<3.6	<3.6	**650**	<3.6	NA
RW-9(B2) (RGRP)	10/6/2011	<10	<5.0	<5.0	**6.6**	**200**	<5.0	<20	<20	<5.0	<5.0	**550**	**8.5**	NA

Notes:
1,1-DCA = 1,1-Dichloroethane
1,2-DCA = 1,2-Dichloroethane
1,1-DCE = 1,2-Dichloroethene
cis-1,2-DCE = cis-1,2-Dichloroethene
trans-1,2-DCE = trans-1,2-Dichloroethene
PCE = Tetrachloroethene
1,1,1-TCA = 1,1,1-Trichloroethane
TCE = Trichloroethene
< indicates analyte not detected above the reported detection limit
D indicates duplicate sample
NA indicates the sample wasn't analyzed for the given analyte
µg/L = micrograms per Liter
RGRP = Regional Groundwater Remediation Program

Table 18

Mann-Kendall Statistics Concentration Trends Summary

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program

Mountain View, California

Well Name	TCE	cis-1,2-DCE	Vinyl Chloride
A/A1 Zone			
33A	N/A	N/A	N/A
46A	S	S	NT
51A	N/A	N/A	N/A
57A	N/A	N/A	N/A
59A	N/A	N/A	N/A
61A	S	PD	NT
62A	D	PD	NT
67A	N/A	N/A	N/A
68A	N/A	N/A	N/A
76A	S	S	NT
84A	N/A	N/A	N/A
118A	S	I	NT
121A	N/A	N/A	N/A
124A	N/A	N/A	N/A
127A	I	I	NT
129A	N/A	N/A	N/A
130A	S	NT	S
133A	N/A	N/A	N/A
156A	NT	D	NT
157A	S	NT	NT
REG-MW-2A	D	NT	S
RW-3A	NT	PI	NT
RW-4A	D	NT	NT
RW-5A	D	S	NT
RW-7A	D	S	NT
RW-9A	D	I	NT
RW-16A	PD	NT	NT
RW-18A	D	S	NT

Well Name	TCE	cis-1,2-DCE	Vinyl Chloride
A/A1 Zone			
RW-27A	D	D	NT
RW-28A	S	NT	NT
B1/A2 Zone			
2B1	D	D	NT
20B1	N/A	N/A	N/A
60B1	D	S	NT
67B1	S	S	NT
115B1	D	PI	NT
119B1	D	D	NT
147B1	S	NT	NT
RW-3(B1)	PD	NT	NT
RW-4(B1)	D	PI	NT
RW-5(B1)	D	PD	NT
RW-7(B1)	D	PD	NT
RW-9(B1)R	D	NT	NT
RW-12(B1)	S	PD	NT
B2 Zone			
10B2	NT	NT	NT
11B2	NT	S	NT
113B2	S	NT	NT
118B2	NT	S	NT
148B2	D	S	NT
RW-3(B2)	S	S	NT
RW-4(B2)	D	D	NT
RW-5(B2)	S	D	NT
RW-7(B2)	NT	NT	NT
RW-9(B2)	D	NT	NT

Notes:

TCE = Trichloroethene

cis-1,2-DCE = cis-1,2-Dichloroethene

PI =Probably Increasing

I =Increasing

N/A = Not applicable due to insufficient data (< 4 sampling events)

S = Stable

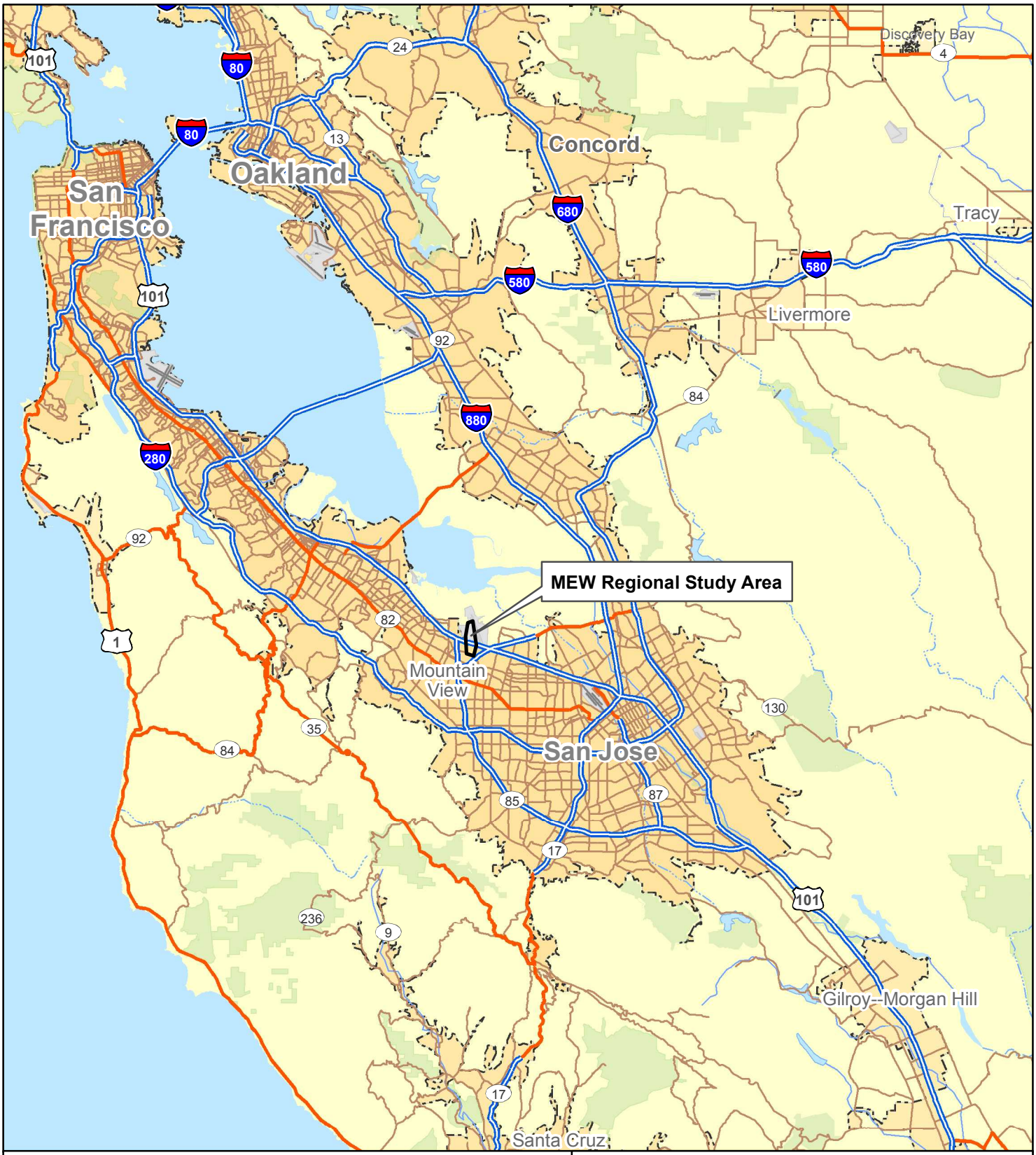
PD = Probably Decreasing

D = Decreasing

NT = No Trend

Mann-Kendall statistical analysis was performed on Site wells using data from 2002 to 2011

FIGURES



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0 10 Miles

Site Location Map

MEW Area, Mountain View, California

Geosyntec consultants

Oakland	April 2012	Figure 1

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Legend

Former Fairchild Facility

- Buildings 1 - 4
- Building 18
- Building 9
- Building 20 and 20A
- Buildings 13, 19, and 23
- Slurry Wall
- Building
- Road

FAIRCHILD BUILDINGS 1 - 4
A. 313 Fairchild Drive
B. 323 Fairchild Drive
C. 545 North Whisman Road
D. 515 North Whisman Road

FAIRCHILD BUILDING 18
E. 644 National Avenue

FAIRCHILD BUILDING 9
F. 401 National Avenue

FAIRCHILD BUILDING 20 AND 20A
G. 468 Ellis Street
H. 466 Ellis Street
I. 464 Ellis Street

FAIRCHILD BUILDINGS 13, 19, AND 23
J. 399 North Whisman Road
K. 389 North Whisman Road
L. 369 North Whisman Road
M. 379 North Whisman Road

N

300 150 0 300 Feet

Current Building Configurations
Former Fairchild Facilities

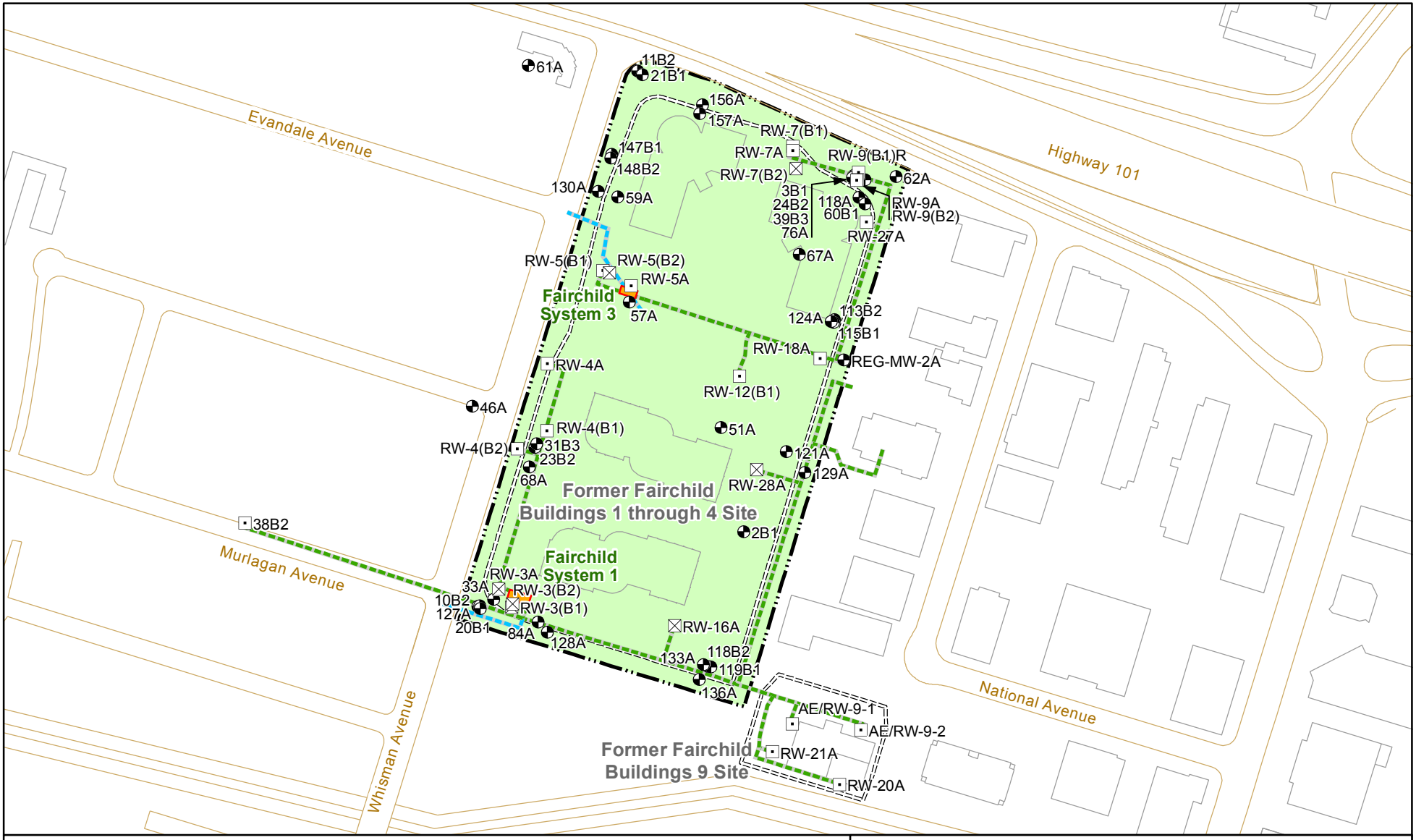
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Oakland | April 2012

Figure **2**

P:\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig02_FormerFacilities.mxd



Legend

Recovery and Monitoring Wells

- Monitoring Well
- Recovery Well, On
- Recovery Well, Off
- Treatment System Pipeline
- Treatment-System Discharge Pipeline
- Slurry Wall
- Building
- Road
- Former Fairchild Buildings 1-4 Site - 515/545 North Whisman Road and 313/323 Fairchild Drive
- Fairchild Groundwater Treatment Systems 1 and 3

N

0 300 Feet

Site Map and Well Network

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

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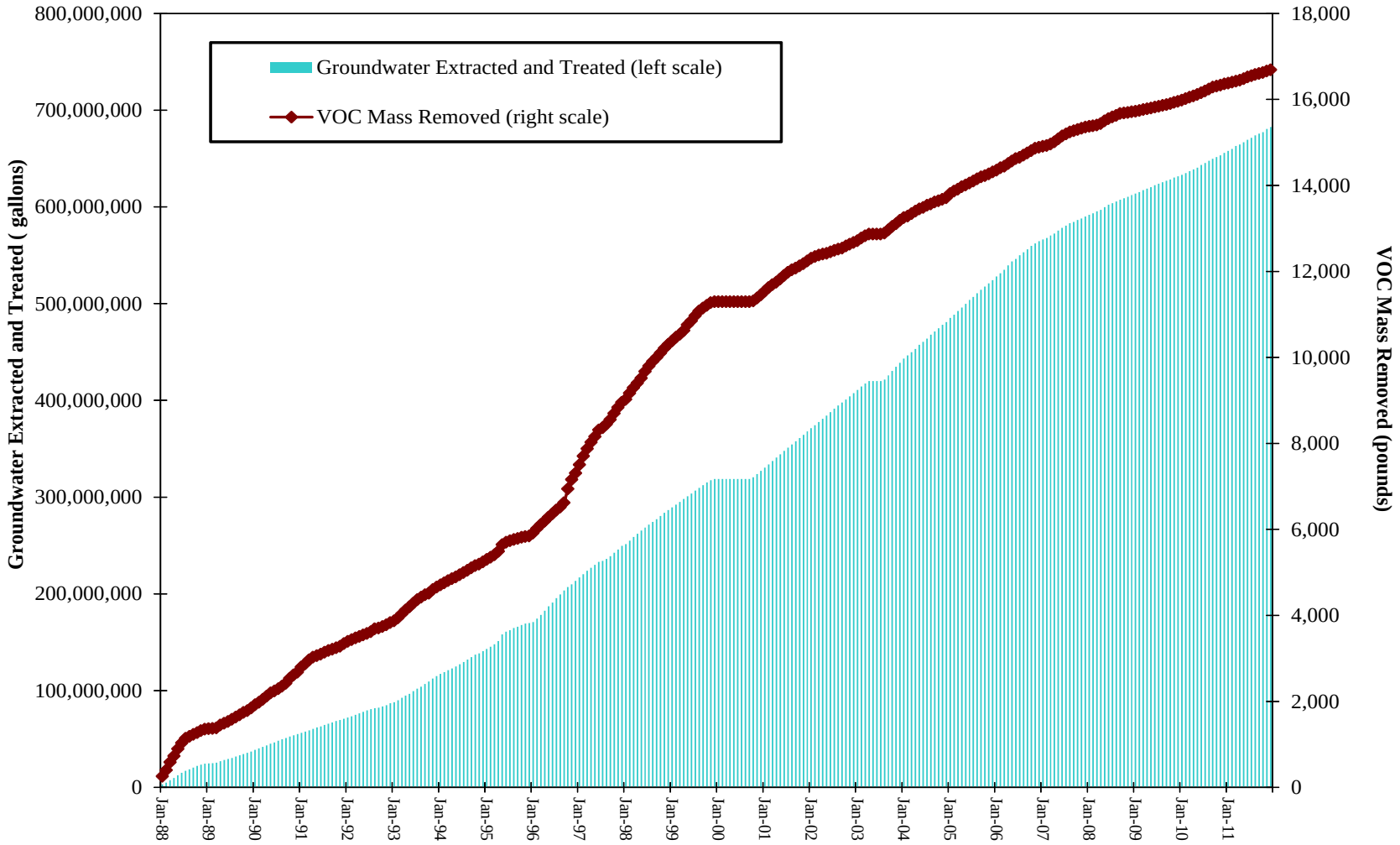
Figure 3

P:\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig03_SiteMap.mxd



Cumulative Groundwater Extracted and VOC Mass Removed, System 1

Former Fairchild Buildings 1-4
Mountain View, California

Source: 2011 Annual Self-Monitoring Report, Treatment System 1, Fairchild Buildings 1-4 (Weiss, 2012a)

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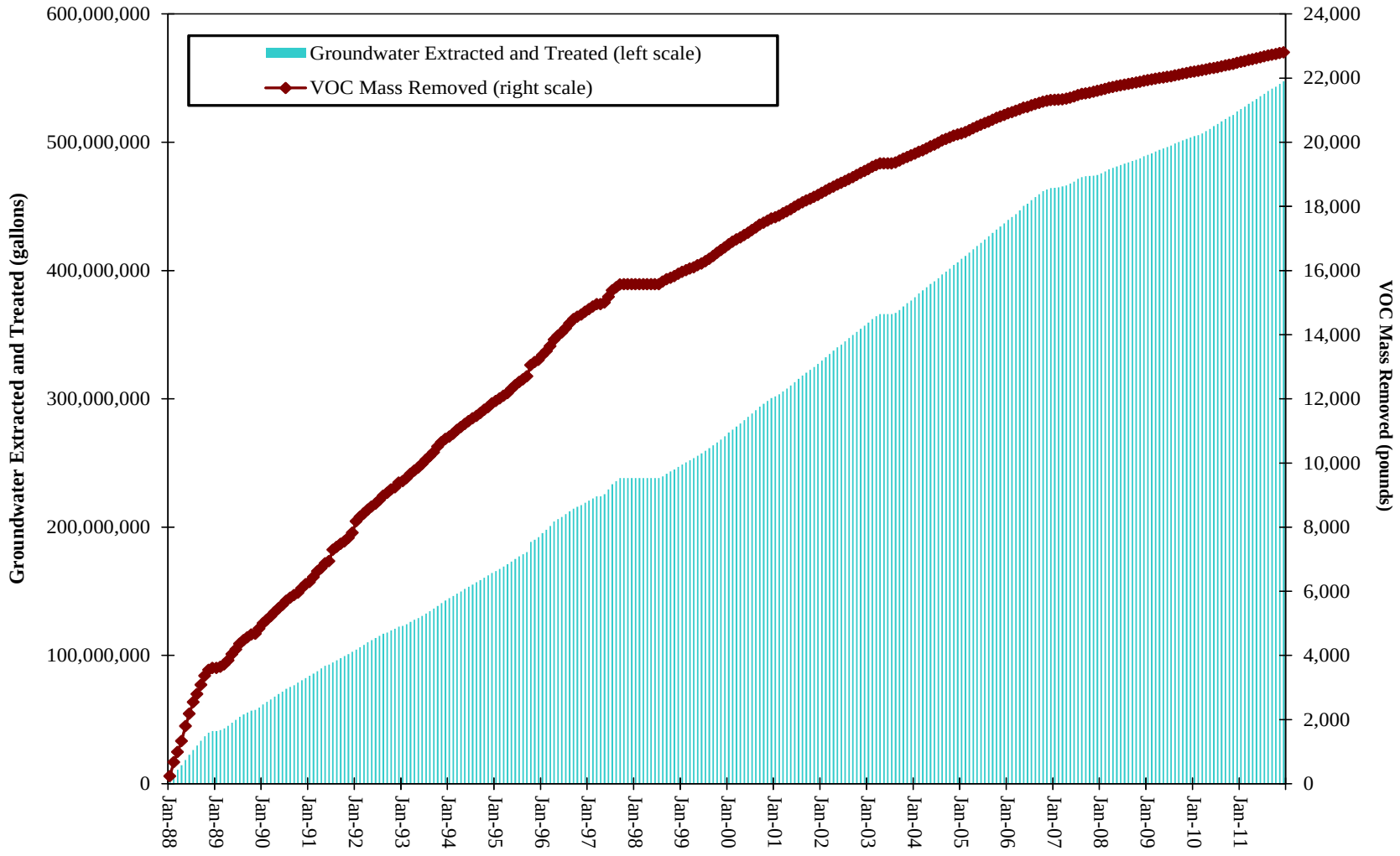
Figure 4

P:\GIS\MEW\AI\Regional\2010_AR\Figure4.AI



Cumulative Groundwater Extracted and VOC Mass Removed, System 3

Fairchild Former Buildings 1-4
Mountain View, California

Geosyntec consultants

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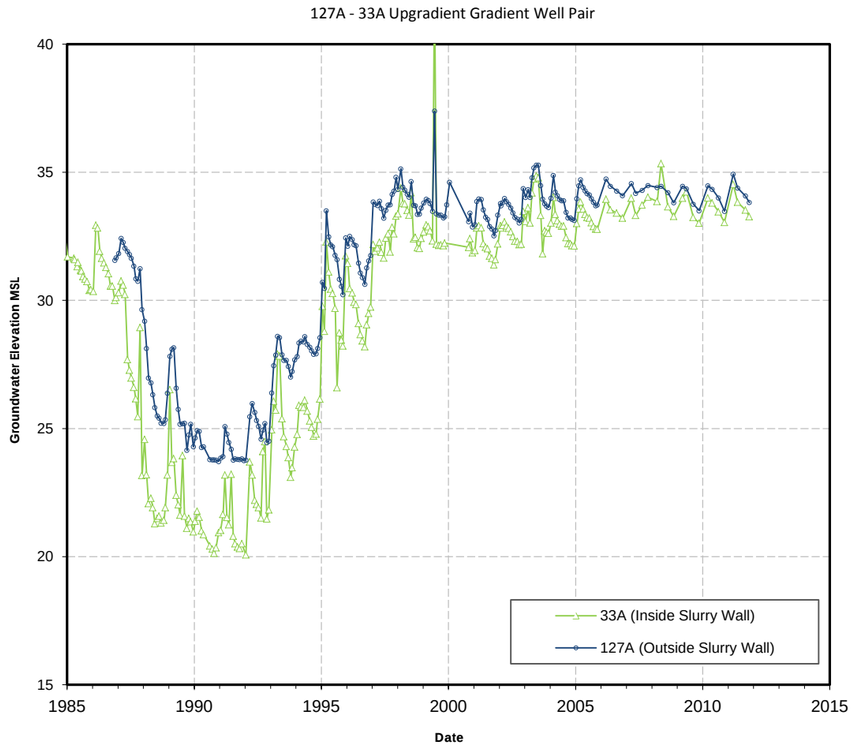
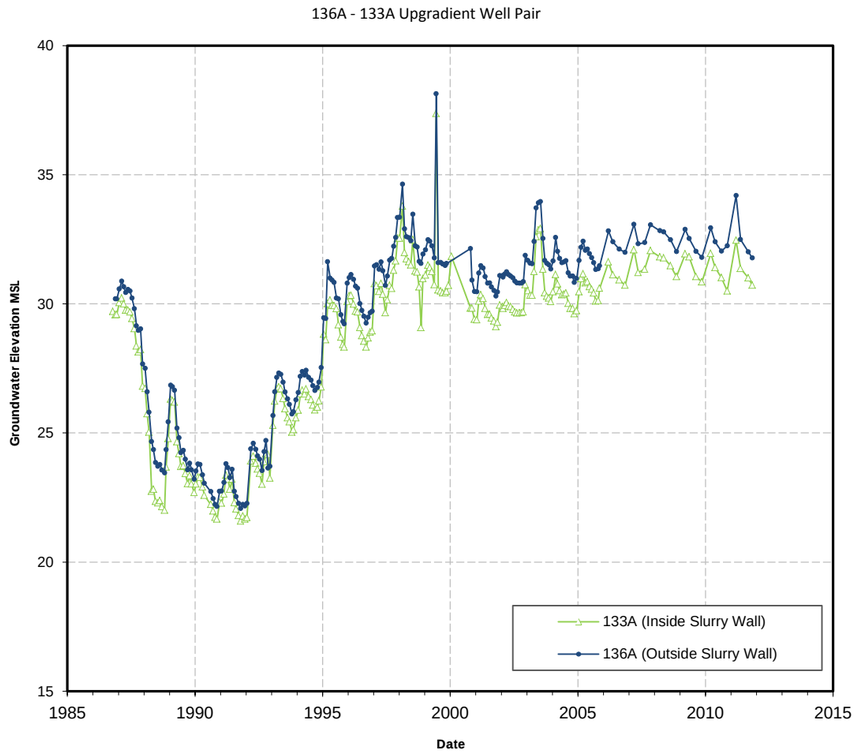
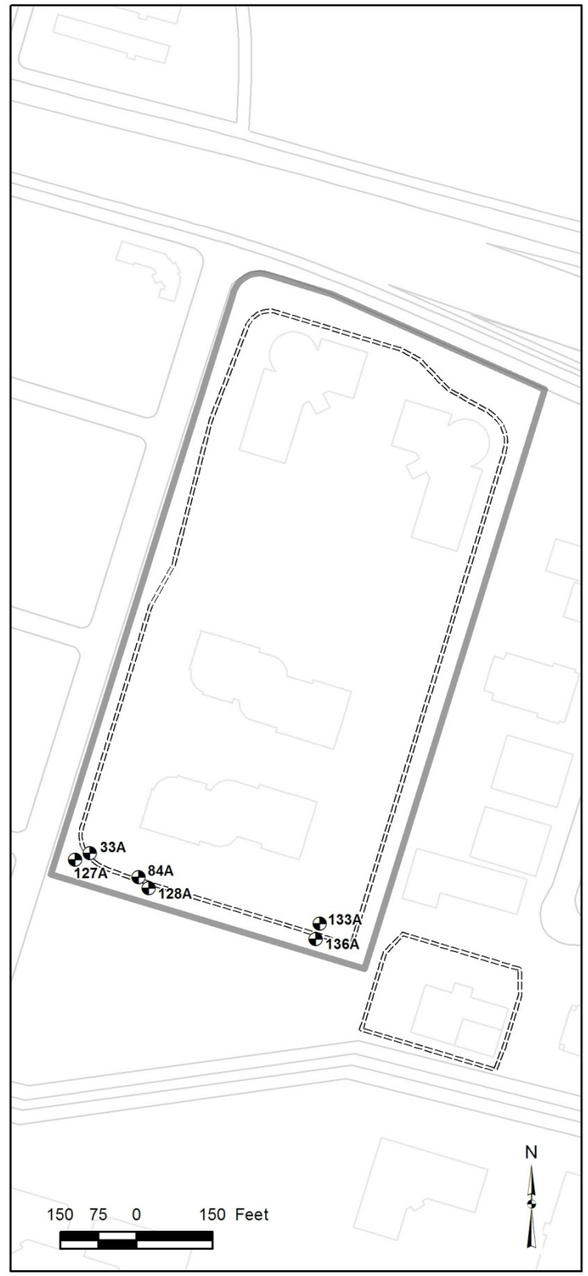
Figure **5**

Source: 2011 Annual Self-Monitoring Report, Treatment System 3, Fairchild Former Buildings 1-4 (Weiss, 2012b)

P:\GIS\MEW\AI\Regional\2010_AR\Figure4.AI







Hydrographs - Groundwater Elevation Measurements
Upgradient A Zone Slurry Wall Well Pairs

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Figure **6**

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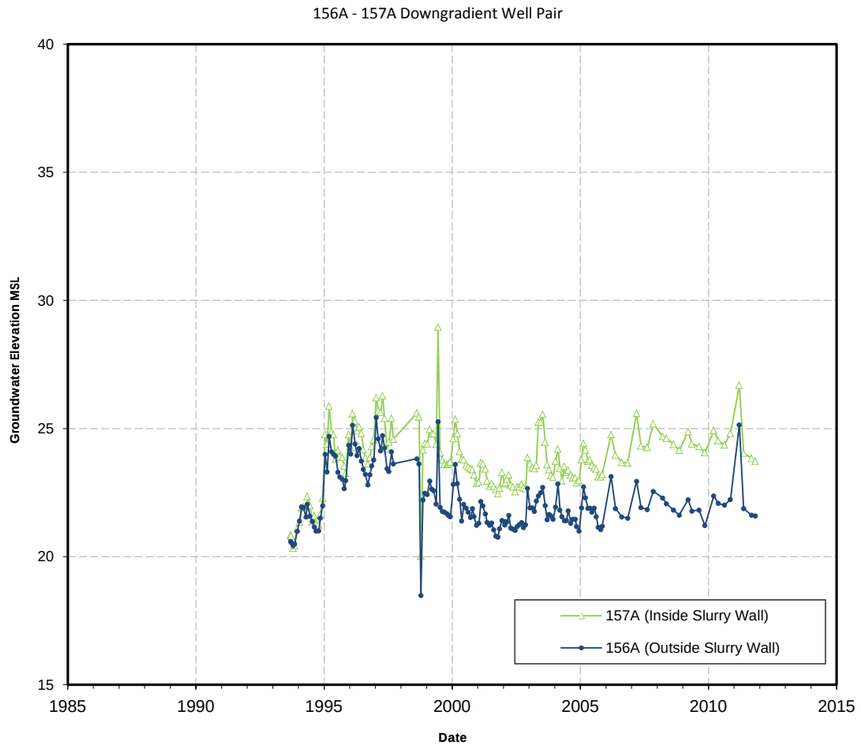
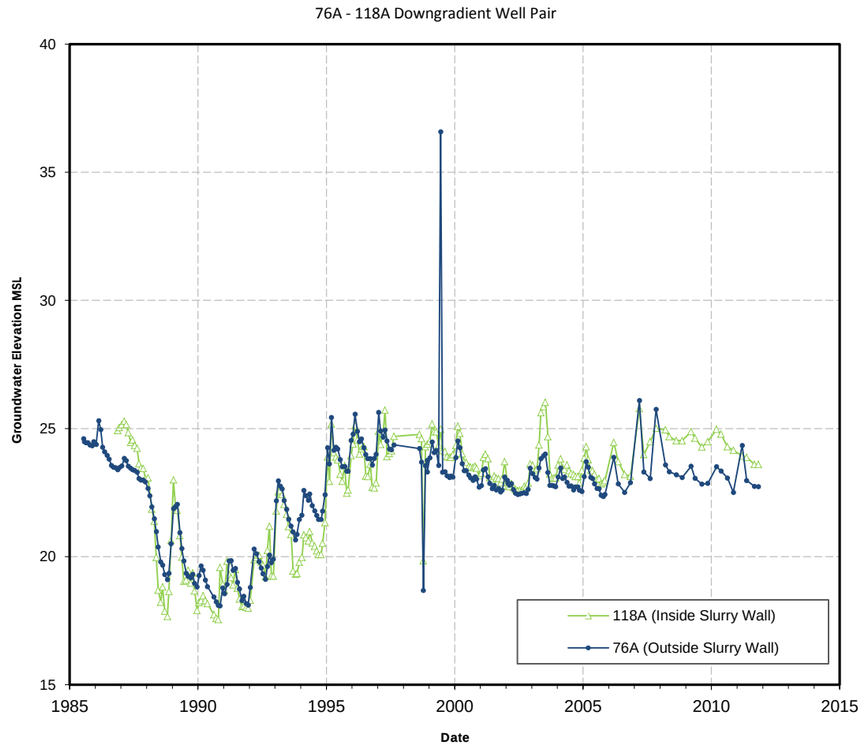
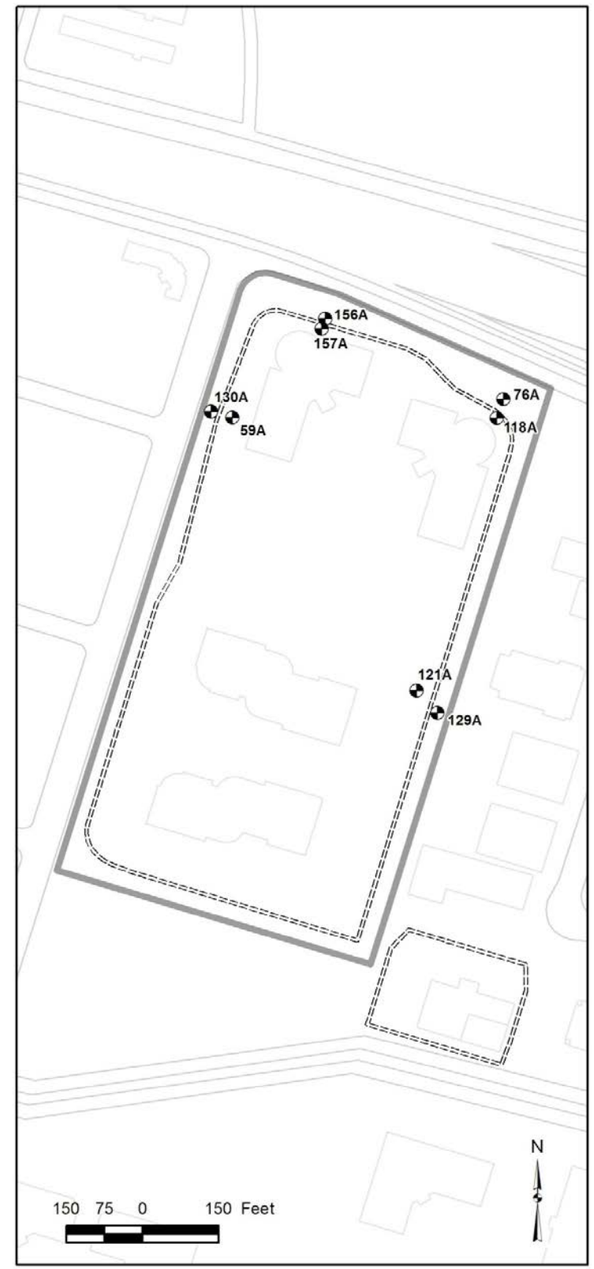
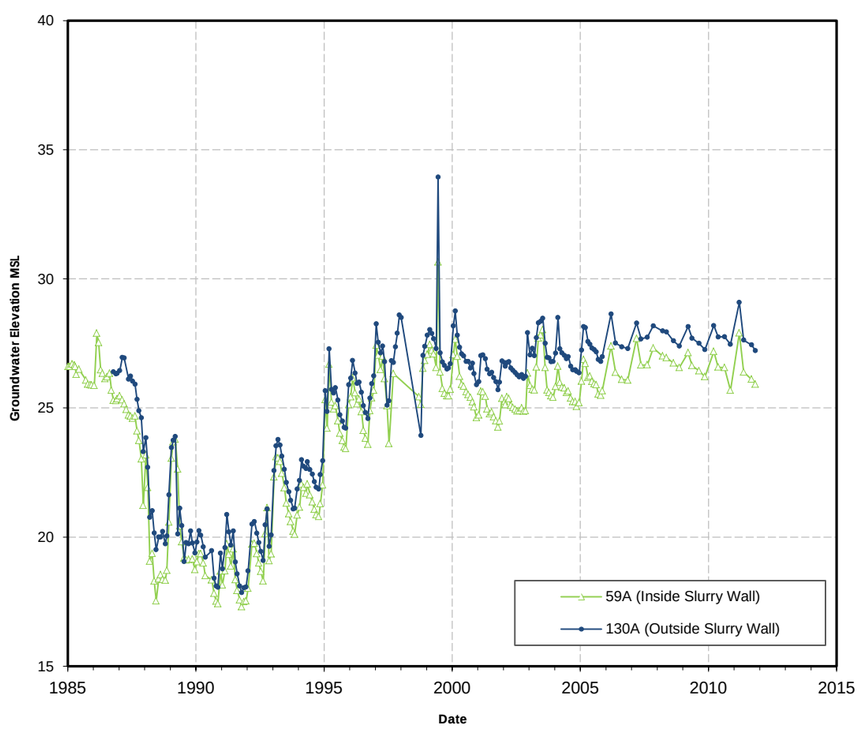
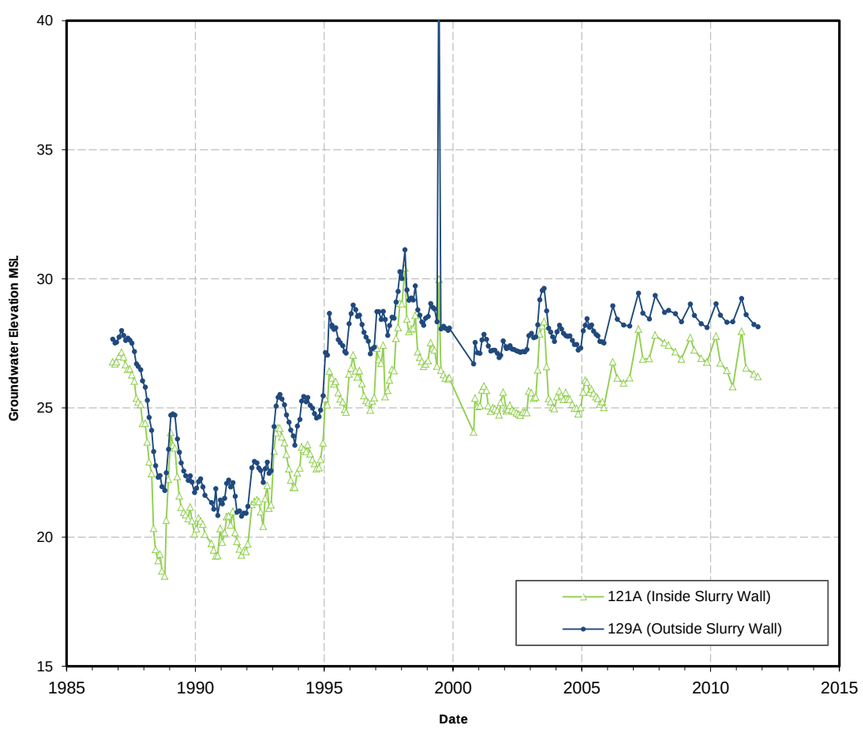
P:\GIS\MEW\Excel\Fairchild\Building1-4\Fig06and08_Hydrographs.xlsx











Hydrographs - Groundwater Elevation Measurements
Crossgradient and Downgradient A Zone Slurry Wall Well Pairs

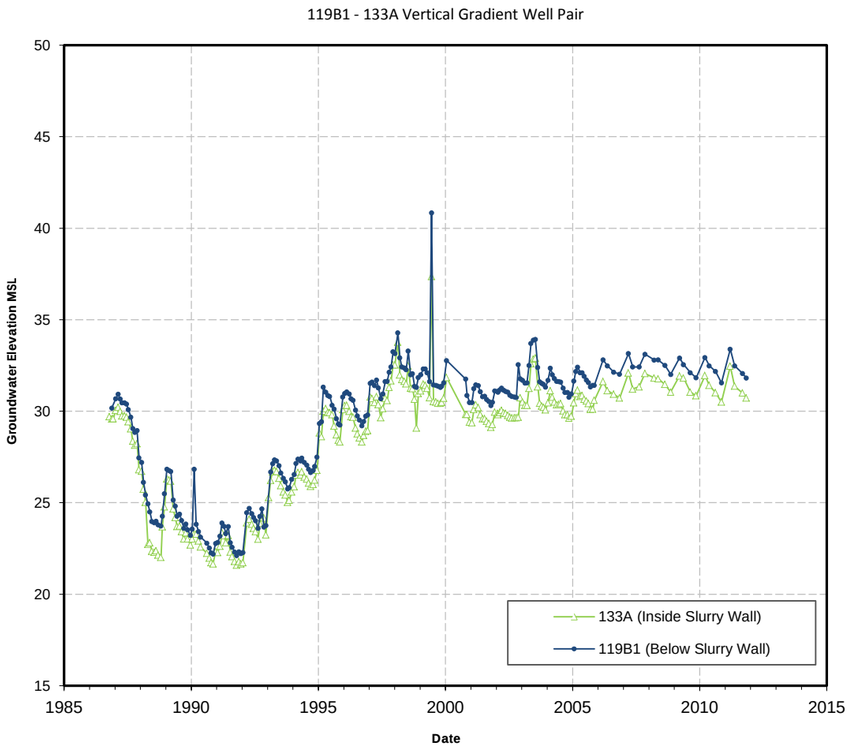
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

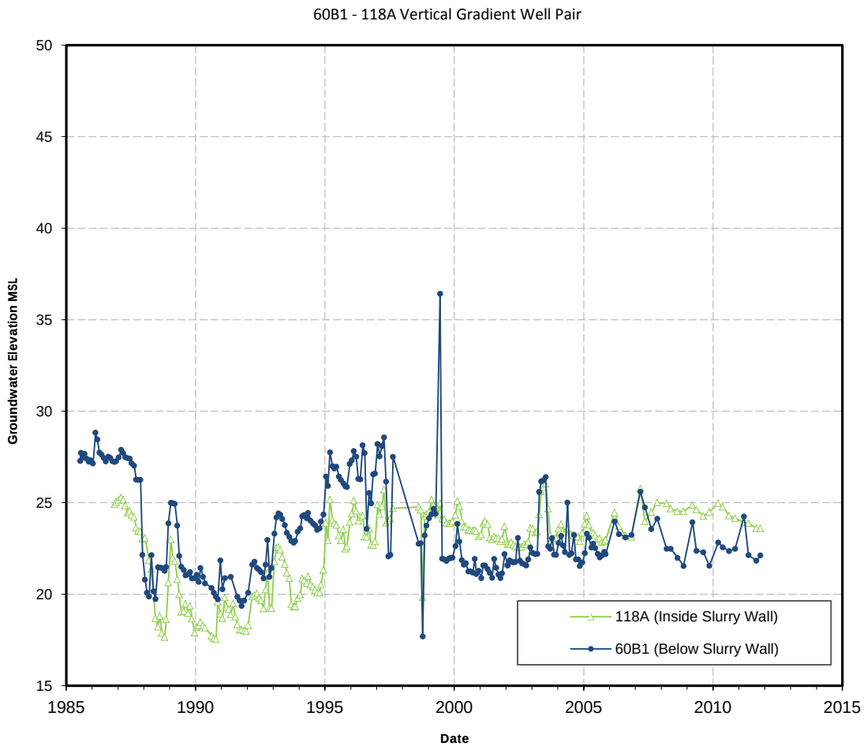
Geosyntec consultants

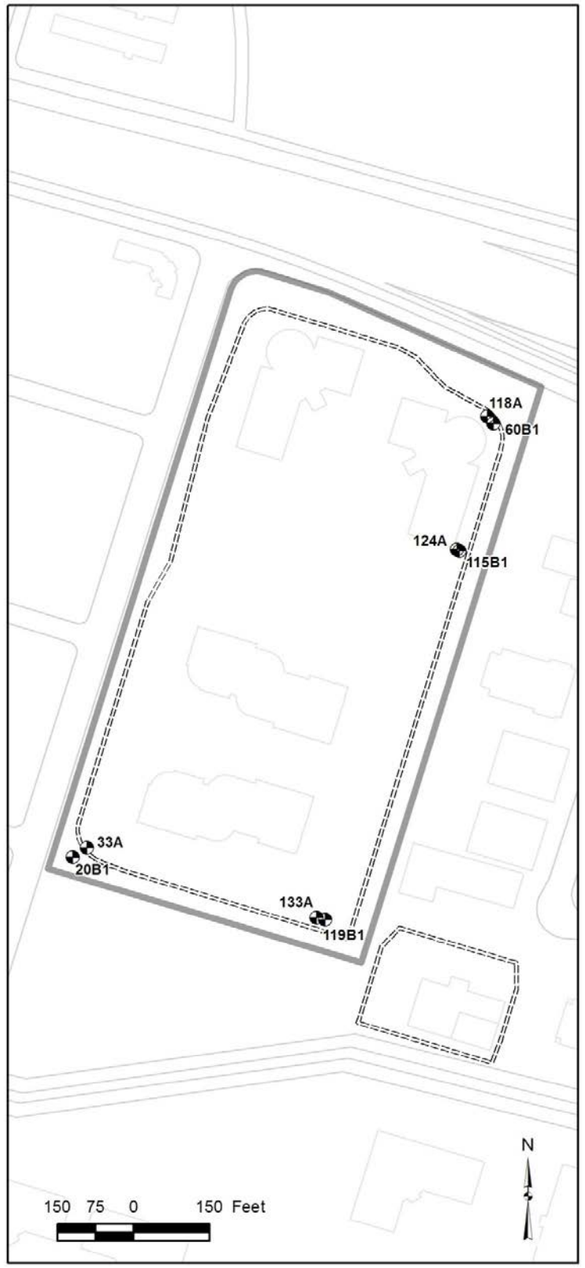
Oakland | April 2012

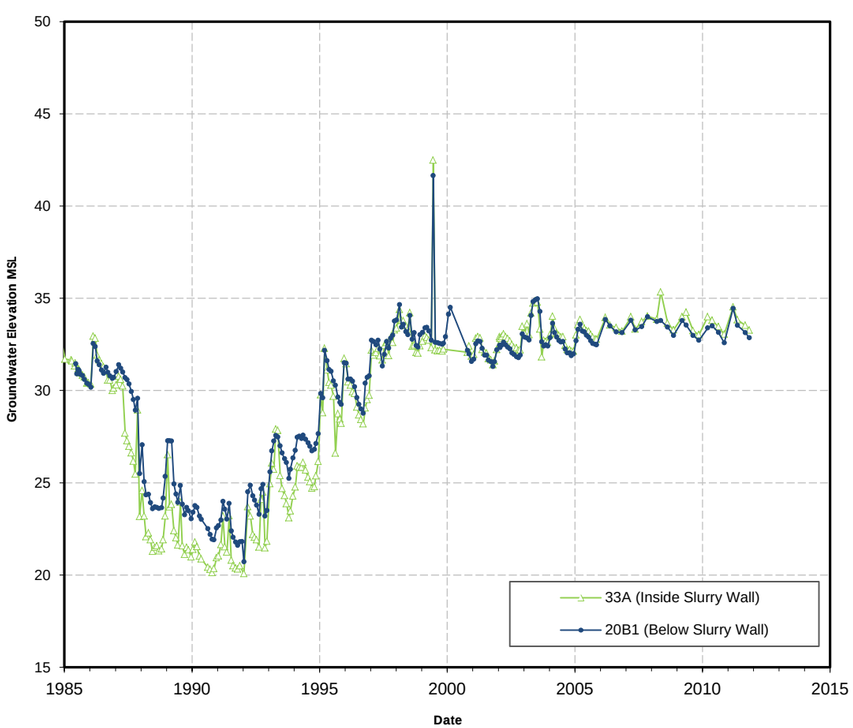
Figure 7

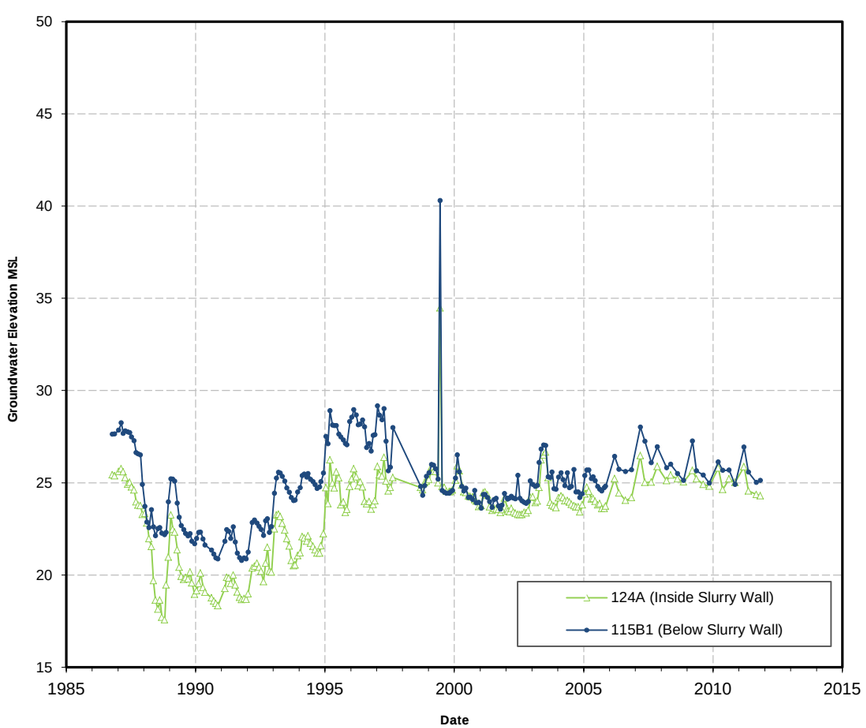
P:\GIS\MEW\Excel\Fairchild\Building1-4\Fig06and08_Hydrographs.xlsx











Hydrographs - Groundwater Elevation Measurements
Slurry Wall Well Pairs Across Water-Bearing Zones

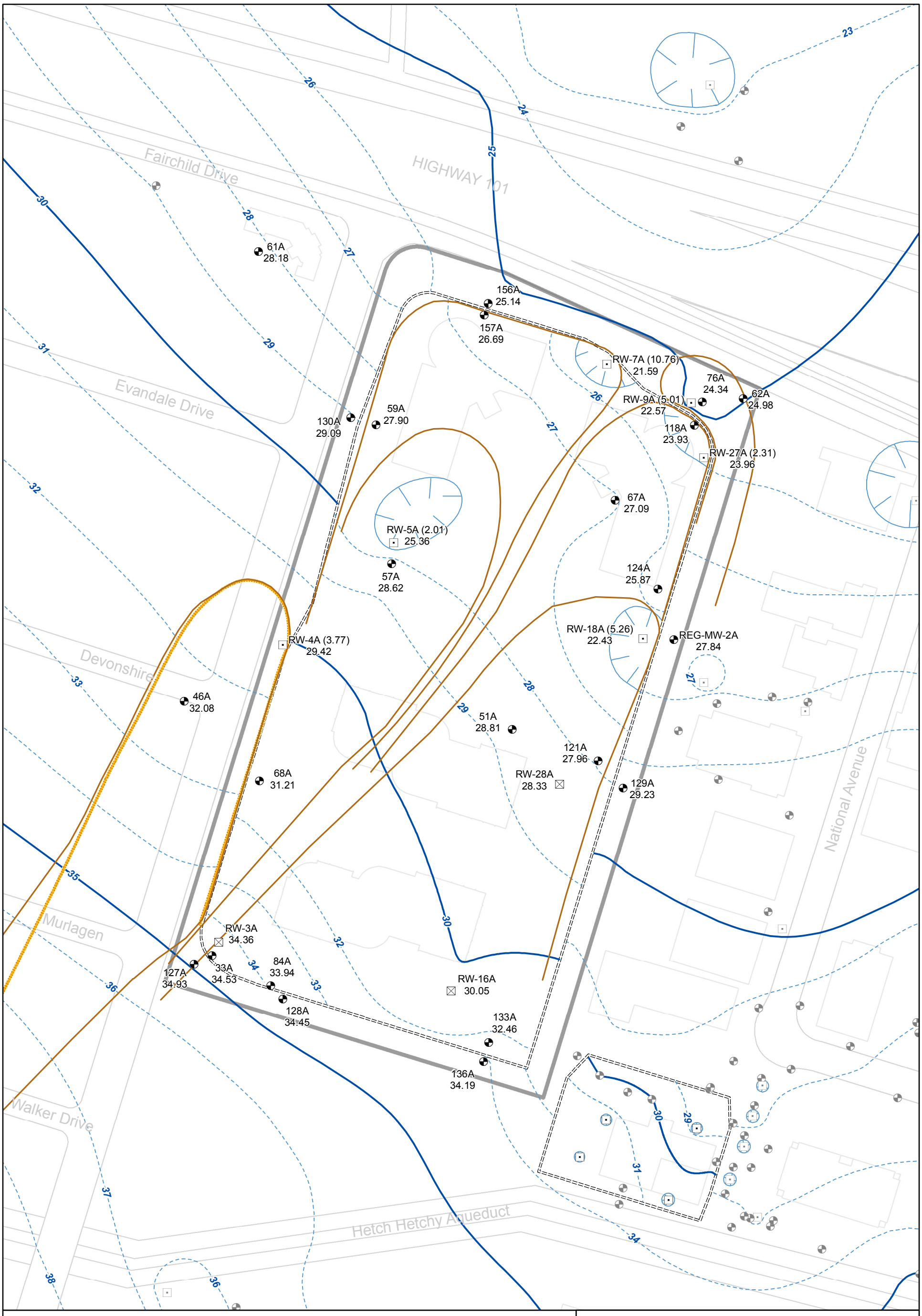
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Figure **8**

Oakland | April 2012

P:\GIS\MEW\Excel\Fairchild\Building1-4\Fig06and08_Hydrographs.xlsx



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off
- Target Capture Zone
- Groundwater Elevation: 1 ft Contours
- Groundwater Elevation: 5 ft Contours
- Closely Spaced Groundwater Contour
- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

RW-18A (5.26) Well ID (Flow Rate)
22.43 Groundwater Elevation (feet above mean sea level)

Note:
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

N

150 75 0 150 Feet

A/A1 Zone Groundwater Contours and Estimated Capture Zones 24 March 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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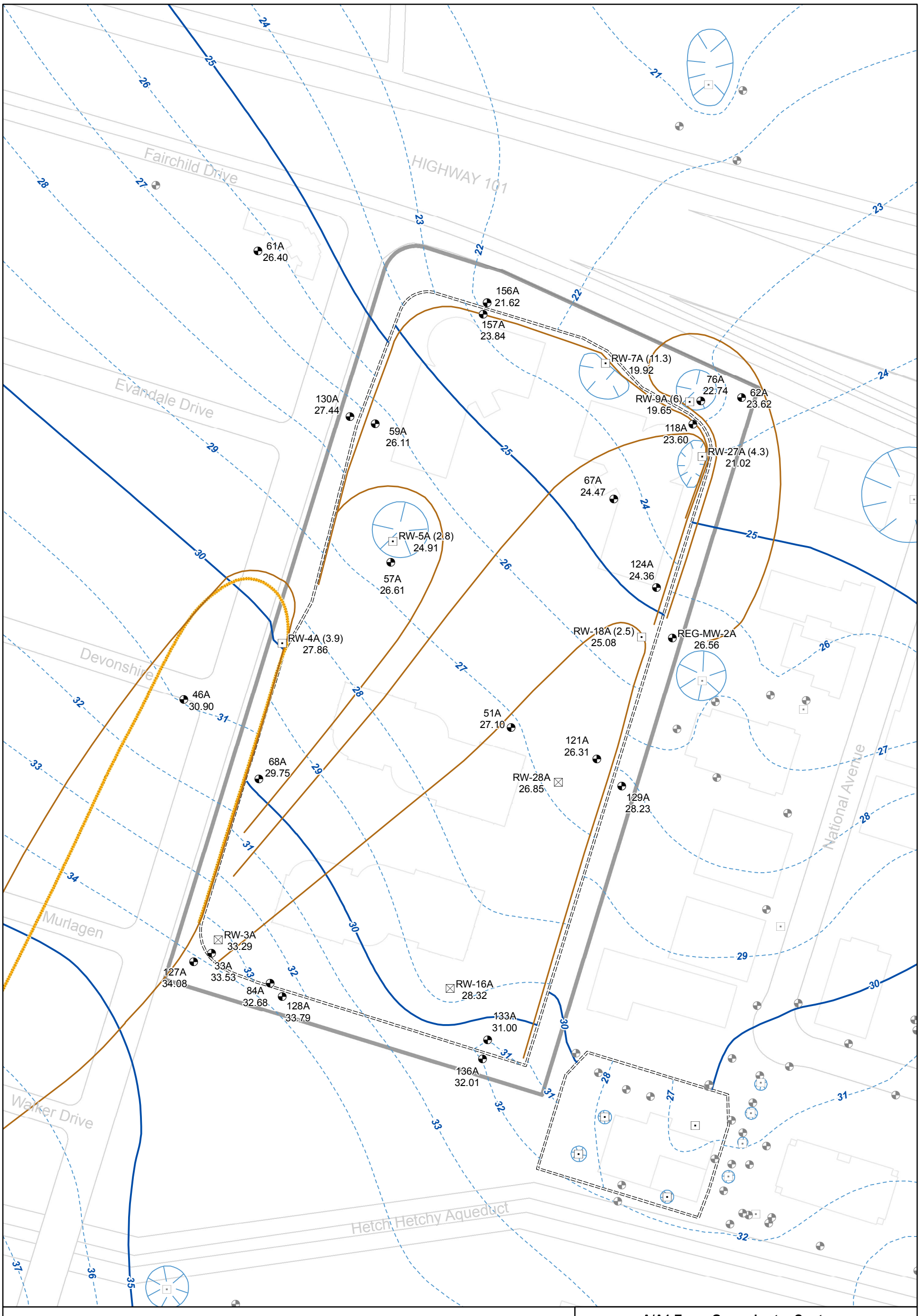
Figure 9

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig09_GW_AA1_Mar2011.mxd | 4/10/2012 5:34:19 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off
- Target Capture Zone
- Groundwater Elevation: 1 ft Contours
- Groundwater Elevation: 5 ft Contours
- Closely Spaced Groundwater Contour
- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

RW-4A (3.9) Well ID (Flow Rate)
27.86 Groundwater Elevation (feet above mean sea level)

Note:
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

N

150 75 0 150 Feet

A/A1 Zone Groundwater Contours and Estimated Capture Zones 15 September 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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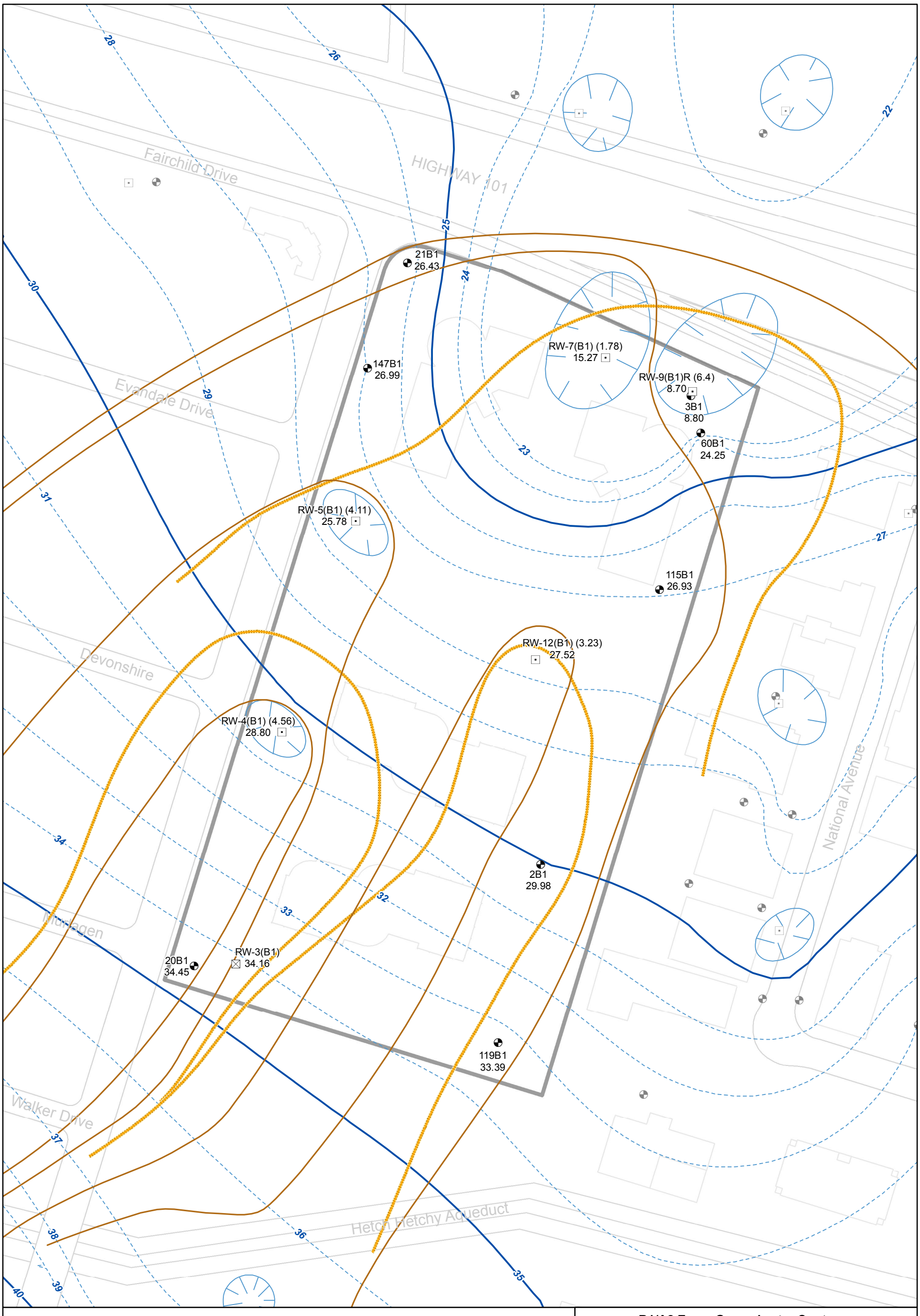
Figure 10

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig10_GW_AA1_Sept2011.mxd | 4/10/2012 5:34:28 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off
- Target Capture Zone
- Groundwater Elevation: 1 ft Contours
- Groundwater Elevation: 5 ft Contours
- Closely Spaced Groundwater Contour
- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

RW-7(B1) (1.78) Well ID (Flow Rate)
15.27 Groundwater Elevation (feet above mean sea level)

N

150 75 0 150 Feet

Note:
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B1/A2 Zone Groundwater Contours and Estimated Capture Zones
24 March 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

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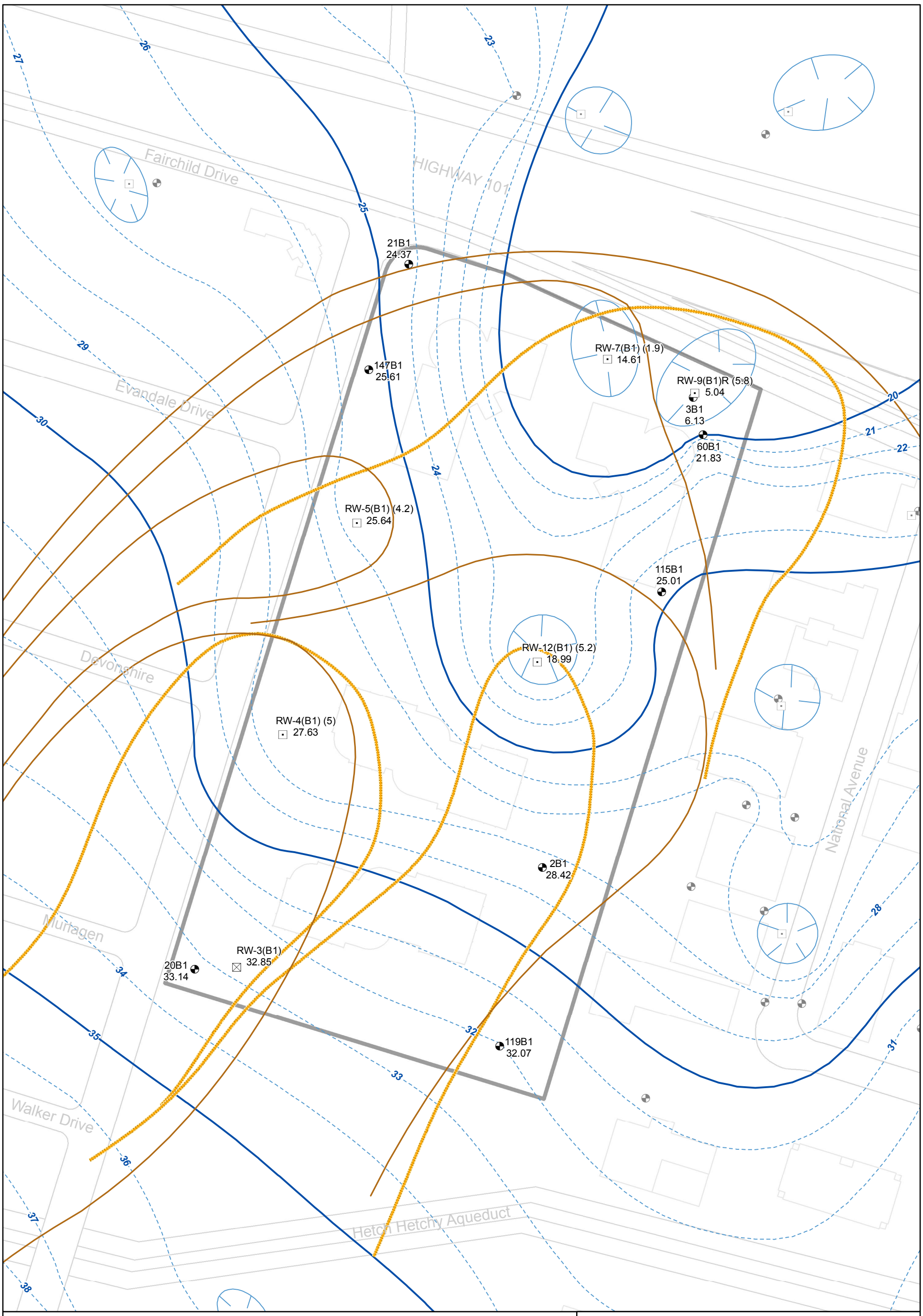
Figure **11**

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig11_GW_B1A2_Mar2011.mxd | 4/10/2012 5:34:37 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off
- Target Capture Zone
- Groundwater Elevation: 1 ft Contours
- Groundwater Elevation: 5 ft Contours
- Closely Spaced Groundwater Contour
- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

RW-7(B1) (1.9) Well ID (Flow Rate)
14.61 Groundwater Elevation (feet above mean sea level)

N

150 75 0 150 Feet

Note:
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B1/A2 Zone Groundwater Contours and Estimated Capture Zones
15 September 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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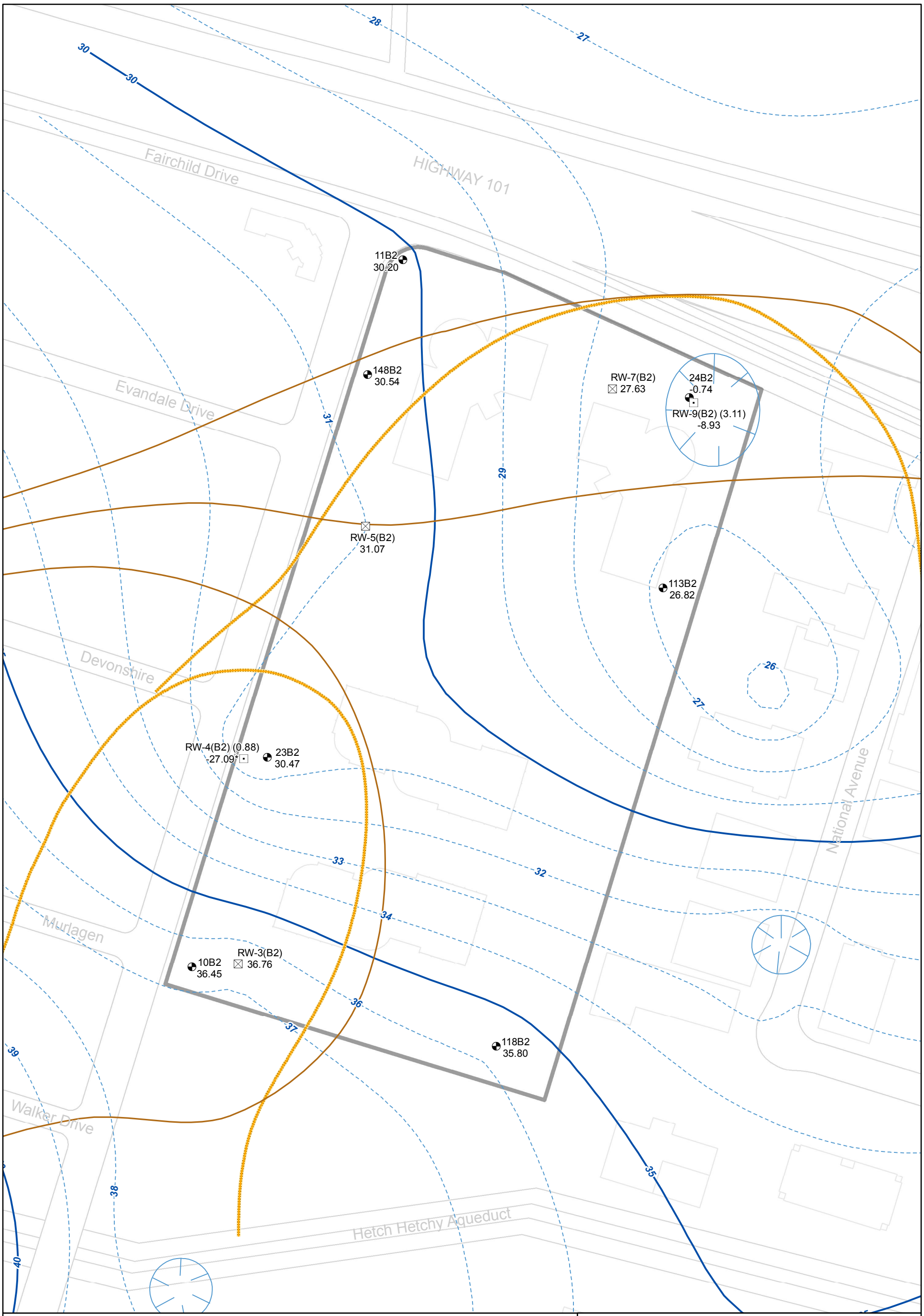
Figure **12**

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig12_GW_B1A2_Sept2011.mxd | 4/10/2012 5:34:45 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off
- Target Capture Zone
- Groundwater Elevation: 1 ft Contours
- Groundwater Elevation: 5 ft Contours
- Closely Spaced Groundwater Contour
- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

RW-9(B2) (3.11) Well ID (Flow Rate)
-8.93 Groundwater Elevation (feet above mean sea level)

Note:
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

N

150 75 0 150 Feet

B2 Zone Groundwater Contours and Estimated Capture Zones 24 March 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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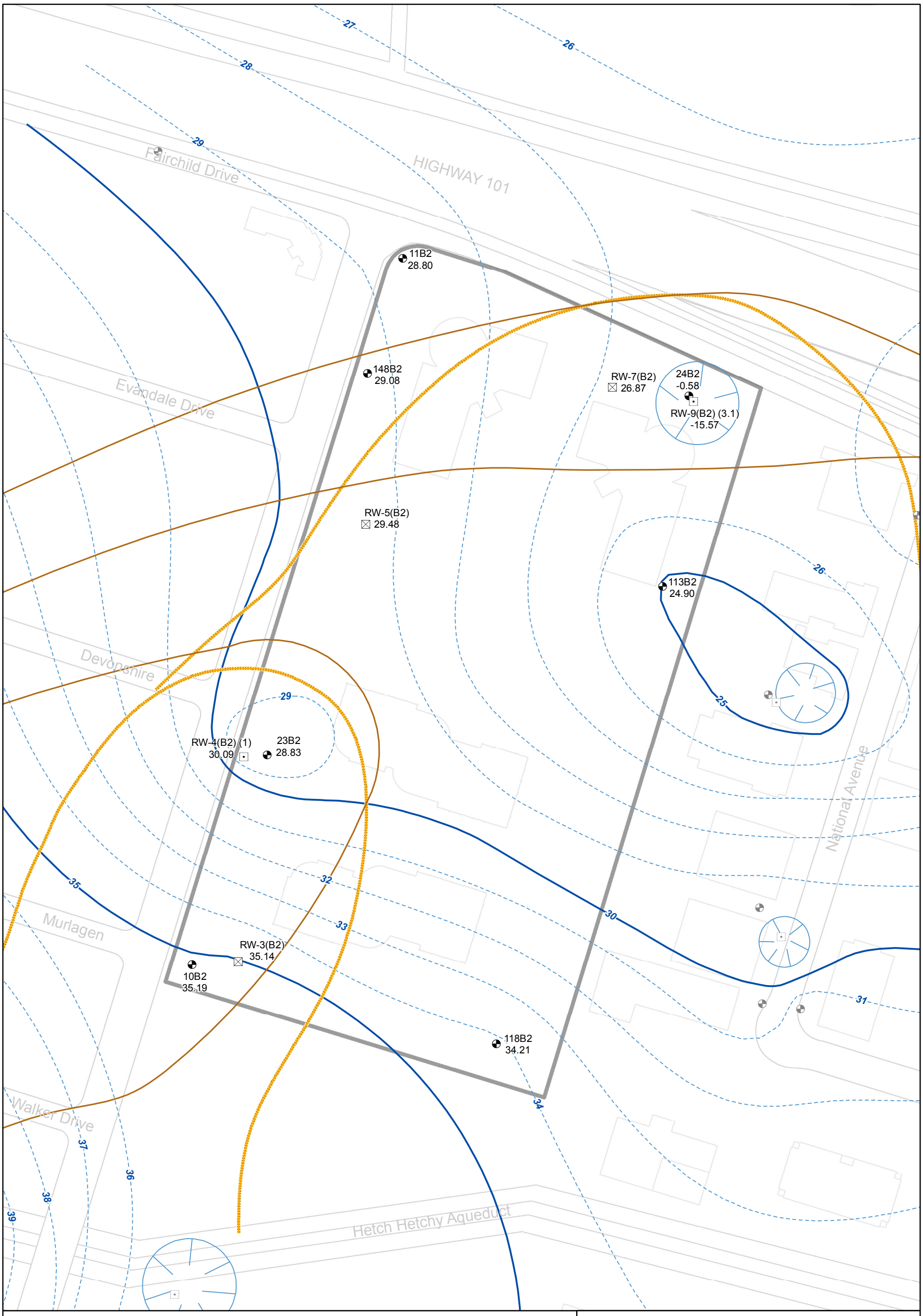
Figure 13

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig13_GW_B2_Mar2011.mxd | 4/10/2012 5:34:54 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off
- Target Capture Zone
- Groundwater Elevation: 1 ft Contours
- Groundwater Elevation: 5 ft Contours
- Closely Spaced Groundwater Contour
- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

RW-9(B2) (3.1) Well ID (Flow Rate)
-15.57 Groundwater Elevation (feet above mean sea level)

N

150 75 0 150 Feet

Note:
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B2 Zone Groundwater Contours and Estimated Capture Zones 15 September 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

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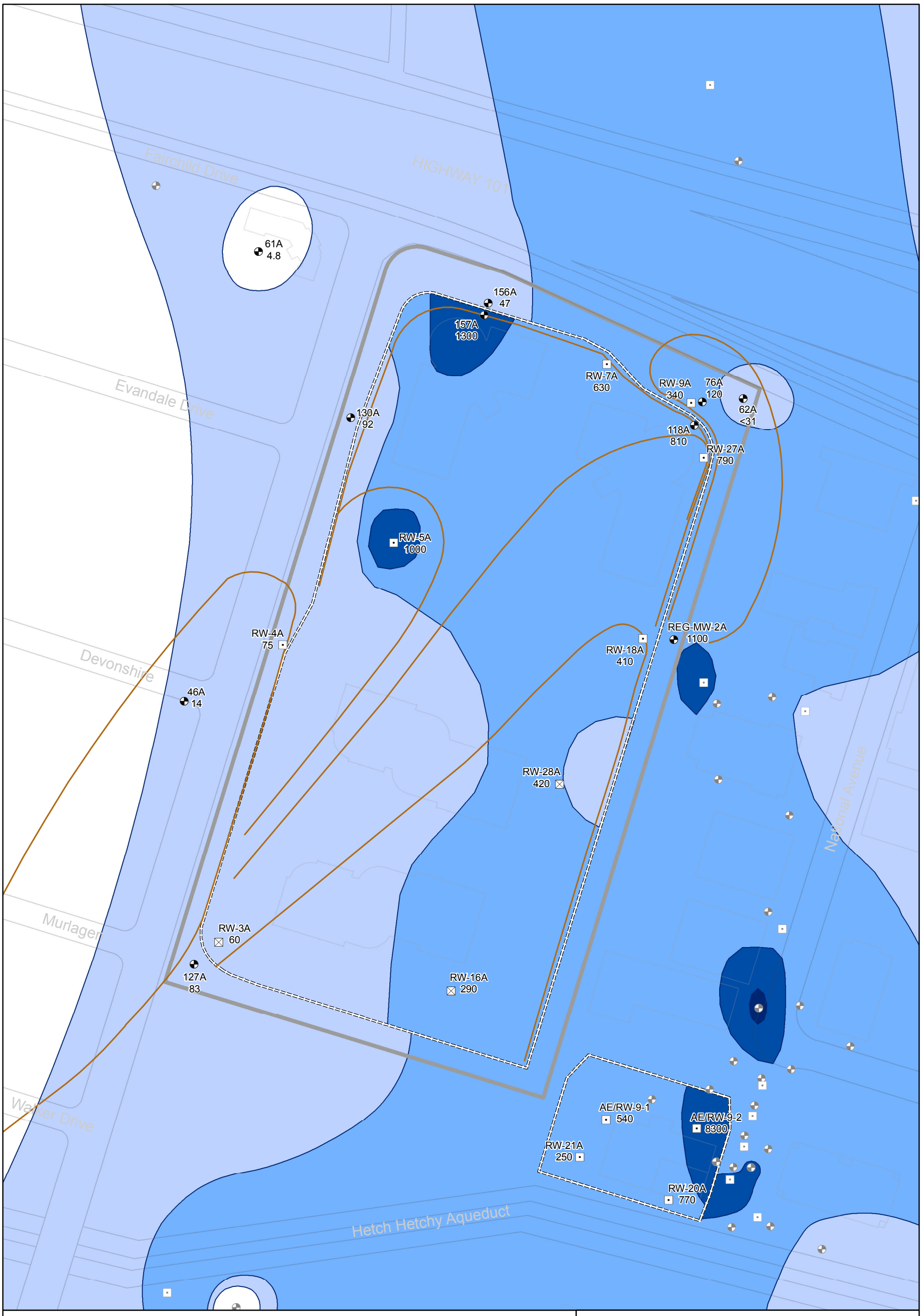
Figure 14

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig14_GW_B2_Sept2011.mxd | 4/10/2012 5:35:02 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

TCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
TCE = Trichloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for TCE in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

A/A1 Zone TCE Concentrations and Estimated Capture Zones September/October 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

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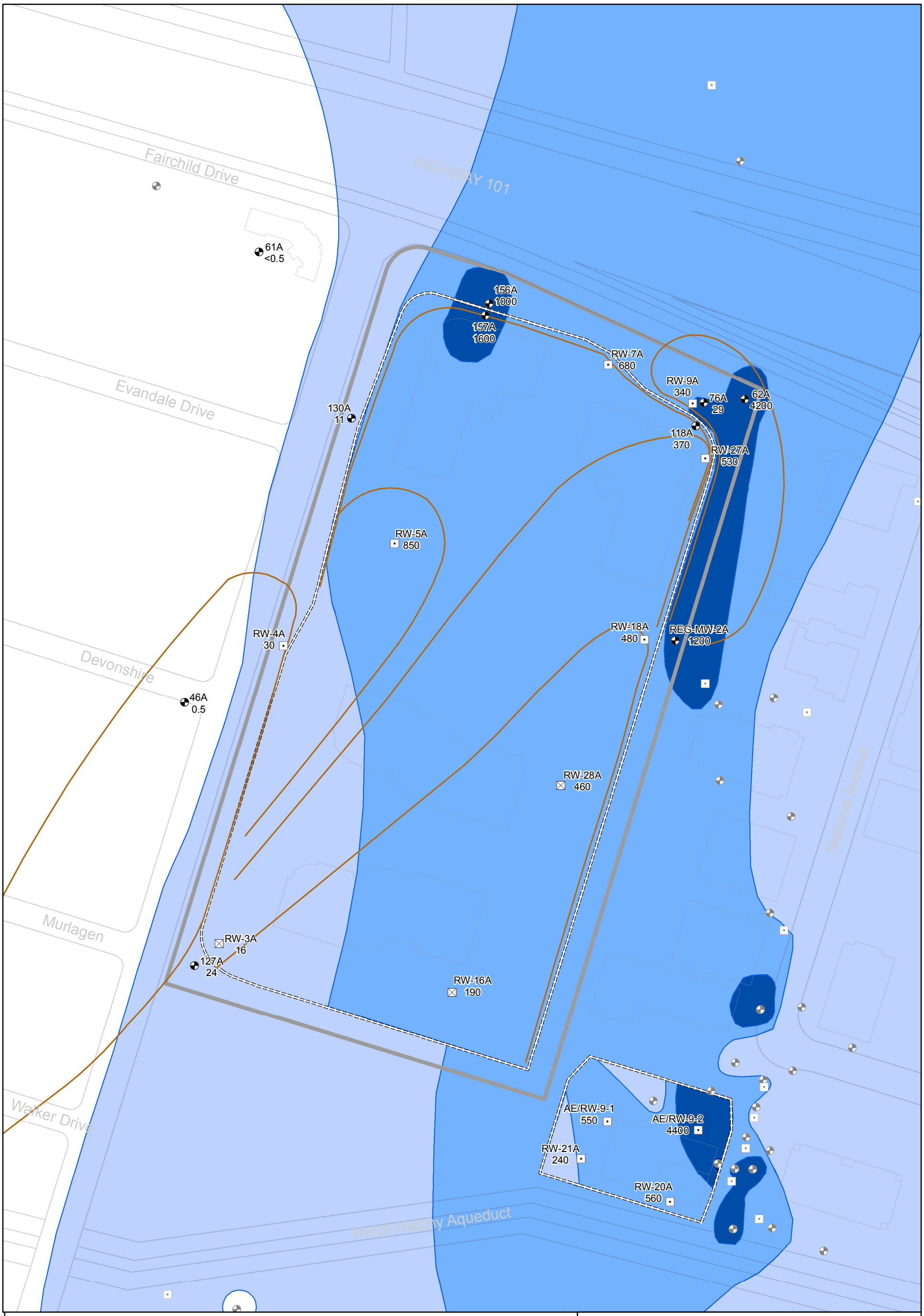
Figure 15

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig15_TCE_AA1_Sept2011_CZ.mxd | 4/10/2012 5:35:12 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

cDCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- ==== Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
cDCE = cis-1,2-Dichloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for cDCE in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

A/A1 Zone cDCE Concentrations and Estimated Capture Zones September/October 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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Figure 16

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig16_DCE_AA1_Sept2011_CZ.mxd | 4/10/2012 5:35:20 PM

Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

VC Concentration

- 0.5 - 5 ug/L
- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Slurry Wall
- Building
- Road
- Estimated Capture Zone
- Site Boundary

N

150 75 0 150 Feet

Notes:
VC = Vinyl Chloride
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for VC in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

A/A1 Zone VC Concentrations and Estimated Capture Zones September/October 2011

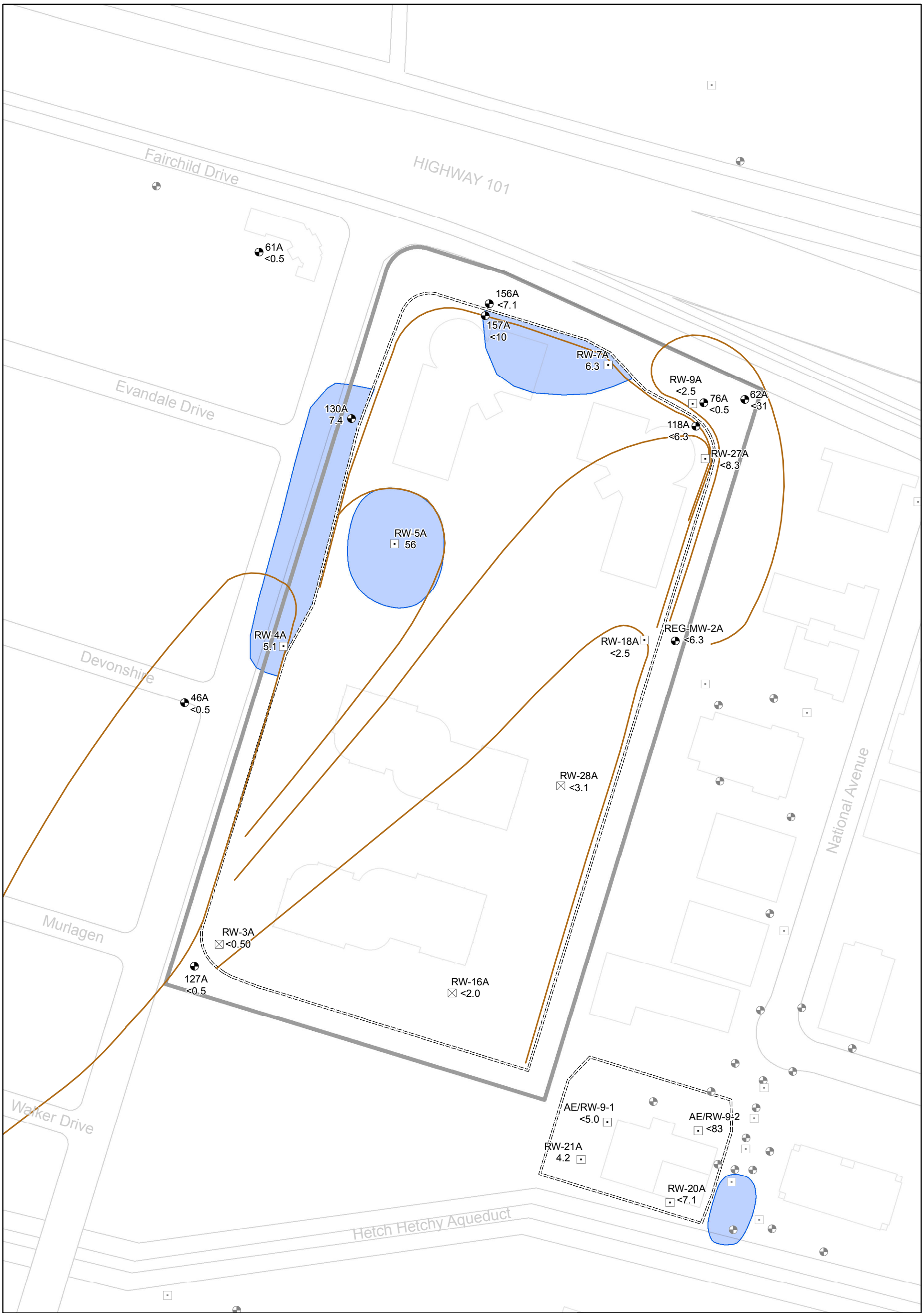
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Oakland | April 2012

Figure 17

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig17_VC_AA1_Sept2011_CZ.mxd | 4/10/2012 5:35:28 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

PCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Slurry Wall
- Building
- Road
- Estimated Capture Zone
- Site Boundary

N

150 75 0 150 Feet

Notes:
PCE = Tetrachloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for PCE in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

A/A1 Zone PCE Concentrations and Estimated Capture Zones September/October 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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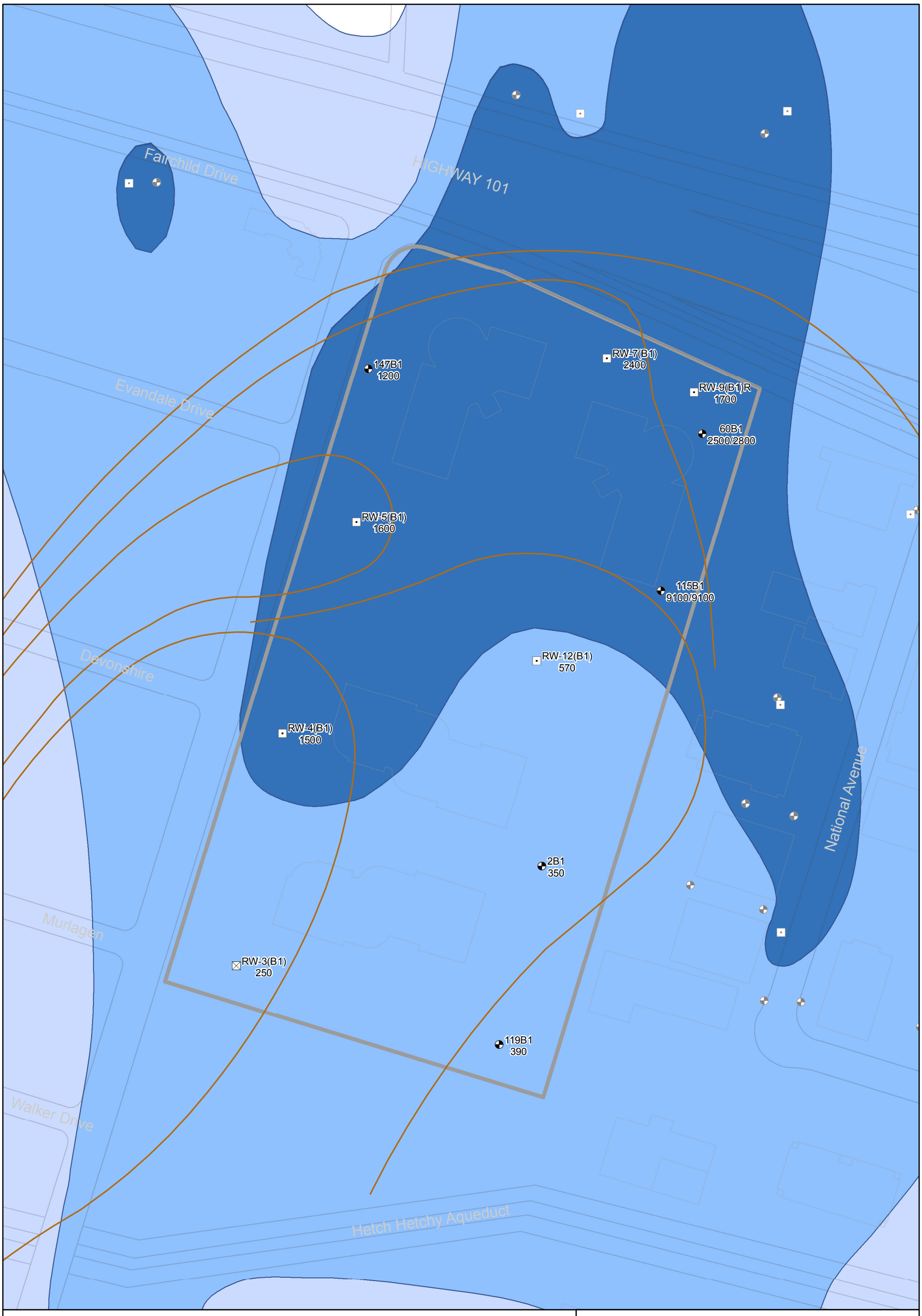
Oakland | April 2012

Figure 18

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig18_PCE_AA1_Sept2011_CZ.mxd | 4/10/2012 5:35:36 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

TCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
TCE = Trichloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for TCE in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B1/A2 Zone TCE Concentrations and Estimated Capture Zones September/October 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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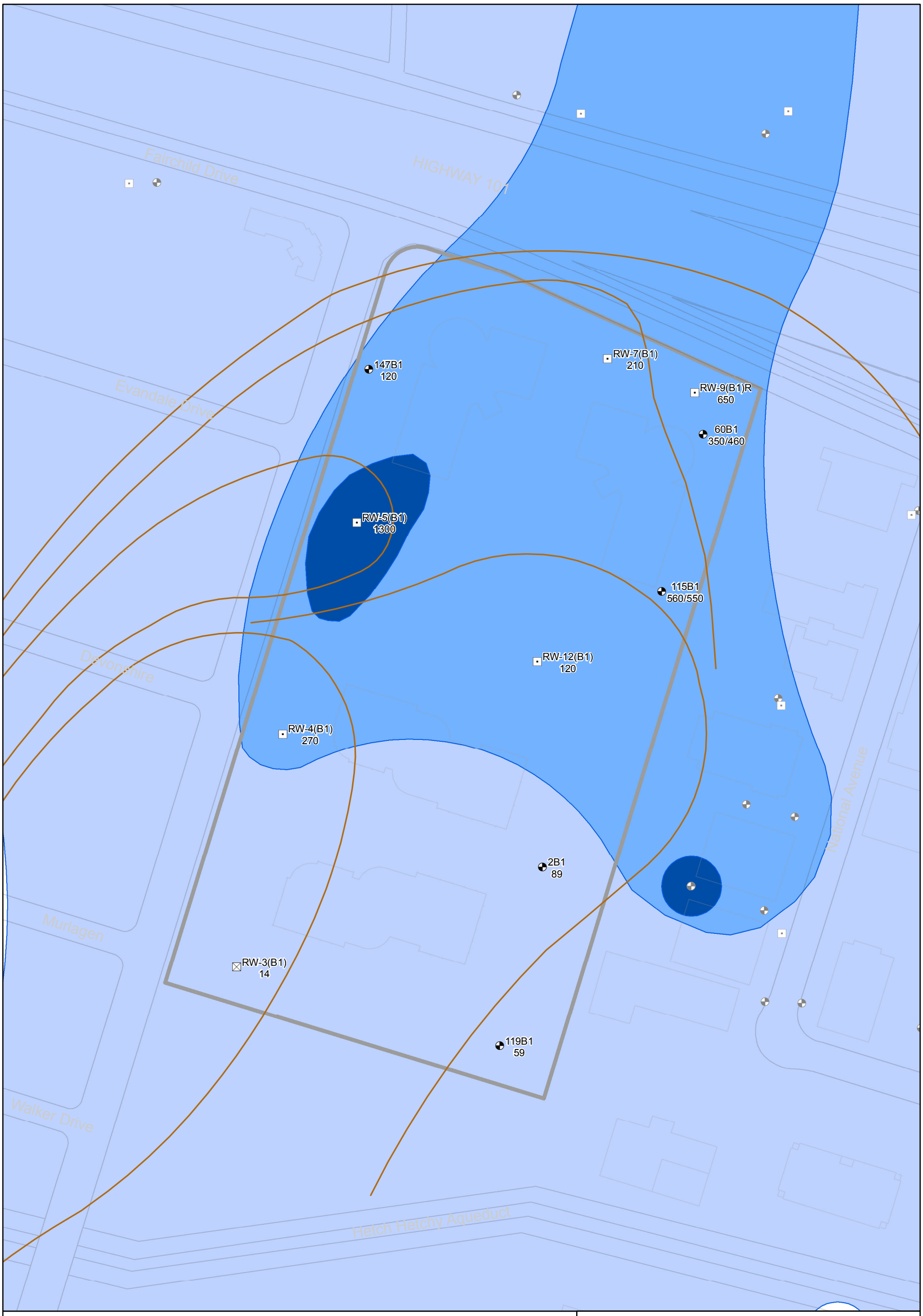
Figure 19

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig19_TCE_B1A2_Sept2011_CZ.mxd | 4/10/2012 5:35:47 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

cDCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- ==== Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
cDCE = cis-1,2-Dichloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for cDCE in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B1/A2 Zone cDCE Concentrations and Estimated Capture Zones September/October 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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Oakland | April 2012

Figure 20

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig20_DCE_B1A2_Sept2011_CZ.mxd | 4/10/2012 5:35:56 PM

Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

VC Concentration

- 0.5 - 5 ug/L
- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- ==== Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
VC = Vinyl Chloride
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for VC in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B1/A2 Zone VC Concentrations and Estimated Capture Zones September/October 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

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Figure 21

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig21_VC_B1A2_Sept2011_CZ.mxd | 4/10/2012 5:36:04 PM

Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

PCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
PCE = Tetrachloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for PCE in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B1/A2 Zone PCE Concentrations and Estimated Capture Zones September/October 2011

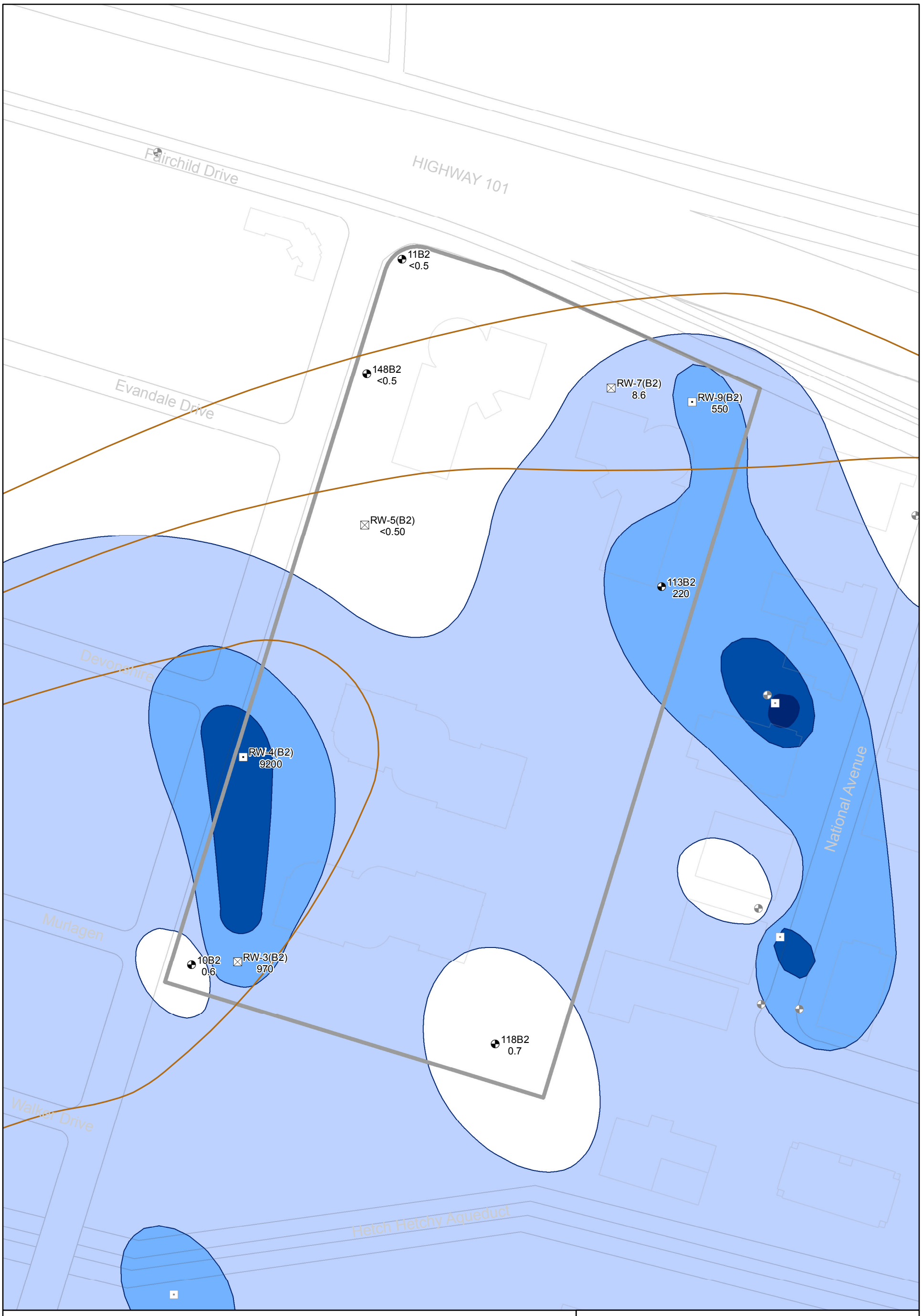
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Oakland | April 2012

Figure 22

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig22_PCE_B1A2_Sept2011_CZ.mxd | 4/10/2012 5:36:13 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

TCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
TCE = Trichloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for TCE in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B2 Zone TCE Concentrations and Estimated Capture Zones September/October 2011

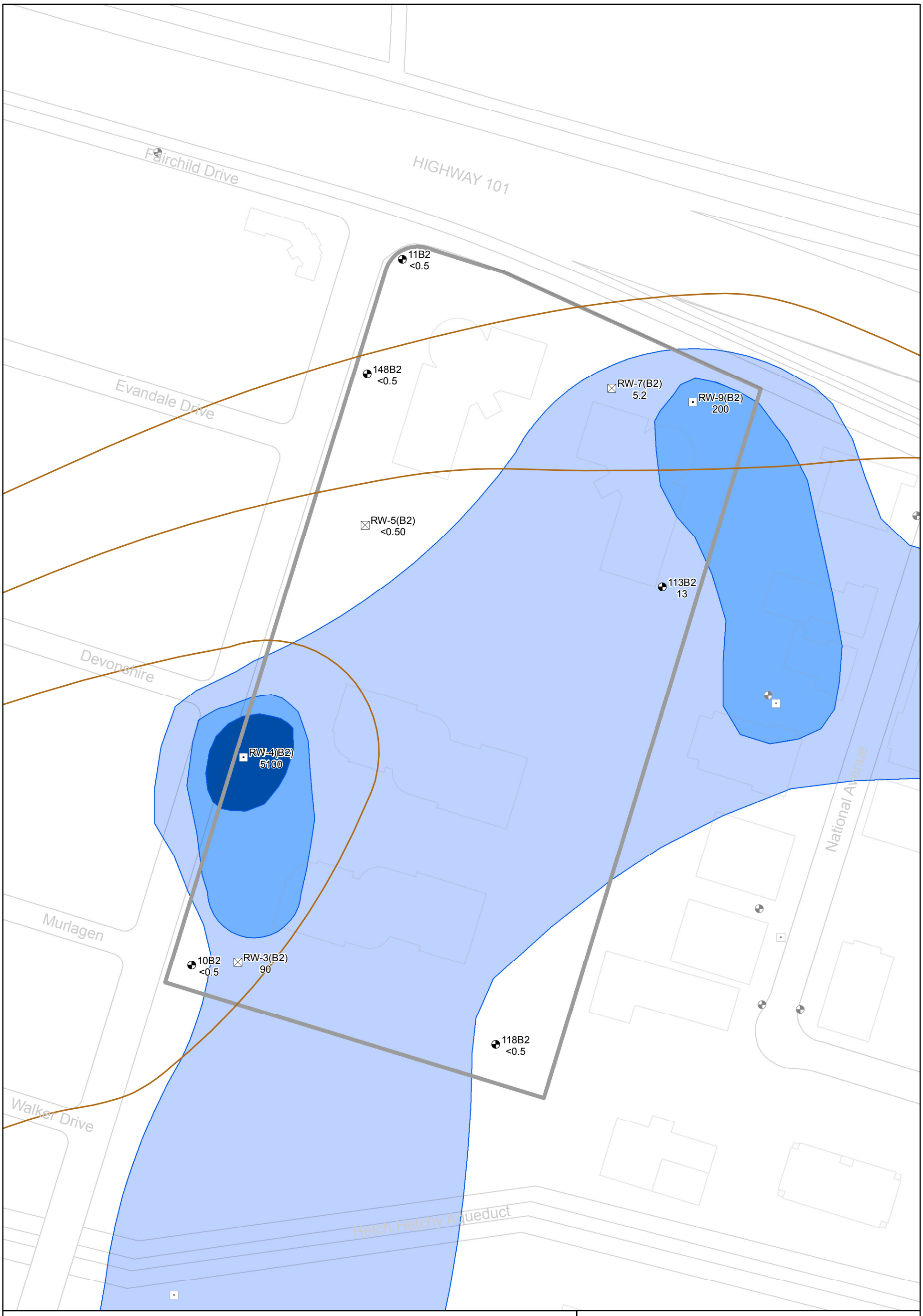
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Oakland | April 2012

Figure 23

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig23_TCE_B2_Sept2011_CZ.mxd | 4/10/2012 5:36:23 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

cDCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
cDCE = cis-1,2-Dichloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for cDCE in 2011..
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B2 Zone cDCE Concentrations and Estimated Capture Zones September/October 2011

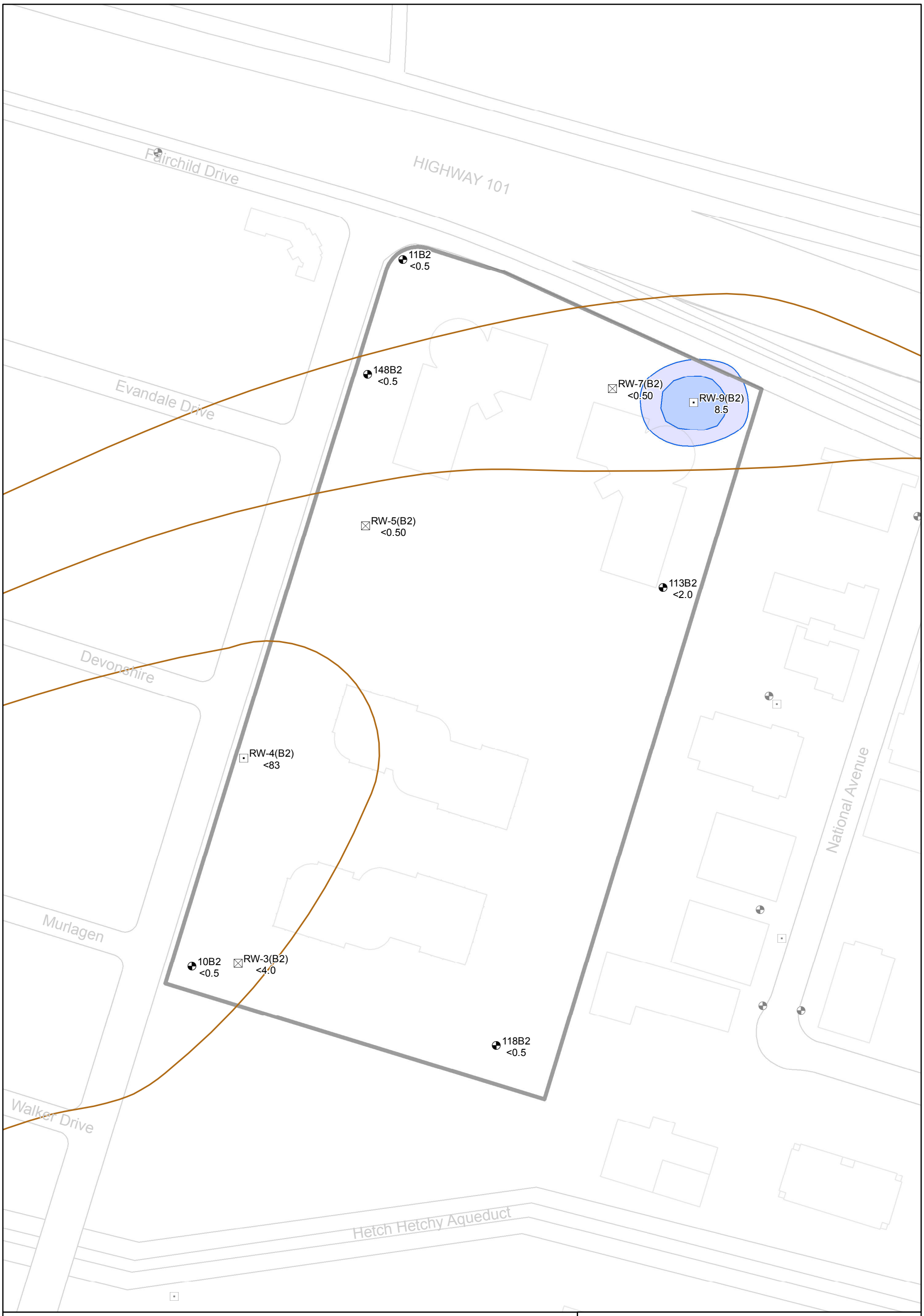
MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Oakland | April 2012

Figure 24

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig24_DCE_B2_Sept2011_CZ.mxd | 4/10/2012 5:36:32 PM



Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

VC Concentration

- 0.5 - 5 ug/L
- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- ==== Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
VC = Vinyl Chloride
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for VC in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B2 Zone VC Concentrations and Estimated Capture Zones September/October 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Oakland | April 2012

Figure 25

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig25_VC_B2_Sept2011_CZ.mxd | 4/10/2012 5:36:41 PM

Legend

- Monitoring Well
- Recovery Well On
- Recovery Well Off

PCE Concentration

- 5 - 100 ug/L
- 100 - 1,000 ug/L
- 1,000 - 10,000 ug/L
- Greater than 10,000 ug/L

- Estimated Capture Zone
- Slurry Wall
- Building
- Road
- Site Boundary

N

150 75 0 150 Feet

Notes:
PCE = Tetrachloroethene
ug/L = micrograms per liter
Figure shows only those wells sampled and analyzed for PCE in 2011.
Wells not associated with the Former Fairchild Buildings 1-4 Site are shown in gray.

B2 Zone PCE Concentrations and Estimated Capture Zones September/October 2011

MEW Former Fairchild Buildings 1-4 Groundwater Remediation Program
Mountain View, California

Geosyntec consultants

Oakland | April 2012

Figure 26

\\Oakland-01\Data\GIS\MEW\Project\Fairchild\Building01-04\2011_AR\Fig26_PCE_B2_Sept2011_CZ.mxd | 4/10/2012 5:36:51 PM

APPENDIX A

2011 Annual Report Remedy Performance Checklist

2011 Annual Report Remedy Performance Checklist

I. GENERAL SITE INFORMATION

Facility Name: Former Fairchild Facilities, Middlefield-Ellis-Whisman Study Area (MEW Site)

Facility Address, City, State: 515/545 North Whisman Road and 313 Fairchild Drive (former Bldgs. 1-4)
369 and 441 North Whisman Road (former Bldgs. 13 and 19 and 23)
401 National Avenue (former Bldg. 9)
644 National Avenue (former Bldg. 18)
464 Ellis Street (former Bldg. 20 and 20A)

Checklist completion date: 23 march 2012

EPA Site ID: System-1: CAR000164285
System-3: CAD095989778
System-19: CAR000164228

Site Lead: ☐ Fund ☑ PRP ☐ State ☐ State Enforcement ☐ Federal Facility ☐ Other: EPA Region IX

Site Remedy Components (Include Other Reference Documents for More Information, as appropriate):

1. Three slurry wall enclosures around former Buildings 1-4, Building 9, and Building 19. The slurry walls extend to a depth of about 40 feet below ground surface and are keyed a minimum of two feet into the A/B1 aquitard.
2. Extraction Systems as described below:

Buildings 1-4 – 20 recovery wells: three Regional Groundwater Remediation Program (RGRP) wells and 17 Source Control Recovery Wells (SCRWs)

Buildings 13, 19, 23 – 15 recovery wells: one RGRP well and 14 SCRWs

Building 9 – Four SCRWs

Building 18 – One SCRW and one basement dewatering sump

3. Treatment Systems as described below:

System 1 (treats water from Buildings 1-4, Building 9, and Building 18)

- Three 5,000-pound GAC vessels in series, treatment pad, controls, double-contained groundwater conveyance piping, vaults, electrical distribution, controls and other appurtenances.

System 3 (treats water from Buildings 1-4)

- Three 5,000-pound GAC vessels in series, treatment pad, controls, double-contained groundwater conveyance piping, vaults, electrical distribution, controls and other appurtenances.

System 19 (treats water from Buildings 13, 19, and 23)

- Three 5,000-pound GAC vessels in series, treatment pad, controls, double-contained groundwater conveyance piping, vaults, electrical distribution, controls and other appurtenances.

II. CONTACTS

List important personnel associated with the Site: Name, title, phone number, e-mail address:

	Name/Title	Phone	E-mail
RP/Facility Representative	Virgilio Cocianni Schlumberger Technology Corporation	281-285-4747	cocianni-v@slb.com
RP Consultant	John Gallinatti Geosyntec Consultants	510-285-2750	jgallinatti@geosyntec.com
RP Consultant	Alok Kolekar Weiss Associates	650-968-7000	adk@weiss.com

2011 Annual Report Remedy Performance Checklist

III. O&M COSTS (OPTIONAL)

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 ☑ 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?

Documents and records are available at treatment systems and/or on-site office located at 453 Ravendale Drive, Suite C, Mountain View, CA.

V. INSTITUTIONAL CONTROLS (as applicable)

List institutional controls called for (and from what enforcement document): Signs and other security measures are in place at extraction and treatment points.

Status of their implementation: Posted signage (Health & Safety and emergency contact information).

- Signs and other security measures are in place at extraction and treatment points.
- Groundwater production wells within plume area are prohibited. Administered by Santa Clara Valley Water District.
- Properties formerly owned by Fairchild have deed restrictions that require notification prior to subsurface construction and provide for access for remedial actions.
- Public notifications regarding remediation activities.

Where are the ICs documented and/or reported?

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:

2011 Annual Report Remedy Performance Checklist

VI. SIGNIFICANT SITE EVENTS
Check all Significant Site events Since the Last Checklist that Affects or May Affect Remedy Performance

☐ Community Issues
☐ Vandalism
☐ Maintenance Issues
☐Other:

Please elaborate on Significant Site Events:

VII. REDEVELOPMENT

Is redevelopment on property planned? ☑ Yes ☐ No

If yes, what is planned? Please describe below.

Is redevelopment plan complete Yes, date:_____; ☑ No ? ☐ Not Applicable

Redevelopment proposal in progress? ☑ Yes, elaborate below
☐ No; If no, is a proposal anticipated? ☐ Yes ☐ No

☑ Is the redevelopment proposal compatible with remedy performance? ☑ Yes ☐ No

Elaborate on redevelopment proposal and how it affects remedy performance:

644 National Avenue property (former Building 18) has been bought by Carr America National Avenue LLC. The building will be removed and replaced by a multi-parcel development. Construction is anticipated to begin May/June 2012.

369 and 441 North Whisman Road (former Bldgs. 13 and 19 and 23), owned by Keenan, Lovewell Ventures, is developing plans for additional buildings on the site.

The existing treatment systems and their components (conveyance piping, extraction wells, and monitoring wells) will be maintained or modified as appropriate to accommodate redevelopment.

2011 Annual Report Remedy Performance Checklist

VIII. GROUNDWATER REMEDY (reference isoconcentration, capture zone maps, trend analysis, and other documentation to support analysis)

Groundwater Quality Data

List the types of data that are available:	What is the source report?
Potentiometric surface maps, hydrographs Capture zone maps, isoconcentration maps VOC time series plots and trend analysis Laboratory Analytical Results and Reports	2011 Annual Fairchild Building Reports (Geosyntec, 2012) and the 2011 Annual Regional Report (Geosyntec, 2012)

☑ Contaminant trend(s) tracked during O&M (i.e., temporal analysis of groundwater contaminant trends).
☑ Groundwater data tracked with software for temporal analyses.
☐ Reviewed MNA parameters to ensure health of substrate (e.g., DO, pH, temperature), if appropriate?

Groundwater Pump & Treat Extraction Well and Treatment System Data

List the types of data that are available:	What is the source report?
O&M logs System Influent & Effluent water samples VOC mass and groundwater removal graphs	NPDES Self-Monitoring Reports 2011 Annual Fairchild Building Reports

☑ The system is functioning adequately.
☐ The system has been shut down for significant periods of time in the past year. Please elaborate below.

Discharge Data

List the types of data that are available:	What is the source report?
System performance data such as average flow rates, totalized flow, influent/effluent chemical data, GAC removal efficiencies	NPDES Self-Monitoring Reports

☑ The system is in compliance with discharge permits.

Slurry Wall Data

List the types of data that are available:	What is the source report?
Water level elevations in select well pairs Analysis of inward and upward hydraulic gradients	2011 Annual Fairchild Reports (Geosyntec, 2012)

Is slurry wall operating as designed? ☑ Yes ☐ No

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

The slurry walls are operating as designed and are effective at impeding flow and preventing VOCs inside the wall from migrating downgradient. However, the ROD specifies that the slurry walls, "maintain inward and upward gradients." Historically, this has not been observed in all well pairs, even under maximum historical pumping scenarios.

The chemical concentration data and potentiometric surface contours from 2011 continue to demonstrate that the slurry walls are an effective means of impeding VOC migration outside of the slurry walls.

Elaborate on technical data and/or other comments

2011 Annual Report Remedy Performance Checklist

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

Walk-throughs/Surveys: The EPA issued a ROD amendment on 16 August 2010 to address vapor intrusion. The MEW parties continued to work with EPA and local entities to implement the ROD amendment during 2011. In accordance with the Statement of Work for the Vapor Intrusion ROD Amendment, an annual report summarizing the status of the vapor intrusion remedy will be submitted under separate cover (Haley and Aldrich, 2012).

Summary of Results: See the Annual Vapor Intrusion Progress Report (Haley and Aldrich, 2012).

Problems Encountered: See the Annual Vapor Intrusion Progress Report (Haley and Aldrich, 2012).

Recommendations/Next Steps: See the Annual Vapor Intrusion Progress Report (Haley and Aldrich, 2012).

Schedule: See the Annual Vapor Intrusion Progress Report (Haley and Aldrich, 2012).

X. REMEDY PERFORMANCE ASSESSMENT

A. Groundwater Remedies

What are the remedial goals for groundwater? ☑ Plume containment (prevent plume migration); ☑ Plume restoration (attain ROD-specific cleanup levels in aquifer); ☐ Other goals, please explain:

The groundwater remedy is hydraulic remediation by extraction and treatment. The Treatment System is reliable and consistent in its operation and mass removal ability, with greater than 95% up-time. The capture zones from the extraction wells provide sufficient overlap to achieve hydraulic control over the plume based on flow net evaluation and converging lines of evidence, including stable lateral extent of TCE exceeding 5 µg/L. Remediation is also demonstrated because concentrations within the TCE plume have continued to decrease in all zones. Groundwater with TCE concentrations exceeding 5 µg/L does not discharge to surface water.

Have you done a trend analysis? ☑ Yes ☐ 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

Concentrations within TCE plume have been evaluated using Mann-Kendall analysis and reviewing VOC concentrations over time. The analyses show that TCE concentrations continued to decrease, remain stable, or show no trend in all zones, while the lateral extent of TCE exceeding 5 µg/L has been stable. See Annual Reports for trends in monitoring wells (Geosyntec 2012).

If plume containment is a remedial goal, check all that apply:
☑ Plume migration is under control (explain basis below)
☐ Plume migration is not under control (explain basis below)
☐ Insufficient data to determine plume stability (explain below)
(Include attachments that substantiate your answers, e.g., reference plume, trend analysis, and capture zone maps in source document)

Elaborate on basis for determining that plume containment goal is being met or not being met**:**

Plume containment goal is met, slurry walls provide physical containment of sources on 369 N. Whisman Road, 401 National Avenue, 515/545 N. Whisman Road and 313 Fairchild Drive.

Groundwater elevation and chemical monitoring results from 2011 demonstrate that the Fairchild extraction wells continue to achieve adequate horizontal and vertical capture based on converging lines of evidence, including graphical flow net analysis and chemical concentration trends.

If plume restoration is a cleanup objective, check all that apply:
☑ Progress is being made toward reaching cleanup levels (explain basis below)
☐ Progress is not being made toward reaching cleanup levels (explain basis below)
☐ Insufficient data to determine progress toward restoration goal (explain below)

2011 Annual Report Remedy Performance Checklist

Elaborate on basis for determining progress or lack of progress toward restoration goal:

The objective is to remediate and control the plume. VOC concentrations in groundwater continue to remain well below historical maximums, and generally show long-term decreasing trends. The groundwater extraction, treatment, and containment systems are functioning as intended and meet the Remedial Action Objectives for the Site.

B. Vertical Migration

Have you done an assessment of vertical gradients? ☑ Yes ☐ 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

In general, vertical gradients across the B and deeper water-bearing zones are upward. Upward vertical gradients are typical from the B- to A-zone, but downward vertical gradients are observed at a few locations.

Source document reference: 2011 Annual Fairchild Building Reports (Geosyntec, 2012)
2011 Annual Regional Report (Geosyntec, 2012)
2008 Optimization Evaluation (Geosyntec, 2008)

C. Source Control Remedies

What are the remedial goals for source control?

Capture of former source areas is the goal for source control. Cleanup standards are Maximum Contaminant Level (MCLs) in upper groundwater zones; the TCE MCL is 5 µg/L.

Elaborate on basis for determining progress or lack of progress toward these goals:

Capture zone analysis in the 2011 Fairchild Building and RGRP Annual Progress Reports indicate containment of target capture areas.

XI. PROJECTIONS

Administrative Issues
Dates of next monitoring and sampling events for next annual reporting period: September/October 2012

A. Groundwater Remedies - Projections for the upcoming year and long-term (Check all that apply)

Remedy Projections for the upcoming year (2012/2013)
☑ No significant changes projected.
☐ Groundwater remedy will be converted to monitored natural attenuation. Target date:
☐ Groundwater Pump & Treat will be shut down. Target date:
☐ Groundwater cleanup standards to be modified. Target date:
☐ PRP will request remedy modification. Target date of request:
☐ Change in the number of monitoring wells. ☐ Increasing or ☐ decreasing? Target date:
☐ Change in the number and/or types of analytes being analyzed. ☐ Increasing or ☐ decreasing? Target date:
☐ Change in groundwater extraction system. Expansion or minimization (i.e., number of extraction wells and/or pumping rate)? Target date:
☐ Modification on groundwater treatment? Elaborate below. Target date:
☐ Change in discharge location. Target date:
☐ Other modification(s) anticipated: Groundwater Feasibility Study Elaborate below. Target date: 2012

Elaborate on Remedy Projections: The EPA is developing a Groundwater Feasibility Study for MEW.

2011 Annual Report Remedy Performance Checklist

Remedy Projections for **the long-term** (Check all that apply)
☐ No significant changes projected.
☐ Groundwater remedy will be converted to monitored natural attenuation. Target date:
☐ Groundwater Pump & Treat will be shut down. Target date:
☐ Groundwater cleanup standards to be modified. Target date:
☐ PRP will request remedy modification. Target date of request:
☐ Change in the number of monitoring wells. ☐ Increasing or ☐ decreasing? Target date:
☐Change in the number and/or types of analytes being analyzed. ☐ Increasing or ☐ decreasing? Target date:
☐ Change in groundwater extraction system. ☐ Expansion or ☐ minimization (i.e., number of extraction wells and/or pumping rate)? Target date:
☐ Modification on groundwater treatment? Elaborate below. Target date:
☐ Change in discharge location. Target date:
☑ Other modification(s) anticipated: Groundwater Feasibility Study Elaborate below. Target date: 2012

Elaborate on Remedy Projections: The EPA is developing a Groundwater Feasibility Study for MEW.

B. Projections – Slurry Walls (Check all that apply)

Remedy Projections for **the upcoming year**
☐ No significant changes projected.
☐ PRP will request remedy modification. Target date of request:
☐Change in the number of monitoring wells. ☐ Increasing or ☐ decreasing? Target date:
☑ Other modification(s) anticipated: Groundwater Feasibility Study Elaborate below. Target date: 2012

Elaborate on Remedy Projections:

Remedy Projections for **the long-term**
☐ No significant changes projected.
☐ PRP will request remedy modification. Target date of request:
☐ Change in the number of monitoring wells. ☐ Increasing or ☐ decreasing? Target date:
☑ Other modification(s) anticipated: Groundwater Feasibility Study Elaborate below. Target date: 2012

Elaborate on Remedy Projections: The EPA is developing a Groundwater Feasibility Study for MEW.

C. Projections – Other Remedial Options Being Reviewed to Enhance Cleanup

Progress implementing recommendations from last report or Five-Year Review
Has optimization study been implemented or scheduled? ☑ Yes; No; If Yes, please elaborate.

Extraction rates were modified in 2010 based on an Optimization Evaluation conducted in 2008 (Geosyntec, 2008).

XII. ADMINISTRATIVE ISSUES
Check all that apply:

☐ Explanation of Significant Differences in progress ☐ ROD Amendment in progress
☐ Site in operational and functional ("shake down") period;
☐ Notice of Intent to Delete in progress ☐ Partial site deletion in progress ☐ TI Waivers
☑ Other administrative issues:

Site-Wide Focused Groundwater Feasibility Study for Groundwater being conducted by EPA.

Date of Next EPA Five-Year Review: September 30, 2014

XIII. RECOMMENDATIONS

APPENDIX B

Laboratory Analytical Reports and Chain-of-Custody Documents January through December 2011

(This appendix is being submitted on CD to the EPA only and is available upon request)

APPENDIX C

QA/QC Report, Summary Tables, and Criteria

Weiss Associates

M E M O R A N D U M

TO:	Carolyn Kneiblher, C.HG. Geosyntec Consultants	**FROM:**	Alok D. Kolekar, P.E. Weiss Associates
RE:	**2011 DATA QUALITY SUMMARY** **FORMER FAIRCHILD BUILDINGS 1-4** MIDDLEFIELD-ELLIS-WHISMAN AREA SUPERFUND SITE MOUNTAIN VIEW, CALIFORNIA	**DATE:**	April 6, 2012

This memorandum summarizes data quality for groundwater and treatment system water samples collected in 2011 from monitoring wells associated with former Fairchild Buildings 1 through 4 and groundwater extraction and treatment systems (GWETS) No. 1 and No. 3 at the Middlefield-Ellis-Whisman (MEW) Area Superfund Site in Mountain View, California. The groundwater samples were collected during the 2011 annual groundwater sampling event in September and October, and the treatment system samples were collected bi-weekly from the influent, midpoint and effluent sample ports at each GWETS. Detailed results for quality assurance/quality control (QA/QC) samples collected during the MEW annual groundwater sampling are presented in Weiss Associates' (Weiss) memorandum titled, "Data Quality Assurance/Quality Control Report, 2011 Groundwater Sampling, Middlefield-Ellis-Whisman Area Superfund Site" and dated March 9, 2012.

The analytical laboratory data and accompanying quality assurance/quality control (QA/QC) information were reviewed for precision, accuracy, reproducibility, and completeness in accordance with the approved MEW 1991 *Quality Assurance Project Plan* (QAPP).[1] In addition, the data quality review was based on Weiss Associates' Standard Operating Procedures (SOPs) for data verification, data validation, and validation procedures for metals, volatile organic chemicals (VOCs), and semivolatile organic chemicals. The SOPs functionally adhere to the most recent USEPA *Contract Laboratory Program National Functional Guidelines for Organic (October 1999) and Inorganic (February 1994) Data Review*. As specified by the QAPP and the SOPs, Weiss Associates collected field QA/QC samples and performed a laboratory data quality review.

FIELD QA/QC SAMPLE COLLECTION

To assess the reliability of field sampling procedures and materials, the following field QA/QC samples were collected or prepared for the annual groundwater sampling and GWETS sampling:

- Field duplicate – Field duplicate samples are blind duplicates that provide data to assess precision of the contract laboratory. Field duplicates are specified to be collected at a frequency of 1 for every 20 field samples collected.
- Matrix spike/Matrix spike duplicate – Matrix spike/matrix spike duplicate (MS/MSD) samples measure the accuracy and precision of the analytical methodsMS/MSD samples are specified at a frequency of 1 for every 20 field samples collected.

[1] 1991, *Quality Assurance Project Plan Middlefield-Ellis-Whisman Site, Mountain View, California*, prepared by Canonie Environmental, Rev. 1.0,; August 16, 1991. This document is sometimes referred to as the Unified QAPP because it is used by MEW, NASA and Navy.

- Rinseate blank – These samples consist of reagent water collected from a final rinse of sampling equipment after the decontamination procedure has been performed. The purpose of rinseate samples is to evaluate whether the sampling equipment may be causing cross-contamination of the samples. Rinseate blank sampling is not necessary for locations that have dedicated sample collection, such as at GWETS sample ports. Following equipment decontamination, deionized/organic-free water used for the final rinse is collected in appropriate bottles. Rinseate samples were specified at a frequency of 1 for every 20 field samples that are collected using reusable sample collection equipment.
- Field blank – These samples consist of source water used for decontamination of equipment. The purpose of field blanks is to evaluate whether source water is contributing to contamination of samples. Field blanks were collected at a frequency of 5% of the field samples collected.
- Trip blank – These samples consist of "clean," volatile organic analysis vials (VOAs) filled with deionized/organic-free water and preserved. These pre-filled VOAs are supplied by the laboratory and accompany other samples in the field and on their trip to the laboratory. The purpose of the trip blank is to evaluate whether exposure to sampling site conditions, storage, and shipment of samples may be causing contamination after the samples are collected. Trip blanks are collected only when samples are collected for VOC analysis. One trip blank accompanies each VOC sample shipment.

LABORATORY DATA QUALITY REVIEW PARAMETERS

For the 2011 annual groundwater sampling event, the sample results were verified for completeness using a Level 2 data review summary per the QAPP and SOPs. The following parameters were reviewed in this review:

- Holding time;
- Detection and reporting limits;
- Surrogate recovery (VOC methods only);
- Laboratory control sample recovery;
- Matrix spike and spike duplicate recovery;
- Method blank results;
- Travel blank results (VOC methods only);
- Field/rinseate blank results; and
- Field sample duplicates results.

Ten percent of the sample delivery groups underwent a Level 4 data validation as required by the QAPP. The samples intended for the Level 4 data validation were documented on separate chain-of-custody forms than the other samples. Level 4 validation procedures vary by method. In addition to the Level 2 verification parameters listed above, the Level 4 validation parameters for organic (e.g., VOC) analyses include:

- Ion abundance;
- Minimum number of initial calibration standards analyzed;

- Relative response factors in initial and continuing calibrations;
- Percent of relative standard deviations in initial calibrations;
- Percent of differences in continuing calibrations;
- Internal standard retention times;
- Internal standard area counts;
- Analytical sequence carryover;
- Dilutions performed appropriately;
- Calibration blank contamination; and
- Data package completeness for all raw data, including chromatograms and bench sheets, for calibration standards, quality control data, and samples.

The Level 4 review of inorganic (e.g., metal) data include:

- Minimum number of initial calibration standards analyzed;
- All initial calibration verification recoveries within established limits;
- Initial calibration correlation coefficients within established limits;
- Continuing calibration verification recoveries within established limits;
- Analytical sequence carryover;
- Dilutions performed appropriately;
- Laboratory duplicate results within established limits;
- Initial and continuing calibration blank contamination; and
- Data package completeness for all raw data, including bench sheets, for calibration standards, quality control data, and sample.

CONCLUSIONS

Weiss Associates' Project Chemist assigned qualifiers to data that were found outside the control limits specified by the QAPP and data evaluation SOPs. Data qualifiers defined in the USEPA *Contract Laboratory Program National Functional Guidelines for Organic and Inorganic Data Review* were used.

A total of 44 groundwater samples were collected from monitoring wells associated with former Fairchild Buildings 1 through 4 and from extraction wells connected to GWETS No. 1 and No.3 during the annual sampling. These samples were analyzed by Curtis and Tompkins, Ltd in Berkeley, California for:

- Halogenated VOCs by U.S. EPA Method 8260B (43 samples)
- Metals by U.S. EPA Method 6010B (1 sample)

A total of 123 treatment system samples were collected from GWETS No. 1 and No. 3 throughout the year. The following laboratory analyses were conducted:

- Halogenated VOCs by U.S. EPA Method 8260B (91 samples)

- 1,4-Dioxane by U.S. EPA Method 8270C, selected ion monitoring (SIM) (44 samples)
- Acute toxicity of effluents to freshwater and marine organisms by Method EPA-821-R-02-012 (2 samples)
- Turbidity by U.S. EPA Method 180.1 (2 samples)
- Alkalinity by Standard Method SM2320D (1 sample)
- Bromide by U.S. EPA Method 300.0 (1 sample)
- Chemical Oxygen Demand by Standard Method SM5220D (1 sample)
- Selenium by U.S. EPA Methods 6010B, 6020, and 200.8 (4 samples)

The samples were collected, stored, transported, and managed according to USEPA protocols based on Weiss' review of field and laboratory documentation. The laboratories reported that sample temperature and holding times were within acceptable ranges. Custody seals were used for each set of samples as specified by the QAPP.

No data non-conformances were identified during the data verification and validation process. Thus, no data qualifiers were necessary, and the data are usable for their intended purposes. Tables 1 and 2 summarize the conformance with sampling and analytical QA/QC methods, respectively.

Table 1. Summary of Conformance with Sampling QA/QC Methods for Water Samples Collected in 2011, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California.

Sampling consultant (Firm name/address/contact/phone)	Weiss Associates 453 Ravendale Drive, Suite C Mountain View, CA 94043 Alok D. Kolekar (650) 968-7000
Chain-of-custody forms completed for all samples?	YES
Field parameters stabilized prior to sample collection?	YES
Headspace in volatile organic vials less than 6 mm in diameter?	YES
Samples preserved according to analytical method?	YES
Required field QA/QC samples collected?	YES

Explain any "NO" answers.

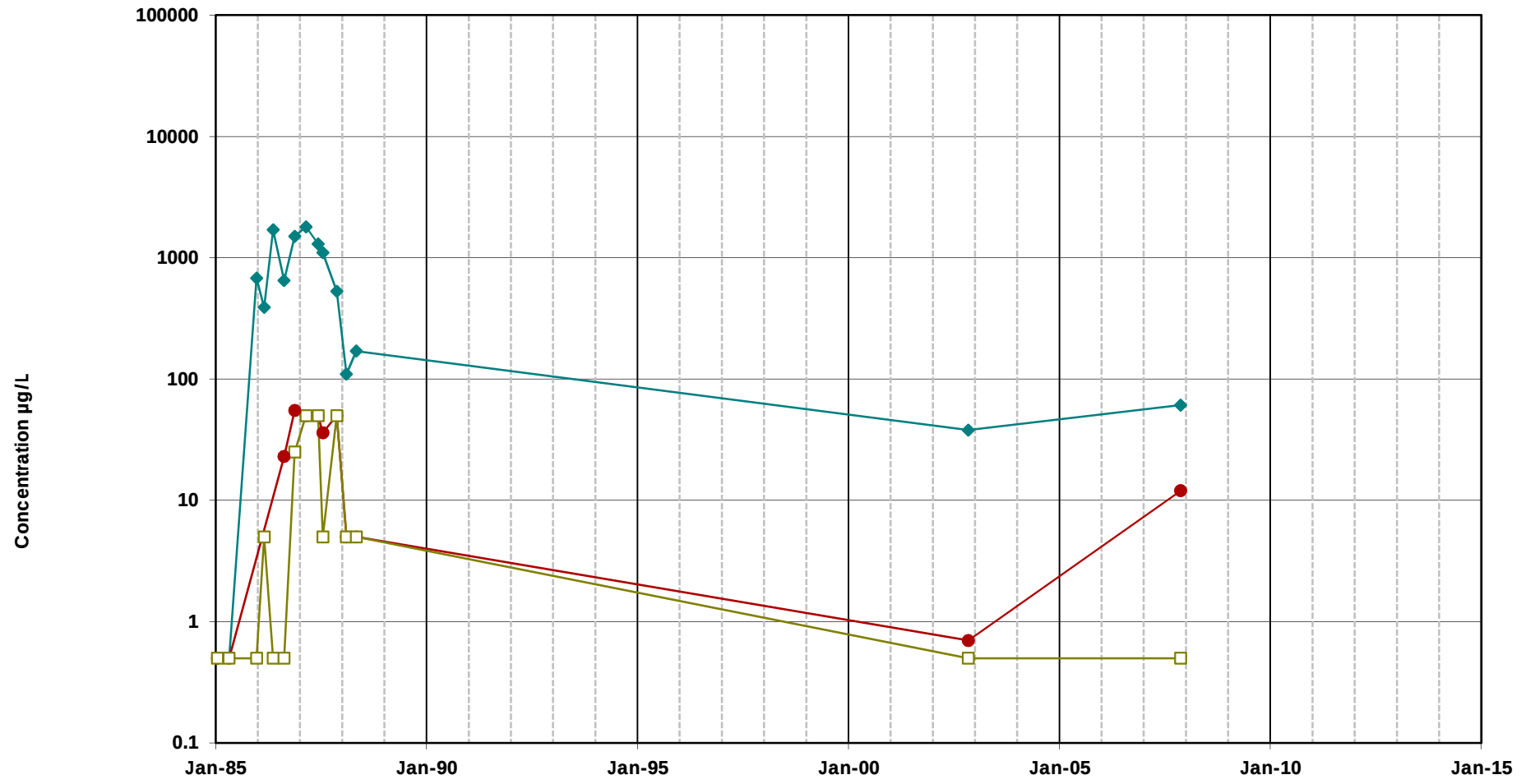
Table 2. Summary of Conformance with Analytical QA/QC Methods for Water Samples Collected in 2011, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California.

Analytical laboratory (Firm name/address/contact/phone)	Curtis and Tompkins, Ltd 2323 Fifth Street Berkeley, CA 94710 Micah Smith (510) 204-2223 Block Environmental Services, Inc. 2451 Estand Way Pleasant Hill, CA 94523 Nanette Bradbury (925) 682-7200
Are the labs state-certified for the above-noted analytical methods?	YES
Analyses performed according to standard methods?	YES
Sample holding times met?	YES
Analytical results reported for all values above method detection limits?	YES
QA/QC analyses run consistent with analytical methods?	YES
QA/QC results meet all acceptance criteria?	YES
QA/QC results and acceptance criteria on file?	YES

Explain any "NO" answers.

APPENDIX D

VOCs versus Time Graphs



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 33A
MEW Former Fairchild Buildings 1-4

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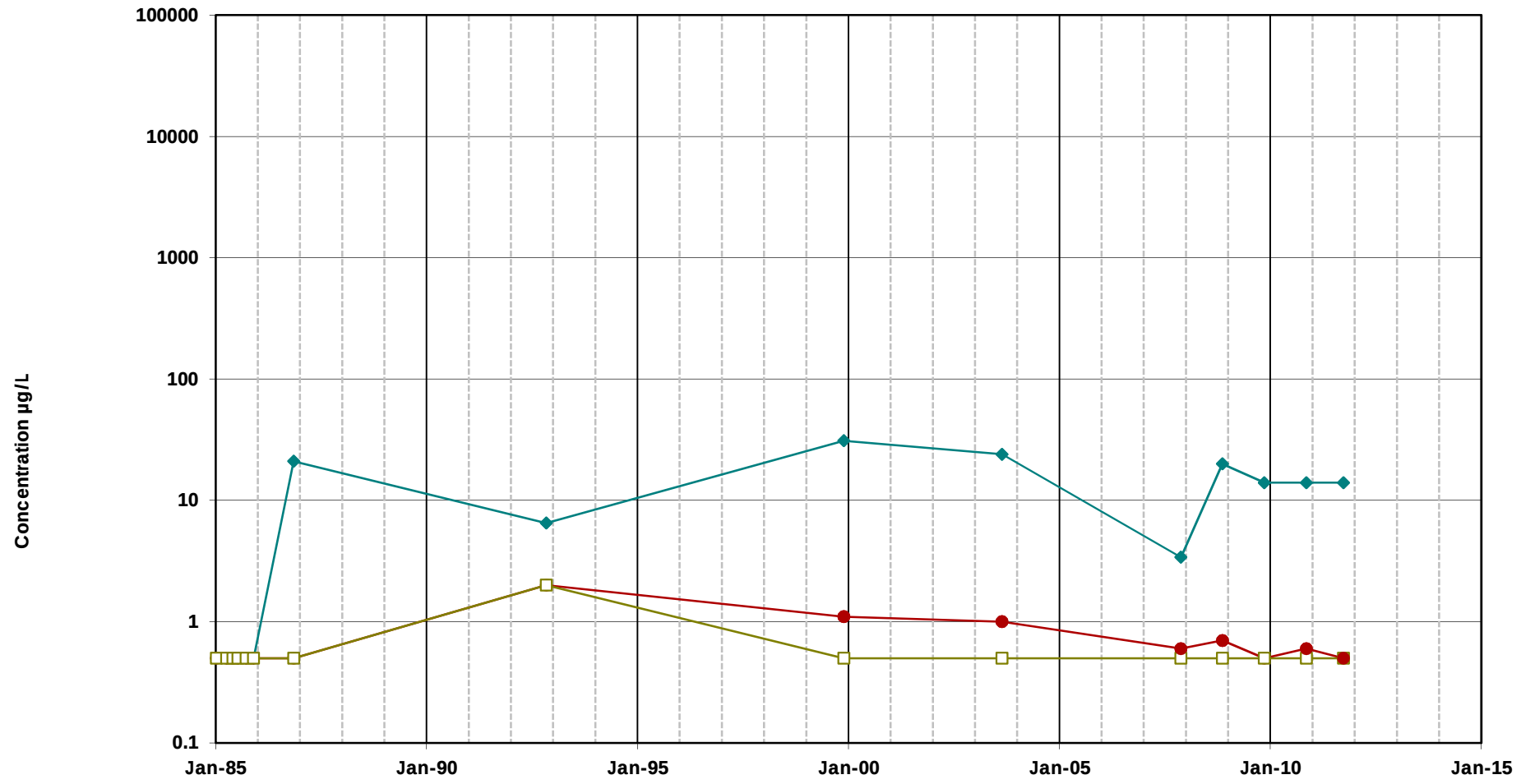
Figure

D-1

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[33A_VOC.xls]Plot_33A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 46A
MEW Former Fairchild Buildings 1-4

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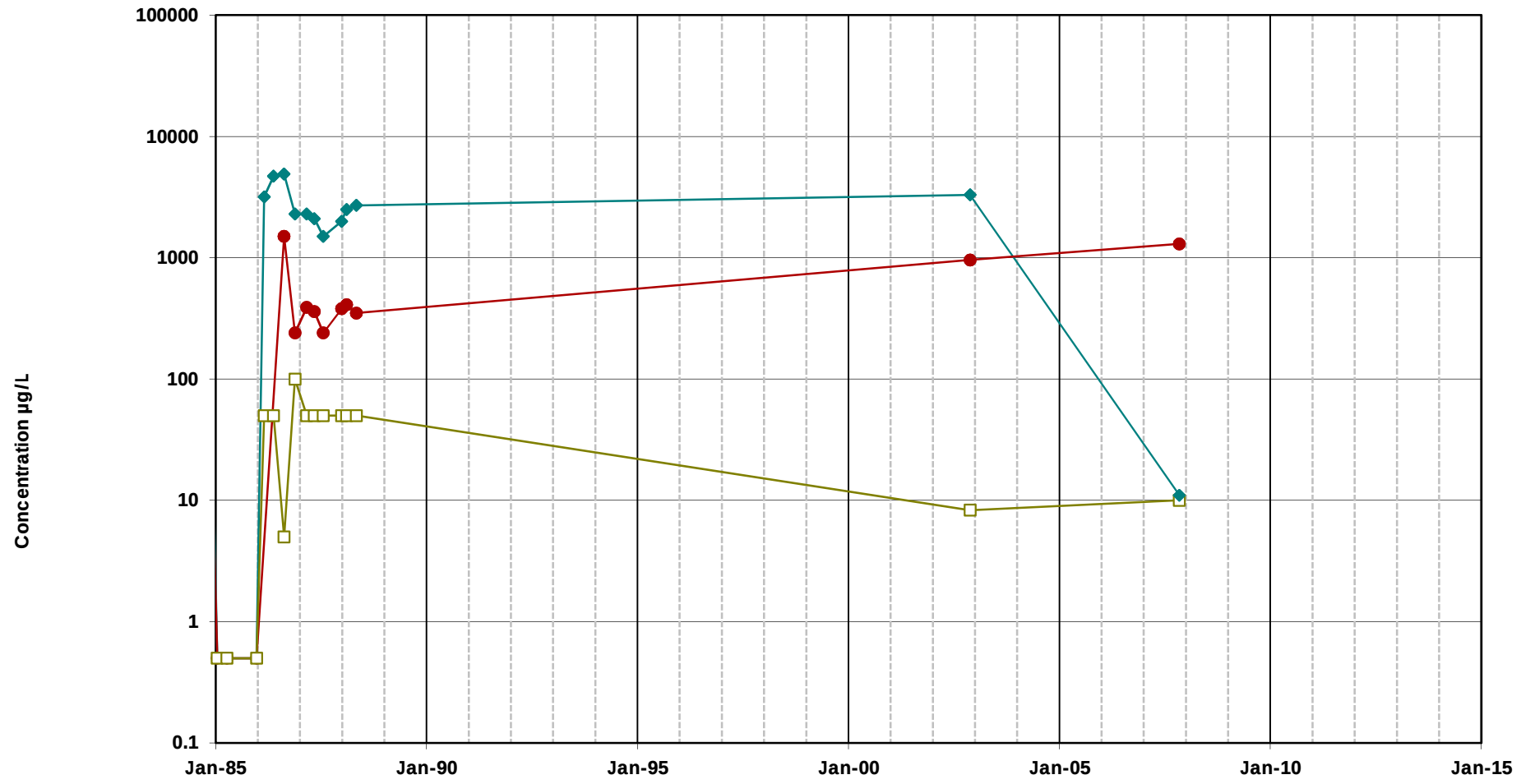
Figure

D-2

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[46A_VOC.xls]Plot_46A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 51A
MEW Former Fairchild Buildings 1-4

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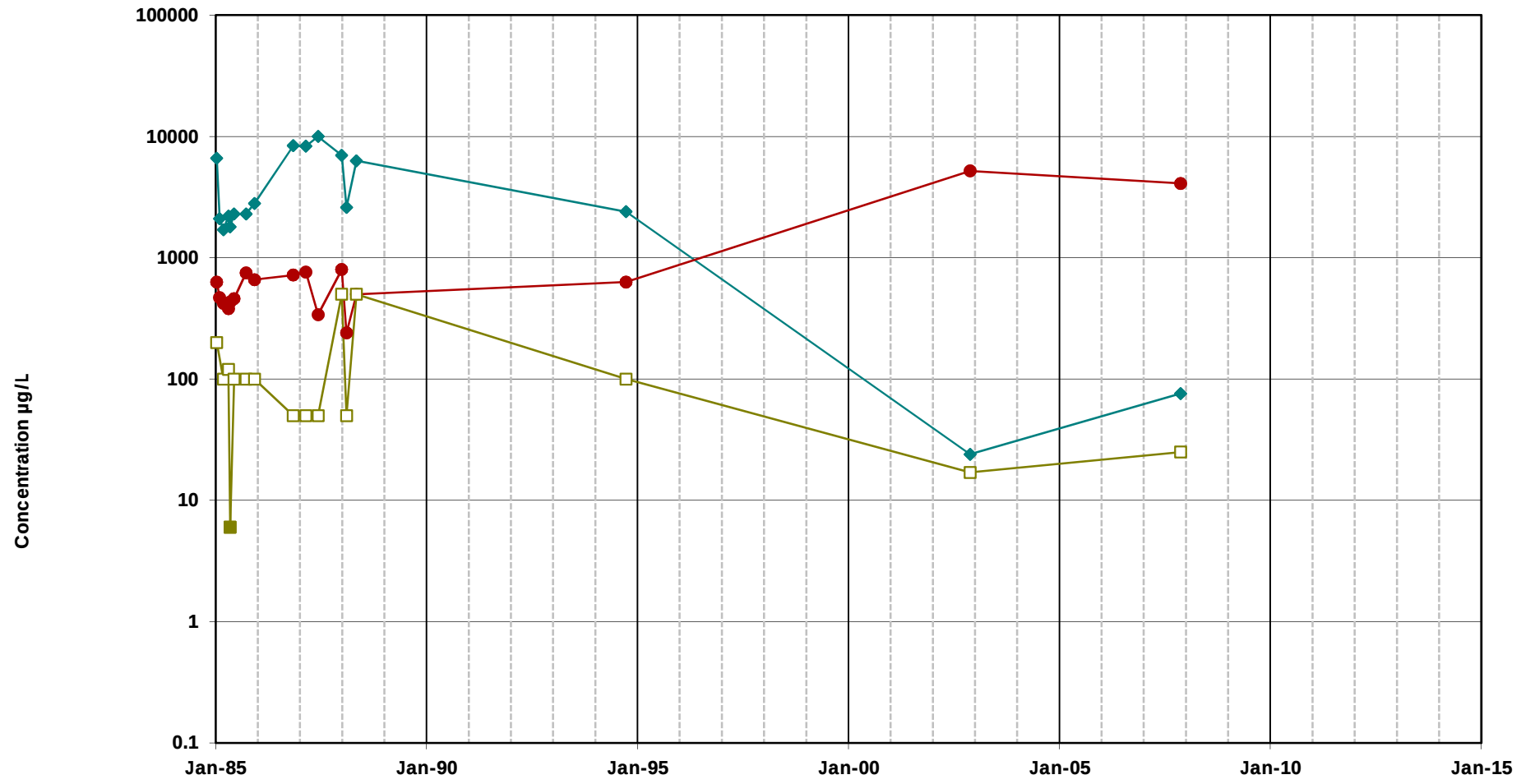
Figure

D-3

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[51A_VOC.xls]Plot_51A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 57A
MEW Former Fairchild Buildings 1-4

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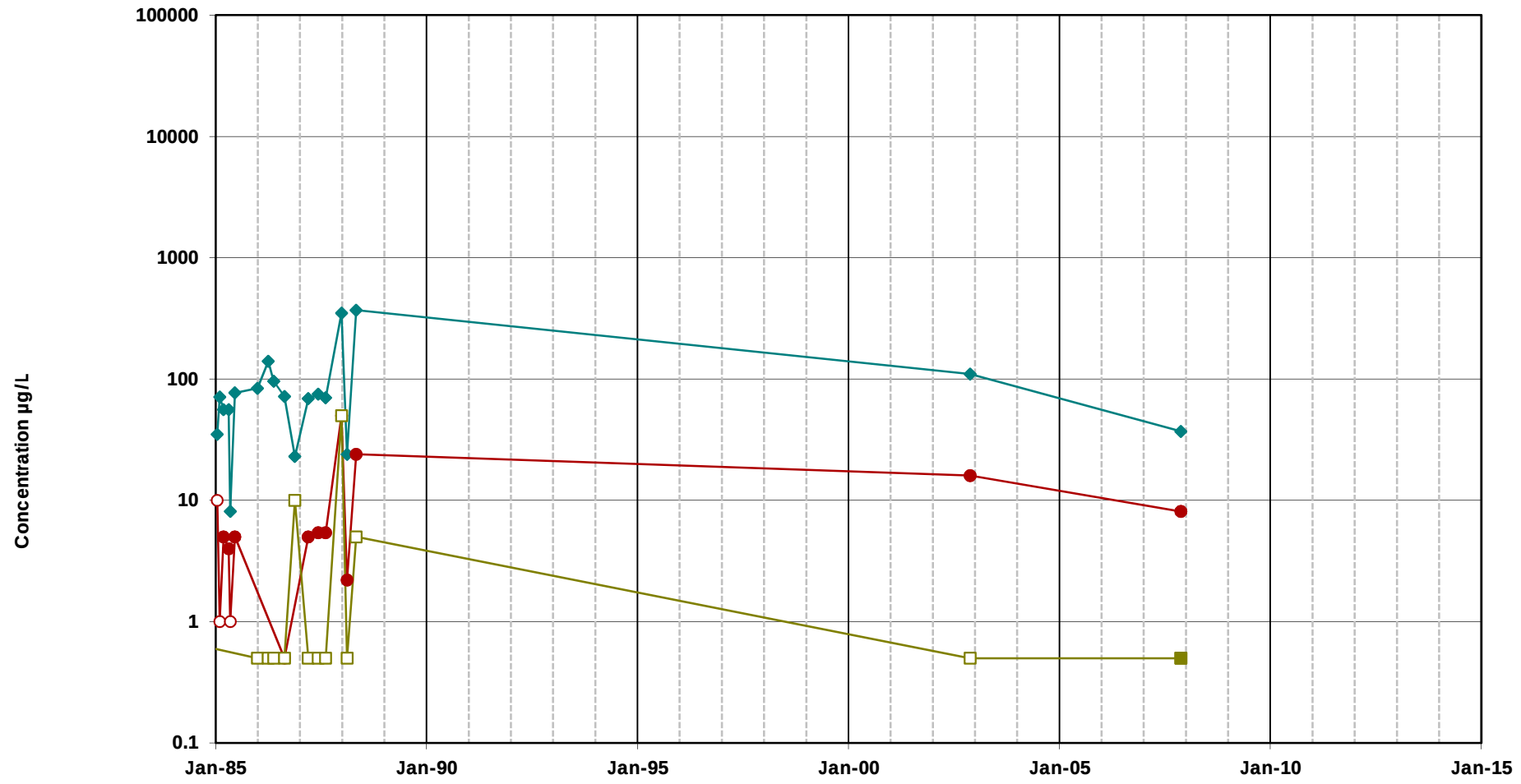
Figure

D-4

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[57A_VOC.xls]Plot_57A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 59A
MEW Former Fairchild Buildings 1-4

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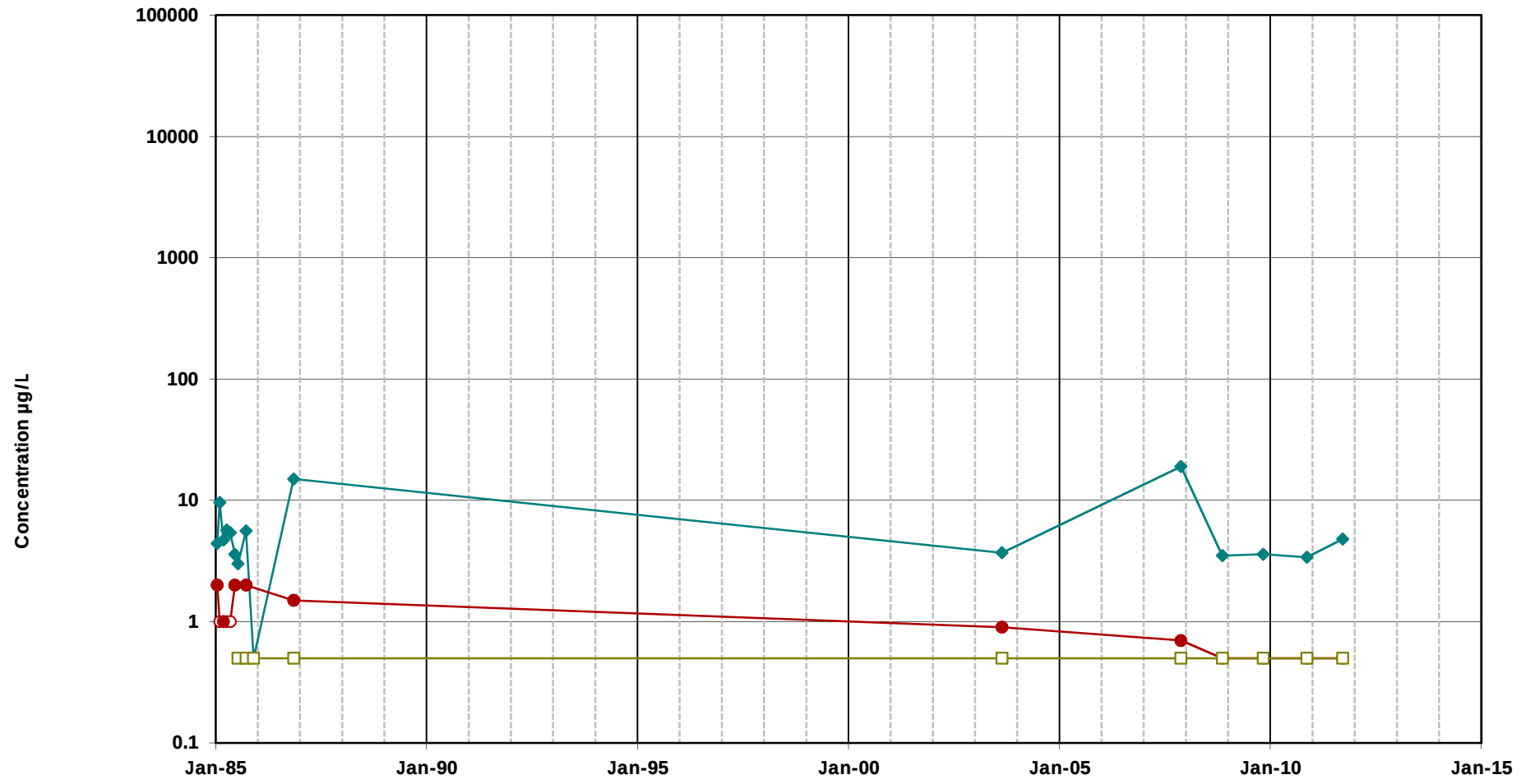
Figure **D-5**

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[59A_VOC.xls]Plot_59A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 61A
MEW Former Fairchild Buildings 1-4

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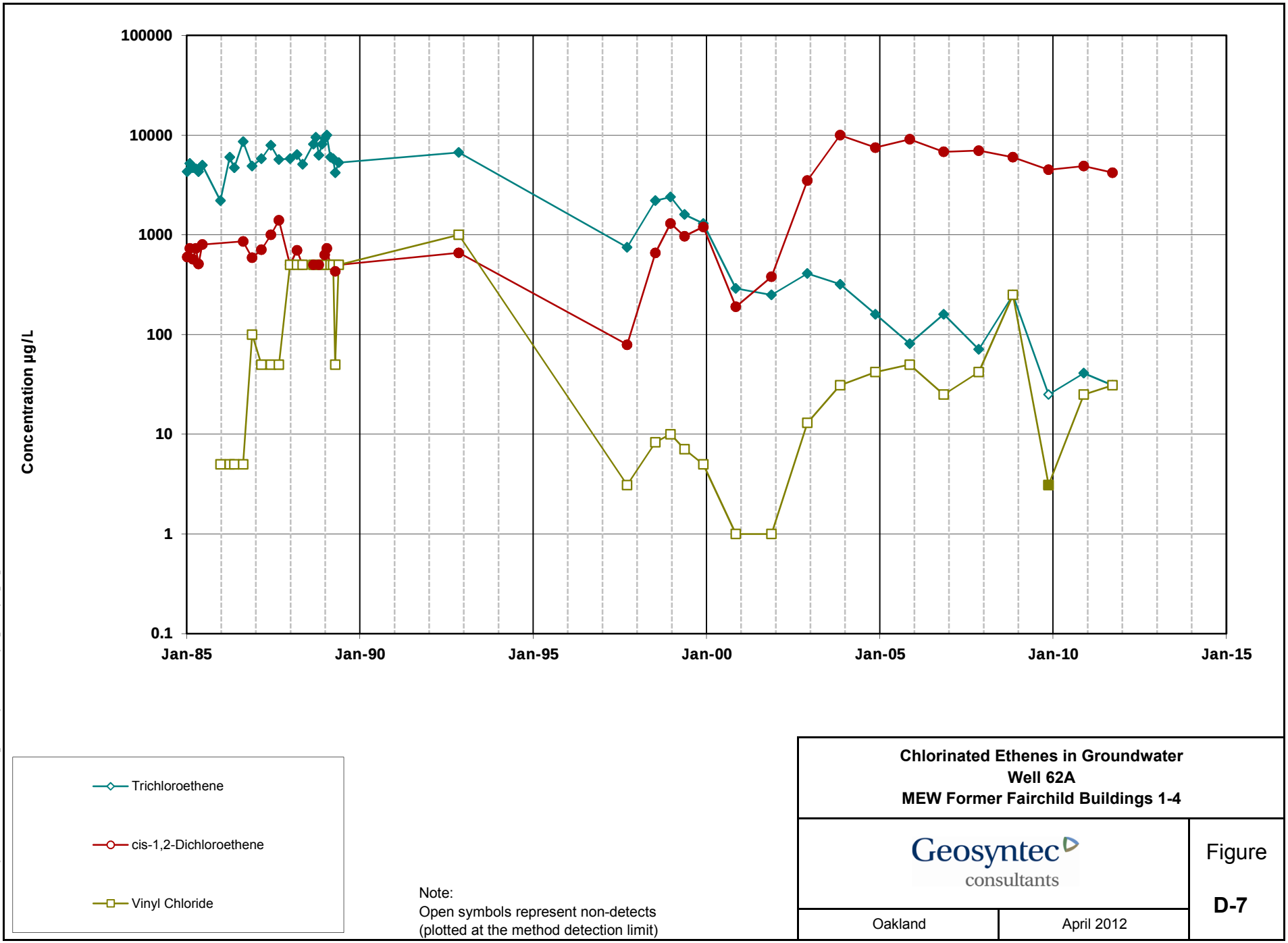
Figure

D-6

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[61A_VOC.xls]Plot_61A_VOC



Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 62A
MEW Former Fairchild Buildings 1-4

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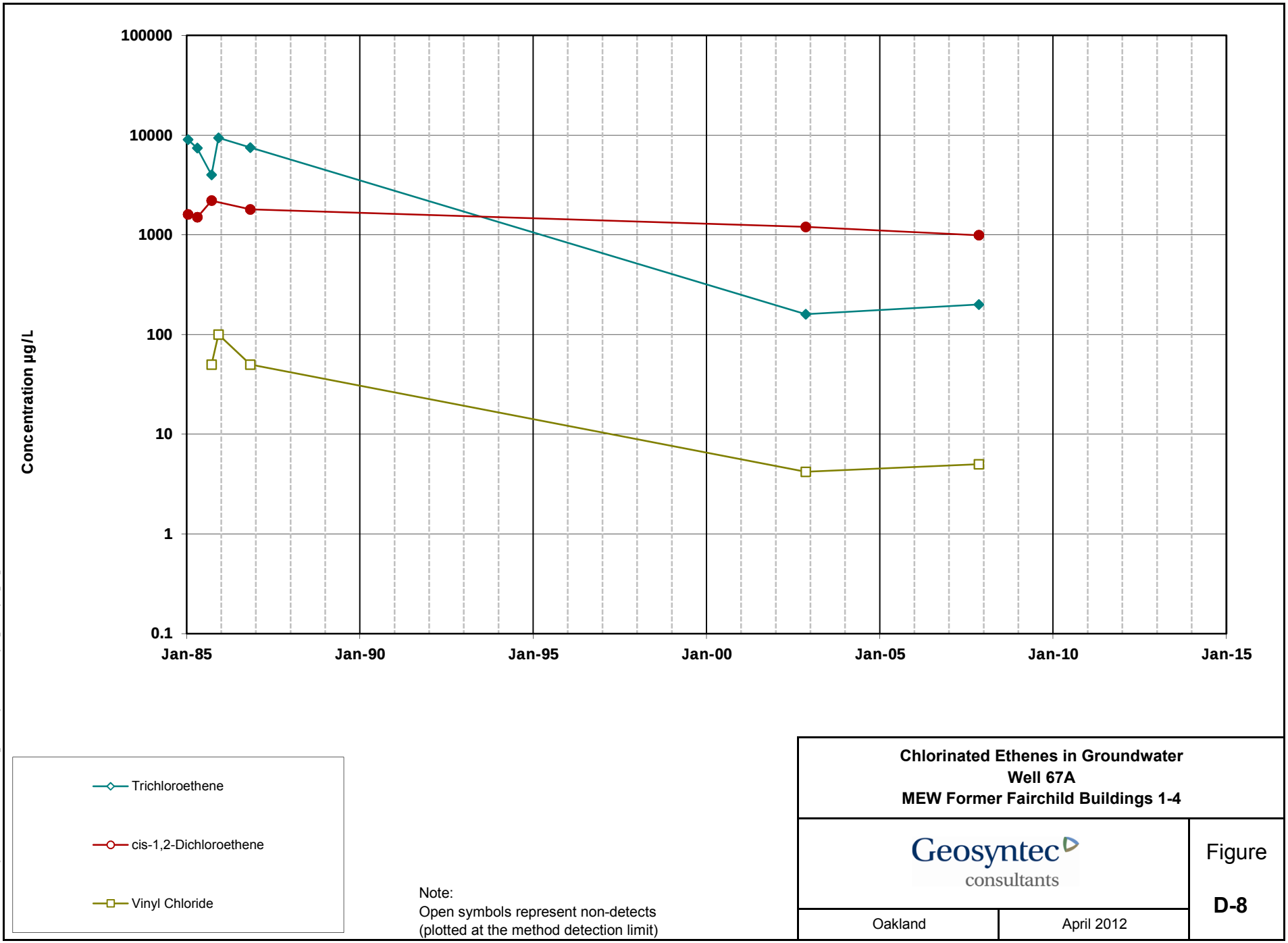
Figure **D-7**

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[62A_VOC.xls]Plot_62A_VOC



Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 67A
MEW Former Fairchild Buildings 1-4

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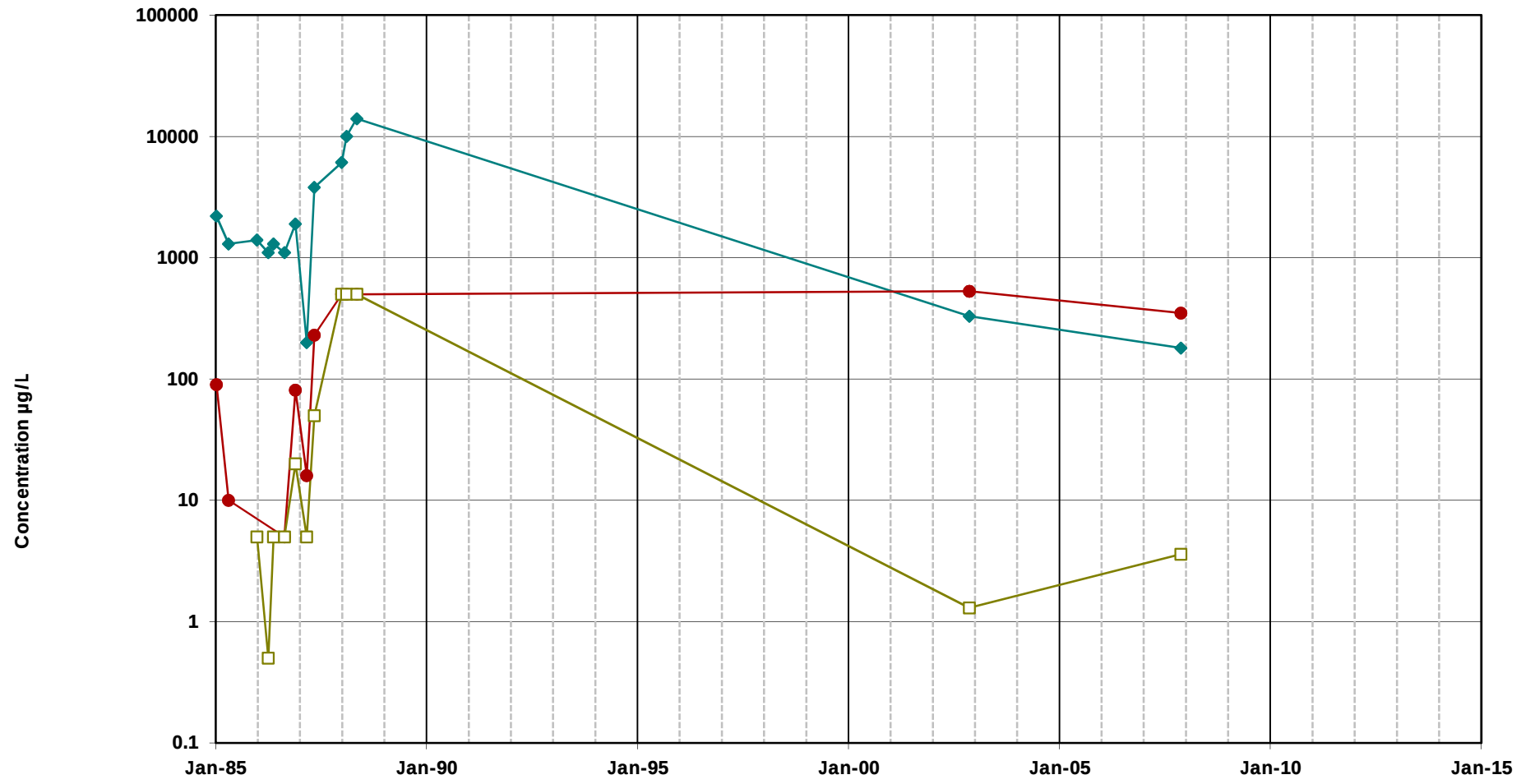
Figure **D-8**

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[67A_VOC.xls]Plot_67A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 68A
MEW Former Fairchild Buildings 1-4

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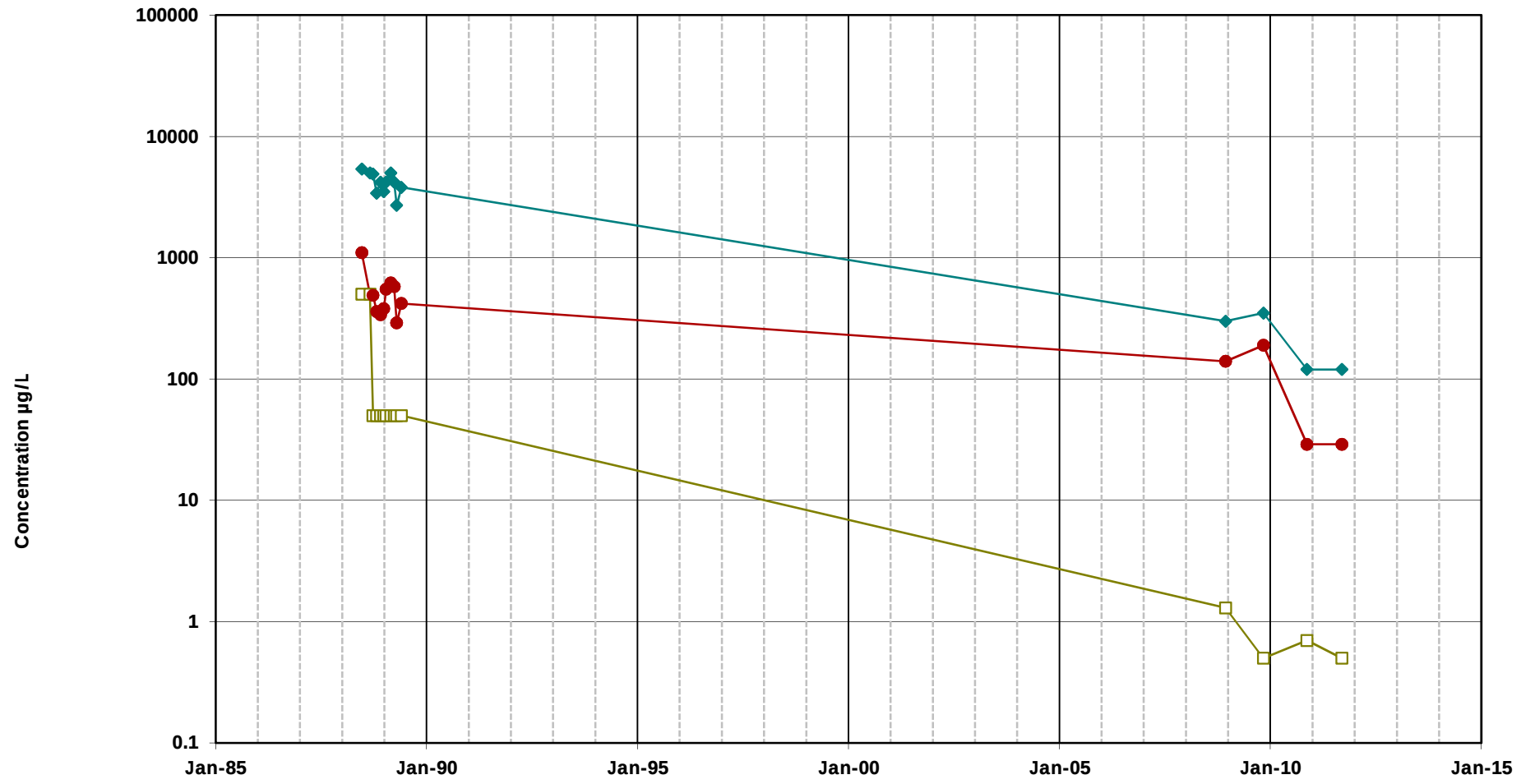
Figure

D-9

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[68A_VOC.xls]Plot_68A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 76A
MEW Former Fairchild Buildings 1-4

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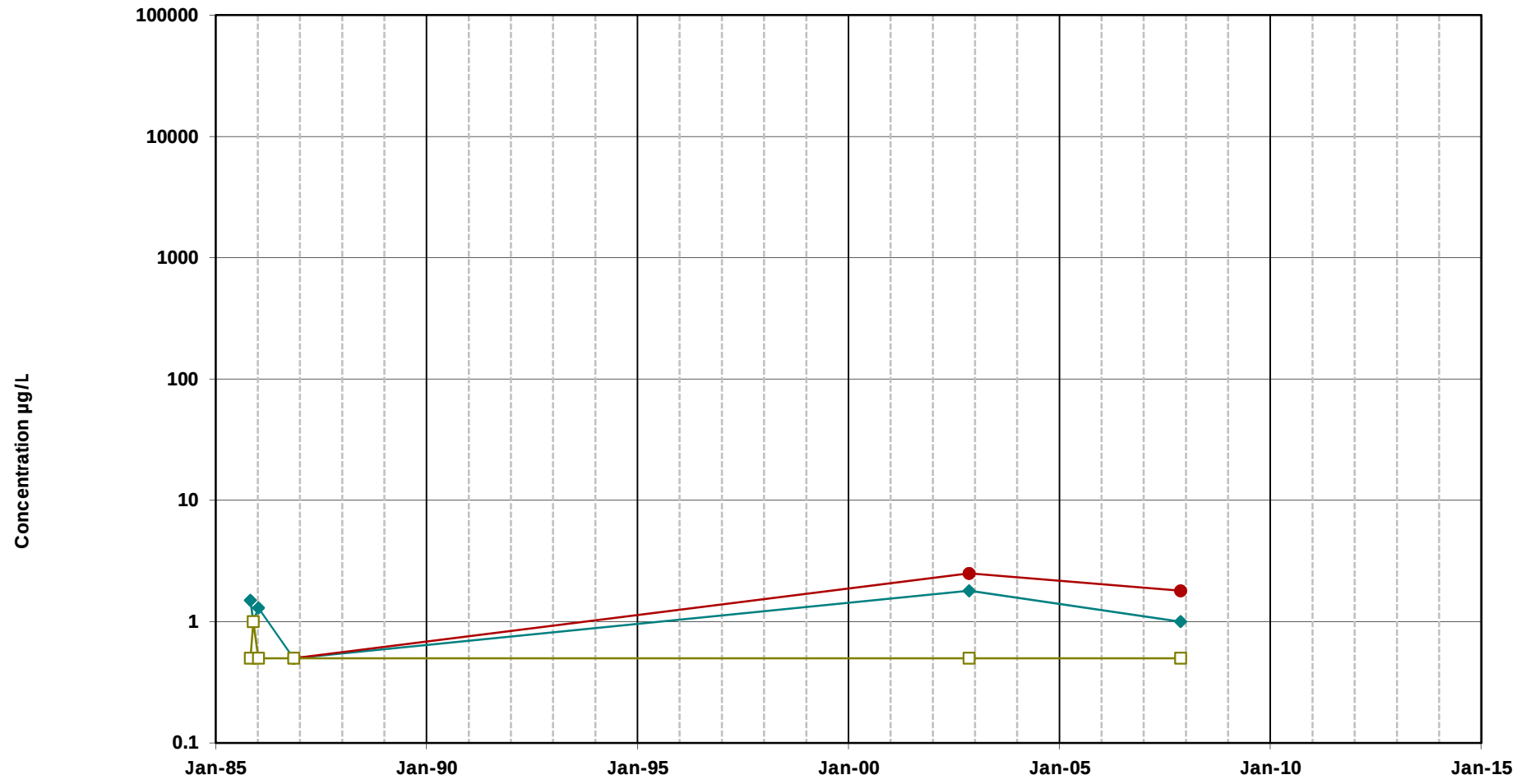
Figure

D-10

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[76A_VOC.xls]Plot_76A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 84A
MEW Former Fairchild Buildings 1-4

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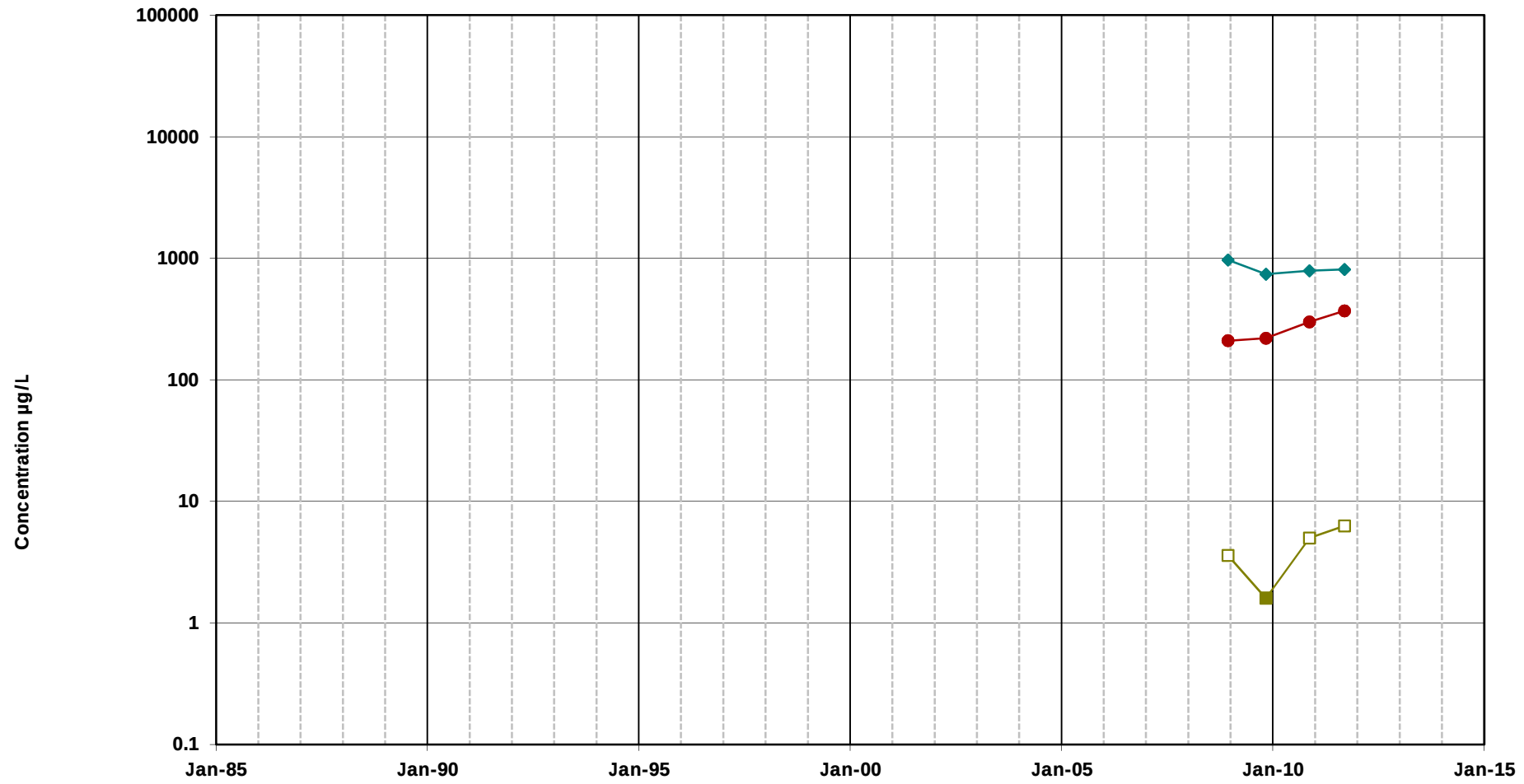
Figure

D-11

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[84A_VOC.xls]Plot_84A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 118A
MEW Former Fairchild Buildings 1-4

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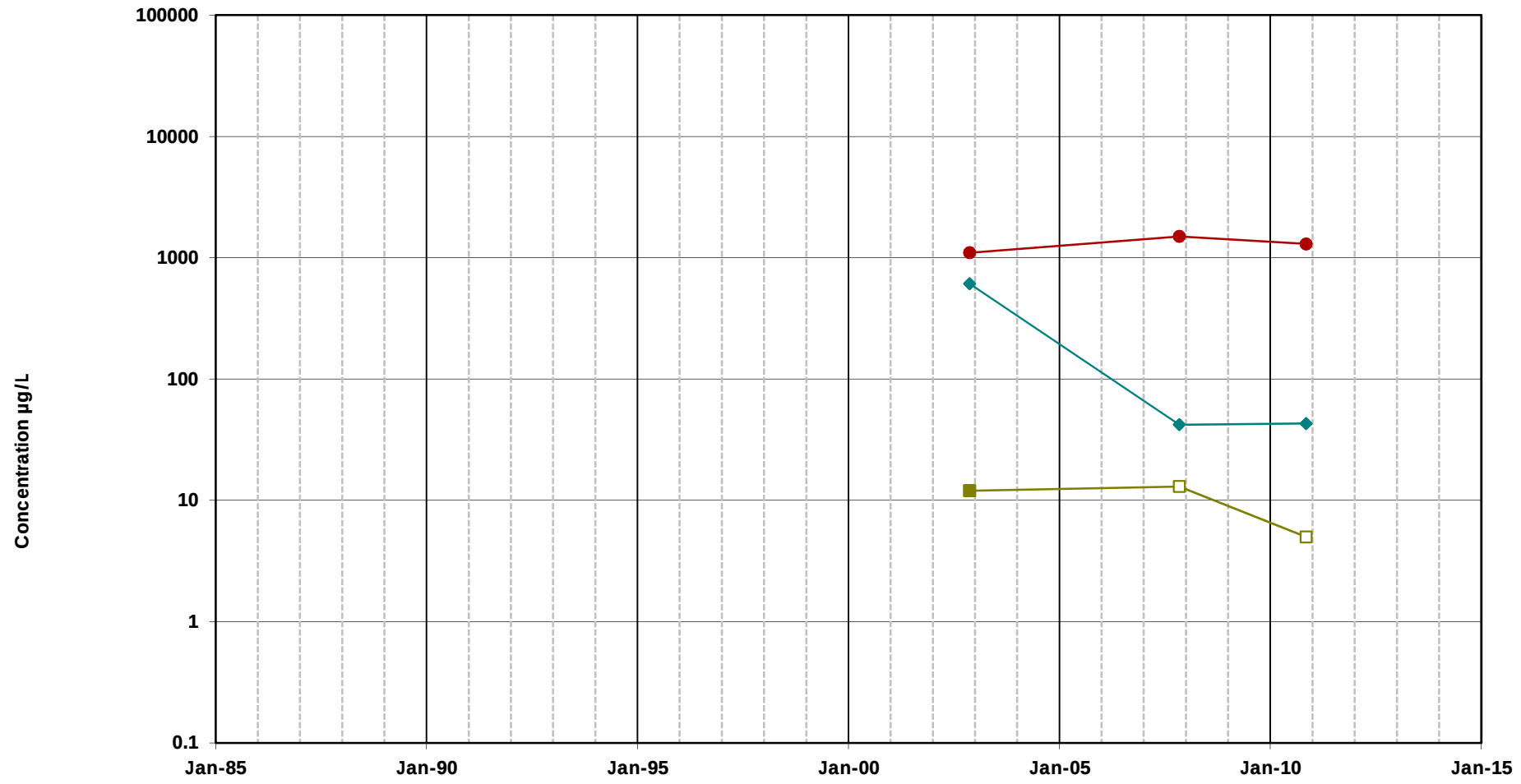
Figure

D-12

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[118A_VOC.xls]Plot_118A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 121A
MEW Former Fairchild Buildings 1-4

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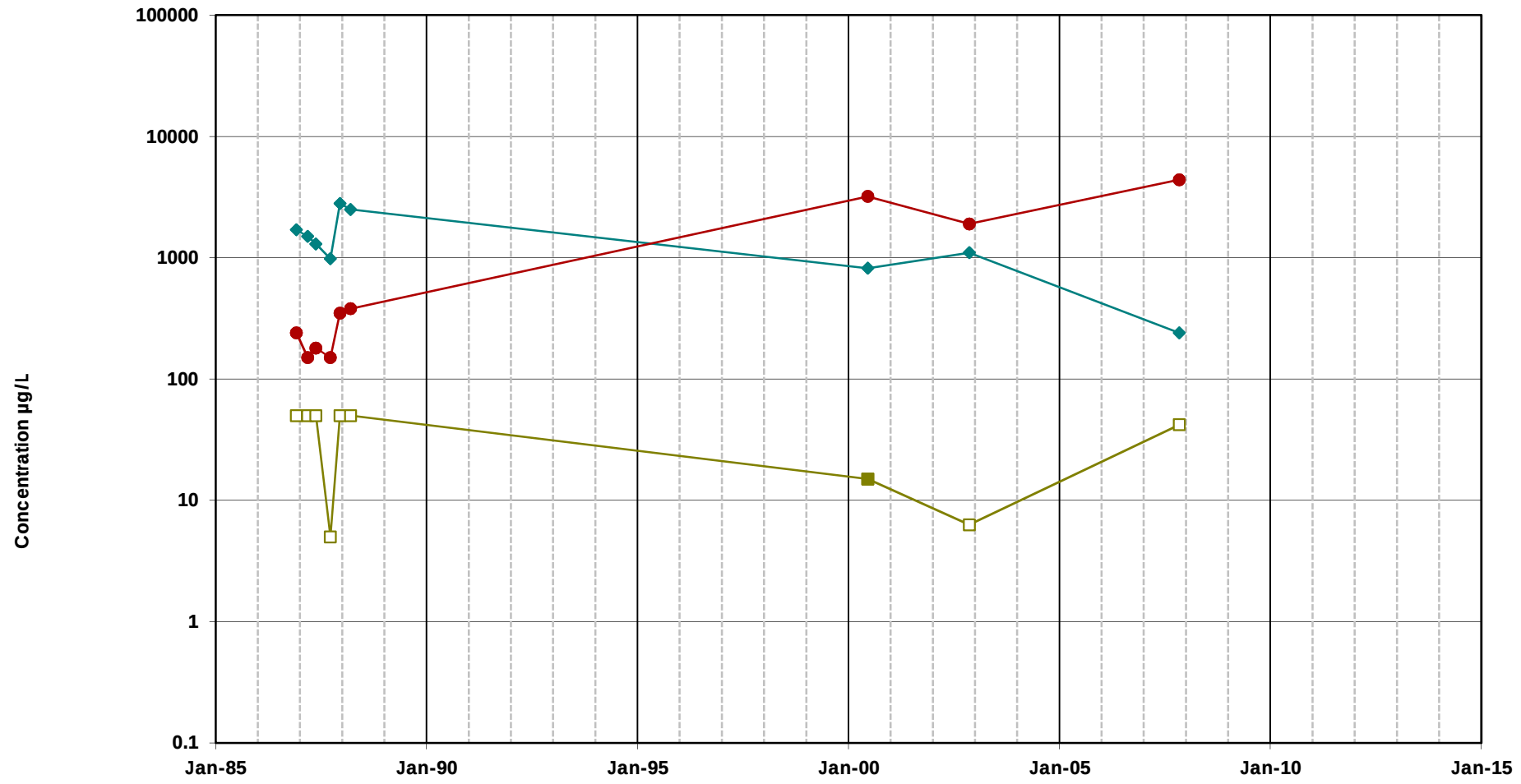
Figure

D-13

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[121A_VOC.xls]Plot_121A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 124A
MEW Former Fairchild Buildings 1-4

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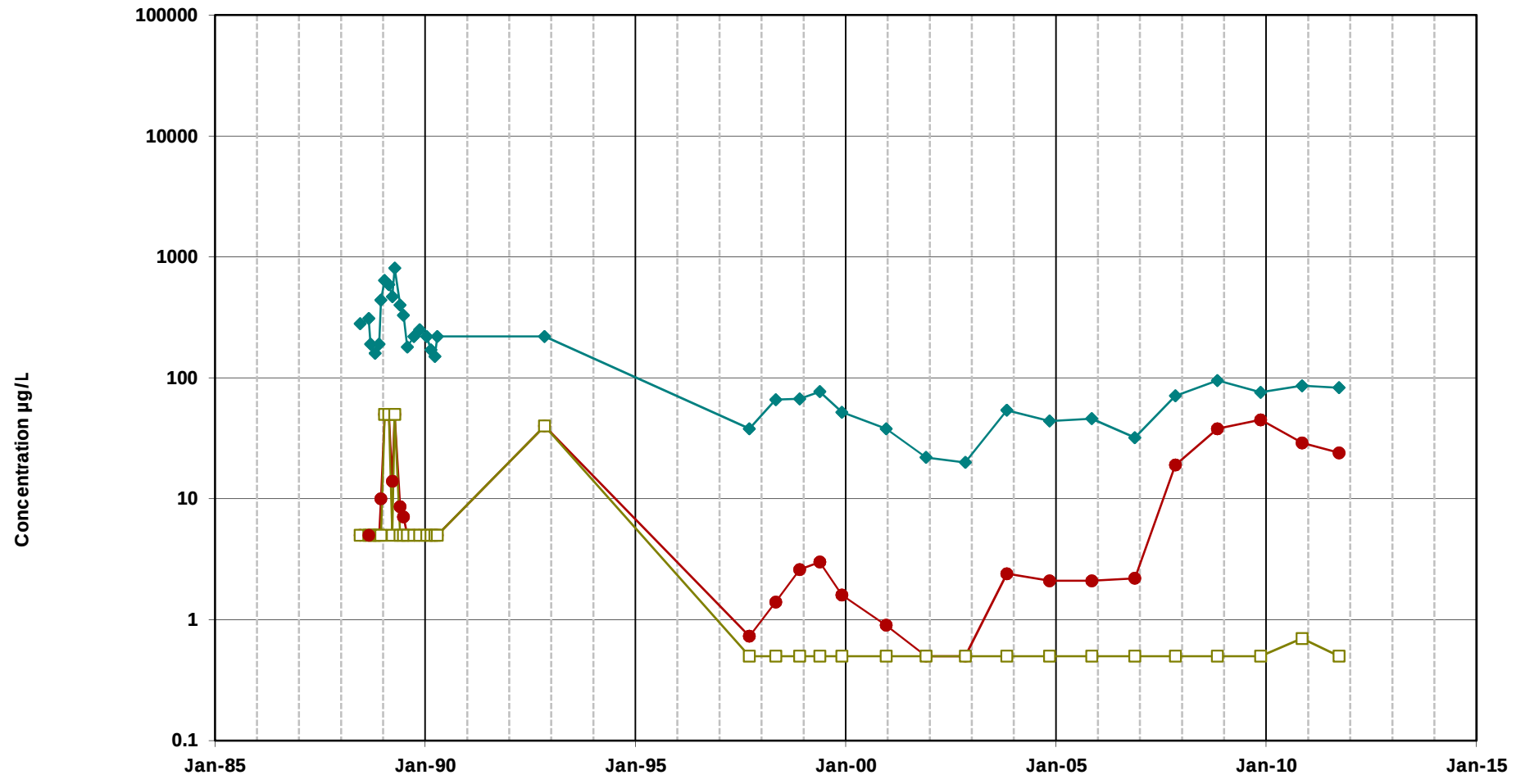
Figure

D-14

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[124A_VOC.xls]Plot_124A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 127A
MEW Former Fairchild Buildings 1-4

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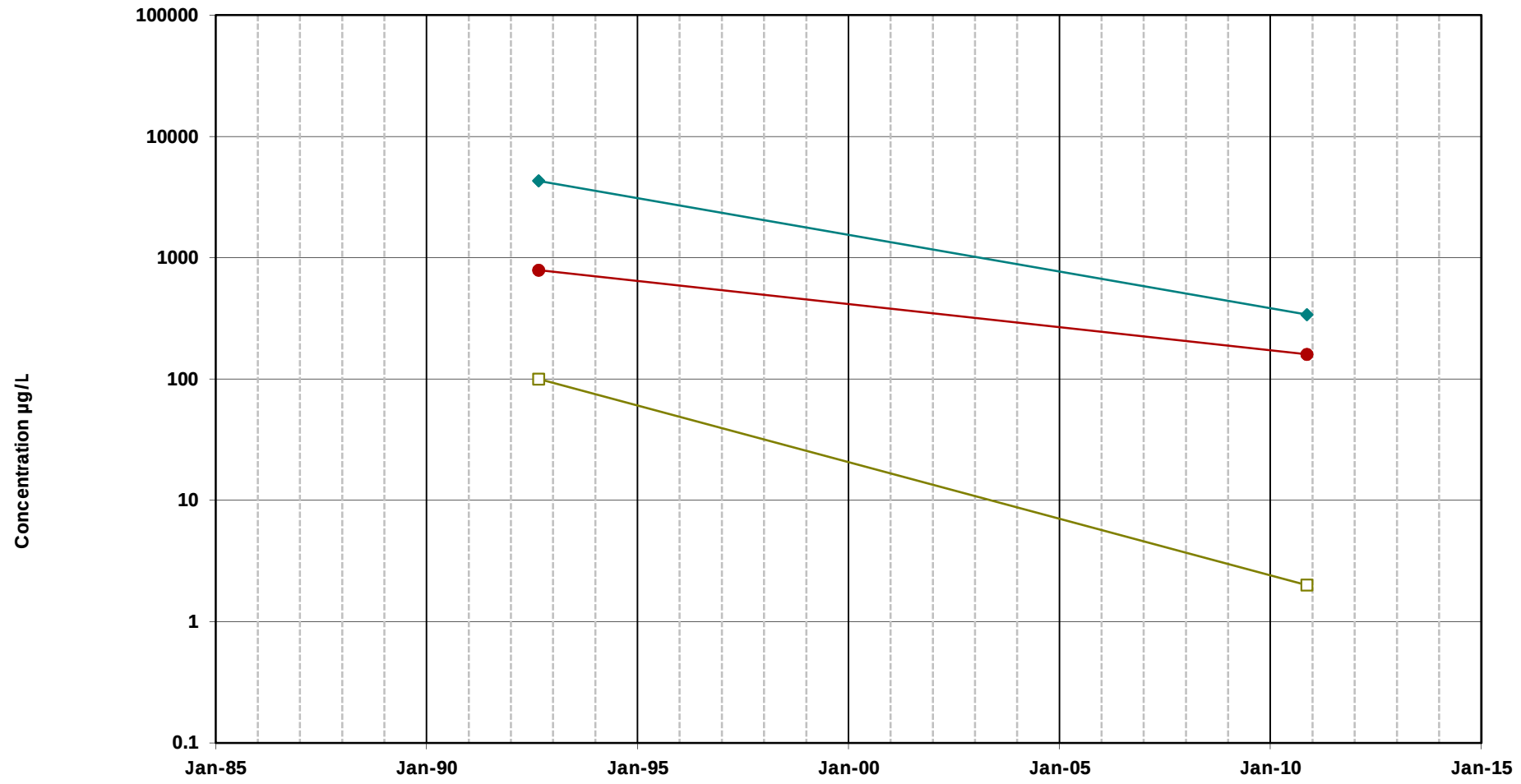
Figure

D-15

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[127A_VOC.xls]Plot_127A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 129A
MEW Former Fairchild Buildings 1-4

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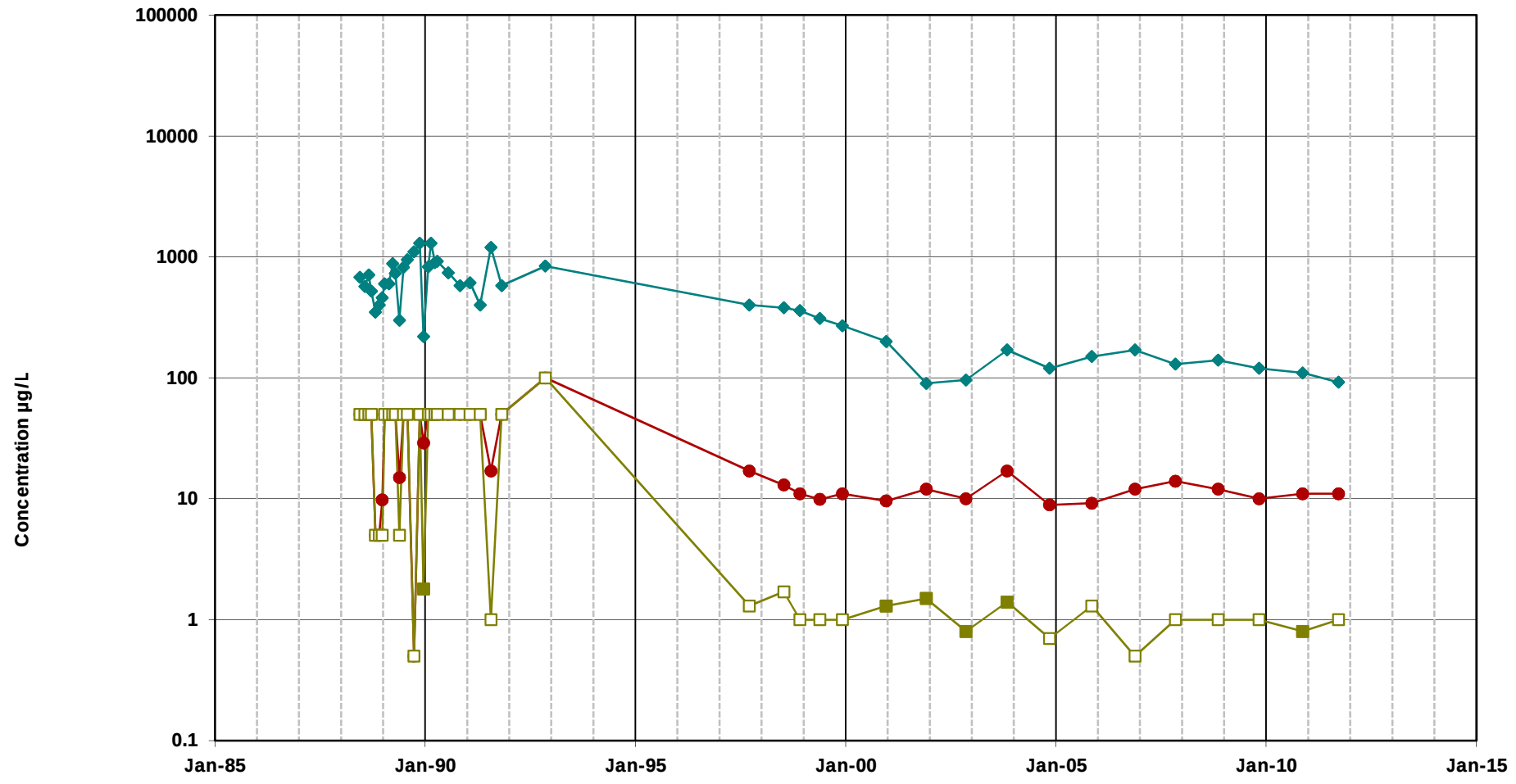
Figure

D-16

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[129A_VOC.xls]Plot_129A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 130A
MEW Former Fairchild Buildings 1-4

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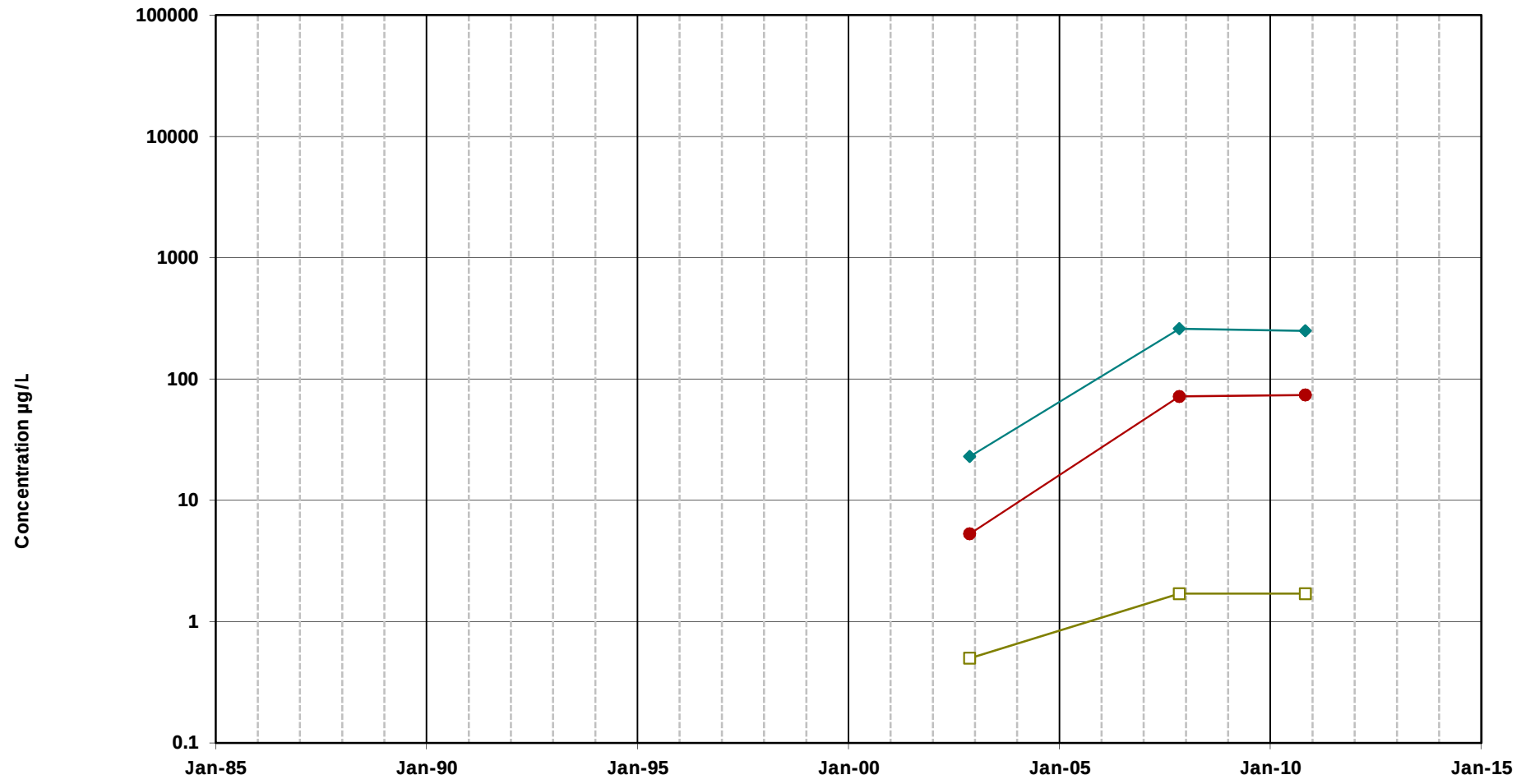
Figure

D-17

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[130A_VOC.xls]Plot_130A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 133A
MEW Former Fairchild Buildings 1-4

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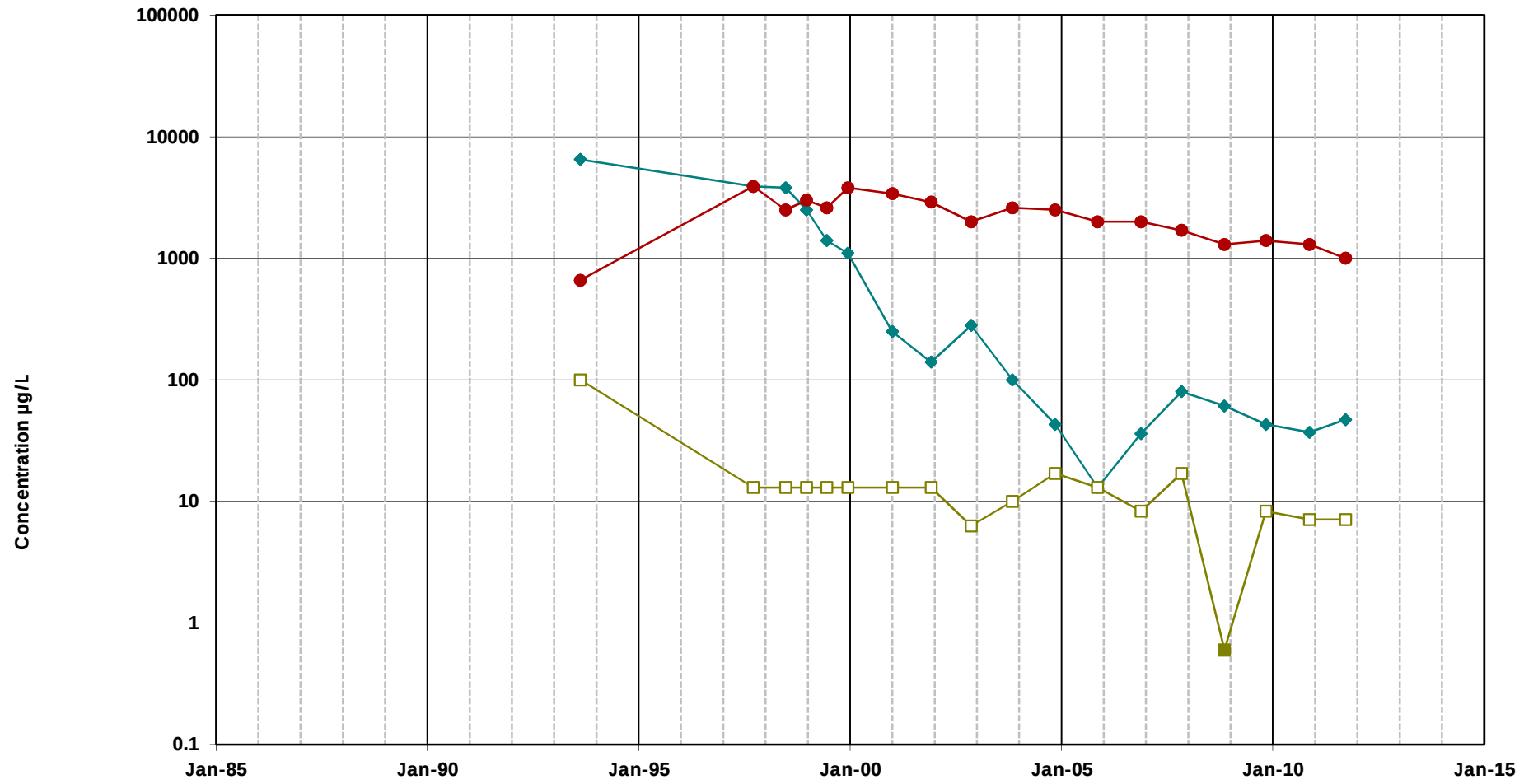
Figure

D-18

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[133A_VOC.xls]Plot_133A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 156A
MEW Former Fairchild Buildings 1-4

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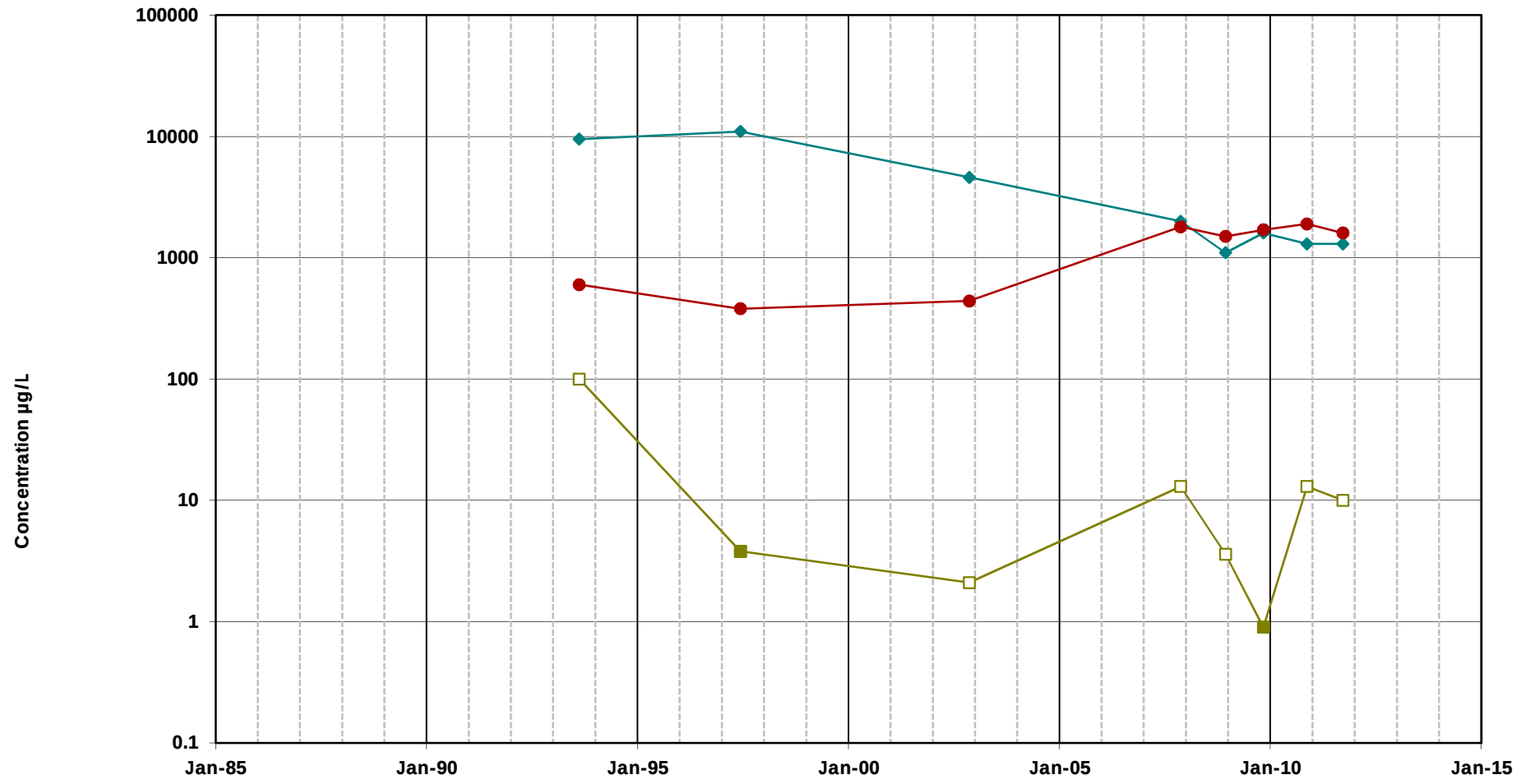
Figure

D-19

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[156A_VOC.xls]Plot_156A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 157A
MEW Former Fairchild Buildings 1-4

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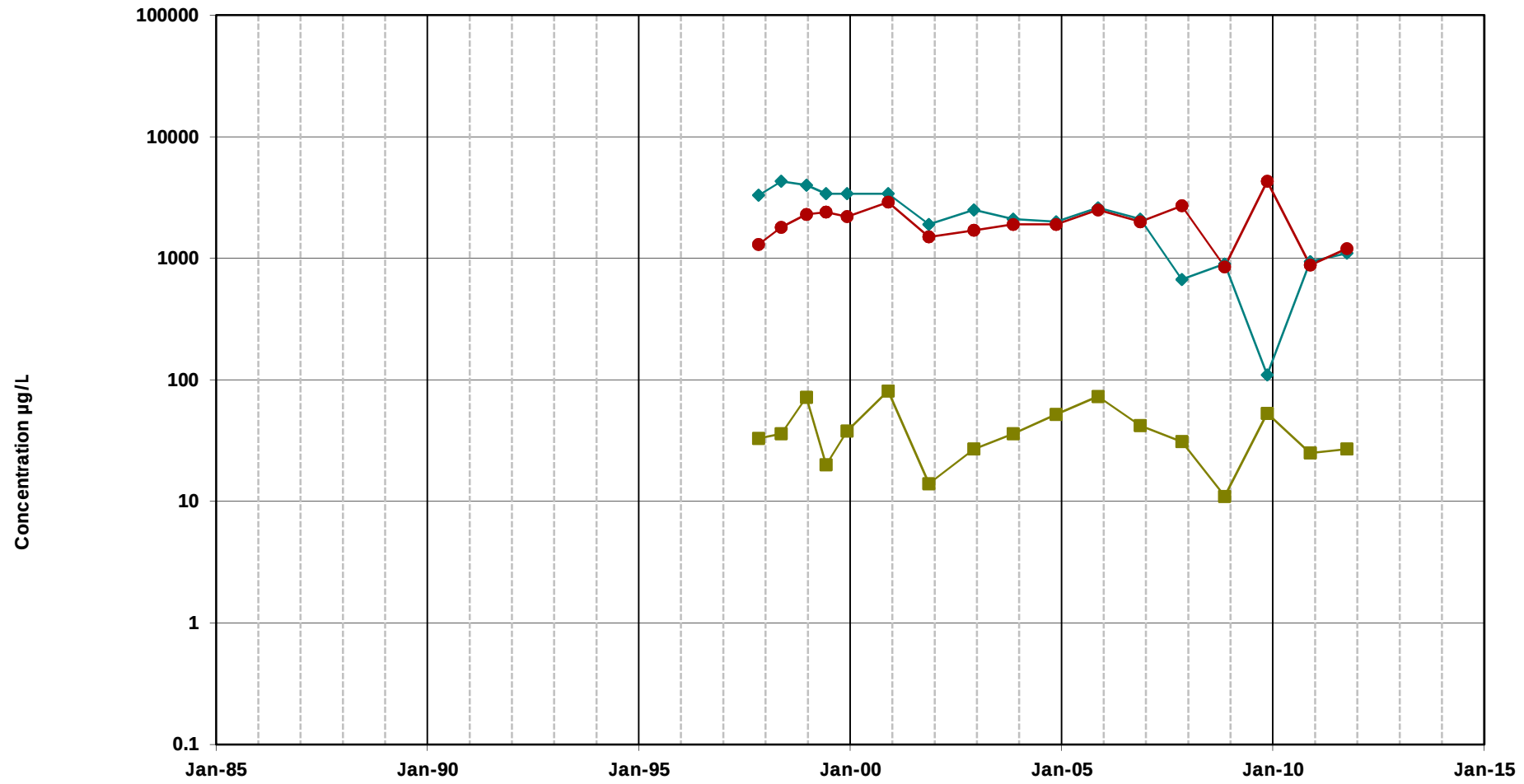
Figure

D-20

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[157A_VOC.xls]Plot_157A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well REG-MW-2A
MEW Former Fairchild Buildings 1-4

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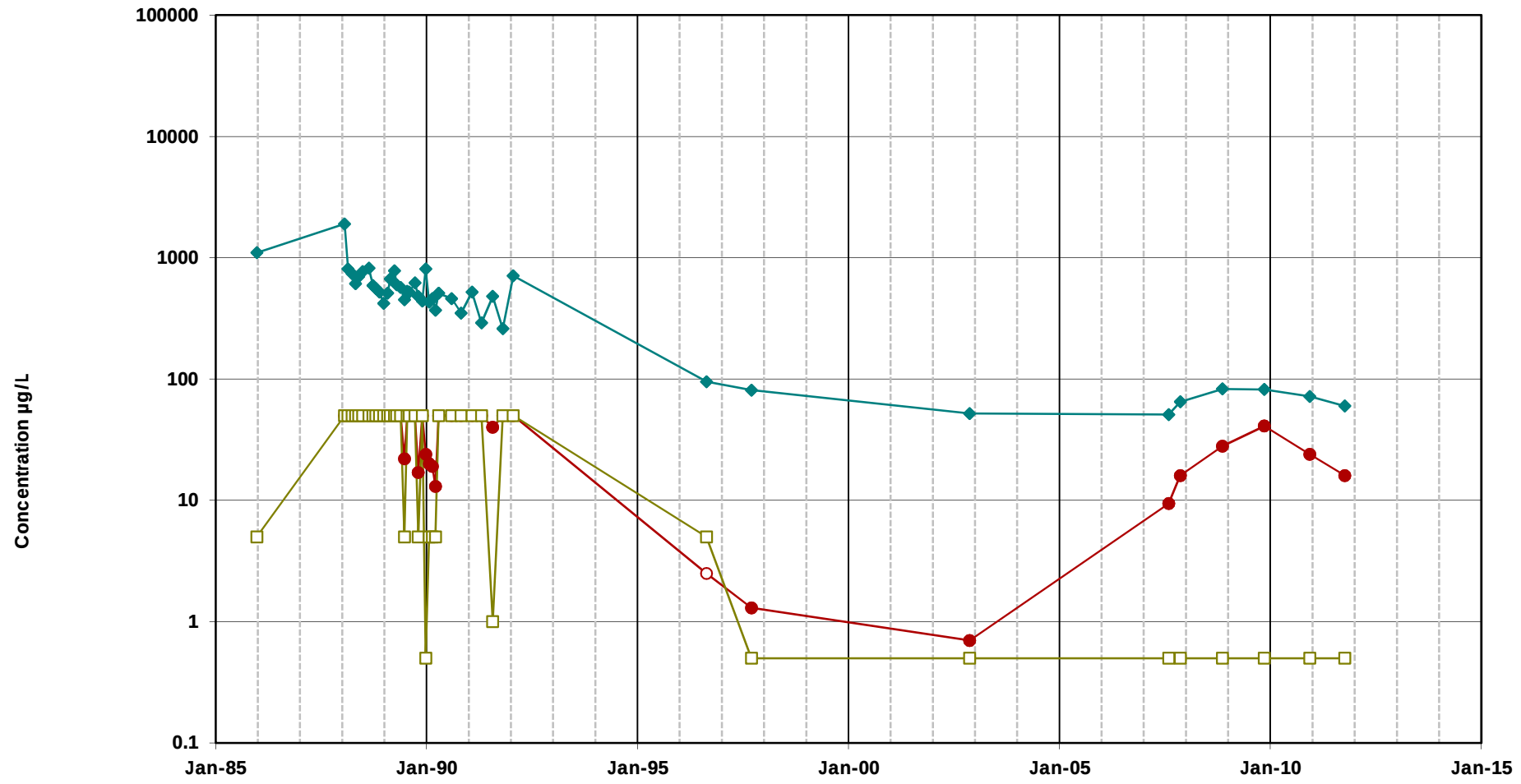
Figure

D-21

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[REG-MW-2A_VOC.xls]Plot_REG-MW-2A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-3A
MEW Former Fairchild Buildings 1-4

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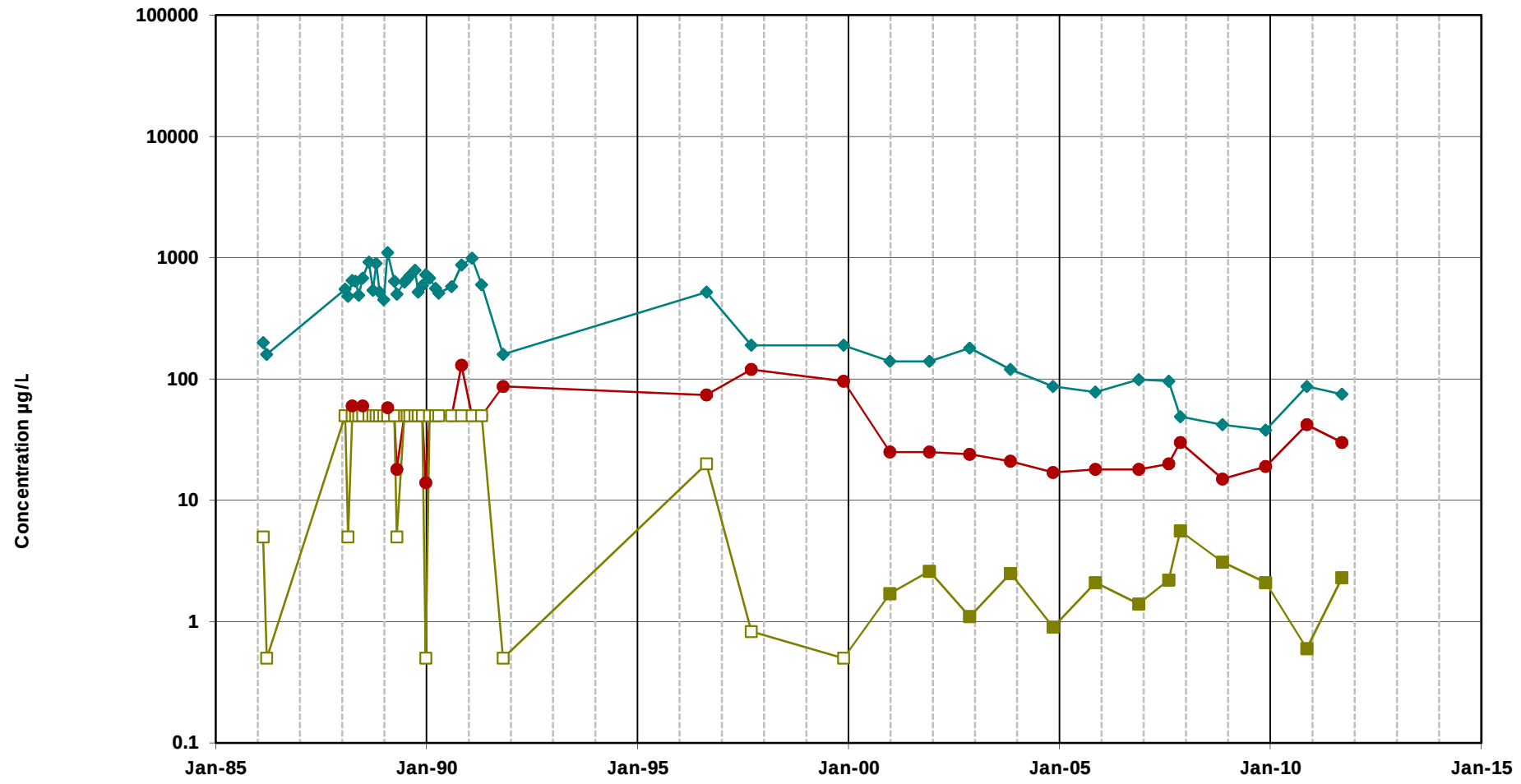
Figure

D-22

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-3A_VOC.xls]Plot_RW-3A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-4A
MEW Former Fairchild Buildings 1-4

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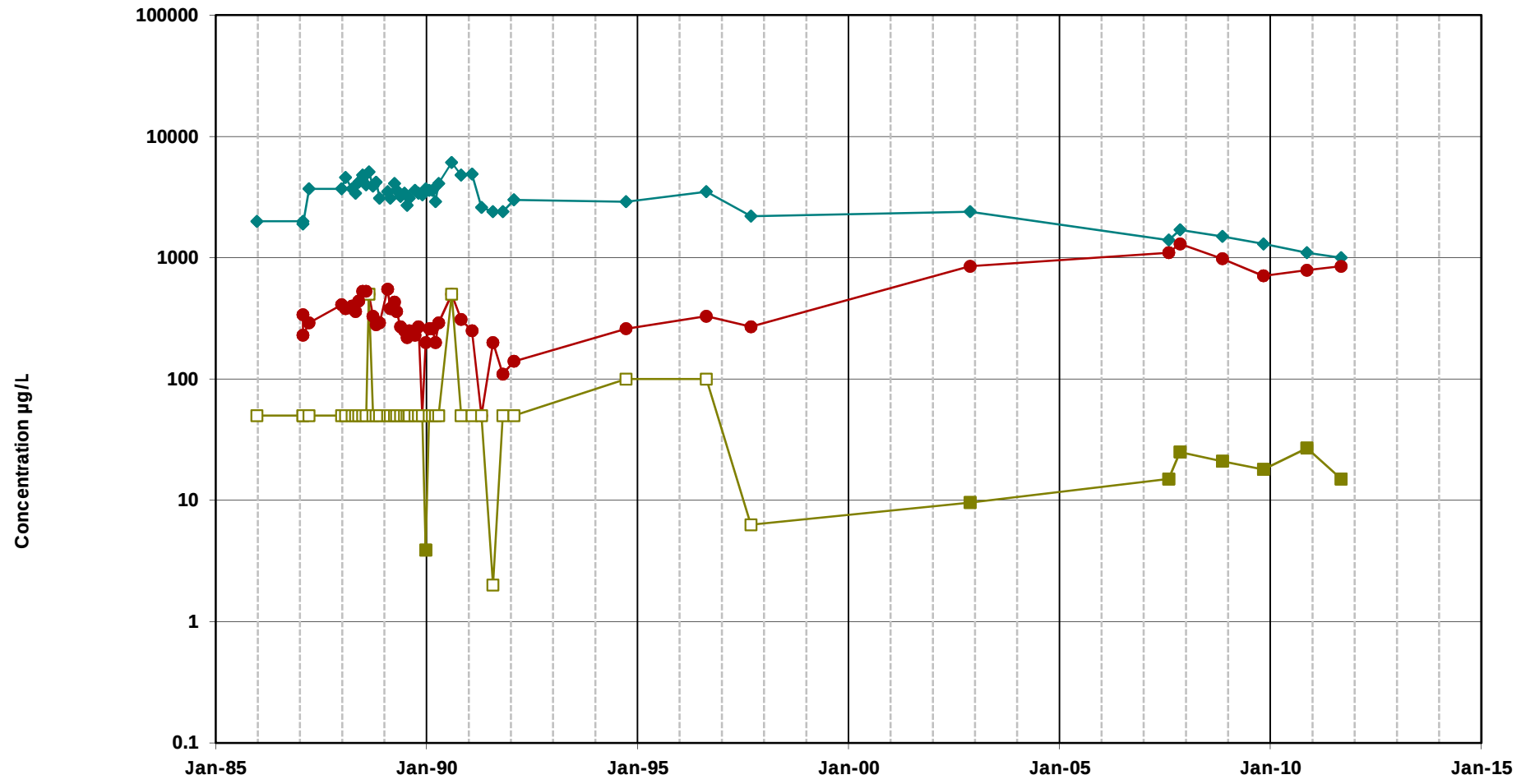
Figure

D-23

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-4A_VOC.xls]Plot_RW-4A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-5A
MEW Former Fairchild Buildings 1-4

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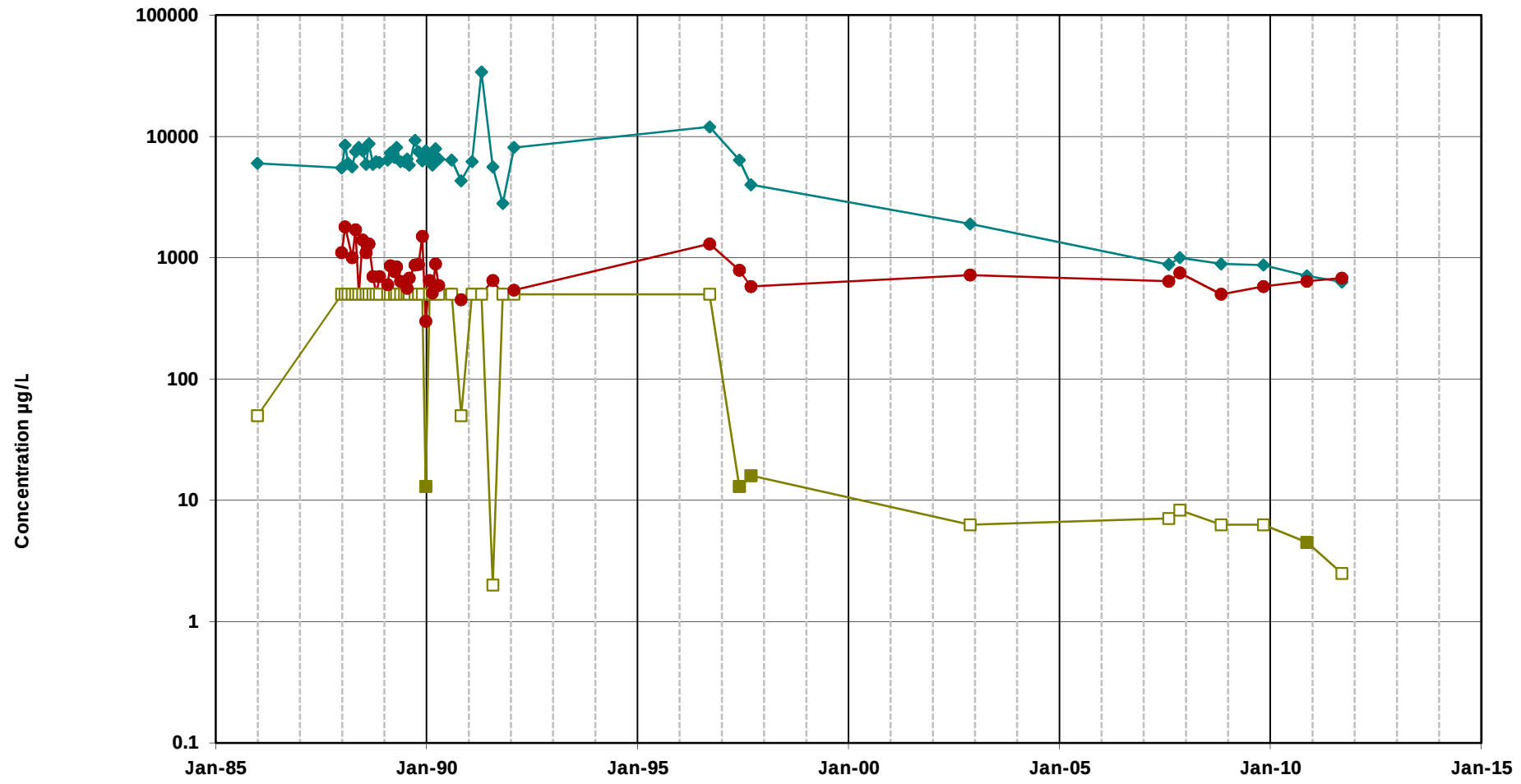
Figure

D-24

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-5A_VOC.xls]Plot_RW-5A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-7A
MEW Former Fairchild Buildings 1-4

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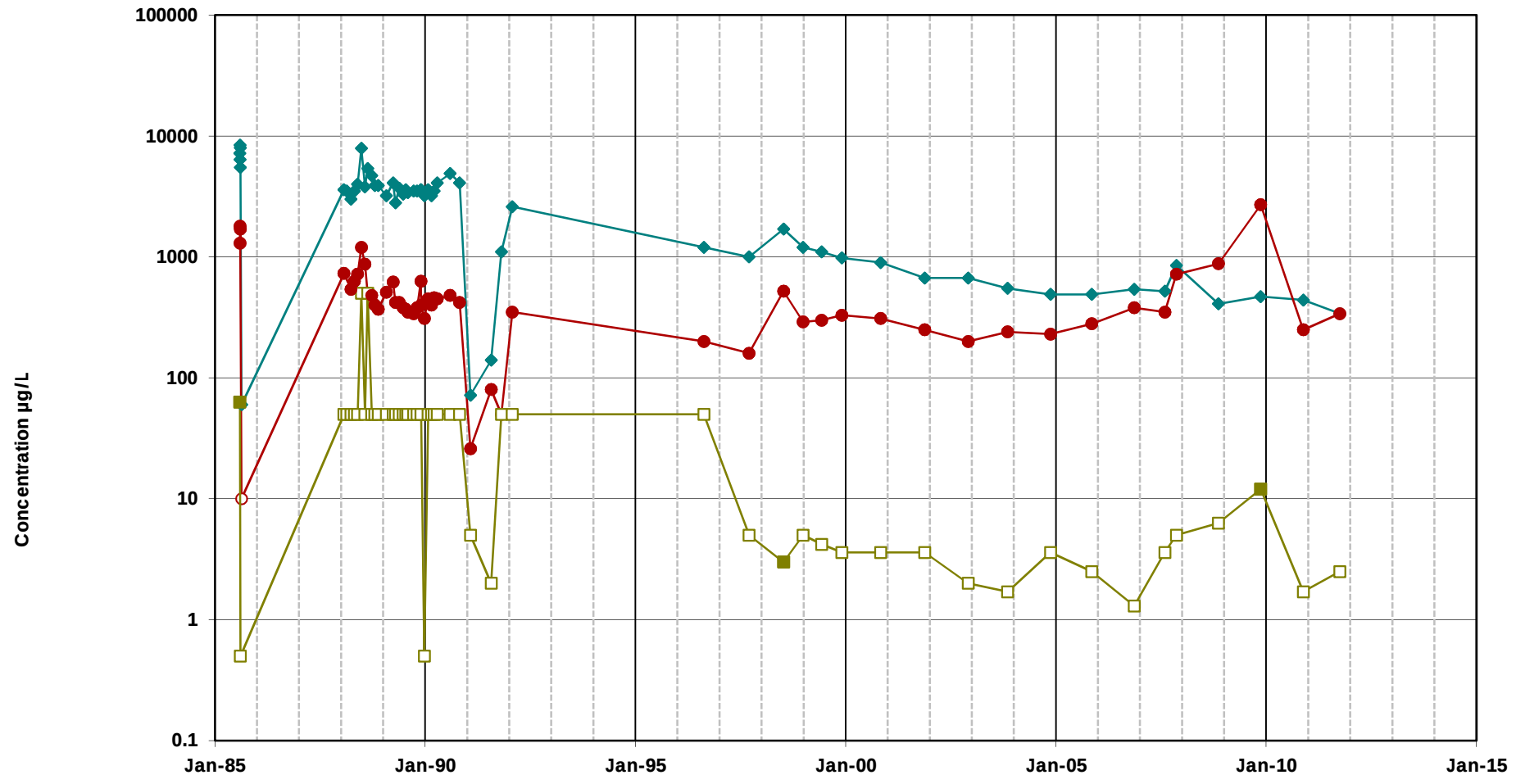
Figure

D-25

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-7A_VOC.xls]Plot_RW-7A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-9A
MEW Former Fairchild Buildings 1-4

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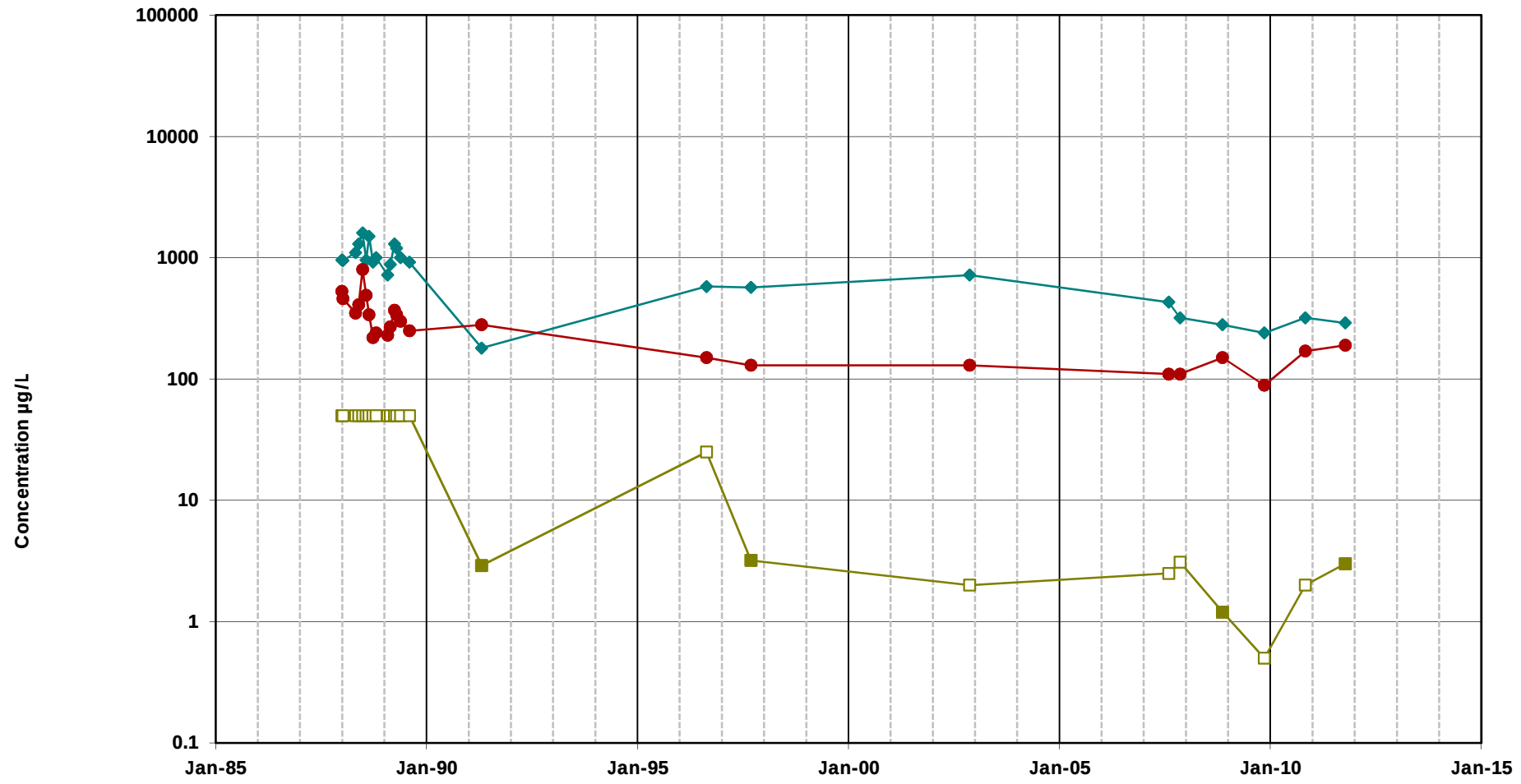
Figure

D-26

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-9A_VOC.xls]Plot_RW-9A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-16A
MEW Former Fairchild Buildings 1-4

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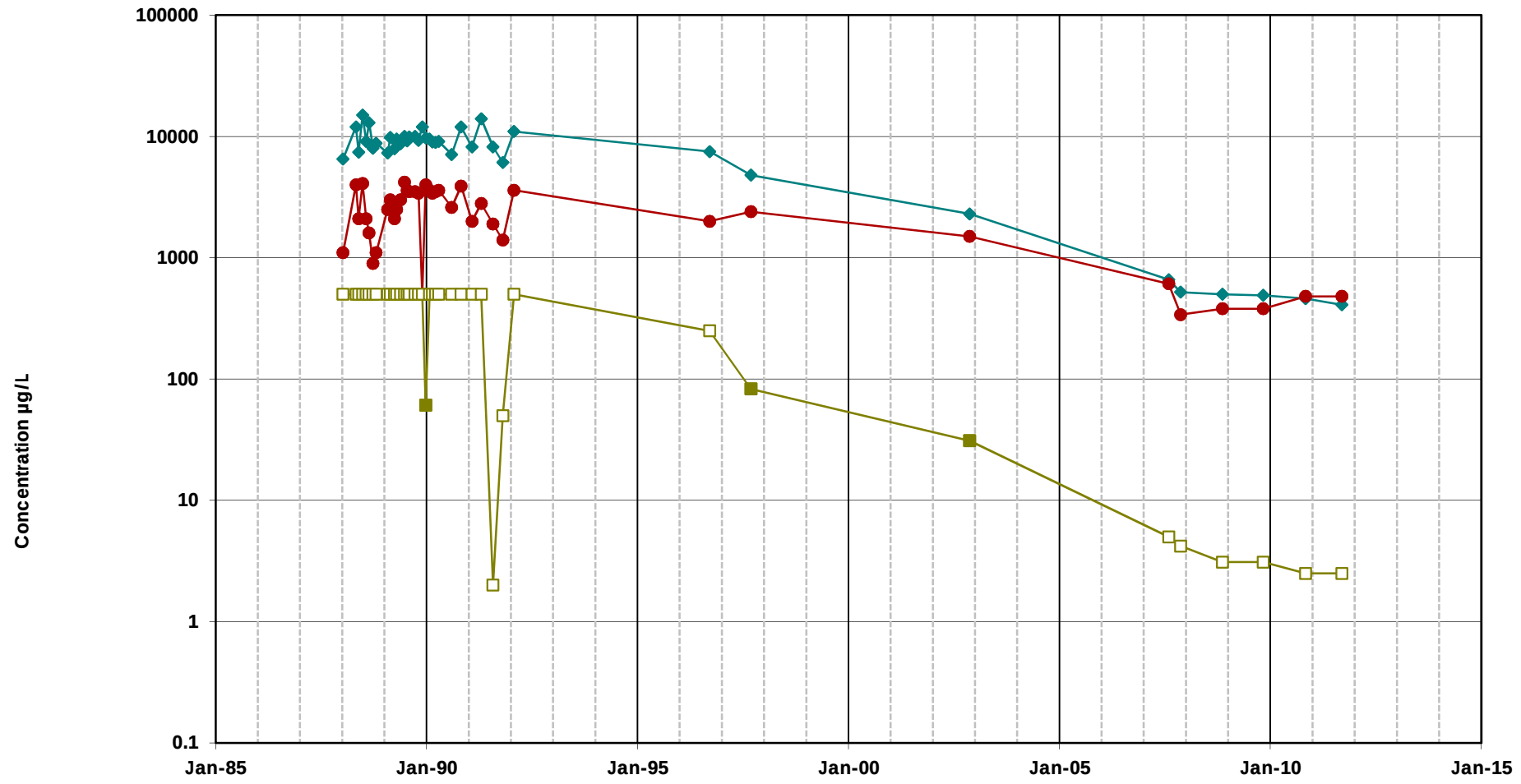
Figure

D-27

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-16A_VOC.xls]Plot_RW-16A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-18A
MEW Former Fairchild Buildings 1-4

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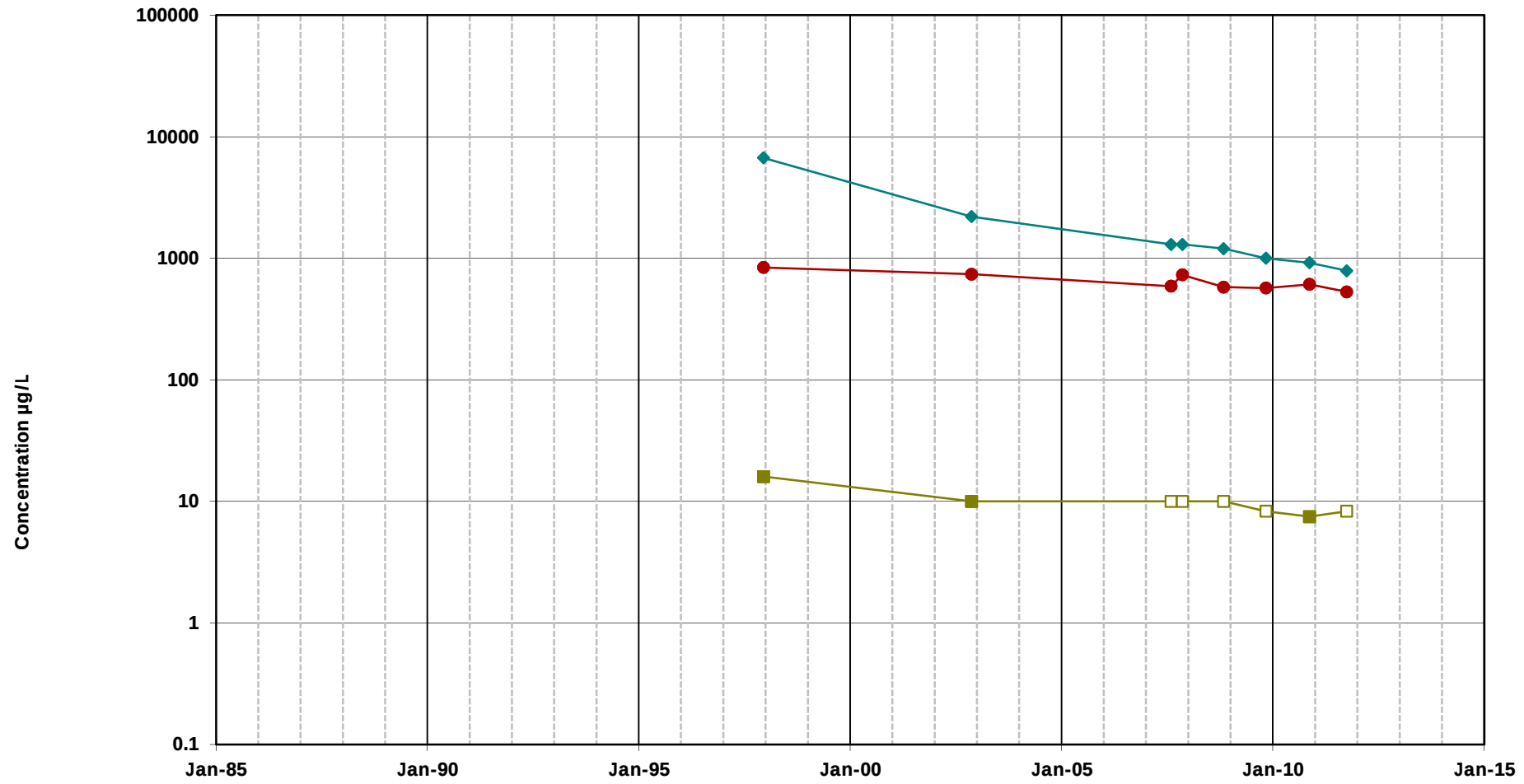
Figure

D-28

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-18A_VOC.xls]Plot_RW-18A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-27A
MEW Former Fairchild Buildings 1-4

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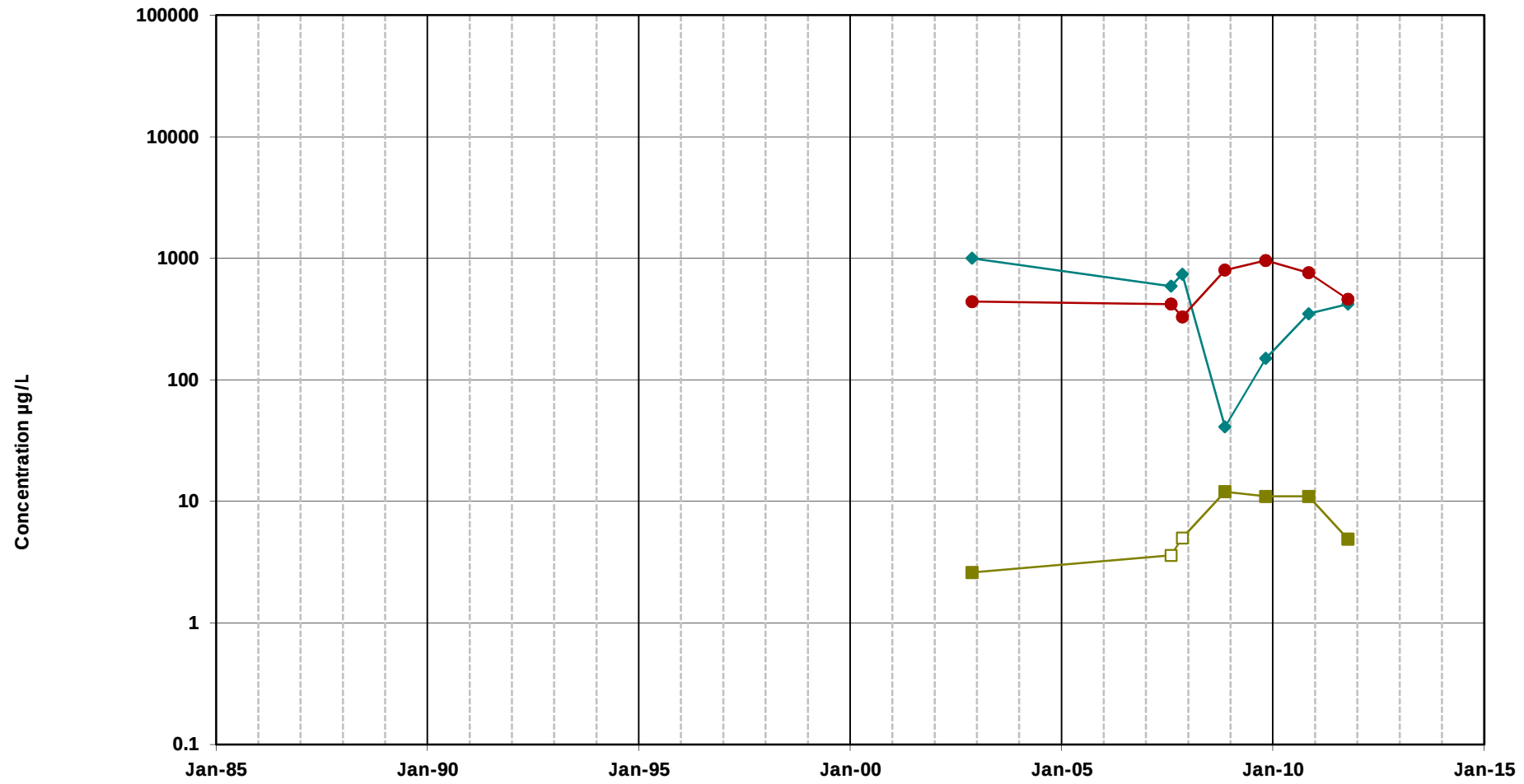
Figure

D-29

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-27A_VOC.xls]Plot_RW-27A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-28A
MEW Former Fairchild Buildings 1-4

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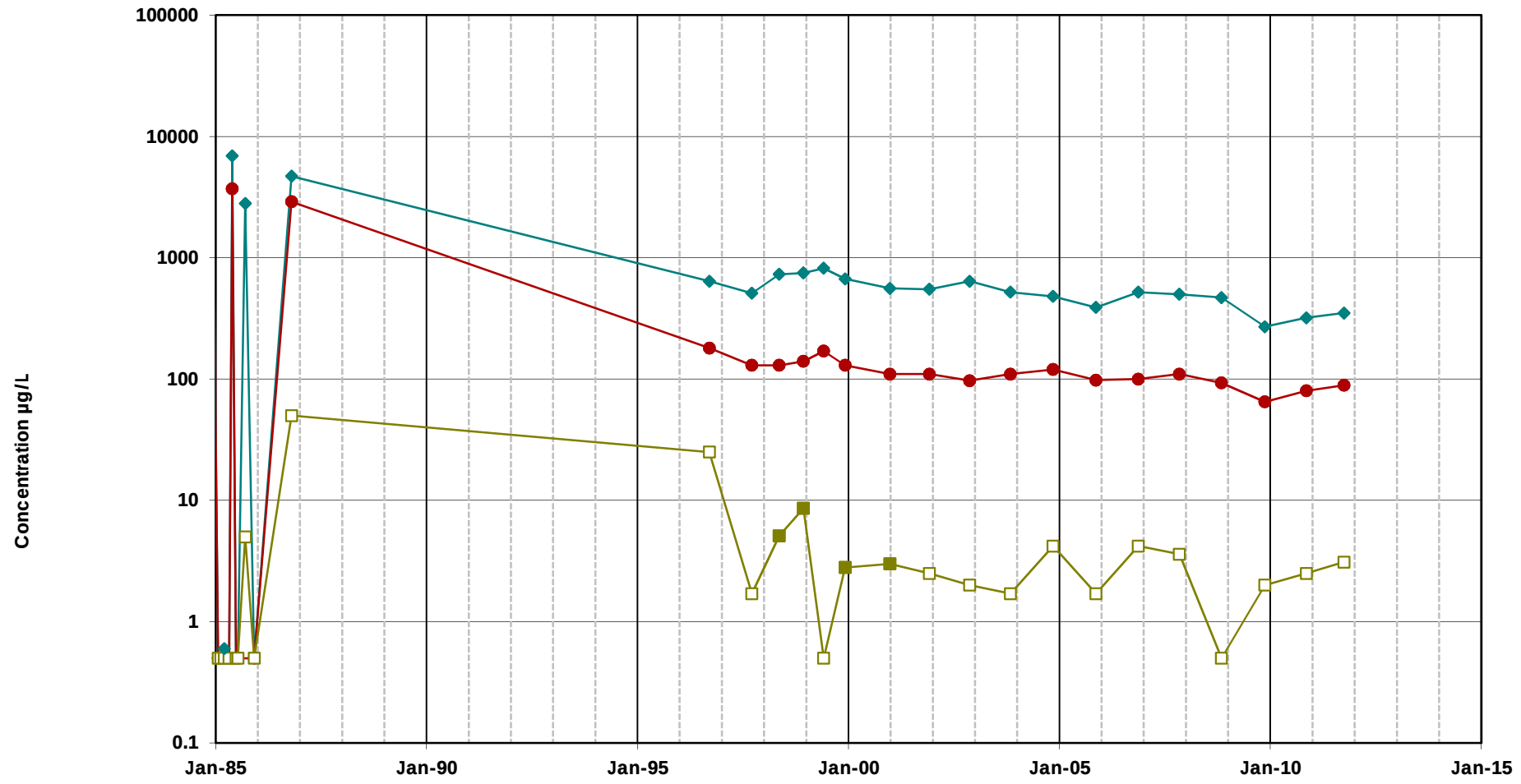
Figure

D-30

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-28A_VOC.xls]Plot_RW-28A_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 2B1
MEW Former Fairchild Buildings 1-4

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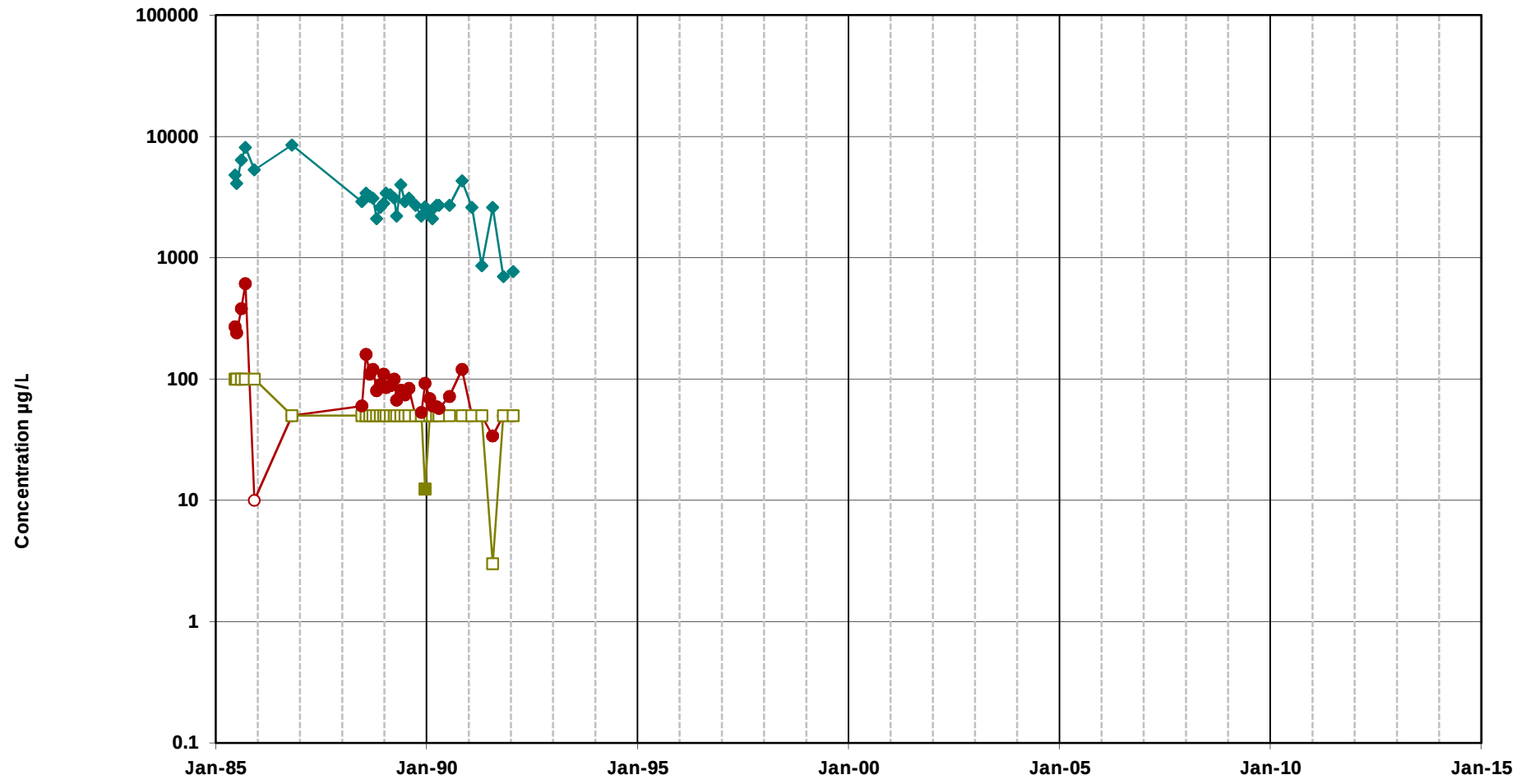
Figure

D-31

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[2B1_VOC.xls]Plot_2B1_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 20B1
MEW Former Fairchild Buildings 1-4

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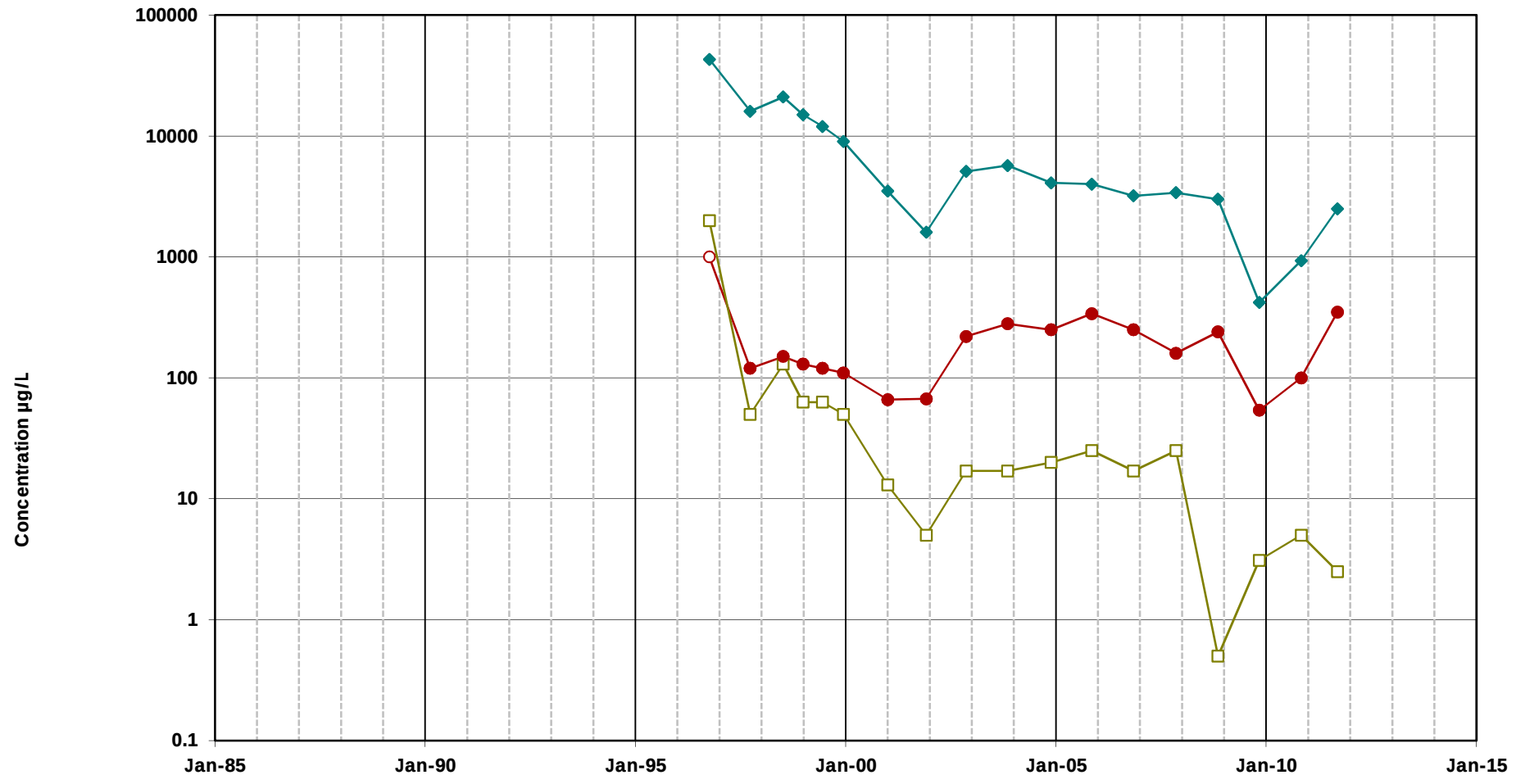
Figure

D-32

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[20B1_VOC.xls]Plot_20B1_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 60B1
MEW Former Fairchild Buildings 1-4

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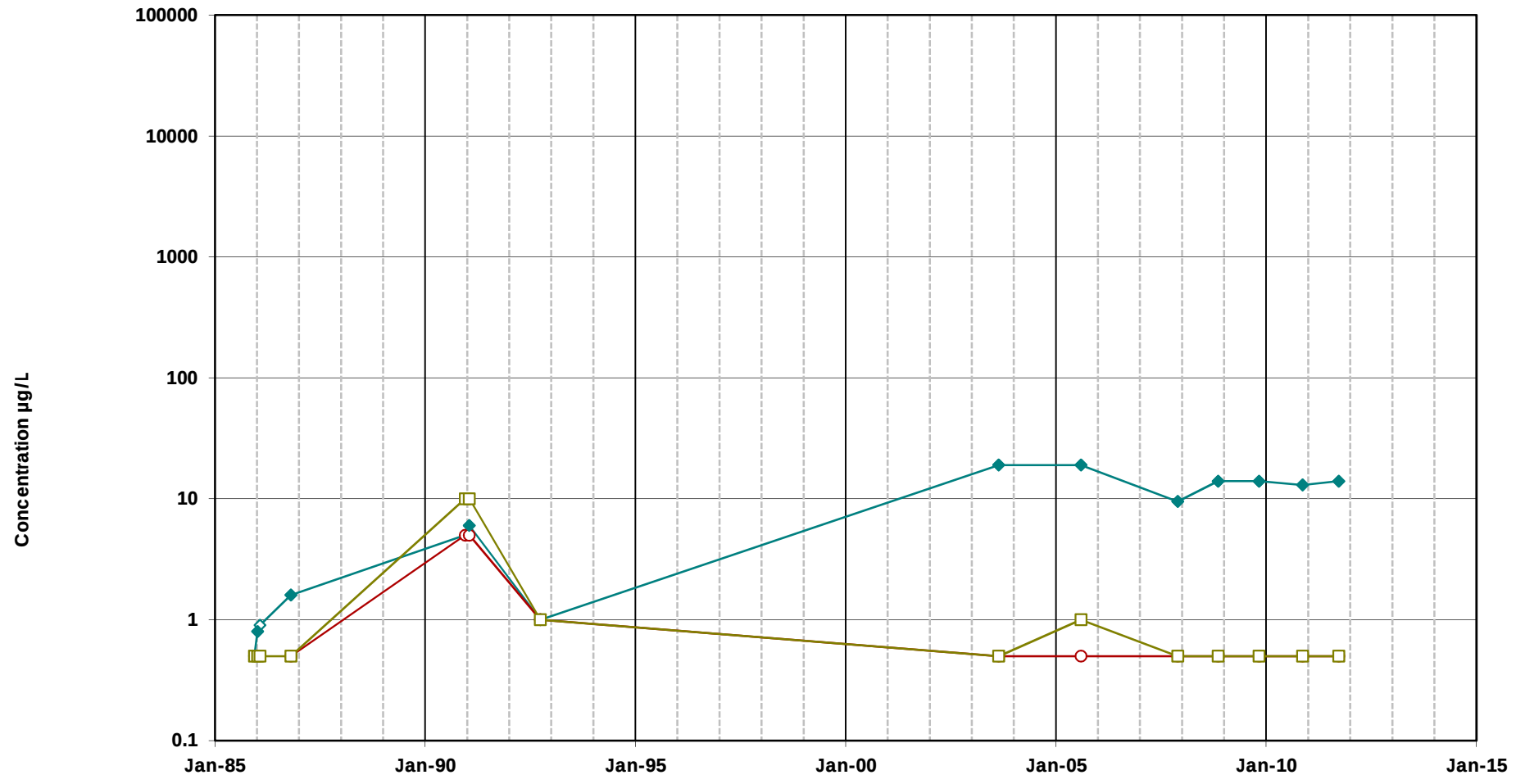
Figure

D-33



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 67B1
MEW Former Fairchild Buildings 1-4

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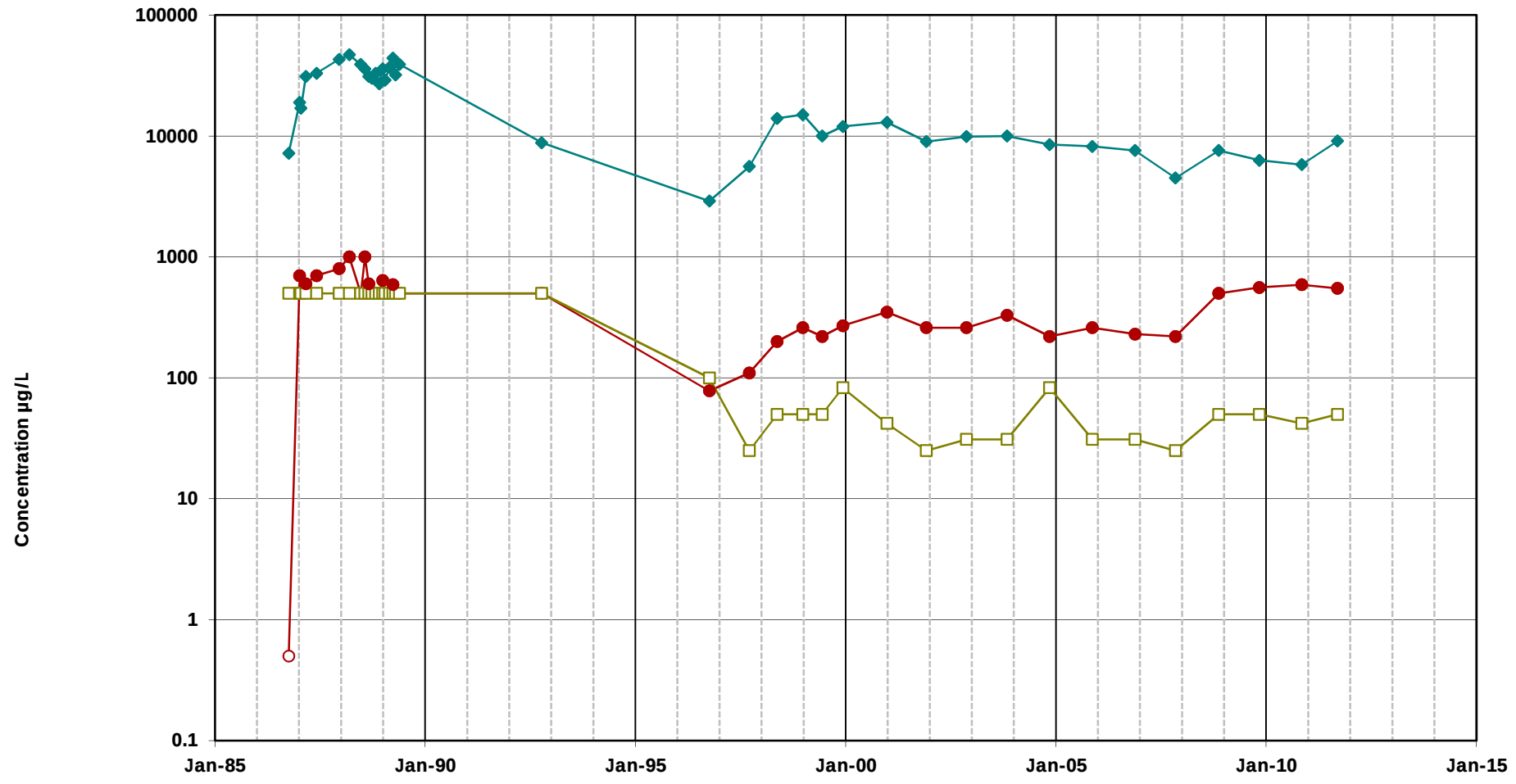
Figure

D-34

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[67B1_VOC.xls]Plot_67B1_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 115B1
MEW Former Fairchild Buildings 1-4

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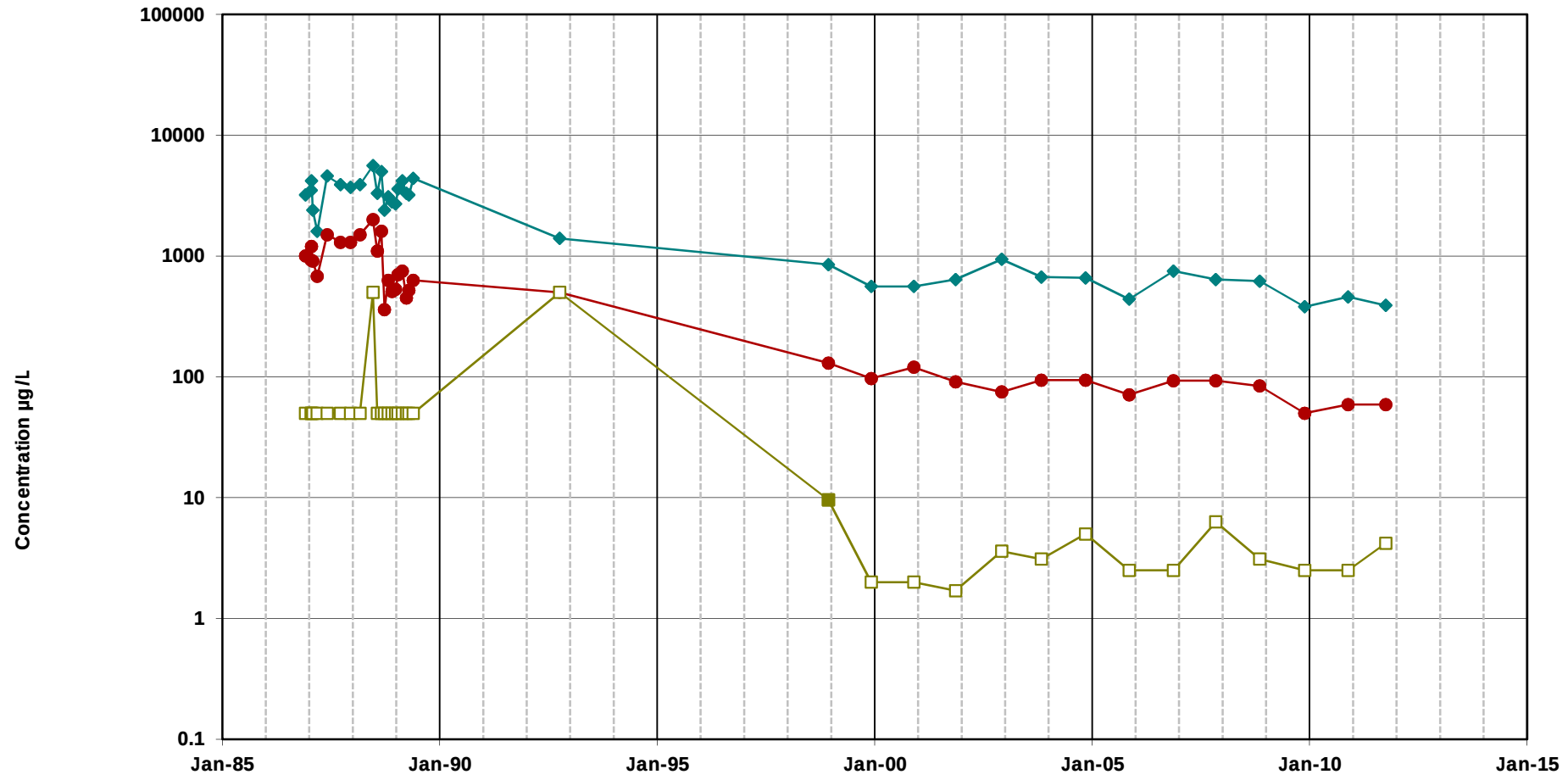
Figure

D-35

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[115B1_VOC.xls]Plot_115B1_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 119B1
MEW Former Fairchild Buildings 1-4
Mountain View, California

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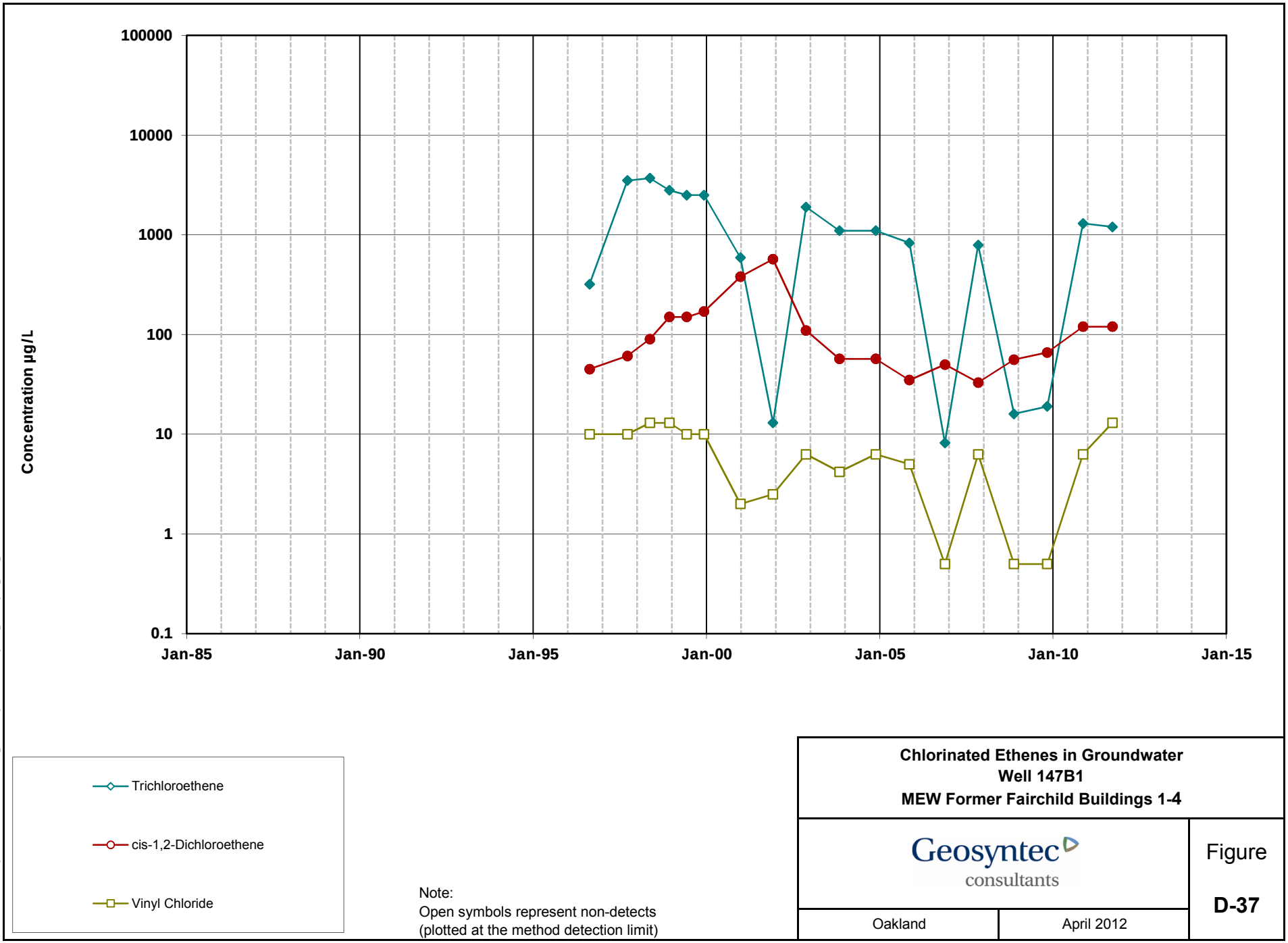
Figure
D-36

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[11198L_VOC.xls]Plot_11981_VOC



Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 147B1
MEW Former Fairchild Buildings 1-4

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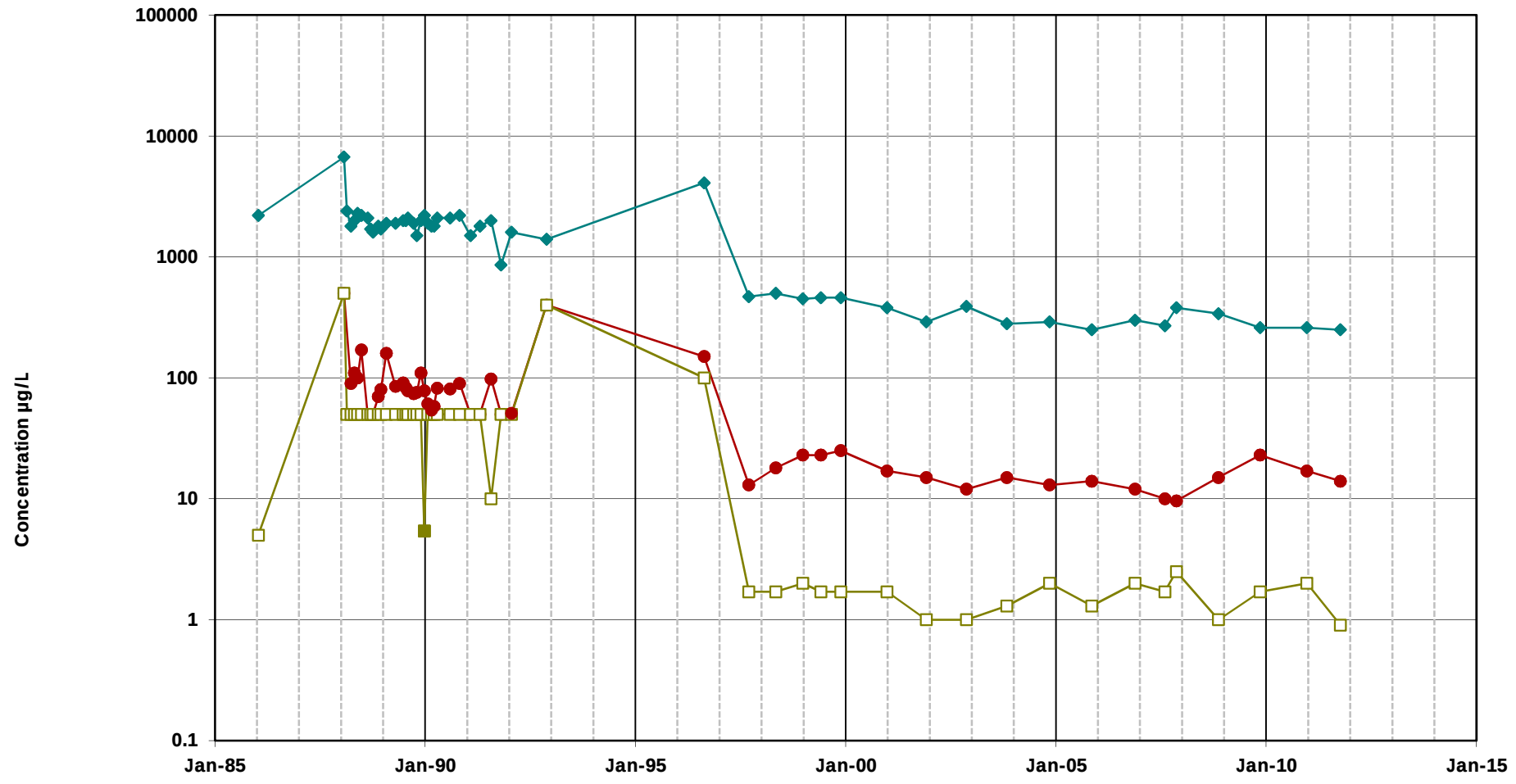
Figure **D-37**

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[147B1_VOC.xls]Plot_147B1_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-3(B1)
MEW Former Fairchild Buildings 1-4

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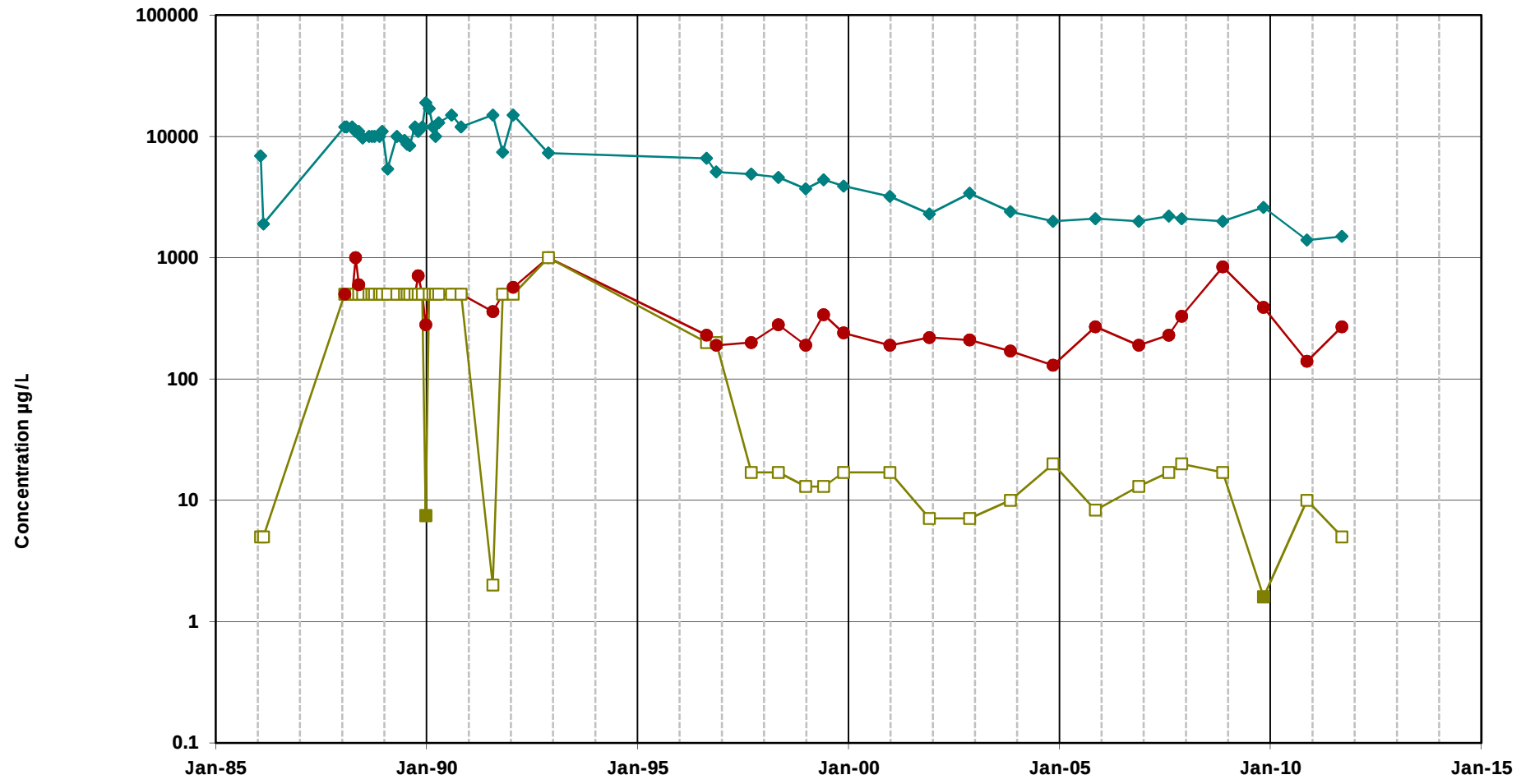
Figure

D-38

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-3(B1)_VOC.xls]Plot_RW-3(B1)_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-4(B1)
MEW Former Fairchild Buildings 1-4

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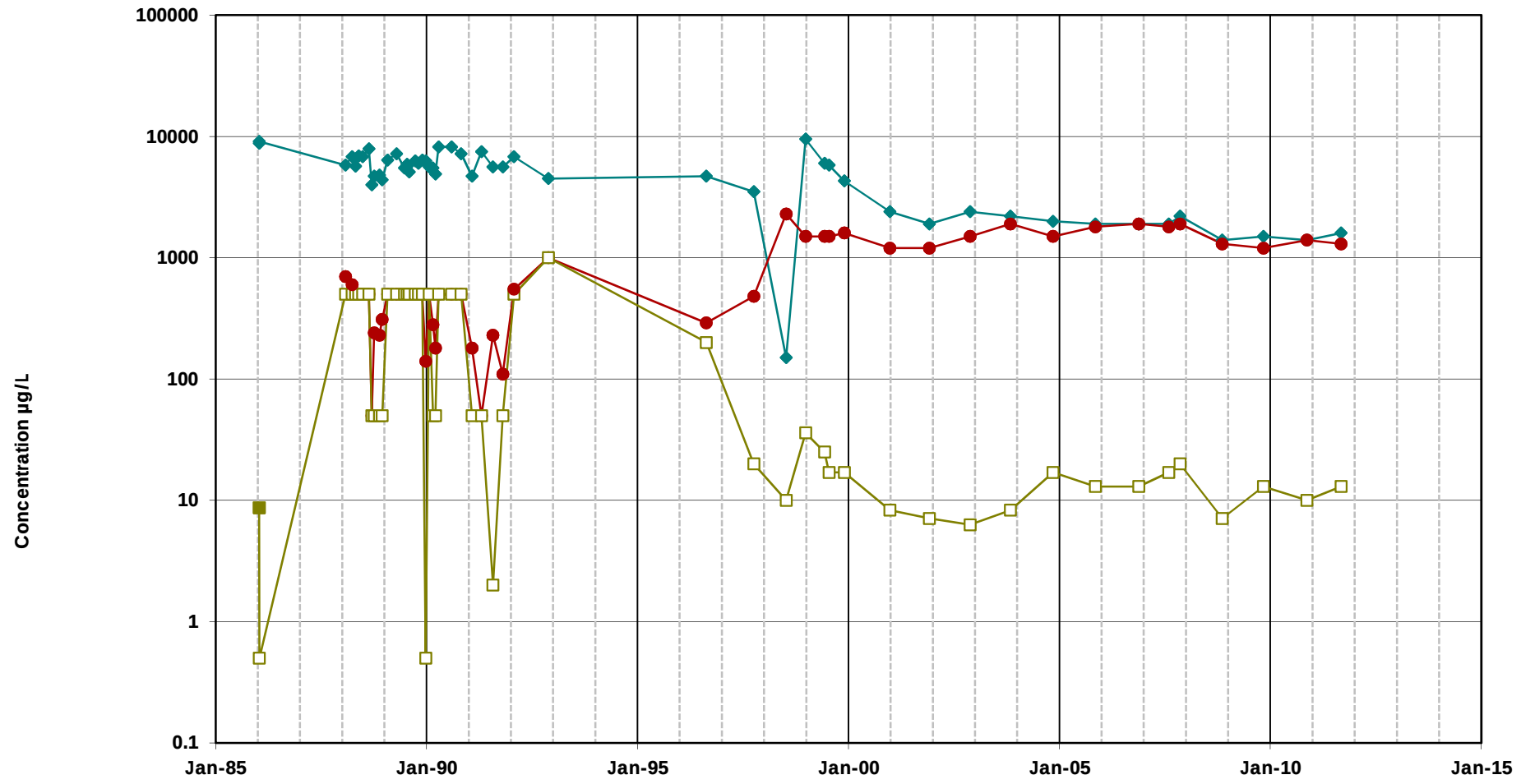
Figure

D-39

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-4(B1)_VOC.xls]Plot_RW-4(B1)_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-5(B1)
MEW Former Fairchild Buildings 1-4

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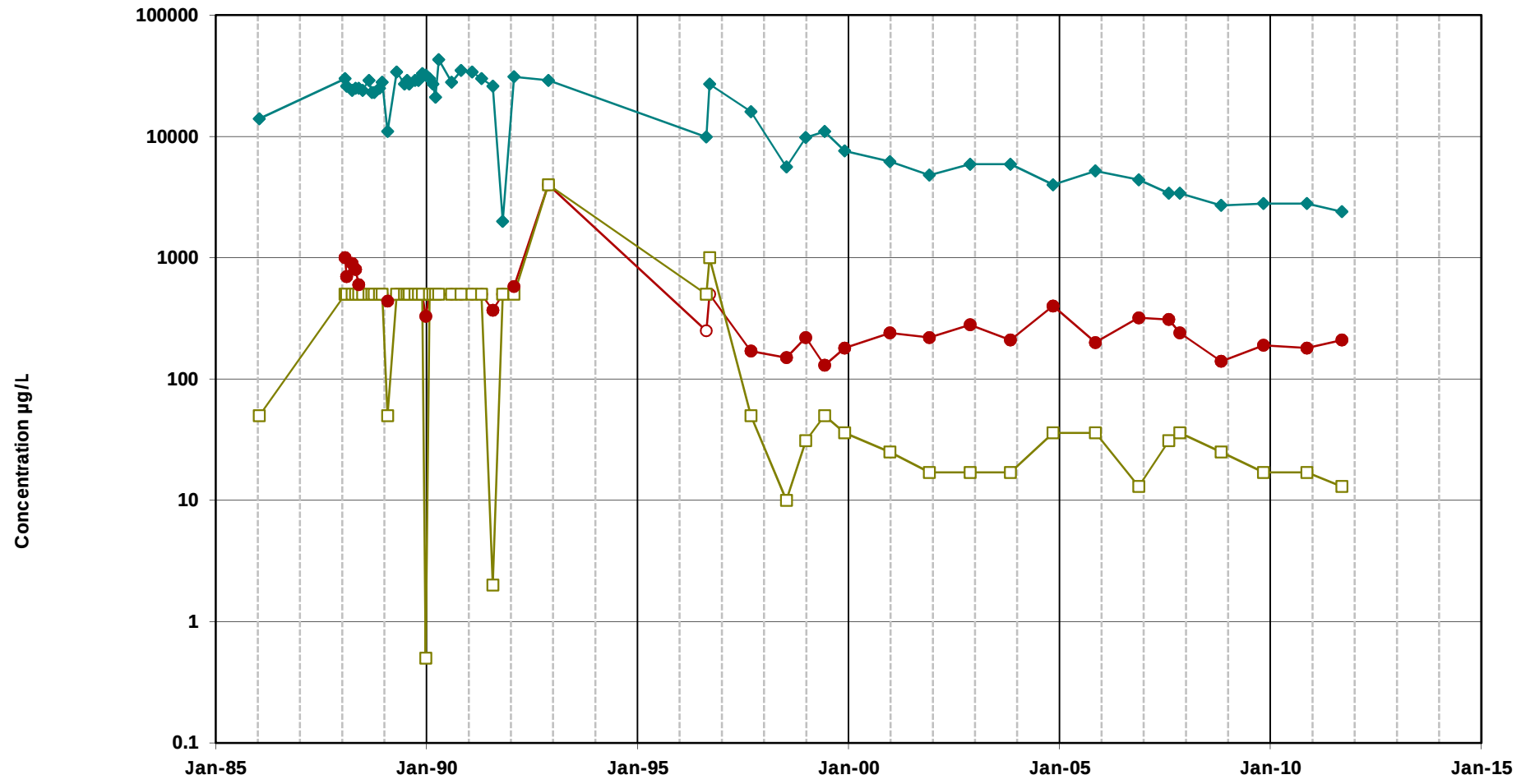
Figure **D-40**

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-5(B1)_VOC.xls]Plot_RW-5(B1)_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-7(B1)
MEW Former Fairchild Buildings 1-4

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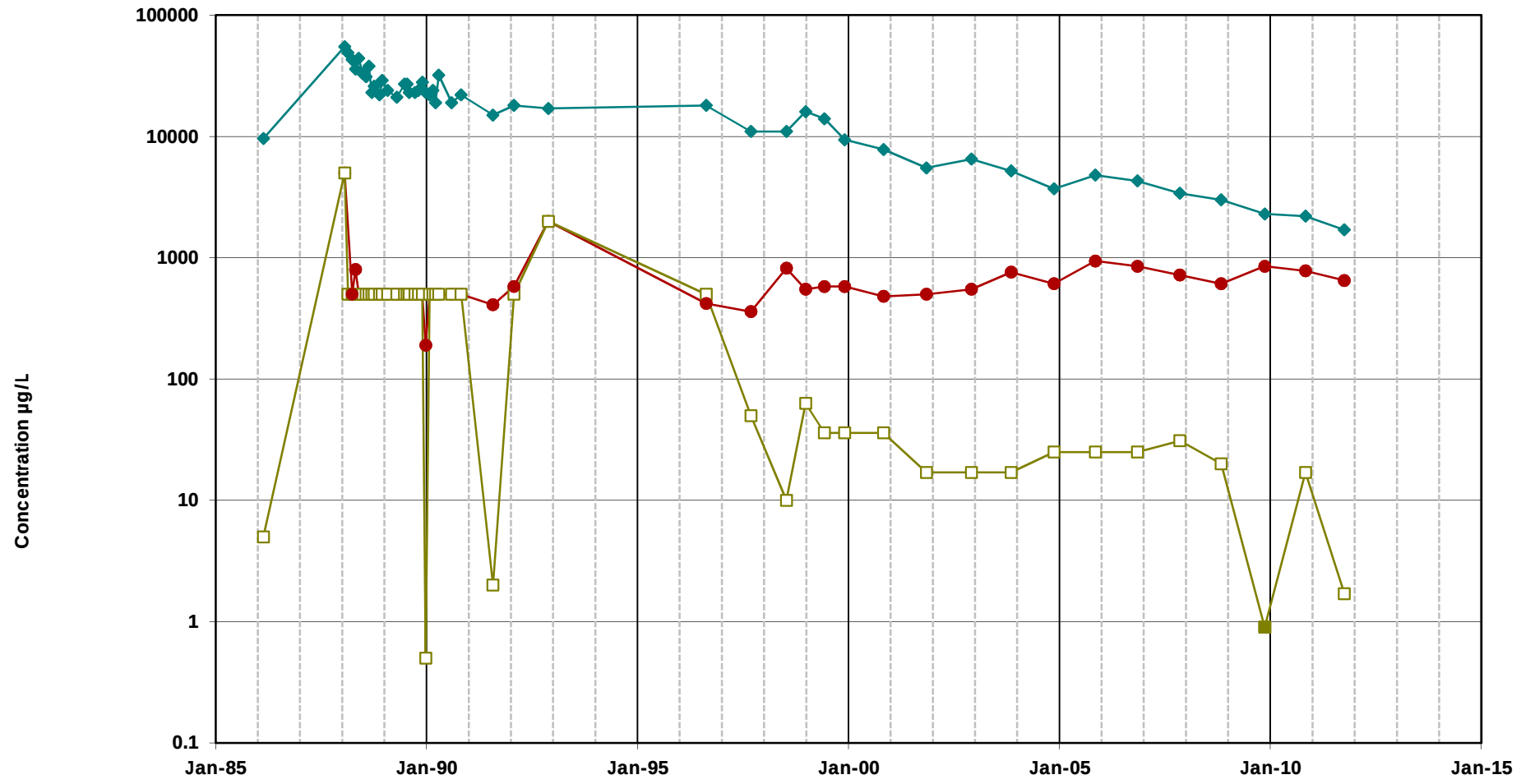
Figure

D-41

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-7(B1)_VOC.xls]Plot_RW-7(B1)_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-9(B1)R
MEW Former Fairchild Buildings 1-4

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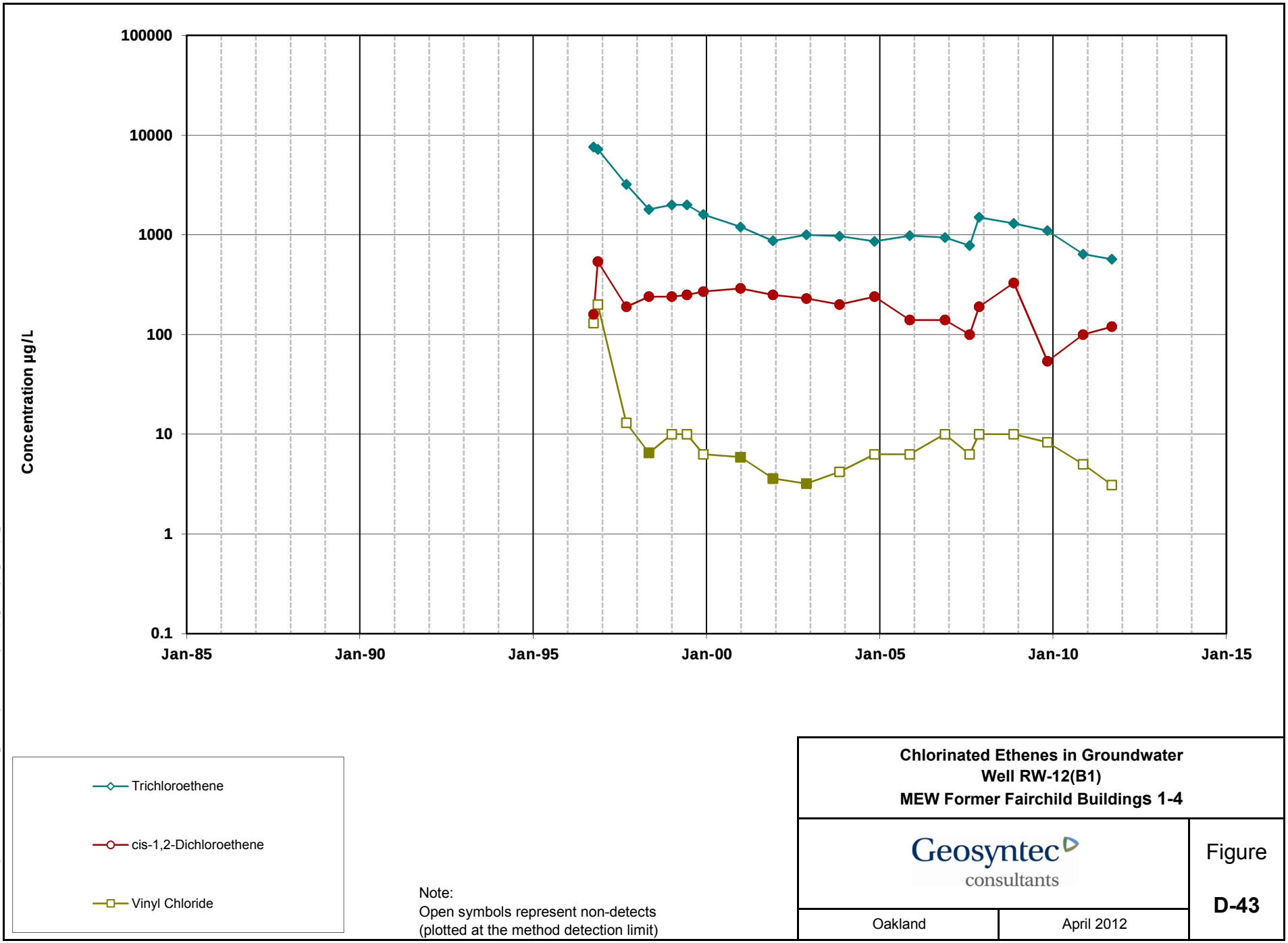
Figure

D-42



Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-12(B1)
MEW Former Fairchild Buildings 1-4

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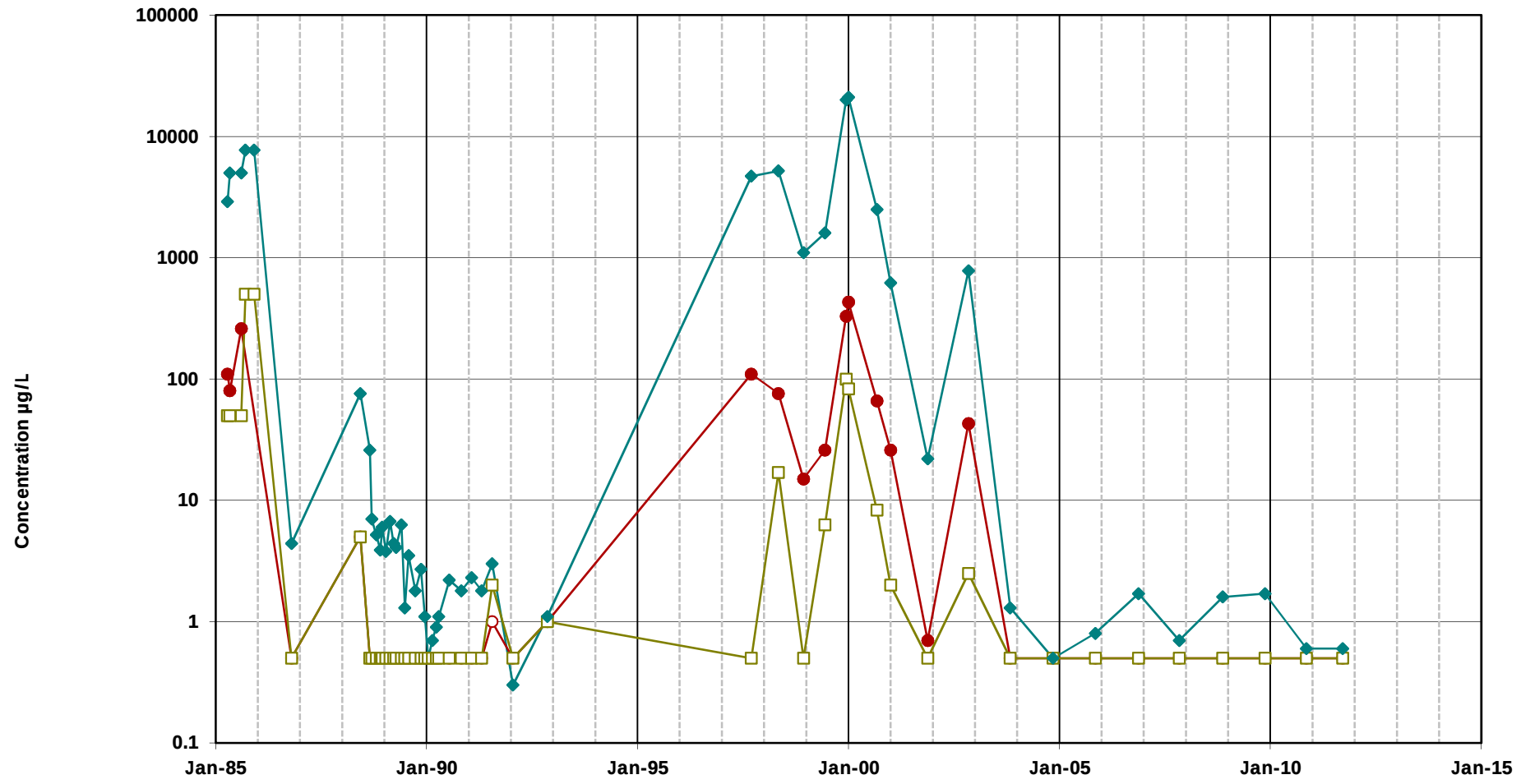
Figure
D-43



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 10B2
MEW Former Fairchild Buildings 1-4

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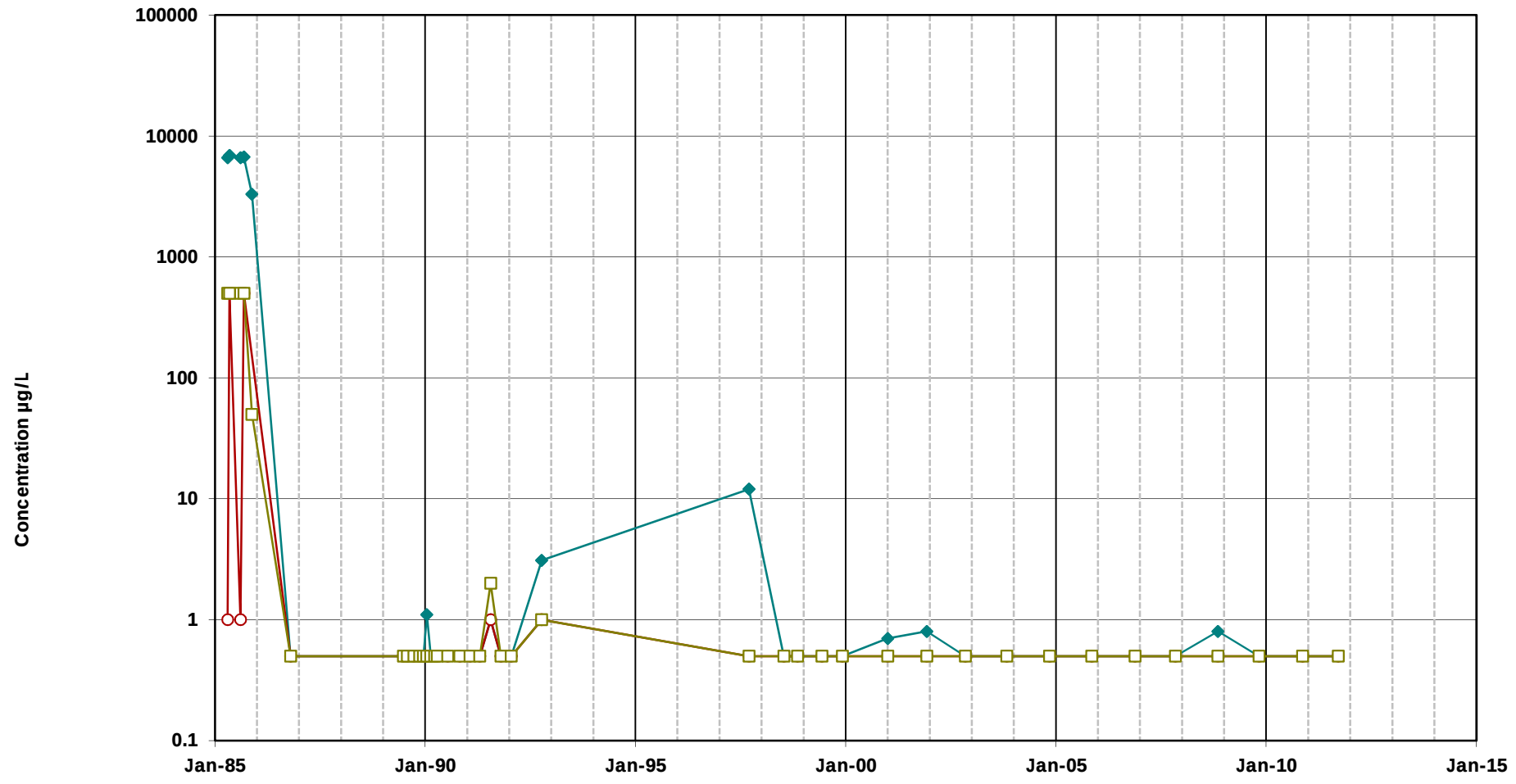
Figure

D-44



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 11B2
MEW Former Fairchild Buildings 1-4

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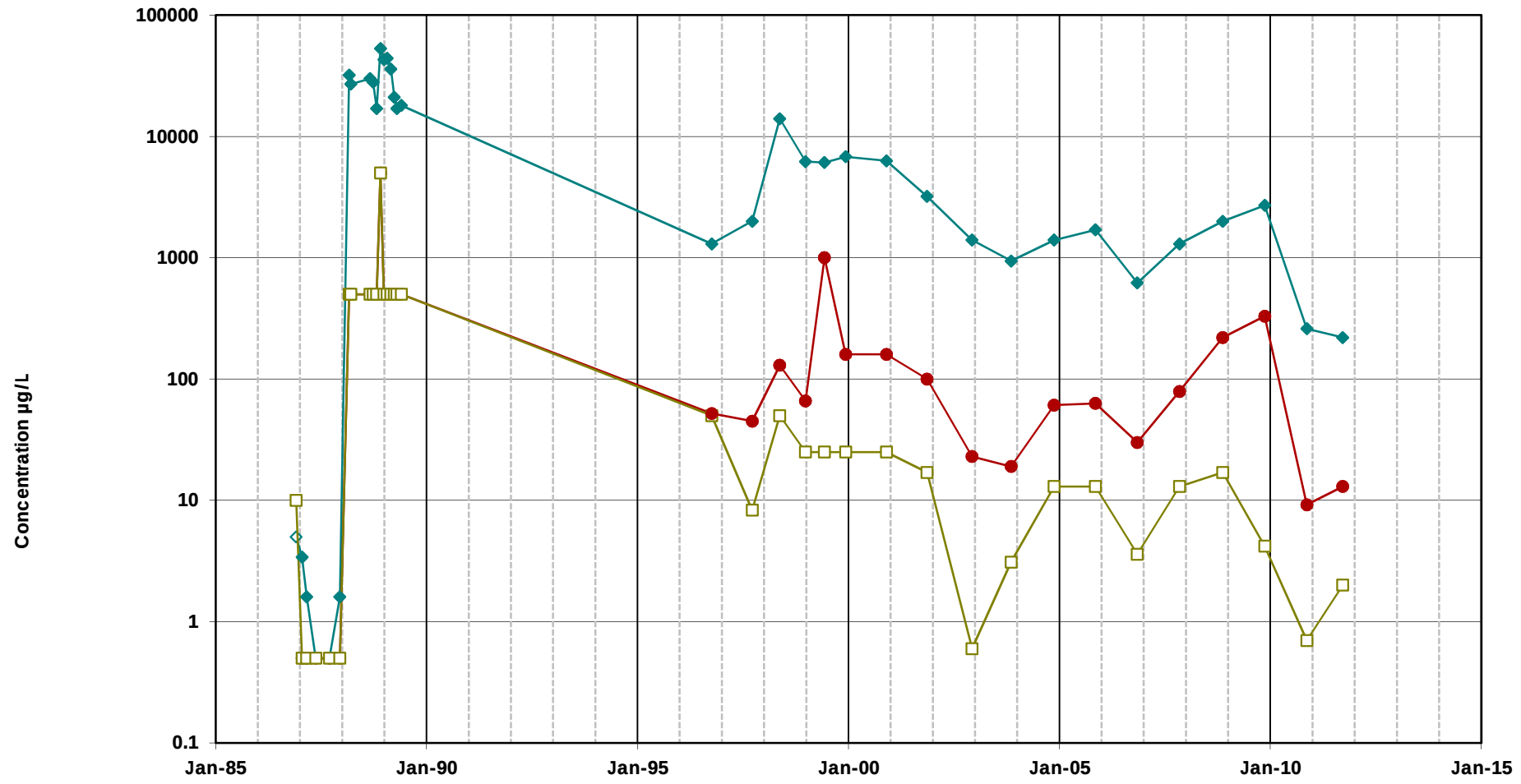
Figure

D-45

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[11B2_VOC.xls]Plot_11B2_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 113B2
MEW Former Fairchild Buildings 1-4

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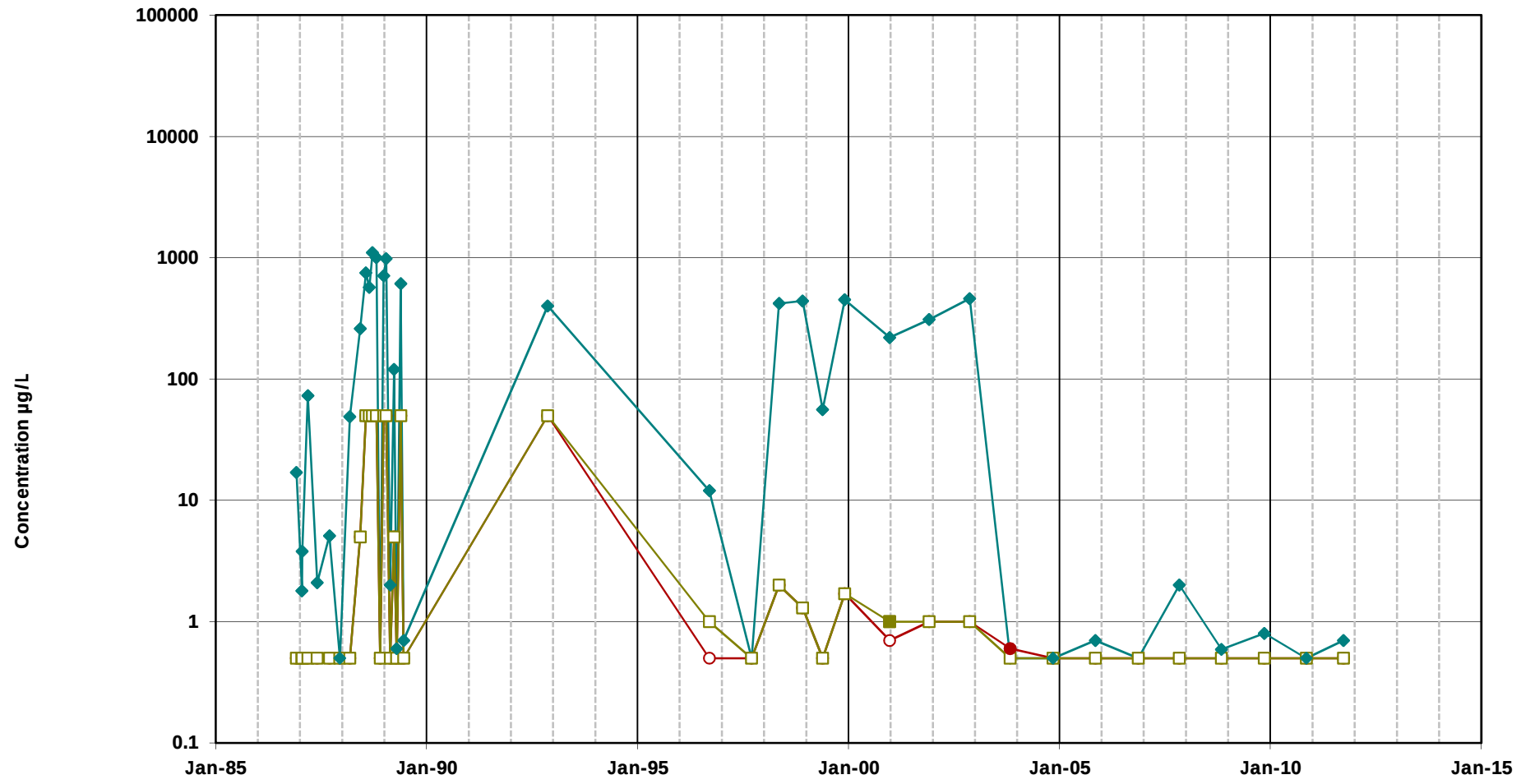
Figure

D-46

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[11382_VOC.xls]Plot_11382_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 118B2
MEW Former Fairchild Buildings 1-4

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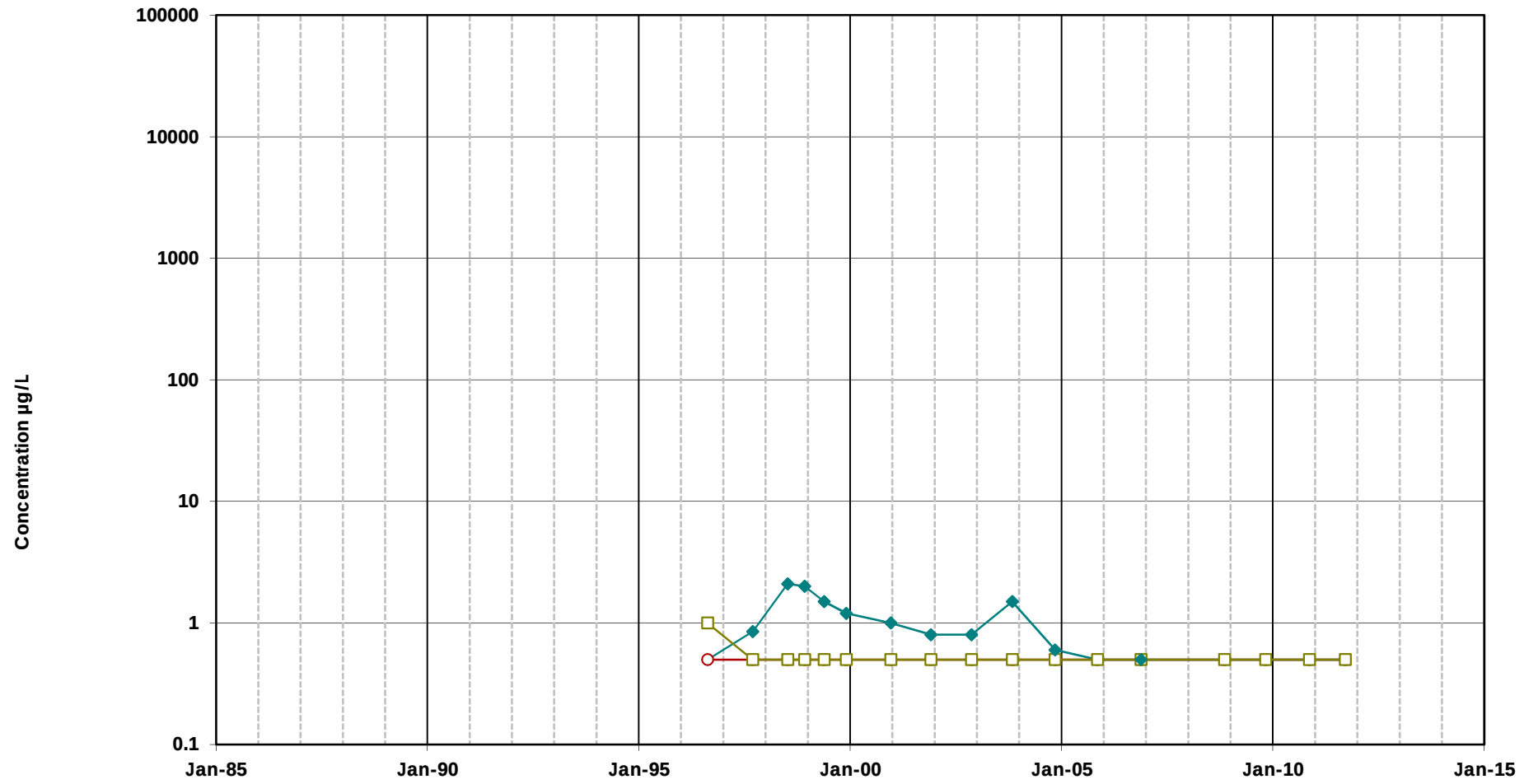
Figure

D-47

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[11882_VOC.xls]Plot_11882_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well 148B2
MEW Former Fairchild Buildings 1-4

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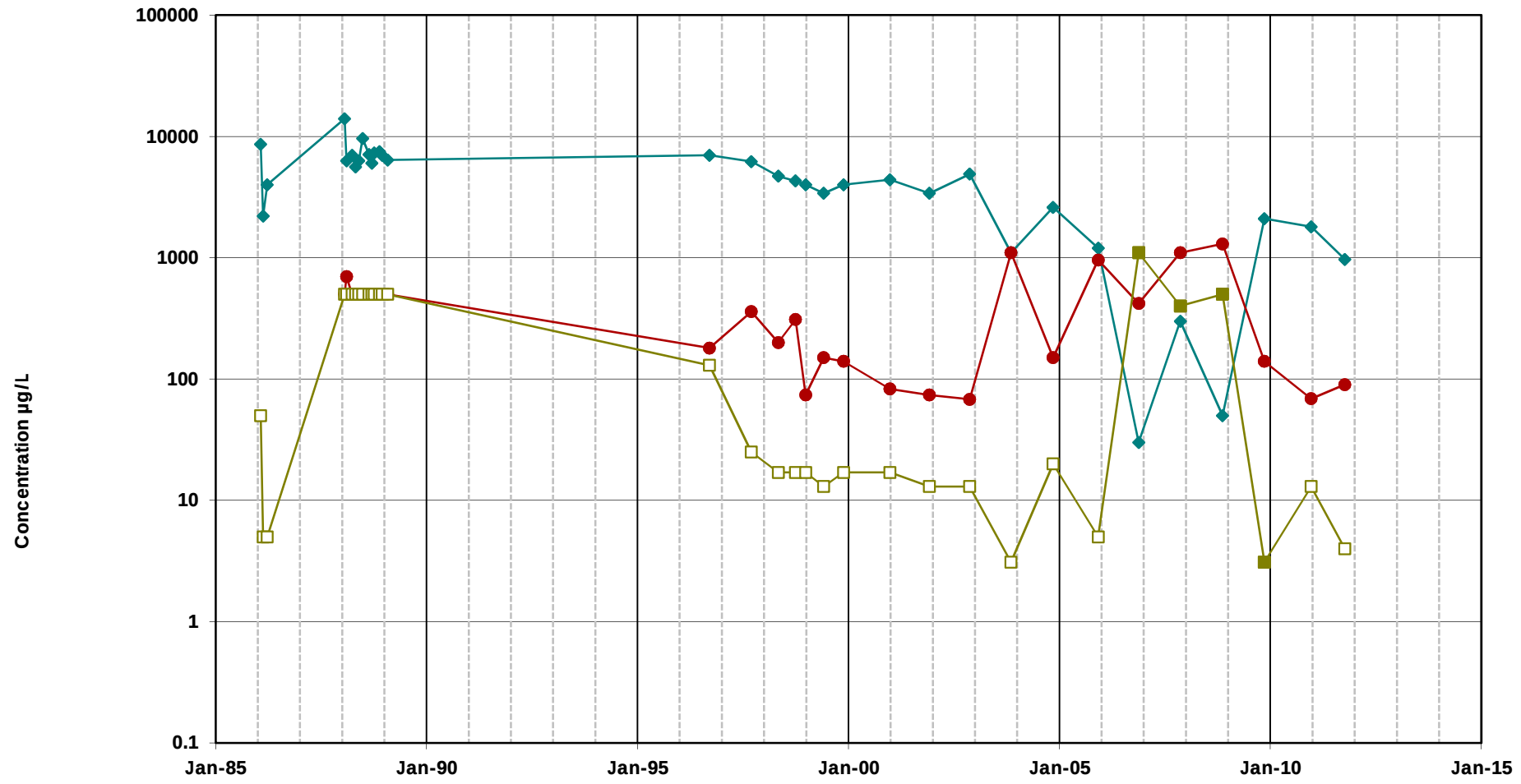
Figure

D-48

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[148B2_VOC.xls]Plot_148B2_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-3(B2)
MEW Former Fairchild Buildings 1-4

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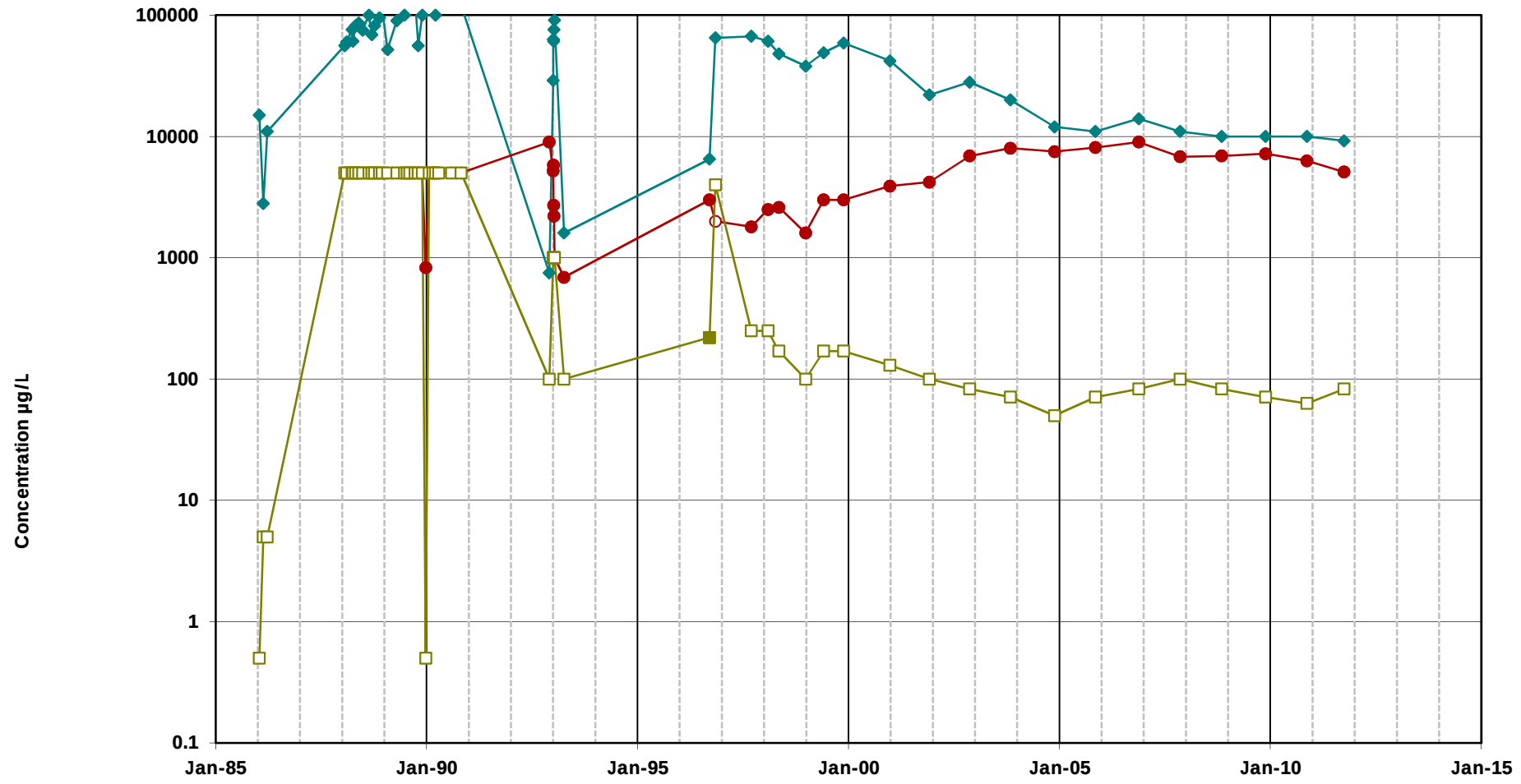
Figure

D-49

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-3(B2)_VOC.xls]Plot_RW-3(B2)_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-4(B2)
MEW Former Fairchild Buildings 1-4

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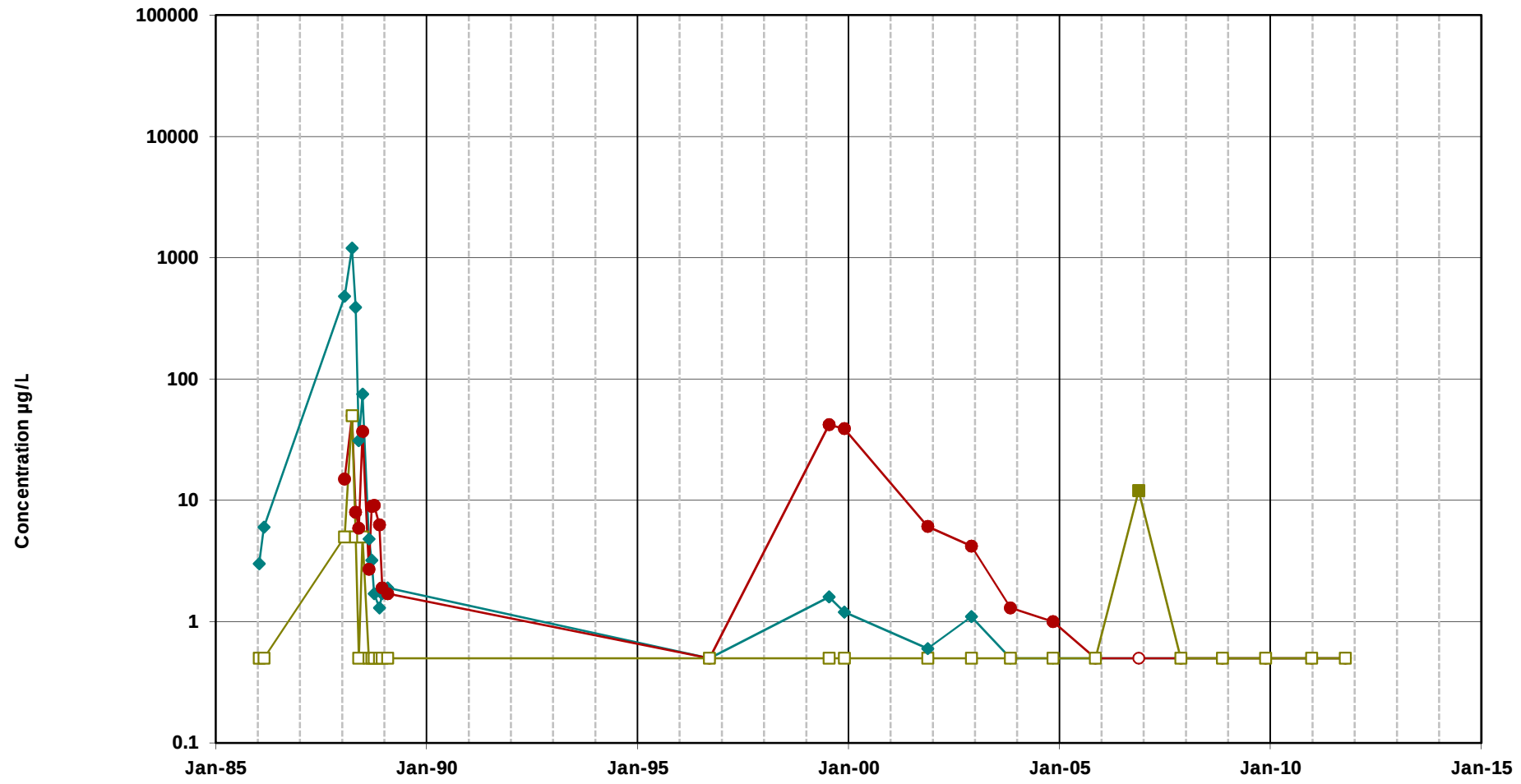
Figure

D-50

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-4(B2)_VOC.xls]Plot_RW-4(B2)_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-5(B2)
MEW Former Fairchild Buildings 1-4

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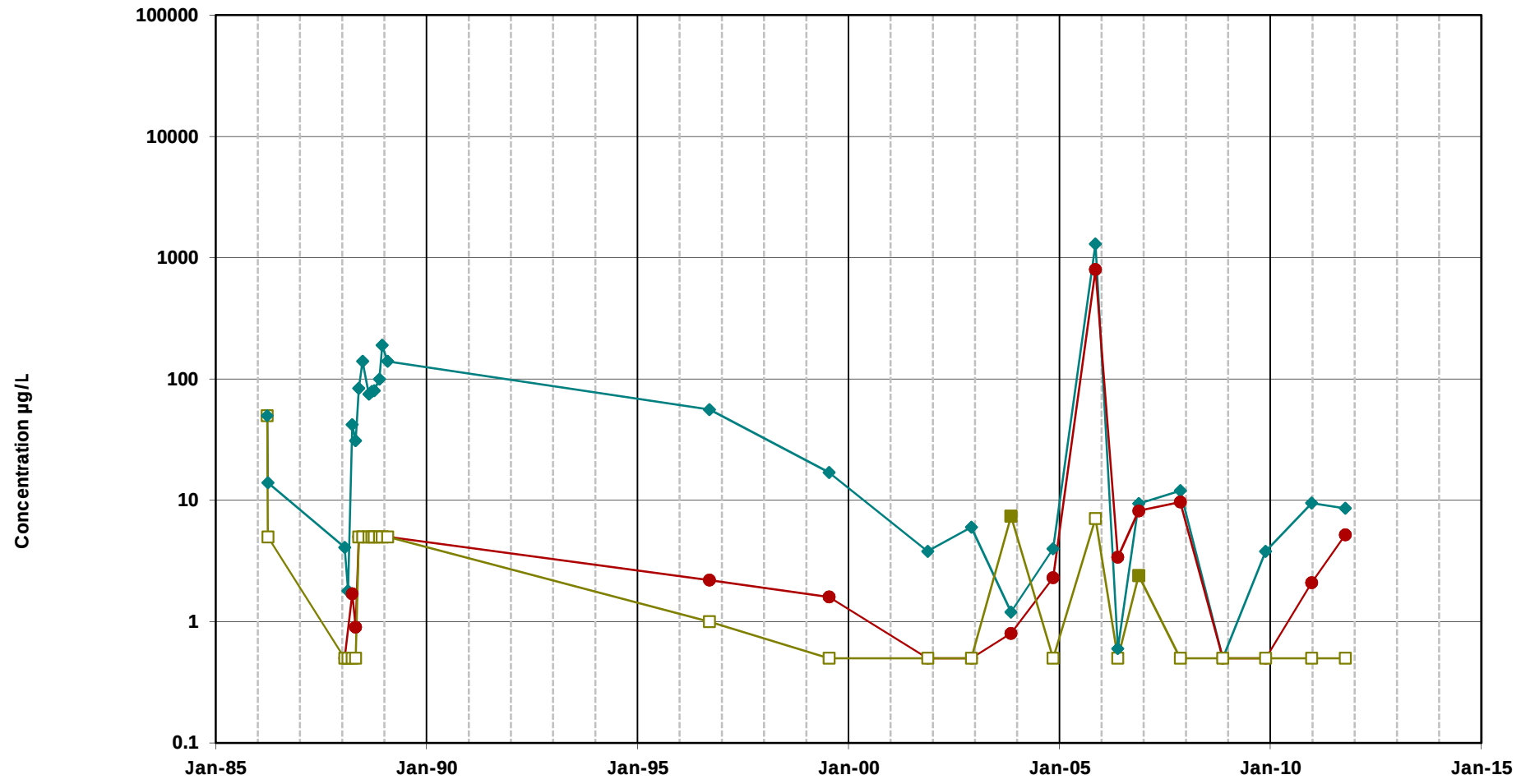
Figure

D-51

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-5(B2)_VOC.xls]Plot_RW-5(B2)_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-7(B2)
MEW Former Fairchild Buildings 1-4

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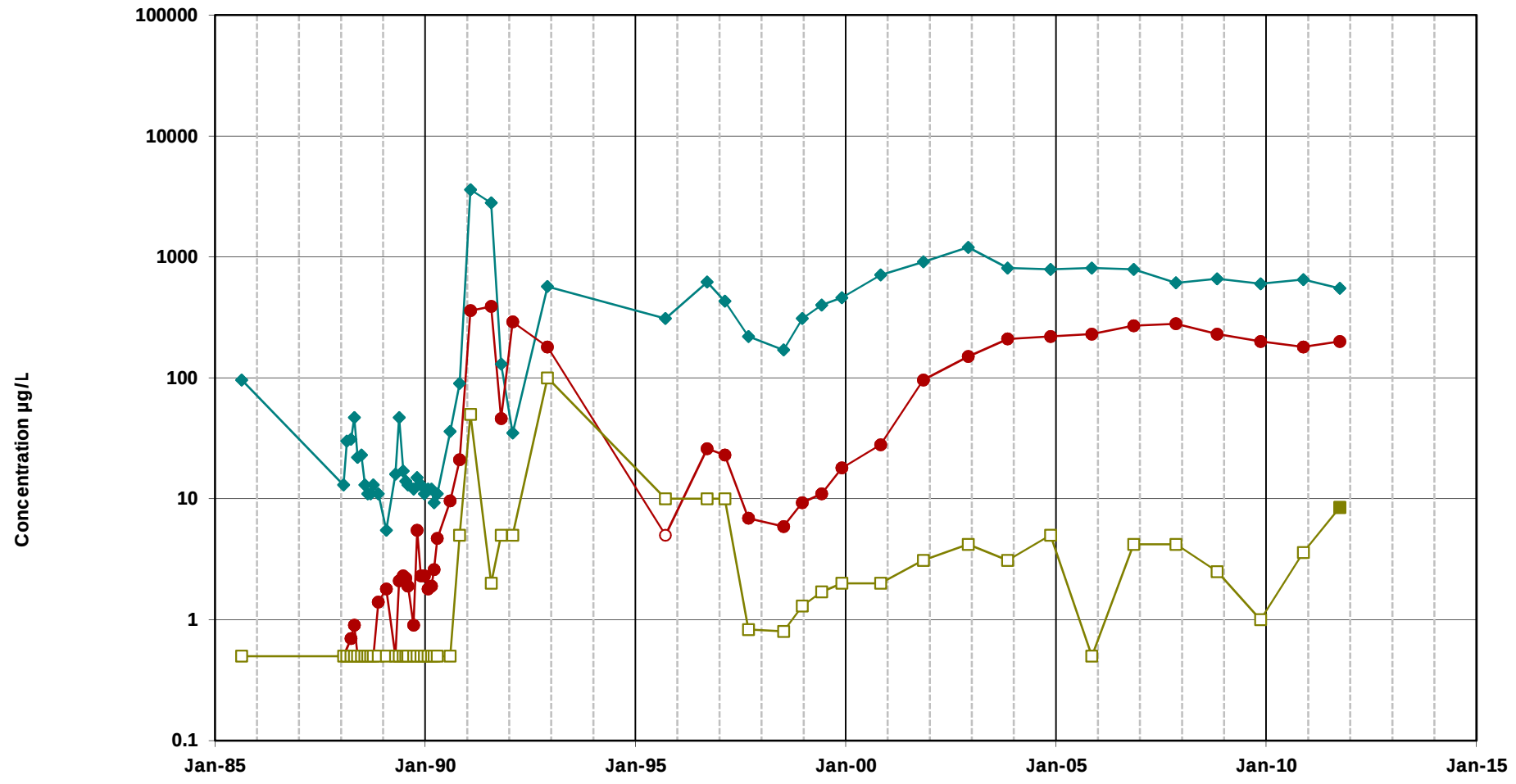
Figure

D-52

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-7(B2)_VOC.xls]Plot_RW-7(B2)_VOC



Trichloroethene

cis-1,2-Dichloroethene

Vinyl Chloride

Note:
Open symbols represent non-detects
(plotted at the method detection limit)

Chlorinated Ethenes in Groundwater
Well RW-9(B2)
MEW Former Fairchild Buildings 1-4

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Figure

D-53

\\oakland-01\data\gis\MEW\Excel\TimeSeries\2011_AR\Buildings 1-4\ExcelFiles\[RW-9(B2)_VOC.xls]Plot_RW-9(B2)_VOC