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2008 ANNUAL PROGRESS REPORT

for

Former Fairchild Buildings 1-4
515/545 Whisman Road and 313 Fairchild Drive
Middlefield-Ellis-Whisman Study Area
Mountain View, California

prepared for

Schlumberger Technology Corporation
225 Schlumberger Drive
Sugar Land, TX 77478

June 15, 2009

Green Business
Santa Clara County

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submitted to

USEPA, Region IX, Superfund Division
75 Hawthorne Street
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Weiss Associates work for Schlumberger Technology Corporation (STC) was conducted under my supervision. To the best of my knowledge, the data contained in this report are true and accurate and satisfy the scope of work prescribed by the client for this project in accordance with generally accepted professional engineering and geologic practice. The data, findings, recommendations, specifications or professional opinions were prepared solely for the use of STC to submit to the U.S. Environmental Protection Agency. The report Summary complements the entire report and is not a stand-alone document. We make no other warranty, either expressed or implied, and are not responsible for the interpretation by others of the contents in this report.

June 15, 2009

Tess Byler, P.G. Date
Sr. Project Geologist
(CA # 8131, expiration Nov. 2010)

CONTENTS

		Page
ACRONYMS AND ABBREVIATIONS		vii
SUMMARY		ix
1. INTRODUCTION		1
1.1	Site Background	1
1.2	Local Hydrology	2
1.3	Description of Remedy	3
1.4	Summary of Site Activities and Deliverables	4
2. GROUNDWATER EXTRACTION AND TREATMENT		6
2.1	Treatment System Description	6
2.1.1	Extraction and Treatment at Building 1 and 2 (System 1)	6
2.1.2	Extraction and Treatment at Buildings 3 and 4 (System 3)	7
2.1.3	Status of Extraction and Monitoring Wells	7
2.1.3.1	Extraction Wells	7
2.1.3.2	Monitoring Wells	8
2.2	Groundwater Level Monitoring	8
2.3	Groundwater Quality Monitoring	8
2.4	Hydraulic Control and Capture Zone Analysis	9
2.4.1	Methodology	9
2.4.2	Comparison to Target Captures	9
2.4.3	Horizontal and Vertical Gradients	10
2.4.4	Capture Assessment	10
2.5	Extraction and Treatment System Operation and Maintenance	11
3. OTHER ACTIVITIES		14

3.1 Optimization Evaluation for Groundwater 14

3.2 Air/ Vapor Intrusion 14

3.3 Annual Settlement Survey 14

4. PROBLEMS ENCOUNTERED 15

5. TECHNICAL ASSESSMENT 16

6. CONCLUSIONS AND RECOMMENDATIONS 17

7. UPCOMING WORK IN 2009 AND PLANNED FUTURE ACTIVITIES 18

8. REFERENCES 19

FIGURES

Figure 1. Site Location Map

Figure 2. Site Map and Well Network

Figure 3. Cumulative Groundwater Extracted and Mass Removed, System 1

Figure 4. Cumulative Groundwater Extracted and Mass Removed, System 3

Figure 5. Hydrographs – Groundwater Elevation Measurements, Slurry Wall Well Pairs

Figure 6. A/A1 Groundwater Zone Target Capture and Estimated 2008 Capture

Figure 7. B1/A2 Groundwater Zone Target Capture and Estimated 2008 Capture Area

Figure 8. B2 Groundwater Zone Target Capture and Estimated 2008 Capture Area

TABLES

Table 1. Monitoring and Reporting Schedule

Table 2. Monthly Average Flow Rates, System 1

Table 3. Monthly Extraction Totals, System 1

Table 4. Monthly Average Flow Rates, System 3

Table 5. Monthly Extraction Totals, System 3

Table 6. Chemical Analytic Results Summary, System 1

Table 7. Chemical Analytic Results Summary, System 3

Table 8. VOC Mass Removal Summary, System 1

Table 9. VOC Mass Removal Summary, System 3

Table 10. Groundwater Elevations, Slurry Wall Well Pairs

Table 11. Chemical Analytic Results Summary

Table 12. Capture Zone Calculations and Analysis

Table 13. Extraction Well Target Flow Rates

Table 14. Extraction and Monitoring Well Details

APPENDICES

Appendix A.	2008 Annual Report Remedy Performance Checklist
Appendix B.	Analytic Reports and Chain-of-Custody Documents, January through December 2008
Appendix C.	QA/QC Report, Summary Tables, and Criteria
Appendix D.	Select VOCs versus Time Graphs

ACRONYMS AND ABBREVIATIONS

106 Order	Administrative Order for Remedial Design and Remedial Action
Buildings 1 and 2	515/545 Whisman Road
Buildings 3 and 4	313 Fairchild Drive
cis-1,2-DCE	cis-1,2-dichloroethene
cm/sec	centimeter per second
DHS	Department of Health Services
ESDs	Explanations of Significant Differences
GAC	granular activated carbon
Fairchild	Fairchild Semiconductor Corporation
K	hydraulic conductivity
µg/L	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter
mg/kg	milligram per kilogram
MEW	Middlefield-Ellis-Whisman
MCLs	maximum contaminant levels
NASA	National Aeronautics and Space Administration
NPDES	National Pollutant Discharge Elimination System
NPL	National Priority List
PRP	potentially responsible parties
PCE	Tetrachloroethylene
QA/QC	quality analysis and quality control
RAO	remedial action objective
RGRP	Regional Groundwater Remediation Program
RI	remedial investigation
RI/FS	remedial investigation and feasibility study
ROD	Record of Decision
RRWs	regional recovery wells
SCRWs	source control recovery wells
SCVWD	Santa Clara Valley Water District
System 1	515 Whisman Road

System 3	313 Fairchild Drive
Water Board	California Regional Water Quality Control Board, San Francisco Bay Region
TCE	trichloroethene
USEPA	United States Environmental Protection Agency
VOCs	volatile organic compounds

SUMMARY

This 2008 Annual Progress Report for the former Fairchild Semiconductor Corporation (Fairchild) facilities located at 515 and 545 Whisman Road (Buildings 1 and 2) and 313 Fairchild Drive (Buildings 3 and 4) in Mountain View, California (the Site; Figure 1) contains a summary of Site activities and data from January 1 through December 31, 2008 and monitoring data for the past five years (2004 through 2008). This 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 (USEPA), Section XI of the Consent Decree entered in Action No. 20275 (N.D. Cal.) in 1992 (Consent Decree) and the USEPA's correspondence prescribing 2004 and future Annual Report contents (USEPA, 2005).

The groundwater containment and treatment system at the Site removes volatile organic chemicals (VOCs), and consists of the following components:

- Slurry wall around former Buildings 1-4 that is approximately 40 feet deep and extends into the A/B1 aquitard that is continuous beneath the Site;
- Two groundwater treatment systems, Fairchild System 1 and System 3, that remove volatile organic chemicals (VOCs) using activated carbon under NPDES Permit CAG912003, Order No. R2-2004-0055;
- Seventeen source control recovery wells (SCRWs);
- 30 Monitoring wells;
- Treatment of four regional recovery wells (RRWs) that are part of the Regional Groundwater Remediation Program (RGRP) but are plumbed to Systems 1 and 3; and,
- Treatment of four SCRWs from former Fairchild Building 9 and one SCRW from former Fairchild Building 18 that are plumbed to Systems 1 and 3.

Site activities conducted in compliance with the 106 Order during this reporting period included continued operation, monitoring and maintenance activities of the Building 1-4 groundwater remediation systems, and submitting an Optimization Evaluation to the EPA for the Fairchild sites on September 3, 2008 (Geosyntec et al, 2008).

Groundwater Treatment: During 2008, a total of approximately 36.8 million gallons of groundwater were treated and 666 pounds of VOCs were removed by the two Site treatment systems. From January 1 through December 31, 2008, Site Treatment System 1 ran 96% of the time, and Site Treatment System 3 ran 99% of the time. During calendar year 2008, the extraction and treatment systems operated within the effluent limits established by the Site NPDES permit for the entire period.

Groundwater Capture Evaluation: Groundwater elevation and chemical monitoring results from 2008 demonstrate that the Site extraction wells continue to achieve adequate horizontal and vertical plume capture based on converging lines of evidence, including graphical flow net analysis and chemical concentration trends. VOC concentrations in groundwater continue to remain well below historical maxima, and generally show long-term decreasing trends.

Technical Assessment: The groundwater extraction, treatment, and containment systems are functioning as intended and meet the Remedial Action Objectives for the Site. Concentrations within the TCE plume have generally decreased by an order of magnitude or more; however, treatment system influent concentrations have declined since the treatment systems were installed, and the perimeter extent of TCE concentrations has largely stabilized. Optimization of the remedy may therefore be warranted.

Problems Encountered: The pump in extraction well RW-27A turned off on July 14, 2008 due to a defective flow meter. The pump remained offline until a new flow meter was installed on August 18. During installation, an electrical problem was discovered. The problem was resolved and the pump was restarted on August 19. Notification requirements were clarified, and since that time, any non-routine shutdowns have been reported in a timely manner.

Planned Activities for 2009: The extraction and treatment systems for System 1 and System 3 will continue to operate, and their performance will continue to be monitored during 2009. The MEW Companies anticipate implementing remediation optimization strategies, pending EPA comments on the Optimization Evaluation Report. The MEW Companies will continue to work with the USEPA to address the vapor intrusion pathway. The 2009 Annual Progress Report will be submitted to the USEPA by June 15, 2010.

1. INTRODUCTION

This 2008 Annual Progress Report was prepared by Weiss Associates (Weiss) on behalf of Schlumberger Technology Corporation for the former Fairchild Semiconductor Corporation (Fairchild) facilities located at 515 and 545 Whisman Road (Buildings 1 and 2), and 313 Fairchild Drive (Buildings 3 and 4) in Mountain View, California (the Site; Figure 1). This report contains a summary of Site activities from January 1 through December 31, 2008, and data from the past five years. Geosyntec Consultants (Geosyntec) contributed to the content of this report. This 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 (USEPA), Section XI of the Consent Decree entered in Action No. 20275 (N.D. Cal.) in 1992 (Consent Decree) and the USEPA's correspondence prescribing 2004 and future Annual Report contents (USEPA, 2005).

Supporting data for the Site groundwater treatment systems are in Figures 1 through 8 and Tables 1 through 14. Groundwater monitoring data are located in Figures 5 through 8 and Tables 10 through 12. Appendices A through D provide documentation for the findings and data presented in this Progress Report.

1.1 Site Background

Buildings 1 through 4 are located at 515/545 North Whisman Road and 313 Fairchild Drive, in Mountain View California. Buildings 1-4 functioned as facilities for chemical mixing and silicon wafer manufacturing at Fairchild Semiconductor Corporation's Linear Division from the early 1960's to 1989. The primary constituent of concern at the Site is trichloroethene (TCE) in groundwater from historical underground tanks/piping, sumps and/or surface spills.

The Site is located within the MEW area, an approximately ½-square mile area bound by Middlefield Road on the south, Ellis Street on the east, Whisman Road on the west, and Highway 101 on the north.

Remedial Investigation and Feasibility Studies (RI/FS) were completed in 1988 (HLA, 1987; Canonie, 1988), with the USEPA issuing a Record of Decision (ROD) in 1989. The ROD and two subsequent Explanations of Significant Differences (ESDs) specify the remedial actions for the MEW area (USEPA, 1989, 1990, 1996). Remedial actions are being conducted pursuant to the 106 Order issued to nine respondents[1] in November 1990, and the MEW Consent Decree entered into by Raytheon Company and Intel Corporation in 1991, by which they agreed to design, construct, and implement the regional remedial action portion of the remedy selected in the ROD.

[1] The nine 106 Order Respondents are Fairchild, Schlumberger Technology Corporation, National Semiconductor Corporation, NEC Electronics, Siltec Corporation, Sobrato Development Companies, General Instrument Corporation, Tracor X-Ray, and Union Carbide Chemicals and Plastics Company.

Remedial actions within the MEW area include facility-specific activities by the individual potential responsible parties (PRPs), (such as this facility-specific Site), and a Regional Groundwater Remediation Program (RGRP) that addresses commingled volatile organic chemicals (VOCs) that have migrated beyond the facility-specific areas and cannot be attributed to a single source.

The Site is currently occupied by Nokia and the Search for Extra Terrestrial Intelligence (SETI) Institute. The land use at the Site is industrial/research/commercial, with surrounding residential development.

1.2 Local Hydrology

Subsurface geology consists of interbedded sediments ranging in grain size from silty clay to sandy gravel. The water-bearing zones defined at the MEW area are summarized below:

Groundwater Zones	Approximate Depth Interval Below Ground Surface
A[a]	0 to 45 feet
B1[b]	50 to 75 feet
B2	75 to110 feet
B3	120 to 160 feet
C	200 to 240 feet
Deep Aquifer	>240 feet

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

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

> = greater than

The upper groundwater zone at the MEW area, defined as the saturated zone above the B/C aquitard, occurs from the top of the saturated zone to a depth of approximately 165 ft bgs south of Highway 101 and generally less than 100 ft bgs north of Highway 101. The B/C aquitard is the major confining layer beneath the MEW area. The upper groundwater zone is subdivided into two units, the A-zone and the B-zone, which are separated by the A/B1 aquitard. The B aquifer has been further subdivided into three zones. From youngest to oldest, these are the B1-, B2-, and B3-zones, separated by aquitards, designated as B1/B2 aquitard and the B2/B3 aquitard. The lower groundwater zones occur below the B/C aquitard, from about 200 ft bgs. Two lower groundwater zones have been defined: the C-zone and what has been termed the Deep Aquifer (HLA, 1987; Intel, 1987).

Ranges of hydraulic conductivity (K), hydraulic gradient, and transmissivity of the upper aquifer zone i.e., above the B3/C aquitard, calculated from pumping tests conducted at the MEW Site from 1986 through 2005[2] are presented below:

[2] References are Canonie 1986a, 1986b, 1987, and 1988, Geomatrix 2004, HLA 1986 & 1987, Locus 1998, PRC 1991, Navy 2005 and Weiss Associates 1995.

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

Currently and historically, the horizontal component of groundwater flow beneath the Site is generally towards the north during non-pumping and pumping conditions. The Site groundwater gradients and velocities have been locally altered near SCRWs, RRWs, and the Fairchild and Raytheon slurry walls (Weiss Associates, 2009a).

The vertical component of groundwater flow is generally upward from the B1- to the A-zone, but is locally downward in some areas of the Site (HLA, 1987). Vertical gradients below the B1-zone are generally upward (Geosyntec et al, 2008).

1.3 Description of Remedy

The remedial action objectives (RAOs) for the MEW area are to; (1) protect potential potable water supplies, (2) remediate or control the elevated concentrations of chemicals present in the localized vadose zone soils, and (3) remediate or control the groundwater that contains elevated concentrations of specified chemicals, including discharge of such groundwater into the surface water (Canonie, 1988).

As specified in the ROD, cleanup has been addressed in two stages: initial actions and a long-term remedial phase (USEPA, 1989). Initial cleanup activities conducted by PRPs included tank removals, well sealing, soil removal and treatment, slurry wall construction, and local groundwater extraction and treatment. The Site is in the long term remedial phase that consists of extraction and treatment of groundwater by air stripping towers or liquid-phase granular activated carbon (GAC) is the long-term remedial method, with remedial activities being conducted by individual PRPs as well as the MEW RGRP.

All soil remediation at the MEW area was completed by 2001. The soil cleanup standards for the MEW area are 0.5 milligrams per kilogram (mg/kg) of TCE for all soils outside of slurry walls and 1 mg/kg TCE for soils inside slurry walls. Soil cleanup actions included *in-situ* vapor extraction with treatment by vapor-phase GAC, and excavation and treatment by aeration. In 1996, Fairchild completed soil cleanup at 515/545 Whisman Road and 313 Fairchild Drive by excavating and treating 15,000 cubic yards of soil.

In 1986, Fairchild installed subsurface slurry walls at three of its former facilities: (1) Buildings 1-4 at 515/545 Whisman Road and 313 Fairchild Drive, (2) Building 9 at 401 National Avenue, and (3) Building 19 at 369 Whisman Road. The slurry walls extend to approximately 40 feet below ground surface, and are keyed a minimum of two feet into the A/B1 Aquitard.

The ROD-approved groundwater remedy is groundwater extraction and treatment by air strippers or liquid-phase GAC. The groundwater cleanup standards are 5 micrograms per liter (μg/L) of TCE for the shallow aquifers (including the aquifers inside the slurry walls) and 0.8 μg/L TCE for the C and deep aquifers. 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).

An additional plume definition program for the MEW area was completed in 1992, and between 1991 and 1995, preliminary and final design documents for soil and groundwater source control measures were developed and submitted to the USEPA (Canonie, 1993, 1994, and 1995). Fairchild first installed extraction wells and groundwater treatment systems (air strippers) at its former facilities in 1985-1986. The treatment systems were replaced (with GAC systems) in 2003 (RMT, 2003). The first five-year remedy review for the MEW site was completed in 2004 (USEPA 2004).

Currently, four SCRWs[3]; (AE/RW-9-1, AE/RW-9-2, RW-25A, and RW-4B2) and one regional recovery well (RRW); 38B2 pump groundwater for treatment at Fairchild System 1 at 545 Whisman Road and five SCRWs; (RW-5A, RW-7A, RW-27A, RW-5B1, and RW-7B1) and two RRWs; (RW-9B1 and RW-9B2) pump groundwater for treatment at Fairchild System 3 at 313 Fairchild Drive.

1.4 Summary of Site Activities and Deliverables

Site activities conducted in compliance with the 106 Order during this reporting period include:

- Continuing groundwater extraction and treatment;
- Monitoring the groundwater extraction and treatment systems weekly for operation and flow rates;
- Sampling the treatment systems monthly in compliance with National Pollutant Discharge Elimination System (NPDES) Permit CAG912003, Order No. R2-2004-0055;
- Submitting quarterly Self-Monitoring Reports for treatment system discharges and extraction and treatment quantities to the Water Board, under NPDES Permit CAG912003 on January 31, April 30, July 30, and October 30;
- Collecting quarterly groundwater elevation measurements in Site slurry wall well pairs on March 27, May 22, August 28, and November 20;
- Collecting semi-annual groundwater elevation measurements in Site monitoring and extraction wells on March 27 and November 20;
- Attending the All Parties Meeting on May 14, June 12, June 26, and December 3;

[3] Wells AE/RW-9-1 and AE/RW-9-2 are associated with Building 9 and RW-25A is associated with Building 18.

- Distributing the 2007 Annual Progress Report to the USEPA and MEW Distribution List parties on June 15;
- Submitting Optimization Evaluation for Fairchild Sites on September 3;
- Collecting annual groundwater samples from Site monitoring and extraction wells in November;
- Annual settlement monitoring on December 17;
- Assessing the progress of remedial actions during 2008; and,
- Planning remedial actions for 2009.

Section 2 of this report provides a summary of Site groundwater remedial activities conducted during this reporting period. Sections 3-7 documents additional activities, problems encountered, technical assessment, conclusions and recommendations, and a summary of planned activities for 2009. Supporting data are presented in Figures 1 through 8, Tables 1 through 14, and Appendices A through D.

2. GROUNDWATER EXTRACTION AND TREATMENT

A combined total of approximately 36.8 million gallons of groundwater were treated and 666 pounds of VOCs were removed by the two Site treatment systems during this reporting period. VOC mass removal summaries for the two Site treatment systems are provided in Tables 8 and 9. Cumulative groundwater extracted and mass removed by Systems 1 and 3 are illustrated in Figures 3 and 4, respectively.

As required by the Site NPDES 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 system performance for Systems 1 and 3 is summarized in Tables 2 through 5. The analytical results of the monthly groundwater samples from Systems 1 and 3 are summarized in Tables 6 and 7, respectively. Appendices B and C contain the analytic and quality assurance/quality control (QA/QC) reports, respectively, for samples collected at the Site during 2008. Field measurements and sampling results remained within NPDES parameters during this reporting period. Discharge of treated groundwater from the treatment systems to the storm sewer is authorized by NPDES Permit CAG912003, Order No. R2-2004-0055.

2.1 Treatment System Description

This section presents the status of the groundwater extraction and treatment systems at 515 and 545 Whisman Road (former Buildings 1 and 2) and 313 Fairchild Drive (former Buildings 3 and 4) during 2008. The Buildings 1 through 4 slurry wall enclosure is approximately 1100 feet long by 500 feet wide, and extends a minimum of two feet into the A/B1 aquitard.

2.1.1 Extraction and Treatment at Building 1 and 2 (System 1)

During 2008, System 1 extracted and removed approximately 22.2 million gallons of groundwater and 351 pounds of VOCs. System 1 includes the following extraction and treatment components:

- One RRW (operational);
- 13 SCRWs (4 operational, 8 temporarily offline and 1 permanently offline);
- One basement dewatering sump conveyed to treatment system from Fairchild Building 18, see separate report on Building 18 (Weiss, 2009b);
- Three 5,000-pound GAC vessels in series; and,
- Electrical distribution and control panels, a programmable logic control (PLC), and an auto-dialer.

The System 1 status of the RRW and SCRWs is given in Section 2.1.3.1.

2.1.2 Extraction and Treatment at Buildings 3 and 4 (System 3)

During 2008, System 3 extracted and removed approximately 14.6 million gallons of groundwater and 315 pounds of VOCs. System 3 includes the following extraction and treatment components:

- Three RRWs (2 operational and 1 temporarily offline);
- Nine SCRWs (5 operational, 2 temporarily offline, and 2 permanently offline);
- Three 5,000-pound GAC vessels in series; and,
- Electrical distribution and control panels, a PLC, and an auto-dialer.

The status of the RRWs and SCRWs is given in Section 2.1.3.1 below.

2.1.3 Status of Extraction and Monitoring Wells

2.1.3.1 Extraction Wells

The average monthly flow rates and total volume of groundwater extracted and treated by System 1 during 2008 are provided in Tables 2 and 3, respectively. The average monthly flow rates and total volume of groundwater extracted and treated by System 3 during 2008 are provided in Tables 4 and 5, respectively. The status [4] of all of the extraction wells plumbed to Systems 1 and 3 are summarized below:

2008 Well Status			
System 1 Wells		**System 3 Wells**	
Operational			
RW-4B2	AE/RW-9-1	RW-5A	RW-9B1 (RRW)
38B2 (RRW)	AE/RW-9-2	RW-5B1	RW-9B2 (RRW)
RW-25A		RW-7A	RW-27A
		RW-7B1	
Temporarily Offline			
RW-3A	RW-16A	RW-9A (RRW)	
RW-3B1	RW-20A	RW-18A	
RW-4A	RW-21A	RW-12B1	
RW-4B1	RW-28A		
Permanently Offline			
RW-3B2		RW-5B2	RW-7B2

Extraction well flow rates were set according to those assigned in the 2007 slurry wall evaluation (Northgate; 2006, 2007a, 2007b, and 2008a). The target flow rates for operating extraction wells conveyed to Systems 1 and 3 is provided in Table 13. The Optimization Evaluation

[4] Wells listed as temporarily offline have been shut down since August 2007 with approval from the USEPA (e-mail from Alana Lee, USEPA, to Maile Smith, Northgate Environmental Management, Inc., August 2, 2007. Extraction wells RW-3B2 and RW5-B2 have been off since 1999 (Five Year Review Well Flow Summary, RMT). Well RW-7B2 has been off since February 2000 (RMT, 2000 Annual Report for Fairchild Buildings 1-4).

Report considered previous evaluations and recommended a revised pumping scenario based on groundwater modeling to achieve greater VOC mass removal (Geosyntec et al, 2008).

2.1.3.2 Monitoring Wells

Currently, 30 monitoring wells are used to evaluate the Building 1-4 Site. Nineteen of the monitoring wells are in the A-zone, seven monitoring wells are located in the B1-zone, and four monitoring wells are in the B2-zone. Water levels are measured quarterly in eleven slurry wall well pairs (22 wells), semi-annually in other monitoring wells, and water quality samples are collected annually in 28 monitoring wells. Monitoring and extraction well construction details are provided in Table 14.

2.2 Groundwater Level Monitoring

During this reporting period, groundwater elevations were recorded in Site monitoring wells on March 27 and November 20, 2008. Water levels were measured in slurry wall well pairs quarterly from March through November 2008 (Figure 5; Table 10). Hydrographs of Site slurry wall well pair water levels are provided in Figure 5.

All groundwater elevation data have been added to the MEW RGRP database and are reported in the MEW RGRP Annual Progress Report (Weiss, 2009a). Potentiometric Surface Maps and Estimated Capture Zones for the five aquifers monitored at MEW are also included in the MEW RGRP Annual Progress Report (Weiss, 2009b).

2.3 Groundwater Quality Monitoring

The 2008 Annual Groundwater Sample Event at the Site was conducted in November 2008. A summary of chemical analytic results for the previous five years (2004 through 2008) is provided in Table 11. Appendix B contains the analytic reports and chain-of-custody documents for samples collected in 2008, and Appendix C contains the QA/QC report and summary tables. VOC versus time graphs for Site SCRWs and selected monitoring wells are presented in Appendix D. TCE isoconcentration contour maps for 2008 are presented in the MEW RGRP Annual Progress Report (Weiss, 2009a).

The data presented in Table 11 and Appendix D show that for the wells sampled in 2008, TCE concentrations in groundwater in most Site wells are well below historical maximums and indicate steady to declining concentration trends in most wells. TCE increases in a few wells measured in 2008 as compared to 2007; however, they are well below historical concentrations. Cis-1,2-DCE concentrations in Site wells outside the slurry wall (127A, RW-9A, 115B1, RW-4B1, RW-12B1, and RW-3B2) and inside the slurry wall (RW-28A), appear to be increasing. These trends will continue to be evaluated under the ongoing monitoring program.

Based on visual inspection of the time–concentration graphs for Site monitoring and extraction wells in Appendix D TCE concentrations have generally decreasing to stable over time.

2.4 Hydraulic Control and Capture Zone Analysis

2.4.1 Methodology

Capture zone analysis is the process of evaluating field observations of hydraulic heads and ground-water chemistry to estimate the actual capture zone achieved by the groundwater extraction system, and then comparing the estimated capture zone at specific measurement events to a "Target Capture Zone" to determine if capture is sufficient (USEPA, 2008).

Capture from the Buildings 1 through 4 extraction wells was estimated for March and November 2008 by graphical flow net evaluation of estimated groundwater flow streamlines drawn perpendicular to groundwater contours in March and November 2008 to derive time-dependent estimated capture zones snapshots. The graphical analysis was guided by calculated distances to the stagnation point and capture zone width based on the analytical solution of Javandel and Tsang (1986). Because the calculation method assumes a homogeneous, isotropic, two-dimensional groundwater flow zone and is dependent on a regionally estimated value of transmissivity, the calculated distances are of secondary importance and primary weight is afforded to measured water level data and the resulting potentiometric surface.

The following six steps were used for the Buildings 1 through 4 capture evaluation:

Step 1: Review Site data, Site conceptual model, and remedy objectives.

Step 2: Define Site-specific Target Capture Zones.

Step 3: Generate potentiometric surface maps based on interpolation of measured water levels.

Step 4: Perform capture zone width calculations.

Step 5: Evaluate concentration trends for wells outside of the target capture zone.

Step 6: Estimate capture based on steps 1-5, compare to target capture zone(s), assess uncertainties and data gaps (Section 2.4).

The complete MEW area potentiometric surface maps and estimated capture zones prepared for both March and November 2008 data are included in the MEW RGRP 2008 Annual Progress Report (Weiss, 2009a).

2.4.2 Comparison to Target Captures

The target capture areas for the 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 and estimated 2008 capture based on graphical flow net evaluation for SCRWs; RW-4A, RW-9A, RW-4B1, RW-5B1, RW-7B1, RW-9B1, RW-12B1, RW-4B2, and RW-9B2 are depicted on Figures 6 through 8.

The capture zone width calculations presented in Table 12 are based on estimates of hydraulic conductivity, thickness and 2008 pumping rates from the MEW area. As previously discussed, all A-zone extraction wells are off with USEPA approval, so capture zone width and stagnation point calculations are not applicable at this time for the A-zone. It should be noted that the facility-specific hydraulic capture areas, including the target capture areas on this property, are also encompassed by the regional capture zones depicted on the MEW RGRP Potentiometric Surface Maps and Estimated Capture Zones, included with the MEW RGRP 2008 Annual Progress Report (Weiss, 2009a).

As shown on Figures 7 and 8, the estimated capture zones are adequate for the B1-zone and B2-zone.

2.4.3 Horizontal and Vertical Gradients

Figure 5 presents graphs of head difference between slurry wall well pairs. The well pairs are used to evaluate either the direction of horizontal gradient across the slurry wall (wells located inside and outside the slurry wall) or the direction of vertical gradient across the A/B aquitard (wells located in the A-zone and B1-zone). Well locations are presented in Figure 2.

Groundwater elevations were recorded quarterly in March, May, August and November 2008 in monitoring wells (slurry wall well pairs); 76A/118A, 127A/33A, 128A/84A, 129A/121A, 130A/59A, 136A/133A, 156A/157A, 20B1/33A, 60B1/118A, 115B1/124A, and 119B1/133A (Table 10). Results of the well pair analysis 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 well pairs 115B1/124A and 119B1/133A and downward at well pairs 20B1/33A and 60B1/118A. (Figure 2).

The horizontal and vertical gradients recorded during this reporting period are generally consistent with historical observations.

2.4.4 Capture Assessment

A summary of the 2008 capture evaluation is provided below:

Step	2008 Status
Step 1: Review Site Data, Site Conceptual Model and Remedy Objectives	Site data, Site conceptual model and remedy objectives were reviewed and determined to be adequate to asses capture.
Step 2: Define "Target Capture Zone(s)"	Target Capture is defined based on modeled capture developed during remedial design, and are shown in Figures 6-8.

Step	2008 Status
Step 3a: Water Level Maps	Potentiometric surface contours are provided in Figures 6 through 8. Water levels in extraction wells were not used to construct potentiometric surface maps because nearby monitoring wells are generally available to measure the effect of pumping. Water levels inside and outside the slurry wall enclosures were contoured separately. Graphical flow net analysis of the potentiometric surface contours was used in addition to the calculated capture zone widths.
Step 3b: Water Level Pairs	As shown in Table 10, inward gradients exist in 5 upgradient and cross gradient slurry wall well pairs, and outward gradients in three well pairs at the downgradient end of the slurry wall and one well pair at the southwest corner of the wall (up/cross gradient).
Step 4a: Perform Capture Zone Widths Calculation	Table 12 presents the results of the capture zone widths calculations. Capture zone width calculations were not performed for the A-zone because all the operating A-zone extraction wells are off.
Step 5: Concentration Trends	Long term trends in VOC concentrations are generally decreasing to stable based on time concentration plots in Appendix D.
Step 6: Estimate Capture Zones and Compare To Target Capture Zone(s)	Vertical and horizontal VOC plume capture in 2008 is considered adequate based on converging lines of evidence, including graphical flow net analysis, and relatively stable 5 μg/L isoconcentration contours since 1992 in the A/A1 and B1/A2 groundwater zones.

An Annual Remedy Performance Checklist is included in Appendix A.

2.5 Extraction and Treatment System Operation and Maintenance

All field measurements and sampling results remained within the NPDES discharge permit limits during this reporting period. As required by the Site NPDES permit, the 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. The annual groundwater sampling schedule is provided in Table 1 for the System 1 and System 3 treatment systems and monitoring wells.

Extraction system performance for Systems 1 and System 3 is summarized in Tables 2 through 5, and the analytical results of the monthly groundwater samples from the System 1 and System 3 are summarized in Tables 6 and 7, respectively. Appendix B presents the analytic reports for Site samples collected during 2008. Appendix C presents the QA/QC evaluation of the 2008 data.

From January 1 through December 31, 2008, the Site groundwater extraction and treatment systems ran nearly continuously during this reporting period. In addition to infrastructure maintenance (see tables below), the following activities were conducted:

- Renewing the City of Mountain View Environmental Compliance Plans and permits to store hazardous materials (i.e., 93% sulfuric acid used to neutralize carbon following carbon replacements) for Systems 1 and 3 on May 30;
- Replacing 17.5 tons of spent carbon and off-hauling 1.1 tons of spent sediment filters as hazardous waste from System 1; and,
- Replacing 10 tons of spent carbon and off-hauling 0.2 tons of spent sediment filters as hazardous waste from System 3.

The following is a summary of maintenance or operational activities conducted at System 1 or the wells that discharge to System 1 during this reporting period:

Date	Component	Comments	Regulatory Notification
January 4, 2008	System	The treatment system was shut down due to power outages caused by severe storms between January 4 and January 8.	Not Applicable
January 4, 2008	AE/RW 9-1	Extraction well AE/RW 9-1 was turned off after a low-flow alarm on January 4. The well remained offline until the flow meter could be accessed and repaired on February 28.	Not Applicable
January 30, 2008	GAC Vessels	The treatment system was shut down to replace carbon in the primary GAC vessel on January 30 and was restarted on January 31.	Not Applicable
March 18, 2008	GAC Vessels	The treatment system was shut down to replace carbon in the primary GAC vessel on March 18 and was restarted on March 19.	Not Applicable
April 12, 2008	System, RW-4B2	The treatment system was shut down for two days due to vault flood at RW-4B2. The vault, which was flooded by irrigation water, was dewatered and the system was restarted on April 14. The vault lid has been resealed with silicone sealant to decrease the frequency of vault floods.	Not Applicable
May 14, 2008	GAC Vessels	The treatment system was shut down to replace carbon in the primary GAC vessel on May 14 and was restarted on May 15.	Not Applicable
May 30, 2008	Effluent Meter	The effluent meter malfunctioned on May 30th and was replaced by the water district on June 11th.	Not Applicable
July 1, 2008	GAC Vessels	The treatment system was shut down to replace carbon in primary and secondary GAC vessels on July 1 and was restarted on July 2.	Not Applicable
July 5, 2008	RW-4B2	The pump remained off-line for approximately eight hours due to low flow before it was restarted.	Not Applicable
July 13, 2008	RW-4B2	The pump remained off-line for approximately nine hours due to low flow before it was restarted.	Not Applicable
July 11, 2008	Effluent Meter	The effluent meter was not functioning and was replaced by Santa Clara Valley Water District on July 11.	Not Applicable
July 22, 2008	REG-4B2	The pump remained off-line for approximately 18 hours due to low flow and was restarted on July 23.	Not Applicable
July 22, 2008	System	The system remained off-line for approximately 14 hours due to well vault flood at REG-38B2 and was restarted on July 23.	Not Applicable
August 30, 2008	RW-4B2	The pump was off-line for approximately 72 hours due to low	Not

Date	Component	Comments	Regulatory Notification
		flow and was restarted on September 2 after cleaning the flow meter paddle wheel.	Applicable
September 3, 2008	GAC Vessels	The treatment system was shut down to replace carbon in primary GAC vessels on September 3 and was restarted on September 4.	Not Applicable
October 23-24, 2008	GAC Vessels	The treatment system was shut down to replace carbon in primary and secondary GAC vessels on October 23, and was restarted on October 24.	Not applicable
December 11-12, 2008	GAC Vessels	The treatment system was shut down to replace carbon in primary GAC vessels on December 11 and was restarted on December 12.	Not applicable

The following is a summary of maintenance or operational activities conducted at System 3 or the wells that discharge to System 3 during this reporting period:

Date	Component	Comments	Regulatory Notification
February 27, 2008	System Effluent Meter	The treatment system was shut down for about an hour to replace System Effluent Meter.	Not Applicable
April 15, 2008	System, GAC Vessels	The treatment system was shut down to replace carbon in the primary GAC vessel.	Not Applicable
July 14, 2008	RW-27A	The pump in RW-27A stopped functioning due to a defective flow meter, and remained off-line until it was replaced on August 18, 2008. An electrical problem was identified on August 18th. The well was restarted on August 19.	Notification to USEPA
July 15, 2008	System, GAC Vessels	The treatment system was shut down on July 15 to replace carbon in the primary GAC vessel and was restarted on July 16.	Not Applicable
September 29, 2008	System	The system went offline for 20.5 hours due to well vault flood at RW-7B1 and was restarted on September 30.	Not Applicable
October 5-8, 2008	System	The system went offline intermittently between, October 5 and October 8, due to well vault flood alerts at RW-7B1. The combined downtime was approximately 30 hours.	Not Applicable.
November 11-12, 2008	System GAC Vessels	The treatment system was shut down on, November 11 to replace carbon in the primary GAC vessel and was restarted on November 12.	Not Applicable

During calendar year 2008, the extraction and treatment systems operated within the effluent limits established by the Site NPDES permit for the entire period. However, the pump in RW-27A turned off on July 14, 2008 due to a defective flow meter. The pump remained offline until a new flow meter was received and installed on August 18. During the installation an electrical problem was discovered. The problem was resolved and the pump was restarted on August 19. The issue was reported to the USEPA on October 7, 2008. Since that time, all non-routine shutdowns have been promptly reported (See Section 4).

3. OTHER ACTIVITIES

3.1 Optimization Evaluation for Groundwater

In response to a request from USEPA[5], an Optimization Evaluation Report for the Fairchild sites in the MEW area was submitted to USEPA September 3, 2008 (Geosyntec et al, 2008). The evaluation considered previous efficiency and slurry wall evaluations at the Site (Northgate, 2007a-b and 2008a-b) and recommended implementing an optimization program for the Fairchild sites in conjunction with similar optimization programs for the RGRP and other facilities. The MEW Companies are awaiting USEPA comments on the Optimization Evaluations prior to implementing the recommended programs.

3.2 Air/ Vapor Intrusion

The MEW companies have completed Site Investigation and Feasibility Studies of remedial alternatives to address the vapor intrusion pathway at the Site. In addition, Interim Remedial Measures were implemented in Building 9 in 2003 and 2004.

A *Revised Supplemental Feasibility Study for Vapor Intrusion* was submitted in January 2008 (Locus, 2008a) and a *Revised Supplemental Remedial Investigation* report was submitted to the USEPA in February 2008 (Locus, 2008b). The USEPA provided comments on these reports June 2, 2009, and plans to issue a proposed plan for a ROD amendment in 2009.

3.3 Annual Settlement Survey

An annual settlement survey was performed on December 17, 2008. 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. Geosyntec 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. Furthermore, the changes are relatively uniform over a large area, whereas settlement induced stress is typically caused by differential settlement over the scale of a single building footprint. Additional information on the settlement survey can be found in the RGRP 2008 Annual Progress Report (Weiss, 2009a).

[5] Letter from USEPA to MEW Parties dated 5 June 2008,

4. PROBLEMS ENCOUNTERED

Section 2.5 provides a summary of all non-routine O&M events that occurred at the System 1 and System 3 Treatment Systems.

In response to a comment from USEPA regarding timely reporting of system down-time events, reporting requirements were clarified as follows:

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

2. Water Board: If the treatment system is shut down for more than 120 consecutive hours after the start up period (maintenance, repair, violations, etc.) 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.

5. TECHNICAL ASSESSMENT

The following assessment of the groundwater remedy performance was made based on data collected through 2008.

- The remedy is functioning as intended. Based on 2008 data, the Building 1-4 treatment systems continue to function as intended. An Annual Remedy Performance Checklist is included in Appendix A.

- The capture zone is adequate. Groundwater elevation and chemical monitoring results from 2008 demonstrate that the SCRWs and RRWs for this Site continue to achieve adequate horizontal and vertical capture for the B1-zone and B2-zone based on converging lines of evidence, including graphical flow net analysis and chemical concentration trends.

- Chemical concentrations are decreasing over time. Chemical concentration trends in Buildings 1-4 wells within and downgradient of the slurry wall indicate stable or declining concentrations over time based on inspection of concentration-time plots in Appendix D and Table 11. Current concentrations are below historical VOC concentrations for this area, and plume maps (Weiss, 2009a) indicate an overall reduction in VOC plume size and magnitude.

- Vertical gradients are variable. Vertical gradients between the B1-zone to the A-zone were upward at well pairs 115B1/124A and 119B1/133A and downward in well pairs 20B1/33A and 60B1/118A. The vertical gradients recorded during this reporting period are generally consistent with historical observations.

- Slurry wall gradients are variable. During this reporting period, horizontal gradients were consistently inward along the upgradient (southern) and cross-gradient (western and eastern) sides of the slurry walls, and outward along the downgradient (northern) side of the slurry wall.

The remedial actions meet the RAOs for groundwater. While concentrations within TCE plume have generally decreased by an order of magnitude or more, the perimeter extent of TCE concentrations has largely stabilized, and treatment system influent concentrations have generally declined. Optimization of the remedy may therefore be warranted.

6. CONCLUSIONS AND RECOMMENDATIONS

During 2008, the Buildings 1-4 remedy achieved adequate horizontal and vertical capture based on converging lines of evidence including graphical flow net analysis and groundwater concentration trends. However, remedy optimization may be appropriate due to generally stable to declining concentrations that have been observed in monitoring and extraction wells.

A total of approximately 36.8 million gallons of groundwater were treated and 666 pounds of VOCs were removed by the two Site treatment systems during this reporting period. From January 1 through December 31, 2008, Site Treatment System 1 ran 96% of the time, and Site Treatment System 3 ran 99% of the time.

Upon receipt of comments from the USEPA, recommendations from the Optimization Evaluation for the Fairchild Sites should be implemented.

7. UPCOMING WORK IN 2009 AND PLANNED FUTURE ACTIVITIES

Activities for 2009 include the following:

- Continued groundwater extraction and treatment at Systems 1 and 3 and their associated extraction and monitoring wells, measuring water levels, and analyzing water samples in accordance with the Site monitoring and reporting schedule;
- Submitting a Notice of Intent to continue treatment operations beyond June 2009 as part of permit renewal activities for Fairchild Treatment Systems 1 and 3;
- Assisting in 5-Year Remedy Review process; and,
- Responding to USEPA comments on the September 3, 2008 Optimization Evaluation and implementing approved recommendations.
- Continued coordination USEPA's Proposed Plan for a ROD amendment for vapor intrusion.

The effectiveness and progress of Site remedial actions during 2009 will continue to be evaluated by continuing operation, maintenance, and monitoring accordance with the Site monitoring and reporting schedule. Site-specific data collected during 2009 will be summarized in the Annual Progress Report, which will be submitted to the USEPA by June 15, 2010.

8. REFERENCES

Canonie Environmental (Canonie), 1986a. Pumping Test Interim Remedial Program, Mountain View Facility, Prepared for Fairchild Semiconductor Corporation, January 1986.

Canonie, 1986b. Pumping Test for Wells 69A, 73A, 82A, 83A, 47B1, 17B2, 29B3, 58B3, Moffett Field, Prepared for Harding Lawson Associates, March 1986.

Canonie, 1987. Addendum to Technical Memorandum: Short- and Long-Term Aquifer Tests, Remedial Investigation Feasibility Study, Middlefield-Ellis-Whisman Study Area, Mountain View, California, March 1987.

Canonie Environmental (Canonie), 1988. Feasibility Study, Middlefield-Ellis-Whisman Area, Mountain View, California, November 1988.

Canonie, 1993. Plume Definition Program, Middlefield-Ellis-Whisman Site, Mountain View, California, March 1993.

Canonie, 1994. Revised Final Source Control Remedial Design, Fairchild Semiconductor Corporation, 515 and 545 North Whisman Road and 313 Fairchild Drive, Buildings 1, 2, 3, and 4, Middlefield-Ellis-Whisman Site, Mountain View, California, November 1994.

Canonie, 1995. Construction Operation and Maintenance Plan, Fairchild Semiconductor Corporation, 515 and 545 North Whisman Road and 313 Fairchild Drive, Buildings 1, 2, 3, and 4, Middlefield-Ellis-Whisman Site, Mountain View, California, February 1995.

Geomatrix, 2004. Revised Report, Aquifer Test and Off-Site B2 Source Control Evaluation, 401/405 National Avenue, Mountain View, California, August 2004.

Geosyntec Consultants (Geosyntec, et al), 2008. Optimization Evaluation, Fairchild Sites, Middlefield-Ellis-Whisman Area, Mountain View, California, September 3, 2008.

Harding Lawson Associates (HLA), 1986. Vol. 1, Technical Memorandum, Short-and Long-Term Aquifer Tests, Middlefield-Ellis-Whisman Area, Mountain View, California, April 14, 1986.

HLA, 1987. Remedial Investigation Report, Remedial Investigation/Feasibility Study, Middlefield-Ellis-Whisman Area, Mountain View, California, Vol. 1-8, July 1987 (revised in 1988).

Intel, 1987. Remedial Investigation/Endangerment Assessment/Feasibility Study, Intel Mountain View Facility, Mountain View, California; prepared by Geraghty & Miller, Inc., Intel Corporation, and Allen Hatheway, 1987.

Javandel I., and C.F. Tsang, 1986. Capture-zone type curves: A tool for aquifer cleanup. *Ground Water 24(5) 616-625*, 1986.

Locus Technologies (Locus) 1998. DW3-219 Pumping Test, Regional Groundwater Remediation Program, Middlefield-Ellis-Whisman Site, Mountain View, California, December 1998.

Locus, 2008a. Revised Supplemental Feasibility Study for Vapor Intrusion, Middlefield-Ellis-Whisman Area and Moffett Field, California, January 24, 2008.

Locus, 2008b. Revised Supplemental Remedial Investigation Study for Vapor Intrusion, Middlefield-Ellis-Whisman Area and Moffett Field, California, February 15, 2008.

Navy, 2005. West-Side Aquifers Treatment System Optimization Completion Report, prepared by Tetra Tech FW, Inc., DCN No. FWSD-RAC-05-1106, Revision 0, May 17, 2005.

Northgate Environmental Management, Inc. (Northgate), 2006. Letter to USEPA re: Plan to Optimize Extraction of Groundwater at Fairchild Building 1-4 Slurry Wall MEW Site, Mountain View, California, November 27, 2006.

Northgate, 2007a. Technical Memorandum, Fairchild Buildings 1-4 Slurry Wall Extraction Rate Optimization Study, MEW Site, Mountain View, California, January 5, 2007.

Northgate, 2007b. Draft Fairchild Buildings Slurry Wall System Efficiency Study Report, Middlefield-Ellis-Whisman Study Area, Mountain View, California, May 29, 2007.

Northgate, 2008a. Fairchild Buildings Slurry Wall System Efficiency Study Report, MEW Site, Mountain View, California, April 18, 2008.

Northgate, 2008b. Efficiency Evaluation Report, MEW Site, Mountain View, California, April 28, 2008.

PRC, 1991. Draft Technical Memorandum, Geology and Hydrogeology, Naval Air Station Moffett Field, California, Prepared for Department of the Navy, Engineering Field Activity West, December 11, 1991.

RMT, 2003. Revised Operation and Maintenance Manual, 515 and 545 North Whisman Road – System 1, 313 Fairchild Drive – System 3, Mountain View, California, November 14, 2003.

Smith Technology Corporation (Smith), 1996. Revised Final Design, Regional Groundwater Remediation Program, South of US Highway 101, Middlefield-Ellis-Whisman Site, Mountain View, California, January 8, 1996.

United States Environmental Protection Agency (USEPA), 1989. Record of Decision, Fairchild, Intel, and Raytheon Sites, Middlefield-Ellis-Whisman Study Area, Mountain View, California, Superfund Records Center Document No. 2807-02332, May 1989.

USEPA, 1990. EPA Superfund Explanation of Significant Differences: Middlefield-Ellis-Whisman Study Area, Mountain View, CA, September 1, 1990.

USEPA, 1996. EPA Superfund Explanation of Significant Differences: Middlefield-Ellis-Whisman Study Area, Mountain View, CA, April 16, 1996.

USEPA, 2004. Final First Five Year Review Report for the Middlefield-Ellis-Whisman Study Area, Mountain View, California, Region 9 San Francisco, California, September 2004.

USEPA 2005. Required Content for Annual Progress Reports, distributed by Alana Lee to the MEW distribution list via email on May 6, 2005.

USEPA 2008. A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems EPA/600/R-08/003 January 2008.

Weiss Associates (Weiss), 1995. VOC Transport Report for Intel Mountain View, 365 Middlefield Road, Mountain View, California, July 6, 1995.

Weiss, 2009a. 2008 Annual Progress Report for Middlefield-Ellis-Whisman Study Area, Regional Groundwater Remediation Program Mountain View, California, June 15, 2009.

Weiss 2009b. 2008 Annual Progress Report For Former Fairchild Building 18, 644 National Avenue, Middlefield-Ellis-Whisman Study Area Mountain View, California, June 15, 2009.

FIGURES

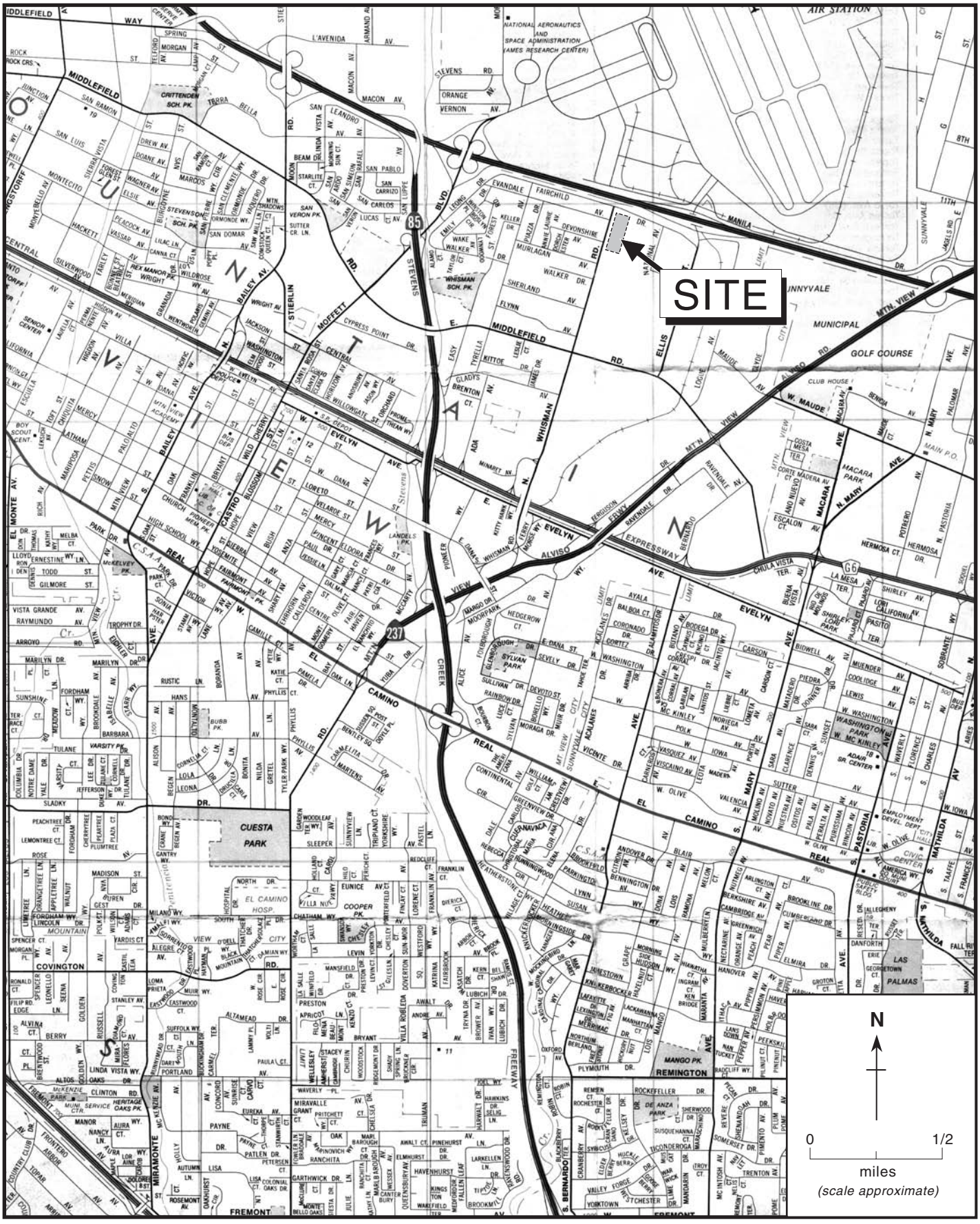

Figure 1. Site Location Map, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Perimeter Rd
Bailey Rd
Dailey Rd
Bayshore Fwy/Hwy 101
Fairchild Dr
Evandale Ave
Devonshire Ave
Murlagan Ave
Sherland Ave
N. Whisman Rd
Flynn Ave
Middlefield Road
National Ave
Ellis St

61A
11B2
156A
157A
147B1
148B2
130A
59A
RW-7(B1)
RW-7A
RW-9(B1)R
RW-7(B2)
RW-9A
RW-9(B2)
118A
76A
60B1
RW-27A
67A
RW-5(B1)
RW-5(B2)
RW-5A
57A
Fairchild System 3
124A
115B1
RW-4A
RW-18A
RW-12(B1)
RGRP - South
RW-25A
46A
51A
RW-4(B1)
RW-4(B2)
121A
68A
RW-28A
129A
38B2
2B1
RW-3A
Fairchild System 1
33A
RW-3(B2)
RW-3(B1)
RW-16A
10B2
84A
127A
128A
20B1
133A
118B2
119B1
136A
AE/RW-9-1
AE/RW-9-2
RW-21A
RW-20A
Former Fairchild Building 9 Site
Fairchild System 19
Former Fairchild Building 19 Site
Raytheon System
Raytheon Site

Legend

Buildings 1 through 4 Remedy Components

- Regional Recovery Well, on
- Regional Recovery Well, off
- Source Recovery Well, on
- Source Recovery Well, off
- Monitoring Well

Extraction and Monitoring Wells in the Vicinity

- Regional Recovery Well
- Source Recovery Well
- Monitoring Well

- 515 /545 Whisman Road and 313 Fairchild Drive (Current - 515 /545 North Whisman Road and 313/323 Fairchild Drive)
- Fairchild Groundwater Treatment System 1 and 3
- Groundwater Treatment Plant
- Slurry Wall
- Building
- Road
- Treatment-System Pipeline
- Treatment-System Discharge Pipeline

N

0 300 600 900 Feet

Figure 2

Former Fairchild Buildings 1 through 4
Site Map and Well Network
Mountain View, California

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Environmental Science, Engineering and Management

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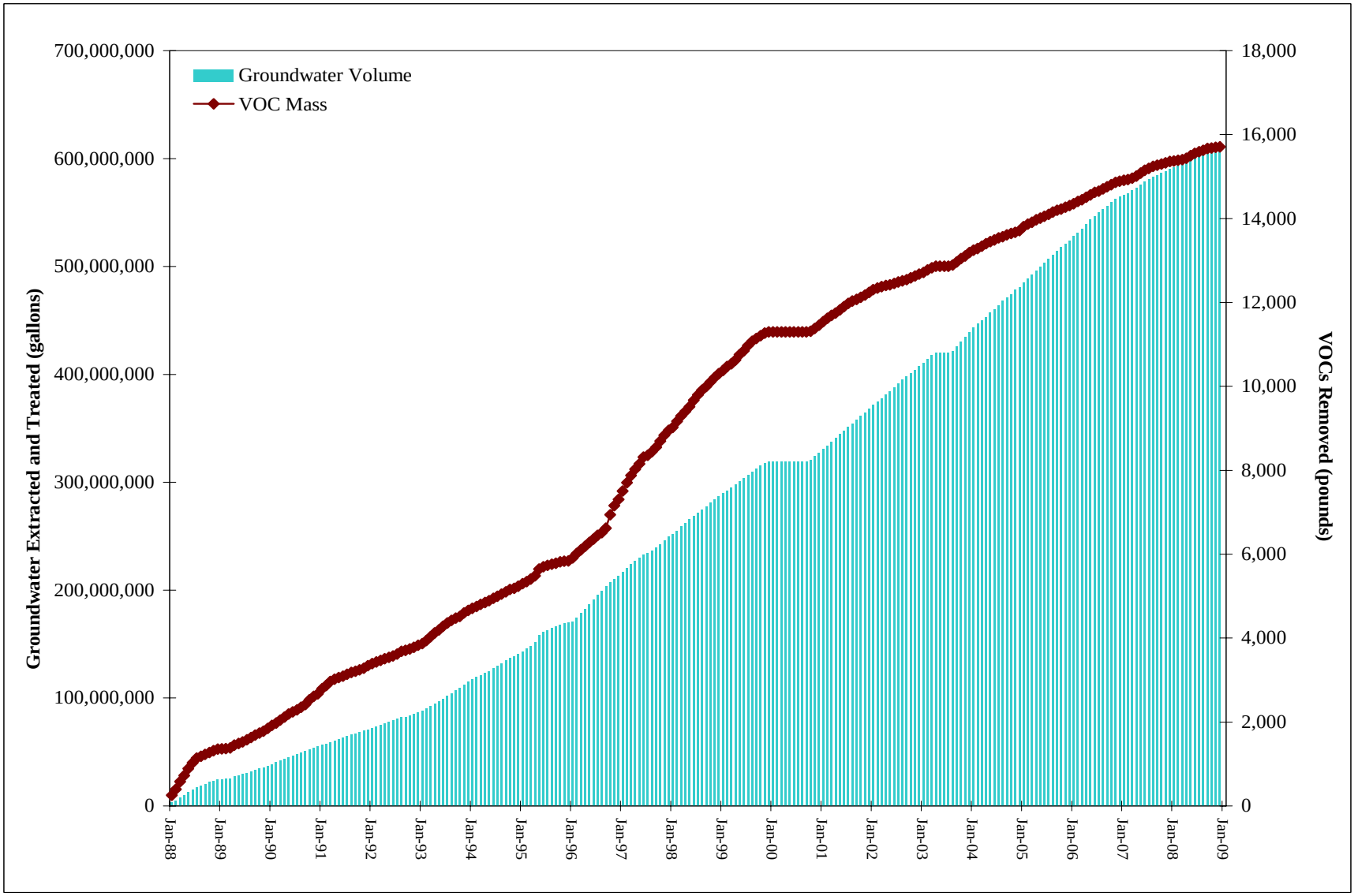

Figure 3. Cumulative Groundwater Extracted and VOC Mass Removed, System 1, 515/545 Whisman Road, Mountain View, California

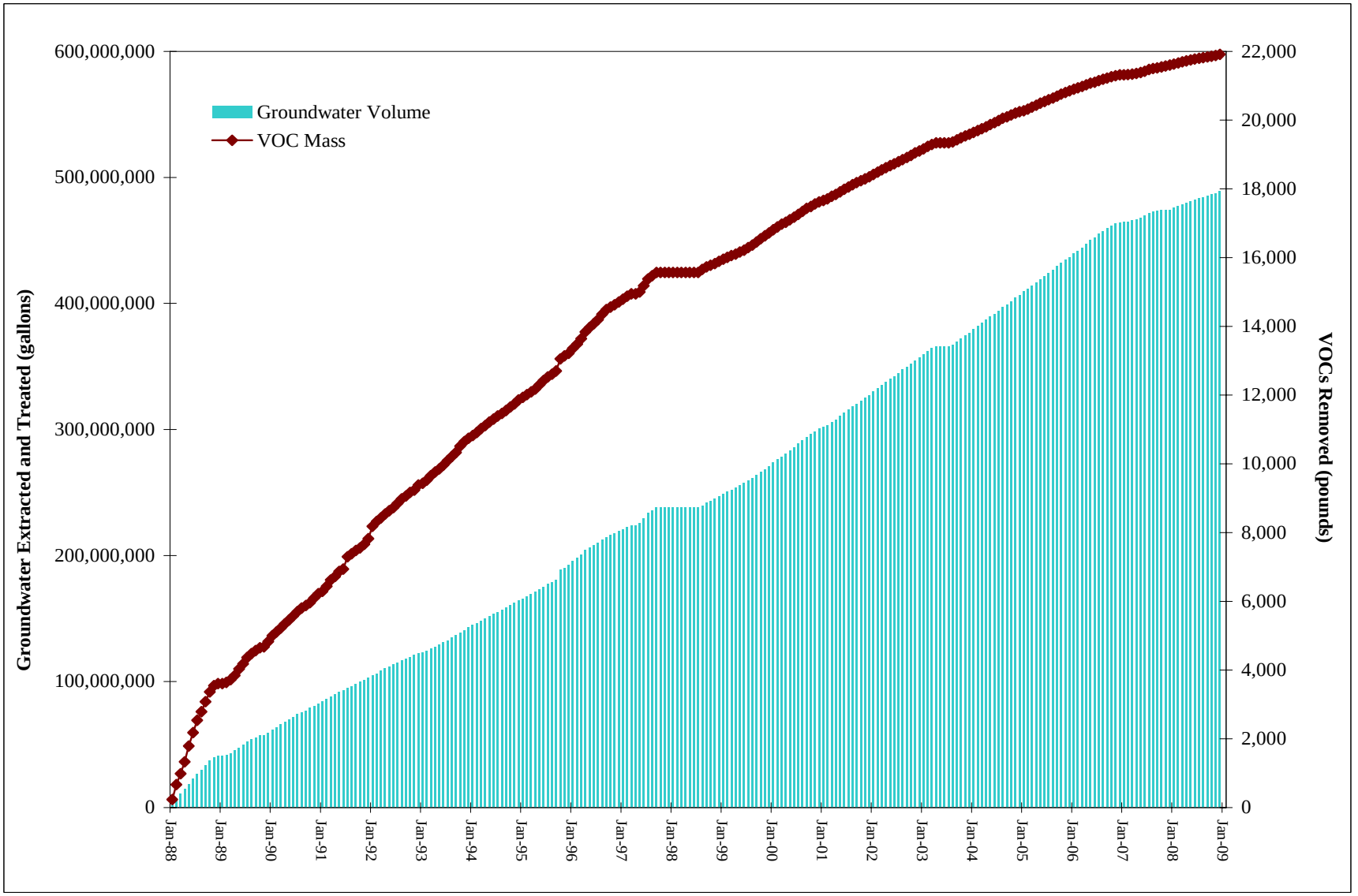

Figure 4. Cumulative Groundwater Extracted and VOC Mass Removed, System 3, 313 Fairchild Drive, Mountain View, California

1.0/1.5 MWPS-
CS-1

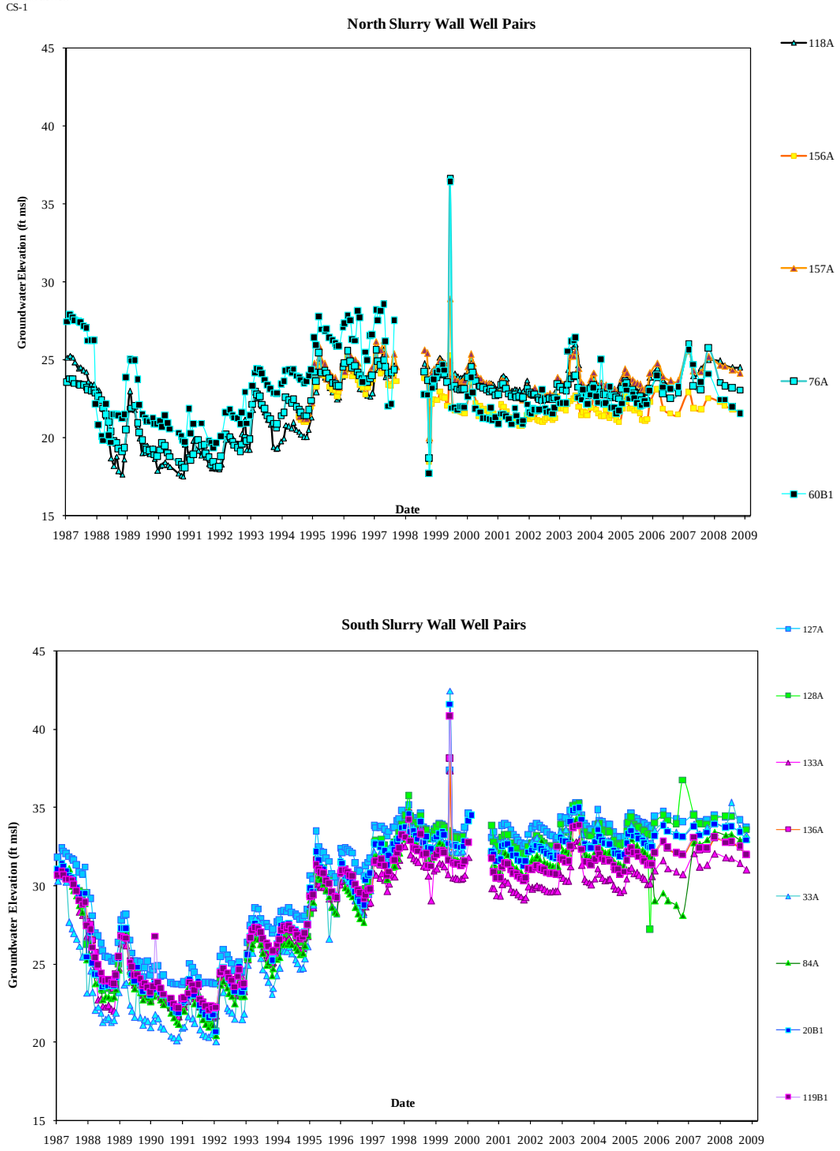

Figure 5. Building 1-4 Hydrographs – Groundwater Elevation Measurements

Buildings 1 through 4 Slurry Wall

Building 9 Slurry Wall

Building 19 Slurry Wall

Raytheon Slurry Wall

Legend

A/A1 Aquifer Wells for Buildings 1-4

- Regional Recovery Well, On
- Regional Recovery Well, Off
- Source Recovery Well, On
- Source Recovery Well, Off
- Monitoring Well

A/A1 Aquifer Wells in the Vicinity

- Regional Recovery Well
- Source Recovery Well
- Monitoring Well

- 515 /545 Whisman Road and 313 Fairchild Drive
- Capture zone
- Target Capture zone
- Groundwater Elevation Index 5 ft Contour
- Groundwater Elevation Intermediate 1 ft Contour
- Slurry Wall
- Building
- Road

(7.25) = Pump rate in gallons per minute
off = Extraction well off with regulatory approval
0.0** = Extraction well temporarily off for efficiency evaluation

0 300 600 900 Feet

Figure 6

Former Fairchild Buildings 1 - 4
A/A1 Groundwater Zone Target Capture
and Estimated 2008 Capture Area
Mountain View, California

Weiss Associates
Environmental Science, Engineering and Management

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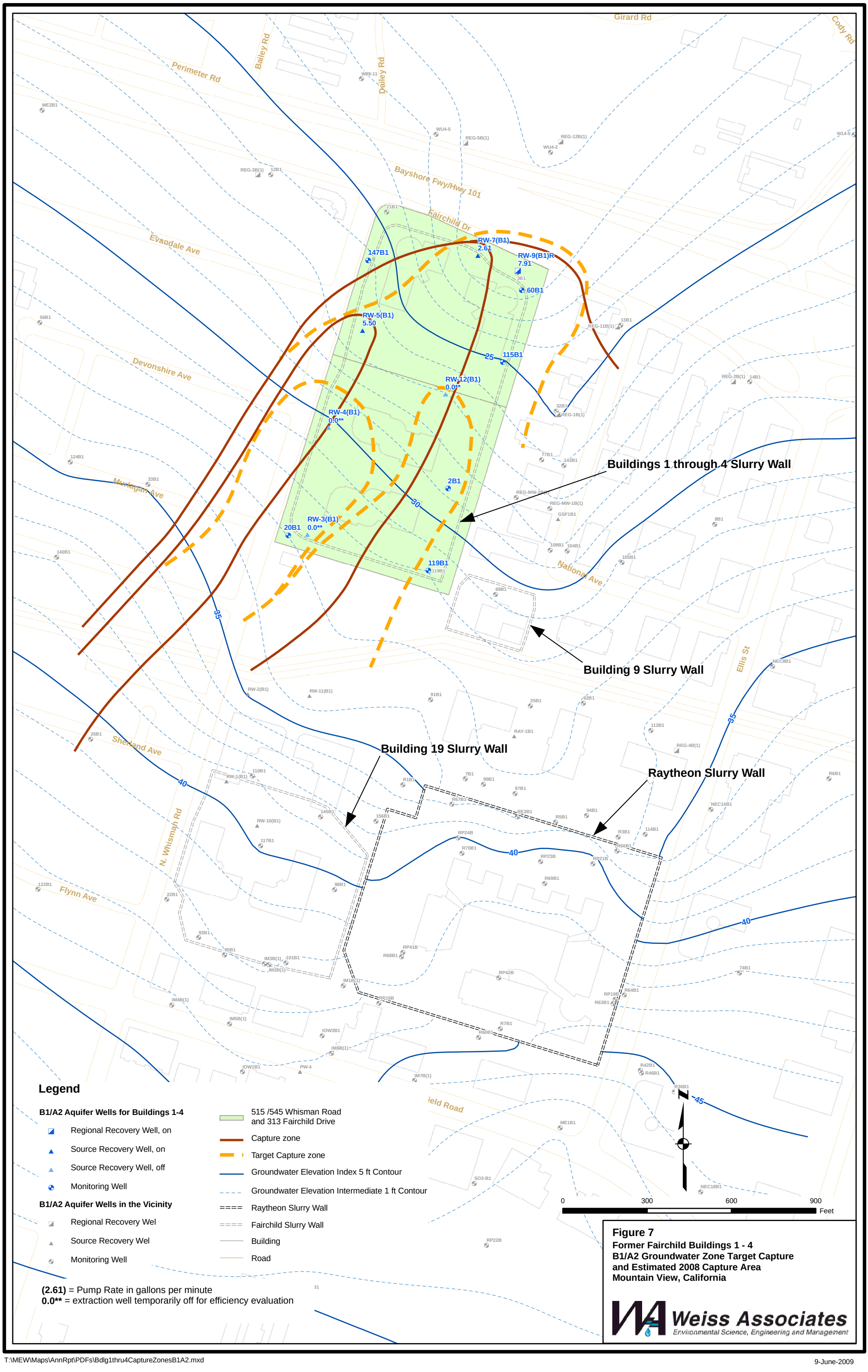

Figure 7
Former Fairchild Buildings 1 - 4
B1/A2 Groundwater Zone Target Capture and Estimated 2008 Capture Area
Mountain View, California

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Bailey Rd
Perlmeter Rd
Dailey Rd
Cody Rd
Bayshore Fwy/Hwy 101
Fairchild Dr
Evandale Ave
Devonshire Ave
Murlagan Ave
National Ave
Ellis St
N. Whisman Rd
Sherland Ave
Flynn Ave
Middlefield Road

11B2
148B2
RW-7(B2) off
RW-9(B2) 5.50
RW-5(B2) off
RW-4(B2) 1.32
38B2 7.84
RW-3(B2) off
10B2
118B2
RW-2(B2)
RW-1(B2)

25
30
35
40
45
50

Buildings 1 through 4 Slurry Wall
Building 9 Slurry Wall
Building 19 Slurry Wall
Raytheon Slurry Wall

Legend

B2 Aquifer Wells for Buildings 1 through 4

- Regional Recovery Well, On
- Source Recovery Well, On
- Source Recovery Well, Off
- Monitoring Well

B2 Aquifer Wells in the Vicinity

- Regional Recovery Well
- Source Recovery Well
- Monitoring Well

- 515 /545 Whisman Road and 313 Fairchild Drive
- Capture zone
- Target Capture zone
- Groundwater Elevation Index 5 ft Contour
- Groundwater Elevation Intermediate 1 ft Contour
- Raytheon Slurry Wall
- Fairchild Slurry Wall
- Building
- Road

(5.5) = Pump Rate in gallons per minute
off = extraction well off with regulatory approval

N

0 300 600 900 Feet

Figure 8
Former Fairchild Buildings 1 - 4
B2 Groundwater Zone Target Capture and Estimated 2008 Capture Area
Mountain View, California

Weiss Associates
Environmental Science, Engineering and Management

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9-June-2009

TABLES

Table 1. 2008 Monitoring and Reporting Schedule, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
118A												9,o
121A											#	
124A											#	
127A											1,o	
128A[11]												
130A											1,o	
133A											#	
156A											1,o	
157A												9,o
33A											#	
46A											1,o	
51A											#	
57A											#	
59A											#	
61A											1,o	
67A											#	
68A[7]											#	
76A												9,o
84A											#	
RW-3A											1,o	
RW-4A											1,o	
RW-5A											#,1,o	
RW-7A											#,1,o	
RW-9A[7]											1,o	
RW-16A											#,1,o	
RW-18A											#,1,o	
RW-20A[6]											1,o	
RW-21A[6]											1,o	
RW-25A[8]											1,o	
RW-27A											#, 1,o	
RW-28A											#, 1,o	
AE/RW-9-1[6]											1,o	
AE/RW-9-2[6]											1,o	
115B1											1,o	
119B1[7]											1,o	
147B1											1,o	
2B1											1,o	
20B1[11]												
60B1											1,o	
67B1											1,o	
RW-3B1											1,o	
RW-4B1											1,o	
RW-5B1											1,o	
RW-7B1											1,o	
RW-9B1[7]											1,o	
RW-12B1											1,o	
10B2											1,o	
11B2											1,o	
118B2											1,o	
148B2											1,o	
38B2[7]											1,o	
RW-3B2											1,o	
RW-4B2											1,o	
RW-5B2[7]											1,o	
RW-7B2[7]											1,o	
RW-9B2[7]											1,o	

Table 1. 2008 Monitoring and Reporting Schedule, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sys1 Influent		1,o			1,o			1,o			1,o	
Sys1 Midpoint	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o
Sys1 Effluent	1,o	1,o	1,o	1,o	1,2,o	1,o	1,o	1,o	1,o	1,o	1*,2,3,4,5,o	1,o
Sys3 Influent		1,o			1,o			1,o			1,o	
Sys3 Midpoint	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o	1,o
Sys3 Effluent	1,o	1,o	1,o	1,o	1,2,o	1,o	1,o	1,o	1,o	1,o	1*,2,3,4,5,o	1,o
Stevens Creek[v]												
Water Levels			X		X			X			X	
Slurry Wall Water Levels[10]			X		X			X			X	
NPDES Rpt.	X			X			X			X		
GW Contour/ Capture Zone & TCE Maps						X						
Annual Progress Report						X						

Notes and Abbreviations:

MEW = Middlefield Ellis Whisman

RGRP = Regional Groundwater Recovery Program

= Wells are sampled every five years and were last sampled during 2007 sampling event

o = standard observations, including field analysis for pH, temperature, and conductivity

v = sample receiving water within 24 hours of an effluent exceedance; analyze upstream/downstream samples for the exceeded compound(s) and dissolved oxygen level

1 = sampled annually by USEPA Method 8010 MS for VOCs (* = full USEPA Method 8260 analyte list)

2 = 1,4-dioxane & SVOCs (twice a year or every three years)

3 = 96-hour static bioassay for rainbow trout

4 = turbidity

5 = sample analysis by USEPA Method 200 series for Sb, As, Be, Cd, Cr, Cu, Pb, Ni, Se, Tl, Zi; USEPA Method 335 for cyanide; USEPA Method 1631 for Hg (every three years)

6 = Part of Building 9 Facility Specific wells. Data for these is discussed in the Building 9 report unless pertinent to this report.

7 = Part of the MEW RGRP S101 sampling event, but are located at the Building 1-4 Site. Data for these discussed in RGRP report unless pertinent to this report.

8 = Part of Building 18 Facility Specific wells. Data for this well is discussed in Building 18 report unless pertinent to this report.

9 = Wells were sampled in December 2008 as part of the slurry wall evaluation study and will be sampled annually henceforth.

10 = Slurry wall water levels are measured in 76A/118A, 127A/33A, 128A/84A, 129A/121A, 130A/59A, 136A/133A, 156A/157A, 20B1/33A, 60B1/118A, 115B1/124A, and 119B1/133A in March, May, August, and November.

11 = Only water levels are measured at wells 20B1 and 128A.

Table 2. Monthly Average Flow Rates (gallons per minute), January through December 2008, System 1, 515/545 Whisman Road, Mountain View, California

Well ID	January	February	March	April	May	June	July	August	September	October	November	December
RW-3A[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-3B1[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-4A[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-4B1[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-4B2	1.94	1.98	1.91	1.34	1.42	1.46	1.58	1.36	1.42	1.21	1.12	0.76
RW-16A[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-20A[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-21A[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-25A	4.99	5.38	5.41	5.43	5.78	6.04	7.56	6.08	5.75	5.57	5.58	5.21
RW-28A[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
AE/RW-9-1	0.63	0.00	4.98	5.21	5.53	5.74	7.19	5.82	5.58	5.35	5.59	5.25
AE/RW-9-2	1.14	2.18	4.09	1.66	1.44	1.44	1.44	1.44	1.44	2.21	2.08	2.10
38B2	6.87	7.38	7.40	6.41	6.79	6.93	8.57	7.05	6.90	6.78	7.03	6.74
RW-3B2[3]	---	---	---	---	---	---	---	---	---	---	---	---
Bldg. 18	34.85	33.85	31.99	14.99	42.48	28.39	27.59	29.15	27.93	25.57	28.02	27.93
Total[1]	40.53	40.41	48.44	37.27	60.41	58.32	43.18	39.82	38.02	35.15	37.44	36.20

Notes and Abbreviations:

Bldg. 18 = Building 18 basement dewatering sump system

EPA = Environmental Protection Agency

--- = not analzyed

1. Total values are calculated from the system effluent meter (as reported in self-monitored reports); therefore the sum of the wells is not equal to the total value reported.
2. Well is off with conditional approval from EPA for implementation of slurry wall evaluation recommendations.
3. Well has been turned off permanently based on EPA approval.

Table 3. Monthly Extraction Totals (gallons), January through December 2008, System 1, 515/545 Whisman Road, Mountain View, California

Well ID	January	February	March	April	May	June	July	August	September	October	November	December
RW-3A[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RW-3B1[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RW-4A[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RW-4B1[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RW-4B2	83,745	74,269	96,212	53,850	59,176	73,468	61,526	54,823	71,623	48,926	48,579	36,269
RW-16A[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RW-20A[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RW-21A[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
RW-25A	215,752	201,329	272,619	219,078	241,214	304,490	293,783	245,007	289,590	224,422	240,862	247,517
RW-28A[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AE/RW-9-1	27,041	2	250,856	210,260	230,868	289,321	279,432	234,480	281,427	215,606	241,547	249,547
AE/RW-9-2	49,139	81,603	206,262	67,087	60,080	72,576	55,987	58,061	72,576	89,133	89,798	99,792
38B2	296,887	276,209	373,089	258,459	283,698	349,134	333,295	284,415	347,508	273,395	303,896	320,491
RW-3B2[4]	---	---	---	---	---	---	---	---	---	---	---	---
Bldg. 18[1]	1,505,677	1,267,393	1,612,168	604,281	1,773,799	1,430,729	1,072,849	1,175,372	1,407,914	1,030,927	1,210,415	1,327,322
Total[2]	1,751,000	1,513,000	2,162,450	1,610,150	2,696,797	2,519,496	1,678,656	1,605,700	1,916,000	1,417,250	1,617,250	1,720,000

Notes and Abbreviations:

Bldg. 18 = Building 18 basement dewatering sump system

EPA = Environmental Protection Agency

RGRP = Regional Groundwater Remediation Program

--- = not analyzed

1. The Building 18 monthly extraction total reported does not include the volume of water pumped to the South 101 treatment systems during carbon changes. These volumes are reported in the Building 18 and RGRP reports. The total volume pumped to S101 in 2008 is 356,798 gallons.
2. Total values are calculated from the system effluent meter (as reported in self monitoring reports); therefore the sum of the wells is not equal to the total value reported.
3. Well is off with conditional approval from EPA for implementation of slurry wall evaluation recommendations.
4. Well has been turned off permanently based on EPA approval.

Table 4. Monthly Average Flow Rates (gallons per minute), January through December 2008, System 3, 313 Fairchild Drive, Mountain View, California

Well ID	January	February	March	April	May	June	July	August	September	October	November	December
RW-5A	2.62	2.90	2.86	2.73	2.89	2.91	2.66	2.79	2.72	2.92	3.16	3.19
RW-5B1	3.45	3.79	3.63	2.29	2.06	2.02	2.08	2.26	2.16	4.06	4.73	4.93
RW-5B2[3]	---	---	---	---	---	---	---	---	---	---	---	---
RW-7A	6.36	6.98	6.81	6.76	6.85	6.69	6.42	6.63	6.68	5.99	6.14	6.60
RW-7B1	1.41	1.71	1.70	1.58	1.65	1.65	1.45	0.75	2.02	2.08	2.28	2.35
RW-7B2[3]	---	---	---	---	---	---	---	---	---	---	---	---
RW-9A[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-9B1	6.37	7.19	7.05	6.75	7.29	7.39	7.08	7.34	7.11	6.79	6.82	7.06
RW-9B2	3.91	4.35	4.30	4.10	4.20	4.23	3.99	4.05	4.12	4.24	4.75	5.43
RW-18A[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
RW-27A	2.74	2.67	2.51	2.38	2.44	2.47	1.20	0.54	1.98	2.41	2.48	2.43
RW-12B1[2]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total[1]	33.17	37.59	30.79	27.56	28.70	22.52	25.50	24.78	22.61	21.88	26.69	32.79

Notes and Abbreviations:

EPA = Environmental Protection Agency

--- = not analyzed

1. Total values are calculated from the system effluent meter (as reported in self monitoring reports); therefore the sum of the wells is not equal to the total value reported.
2. Well is off with conditional approval from EPA for implementation of slurry wall evaluation recommendations.
3. Well has been turned off permanently based on EPA approval.

Table 5. Monthly Extraction Totals (gallons), January through December 2008, System 3, 313 Fairchild Drive, Mountain View, California

Well ID	January [1]	February	March	April	May	June	July	August	September	October	November	December
RW-5A	105,480	117,069	143,954	109,919	120,751	146,898	103,493	112,300	137,127	117,749	136,391	151,603
RW-5B1	139,188	152,801	183,009	92,479	86,176	101,786	80,942	90,940	108,795	163,900	204,232	234,171
RW-5B2[3]	---	---	---	---	---	---	---	---	---	---	---	---
RW-7A	256,293	281,293	343,178	272,403	285,980	337,388	249,435	267,285	336,509	241,431	265,379	313,743
RW-7B1	56,690	69,006	85,431	63,674	68,890	82,801	56,338	30,063	101,647	83,679	98,511	111,591
RW-7B2[3]	---	---	---	---	---	---	---	---	---	---	---	---
RW-9A[2]	0	0	0	0	0	0	0	0	0	0	0	0
RW-9B1	256,659	289,879	355,471	272,054	304,546	372,526	275,119	295,957	358,584	273,869	294,787	335,302
RW-9B2	157,710	175,476	216,736	165,270	175,596	213,155	155,156	163,238	207,835	170,961	205,189	257,966
RW-18A[2]	0	0	0	0	0	0	0	0	0	0	0	0
RW-27A	110,296	107,592	126,747	95,974	101,816	124,378	46,462	21,912	99,816	97,269	107,305	115,673
RW-12B1[2]	0	0	0	0	0	0	0	0	0	0	0	0
Total[1]	1,337,300	1,515,600	1,552,030	1,111,250	1,198,550	1,135,050	991,330	999,025	1,139,425	882,350	1,153,200	1,558,250

Notes and Abbreviations:

1. Total values are calculated from the system effluent meter (as reported in self monitoring reports); therefore the sum of the wells is not equal to the total value reported.
2. Well is off with conditional approval from EPA for implementation of slurry wall evaluation recommendations.
3. Well has been turned off permanently based on EPA approval.

--- = not analyzed

Table 6. Chemical Analytic Results Summary, Fairchild System No. 1, 515 Whisman Road, Mountain View, California

Sample Location	Sample Date	Lab Analytical Method	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	Chloroform	Total VOCs	bis (2-ethylhexyl) phthalate	1,4-dioxane[1]
			<---------- (µg/L) ---------->												
Influent[1]	02/20/08	C&T/8260B	<0.5	<0.5	<0.5	370	17	<0.5	600	6	6.3	<1.0	999	---	---
	05/21/08	C&T/8260B	14	<0.5	11	1100	21	34	1,400	10	10	<1.0	2,600	---	---
	08/18/08	C&T/8260B	14	<0.5	16	1100	22	58	1,500	24	22	<1.0	2,760	---	---
	11/24/08	C&T/8260B	7	<0.5	5	390	9	24	530	7	7	<1.0	979	<9.4	---
	12/17/08	C&T/8270C	---	---	---	---	---	---	---	---		---	---	<9.4	---
Midpoint 1	01/17/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<1.0	<1.0	0.8	---	---
	02/11/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	03/10/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	04/14/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	05/13/08	C&T/8260B	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	1.0	<1.0	<1.0	1.5	---	---
	06/02/08	C&T/8260B	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	0.5	---	---
	07/14/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	08/11/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<1.0	<1.0	0.7	---	---
	09/10/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	11/10/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	12/08/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
Midpoint 2	02/11/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	05/13/08	C&T/8260B	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	08/11/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	11/10/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
Effluent[1,2]	01/31/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	02/20/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	03/19/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	04/16/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	05/21/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	06/19/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	07/21/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	08/18/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	09/17/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	---	---
	10/27/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	100	<0.95
	11/24/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	<9.4	---
	12/17/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<1.0	ND	<9.4	---

Notes and Abbreviations:

1 = System effluent samples were analyzed for semi volatile organic compounds (SVOCs) on October 27, 2008 using 8270C and for 1,4-Dioxane using USEPA Method 8270C-SIM.
Results were Non Detect for 1,4-Dioxane. Bis (2-ethylhexyl) phthalate, a trigger chemical with a trigger limit of 1.8 ug/L, was detected in the SVOC analysis in October. Bis (2-ethylhexyl) phthalate was not detected in influent or effluent samples in November and December, however the detection limit is above the trigger limit. This is currently being evaluated with the laboratory.

2 = Chemical concentrations in effluent stream were below the NPDES effluent limitations for the entire quarter.

< # = analyte not detected above the reported detection limit of "#" µg/L

--- = not analzyed

8260B = USEPA Method 8260 for halogenated VOCs

DCA = Dichloroethane

DCE = Dichloroethene

ug/L = micrograms per liter

Midpoint 1 = sample collected between the primary and secondary carbon vessels

Midpoint 2 = sample collected between the secondary and tertiary carbon vessels

ND = no analytes detected above reporting limits

TCA = Trichloroethane

TCE = Trichloroethene

VOCs = volatile organic compounds

Table 7. Chemical Analytic Results Summary, Fairchild System No. 3, 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab Analytical Method	1,1-DCA	1,2-DCA	1,1-DCE	cis-1,2-DCE	trans-1,2-DCE	1,1,1-TCA	TCE	Vinyl Chloride	Freon 113	PCE	Chloroform	Total VOCs	1,4-dioxane[1]
			<---------- (µg/L) ----------												---------->
Influent[2]	02/20/08	C&T/8260B	<17	<17	19	810	37	<17	1,800	<17	26	9.3	<33	2,701	---
	05/21/08	C&T/8260B	<17	<17	<17	750	36	<17	1,900	<17	26	<17	<33	2,712	4.4
	10/03/08	C&T/8260B	<17	<17	<17	770	35	<17	1,700	<17	19	<17	<33	2,524	---
	10/27/08	C&T/8260B	---	---	---	---	---	---	---	---	---	---	---	---	3.0
	11/24/08	C&T/8260B	<17	<17	<17	670	32	<17	1,700	<17	22	<17	<33	2,424	---
Midpoint 1	01/17/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	02/11/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	03/10/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	04/14/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<1.0	<0.5	<1.0	1.2	---
	05/13/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	06/02/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	07/14/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	<1.0	<0.5	<1.0	1.2	---
	08/11/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	09/10/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.6	<2.0	ND	---
	11/10/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<2.0	<0.6	<2.0	ND	---
	12/08/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.6	<2.0	ND	---
Midpoint 2	02/11/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	05/13/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	08/11/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	11/10/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.6	<2.0	ND	---
Effluent[3,4]	01/31/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<1.0	ND	---
	02/20/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	ND	---
	03/20/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	ND	---
	04/17/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	ND	---
	05/21/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	ND	1.1
	06/19/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	ND	---
	07/21/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	ND	---
	08/18/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<1.0	ND	---
	09/17/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<6.0	<0.6	<1.1	ND	---
	10/27/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.6	<2.0	ND	3.9
	11/24/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.6	<2.0	ND	---
	12/17/08	C&T/8260B	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.6	<2.0	ND	---

Notes and Abbreviations:

1 = System influent and effluent samples are analyzed semi-annually by, USEPA Method 8270C-SIM for 1,4-dioxane. A technical evaluation for 1,4-dioxane was performed in 2003.
2 = For the third quarter, the influent sample was collected in October.
3 = System effluent samples were analyzed for semi volatile organic compounds (SVOCs) on, October 27, 2008 using USEPA Method 8270C. Results we non detect for all trigger SVOCs.
4 = Chemical concentrations in effluent stream were below the NPDES effluent limitations for the entire quarter.
< # = analyte not detected above the reported detection limit of "#" µg/L
--- = not analyzed
8260B = USEPA Method 8260 for halogenated VOCs
DCA = Dichloroethane
DCE = Dichloroethene
ug/L = micrograms per liter
Midpoint 1 = sample collected between the primary and secondary carbon vessels
Midpoint 2 = sample collected between the secondary and tertiary carbon vessels
ND = no analytes detected above reporting limits
PCE = Tetrachloroethene
TCA = Trichloroethane
TCE = Trichloroethene
VOCs = volatile organic compounds

Table 8. VOC Mass Removal Summary, System 1, 515/545 Whisman Road, Mountain View, California

TOTAL GROUNDWATER EXTRACTED (gallons):	
January	1,751,000
February	1,513,000
March	2,162,450
April	1,610,150
May	2,696,797
June	2,519,496
July	1,678,656
August	1,605,700
September	1,916,000
October	1,417,250
November	1,617,250
December	1,720,000
CUMULATIVE GROUNDWATER EXTRACTED IN 2008 (gallons):	**22,207,749**

INFLUENT VOC CONCENTRATION (mg/L)[1]:	
January	1.00
February	1.00
March	1.00
April	2.60
May	2.60
June	2.60
July	2.76
August	2.76
September	2.76
October	0.98
November	0.98
December	0.98
Unit Conversion ((L H_2O/gal H_2O)*(kg VOC/mg VOC)*(2.2 pounds/kg)):	**8.33E-06**

TOTAL VOC MASS REMOVED (pounds):	
January	14.57
February	12.59
March	18.00
April	34.86
May	58.39
June	54.55
July	38.58
August	36.91
September	44.04
October	11.55
November	13.19
December	14.02
CUMULATIVE MASS REMOVED IN 2008 (pounds):	**351.26**

Notes and Abbreviations:
1 = System Influent samples are collected the second month of every quarter. These concentrations are used for the entire quarter.
gal = gallons
kg = kilogram
mg/L = milligram per liter
VOC = volatile organic compound

Table 9. VOC Mass Removal Summary, System 3, 313 Fairchild Drive, Mountain View, California

TOTAL GROUNDWATER EXTRACTED (gallons):	
January	1,337,300
February	1,515,600
March	1,552,030
April	1,111,250
May	1,198,550
June	1,135,050
July	991,330
August	999,025
September	1,139,425
October	882,350
November	1,153,200
December	1,558,250
CUMULATIVE GROUNDWATER EXTRACTED IN 2008 (gallons):	**14,573,360**
INFLUENT VOC CONCENTRATION (mg/L)[1]:	
January	2.71
February	2.71
March	2.71
April	2.71
May	2.71
June	2.71
July	2.50
August	2.50
September	2.50
October	2.42
November	2.42
December	2.42
Unit Conversion ((L H_2O/gal H_2O)*(kg VOC/mg VOC)*(2.2 pounds/kg)):	**8.33E-06**
TOTAL VOC MASS REMOVED (pounds):	
January	30.20
February	34.23
March	35.05
April	25.10
May	27.07
June	25.64
July	20.64
August	20.80
September	23.72
October	17.81
November	23.28
December	31.46
CUMULATIVE MASS REMOVED IN 2008 (pounds):	**315.00**

Notes and Abbreviations:
1 = System Influent samples are collected the second month of every quarter. These concentrations are used for the entire quarter.
gal = gallons
VOC = volatile organic compound

Table 10. Groundwater Elevations, Slurry Wall Well Pairs, January through December 2008, Former Fairchild Buildings 1-4, Mountain View, California

Date	Well ID (outer/B1 well)	Groundwater Elevation (ft amsl)	Well ID (inner/A well)	Groundwater Elevation (ft amsl)	Difference [1] (ft)
03/27/08	76A	23.58	118A	24.95	-1.37
05/22/08	76A	23.31	118A	24.68	-1.37
08/28/08	76A	23.20	118A	24.53	-1.33
11/20/08	76A	23.09	118A	24.53	-1.44
03/27/08	127A	34.41	33A	33.86	0.55
05/22/08	127A	34.46	33A	35.34	-0.88
08/28/08	127A	34.21	33A	33.66	0.55
11/20/08	127A	33.81	33A	33.28	0.53
03/27/08	128A	34.43	84A	33.28	1.15
05/22/08	128A	34.48	84A	33.33	1.15
11/20/08	128A	33.64	84A	33.02	0.62
03/27/08	129A	28.70	121A	27.52	1.18
05/22/08	129A	28.77	121A	27.42	1.35
08/28/08	129A	28.65	121A	27.17	1.48
11/20/08	129A	28.33	121A	26.89	1.44
03/27/08	130A	27.98	59A	27.01	0.97
05/22/08	130A	27.94	59A	26.95	0.99
08/28/08	130A	27.60	59A	26.74	0.86
11/20/08	130A	27.40	59A	26.56	0.84
03/27/08	136A	32.83	133A	31.82	1.01
05/22/08	136A	32.78	133A	31.78	1.00
08/28/08	136A	32.48	133A	31.47	1.01
11/20/08	136A	32.02	133A	31.05	0.97
03/27/08	156A	22.29	157A	24.69	-2.40
05/22/08	156A	22.06	157A	24.62	-2.56
08/28/08	156A	21.82	157A	24.38	-2.56
11/20/08	156A	21.62	157A	24.15	-2.53
03/27/08	20B1	33.74	33A	33.86	-0.12
05/22/08	20B1	33.79	33A	35.34	-1.55
08/28/08	20B1	33.44	33A	33.66	-0.22
11/20/08	20B1	32.98	33A	33.28	-0.30

Table 10. Groundwater Elevations, Slurry Wall Well Pairs, January through December 2008, Former Fairchild Buildings 1-4, Mountain View, California

Date	Well ID (outer/B1 well)	Groundwater Elevation (ft amsl)	Well ID (inner/A well)	Groundwater Elevation (ft amsl)	Difference [1] (ft)
03/27/08	60B1	22.48	118A	24.95	-2.47
05/22/08	60B1	22.49	118A	24.68	-2.19
08/28/08	60B1	21.99	118A	24.53	-2.54
11/20/08	60B1	21.55	118A	24.53	-2.98
03/27/08	115B1	25.81	124A	25.11	0.70
05/22/08	115B1	26.00	124A	25.41	0.59
08/28/08	115B1	25.50	124A	25.20	0.30
11/20/08	115B1	25.12	124A	25.04	0.08
03/27/08	119B1	32.80	133A	31.82	0.98
05/22/08	119B1	32.81	133A	31.78	1.03
08/28/08	119B1	32.51	133A	31.47	1.04
11/20/08	119B1	32.01	133A	31.05	0.96

Notes and Abbreviations:

1 = Positive value denotes either an inward gradient (outer > inner) or an upward gradient (B1 > A).
A = A water-bearing zone
B1 = B1 water-bearing zone
ft = feet
ft amsl = feet above mean sea level
inner = well inside slurry wall
outer = well outside slurry wall

Table 11. Chemical Analytic Results Summary, January 2004 through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab/Analytical Method	Chloro-form	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	Total VOC's
			< micrograms per liter (µg/L) >												
33A	11/19/07	CT/8260	<1	**1.2**	<0.5	**2.4**	**12**	<0.5	**8.5**	<20	<0.5	**4**	**61**	<0.5	**89**
46A	11/21/07	CT/8260	<1	**0.6**	<0.5	**1.2**	**0.6**	<0.5	<0.5	<20	<0.5	**1.2**	**3.4**	<0.5	**7**
46A	11/14/08	CT/8260	<1	**1.3**	<0.5	**2.3**	**0.7**	<0.5	**1.2**	<20	<0.5	**1.7**	**20**	<0.5	**27**
51A	11/08/07	CT/8260	<20	**19**	<10	**26**	**1,300**	**34**	<10	<400	<10	<10	**11**	<10	**1,412**
57A	11/19/07	CT/8260	<50	**36**	<25	**31**	**4,100**	**210**	<25	<1,000	<25	<25	**76**	<25	**4,583**
59A	11/21/07	CT/8260	<1	**14**	<0.5	**9.1**	**8.1**	<0.5	<0.5	<20	**0.5**	**8.1**	**37**	**0.5**	**77**
61A	11/21/07	CT/8260	<1	**1.6**	<0.5	**2.3**	**0.7**	<0.5	**0.8**	<20	<0.5	**1.6**	**19**	<0.5	**26**
61A	11/14/08	CT/8260	<1	**0.6**	<0.5	**0.8**	<0.5	<0.5	<0.5	<20	<0.5	**1.2**	**3.5**	<0.5	**6**
67A	11/13/07	CT/8260	<10	**7.1**	<5	**11**	**990**	**9.8**	**7.9**	<200	<5	<5	**200**	<5	**1,226**
68A	11/21/07	CT/8260	<7.1	**4.1**	<3.6	**5.1**	**350**	**7.6**	<3.6	<140	<3.6	**4.6**	**180**	<3.6	**551**
76A	12/11/08	CT/8260	<2.5	**2.4**	<1.3	**2.1**	**140**	**2.3**	**4.4**	<50	<1.3	**1.3**	**300**	<1.3	**453**
84A	11/19/07	CT/8260	<1	**3**	<0.5	**0.9**	**1.8**	<0.5	<0.5	<20	<0.5	**4.4**	**1**	<0.5	**11**
118A	12/11/08	CT/8260	<7.1	**18**	<3.6	**8.7**	**210**	**22**	**7.7**	<140	**4.2**	**4.7**	**970**	<3.6	**1,245**
121A	11/08/07	CT/8260	<25	<13	<13	<13	**1,500**	**61**	<13	<500	<13	<13	**42**	<13	**1,603**
124A	11/08/07	CT/8260	<83	<42	<42	**42**	**4,400**	<42	<42	<1,700	<42	<42	**240**	<42	**4,682**
127A	11/10/04	CT/8260	**1**	<0.5	<0.5	**1.1**	**2.1**	<0.5	<5	<5	<0.5	**1.8**	**44**	<0.5	**50**
127A	11/10/05	CT/8260	<1	<0.5	<0.5	**0.9**	**2.1**	<0.5	**2.6**	<20	<0.5	**1.8**	**46**	<0.5	**53**
127A	11/20/06	CT/8260	<1	<0.5	<0.5	**0.9**	**2.2**	<0.5	**3.1**	<20	<0.5	**1.9**	**32**	<0.5	**40**
127A	11/07/07	CT/8260	<1	**1.5**	<0.5	**3**	**19**	<0.5	**11**	<20	<0.5	**4.4**	**71**	<0.5	**110**
127A	11/06/08	CT/8260	**0.65**	**2.5**	<0.5	**4.8**	**38**	<0.5	**18**	<0.5	<0.5	**7.1**	**95**	<0.5	**166**
130A	11/10/04	CT/8260	<0.7	**3**	<0.7	**2.7**	**8.9**	<0.7	<7.1	<7.1	**11**	**2.9**	**120**	<0.7	**150**
130A	11/11/05	CT/8260	<2.5	**2.7**	<1.3	**3**	**9.2**	<1.3	<1.3	<50	**7.3**	**3.1**	**150**	<1.3	**177**

Table 11. Chemical Analytic Results Summary, January 2004 through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab/Analytical Method	Chloro-form	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	Total VOC's
			< micrograms per liter (µg/L) >												
130A	11/21/06	CT/8260	<1	**3.2**	<0.5	**4.4**	**12**	**0.7**	<1.3	<20	**11**	**4**	**170**	<0.5	**207**
130A	11/07/07	CT/8260	<2	**1.9**	<1	**2.3**	**14**	<1	<1	<40	**3.6**	**2.1**	**130**	<1	**156**
130A	11/12/08	CT/8260	<2	**1.9**	<1	**3**	**12**	<1	<1	<40	**5.5**	**2.9**	**140**	<1	**167**
133A	11/08/07	CT/8260	<3.3	**3.5**	<1.7	**3.8**	**72**	**3**	**16**	<67	<1.7	**2.8**	**260**	<1.7	**361**
156A	11/10/04	CT/8260	<17	<17	<17	**20**	**2,500**	**25**	<170	<170	<17	<17	**43**	<17	**2,588**
156A	11/11/05	CT/8260	<25	<13	<13	<13	**2,000**	**20**	<13	<500	<13	<13	<13	<13	**2,020**
156A	11/21/06	CT/8260	<17	<8.3	<8.3	**16**	**2,000**	**29**	<8.3	<330	<8.3	<8.3	**36**	<8.3	**2,081**
156A	11/07/07	CT/8260	<33	<17	<17	<17	**1,700**	**43**	<17	<670	<17	<17	**80**	<17	**1,823**
156A	11/11/08	CT/8260	<1	**4.7**	<0.5	**11**	**1,300**	**12**	**1**	<20	<0.5	<0.5	**61**	**0.6**	**1,391**
157A	11/19/07	CT/8260	<25	**51**	<13	**34**	**1,800**	**25**	**20**	<500	**13**	<13	**2,000**	<13	**3,943**
157A	12/11/08	CT/8260	<13	**52**	<6.3	**27**	**1,500**	**33**	**20**	<250	**6.5**	<6.3	**1,100**	<6.3	**2,739**
157A (DUP)	12/11/08	CT/8260	<7.1	**56**	<3.6	**18**	**1,500**	**86**	**15**	<140	**5**	<3.6	**1,200**	<3.6	**2,880**
AE/RW-9-1	08/08/07	CT/8260	<33	**500**	<17	**74**	**1,000**	<17	**24**	<670	<17	**2,600**	**1,200**	**71**	**5,469**
AE/RW-9-1	04/22/08	CT/8260	<8.3	**47**	<4.2	**22**	**430**	**11**	**16**	<170	<4.2	**140**	**650**	**5.1**	**1,331**
AE/RW-9-1	11/07/08	CT/8260	<13	**54**	<6.3	**24**	**460**	**10**	**19**	<250	<6.3	**360**	**730**	<6.3	**1,668**
AE/RW-9-2	08/08/07	CT/8260	<100	<50	<50	<50	**5,100**	**59**	**110**	<2,000	<50	**84**	**5,400**	**220**	**10,973**
AE/RW-9-2	11/16/07	CT/8260	<50	**58**	<25	**39**	**3,700**	**45**	**56**	<1,000	<25	**74**	**2,500**	**170**	**6,642**
AE/RW-9-2	11/06/08	CT/8260	<100	<100	<100	<100	**3,100**	<100	<100	<100	<100	<100	**4,100**	**130**	**7,330**
BLDG-18	11/24/08	CT/8260	<7.1	<3.6	<3.6	<3.6	**300**	**12**	<3.6	<140	<3.6	<3.6	**510**	**4.8**	**827**
RW-3A	08/08/07	CT/8260	<1	**0.8**	<0.5	**1.8**	**9.4**	<0.5	**5.4**	<20	<0.5	**2.1**	**51**	<0.5	**71**
RW-3A	11/16/07	CT/8260	<1	**1.1**	<0.5	**1.7**	**16**	<0.5	**7.3**	<20	<0.5	**3.6**	**65**	<0.5	**95**
RW-3A	11/15/08	CT/8260	<1	**1.8**	<0.5	**3.5**	**28**	<0.5	**16**	<20	<0.5	**5.3**	**83**	<0.5	**138**
RW-4A	11/10/04	CT/8260	<0.7	**2.4**	<0.7	**2.6**	**17**	<0.7	<7.1	<7.1	**9.2**	**4**	**87**	**0.9**	**127**
RW-4A	11/11/05	CT/8260	<1	**3**	<0.5	**3.6**	**18**	<0.5	**0.9**	<20	**11**	**5.5**	**78**	**2.1**	**126**
RW-4A	11/21/06	CT/8260	<1	**2.7**	<0.5	**3.4**	**18**	**0.5**	<1	<20	**11**	**4.7**	**99**	**1.4**	**145**
RW-4A	08/08/07	CT/8260	<1	**2.2**	<0.5	**2.6**	**20**	<0.5	**0.7**	<20	**8.7**	**4.2**	**96**	**2.2**	**139**

Table 11. Chemical Analytic Results Summary, January 2004 through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab/Analytical Method	Chloro-form	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	Total VOC's
			< micrograms per liter (µg/L) >												
RW-4A	11/16/07	CT/8260	<1	**1.9**	<0.5	**1.5**	**30**	**0.5**	<0.5	<20	**3.7**	**2.3**	**49**	**5.6**	**95**
RW-4A	11/15/08	CT/8260	<1	**1.5**	<0.5	**0.9**	**15**	**0.5**	<0.5	<20	**3.1**	**1.7**	**42**	**3.1**	**68**
RW-5A	08/08/07	CT/8260	<25	**32**	<13	**24**	**1,100**	**110**	<50	<500	**79**	**13**	**1,400**	**15**	**2,933**
RW-5A	11/14/07	CT/8260	<25	**44**	<13	**30**	**1,300**	**130**	<13	<500	**81**	**21**	**1,700**	**25**	**3,501**
RW-5A	11/14/08	CT/8260	<14	**36**	<7.1	**26**	**980**	**100**	<7.1	<290	**85**	**17**	**1,500**	**21**	**2,935**
RW-7A	08/08/07	CT/8260	<14	**16**	<7.1	**14**	**640**	**24**	**6.4**	<290	**8.9**	<7.1	**880**	<7.1	**1,606**
RW-7A	11/12/07	CT/8260	<17	**17**	<8.3	**16**	**750**	**18**	**8.6**	<330	<8.3	<8.3	**1,000**	<8.3	**1,823**
RW-7A	11/04/08	CT/8260	<13	**13**	<6.3	**17**	**500**	**20**	**7.1**	<250	**7.6**	<6.3	**890**	<6.3	**1,467**
RW-9A	11/17/04	CT/8260	<3.6	<3.6	<3.6	<3.6	**230**	**7.6**	<36	<36	<3.6	<3.6	**490**	<3.6	**728**
RW-9A	11/11/05	CT/8260	<5	**3.4**	<2.5	**3.2**	**280**	**6.3**	**4**	<100	<2.5	<2.5	**490**	<2.5	**787**
RW-9A	11/15/06	CT/8260	<2.5	**4.3**	<1.3	**4**	**380**	**7.2**	**6.3**	<50	<1.3	**1.9**	**540**	<1.3	**944**
RW-9A	08/08/07	CT/8260	<7.1	<3.6	<3.6	<3.6	**350**	**4.9**	**4.8**	<140	<3.6	<3.6	**520**	<3.6	**880**
RW-9A	11/16/07	CT/8260	<10	**6.2**	<5	**7.7**	**720**	**16**	**12**	<200	<5	<5	**850**	<5	**1,612**
RW-9A	11/15/08	CT/8260	<13	<6.3	<6.3	**6.4**	**880**	**10**	**8.3**	<250	<6.3	<6.3	**410**	<6.3	**1,315**
RW-16A	08/08/07	CT/8260	<5	**5.8**	<2.5	**11**	**110**	<2.5	**15**	<100	<2.5	**3.4**	**430**	<2.5	**575**
RW-16A	11/13/07	CT/8260	<6.3	**7.5**	<3.1	**11**	**110**	<3.1	**7.9**	<130	<3.1	<3.1	**320**	<3.1	**456**
RW-16A	11/15/08	CT/8260	<1.4	**9.8**	<0.7	**17**	**150**	**1.2**	**7.6**	<29	<0.7	**3.8**	**280**	**1.2**	**471**
RW-18A	08/08/07	CT/8260	<10	**12**	<5	**13**	**610**	**9.7**	**5.2**	<200	<5	<5	**660**	<5	**1,310**
RW-18A	11/19/07	CT/8260	<8.3	**7.8**	<4.2	**9.9**	**340**	**9.3**	**6.8**	<170	<4.2	<4.2	**520**	<4.2	**894**
RW-18A	11/14/08	CT/8260	<6.3	**9**	<3.1	**8.9**	**380**	**13**	<3.1	<130	<3.1	<3.1	**500**	<3.1	**911**
RW-20A	08/08/07	CT/8260	<13	**23**	<6.3	**18**	**860**	**11**	**9.1**	<250	<6.3	**34**	**790**	**15**	**1,768**
RW-20A	11/16/07	CT/8260	<6.3	**83**	<3.1	**69**	**480**	**8.6**	**7.1**	<130	**8.5**	**420**	**440**	<3.1	**1,516**
RW-20A	11/15/08	CT/8260	<5	**21**	<2.5	**18**	**590**	**8.4**	**6.7**	<100	**3.1**	**48**	**360**	**4.2**	**1,063**
RW-21A	08/08/07	CT/8260	<6.3	**8.7**	<3.1	**7.4**	**250**	**6.9**	**12**	<130	**6.3**	**8.5**	**340**	<3.1	**644**
RW-21A	11/16/07	CT/8260	<1.4	**8.1**	<0.7	**5**	**64**	**4.8**	**52**	<29	**3.5**	**4.9**	**71**	**1.1**	**214**
RW-21A	11/17/08	CT/8260	<1	**7.8**	<0.5	**5.8**	**68**	**8.1**	**49**	<20	<0.5	**1.7**	**58**	**1.3**	**200**
RW-21A (DUP)	11/17/08	CT/8260	<1	**8**	<0.5	**5.5**	**68**	**8.7**	**50**	<20	<0.5	**1.6**	**60**	**1.3**	**203**

Table 11. Chemical Analytic Results Summary, January 2004 through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab/Analytical Method	Chloro-form	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	Total VOC's
			< micrograms per liter (µg/L) >												
RW-25A	02/12/04	CT/8260	<7.1	**7.7**	<7.1	**11**	**1,100**	**16**	<71	<71	<7.1	<7.1	**1,400**	**32**	**2,567**
RW-25A	11/11/04	CT/8260	<5	<5	<5	**7.3**	**640**	**23**	**25**	<200	<5	<5	**1,100**	**16**	**1,811**
RW-25A	11/18/05	CT/8260	<25	<13	<13	<13	**920**	<13	**19**	<500	<13	<13	**1,300**	**32**	**2,271**
RW-25A	11/21/06	CT/8260	<40	<10	<10	**17**	**1,400**	**20**	**72**	<400	<10	<10	**1,700**	**37**	**3,246**
RW-25A	11/16/07	CT/8260	<33	<17	<17	**24**	**2,600**	**29**	**42**	<670	<17	<17	**2,200**	**91**	**4,986**
RW-25A	11/07/08	CT/8260	<25	<13	<13	**20**	**2,100**	**25**	**39**	<500	<13	<13	**2,100**	**55**	**4,339**
RW-25A (DUP)	11/07/08	CT/8260	<40	<20	<20	**21**	**2,100**	**24**	**44**	<800	<20	<20	**2,100**	**55**	**4,344**
RW-27A	08/08/07	CT/8260	<20	**19**	<10	**18**	**590**	**21**	**6.5**	<400	<10	<10	**1,300**	<10	**1,955**
RW-27A	11/14/07	CT/8260	<20	**17**	<10	<10	**730**	**41**	<10	<400	<10	<10	**1,300**	<10	**2,088**
RW-27A	11/04/08	CT/8260	<20	**17**	<10	**16**	**580**	**14**	<10	<400	<10	<10	**1,200**	<10	**1,827**
RW-28A	08/08/07	CT/8260	<7.1	**10**	<3.6	**12**	**420**	**20**	**3.5**	<140	**4.2**	<3.6	**590**	<3.6	**1,072**
RW-28A (DUP)	08/08/07	CT/8260	<13	**12**	<6.3	**11**	**440**	**21**	**3.4**	<250	<6.3	<6.3	**610**	<6.3	**1,109**
RW-28A	11/13/07	CT/8260	<10	**9.5**	<5	**15**	**330**	**18**	<5	<200	**5.7**	<5	**740**	<5	**1,133**
RW-28A	11/15/08	CT/8260	<8.3	**9.7**	<4.2	**12**	**800**	**15**	<4.2	<170	<4.2	<4.2	**41**	**12**	**898**
2B1	11/10/04	CT/8260	<4.2	**6.8**	<4.2	**8.8**	**120**	<4.2	<42	<42	<4.2	<4.2	**480**	<4.2	**616**
2B1	11/16/05	CT/8260	<3.3	**5.7**	<1.7	**4.4**	**98**	**3.6**	**4.2**	<67	<1.7	<1.7	**390**	<1.7	**506**
2B1	11/17/06	CT/8260	<1	**5.3**	<0.5	**9.9**	**100**	**0.8**	**6.9**	<20	<0.5	**1.8**	**520**	<4.2	**645**
2B1	11/08/07	CT/8260	<7.1	**5.3**	<3.6	**6.5**	**110**	**3.8**	**5.6**	<140	<3.6	<3.6	**500**	<3.6	**631**
2B1	11/06/08	CT/8260	<0.5	**5.5**	<0.5	**8.7**	**93**	**0.99**	**5.4**	<0.5	<0.5	<0.5	**470**	<0.5	**584**
60B1	11/23/04	CT/8260	<20	<20	<20	<20	**250**	<20	**97**	<800	<20	<20	**4,100**	<20	**4,447**
60B1	11/11/05	CT/8260	<50	<25	<25	<25	**340**	<25	**64**	<1,000	<25	<25	**4,000**	<25	**4,404**
60B1	11/08/06	CT/8260	<33	<17	<17	**19**	**250**	<17	**120**	<670	<17	<17	**3,200**	<17	**3,589**
60B1	11/12/07	CT/8260	<50	<25	<25	<25	**160**	<25	**64**	<1,000	<25	<25	**3,400**	<25	**3,624**
60B1	11/11/08	CT/8260	<1	**4.3**	<0.5	**14**	**240**	**2.8**	**56**	<20	**1.4**	**0.5**	**3,000**	<0.5	**3,319**
67B1	08/09/05	UNK/8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**19**	<1	**19**
67B1	11/27/07	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	**0.9**	<20	<0.5	<0.5	**9.5**	<0.5	**10**
67B1	11/12/08	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	**1.1**	<20	<0.5	**0.5**	**14**	<0.5	**16**

Table 11. Chemical Analytic Results Summary, January 2004 through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab/Analytical Method	Chloro-form	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	Total VOC's
			micrograms per liter (µg/L)												
115B1	11/10/04	CT/8260	<83	<83	<83	<83	**220**	<83	<830	<830	<83	<83	**8,500**	<83	**8,720**
115B1	11/16/05	CT/8260	<63	<31	<31	**55**	**260**	<31	**180**	<1,300	<31	<31	**8,200**	<31	**8,695**
115B1	11/21/06	CT/8260	<63	<31	<31	**39**	**230**	<31	**140**	<1,300	<31	<31	**7,600**	<31	**8,009**
115B1	11/08/07	CT/8260	<50	<25	<25	<25	**220**	<25	**49**	<1,000	<25	<25	**4,500**	<25	**4,769**
115B1	11/18/08	CT/8260	<100	<50	<50	**79**	**500**	<50	**160**	<2,000	<50	<50	**7,600**	<50	**8,339**
147B1	11/22/04	CT/8260	<6.3	<6.3	<6.3	**9**	**57**	<6.3	**9.5**	<250	<6.3	<6.3	**1,100**	<6.3	**1,176**
147B1	11/11/05	CT/8260	<10	<5	<5	**5.1**	**35**	<5	**10**	<200	<5	<5	**830**	<5	**880**
147B1	11/21/06	CT/8260	<1	<0.5	<0.5	**0.5**	**50**	<0.5	<0.5	<20	<0.5	<0.5	**8.2**	<0.5	**59**
147B1	11/07/07	CT/8260	<13	<6.3	<6.3	<6.3	**33**	<6.3	**6.6**	<250	<6.3	<6.3	**790**	<6.3	**830**
147B1	11/18/08	CT/8260	<1	<0.5	<0.5	<0.5	**56**	<0.5	<0.5	<20	<0.5	<0.5	**16**	<0.5	**72**
RW-3(B1)	11/09/04	CT/8260	<2	<2	<2	**3.3**	**13**	<2	**19**	<80	<2	**7.1**	**290**	<2	**332**
RW-3(B1)	11/10/05	CT/8260	<2.5	**1.3**	<1.3	**2.1**	**14**	<1.3	**11**	<50	<1.3	**5.5**	**250**	<1.3	**284**
RW-3(B1)	11/21/06	CT/8260	<4	<2	<2	**4.2**	**12**	<2	**17**	<80	<2	**8.3**	**300**	<2	**342**
RW-3(B1)	08/08/07	CT/8260	<3.3	<1.7	<1.7	**1.8**	**10**	<1.7	**15**	<67	<1.7	**6.7**	**270**	<1.7	**304**
RW-3(B1)	11/16/07	CT/8260	<5	<2.5	<2.5	**2.5**	**9.6**	<2.5	**13**	<100	<2.5	**5.2**	**380**	<2.5	**410**
RW-3(B1)	11/15/08	CT/8260	<2	**1.2**	<1	**2.9**	**15**	<1	**21**	<40	<1	**8.3**	**340**	<1	**388**
RW-4(B1)	11/09/04	CT/8260	<20	<20	<20	<20	**130**	**63**	<20	<800	<20	<20	**2,000**	<20	**2,193**
RW-4(B1)	11/11/05	CT/8260	<17	<8.3	<8.3	<8.3	**270**	**89**	<8.3	<330	<8.3	<8.3	**2,100**	<8.3	**2,459**
RW-4(B1)	11/21/06	CT/8260	<25	<13	<13	<13	**190**	**67**	<13	<500	<13	<13	**2,000**	<13	**2,257**
RW-4(B1)	08/08/07	CT/8260	<33	<17	<17	<17	**230**	**110**	**9.2**	<670	<17	<17	**2,200**	<17	**2,549**
RW-4(B1)	11/27/07	CT/8260	<40	<20	<20	<20	**330**	<20	<20	<800	<20	<20	**2,100**	<20	**2,430**
RW-4(B1)	11/18/08	CT/8260	<33	<17	<17	<17	**840**	<17	<17	<670	<17	<17	**2,000**	<17	**2,840**
RW-5(B1)	11/09/04	CT/8260	<17	<17	<17	<17	**1,500**	**150**	<17	<670	<17	<17	**2,000**	<17	**3,667**
RW-5(B1)	11/11/05	CT/8260	<25	<13	<13	**13**	**1,800**	**180**	<13	<500	<13	<13	**1,900**	<13	**3,908**
RW-5(B1)	11/21/06	CT/8260	<25	<13	<13	**13**	**1,900**	**170**	<13	<500	<13	<13	**1,900**	<13	**3,998**
RW-5(B1)	08/09/07	CT/8260	<33	<17	<17	<17	**1,800**	**160**	<67	<670	<17	<17	**1,900**	<17	**3,860**
RW-5(B1)	11/14/07	CT/8260	<40	<20	<20	<20	**1,900**	**180**	<20	<800	<20	<20	**2,200**	<20	**4,280**
RW-5(B1)	11/13/08	CT/8260	<14	**7.2**	<7.1	**9.3**	**1,300**	**140**	<7.1	<290	<7.1	<7.1	**1,400**	<7.1	**2,870**

Table 11. Chemical Analytic Results Summary, January 2004 through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab/Analytical Method	Chloro-form	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	Total VOC's
			< micrograms per liter (µg/L) >												
RW-7(B1)	11/09/04	CT/8260	<36	<36	<36	<36	**400**	<36	**44**	<1,400	<36	<36	**4,000**	<36	**4,444**
RW-7(B1)	11/11/05	CT/8260	<71	<36	<36	<36	**200**	<36	<36	<1,400	<36	<36	**5,200**	<36	**5,400**
RW-7(B1)	11/21/06	CT/8260	<25	<13	<13	**17**	**320**	<13	**49**	<500	<13	<13	**4,400**	<13	**4,786**
RW-7(B1)	08/09/07	CT/8260	<63	<31	<31	<31	**310**	<31	**24**	<1,300	<31	<31	**3,400**	<31	**3,734**
RW-7(B1)	11/12/07	CT/8260	<71	<36	<36	<36	**240**	<36	<36	<1,400	<36	<36	**3,400**	<36	**3,640**
RW-7(B1)	11/04/08	CT/8260	<50	<25	<25	<25	**140**	<25	<25	<1,000	<25	<25	**2,700**	<25	**2,840**
RW-9(B1)R	11/17/04	CT/8260	<25	<25	<25	<25	**610**	<25	<250	<250	<25	<25	**3,700**	<25	**4,310**
RW-9(B1)R	11/11/05	CT/8260	<50	<25	<25	**26**	**940**	<25	**93**	<1,000	<25	<25	**4,800**	<25	**5,859**
RW-9(B1)R	11/10/06	CT/8260	<50	<25	<25	<25	**850**	<25	**160**	<1,000	<25	<25	**4,300**	<25	**5,310**
RW-9(B1)R	11/12/07	CT/8260	<63	<31	<31	<31	**720**	<31	**82**	<1,300	<31	<31	**3,400**	<31	**4,202**
RW-9(B1)R	11/04/08	CT/8260	<40	<20	<20	<20	**610**	<20	**45**	<800	<20	<20	**3,000**	<20	**3,655**
RW-12(B1)	11/10/04	CT/8260	<6.3	**10**	<6.3	**9.9**	**240**	**29**	<63	<63	<6.3	<6.3	**860**	<6.3	**1,149**
RW-12(B1)	11/16/05	CT/8260	<13	**7.5**	<6.3	**6.8**	**140**	**13**	**14**	<250	<6.3	<6.3	**980**	<6.3	**1,161**
RW-12(B1)	11/21/06	CT/8260	<20	<10	<10	<10	**140**	<10	**13**	<400	<10	<10	**940**	<10	**1,093**
RW-12(B1)	08/09/07	CT/8260	<13	<6.3	<6.3	<6.3	**100**	**7.2**	**7.2**	<250	<6.3	<6.3	**780**	<6.3	**894**
RW-12(B1)	11/16/07	CT/8260	<20	<10	<10	<10	**190**	<10	<20	<400	<10	<10	**1,500**	<10	**1,690**
RW-12(B1)	11/15/08	CT/8260	<20	<10	<10	<10	**330**	<10	<10	<400	<10	<10	**1,300**	<10	**1,630**
10B2	11/09/04	CT/8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.5**	<0.5	**1**
10B2	11/10/05	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.8**	<0.5	**1**
10B2	11/20/06	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**1.7**	<0.5	**2**
10B2	11/07/07	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.7**	<0.5	**1**
10B2	11/18/08	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**1.6**	<0.5	**2**
11B2	11/09/04	CT/8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
11B2	11/11/05	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
11B2	11/21/06	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
11B2	11/07/07	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
11B2	11/11/08	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.8**	<0.5	**1**
38B2	11/09/04	CT/8260	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	**5.4**	<67	<1.7	<1.7	**260**	<1.7	**265**

Table 11. Chemical Analytic Results Summary, January 2004 through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab/Analytical Method	Chloro-form	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	Total VOC's
			< micrograms per liter (µg/L) >												
38B2	11/08/05	CT/8260	<4	<2	<2	**2.3**	<2	<2	**4.1**	<80	<2	<2	**300**	<2	**306**
38B2	11/10/06	CT/8260	<2	<1	<1	<1	**1.4**	<1	**5.5**	<40	<1	<1	**230**	<1	**237**
38B2	11/14/07	CT/8260	<3.3	<1.7	<1.7	<1.7	**1.9**	<1.7	<1.7	<67	<1.7	<1.7	**230**	<1.7	**232**
38B2	11/13/08	CT/8260	<2.5	<1.3	<1.3	<1.3	**1.5**	<1.3	**1.7**	<50	<1.3	<1.3	**190**	<1.3	**193**
118B2	11/10/04	CT/8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<0.5	<0.5	**0.5**	<0.5	**1**
118B2	11/10/05	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.7**	<0.5	**1**
118B2	11/17/06	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
118B2	11/08/07	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**2**	<0.5	**2**
118B2	11/06/08	CT/8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.59**	<0.5	**1**
148B2	11/09/04	CT/8260	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.6**	<0.5	**1**
148B2	11/11/05	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
148B2	11/21/06	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	**0.5**	<0.5	**1**
148B2	11/13/08	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
RW-3(B2)	11/10/04	CT/8260	<20	<20	<20	<20	**150**	<20	<200	<200	<20	<20	**2,600**	<20	**2,750**
RW-3(B2)	12/05/05	CT/8260	<10	<5	<5	**12**	**960**	**13**	<5	<200	<5	<5	**1,200**	<5	**2,185**
RW-3(B2)	11/21/06	CT/8260	<25	<13	<13	<13	**420**	**21**	<13	<500	<13	<13	**30**	**1,100**	**1,571**
RW-3(B2)	11/16/07	CT/8260	<14	<7.1	<7.1	**15**	**1,100**	**21**	<7.1	<290	<7.1	<7.1	**300**	**400**	**1,836**
RW-3(B2)	11/15/08	CT/8260	<20	<10	<10	**12**	**1,300**	**20**	<10	<400	<10	<10	**50**	**500**	**1,882**
RW-4(B2)	11/22/04	CT/8260	<50	<50	<50	<50	**7,500**	**68**	<50	<2,000	<50	<50	**12,000**	<50	**19,568**
RW-4(B2)	11/11/05	CT/8260	<140	<71	<71	<71	**8,100**	**96**	<71	<2,900	<71	<71	**11,000**	<71	**19,196**
RW-4(B2)	11/21/06	CT/8260	<170	<83	<83	<83	**9,000**	**91**	<83	<3,300	<83	<83	**14,000**	<83	**23,091**
RW-4(B2)	11/14/07	CT/8260	<200	<100	<100	<100	**6,800**	<100	<100	<4,000	<100	<100	**11,000**	<100	**17,800**
RW-4(B2)	11/07/08	CT/8260	<170	<83	<83	<83	**6,900**	<83	<83	<3,300	<83	<83	**10,000**	<83	**16,900**
RW-5(B2)	11/10/04	CT/8260	<0.5	<0.5	<0.5	<0.5	**1**	<0.5	<5	<5	<0.5	<0.5	<0.5	<0.5	**1**
RW-5(B2)	11/11/05	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
RW-5(B2)	11/21/06	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	**12**	**12**
RW-5(B2)	11/20/07	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
RW-5(B2)	11/15/08	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND

Table 11. Chemical Analytic Results Summary, January 2004 through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Sample Location	Sample Date	Lab/Analytical Method	Chloro-form	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	Total VOC's
			< micrograms per liter (µg/L) >												
RW-7(B2)	11/09/04	CT/8260	<0.5	<0.5	<0.5	<0.5	**2.3**	<0.5	**0.8**	<20	<0.5	<0.5	**4**	<0.5	**7**
RW-7(B2)	11/11/05	CT/8260	<14	**19**	<7.1	**17**	**800**	**17**	**9.8**	<290	**8.5**	<7.1	**1,300**	<7.1	**2,188**
RW-7(B2)	05/24/06	CT/8260	<1	<0.5	<0.5	<0.5	**3.4**	<0.5	<0.5	<20	<0.5	<0.5	**0.6**	<0.5	**4**
RW-7(B2)	11/21/06	CT/8260	<1	**1.3**	<0.5	**2.2**	**8.2**	<0.5	**1.8**	<20	<0.5	<0.5	**9.4**	**2.4**	**25**
RW-7(B2)	11/16/07	CT/8260	<1	<0.5	<0.5	<0.5	**9.7**	<0.5	**1.2**	<20	<0.5	<0.5	**12**	<0.5	**23**
RW-7(B2)	11/18/08	CT/8260	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	ND
RW-9(B2)	11/17/04	CT/8260	<5	<5	<5	<5	**220**	**16**	<50	<50	<5	<5	**790**	<5	**1,026**
RW-9(B2)	11/11/05	CT/8260	<1	**0.9**	<0.5	**9.8**	**230**	**6**	**21**	<20	<0.5	<0.5	**810**	<0.5	**1,078**
RW-9(B2)	11/10/06	CT/8260	<8.3	<4.2	<4.2	**8.2**	**270**	**5.7**	**32**	<170	<4.2	<4.2	**790**	<4.2	**1,106**
RW-9(B2)	11/12/07	CT/8260	<8.3	<4.2	<4.2	**7.5**	**280**	**6.1**	**13**	<170	<4.2	<4.2	**610**	<4.2	**917**
RW-9(B2)	11/04/08	CT/8260	<5	<2.5	<2.5	**6**	**230**	**5.1**	**9**	<100	<2.5	<2.5	**660**	<2.5	**910**

Notes and Abbreviations:
< # = analyte not detected above the reported detection limit of "#" ug/L
8010 = USEPA Method 8010 fo halogenated VOCs
8260 = USEPA Method 8260B for halogenated VOCs, for Method 8010 list of analytes
8270 = USEPA Method 8270C for SVOCs
CT = Curtis and Tompkins, Berkeley, California
DCA = Dichloroethane
DCE = Dichloroethene
DUP = duplicate sample
ND = no analytes detected above the laboratory detection limit
PCE = Tetrachloroethene
TCA = Trichloroethane
TCE = Trichloroethene
VOCs = volatile organic compounds

Table 12. Capture Zone Calculations and Analysis, Former Fairchild Buildings 1-4, Mountain View, California

Extraction Well:		RW-4A	RW-4B1	RW-7B1	RW-12B1	RW-4B2
b		15	25	25	25	35
i		0.004	0.003	0.003	0.003	0.004
K		79.200	19.584	19.584	19.584	3.168
T		1188	490	490	490	111
w		200	400	500	200	500
estimated well loss (ft):	$s_w = CQ^2$	0.000	0.000	0.001	0.000	0.000
extraction rate (gpm):		0.00	0.00	2.61	0.00	1.32
stagnation point (ft):	$X_0 = -Q / 2\pi Ti$	0	0	-54	0	-91
capture zone width (at extraction well; ft)	$Y_{well} = \pm Q / 4Ti$	0	0	86	0	143
capture zone width (maximum; ft):	$Y_{max} = \pm Q / 2Ti$	0	0	171	0	286

LINE OF EVIDENCE	CAPTURE?	COMMENTS
Water Levels *potentiometric surface maps*	*Adequate.*	*A-zone wells were shut-downs in 2007. Potentiometric surface maps indicate complete capture in B1- and B2-zones.*
Calculations *capture zone widths*	*Adequate.*	*The calculated stagnations points are smaller than target captures. These calculated values are balanced by the observed water levels and chemical concentration data. Therefore primary weight is afforded to measured water level data and the resulting potentiometric surface to assess capture.*
Concentration Trends *downgradient monitoring wells*	*Adequate.*	*TCE increases were only detected in upgradient well 127A.*

Notes and Abbreviations:

b = aquifer or saturated thickness (ft)
C = turbulent well loss coefficient from Walton, 1962 (sec^2/ft^5); the following are coefficients and their corresponding well condition:
5 = properly designed and developed, 5 to 10 = mild deterioration, 10 to 40 = severe deterioration (40 used in the calculation)
factor = accounts for other contributions to the extraction well (a factor of 1.5 was used in the calculation)
i = regional hydraulic gradient (ft/ft)
K = hydraulic conductivity (ft/day)
Q = extraction flow rate (gallons per minute; gpm)
s_w = drawdown due to well loss
T = transmissivity (ft^2/day)
w = plume width (ft) (the modeled capture zone width is used for all wells)
X_0 = stagnation point (ft)
Y_{max} = maximum capture zone width (ft)
Y_{well} = capture zone width in-line w/ extraction well (ft)

Assumptions:

- homogeneous, isotropic, confined aquifer of infinite extent
- uniform regional horizontal hydraulic gradient
- no net recharge (or net recharge is accounted for in regional hydraulic gradient)
- no other sources of water introduced into aquifer due to extraction
- uniform aquifer thickness
- fully penetrating extraction well
- steady-state flow
- negligible vertical gradient

Table 13. Extraction Well Target Flow Rates, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California.

Extraction Wells[a]	Target Flow Rate (gpm)	Average Flow Rate (2008)
----------System 1----------		
38B2 (RGRP)	7.5	7.1
RW-3A	off[a]	---
RW-3(B1)	off[a]	---
RW-3(B2)	off[b]	---
RW-4A	off[a]	---
RW-4(B1)	off[a]	---
RW-4(B2)	0.8	1.5
RW-16A	off[a]	---
RW-20A	off[a]	---
RW-21A	off[a]	---
RW-25A	5.5	5.7
RW-28A	off[a]	---
AE/RW-9-1	5.0	4.8
AE/RW-9-2	1.0	1.9

Extraction Wells[a]	Target Flow Rate (gpm)	Average Flow Rate (2008)
----------System 3----------		
RW-5A	3.0	2.9
RW-5(B1)	4.0	3.1
RW-5(B2)	off[b]	---
RW-7A	7.0	6.6
RW-7(B1)	2.0	1.7
RW-7(B2)	off[b]	---
RW-9A (RGRP)	off[a]	---
RW-9(B1) (RGRP)	7.4	7.0
RW-9(B2) (RGRP)	4.7	4.3
RW-18A	off[a]	---
RW-27A	3.0	2.2

Notes & Abbreviations:

a) The following extraction wells have been turned off based on conditional approval to implement the recommendations in the Slurry Wall System Efficiency Report, email from Alana Lee, USEPA, to L. Maile Smith, Northgate Environmental Management, Inc., August 2, 2007:
System 1 Extraction Wells: RW-3A, RW-3(B1), RW-4A, RW-4(B1), RW-16A, RW-20A, RW-21 A, RW-28A
System 3 Extraction Wells: RW-9A, RW-18A, RW-12(B1)

b) Wells turned off with full EPA approval
System 1: RW-3(B2)
System 3: RW-5(B2), RW-7(B2)
Extraction wells RW-3B2 and RW5-B2 have been off since 1999 (Five Year Review Well Flow Summary, RMT).
Well RW-7B2 has been off since February 2000 (RMT, 2000 Annual Report for Fairchild Buildings 1-4).
Target Flow rates as assigned in August 2007

-.- = no data

Table 14. Extraction and Monitoring Well Details, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Well Details	Date Installed	Zone	TOC Elevation (ft amsl)	Diameter (inches)	Total Well Depth (ft btoc)	Top of Screened Interval (ft btoc)	Bottom of Screened Interval (ft btoc)	Top of Sand Pack (ft btoc)	Bottom of Sand Pack (ft btoc)	Well Type
118A	09/19/86	A	39.78	4	20.5	10.5	20.5	6	21	Mon
121A	09/24/86	A	41.82	4	36	26	36	12	38	Mon
124A	09/26/86	A	38.86	4	24	14	24	19	26	Mon
127A	10/01/86	A	43.81	4	20	15	20	13	22	Mon
128A	10/07/86	A	43.38	4	28	18	28	16	30	Mon
130A	10/08/86	A	41.60	4	29	14	29	11	31	Mon
133A	10/10/86	A	43.75	4	30	15	30	13	32	Mon
156A	07/29/93	A	40.22	4	29.5	19.5	29.5	37	55	Mon
157A	07/07/93	A	40.50	4	29.5	19.5	29.5	15	30	Mon
33A	02/02/82	A	43.74	2	34	14	34	14	34	Mon
46A	04/04/82	A	42.10	2	34	14	34	14	34	Mon
51A	02/02/82	A	44.22	2	34	14	34	12	34	Mon
57A	02/02/82	A	39.21	2	35	15	35	12	35	Mon
59A	02/02/82	A	39.56	2	30	15	30	12	30	Mon
61A	04/04/82	A	37.18	2	31	486	496	10	31	Mon
67A	07/07/82	A	39.77	4	31	21	31	10	31	Mon
68A	07/07/85	A	43.26	4	31	21	31	10	31	Mon
76A	07/07/85	A	40.08	4	20	10	20	7.5	22	Mon
84A	10/10/85	A	43.38	4	28	18	28	15	30	Mon
RW-3A	---	A	43.34	6	30.5	19.6	29.6	11	32	Ext
RW-4A	---	A	42.61	6	29	18	28	11	32	Ext
RW-5A	---	A	36.86	6	30.5	19.5	29.5	11	32	Ext
RW-7A	---	A	36.29	6	36	15	35	11	37	Ext
RW-9A	---	A	37.83	6	25	13	23	10	25	Ext
RW-16A	---	A	43.89	8	33	22	32	11	33.5	Ext
RW-18A	12/12/87	A	37.53	6	36	25	35	11	37	Ext
RW-20A	---	A	43.57	8	37.5	26.5	36.5	11	38	Ext
RW-21A	---	A	43.16	6	37	21	36	11	38	Ext
RW-25A	---	A	38.38	6	31	21	31	18	32	Ext
RW-27A	---	A	38.41	6	25	15	25	12	27.5	Ext
RW-28A	---	A	42.33	6	28	18	28	15	31	Ext
AE/RW-9-1	---	A	43.15	6	33	8	33	6	36	Ext
AE/RW-9-2	---	A	43.85	6	37	8	37	6	38	Ext
115B1	09/25/86	B1	38.76	4	64	59	64	57.5	65	Mon
119(B1)	10/16/86	B1	42.96	4	62	52	62	50	34	Mon
147B1	09/05/95	B1	37.82	6	61	50	60	47	62	Mon
2B1	04/07/82	B1	43.43	4	59	47	59	47	60	Mon
20B1	05/05/85	B1	43.89	4	67	57	67	55	68	Mon
60B1	07/11/85	B1	39.64	4	73	63	73	60	75	Mon
67B1	11/11/85	B1	36.93	4	62	56	62	52	67	Mon
RW-3B(1)	---	B1	43.28	6	57	46	56	41	59	Ext

Table 14. Extraction and Monitoring Well Details, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California

Well Details	Date Installed	Zone	TOC Elevation (ft amsl)	Diameter (inches)	Total Well Depth (ft btoc)	Top of Screened Interval (ft btoc)	Bottom of Screened Interval (ft btoc)	Top of Sand Pack (ft btoc)	Bottom of Sand Pack (ft btoc)	Well Type
RW-4B(1)	---	B1	42.66	6	61	50	60	49	63	Ext
RW-5B(1)	---	B1	37.87	6	59	0	0	40	62	Ext
RW-7B(1)	---	B1	38.76	6	66	55	65	45	67	Ext
RW-9B(1)R	---	B1	38.59	6	69	59	69	58	72	Ext
RW-12B(1)	---	B1	40.51	6	62	52	62	49	63	Ext
10B2	03/19/85	B2	43.90	2	90	85	90	83	95	Mon
11B2	03/14/85	B2	37.19	2	92	87	92	85	92	Mon
118B2	10/13/86	B2	43.21	4	89	84	89	81	91	Mon
148B2	09/05/95	B2	37.72	6	86	75	85	72	87	Mon
38B2	08/08/85	B2	44.09	4	88	78	88	71	90	Ext
RW-3B(2)	09/23/86	B2	42.96	6	92	76	91	69	94	Ext
RW-4B(2)	10/13/86	B2	41.79	6	90.5	74.5	89.5	72	93	Ext
RW-5B(2)	03/14/85	B2	37.98	6	95	84	94	67	97.5	Ext
RW-7B(2)	09/05/95	B2	37.18	6	90	80	90	76	93	Ext
RW-9B(2)	---	B2	37.88	6	92.6	82.6	92.6	80	95	Ext

Notes and Abbreviations:

---- = date installed not available
Depth = feet below top-of-casing (ft btoc)
Diameter = inches
TOC Elevation = feet above mean sea level (ft amsl)
Top of Screened Interval = feet below top-of-casing (ft btoc)
Bottom of Screened Interval = feet below top-of-casing (ft btoc)
Top of Sand Pack = feet below top-of-casing (ft btoc)
Bottom of Sand Pack = feet below top-of-casing (ft btoc)
Well Type = extraction well (Ext), monitoring well (Mon)
Zone = A, B1, B2, or C water-bearing zone

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APPENDIX A

2008 ANNUAL REPORT REMEDY PERFORMANCE CHECKLIST

2008 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: **June 3, 2009**

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 A2/B1 aquitard.**
2. **Three treatment systems as detailed below:**

System 1:

- **Three 5,000-pound GAC vessels in series, treatment pad, controls, double-contained groundwater conveyance piping, vaults, electrical distribution, controls and other appurtenances.**
- **Thirteen source control recovery wells (Four wells operated during 2008).**
- **One regional recovery wells (One well operated during 2008).**

System 3:

- **Three 5,000-pound GAC vessels in series, treatment pad, controls, double-contained groundwater conveyance piping, vaults, electrical distribution, controls and other appurtenances.**
- **Seven source control recovery wells (Five wells operated during 2008).**
- **Three regional recovery wells (Two wells operated during 2008).**

System 19:

- **Three 5,000-pound GAC vessels in series, treatment pad, controls, double-contained groundwater conveyance piping, vaults, electrical distribution, controls and other appurtenances.**
- **Fifteen source control recovery wells (Ten operated during 2008).**
- **Seven regional recovery wells (Two operated during 2008).**

II. CONTACTS

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

	Name/Title	Phone	E-mail
RP/Facility Representative	**Du'Bois (Joe) Ferguson Schlumberger Technology Corporation**	**281-285-3692**	dferguson3@sugar-land.oilfield.slb.com
RP Consultant	**John Gallinatti Geosyntec Consultants**	**510-285-2750**	jgallinatti@geosyntec.com
RP Consultant	**Tess Byler Weiss Associates**	**650-968-7000**	tb@weiss.com

2008 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, 350 E. Middlefield Road 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). Bay Alarm Security System at the site.

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:

2008 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:

Maintenance issues:

System 19:
During 2008, the extraction and treatment system operated within the effluent limits established by the site NPDES permit for the entire period. However, the treatment system shut down from July 7-14 for approximately 165 hours without any alarm notification. There was no treatment unit bypass or discharge during the system shut down. Based on communication with Water Board staff on September 30, 2008, any future shut downs greater than 120 hours will be orally reported within five days of shut down, and a written submission within 15 days of shut down.

Additional non-routine maintenance issues are reported in Section 2 of the facility-specific 2008 Annual Progress Reports.

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:

Planned and ongoing redevelopment in the residential area over the western edge of the MEW A/A1 and B1/A2 zone plume. Planned redevelopment of apartments on Whisman Road; ongoing redevelopment of residential area on Fairchild Drive, west of Whisman Road.

Building 18, the 644 National Avenue property has been bought by Carr America National Avenue LLC; redevelopment plans include new buildings and a parking structure.

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

2008 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	**2008 Annual Reports & 5-Year Review**
Capture zone maps, isoconcentration maps	

■ 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	**NPDES Reports**
System Influent & Effluent water samples	**2008 Annual Reports**
VOC mass and groundwater removal graphs, VOC concentration trends	

■ 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 analyticals, GAC removal efficiencies	**NPDES Discharge 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	**2008 Annual Reports & 5-Year Review**
Analysis of inward and upward hydraulic gradients	

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. However, the ROD specifies that the slurry walls, "maintain inward and upward gradients." Historically, that has not been the case in the downgradient direction even under maximum historical pumping scenarios. Since 2007, pumping ceased in the lower concentration/higher pumping rate extraction wells within the slurry walls. Gradients have maintained trends consistent with those prior to reduced groundwater extraction rates within the slurry wall. In one case, a change in gradient from inward to outward was observed in the cross-gradient direction in one of the three slurry walls (Buildings 1-4) in May 2008. In August and November, gradient measurements were inward again.

The chemical concentration data and potentiometric surface contours 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

2008 Annual Report Remedy Performance Checklist

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

Walk-throughs/Surveys: N/A

No additional air work was conducted at 401 and 644 National Avenue in 2008.

Summary of Results: **N/A**

Problems Encountered: **None**

Recommendations/Next Steps: **None**

Schedule: **All work is coordinated with the USEPA.**

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 the core of the TCE plume have continued to decrease in all zones, while the lateral extent of TCE exceeding 5 µg/L has been stable. See Annual Reports for trends in monitoring wells (Appendix D) and the Optimization Evaluation Report (Geosyntec et al., 2008) for change in TCE distribution over time (Figures 4-18 through 4-21).

While the lateral extent of TCE concentrations exceeding 5 µg/L has not grown since 1992 and concentrations within TCE plume have generally decreased by an order of magnitude or more, the perimeter extent of TCE concentrations has largely stabilized. Optimization of the remedy may therefore be warranted (Geosyntec et al, 2008).

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, and 515/545 N. Whisman Road and 313 Fairchild Drive.

Groundwater elevation and chemical monitoring results from 2008 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. VOC concentrations in groundwater continue to remain well below historical maximums, and generally show long-term decreasing trends.

2008 Annual Report Remedy Performance Checklist

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)

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

The objective is to remediate and control the plume. The groundwater extraction, treatment, and containment systems are functioning as intended and meet the Remedial Action Objectives for the Site. While concentrations within TCE plume have generally decreased by an order of magnitude or more, treatment system influent concentrations have declined and the perimeter extent of TCE concentrations has largely stabilized. Optimization of the remedy may therefore be warranted.

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: 2008 Annual Reports & 5-Year Review

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 is 5 µg/L.

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

Capture zone analysis in the 2008 Annual Progress Report indicate plume containment of target capture areas.

XI. PROJECTIONS

Administrative Issues
Dates of next monitoring and sampling events for next annual reporting period: Nov/Dec 2009

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

Remedy Projections for **the upcoming year (2009)**
☐ 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: **Optimization** Elaborate below. Target date: **TBD**

2008 Annual Report Remedy Performance Checklist

Elaborate on Remedy Projections:

The RPs for the Former Fairchild Facilities anticipate implementing remediation optimization strategies, pending receipt of and response to EPA comments on the September 3, 2008 Optimization Evaluation Report.

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: **TBD**

Elaborate on Remedy Projections:

Minor changes to the EPA's January 15, 2009 Draft Process Framework for a site-wide Groundwater Feasibility Study were proposed January 30, 2009. The PRPs are prepared to implement the modified Framework as soon as the Draft Framework is finalized by EPA .

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: **Optimization** Elaborate below. Target date: **TBD**

Elaborate on Remedy Projections:

The slurry walls are part of the groundwater remedy. The recommendations of the Optimization Evaluation Report will be implemented upon receipt of, and response to, comments from EPA. In the interim, the system continued to operate per the August 2007 groundwater extraction scheme.

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: TBD

Elaborate on Remedy Projections:

See above. The slurry walls are part of the groundwater remedy.

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.

An Optimization Evaluation Report was submitted September 2008.

2008 Annual Report Remedy Performance Checklist

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:

Proposed Plan to address vapor intrusion pathway planned for 2009, with ROD amendment to follow.

Date of Next EPA Five-Year Review: **September 30, 2009**

XII. RECOMMENDATIONS

- **Implement optimization strategies for Fairchild systems pending receipt of and response to EPA comments on the Optimization Evaluation Report.**
- **Follow revised groundwater feasibility study framework pending finalization by EPA.**
- **Potentially responsible parties (PRPs) requested in the 2008 Annual Progress Report that USEPA not require further facility-specific reporting for Former Fairchild Building 20 beginning in 2009. However, this request has not yet been acknowledged by the USEPA. The PRPs are requesting again to discontinue additional facility-specific reporting for Former Fairchild Building 20. The rationale for this request is:**
    1. **No potential source areas were identified at former Fairchild Building 20 property during Site investigations.**
    2. **Analytical results for the monitoring wells sampled in 2008 continue to indicate that VOC concentrations in groundwater are generally stable to declining. This is also reported in the RGRP Annual report.**
    3. **Building 20 does not have an associated groundwater treatment system.**
    4. **There is no facility-specific capture to evaluate.**

  In summary, the groundwater monitoring data are evaluated in the RGRP report, and this report is redundant with other reports at the MEW Site since all information is covered under Raytheon Facility Specific and RGRP reporting.

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APPENDIX B

ANALYTIC REPORTS AND CHAIN-OF-CUSTODY DOCUMENTS, JANUARY THROUGH DECEMBER 2008

(THIS APPENDIX IS BEING SUBMITTED ON CD TO THE USEPA ONLY AND IS AVAILABLE UPON REQUEST)

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APPENDIX C

QA/QC REPORT, SUMMARY TABLES, AND CRITERIA

2008 QA/QC SUMMARY

From January through December 2008, the Site treatment systems (Systems 1 and 3) were sampled monthly. Annual groundwater samples were collected in Site wells in November 2008. Groundwater samples from the selected wells were also collected in December 2008, as a part of slurry wall evaluation. As a part of monthly sampling for the MEW area, a total of 73 samples were submitted to Curtis and Tompkins in Berkeley, California, a state-certified analytical laboratory for VOCs, turbidity, semi-VOCs, and 1, 2 dioxane analysis. Two samples were analyzed for Acute Toxicity by Block Environmental Services, Inc, another state-certified laboratory. In addition to the monthly treatment system samples, 37 groundwater samples were collected from the Site monitoring and extraction wells as a part of MEW Annual Groundwater Sampling Event and analyzed for VOCs by Curtis and Tompkins. Additional wells listed on the 2008 sampling schedule (Table 1) are part of either other facility-specific sampling or part of the RGRP sampling program but are located in the vicinity of Buildings 1-4. All samples were collected, stored, transported, and managed according to USEPA protocols. Sample temperature and holding times were correctly observed. Tables C-1 and C-2 present a summary of sampling and analysis QA/QC for 2008 Analytical laboratory reports for the groundwater and related QC samples (travel blanks, rinseate/equipment blanks, and field blanks) are presented in Appendix F of the MEW 2008 Annual Progress Report. Appendix G of the MEW 2008 Annual Progress Report summarizes the analytical issues (Table G-2) and the results of the QC samples (Table G-3) for the 2008 annual groundwater sampling event.

Table C-1. Summary of Sampling QA/QC for January through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California.

Who performed sampling (Firm name/address/contact/phone):	Weiss Associates 350 East Middlefield Road, Mountain View, CA 94043 Joyce Adams (510) 450-6162
Chain of Custody forms completed for all samples?	YES
Field parameters stabilized prior to taking sample?	YES[1]
Zero headspace in sample containers (applicable to VOCs only)?	YES
Samples preserved according to analytical method?	YES
Required field QA/QC samples taken?	YES

*Explain any "NO" answers:

1. Not applicable for groundwater treatment system samples. Field parameter stabilization is not part of the standard sampling protocol for the groundwater treatment system samples. All field parameters are assumed stable when grab samples are collected from a running treatment system.

Table C-2. Summary of Analytical QA/QC for January through December 2008, Former Fairchild Buildings 1-4, 515/545 Whisman Road and 313 Fairchild Drive, Mountain View, California.

Who performed analysis (Lab name/address/contact/phone):	Curtis and Tompkins 2323 Fifth Street Berkeley, CA 94710 Anna Pajarillo (510) 486-0900 Block Environmental Services, Inc. 2451 Estand Way Pleasant Hill, CA 94523 Nanette Bradbury (925) 682-7200
Analytical methods (by method number and chemical category):	
Groundwater Treatment System Samples:	37 samples analyzed by USEPA 8260B – Halogenated Volatile Organic Compounds (8010 MS Parameters) One sample analyzed by USEPA 8270C- Semi Volatile Organic Compounds One sample analyzed by USEPA 8270C-SIM- 1,4 Dioxane One sample analyzed by USEPA/600/4-85-01 – Acute Toxicity of Effluents to Freshwater and Marine Organisms One sample analyzed by USEPA 180.1 – Turbidity
Groundwater Well Samples[1]:	32 samples analyzed by USEPA 8260B – Halogenated Volatile Organic Compounds (8010 MS Parameters)
Are the labs state-certified for the above analytical methods?	YES
Analyses performed according to standard methods?	YES
Sample holding times met?	YES
Analytical results reported for all values above MDL?	YES
QA/QC analyses run consistent with analytical methods?	YES
QA/QC results meet all acceptance criteria?	YES[1,2,]
QA/QC results and acceptance criteria on file?	YES

*Explain any "NO" answers:

1. The Analytic Reports and Chain of Custody forms are located in Appendix F of the *2008 Annual Progress Report for Middlefield-Ellis-Whisman Study Area Regional Groundwater Remediation Program, Mountain View, CA.*

2. Analytical issues for treatment systems samples collected during 2008 are reported in the 2008 Quarterly NPDES reports for Treament Systems 1 and 3. Analytical issues for groundwater samples collected during the 2008 annual groundwater sampling event are summarized in Appendix G of the *2008 Annual Progress Report for Middlefield-Ellis-Whisman Study Area Regional Groundwater Remediation Program, Mountain View, CA.*

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APPENDIX D

SELECTED VOC CONCENTRATION TIME-SERIES GRAPHS

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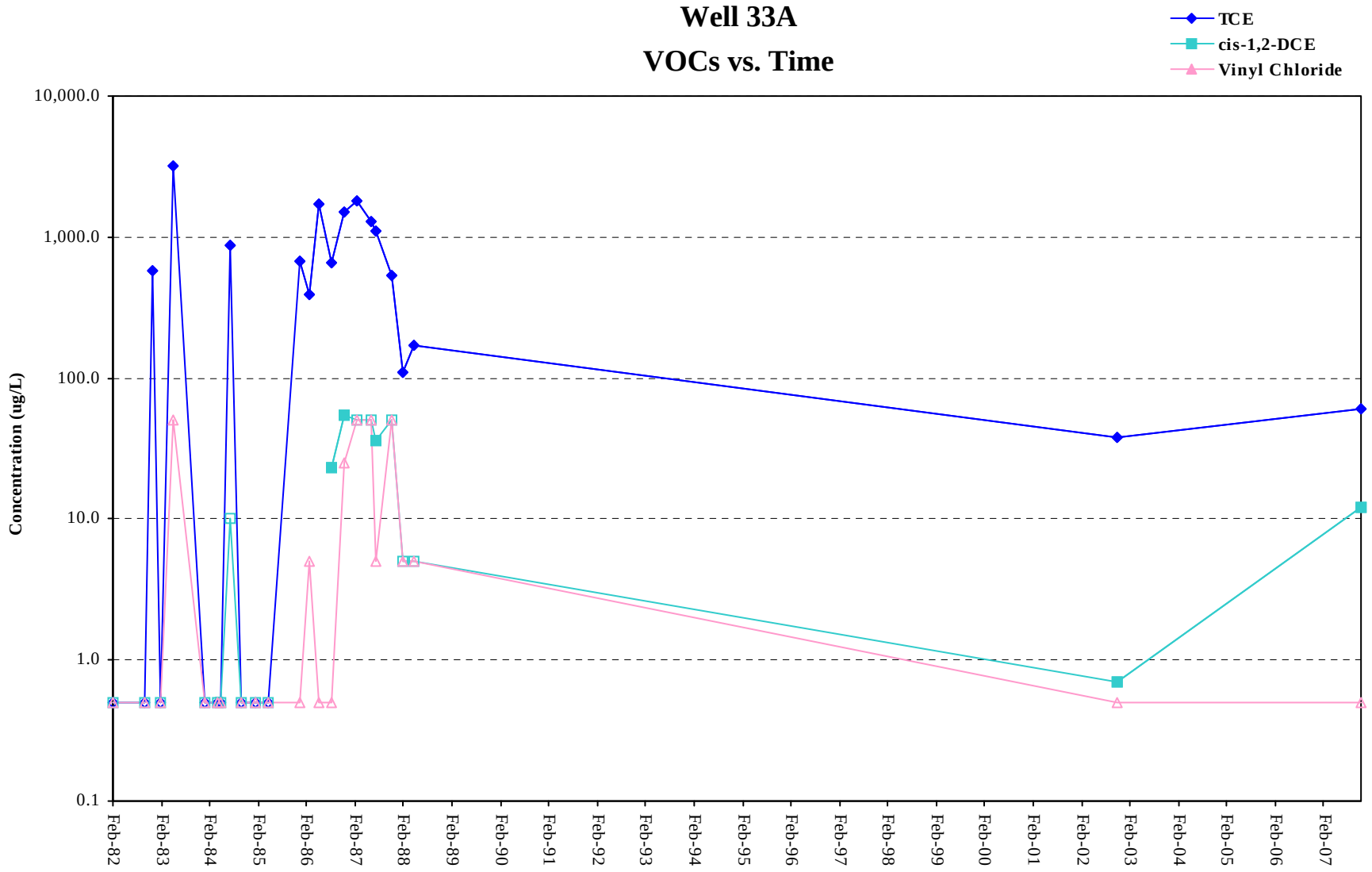
Well 33A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

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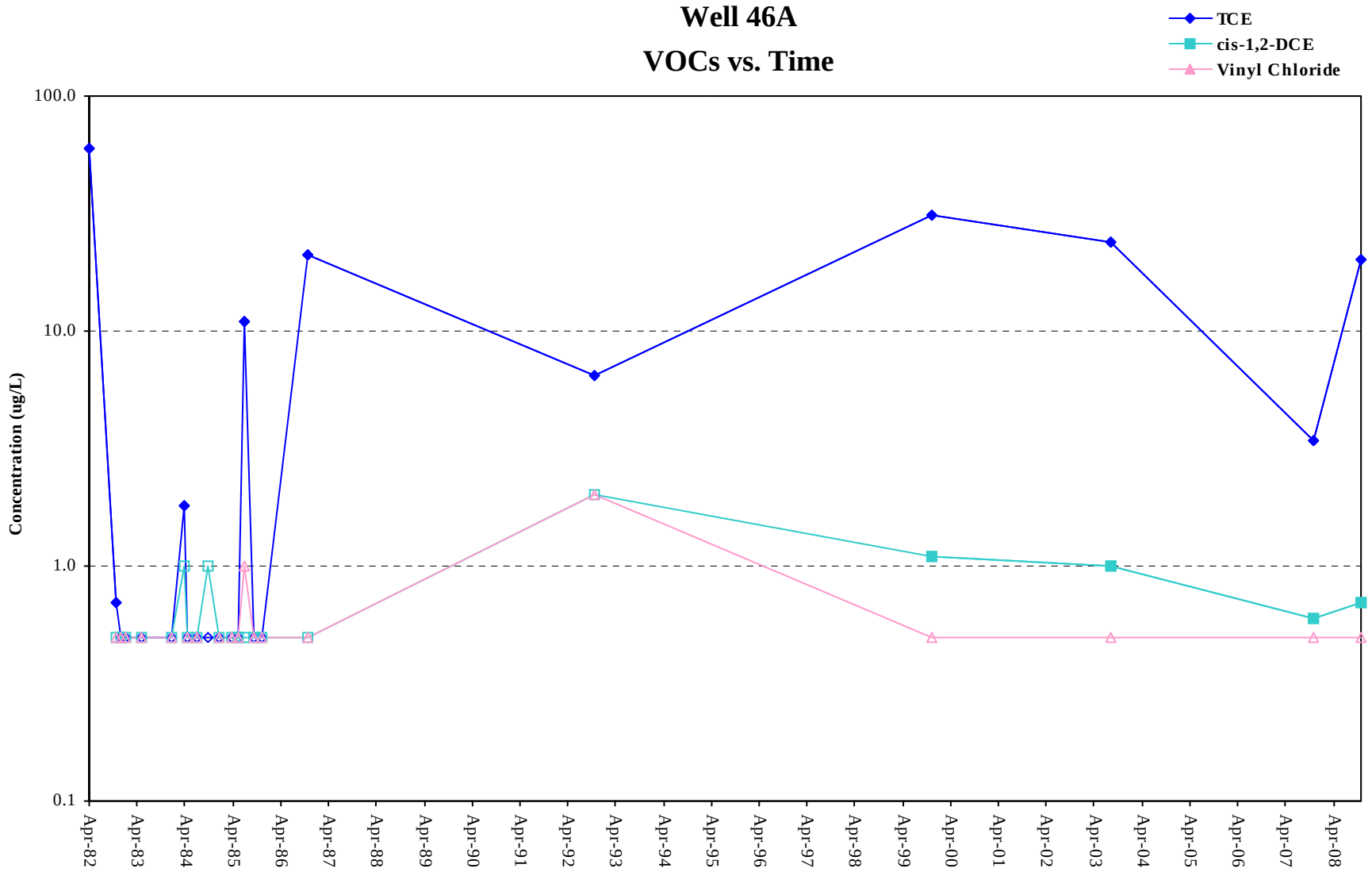
Well 46A

VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

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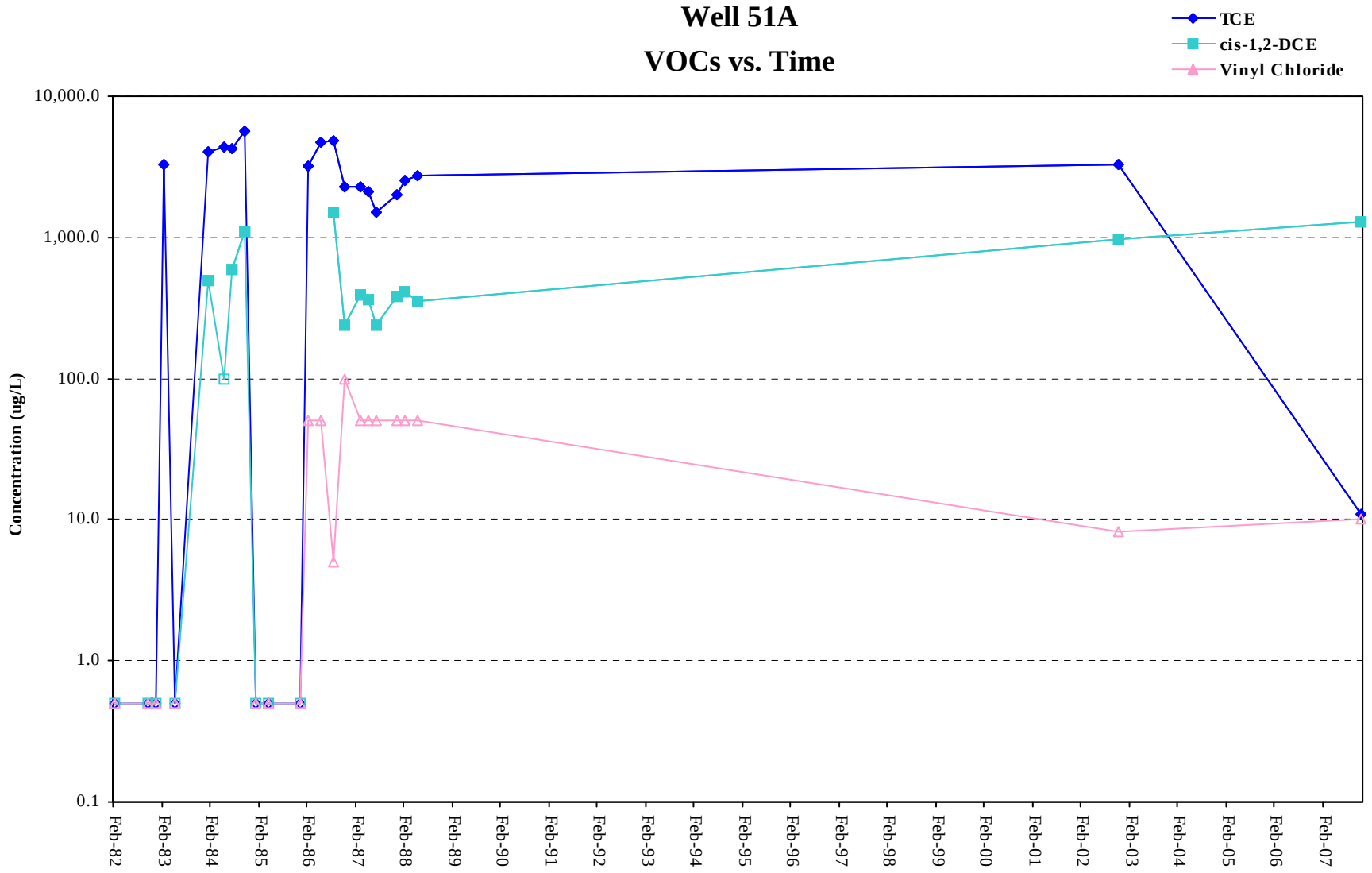
Well 51A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

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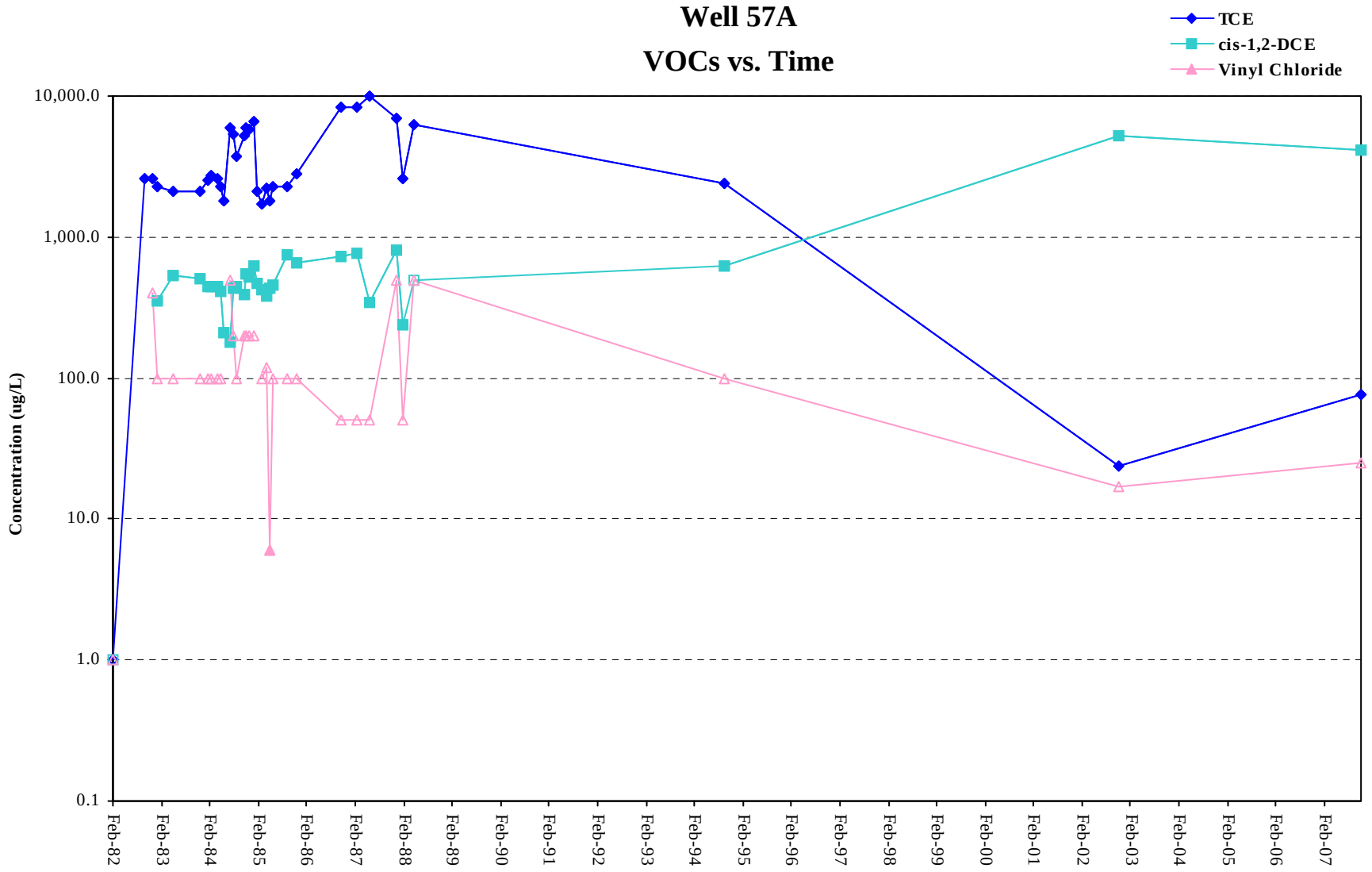
Well 57A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

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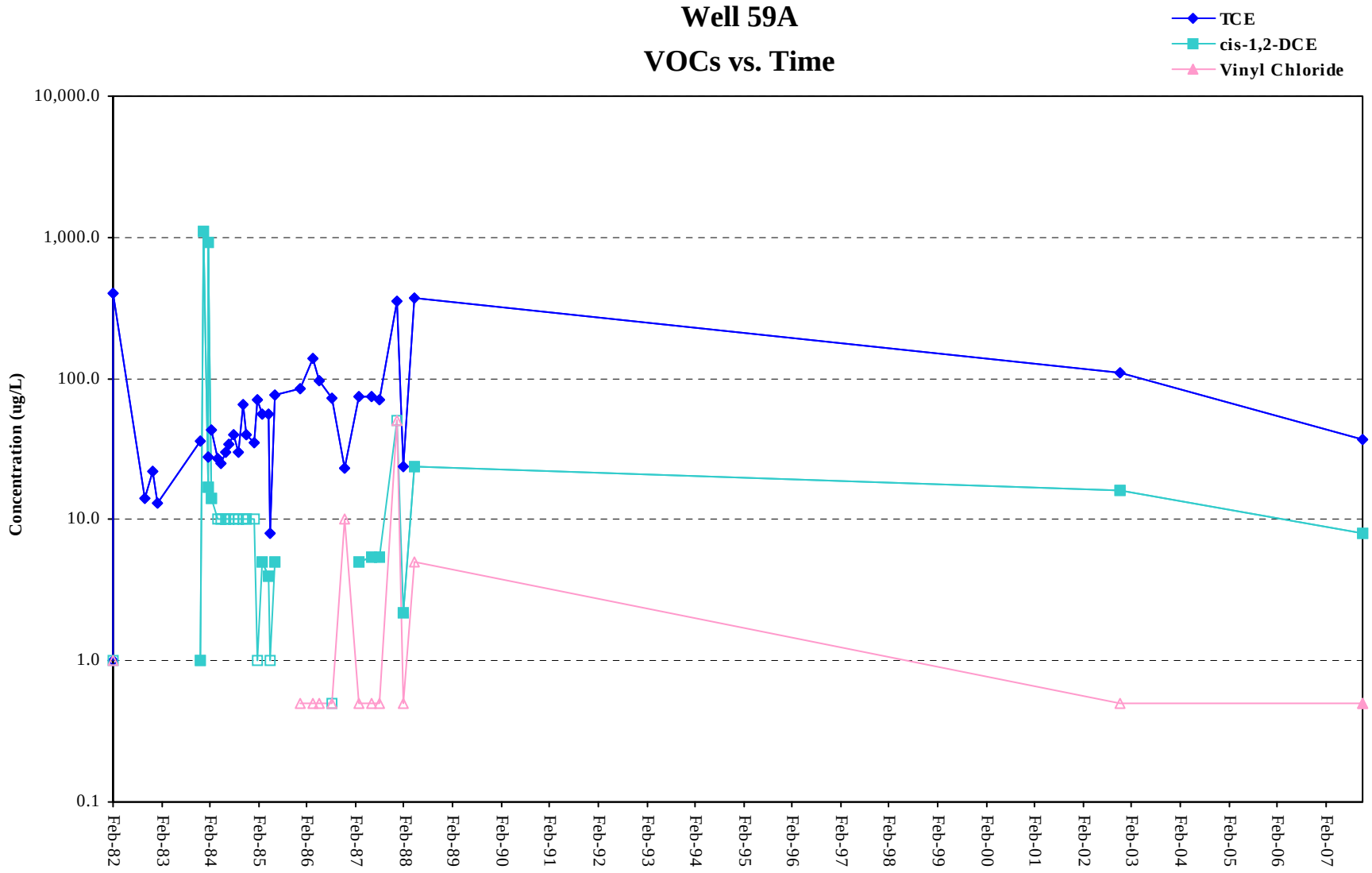
Well 59A
VOCs vs. Time



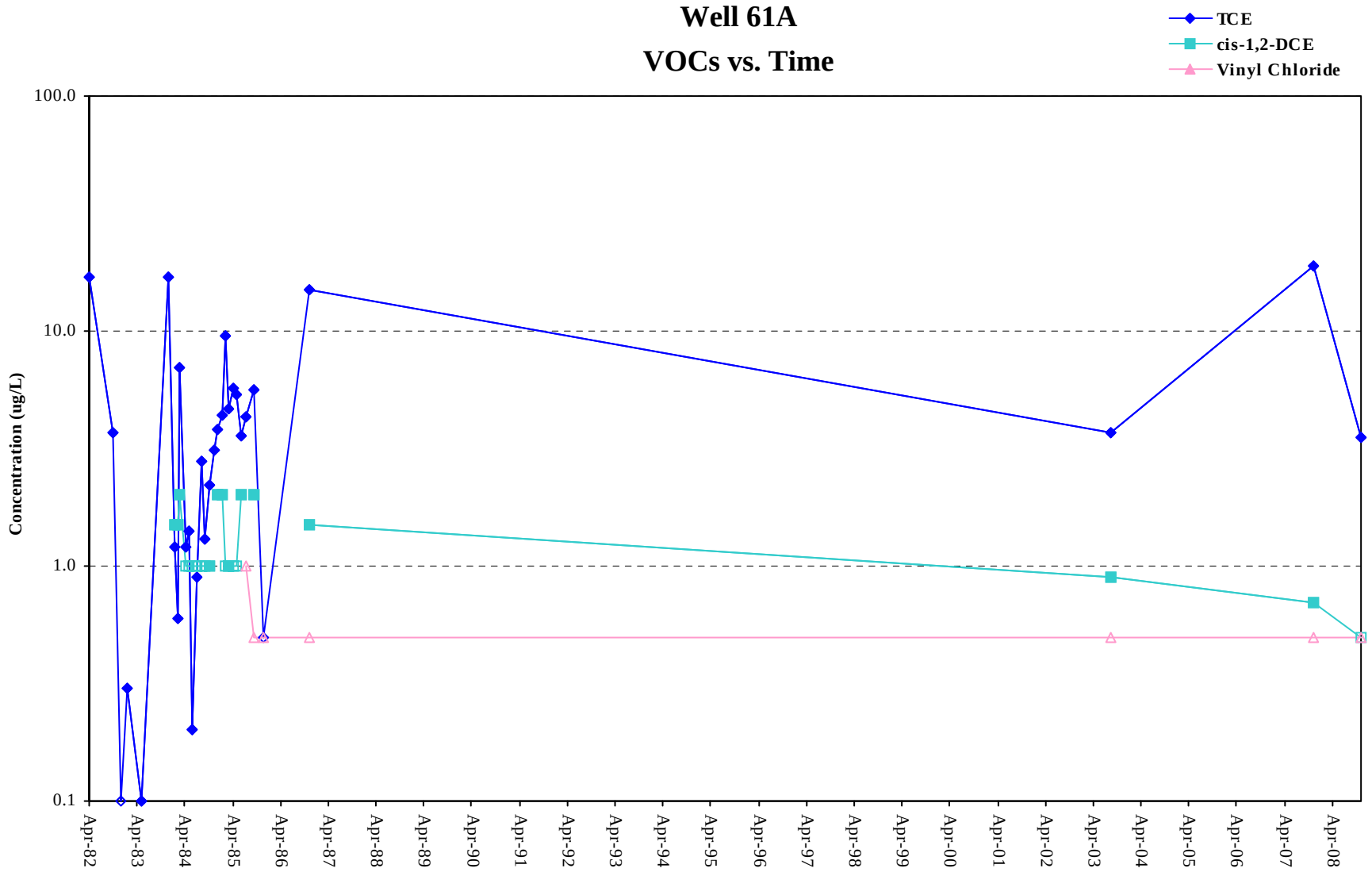
NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Database: S:\WELLDATA\Schlumberger\Mt View - MEW\SlmbMv.mdb
Report: rptMvChrts2008Log Loc. Group: Bldg1-4

Printed: 6/9/2009 5:01:08 PM

Weiss Associates

Well 61A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

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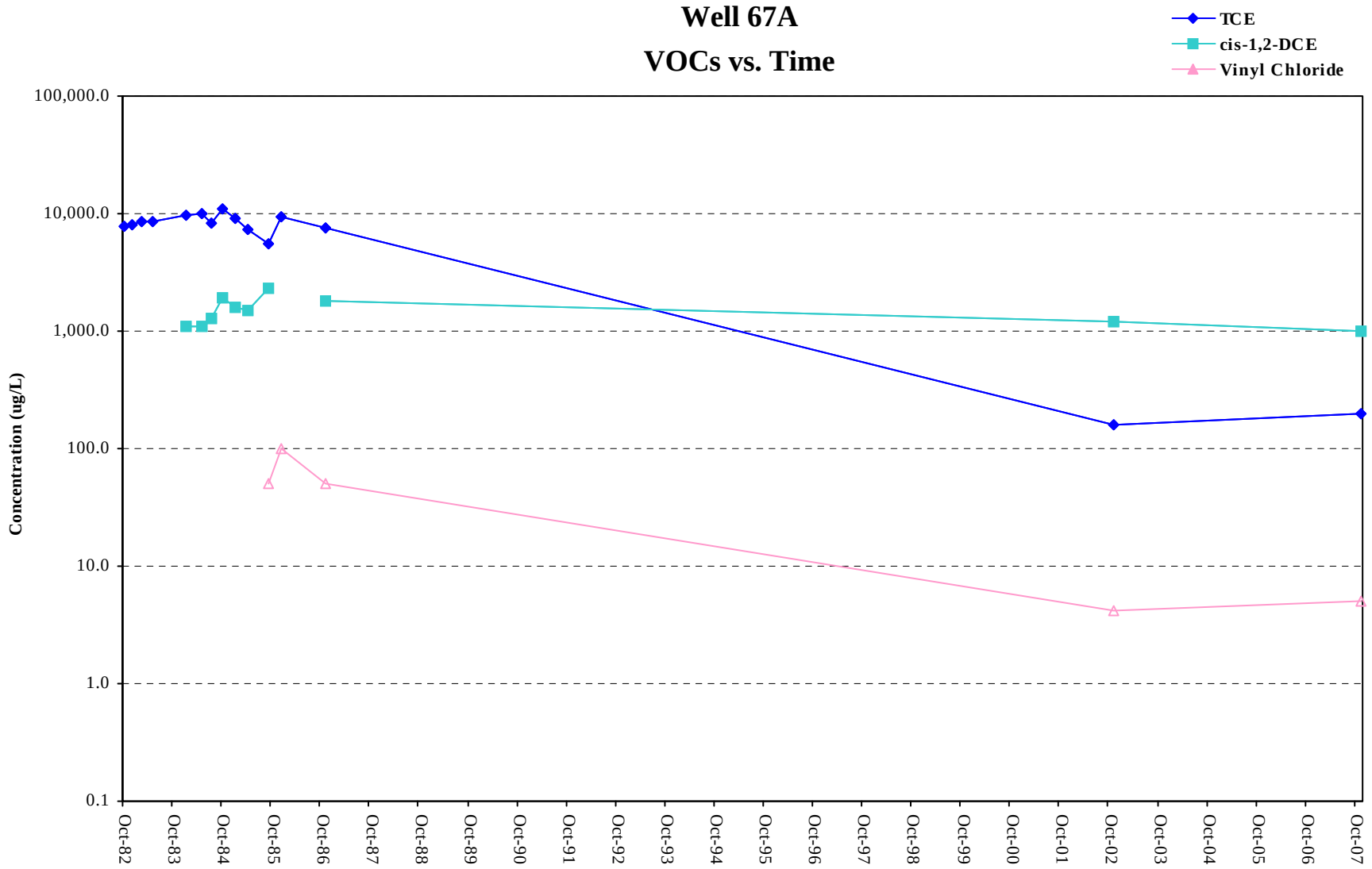
Well 67A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

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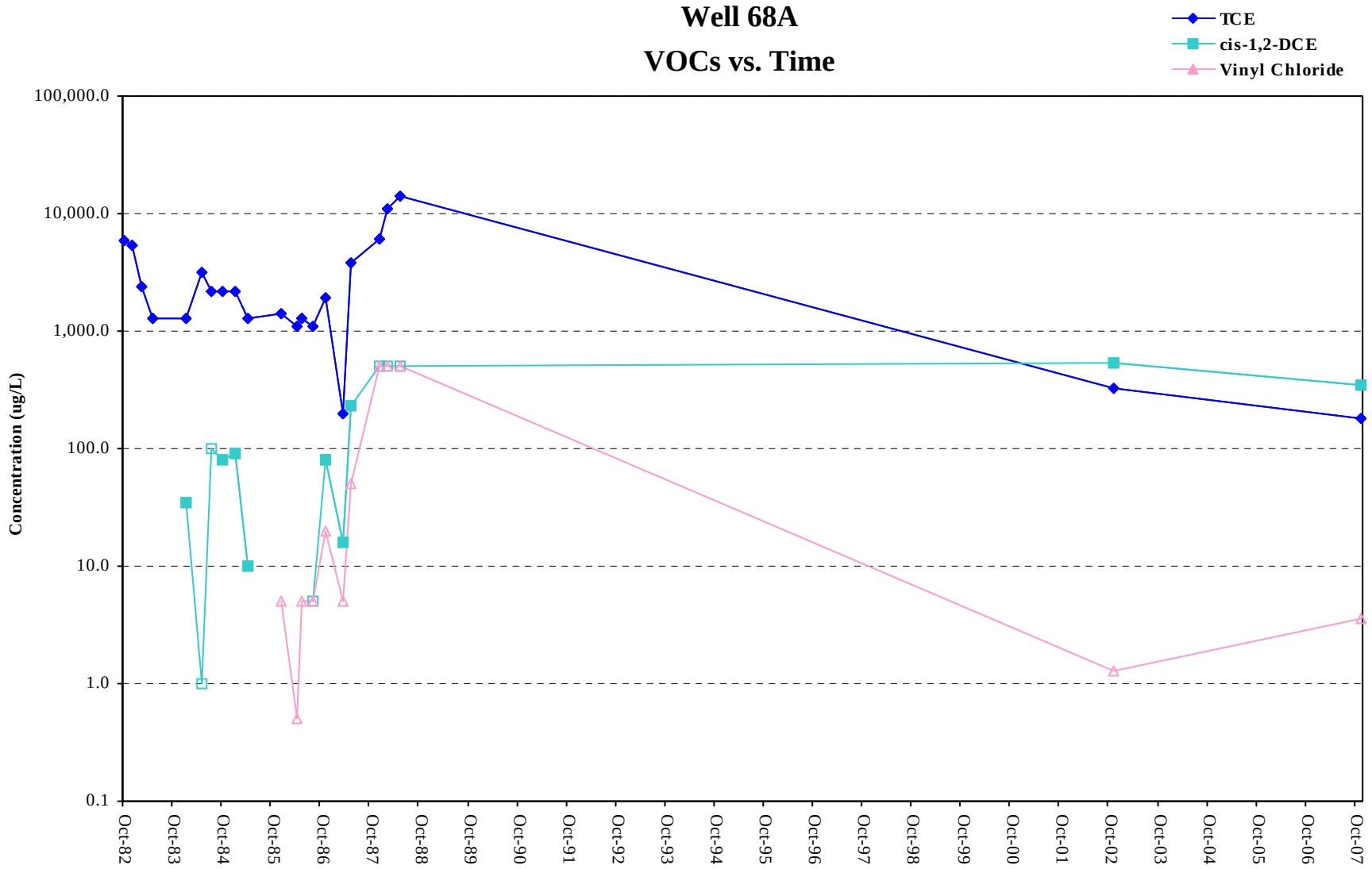
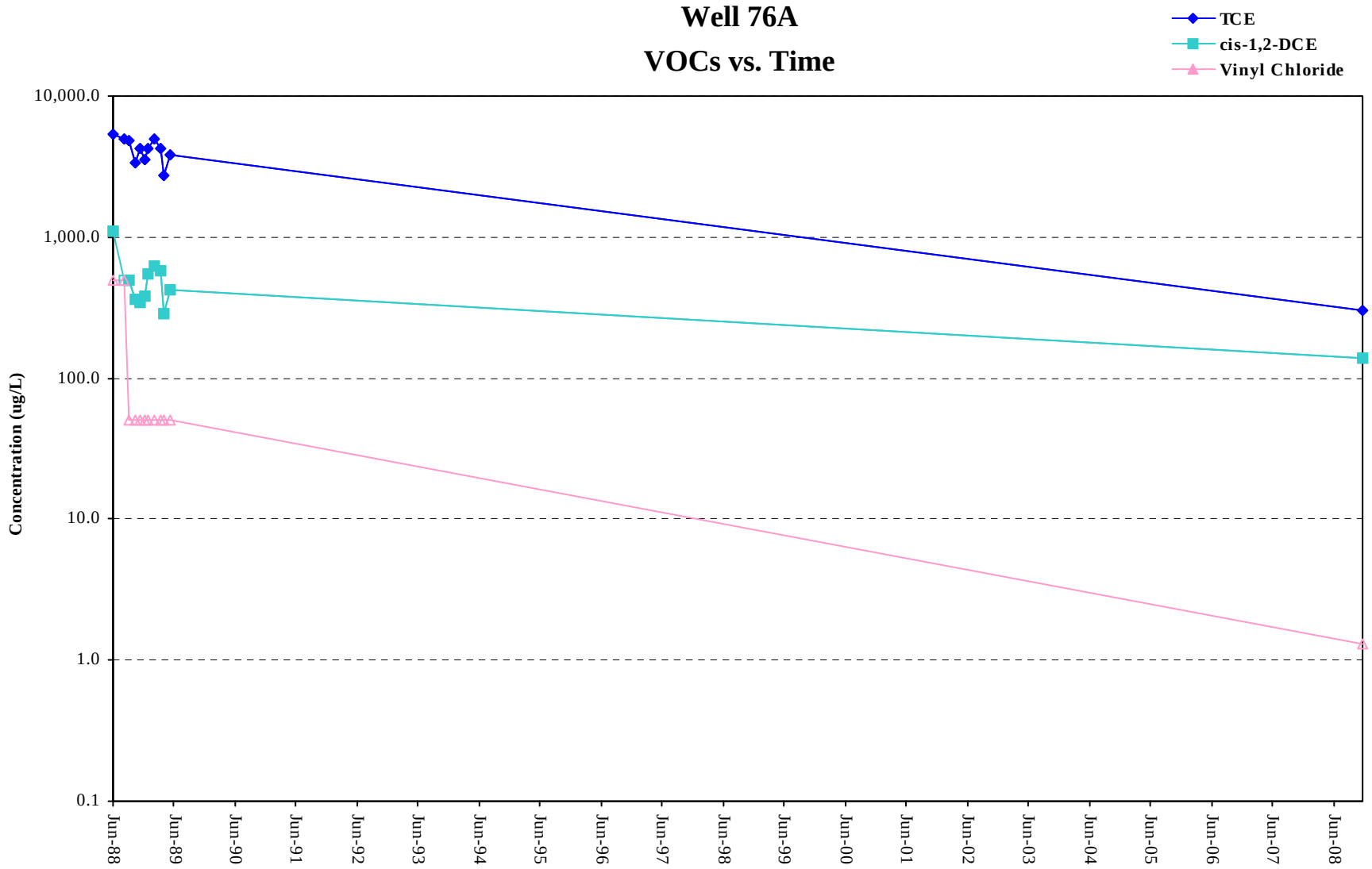
Well 68A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

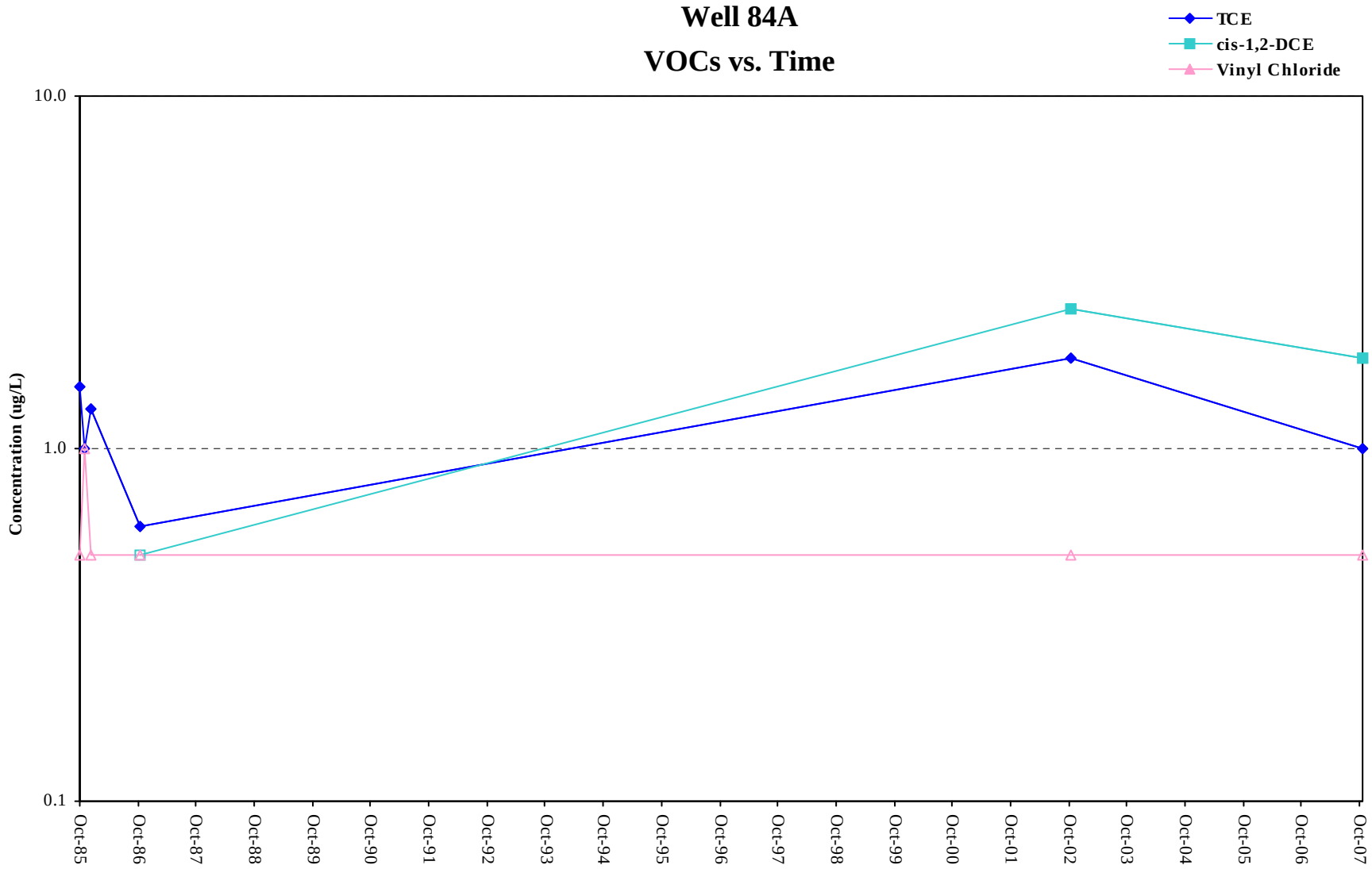
Well 76A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

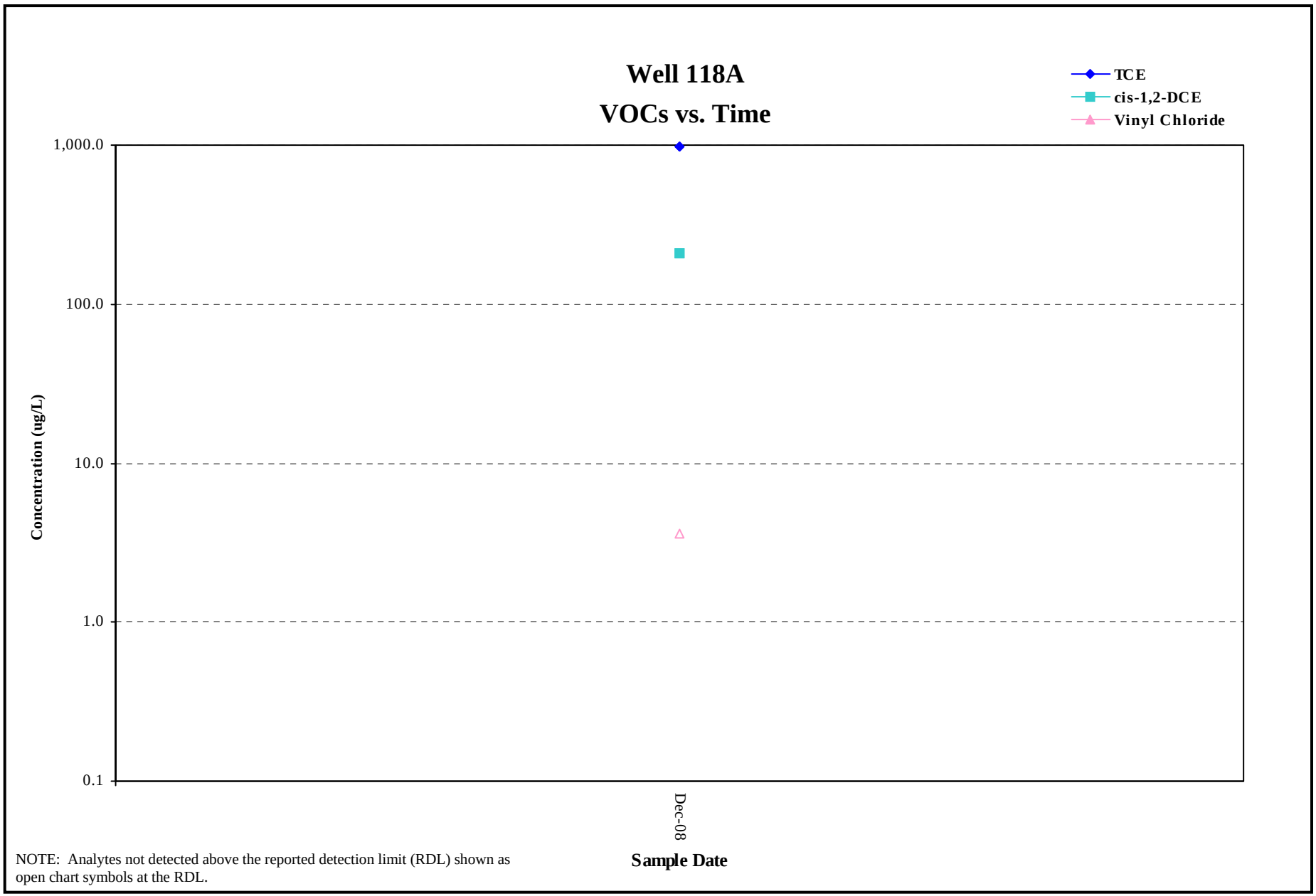
Weiss Associates

Well 84A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

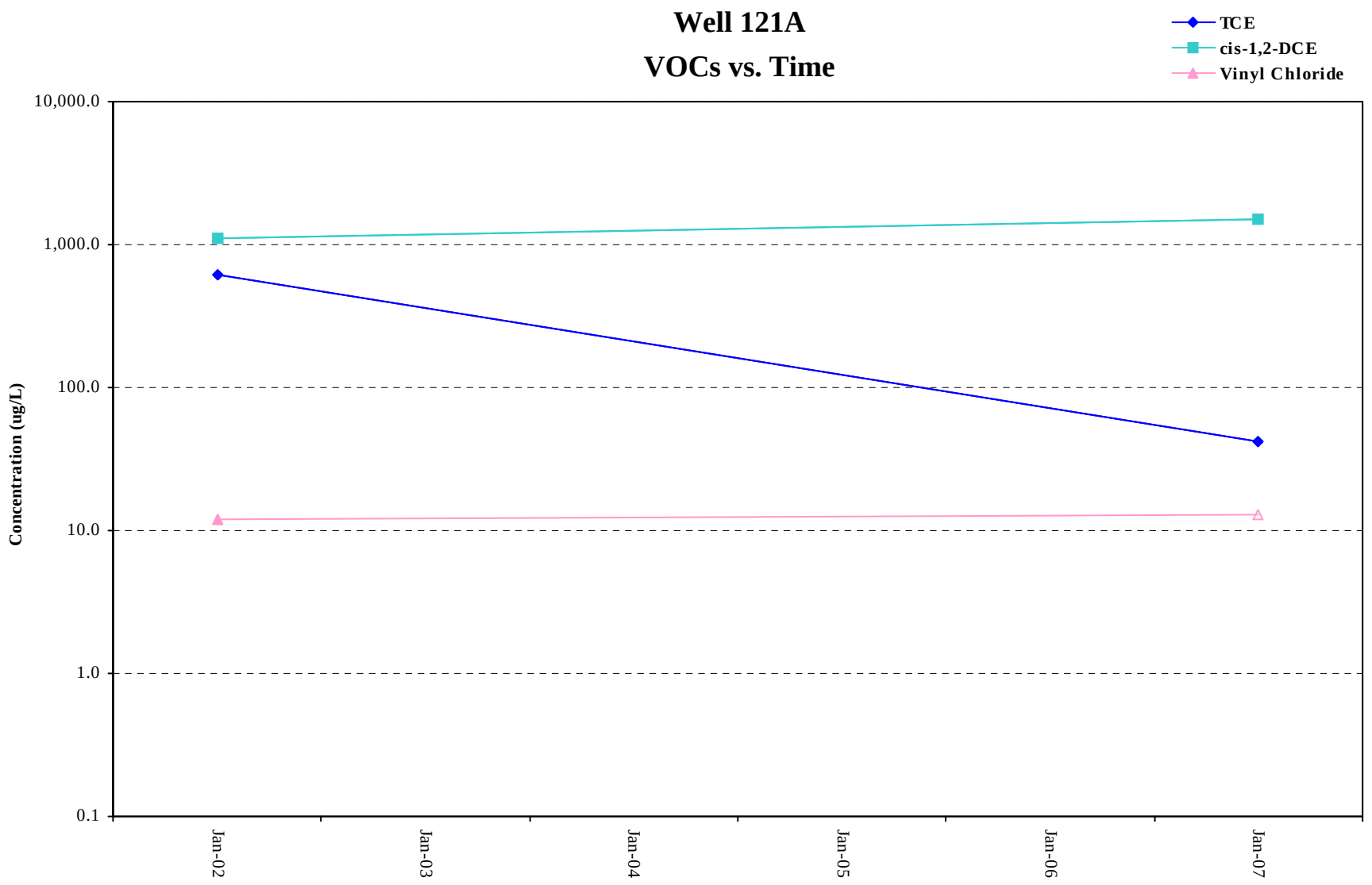
Weiss Associates



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

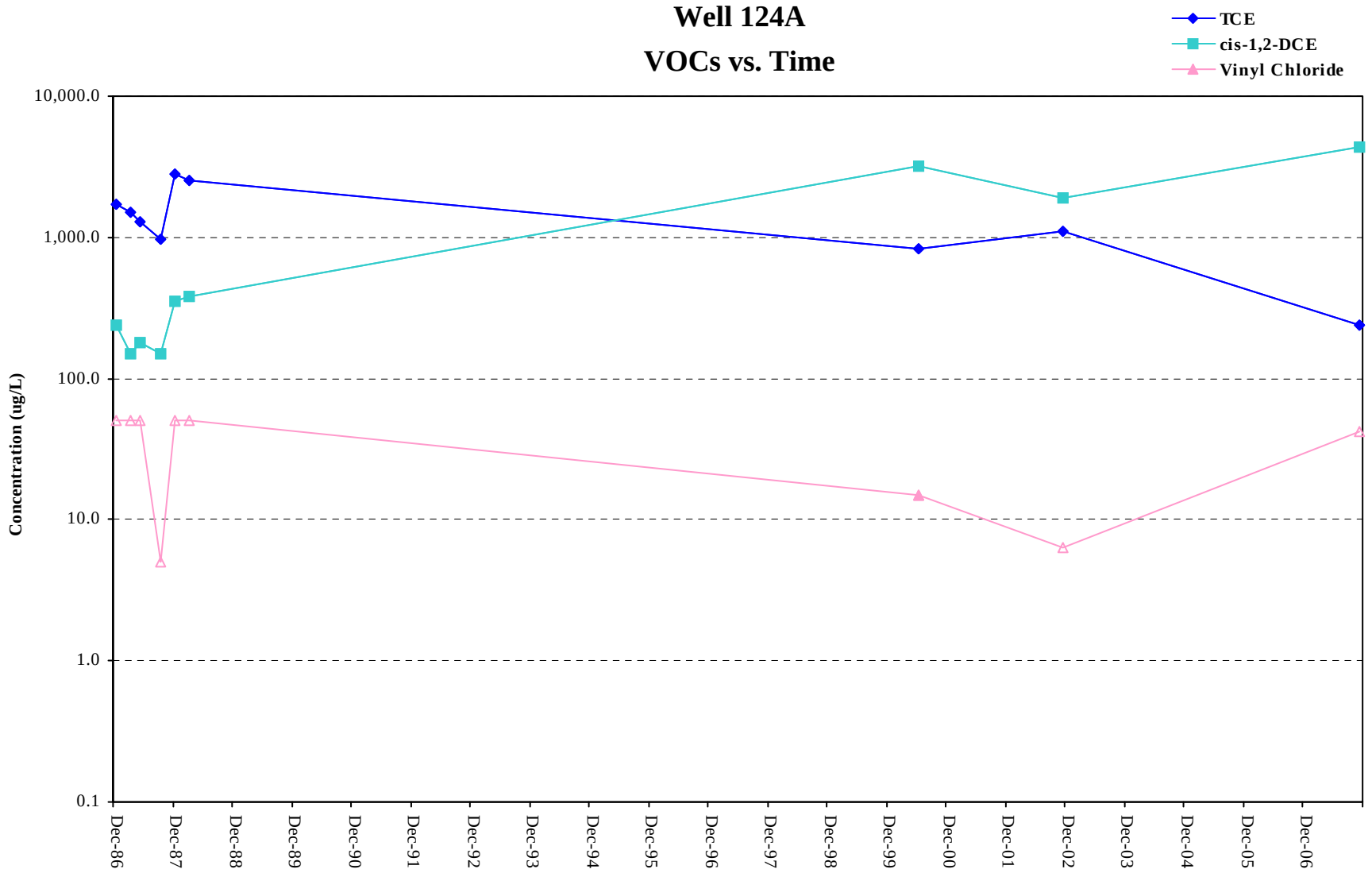
Well 121A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

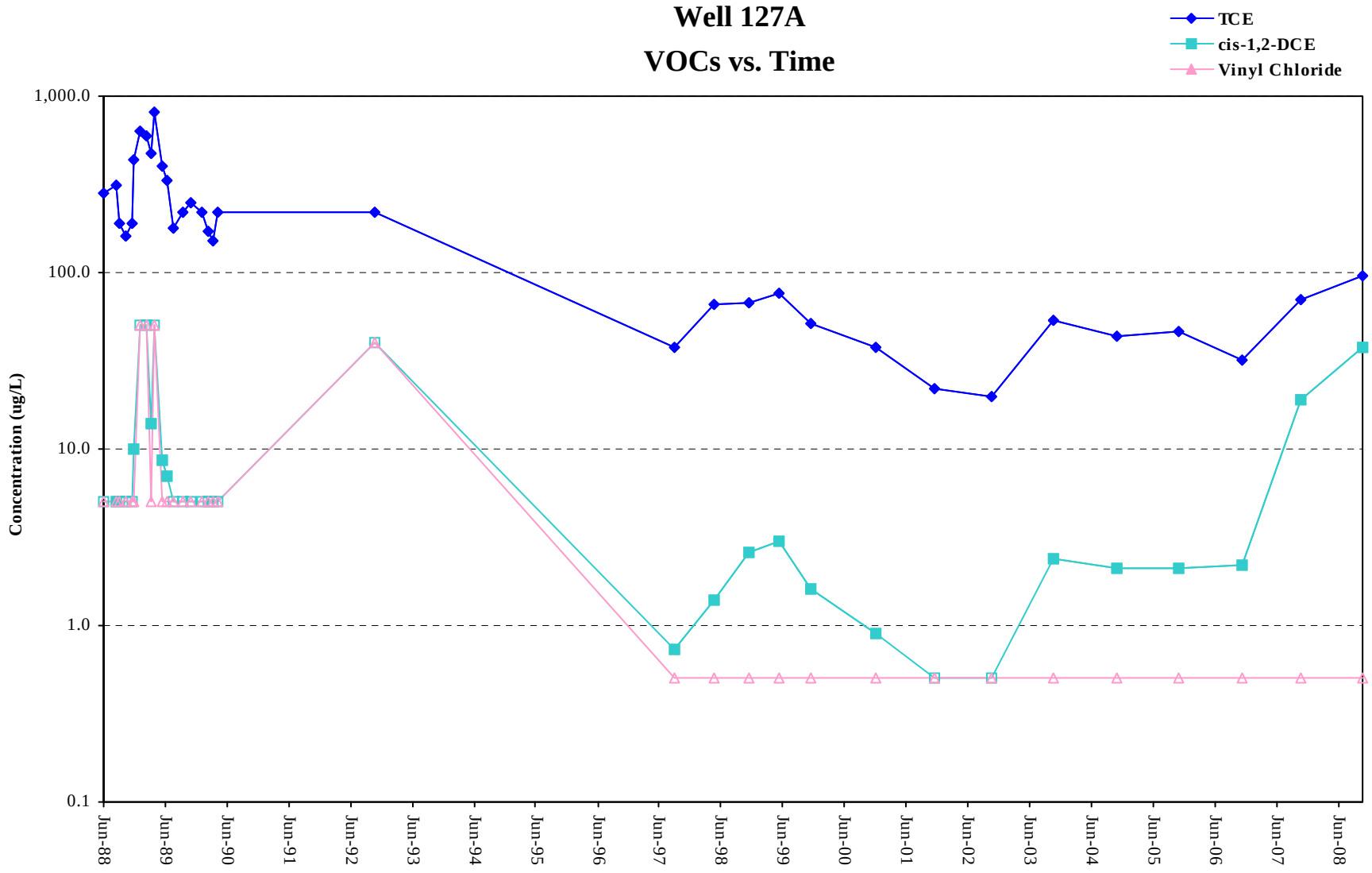
Well 124A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well 127A
VOCs vs. Time



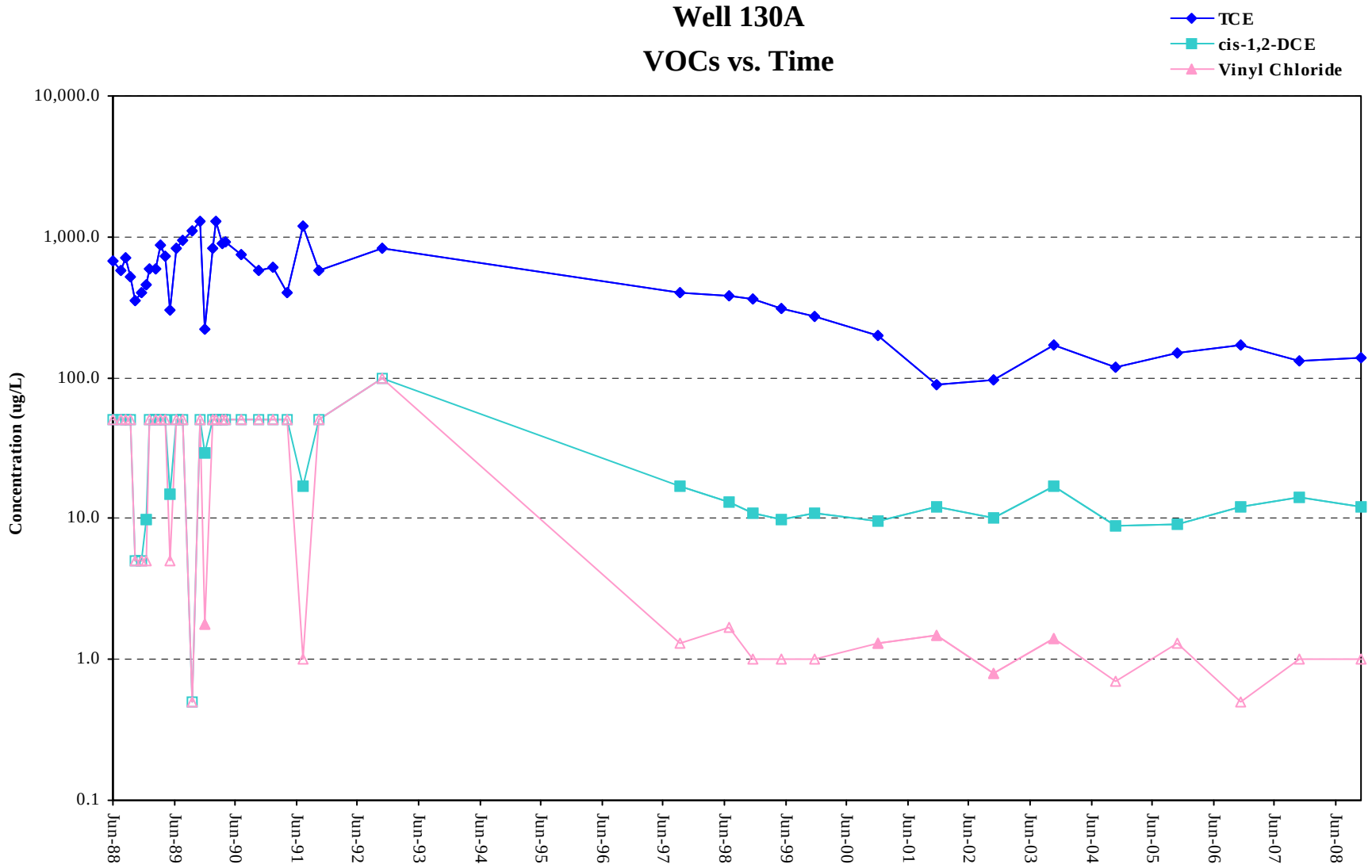
NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Database: S:\WELLDATA\Schlumberger\Mt View - MEW\SlmbMv.mdb
Report: rptMvChrts2008Log Loc. Group: Bldg1-4

Printed: 6/9/2009 5:01:09 PM

Weiss Associates

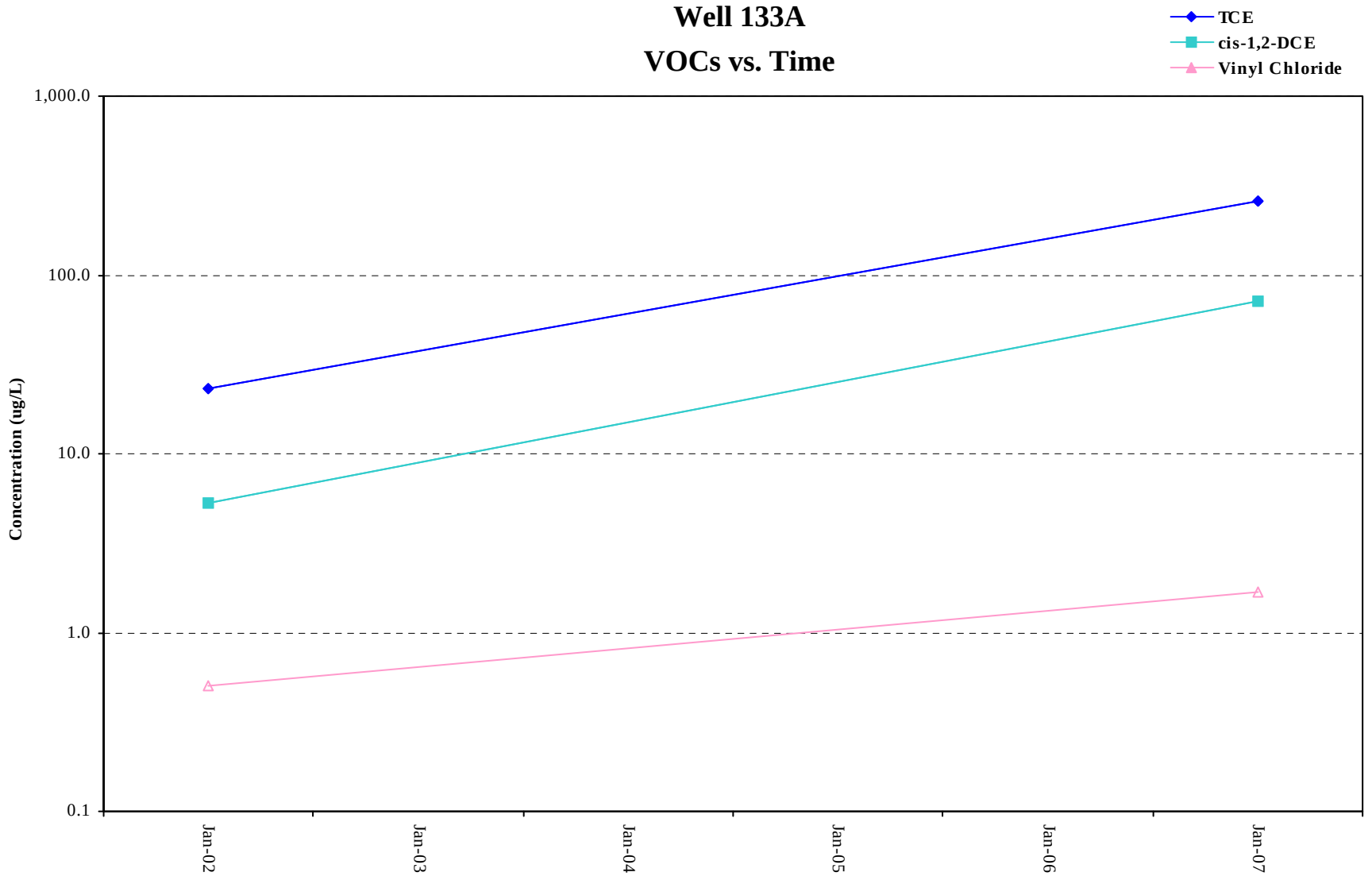
Well 130A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

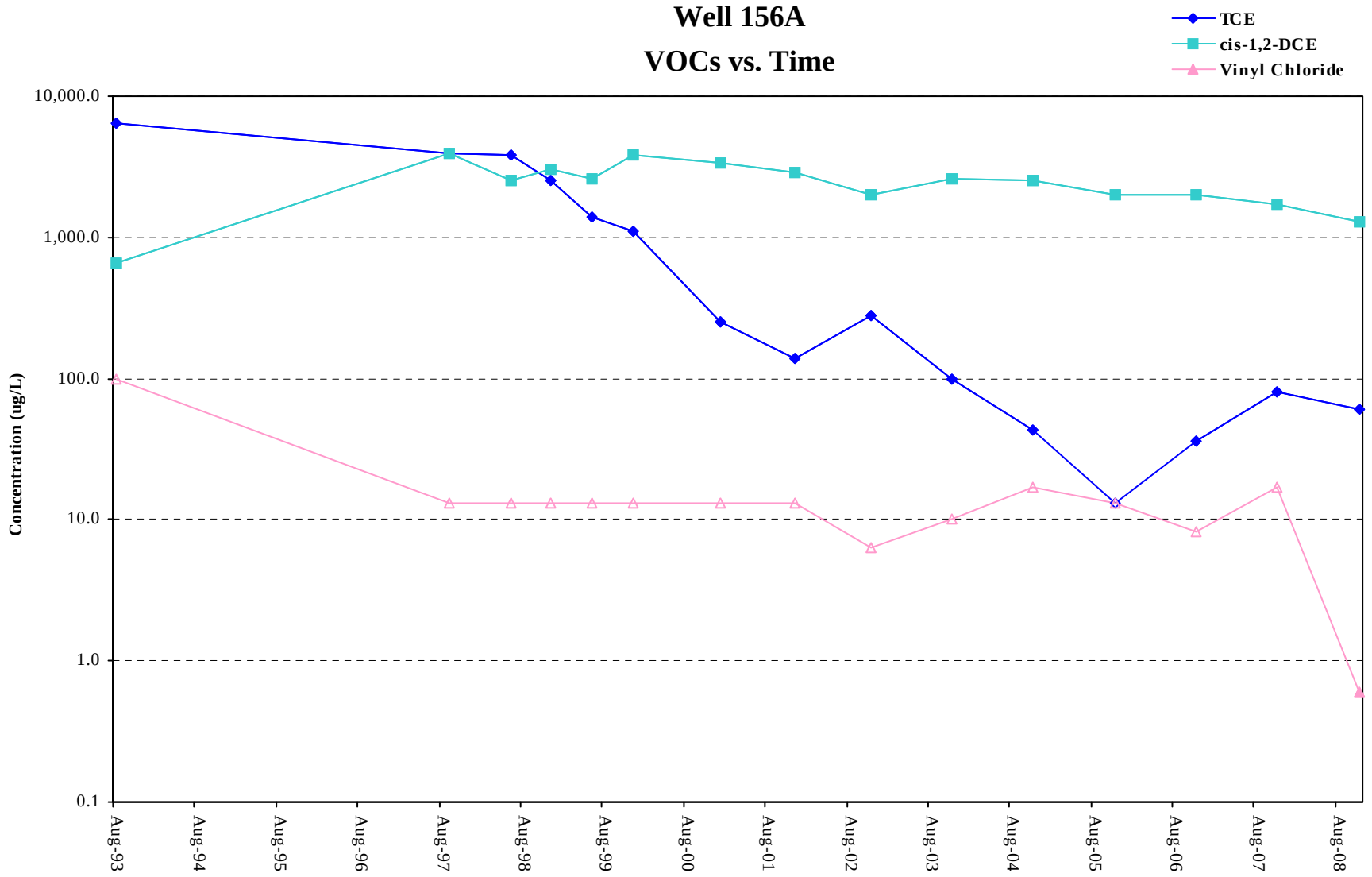
Well 133A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well 156A
VOCs vs. Time



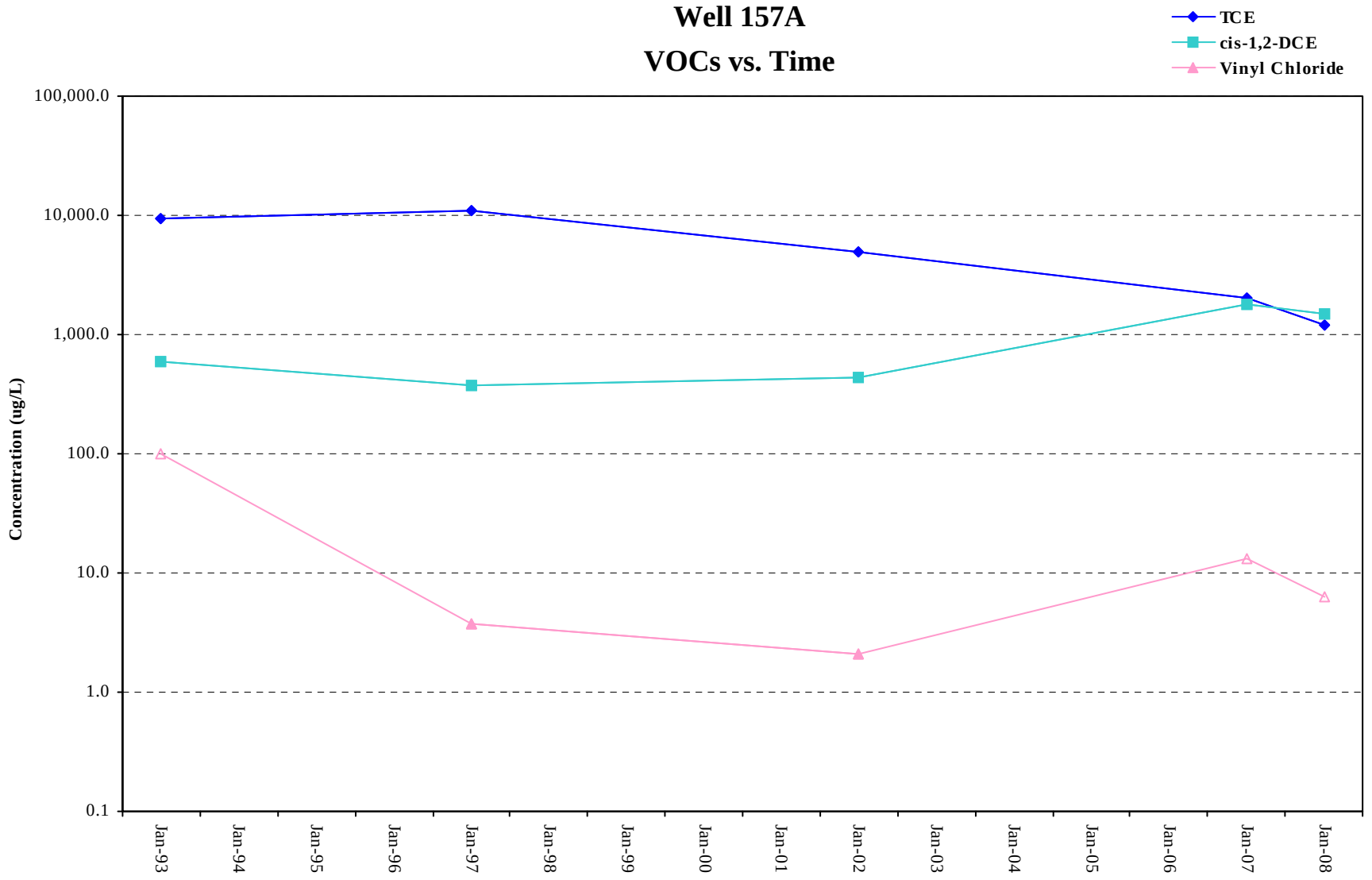
NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Database: S:\WELLDATA\Schlumberger\Mt View - MEW\SlmbMv.mdb
Report: rptMvChrts2008Log Loc. Group: Bldg1-4

Printed: 6/9/2009 5:01:09 PM

Weiss Associates

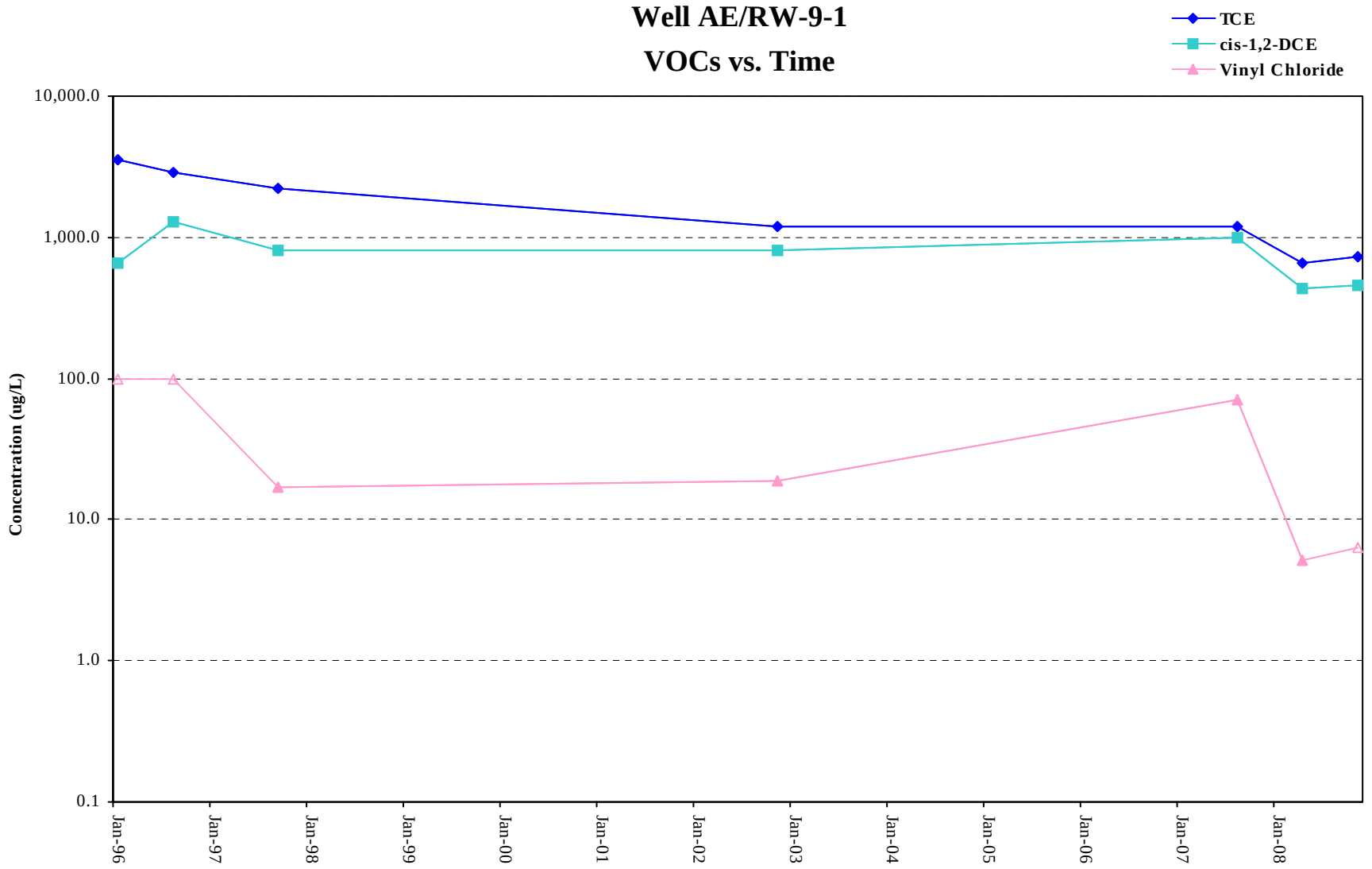
Well 157A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

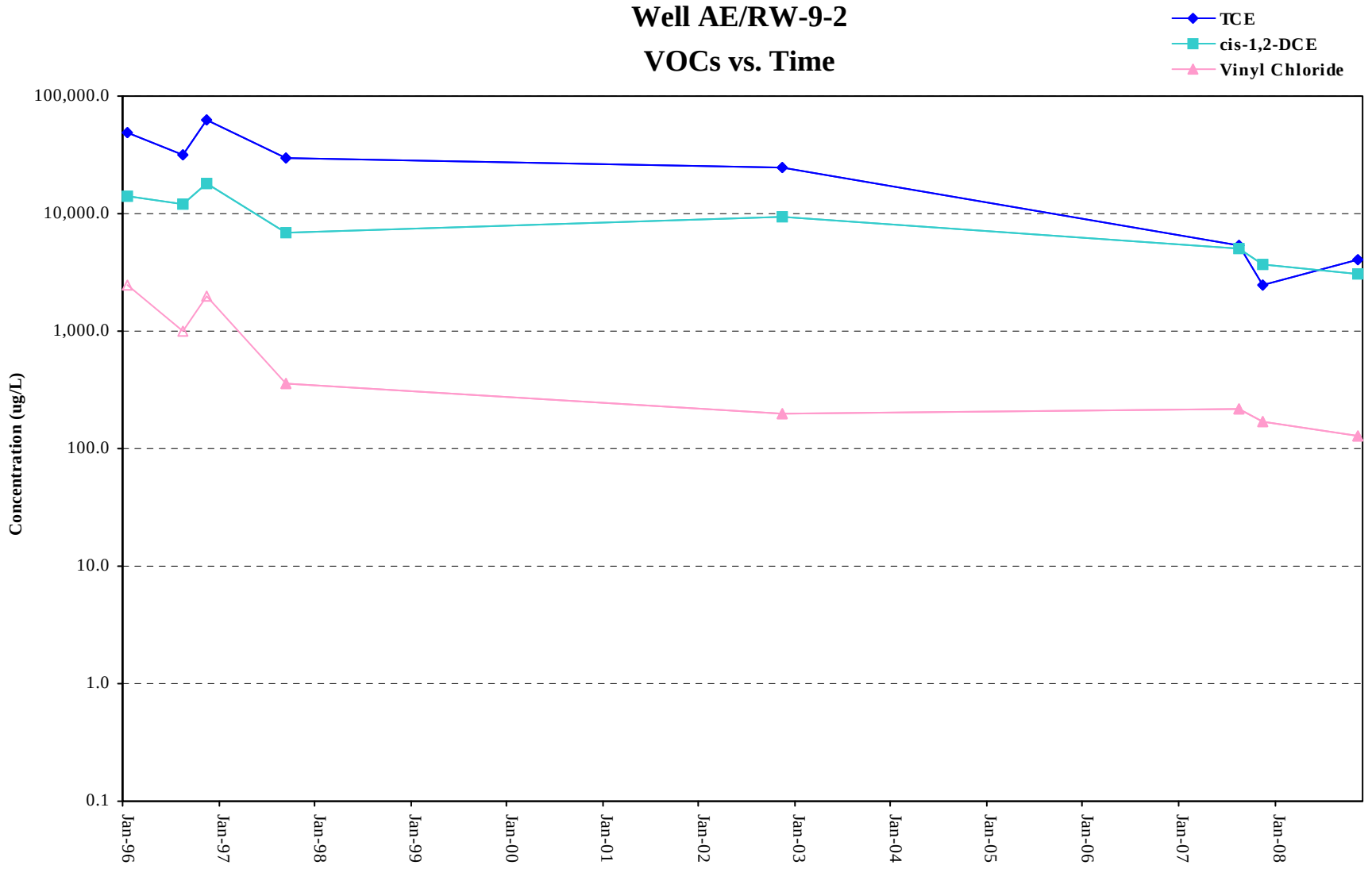
Well AE/RW-9-1
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

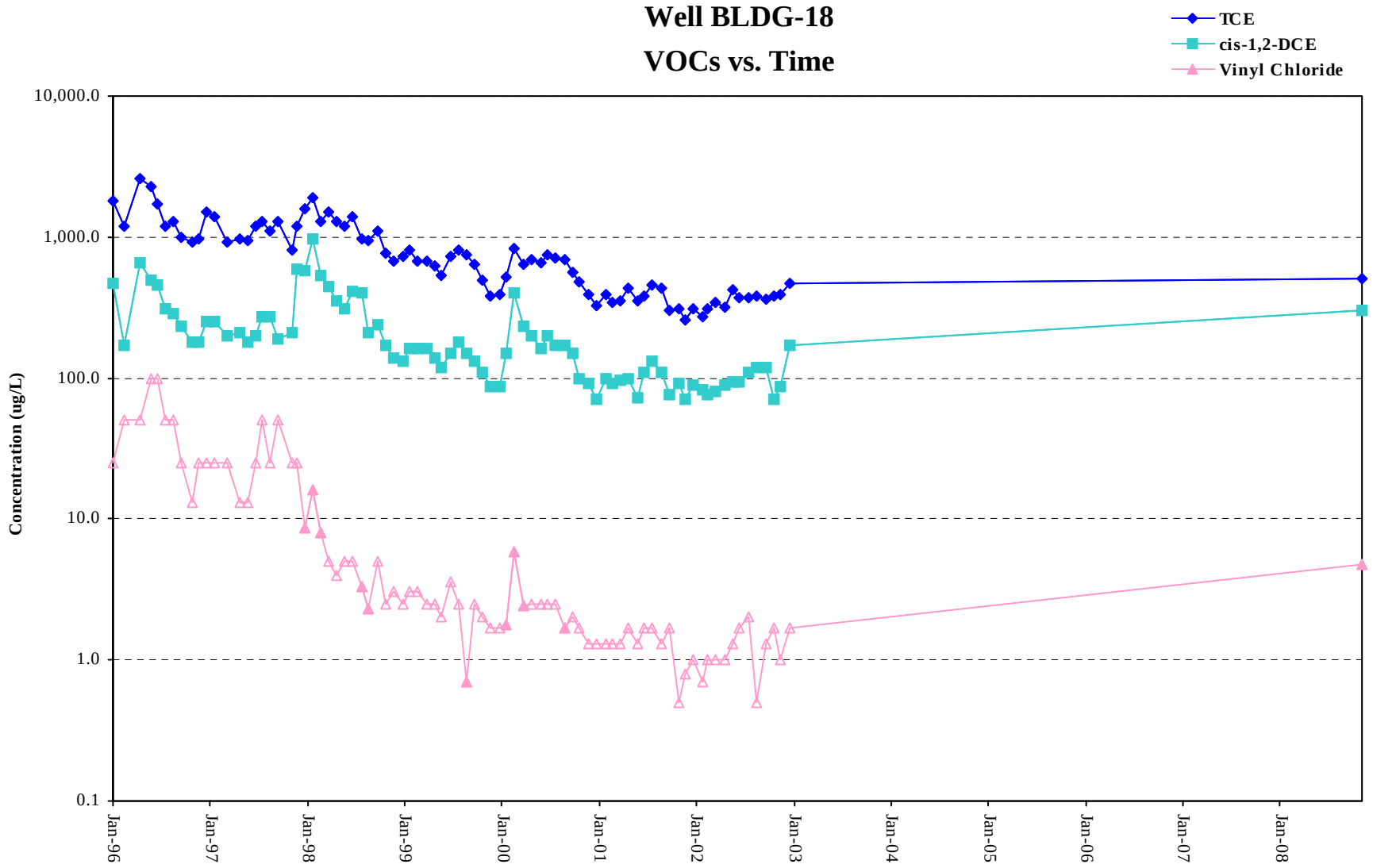
Well AE/RW-9-2
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well BLDG-18
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Database: S:\WELLDATA\Schlumberger\Mt View - MEW\SlmbMv.mdb
Report: rptMvChrts2008Log Loc. Group: Bldg1-4

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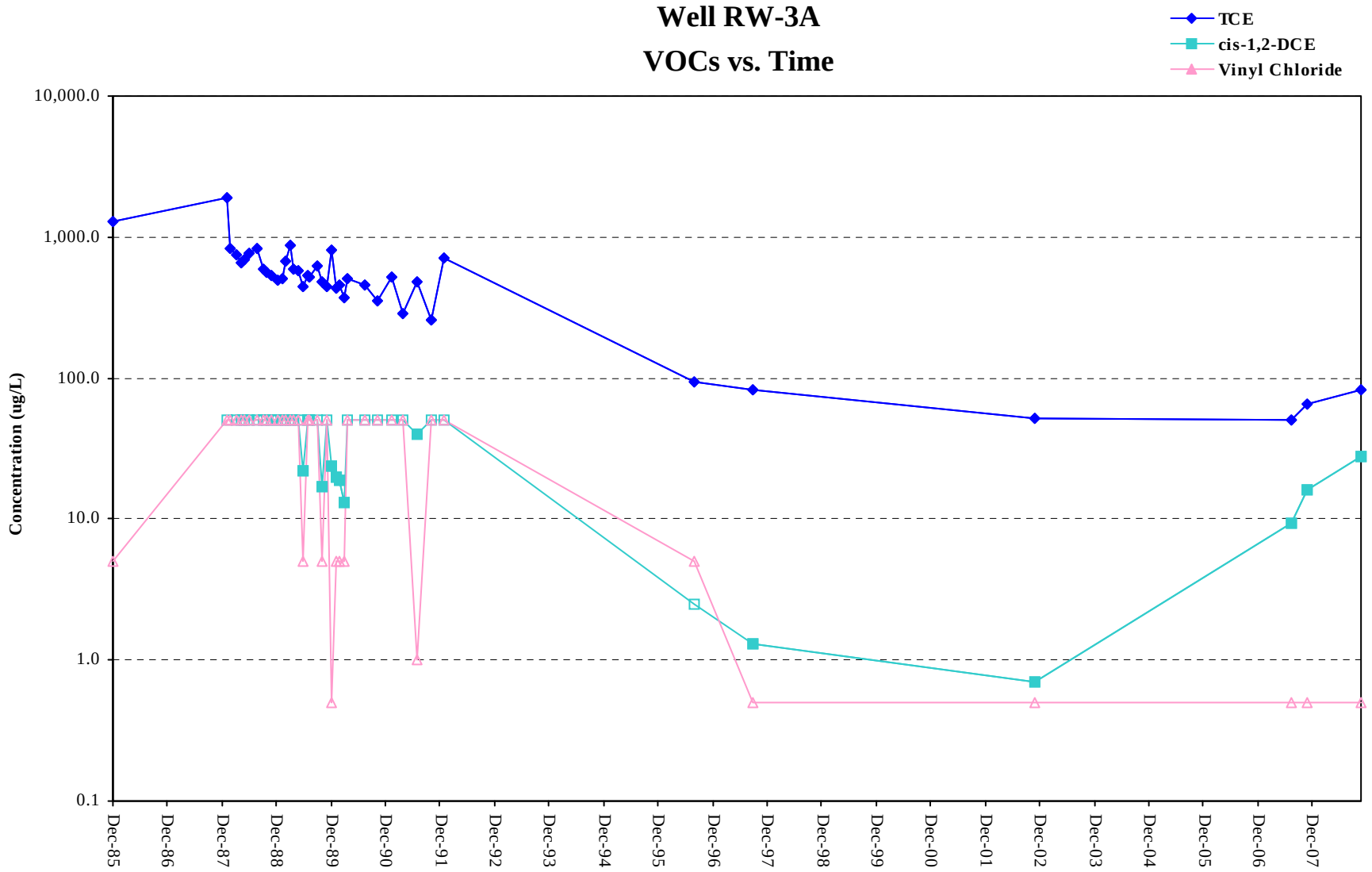
Weiss Associates

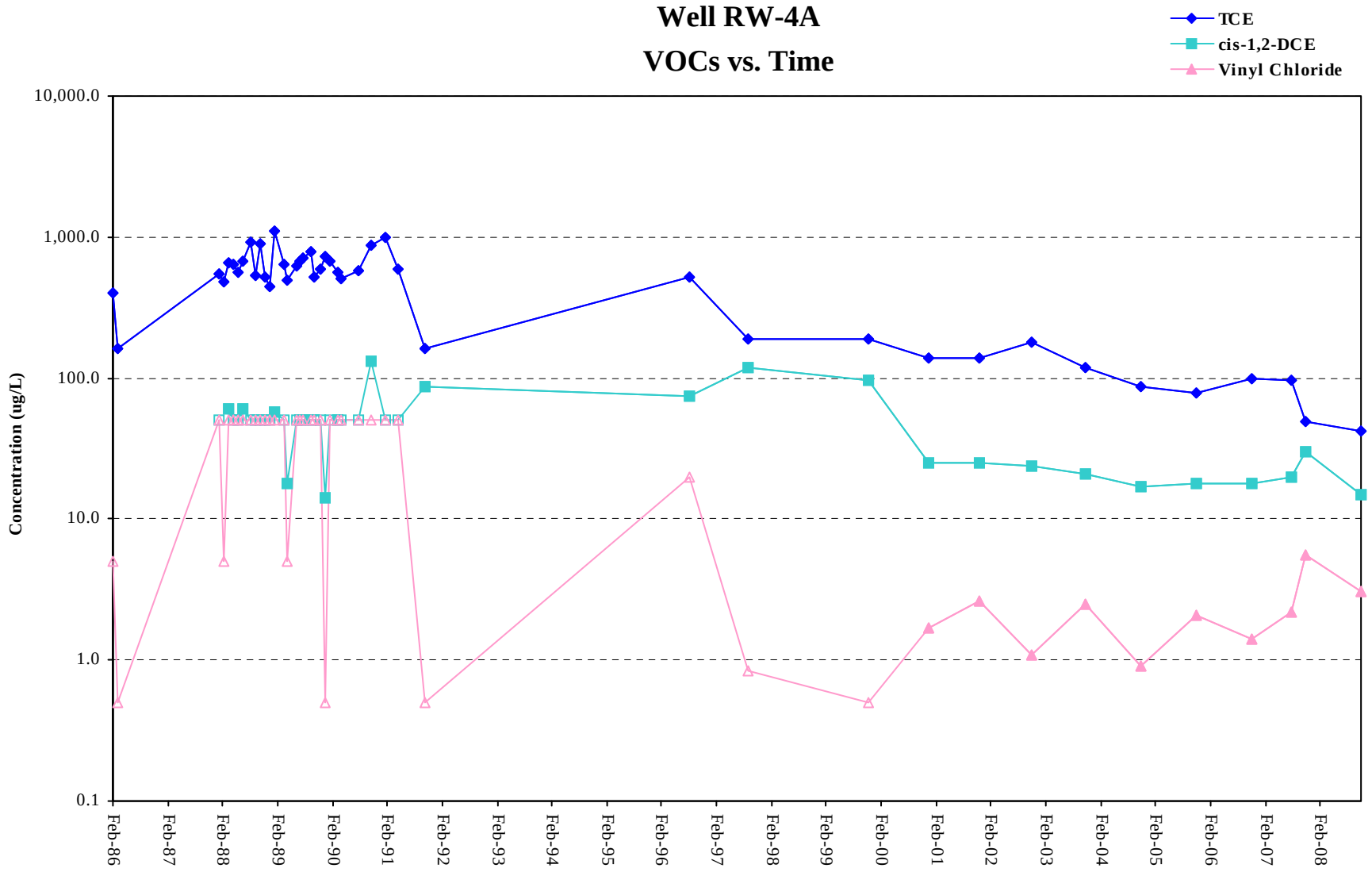
Well RW-3A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

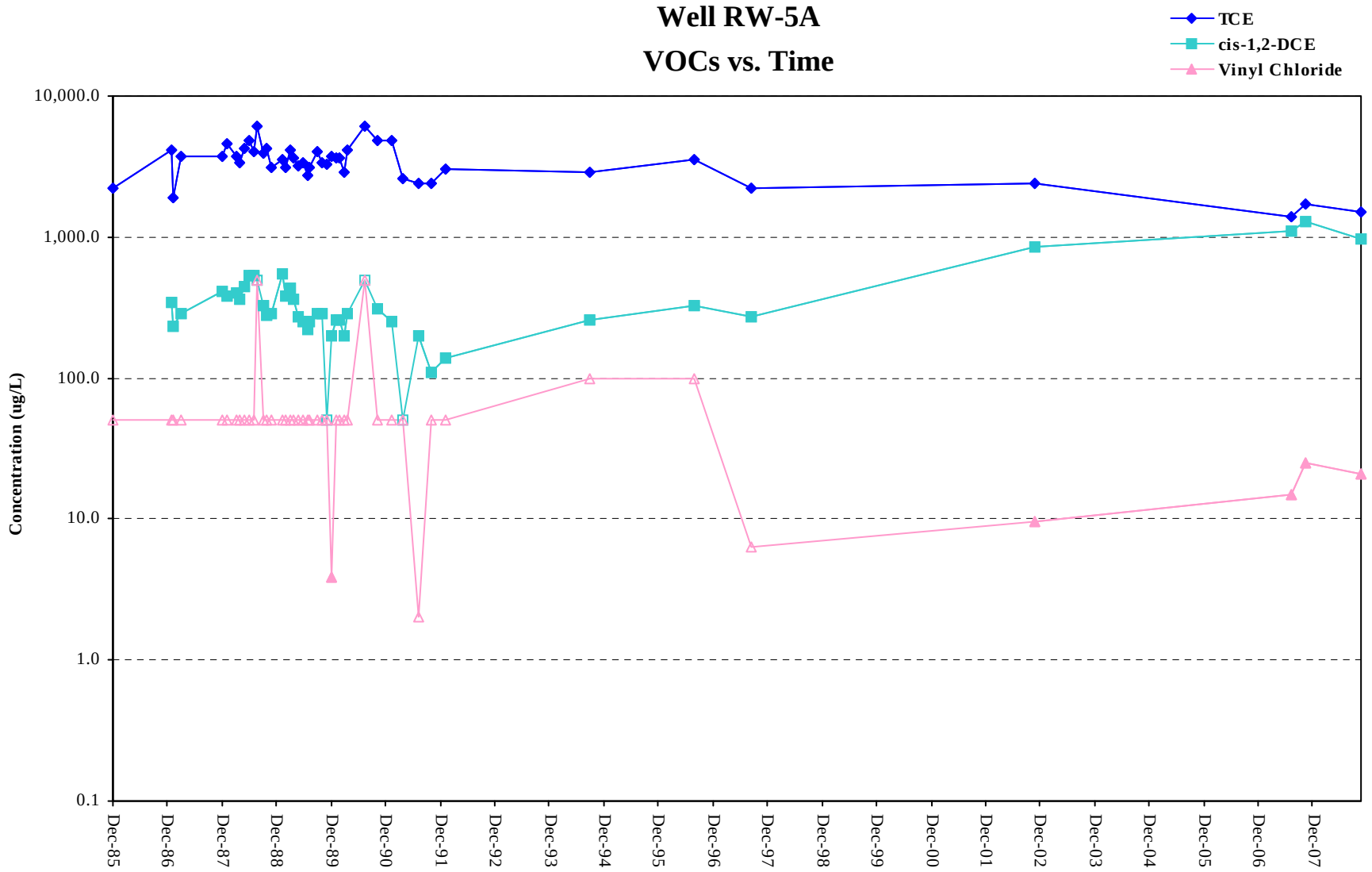
Well RW-4A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

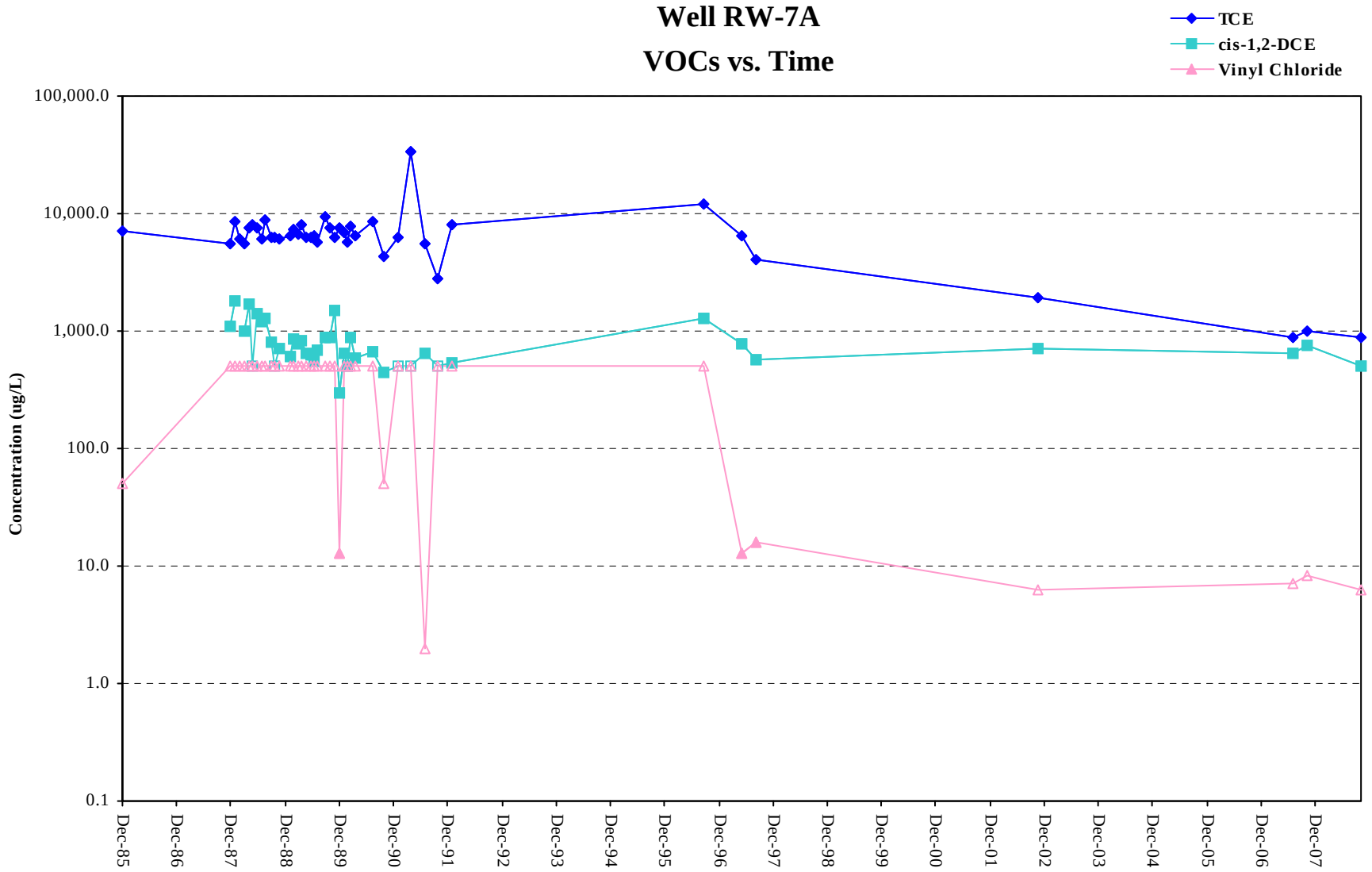
Well RW-5A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well RW-7A
VOCs vs. Time



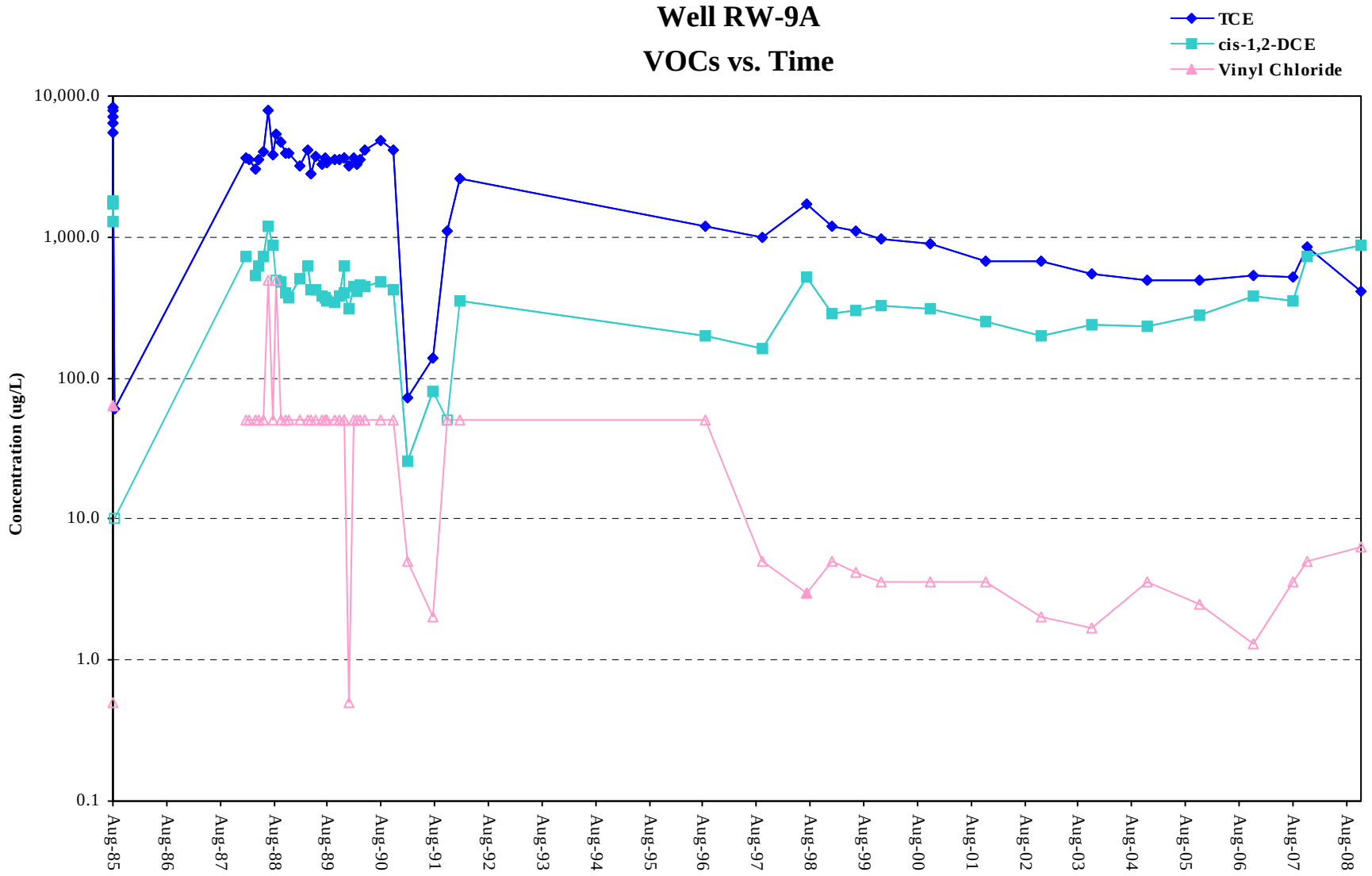
NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Database: S:\WELLDATA\Schlumberger\Mt View - MEW\SlmbMv.mdb
Report: rptMvChrts2008Log Loc. Group: Bldg1-4

Printed: 6/9/2009 5:01:10 PM

Weiss Associates

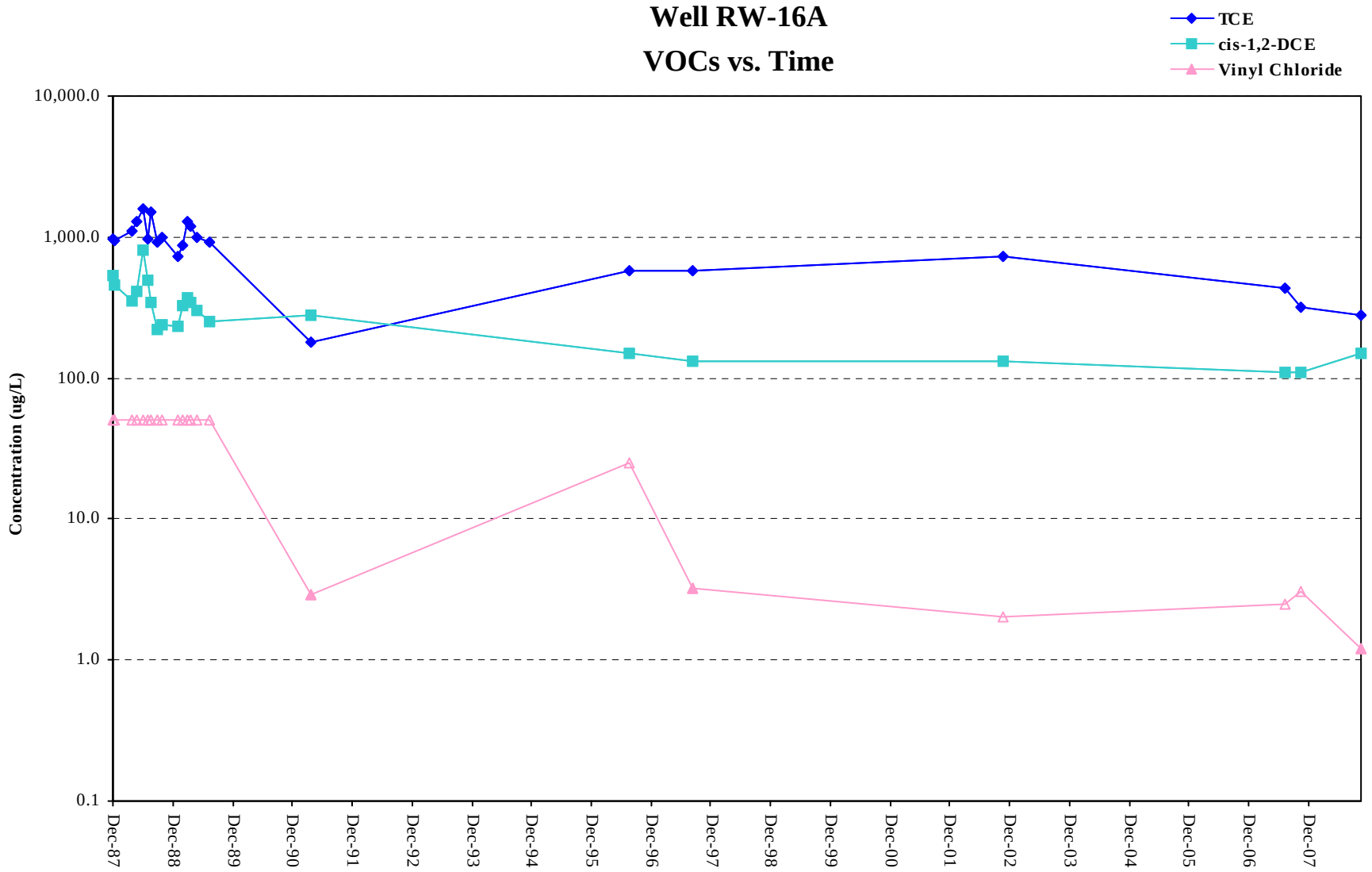
Well RW-9A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

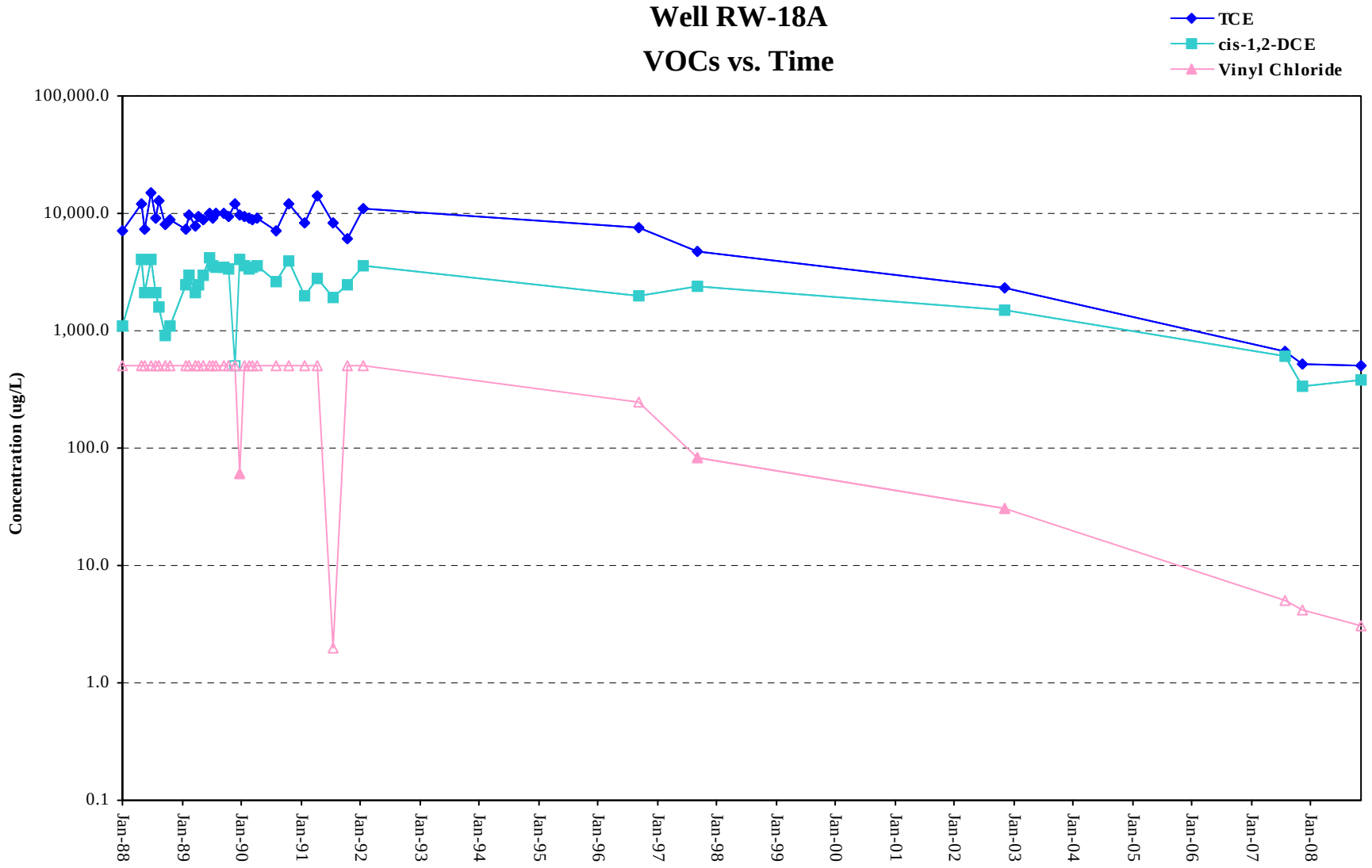
Well RW-16A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

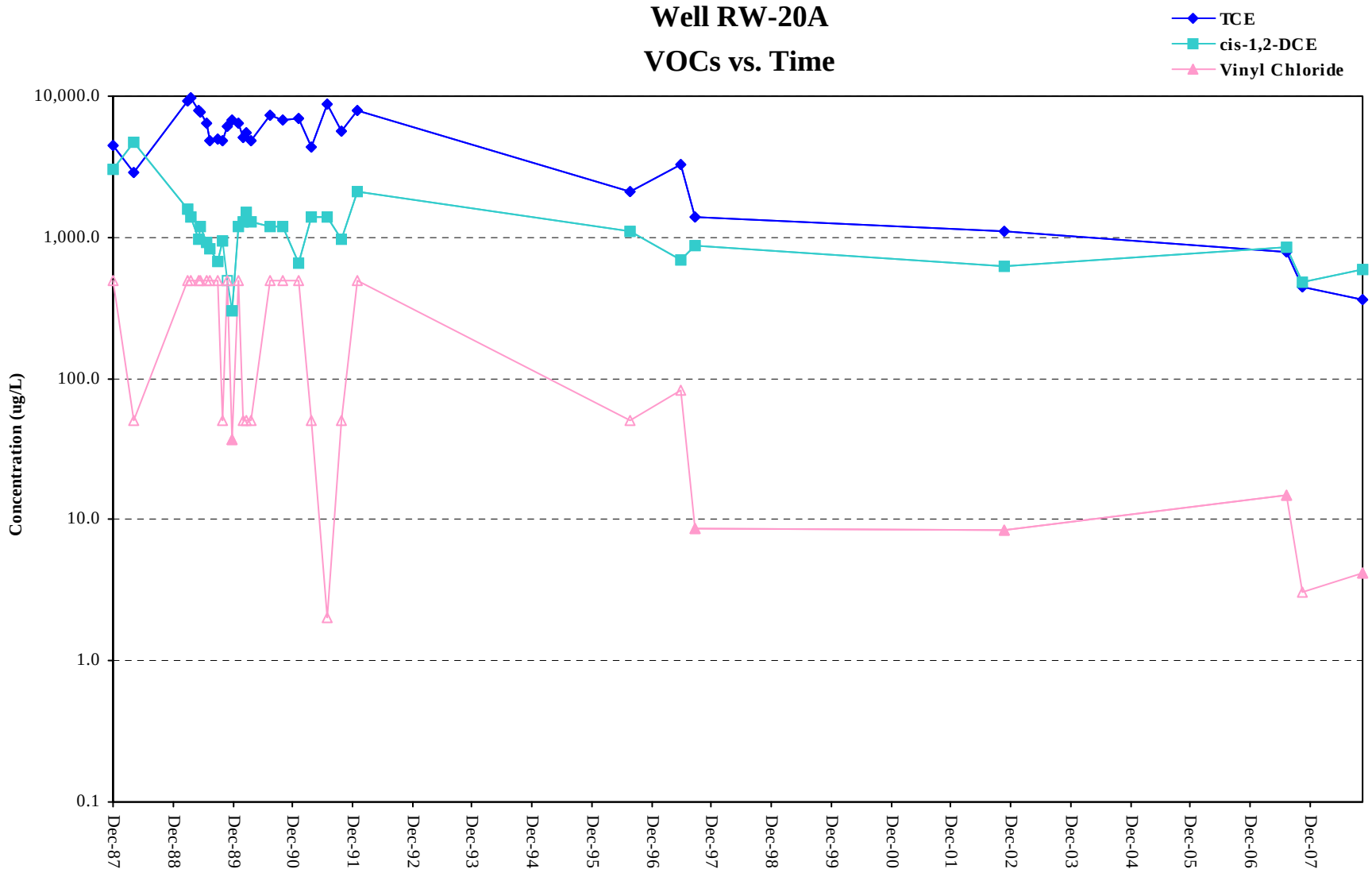
Well RW-18A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

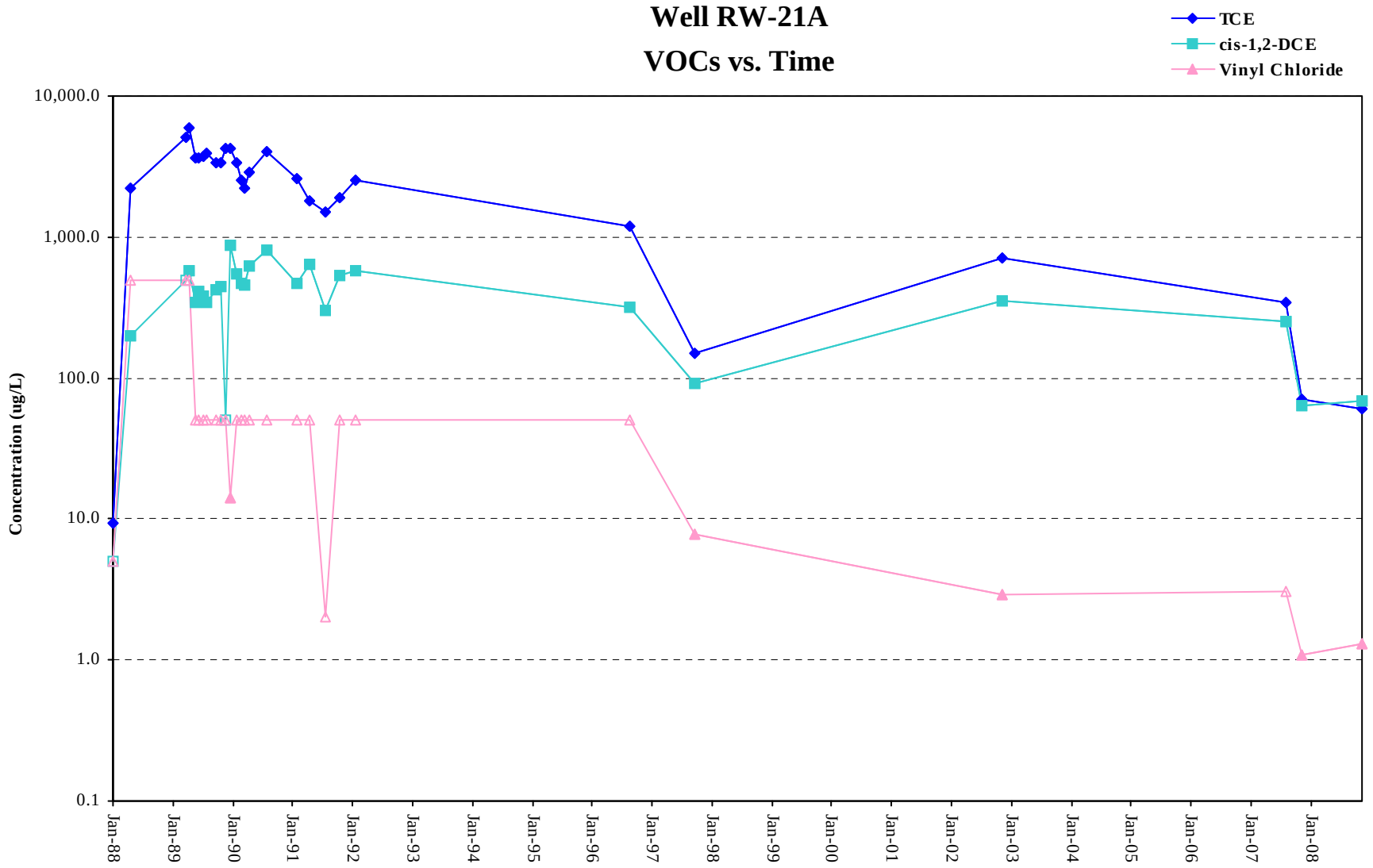
Well RW-20A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

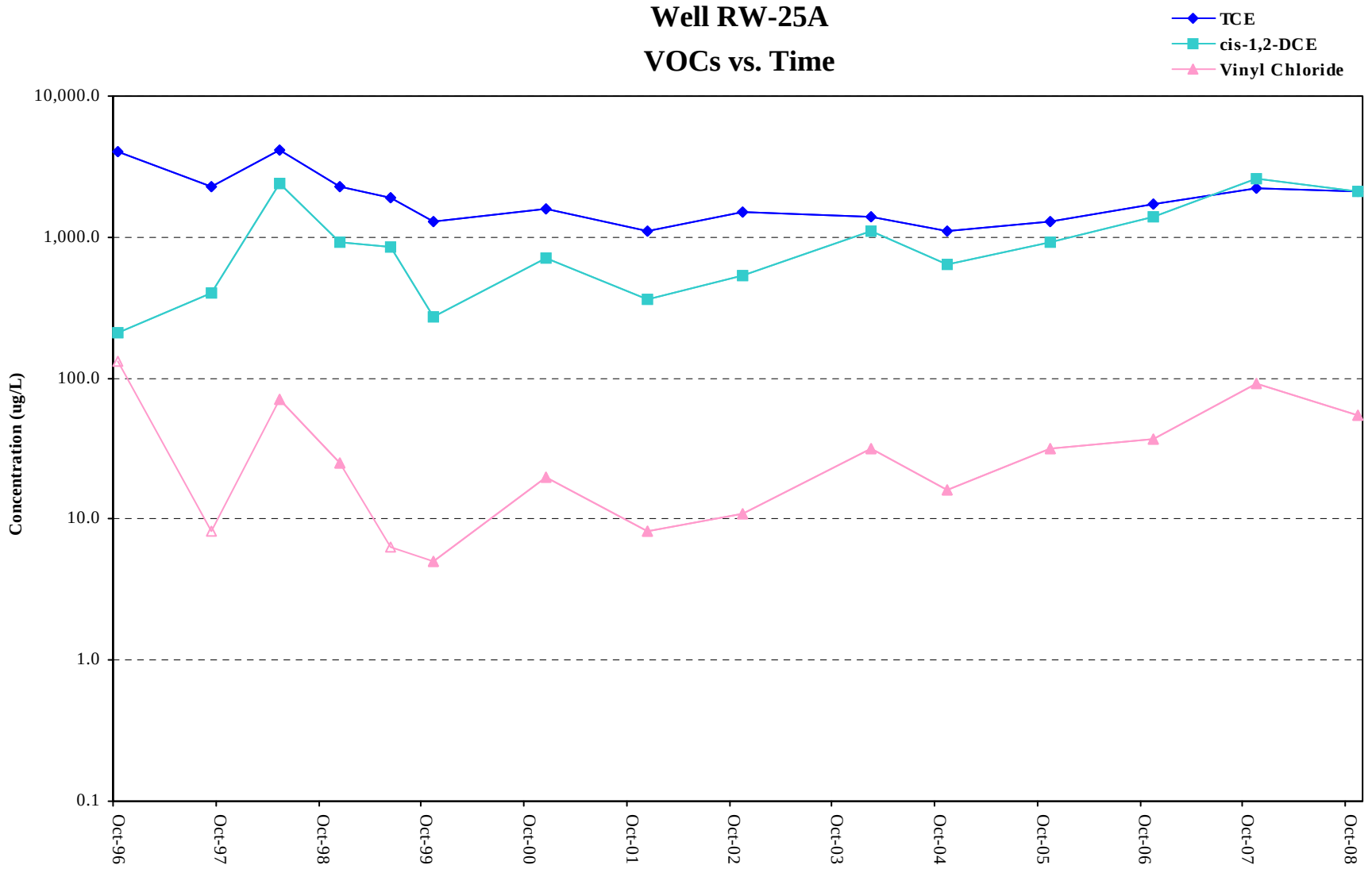
Well RW-21A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well RW-25A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Database: S:\WELLDATA\Schlumberger\Mt View - MEW\SlmbMv.mdb
Report: rptMvChrts2008Log Loc. Group: Bldg1-4

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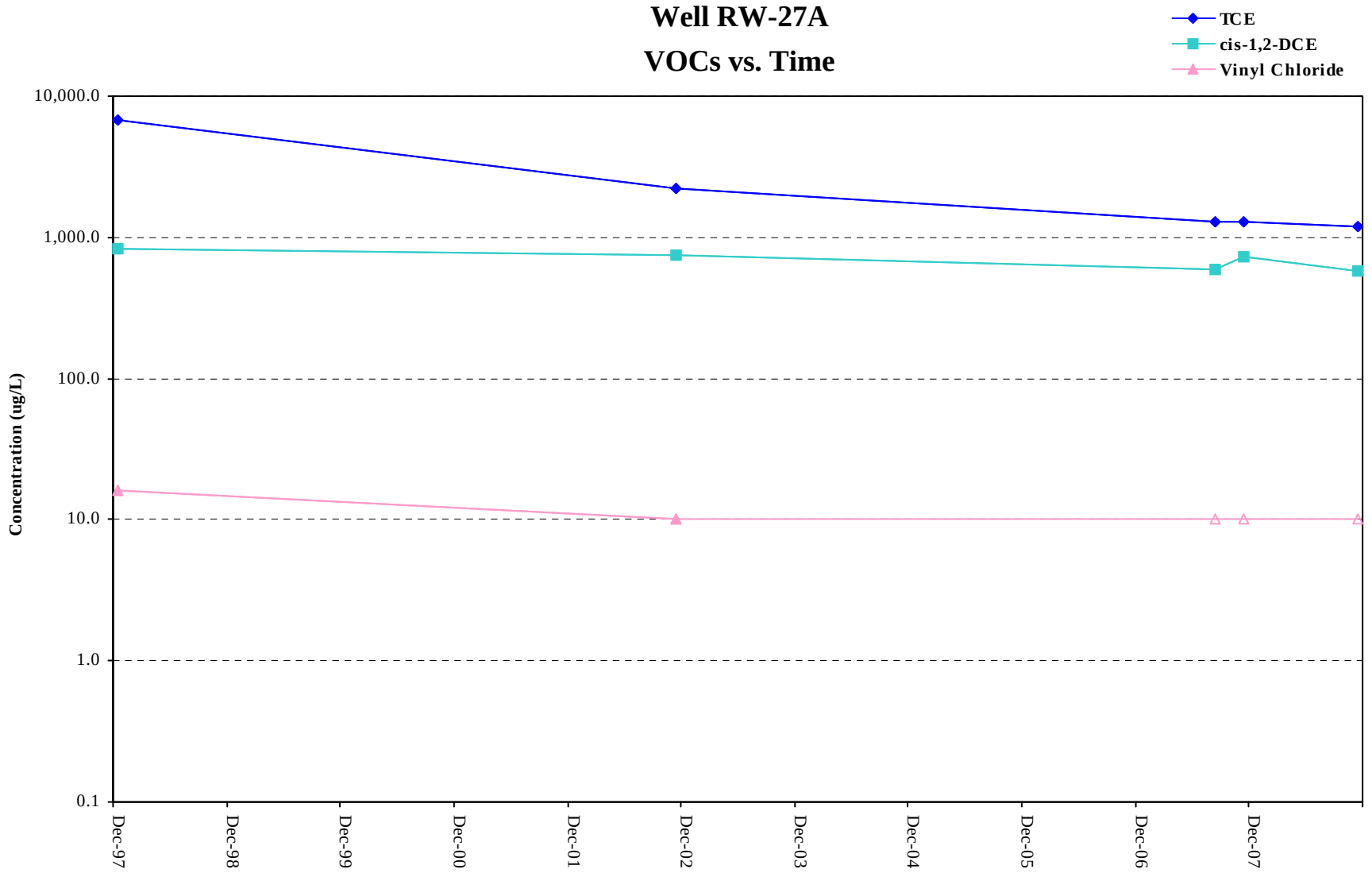
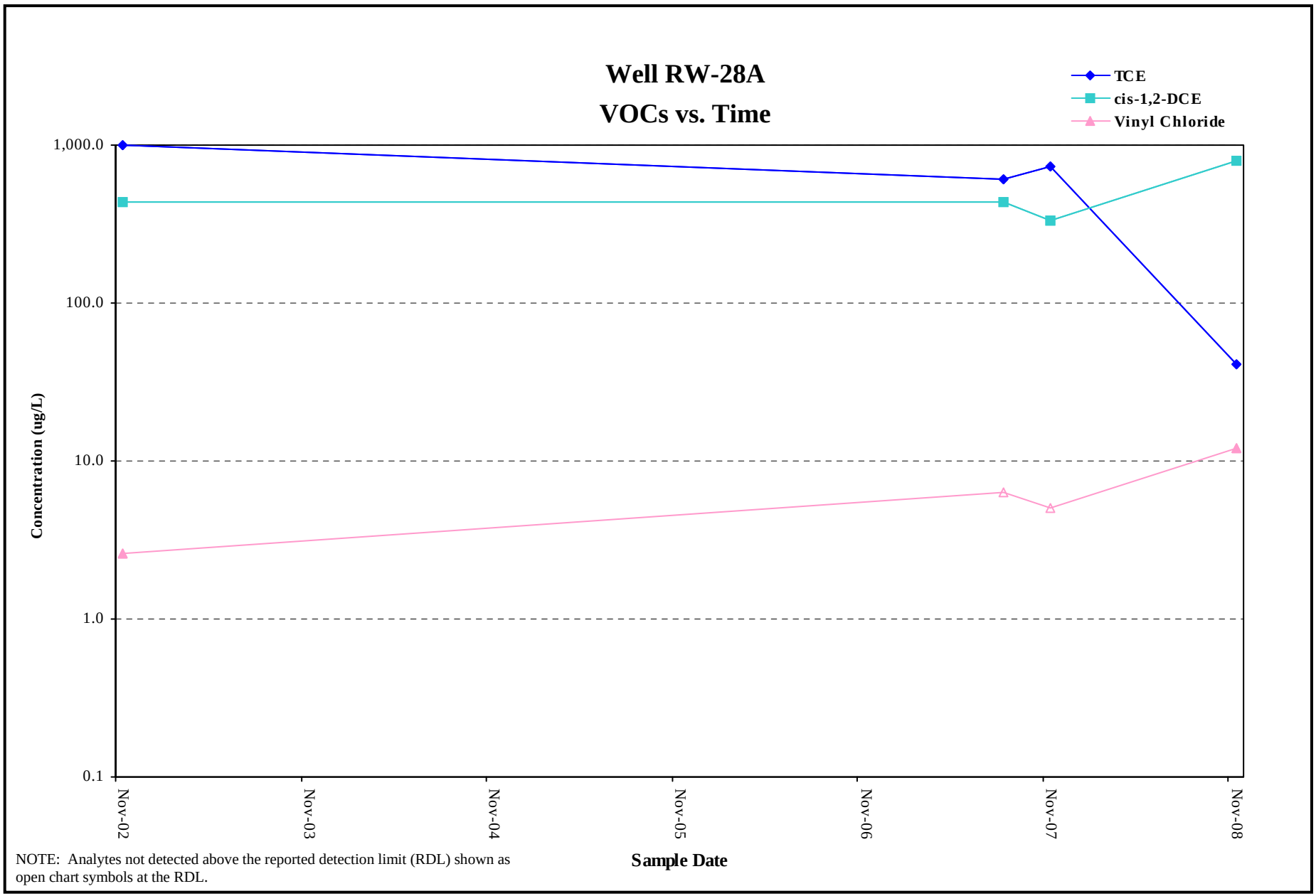
Weiss Associates

Well RW-27A
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

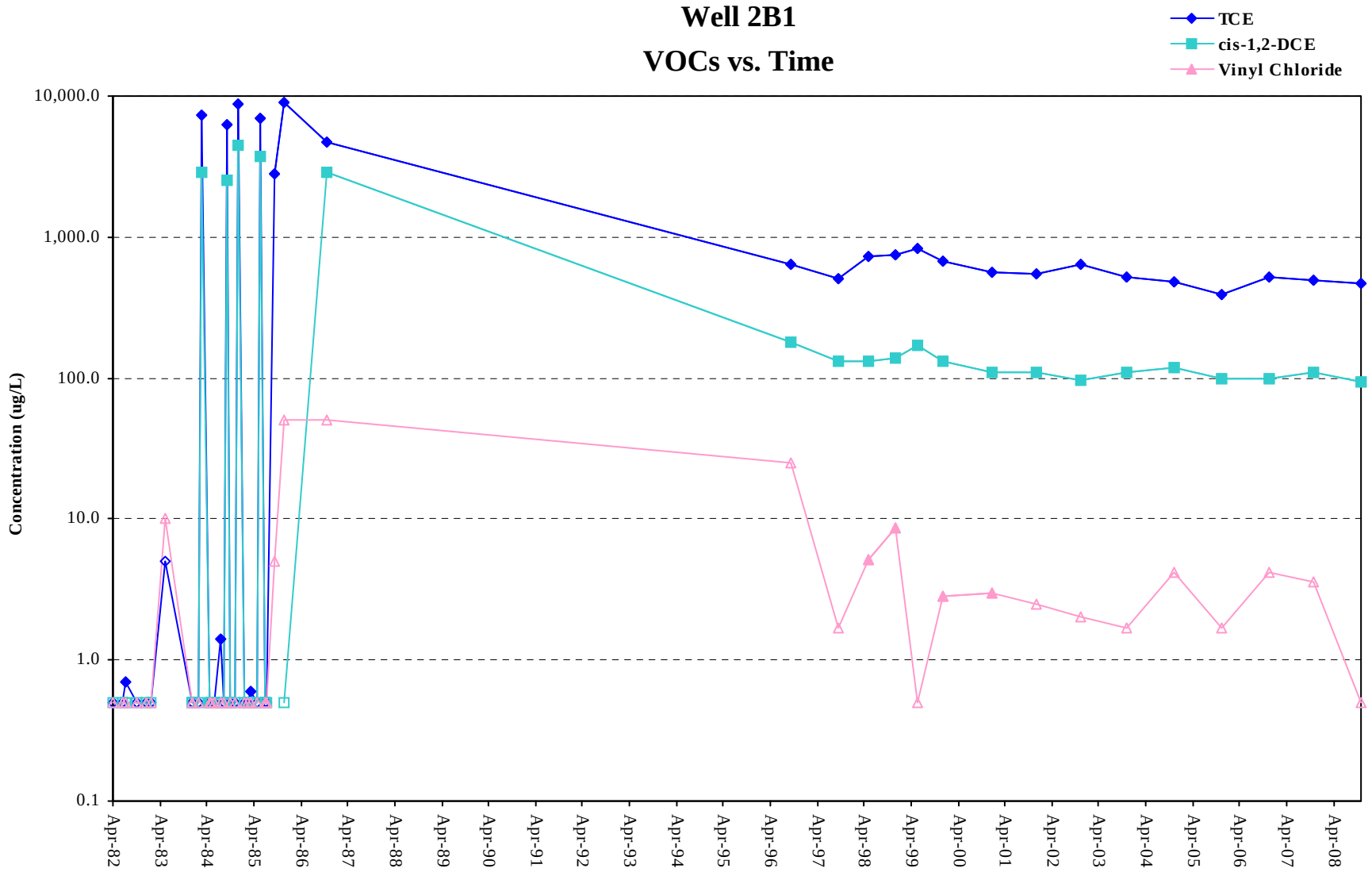


NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well 2B1

VOCs vs. Time

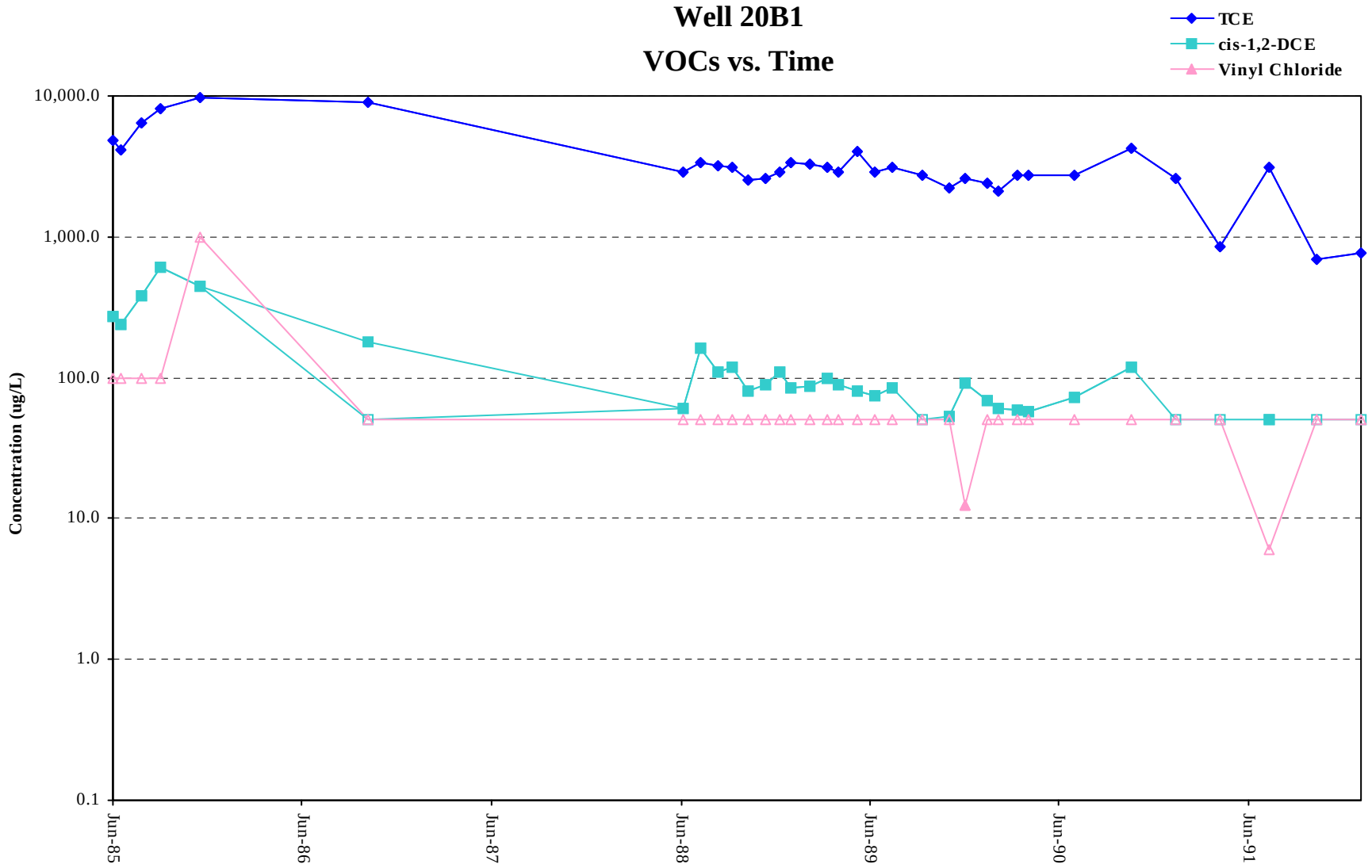


NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well 20B1

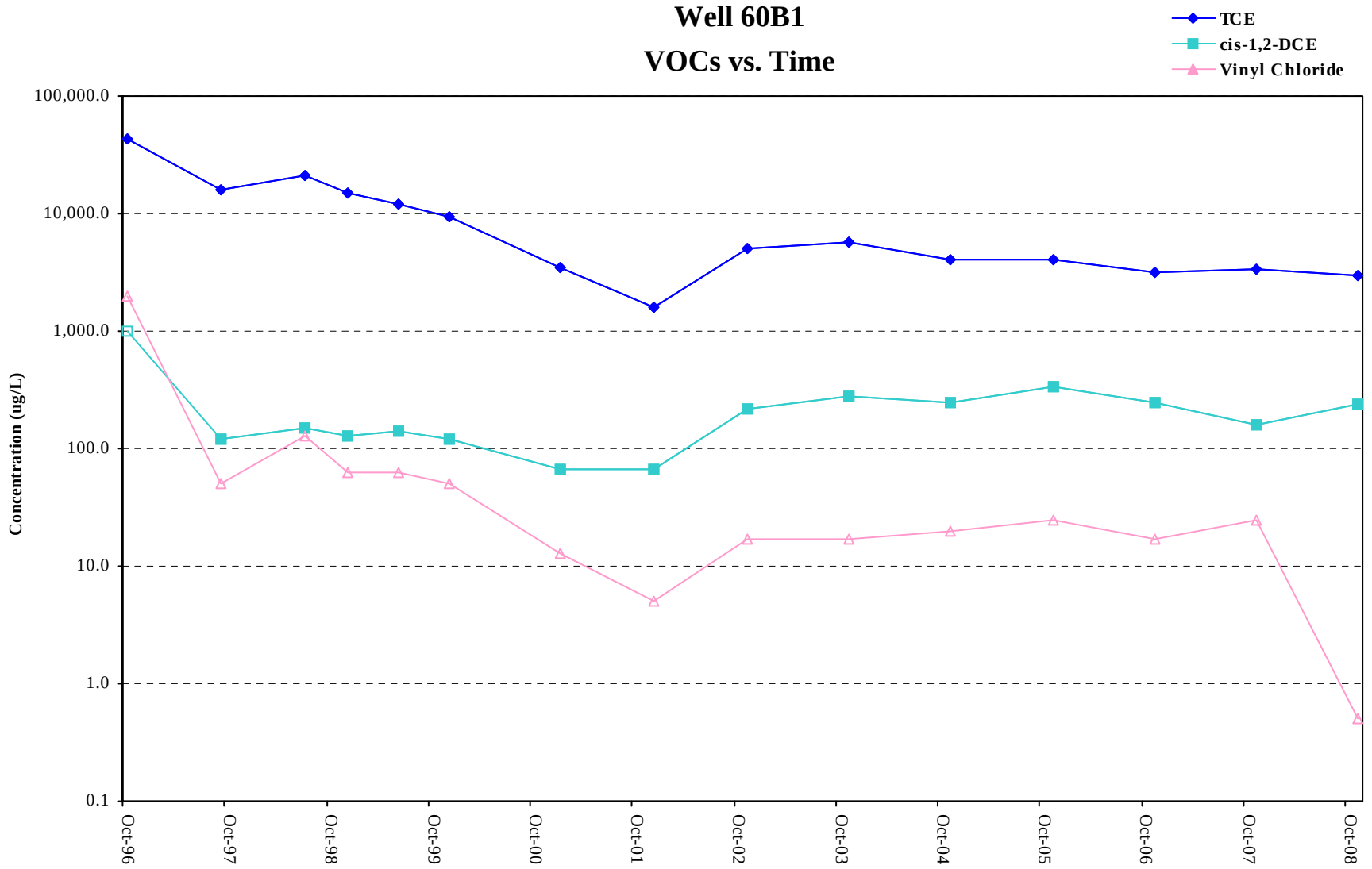
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

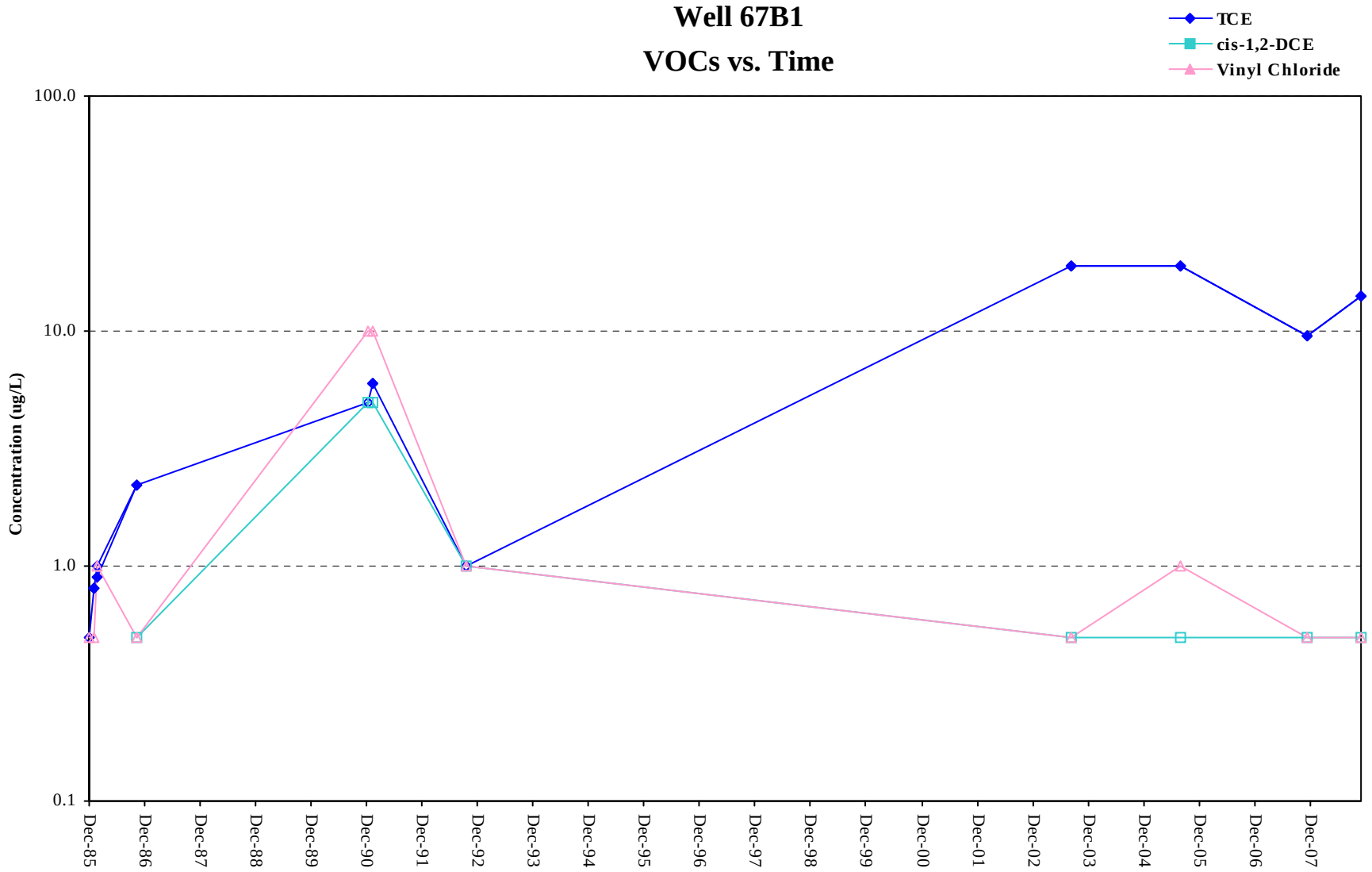
Well 60B1
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

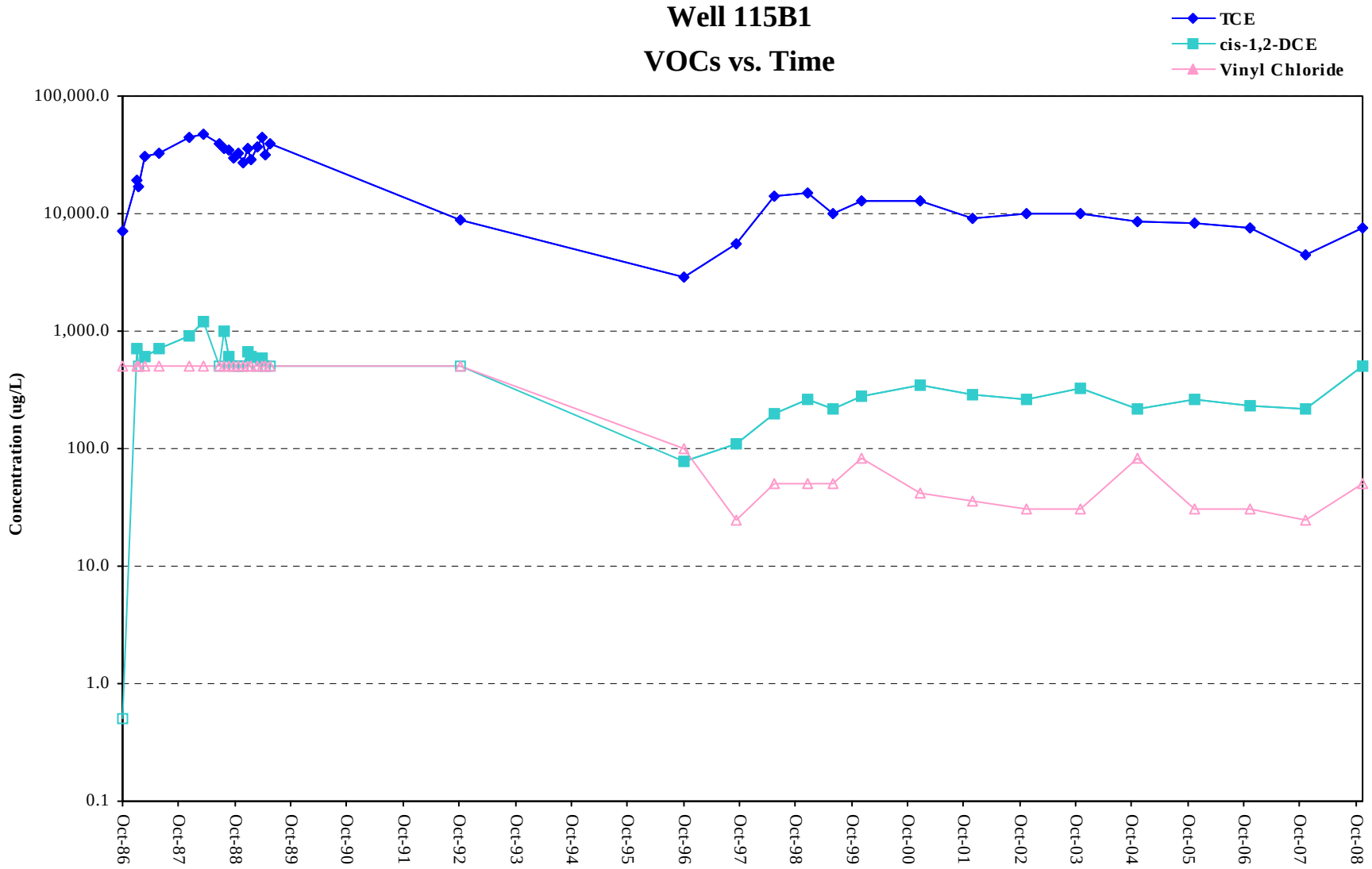
Well 67B1
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

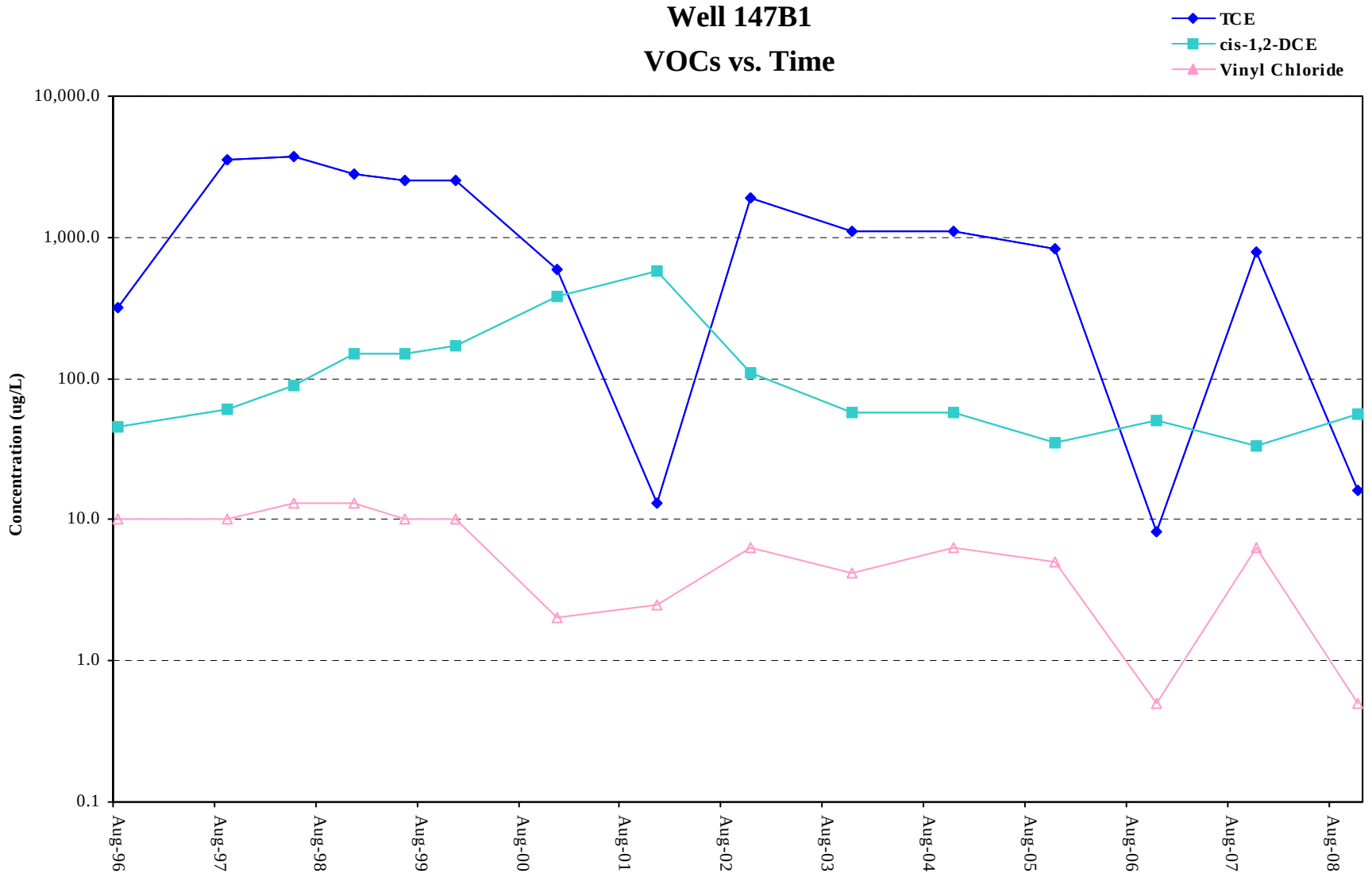
Well 115B1
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

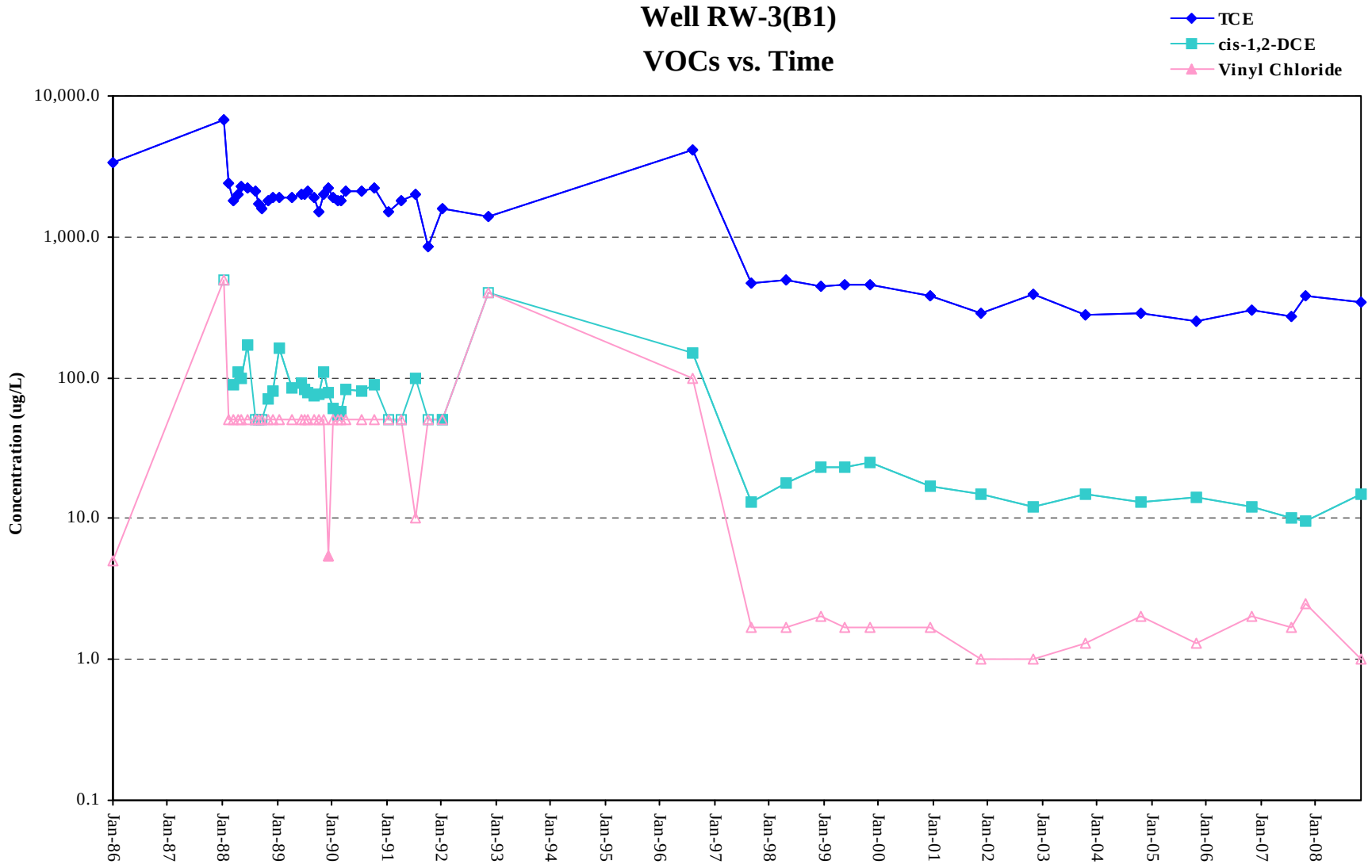
Well 147B1
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

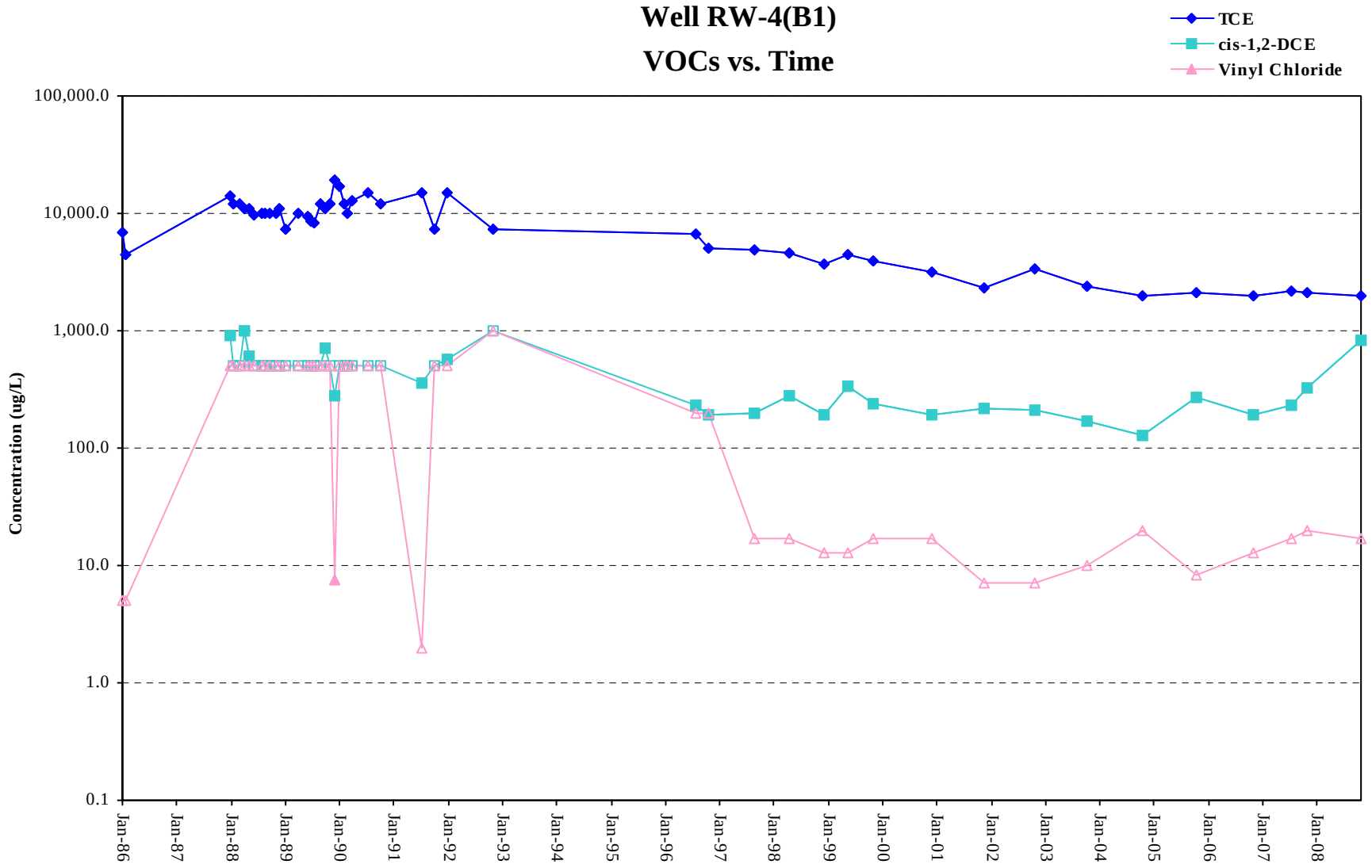
Well RW-3(B1)
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

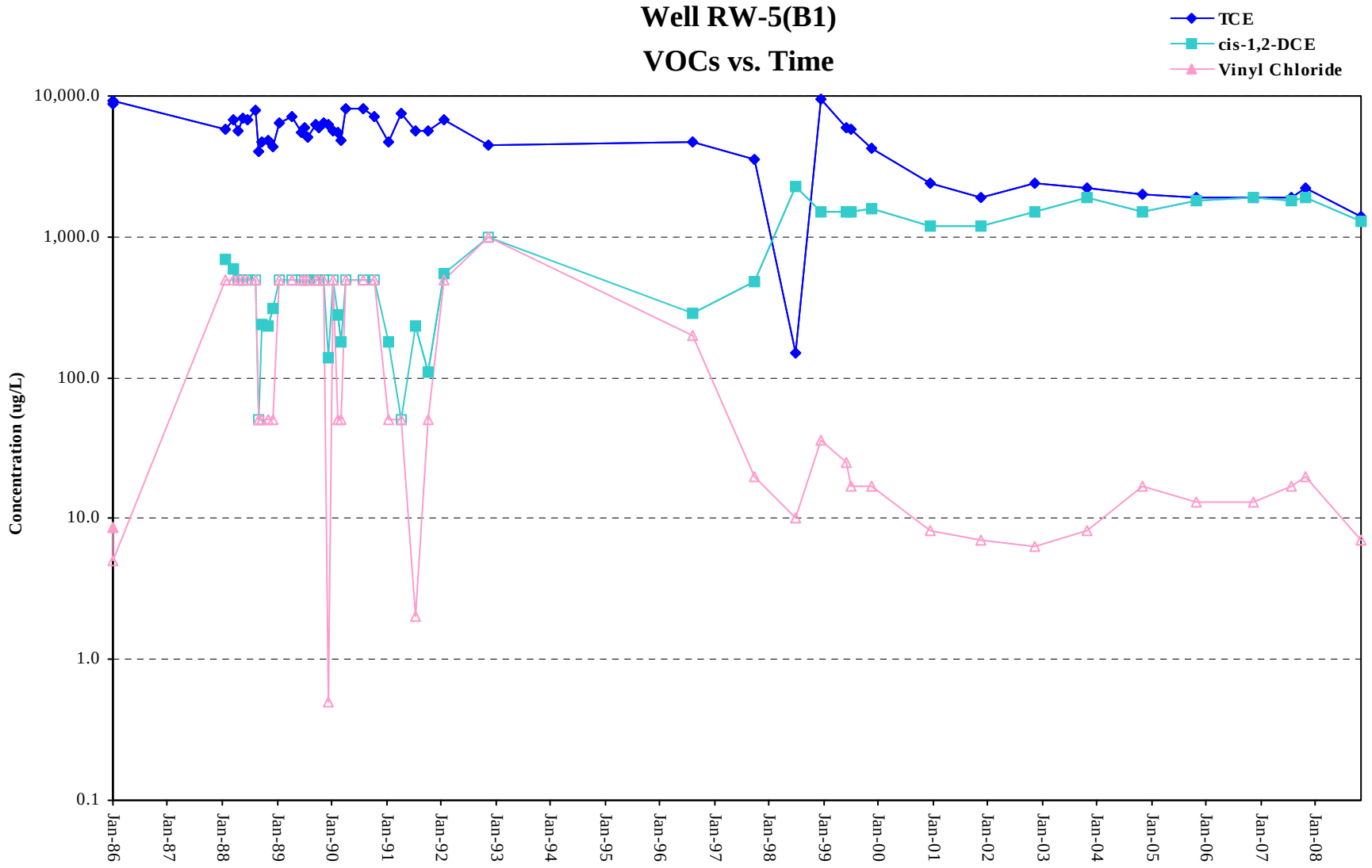
Well RW-4(B1)
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

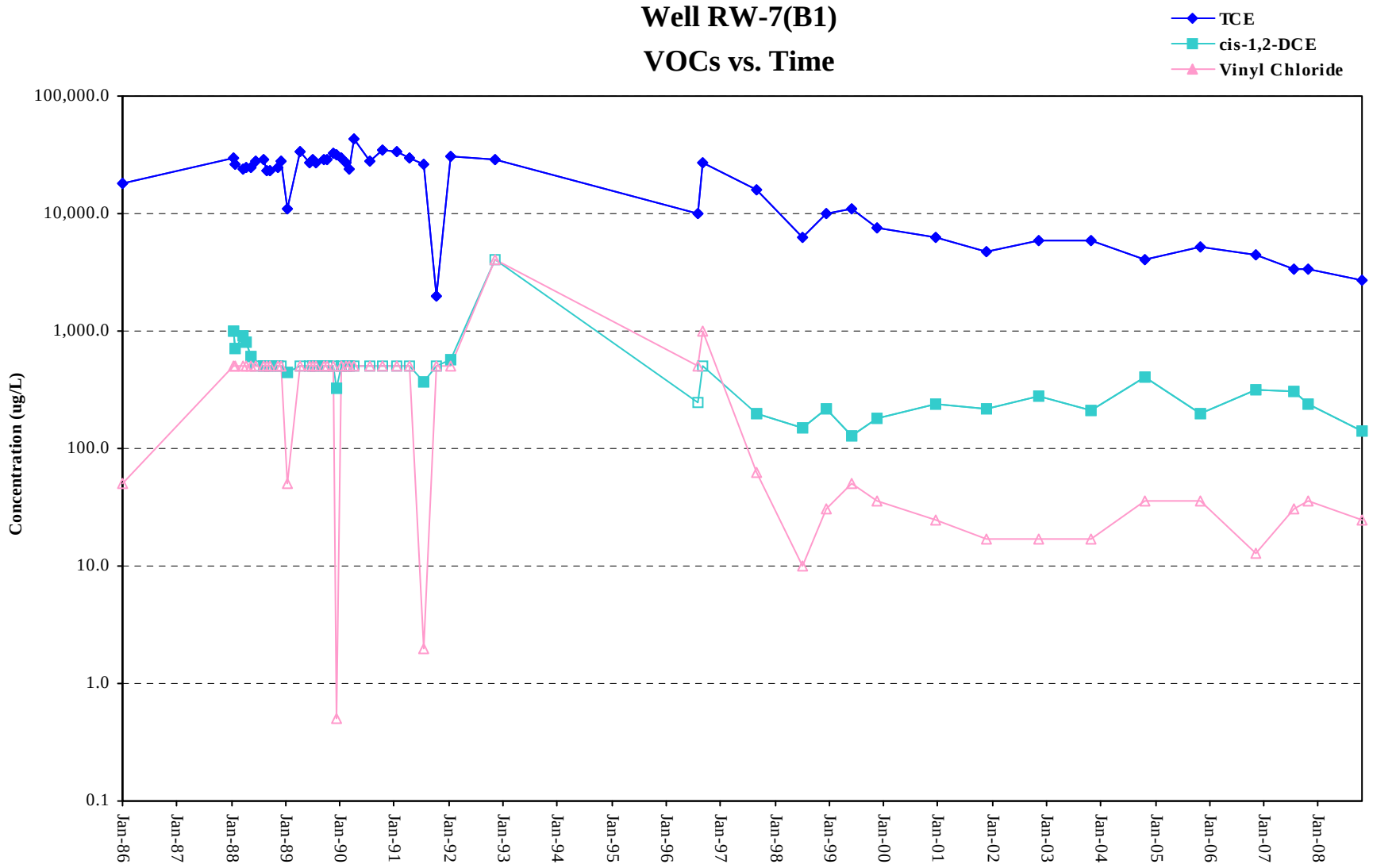
Well RW-5(B1)
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well RW-7(B1)
VOCs vs. Time



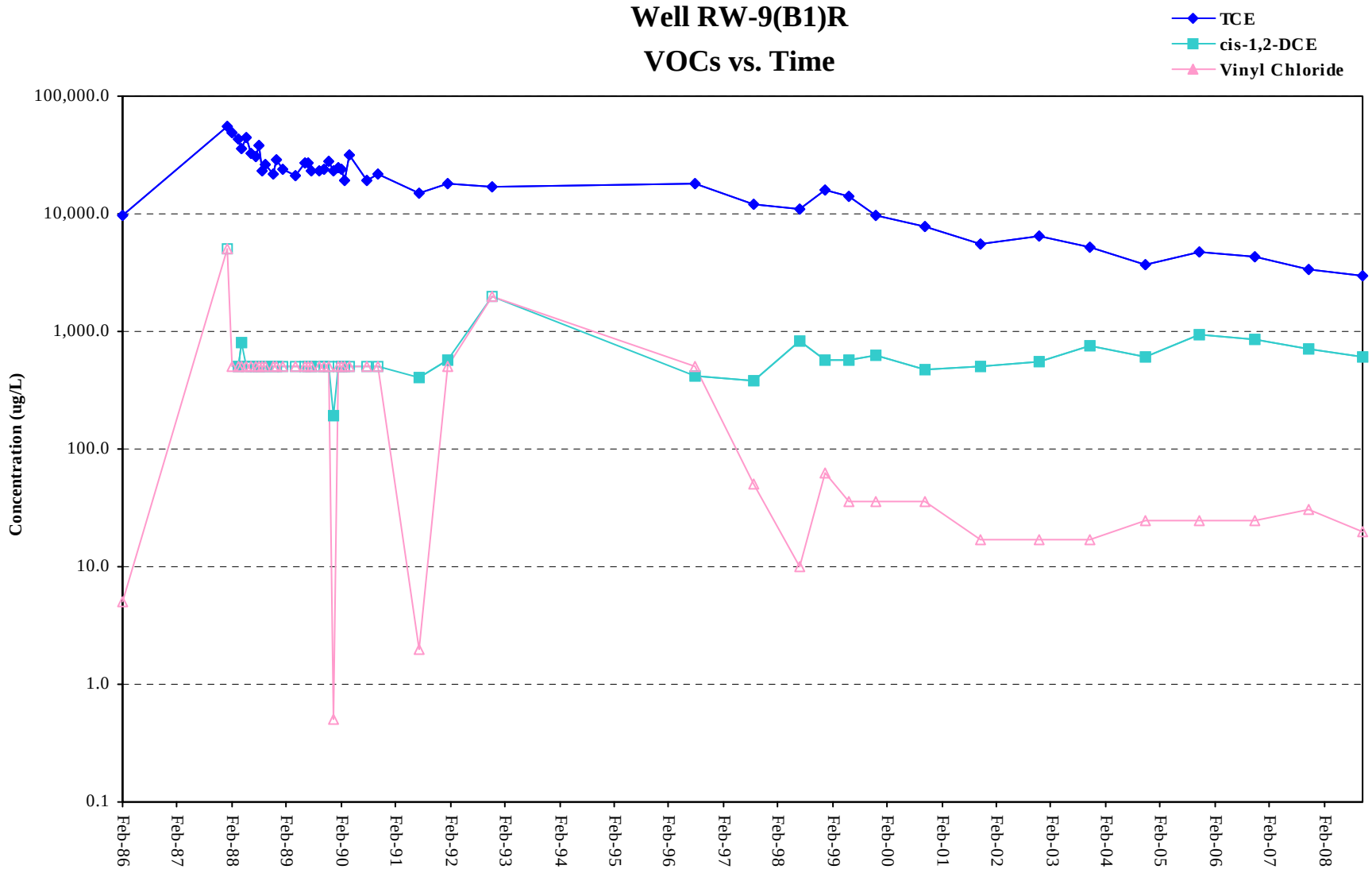
NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Database: S:\WELLDATA\Schlumberger\Mt View - MEW\SlmbMv.mdb
Report: rptMvChrts2008Log Loc. Group: Bldg1-4

Printed: 6/9/2009 5:01:11 PM

Weiss Associates

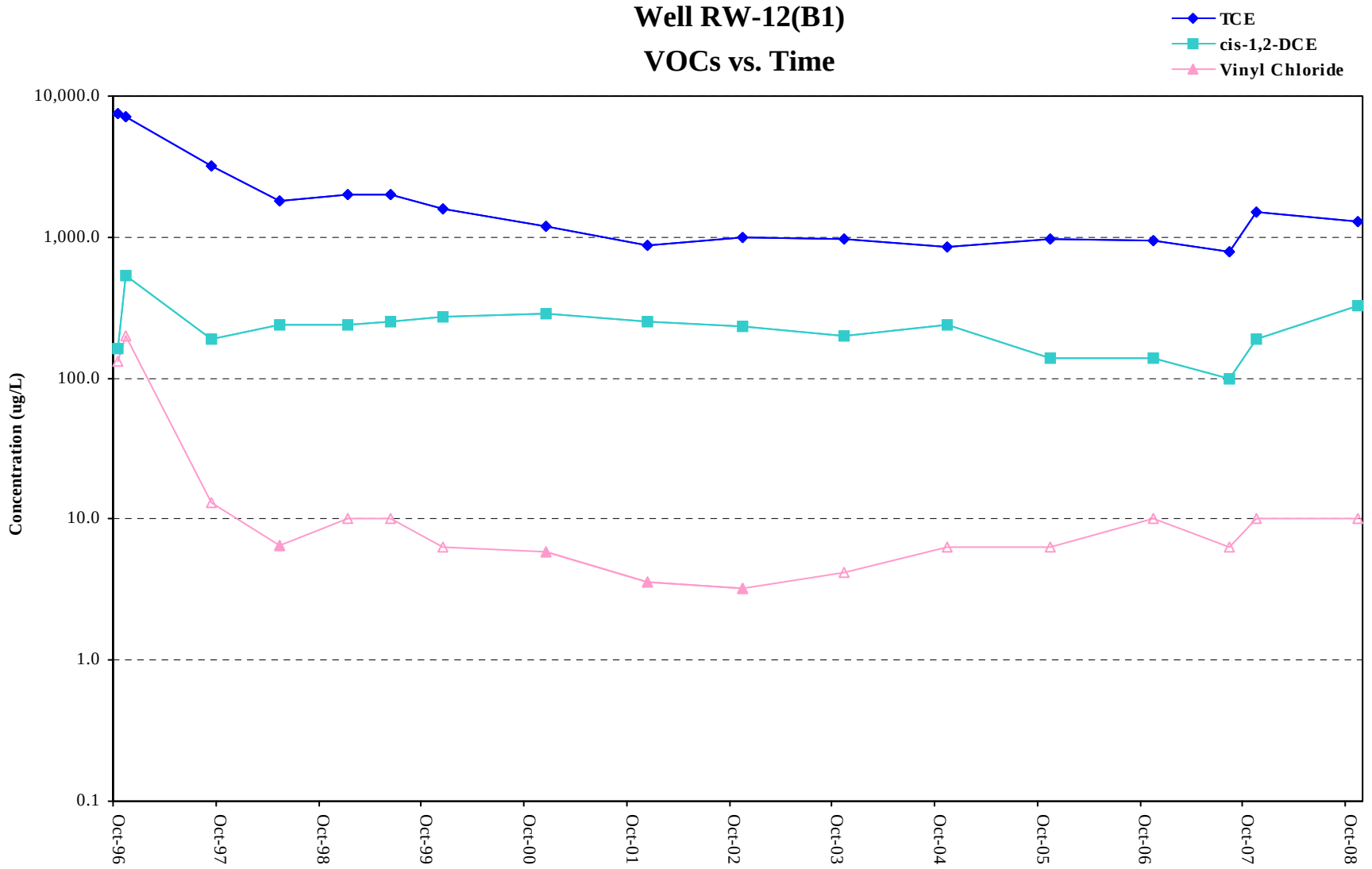
Well RW-9(B1)R
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well RW-12(B1)
VOCs vs. Time

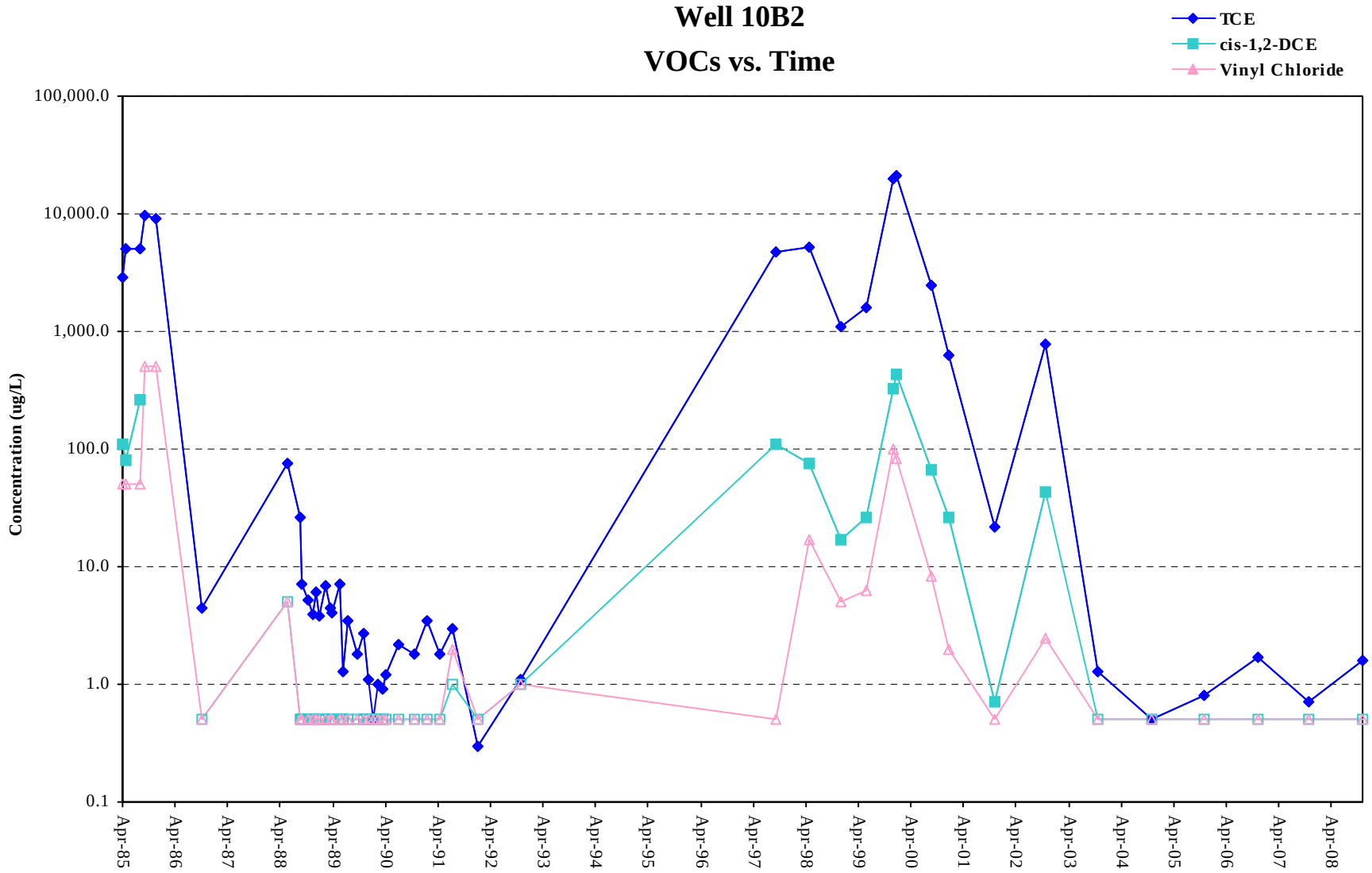


NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well 10B2

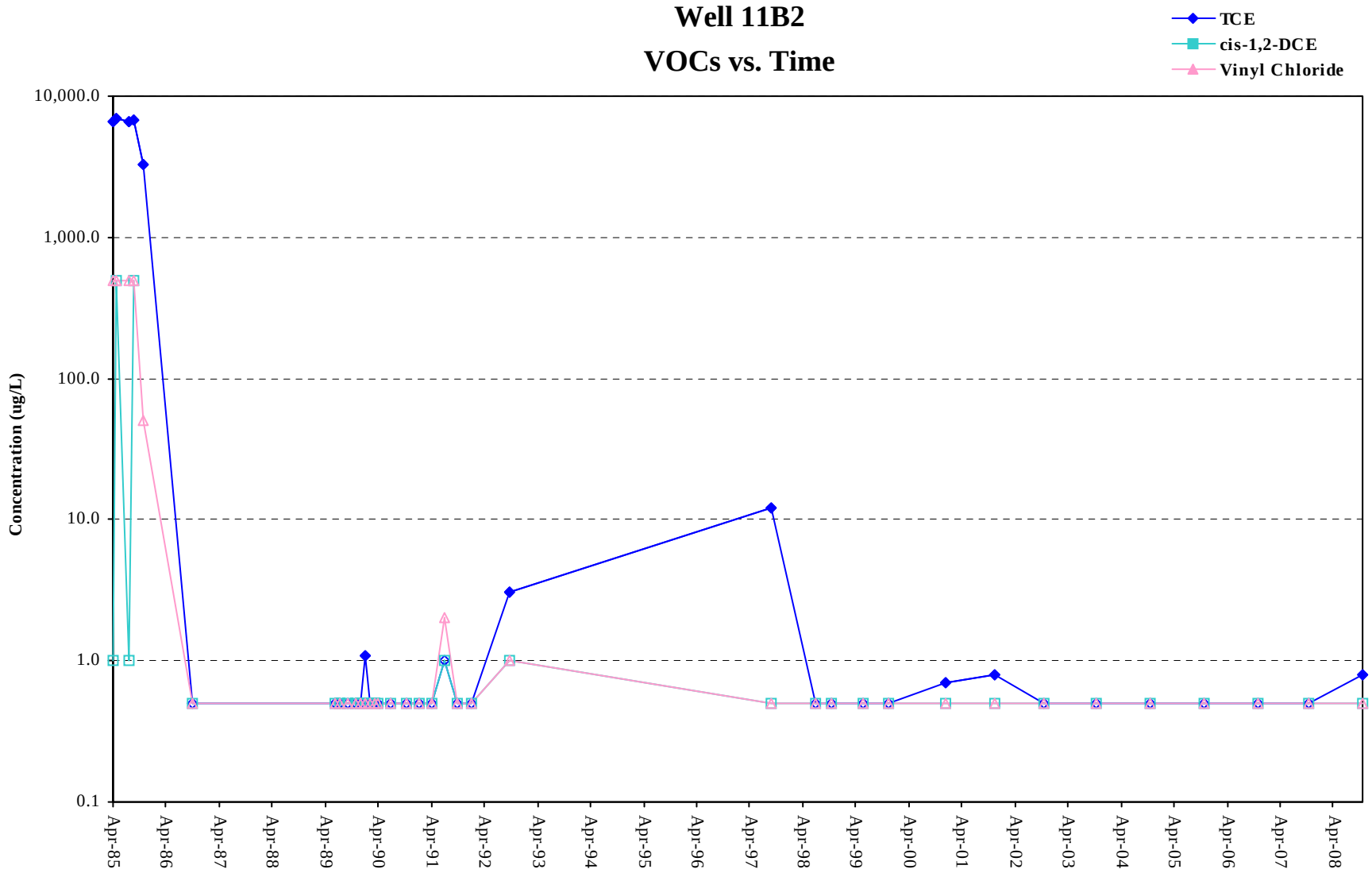
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

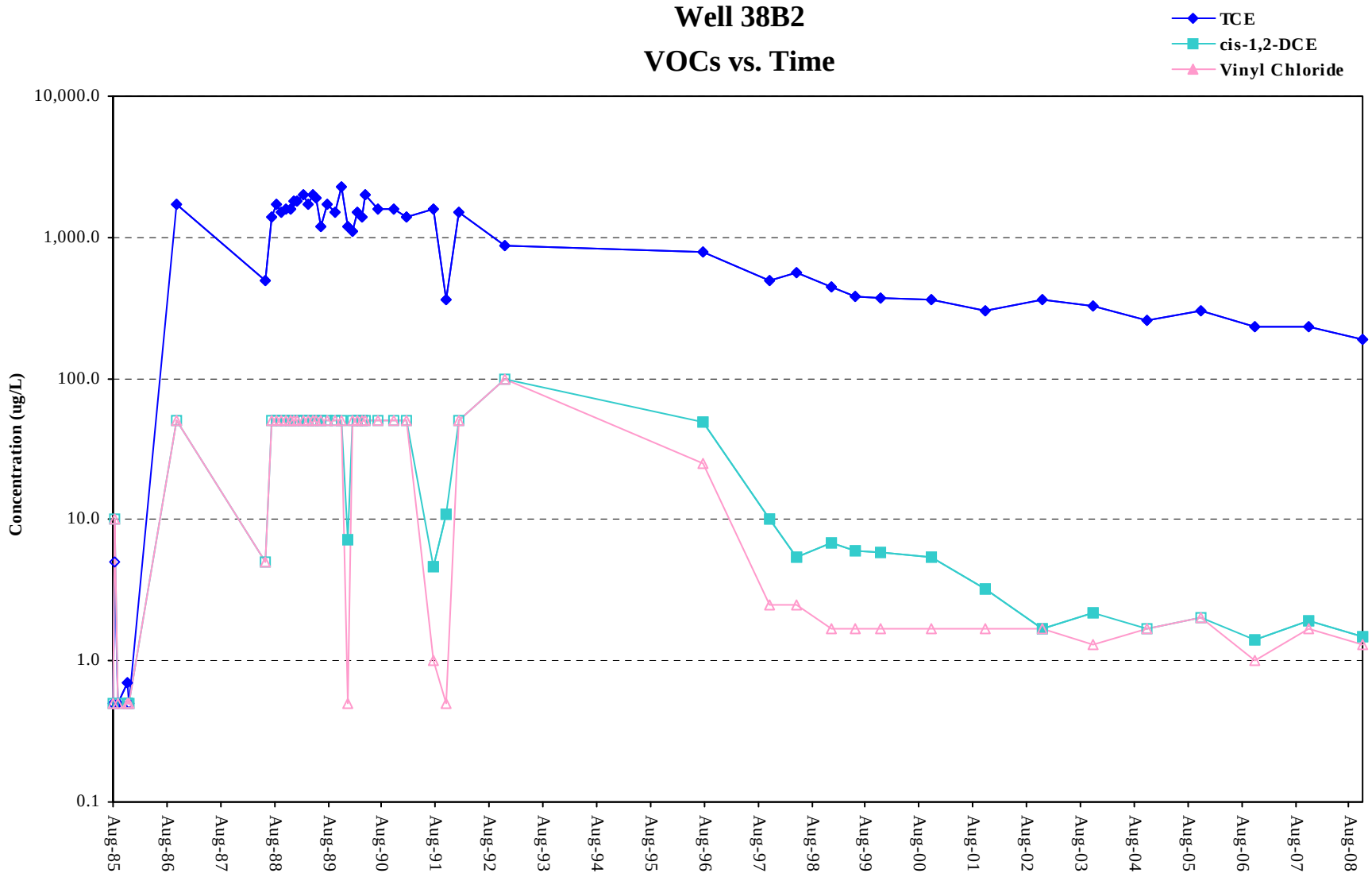
Well 11B2
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

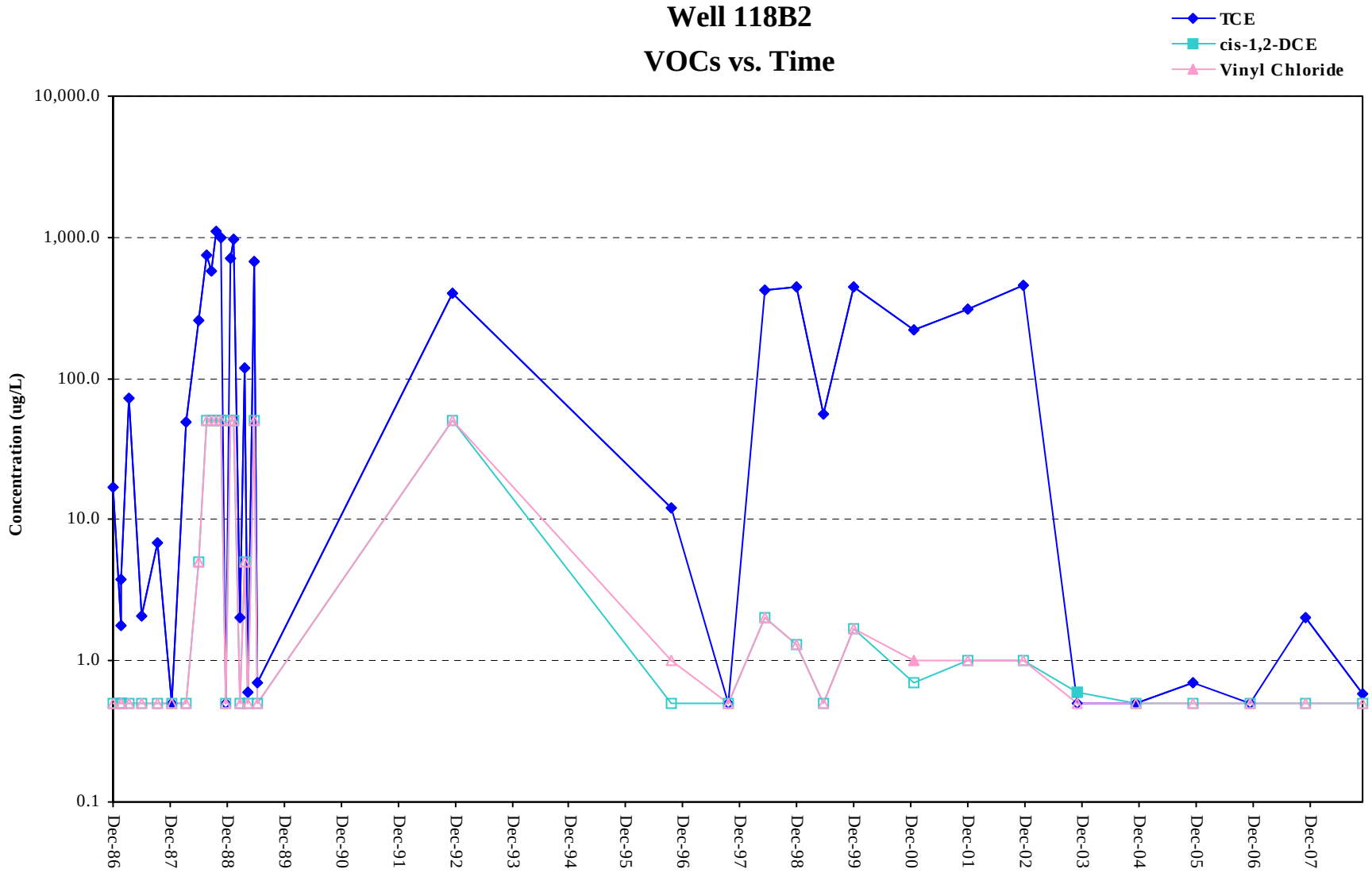
Well 38B2
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

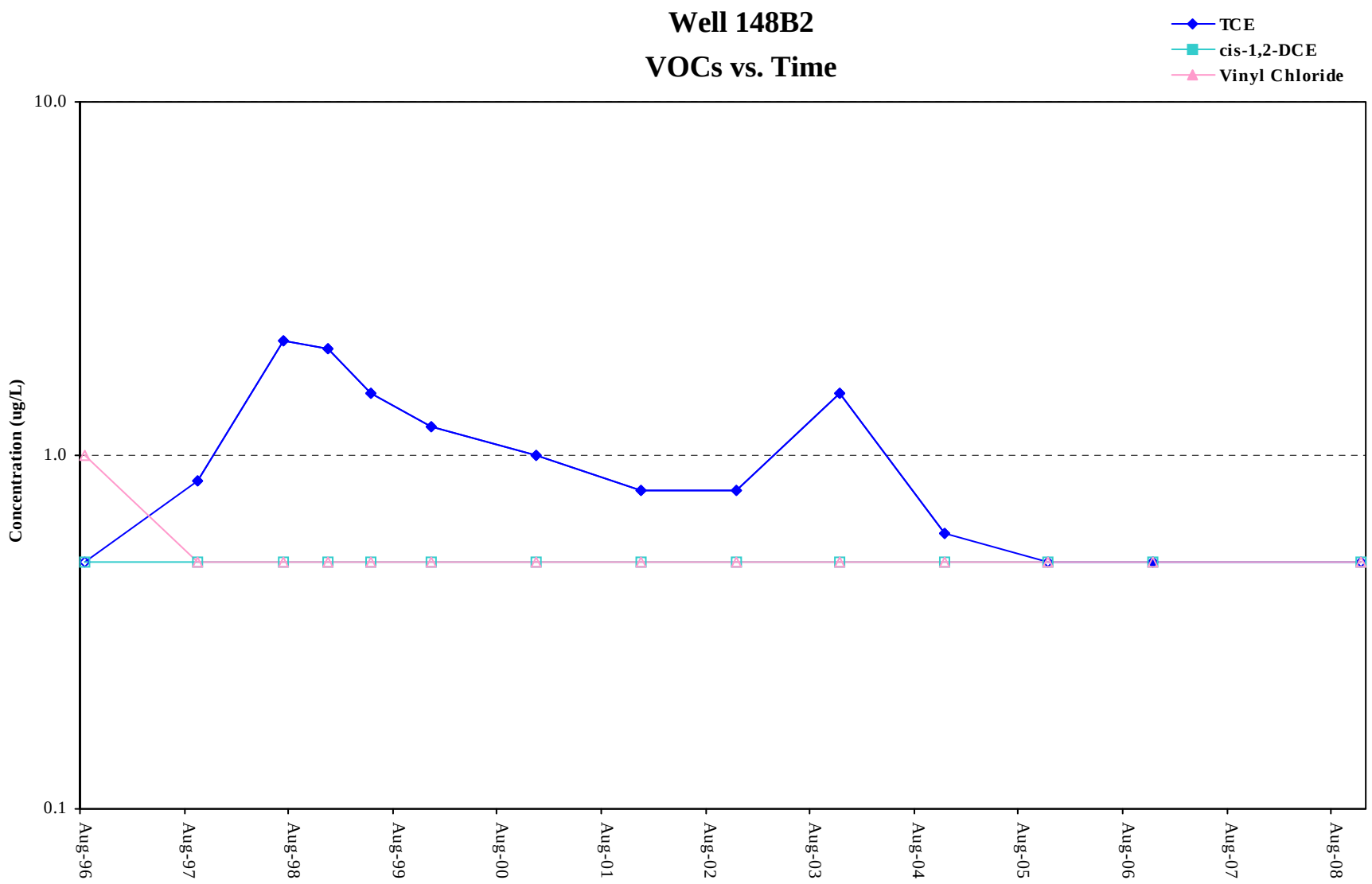
Well 118B2
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well 148B2
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Database: S:\WELLDATA\Schlumberger\Mt View - MEW\SlmbMv.mdb
Report: rptMvChrts2008Log Loc. Group: Bldg1-4

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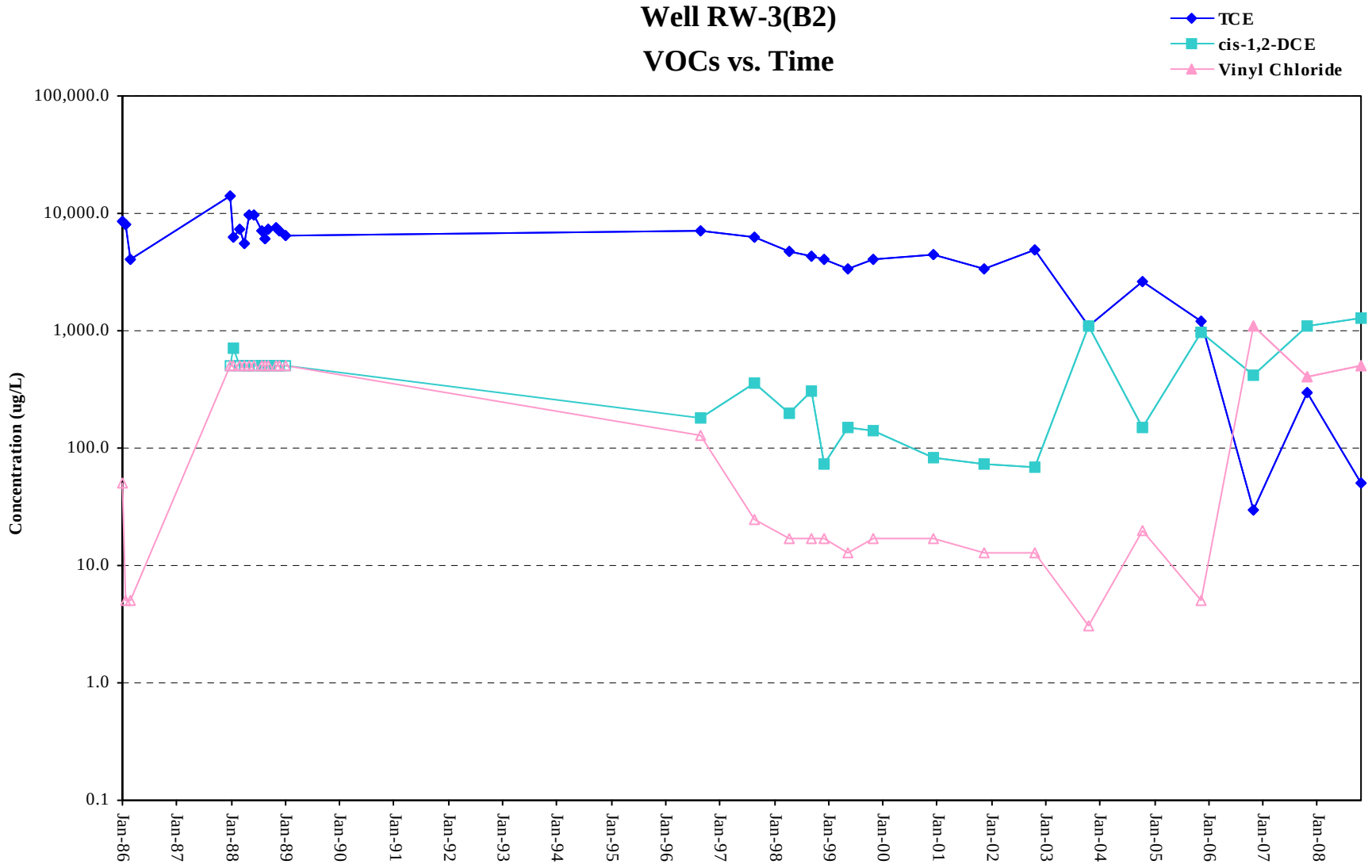
Weiss Associates

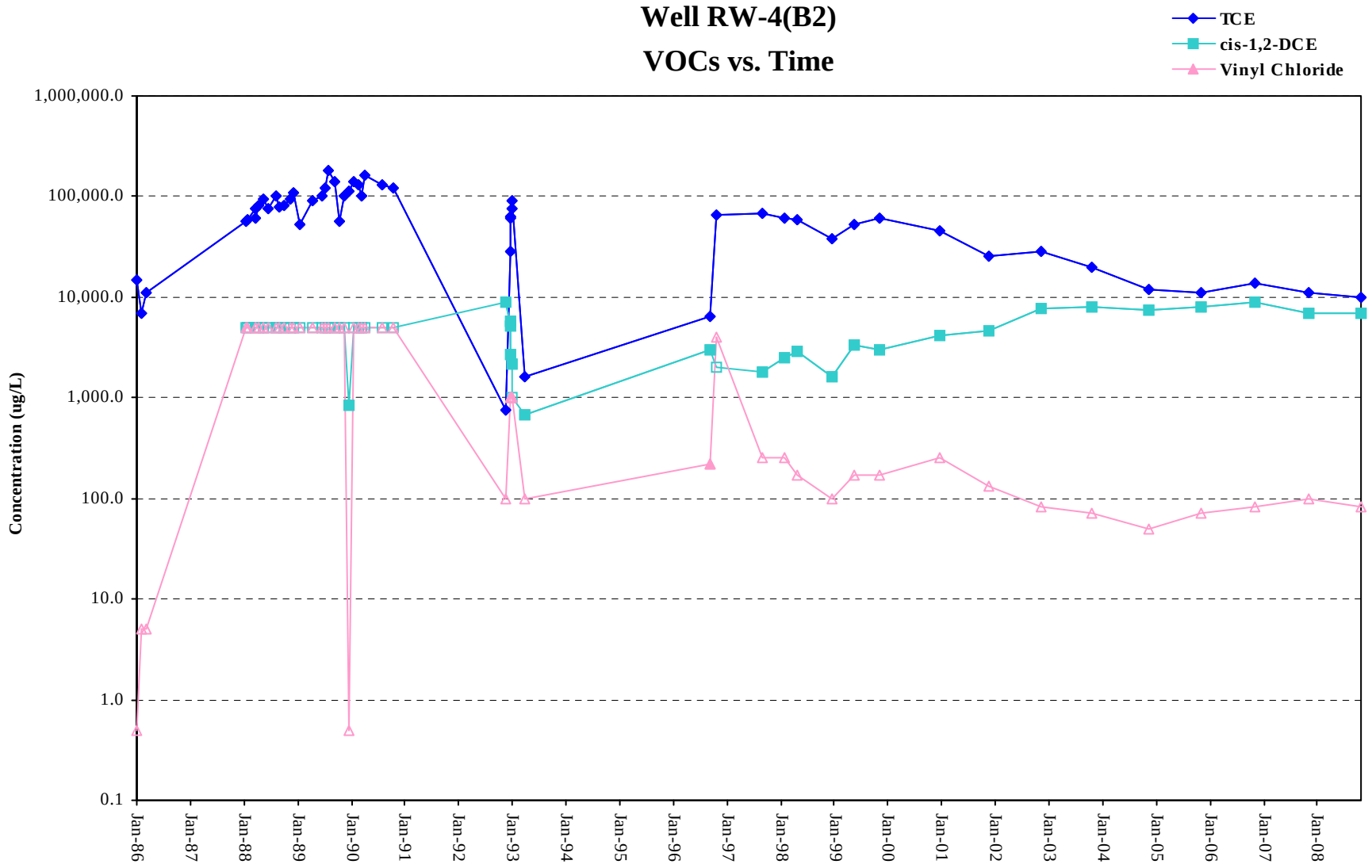
Well RW-3(B2)
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

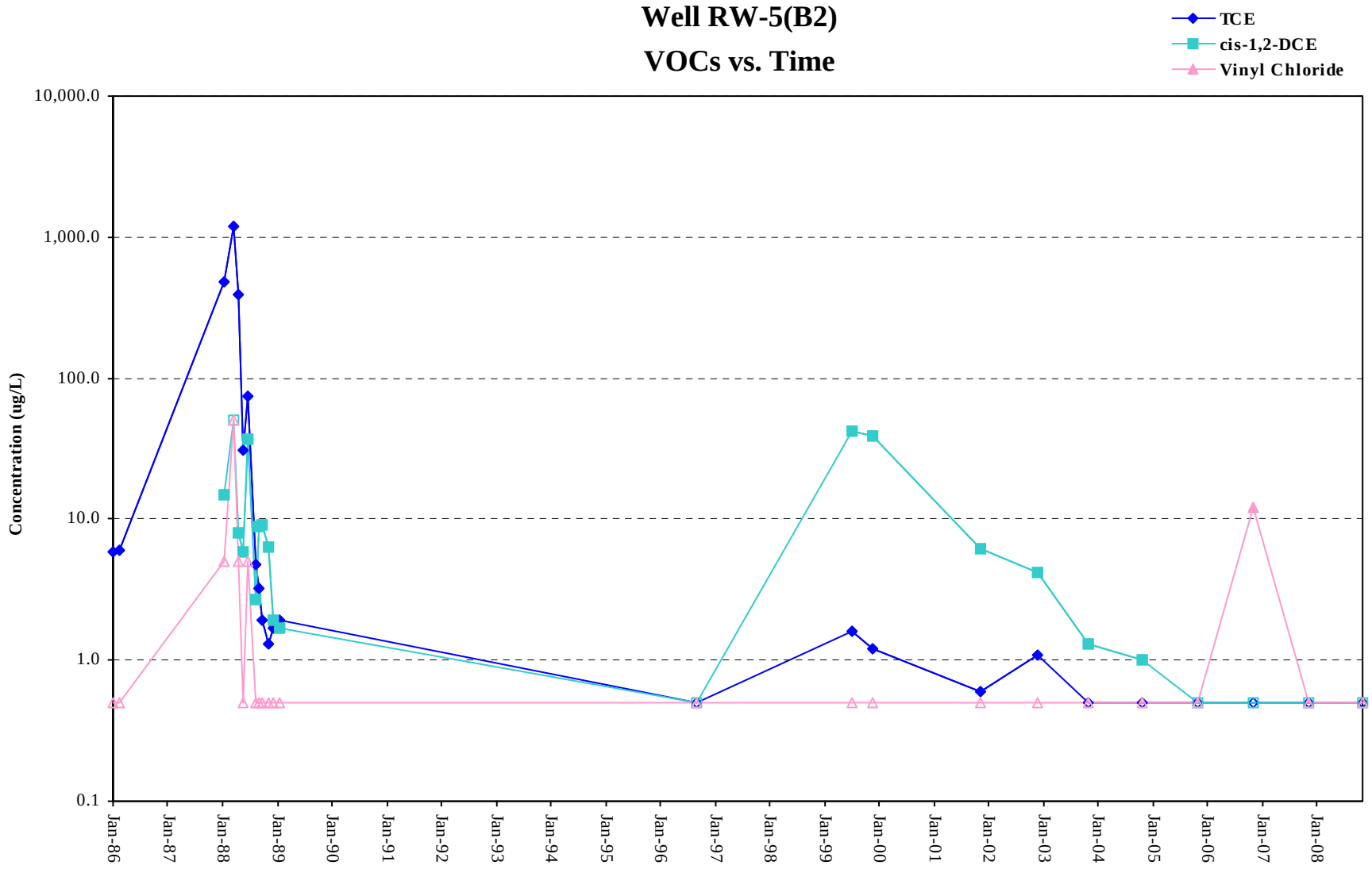
Well RW-4(B2)
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

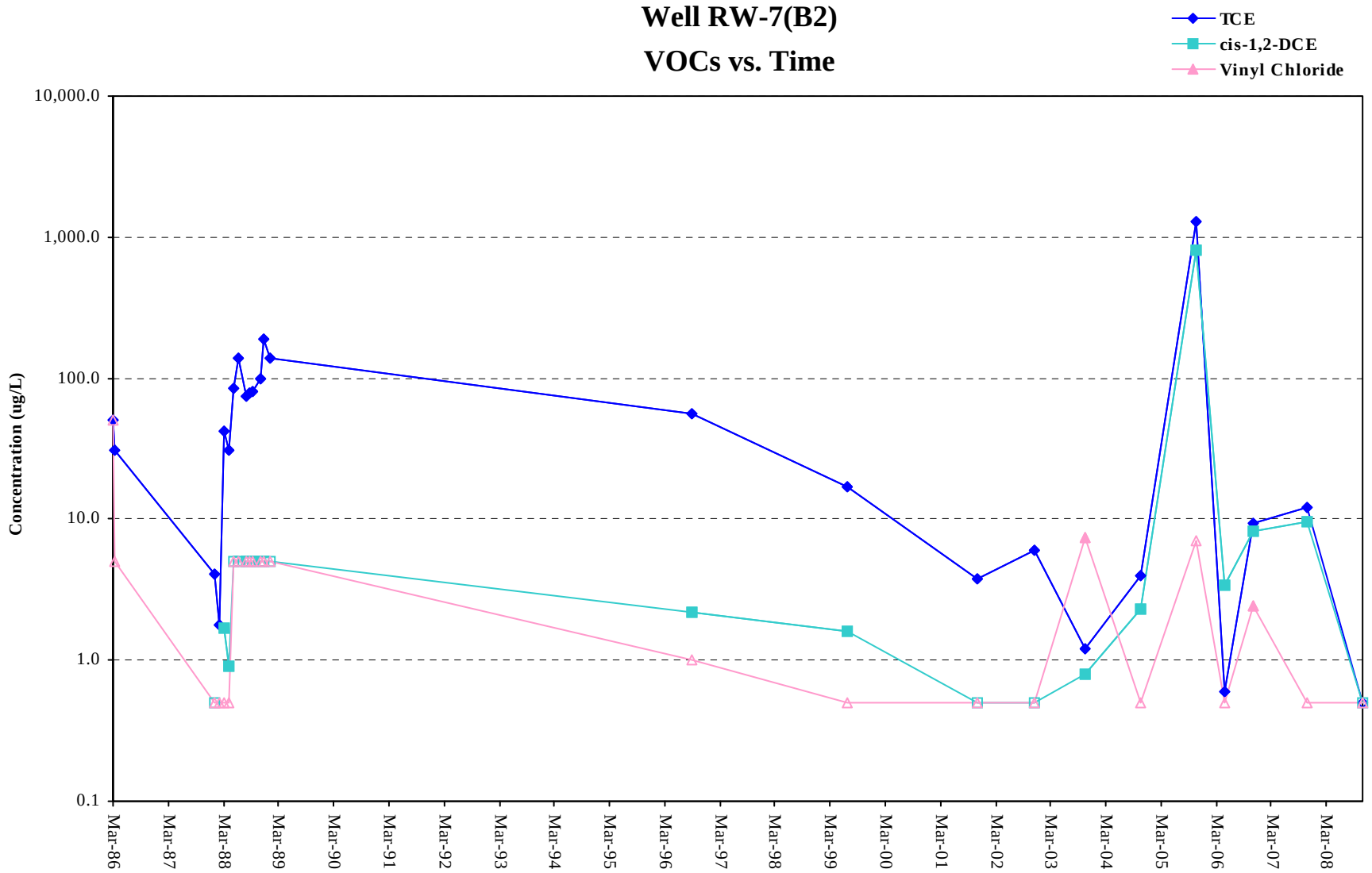
Well RW-5(B2)
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

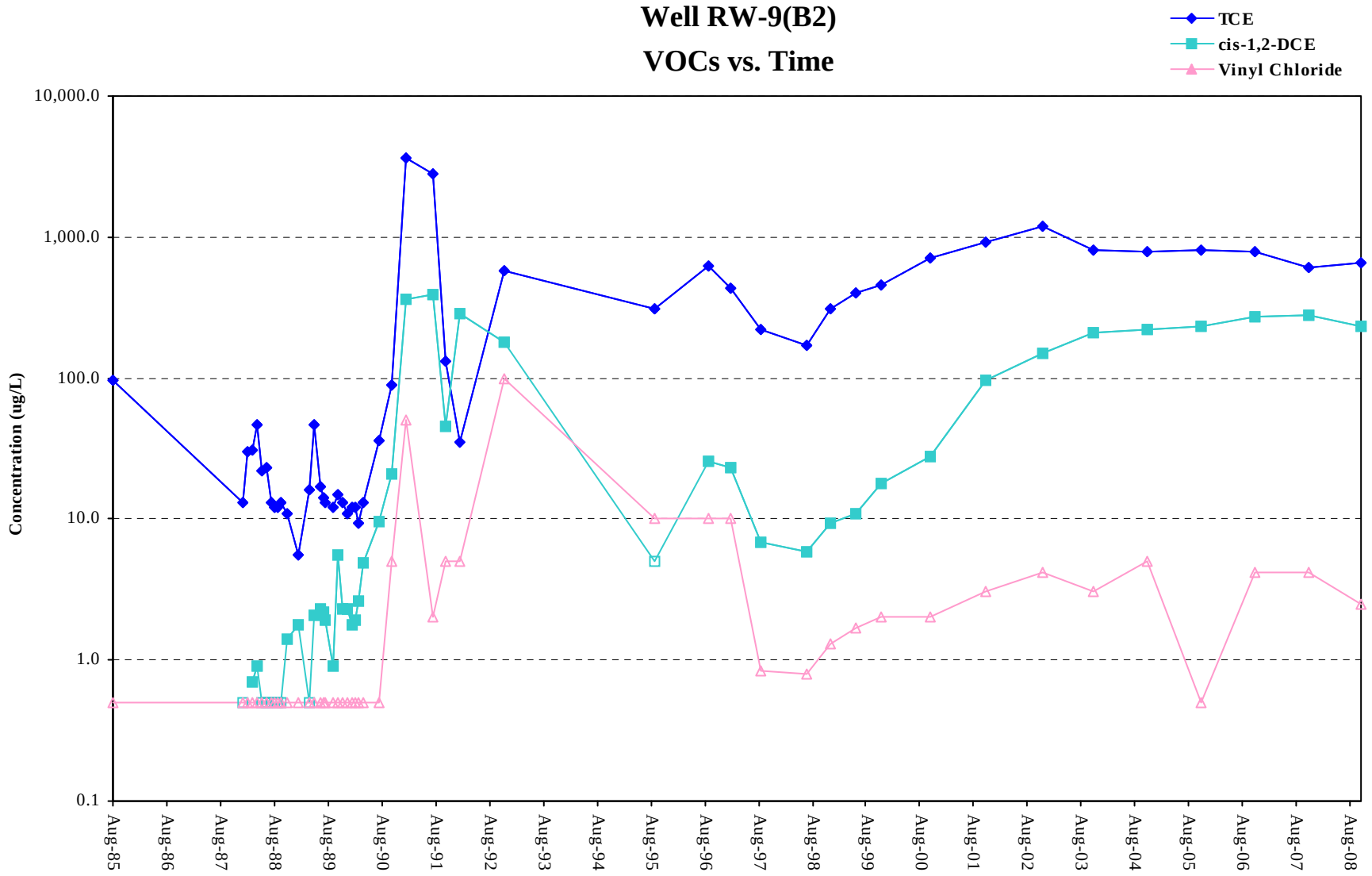
Well RW-7(B2)
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

Weiss Associates

Well RW-9(B2)
VOCs vs. Time



NOTE: Analytes not detected above the reported detection limit (RDL) shown as open chart symbols at the RDL.

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Report: rptMvChrts2008Log Loc. Group: Bldg1-4

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