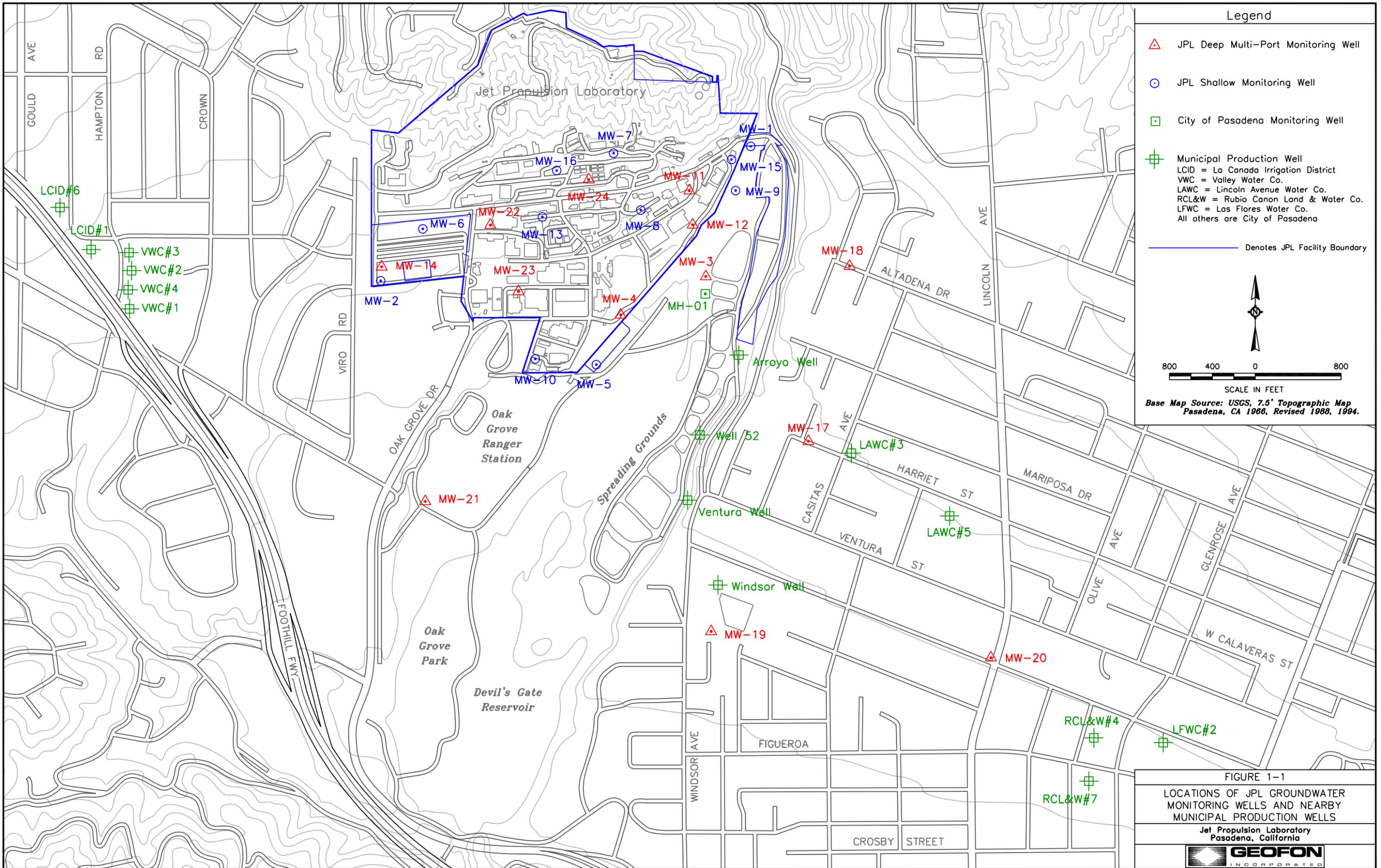
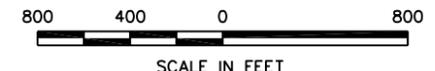


FIGURES



Legend

- ▲ JPL Deep Multi-Port Monitoring Well
 - JPL Shallow Monitoring Well
 - City of Pasadena Monitoring Well
 - ⊕ Municipal Production Well
 LCID = La Canada Irrigation District
 VWC = Valley Water Co.
 LAW = Lincoln Avenue Water Co.
 RCL&W = Rubio Canon Land & Water Co.
 LFWC = Las Flores Water Co.
 All others are City of Pasadena
- Denotes JPL Facility Boundary



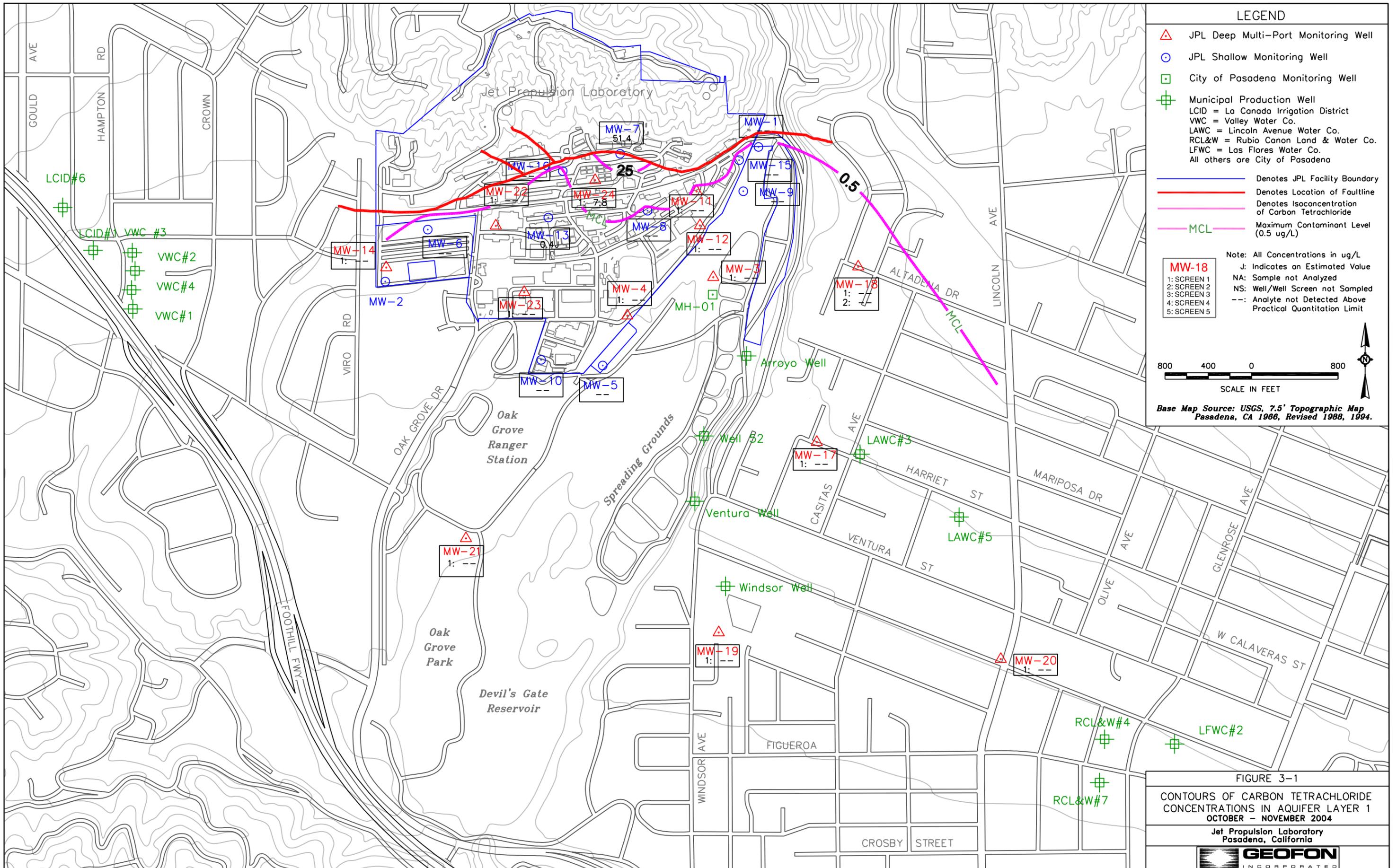
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 1-1

LOCATIONS OF JPL GROUNDWATER MONITORING WELLS AND NEARBY MUNICIPAL PRODUCTION WELLS

Jet Propulsion Laboratory Pasadena, California





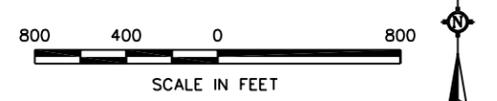
LEGEND

- ▲ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- ◻ City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
- LCID = La Canada Irrigation District
- VWC = Valley Water Co.
- LAWC = Lincoln Avenue Water Co.
- RCL&W = Rubio Canon Land & Water Co.
- LFWC = Los Flores Water Co.
- All others are City of Pasadena
- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- MCL Maximum Contaminant Level (0.5 ug/L)

Note: All Concentrations in ug/L

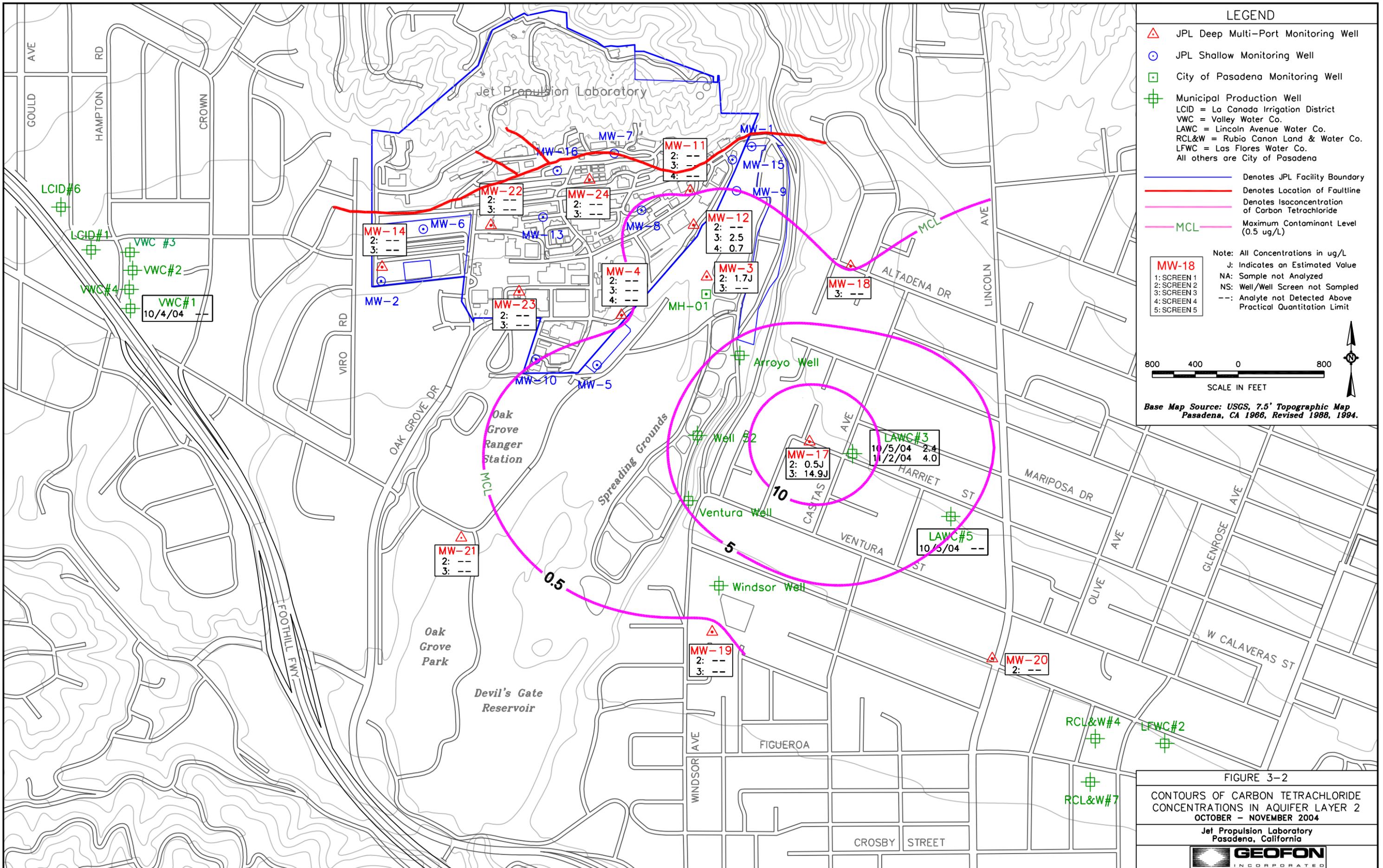
MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5

J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 ---: Analyte not Detected Above Practical Quantitation Limit



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1968, Revised 1988, 1994.

FIGURE 3-1
 CONTOURS OF CARBON TETRACHLORIDE CONCENTRATIONS IN AQUIFER LAYER 1
 OCTOBER - NOVEMBER 2004
 Jet Propulsion Laboratory
 Pasadena, California
GEOFON
 INCORPORATED



LEGEND

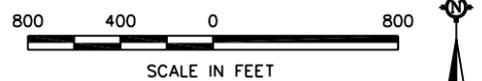
- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
- LCID = La Canada Irrigation District
- VWC = Valley Water Co.
- LAWC = Lincoln Avenue Water Co.
- RCL&W = Rubio Canon Land & Water Co.
- LFWC = Los Flores Water Co.
- All others are City of Pasadena

- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- MCL Maximum Contaminant Level (0.5 ug/L)

Note: All Concentrations in ug/L

MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5

J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 --: Analyte not Detected Above Practical Quantitation Limit



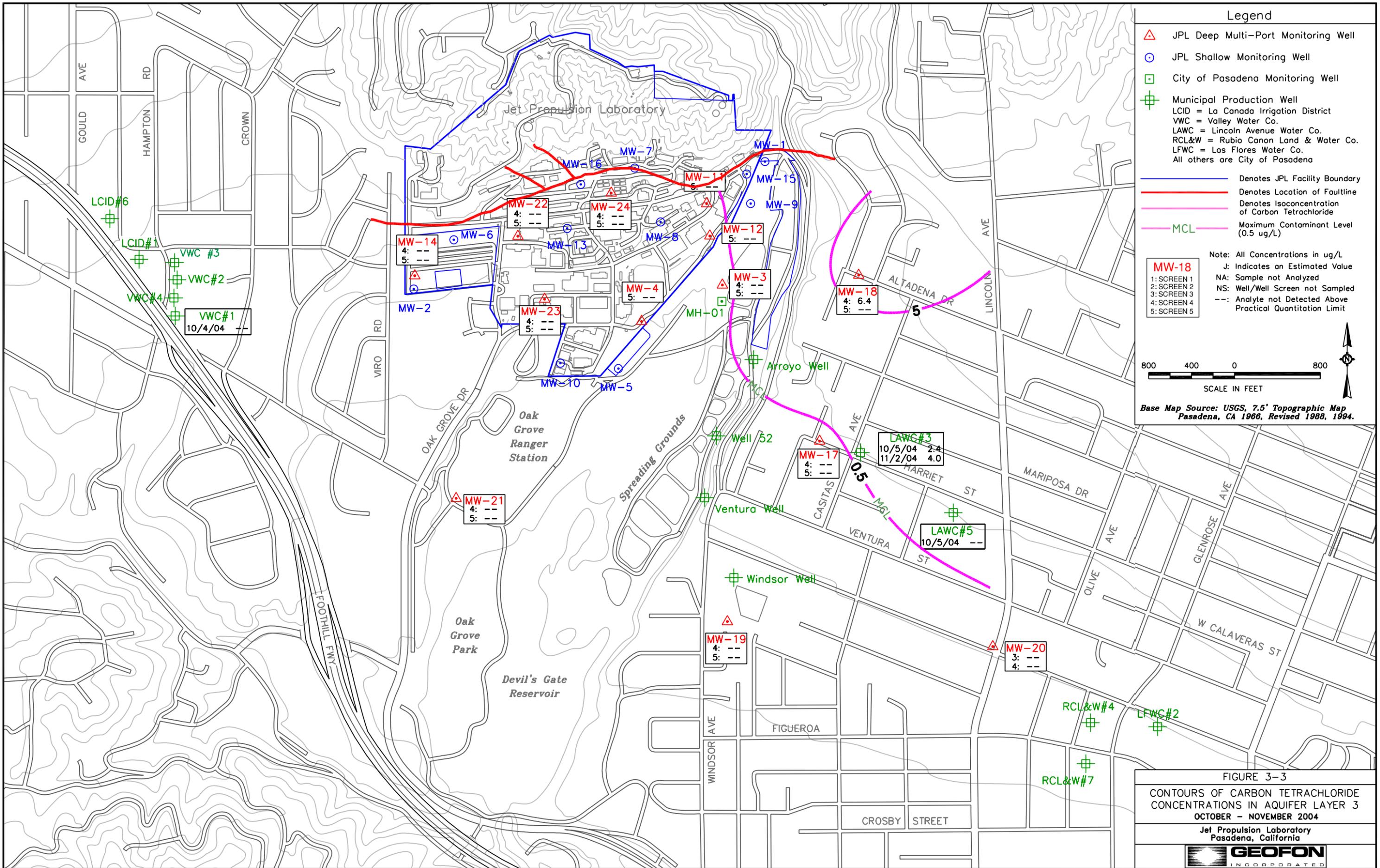
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1986, Revised 1988, 1994.

FIGURE 3-2

CONTOURS OF CARBON TETRACHLORIDE CONCENTRATIONS IN AQUIFER LAYER 2
OCTOBER - NOVEMBER 2004

Jet Propulsion Laboratory
Pasadena, California





Legend

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
 - LCID = La Canada Irrigation District
 - VWC = Valley Water Co.
 - LAWC = Lincoln Avenue Water Co.
 - RCL&W = Rubio Canon Land & Water Co.
 - LFWC = Las Flores Water Co.
 - All others are City of Pasadena
- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- MCL Maximum Contaminant Level (0.5 ug/L)

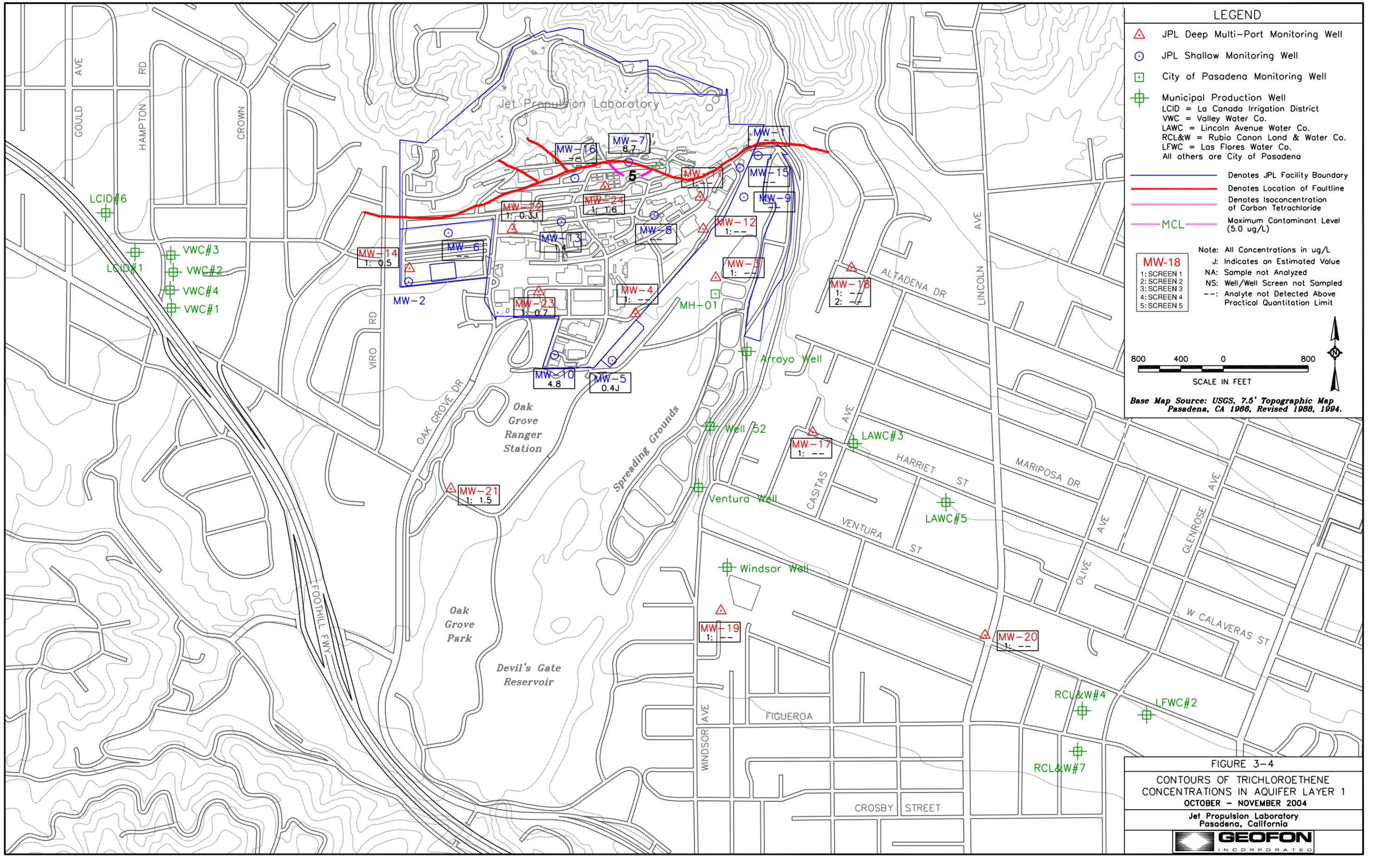
Note: All Concentrations in ug/L
 J: Indicates on Estimated Value
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 ---: Analyte not Detected Above Practical Quantitation Limit

MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5

800 400 0 800
 SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-3
 CONTOURS OF CARBON TETRACHLORIDE CONCENTRATIONS IN AQUIFER LAYER 3
 OCTOBER - NOVEMBER 2004
 Jet Propulsion Laboratory
 Pasadena, California
GEOFON
 INCORPORATED



LEGEND

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
 LCID = La Canada Irrigation District
 VWC = Valley Water Co.
 LAWC = Lincoln Avenue Water Co.
 RCL&W = Rubio Canon Land & Water Co.
 LFWC = Los Flores Water Co.
 All others are City of Pasadena

- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- MCL Maximum Contaminant Level (5.0 ug/L)

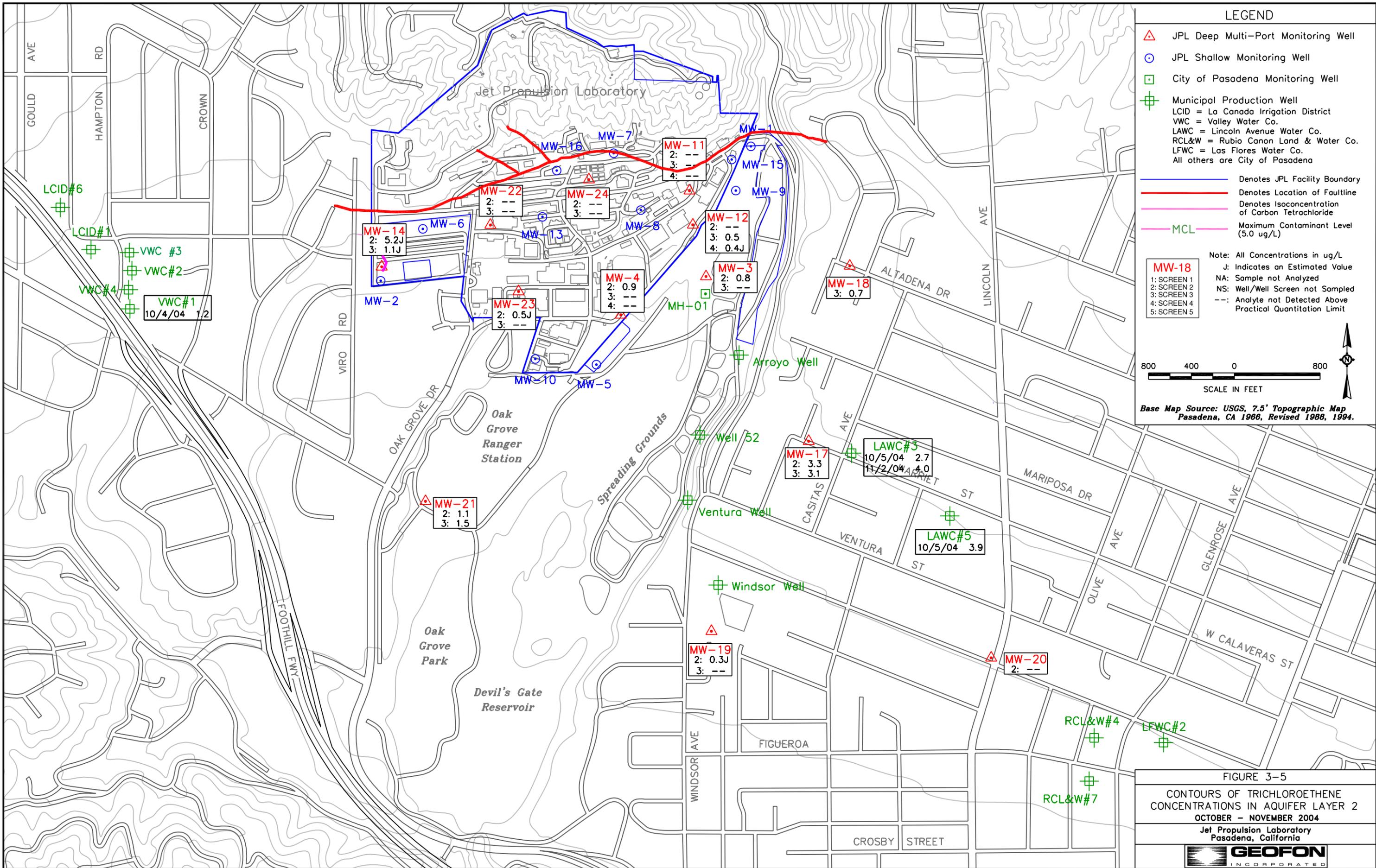
Note: All Concentrations in ug/L
 J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 --: Analyte not Detected Above Practical Quantitation Limit

MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-4
 CONTOURS OF TRICHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 1
 OCTOBER - NOVEMBER 2004
 Jet Propulsion Laboratory
 Pasadena, California



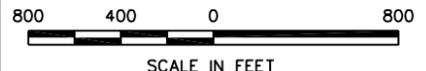
LEGEND

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
 - LCID = La Canada Irrigation District
 - VWC = Valley Water Co.
 - LAWC = Lincoln Avenue Water Co.
 - RCL&W = Rubio Canon Land & Water Co.
 - LFWC = Las Flores Water Co.
 - All others are City of Pasadena

- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- MCL Maximum Contaminant Level (5.0 ug/L)

MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5

Note: All Concentrations in ug/L
 J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 ---: Analyte not Detected Above Practical Quantitation Limit



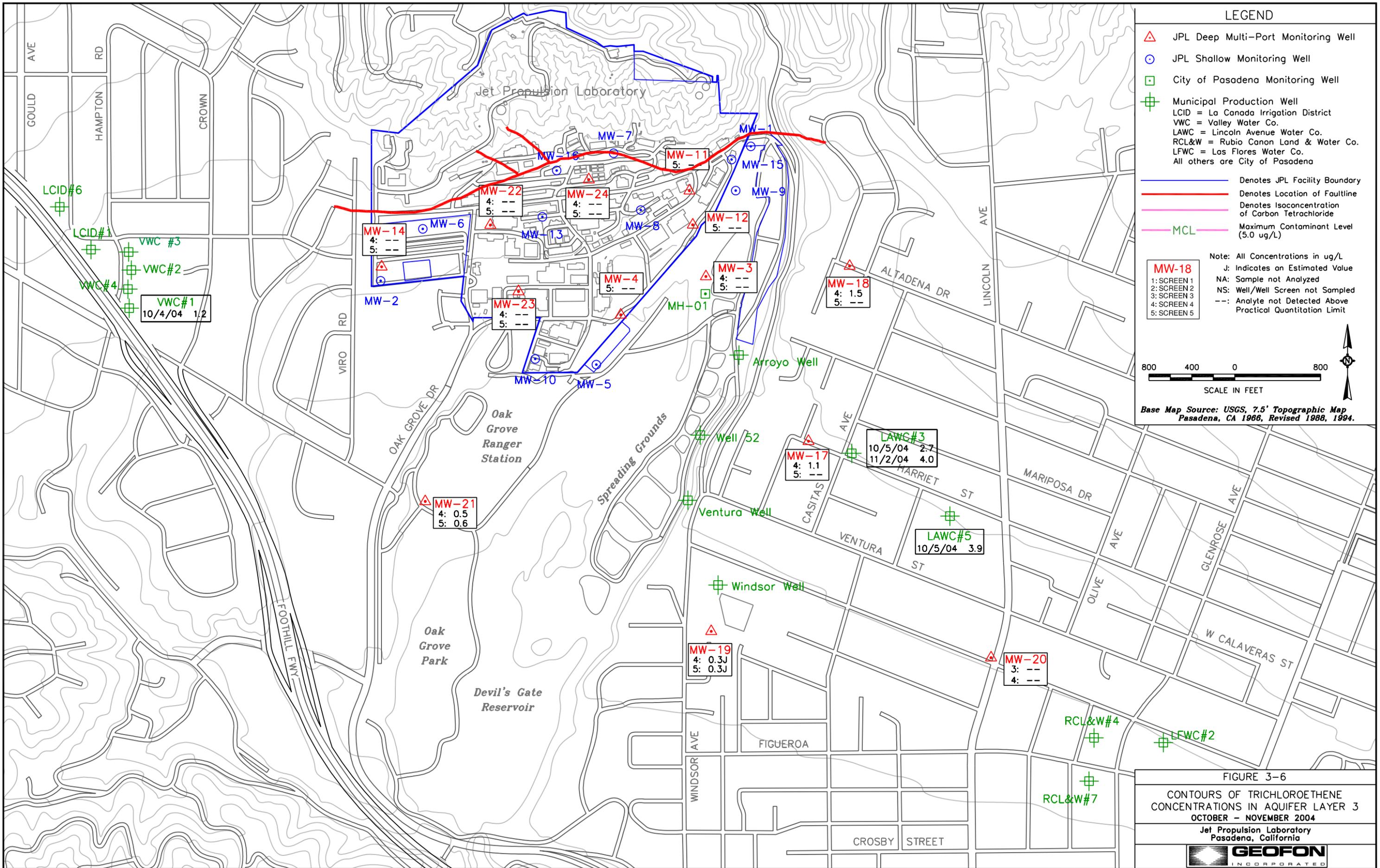
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-5

CONTOURS OF TRICHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 2
 OCTOBER - NOVEMBER 2004

Jet Propulsion Laboratory
 Pasadena, California





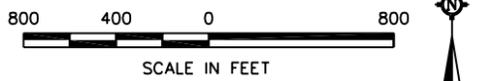
LEGEND

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
 - LCID = La Canada Irrigation District
 - VWC = Valley Water Co.
 - LAWC = Lincoln Avenue Water Co.
 - RCL&W = Rubio Canon Land & Water Co.
 - LFWC = Los Flores Water Co.
 - All others are City of Pasadena

- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- MCL Maximum Contaminant Level (5.0 ug/L)

Note: All Concentrations in ug/L
 J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 ---: Analyte not Detected Above Practical Quantitation Limit

MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5



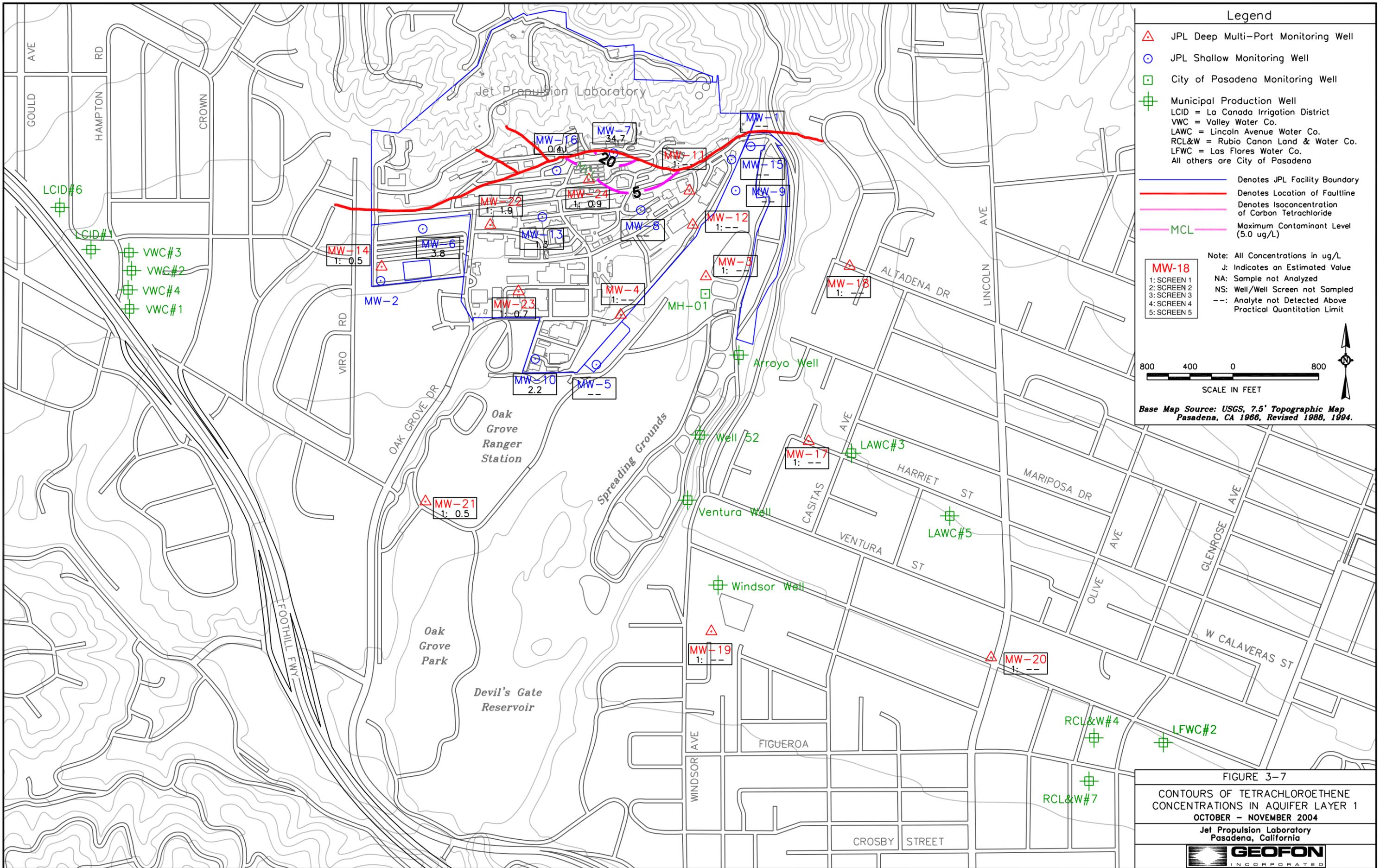
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-6

CONTOURS OF TRICHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 3
 OCTOBER - NOVEMBER 2004

Jet Propulsion Laboratory
 Pasadena, California





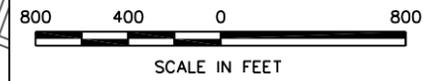
Legend

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
- LCID = La Canada Irrigation District
- VWC = Valley Water Co.
- LAWC = Lincoln Avenue Water Co.
- RCL&W = Rubio Canon Land & Water Co.
- LFWC = Las Flores Water Co.
- All others are City of Pasadena

- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- MCL Maximum Contaminant Level (5.0 ug/L)

Note: All Concentrations in ug/L
 J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 ---: Analyte not Detected Above Practical Quantitation Limit

MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5



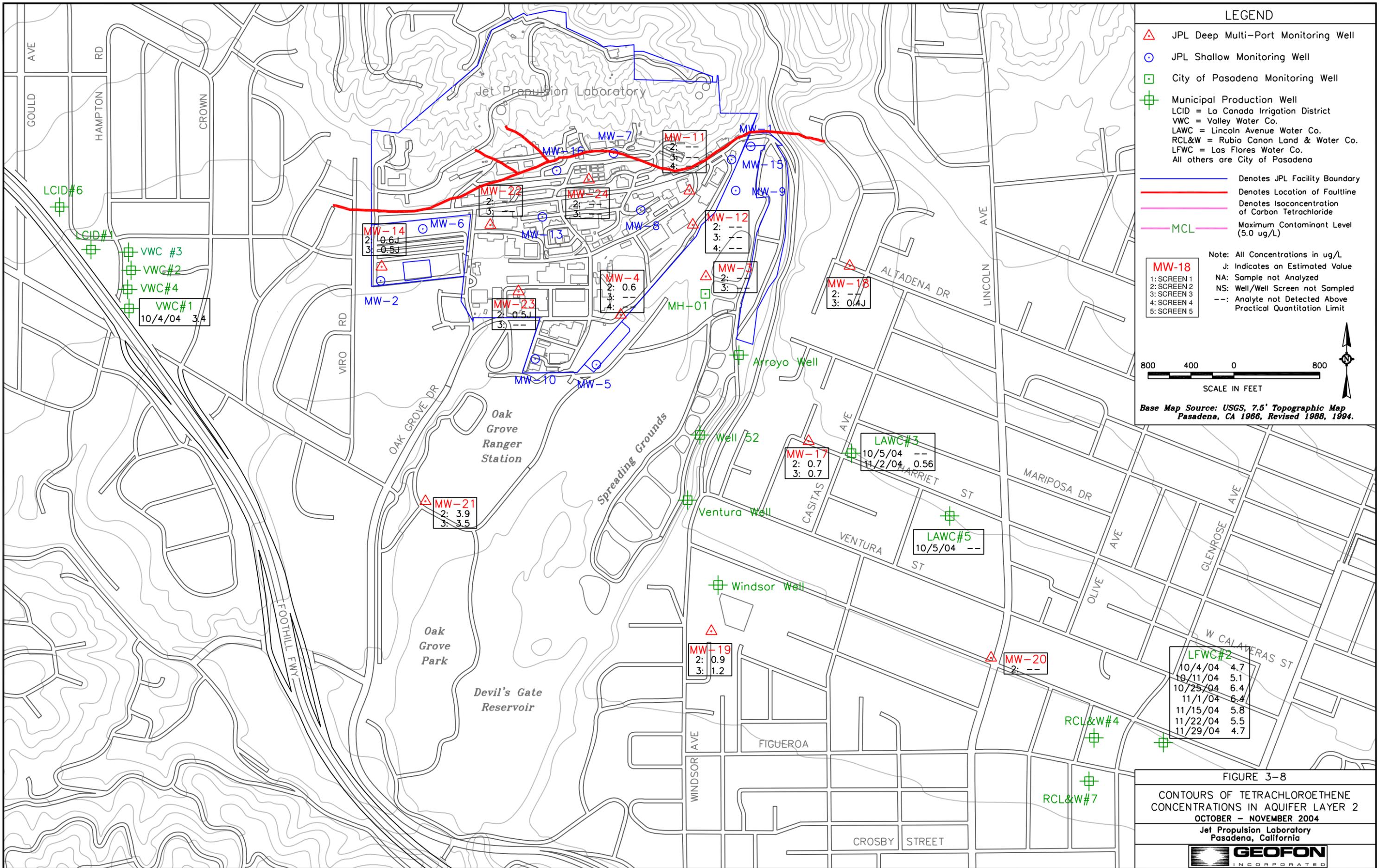
Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 3-7

CONTOURS OF TETRACHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 1
 OCTOBER - NOVEMBER 2004

Jet Propulsion Laboratory
 Pasadena, California





MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5

VWC#1
 10/4/04 3.4

MW-14
 2: 0.6J
 3: 0.5J

MW-23
 2: 0.5J
 3: ---

MW-4
 2: 0.6
 3: ---
 4: ---

MW-3
 2: ---
 3: ---

MW-18
 2: ---
 3: 0.4J

MW-21
 2: 3.9
 3: 3.5

MW-17
 2: 0.7
 3: 0.7

LAWC#3
 10/5/04 ---
 11/2/04 0.56

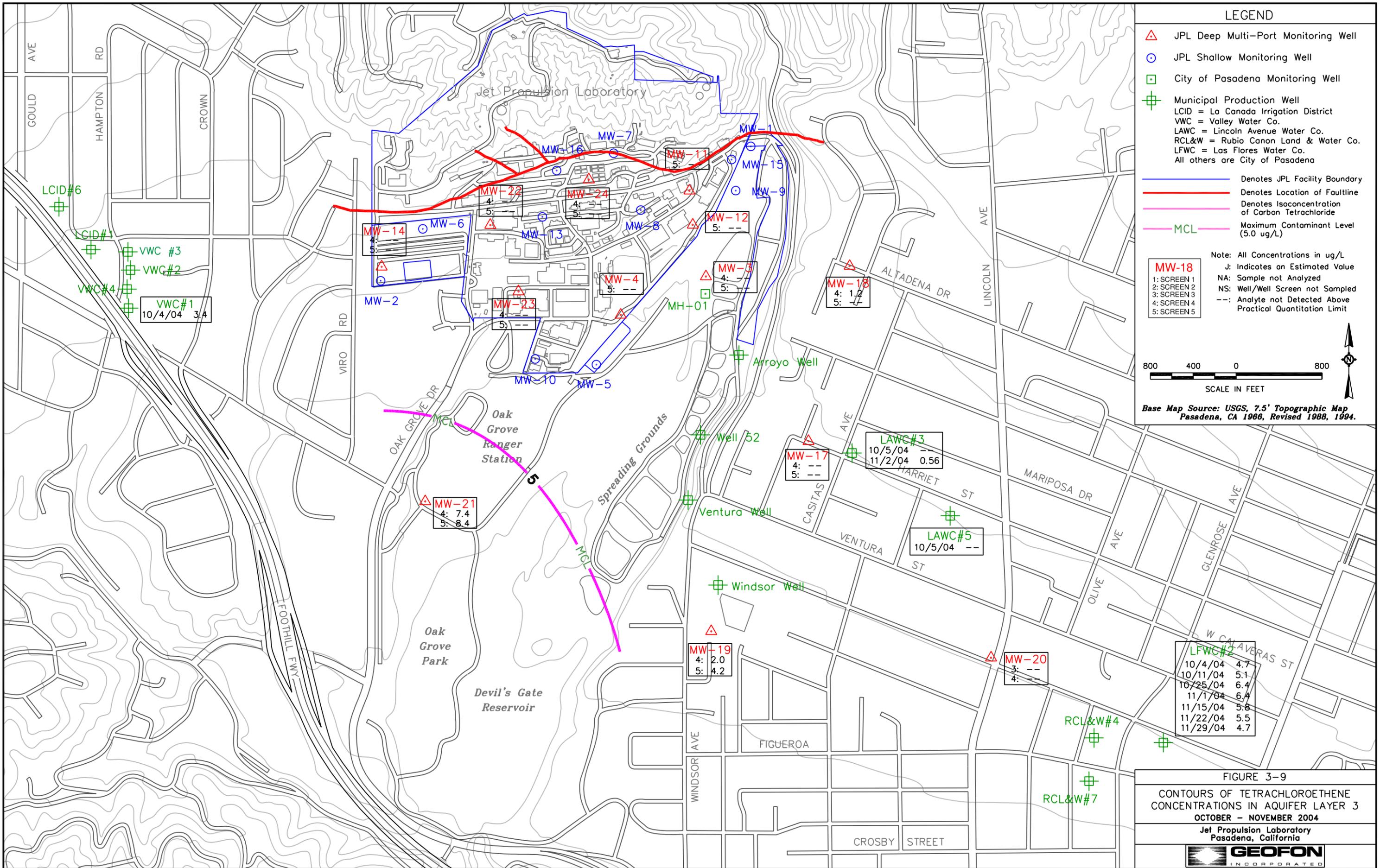
LAWC#5
 10/5/04 ---

MW-19
 2: 0.9
 3: 1.2

MW-20
 2: ---

LFWC#2
 10/4/04 4.7
 10/11/04 5.1
 10/25/04 6.4
 11/1/04 6.4
 11/15/04 5.8
 11/22/04 5.5
 11/29/04 4.7

FIGURE 3-8
 CONTOURS OF TETRACHLOROETHENE
 CONCENTRATIONS IN AQUIFER LAYER 2
 OCTOBER - NOVEMBER 2004
 Jet Propulsion Laboratory
 Pasadena, California
GEOFON
 INCORPORATED



LEGEND

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
 - LCID = Lo Canada Irrigation District
 - VWC = Valley Water Co.
 - LAWC = Lincoln Avenue Water Co.
 - RCL&W = Rubio Canon Land & Water Co.
 - LFWC = Las Flores Water Co.
 - All others are City of Pasadena

- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- MCL Maximum Contaminant Level (5.0 ug/L)

Note: All Concentrations in ug/L
 J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 ---: Analyte not Detected Above Practical Quantitation Limit

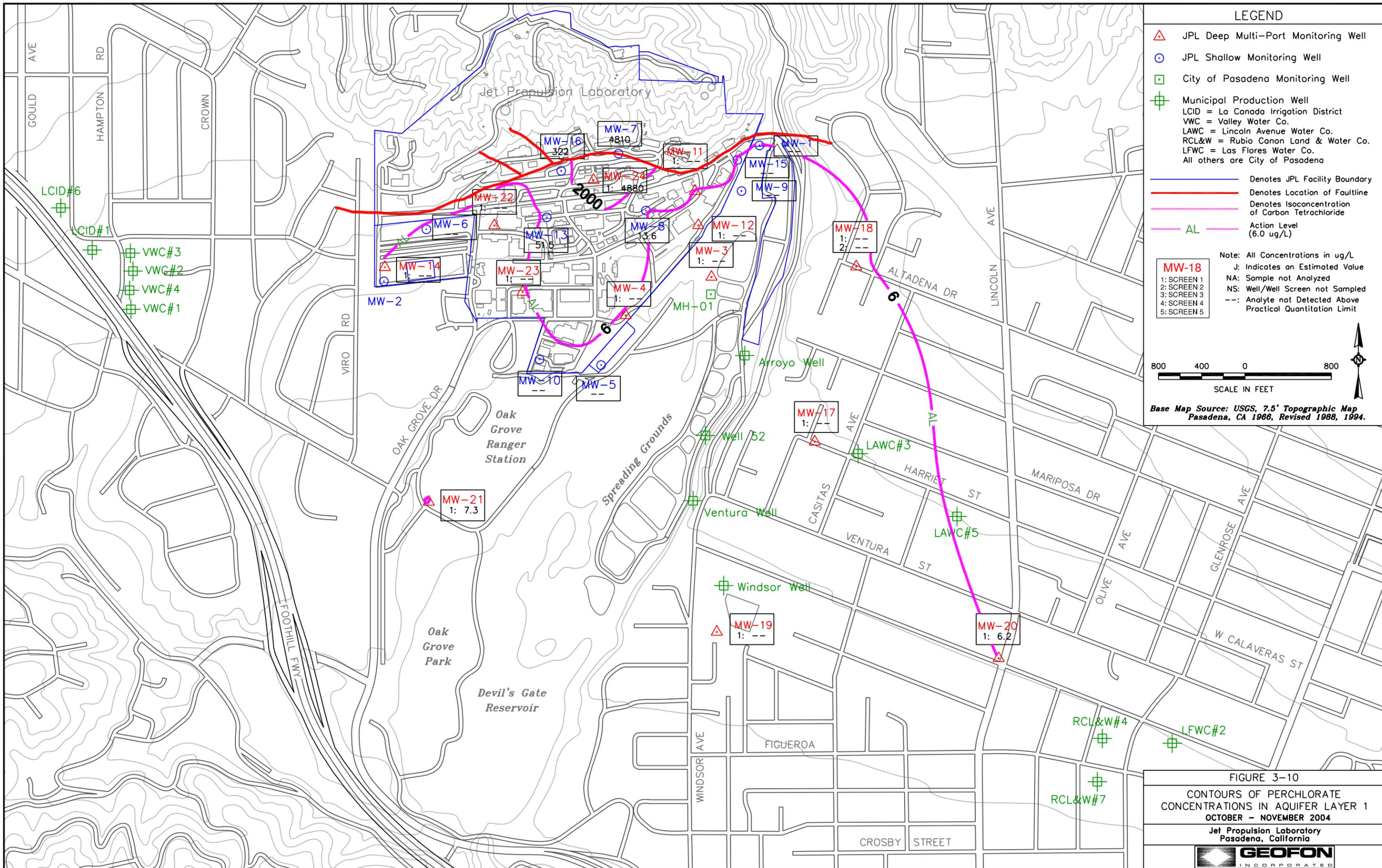
MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5

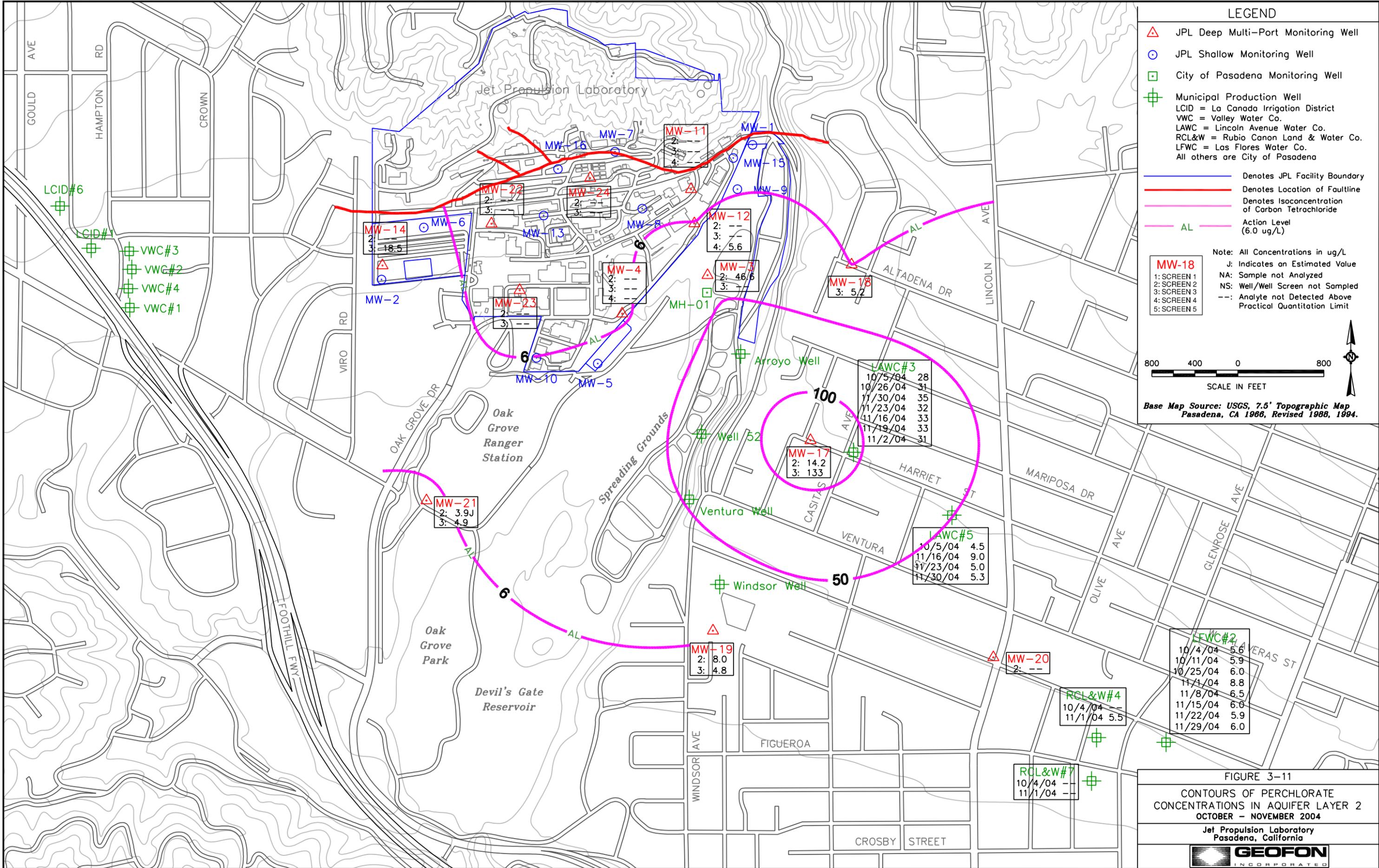
800 400 0 800
 SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

LFWC#2
10/4/04 4.7
10/11/04 5.1
10/25/04 6.4
11/1/04 6.4
11/15/04 5.8
11/22/04 5.5
11/29/04 4.7

FIGURE 3-9
 CONTOURS OF TETRACHLOROETHENE CONCENTRATIONS IN AQUIFER LAYER 3
 OCTOBER - NOVEMBER 2004





LEGEND

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
- LCID = La Canada Irrigation District
- VWC = Valley Water Co.
- LAWC = Lincoln Avenue Water Co.
- RCL&W = Rubio Canon Land & Water Co.
- LFWC = Las Flores Water Co.
- All others are City of Pasadena

- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- AL Action Level (6.0 ug/L)

Note: All Concentrations in ug/L
 J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 ---: Analyte not Detected Above Practical Quantitation Limit

MW-18

1: SCREEN 1
2: SCREEN 2
3: SCREEN 3
4: SCREEN 4
5: SCREEN 5



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1988, Revised 1988, 1994.

FIGURE 3-11
 CONTOURS OF PERCHLORATE CONCENTRATIONS IN AQUIFER LAYER 2
 OCTOBER - NOVEMBER 2004

LAWC#3

10/5/04	28
10/26/04	31
11/30/04	35
11/23/04	32
11/16/04	33
11/19/04	33
11/2/04	31

LAWC#5

10/5/04	4.5
11/16/04	9.0
11/23/04	5.0
11/30/04	5.3

LFWC#2

10/4/04	5.6
10/11/04	5.9
10/25/04	6.0
11/1/04	8.8
11/8/04	6.5
11/15/04	6.0
11/22/04	5.9
11/29/04	6.0

RCL&W#4

10/4/04	---
11/1/04	5.5

RCL&W#7

10/4/04	---
11/1/04	---

MW-17

2:	14.2
3:	133

MW-19

2:	8.0
3:	4.8

MW-21

2:	3.9J
3:	4.9

MW-4

2:	---
3:	---
4:	---

MW-3

2:	46.6
3:	---

MW-12

2:	---
3:	---
4:	5.6

MW-24

2:	---
3:	---
4:	---

MW-22

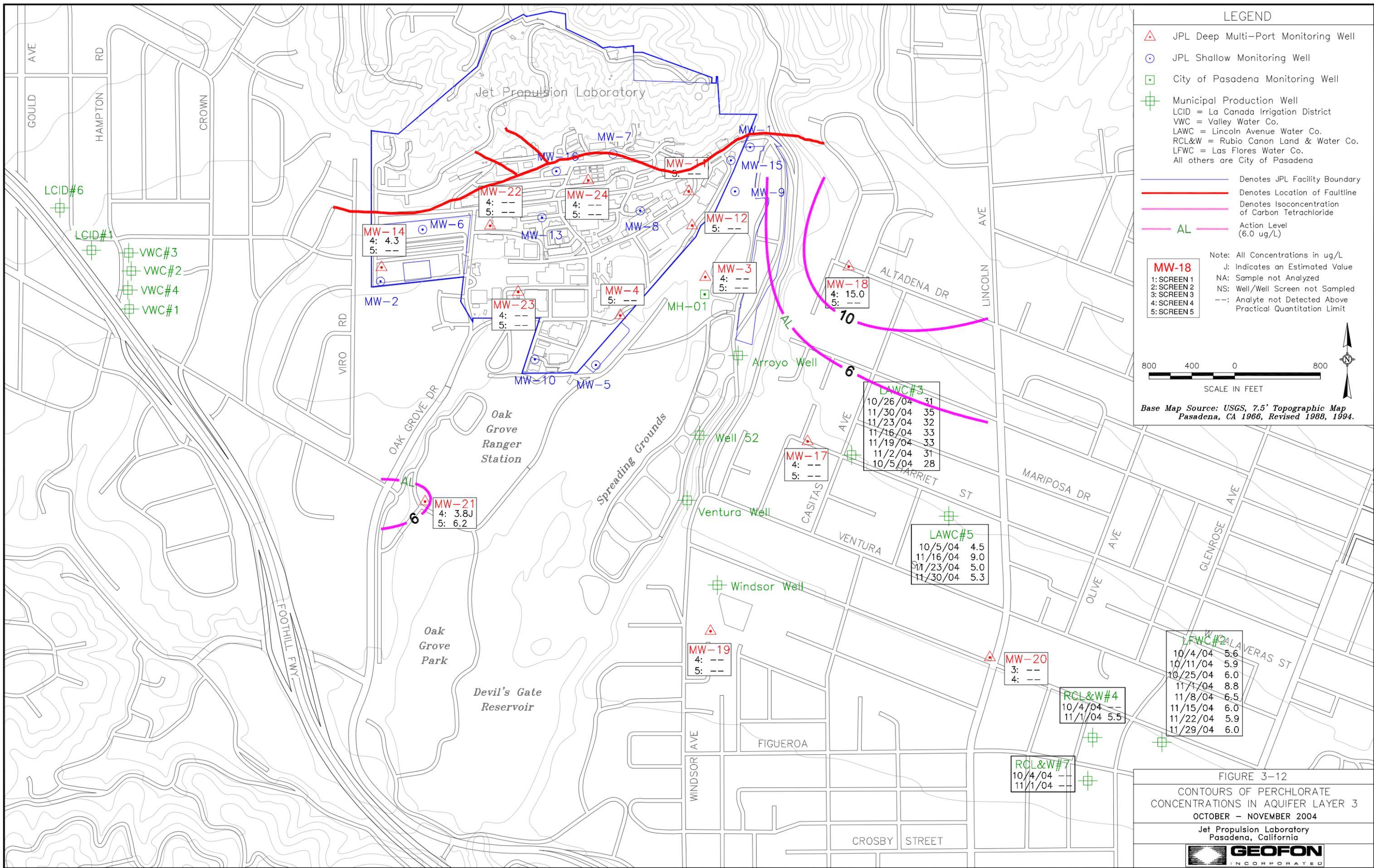
2:	---
3:	---
4:	---

MW-14

2:	---
3:	18.5

- VWC#3
- VWC#2
- VWC#4
- VWC#1

- LCID#6
- LCID#1



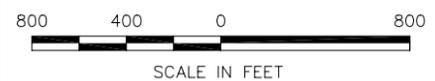
LEGEND

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
- LCID = La Canada Irrigation District
- VWC = Valley Water Co.
- LAWC = Lincoln Avenue Water Co.
- RCL&W = Rubio Canon Land & Water Co.
- LFWC = Las Flores Water Co.
- All others are City of Pasadena

- Denotes JPL Facility Boundary
- Denotes Location of Faultline
- Denotes Isoconcentration of Carbon Tetrachloride
- AL Action Level (6.0 ug/L)

Note: All Concentrations in ug/L
 J: Indicates an Estimated Value
 NA: Sample not Analyzed
 NS: Well/Well Screen not Sampled
 ---: Analyte not Detected Above Practical Quantitation Limit

MW-18
 1: SCREEN 1
 2: SCREEN 2
 3: SCREEN 3
 4: SCREEN 4
 5: SCREEN 5



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

LAWC#3

10/26/04	31
11/30/04	35
11/23/04	32
11/16/04	33
11/19/04	33
11/2/04	31
10/5/04	28

LAWC#5

10/5/04	4.5
11/16/04	9.0
11/23/04	5.0
11/30/04	5.3

LFWC#2

10/4/04	5.6
10/11/04	5.9
10/25/04	6.0
11/1/04	8.8
11/8/04	6.5
11/15/04	6.0
11/22/04	5.9
11/29/04	6.0

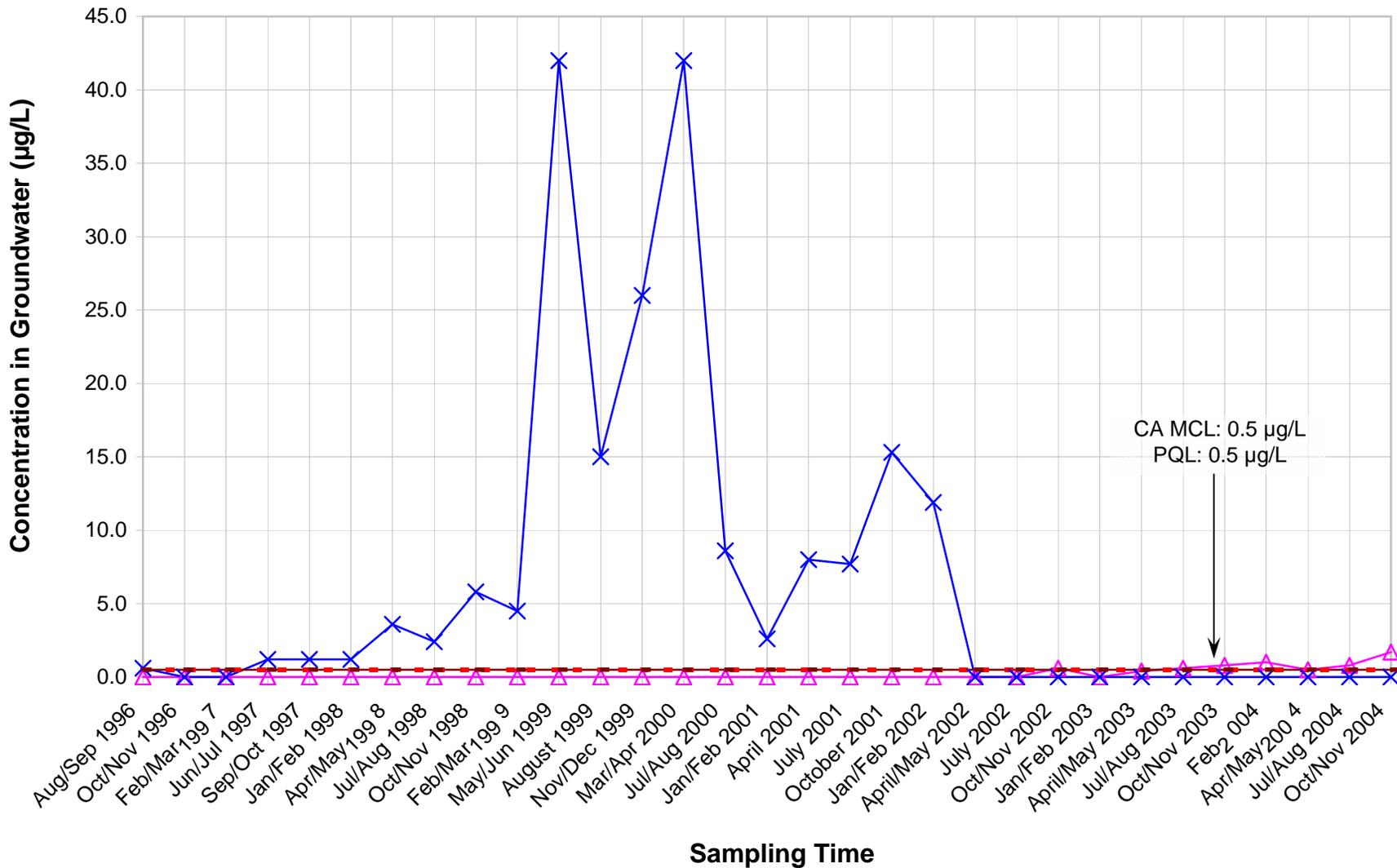
RCL&W#4

10/4/04	---
11/1/04	5.5

RCL&W#7

10/4/04	---
11/1/04	---

FIGURE 3-12
 CONTOURS OF PERCHLORATE CONCENTRATIONS IN AQUIFER LAYER 3
 OCTOBER - NOVEMBER 2004
 Jet Propulsion Laboratory
 Pasadena, California
GEOFON
 INCORPORATED



Legend

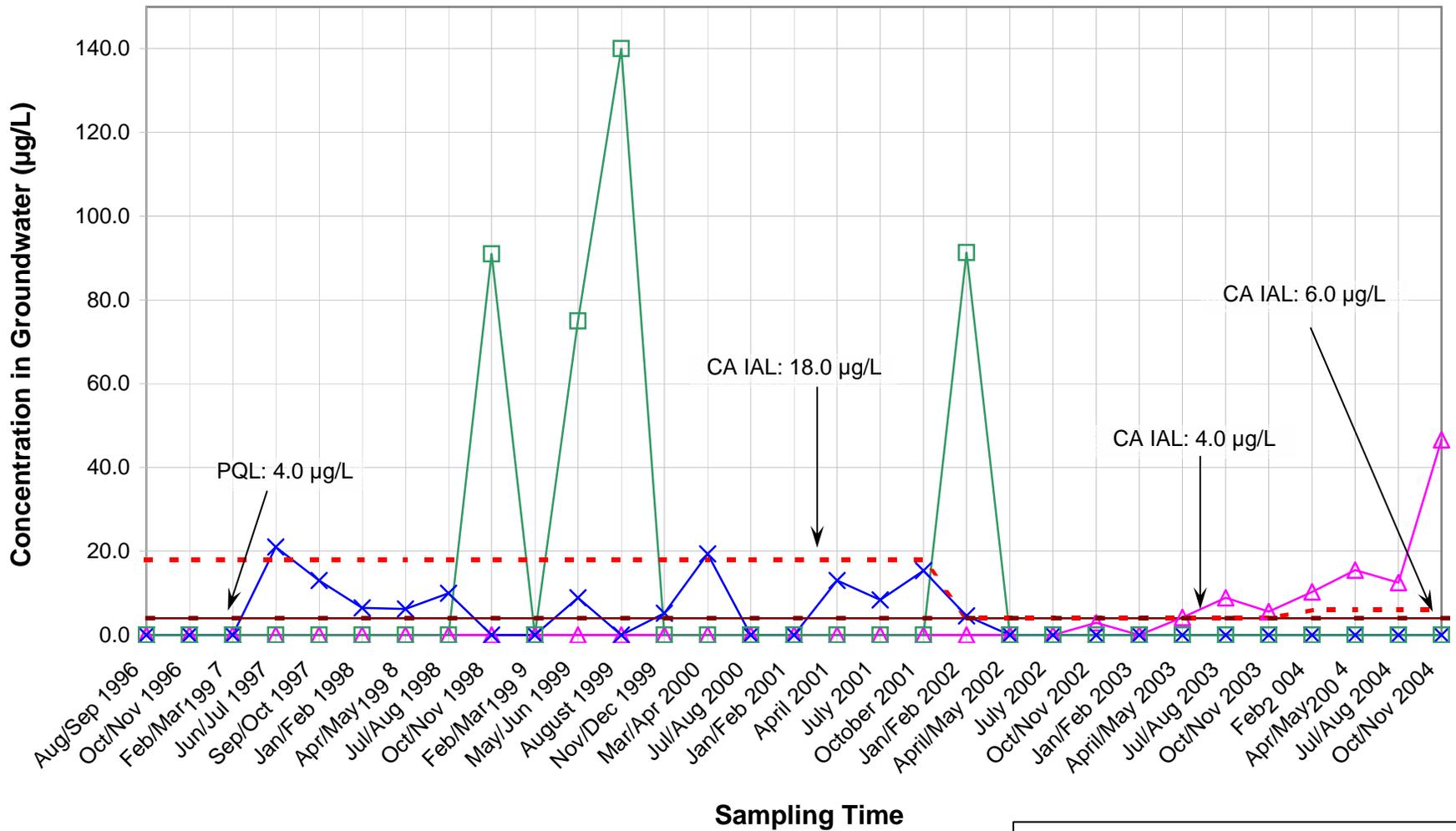
- △— Screen 2
- ×— Screen 3
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-13

**CARBON TETRACHLORIDE DETECTED AT MW-3
 FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
 Pasadena, California



Legend

- △— Screen 2
- ×— Screen 3
- Screen 5
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.

Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

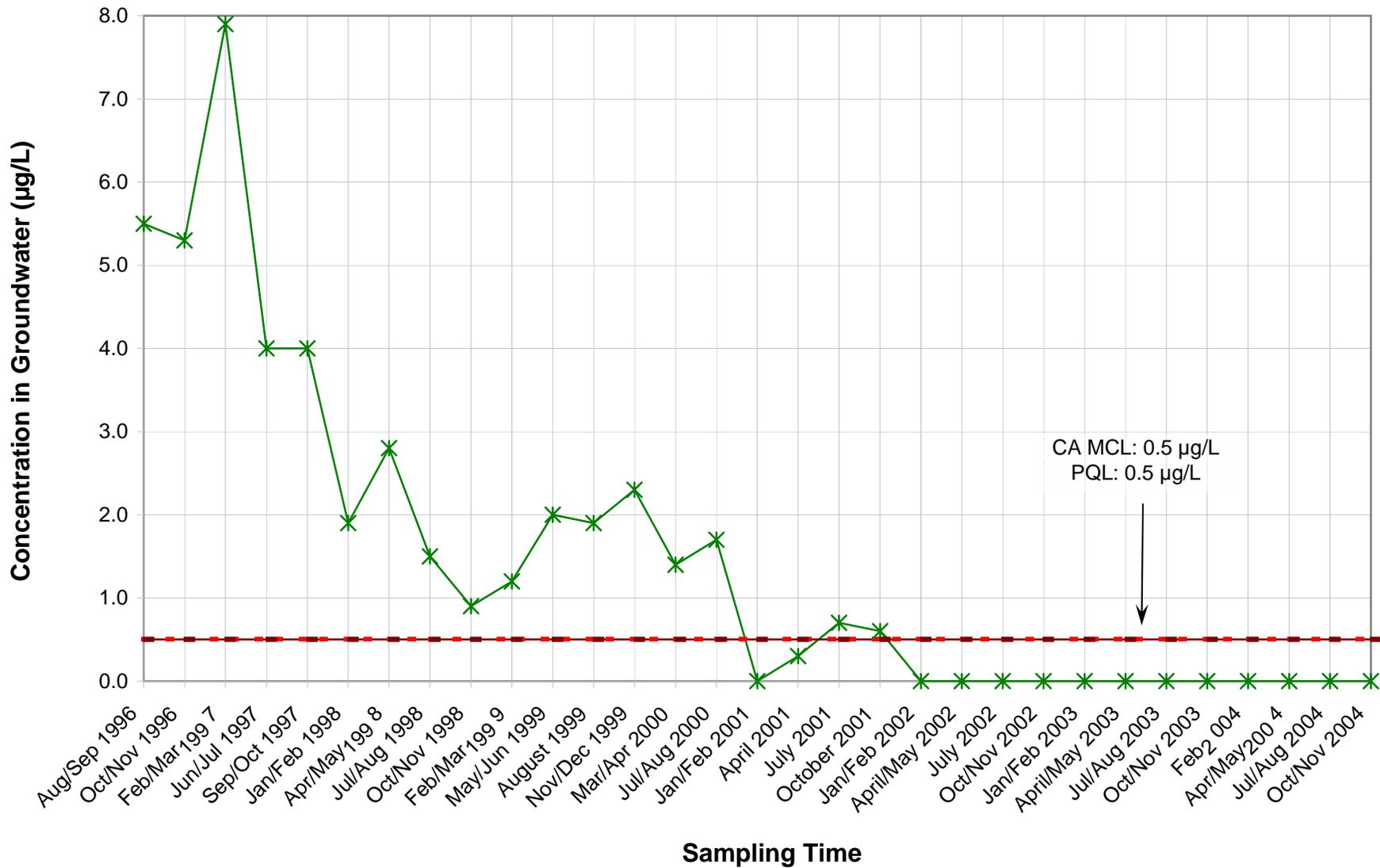
California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-14

**PERCHLORATE DETECTED AT MW-3
FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
Pasadena, California





CA MCL: 0.5 µg/L
PQL: 0.5 µg/L

Legend

- * Screen 2
- PQL
- - - CA MCL

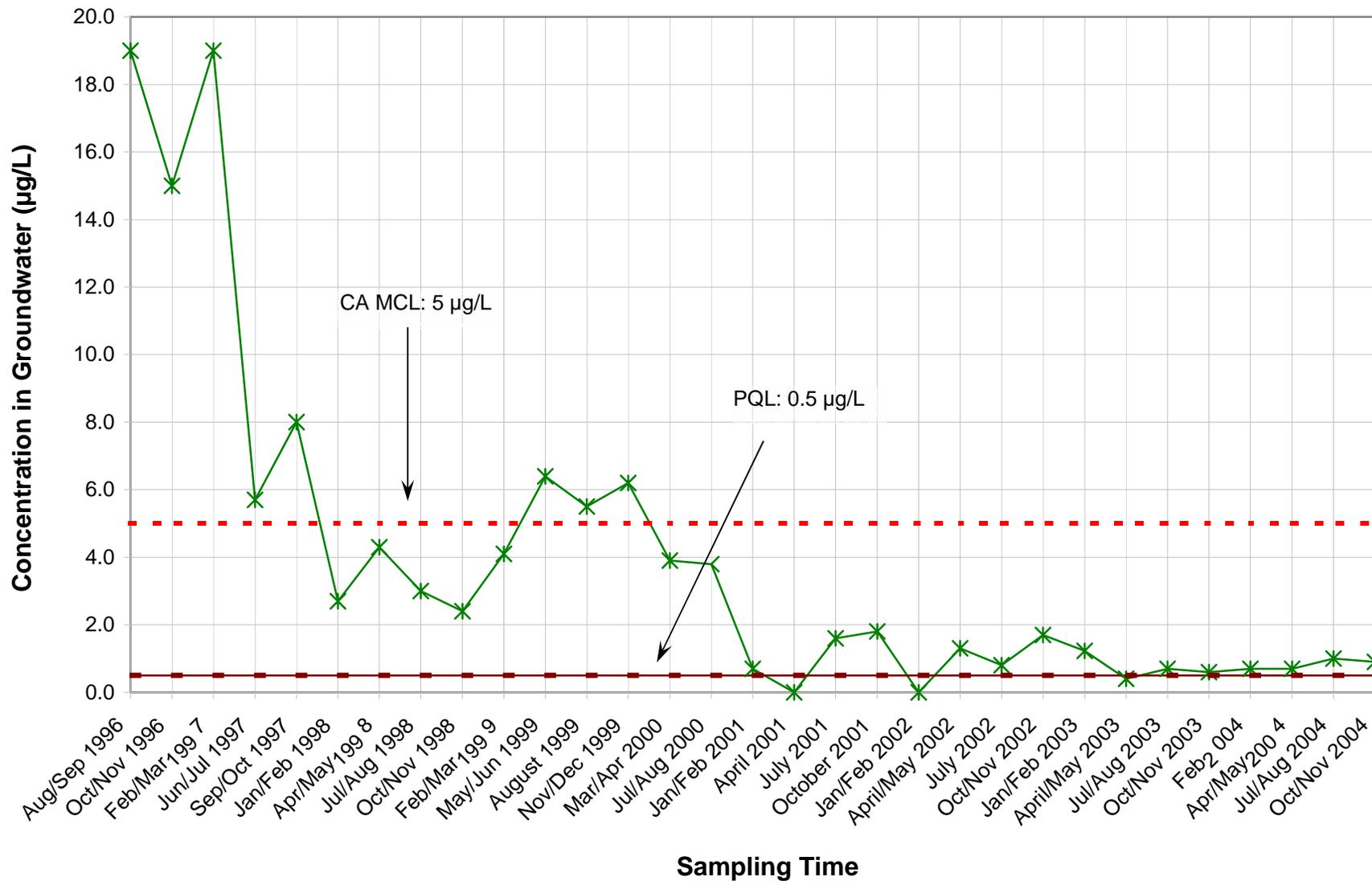
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-15

**CARBON TETRACHLORIDE DETECTED AT MW-4
FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
Pasadena, California





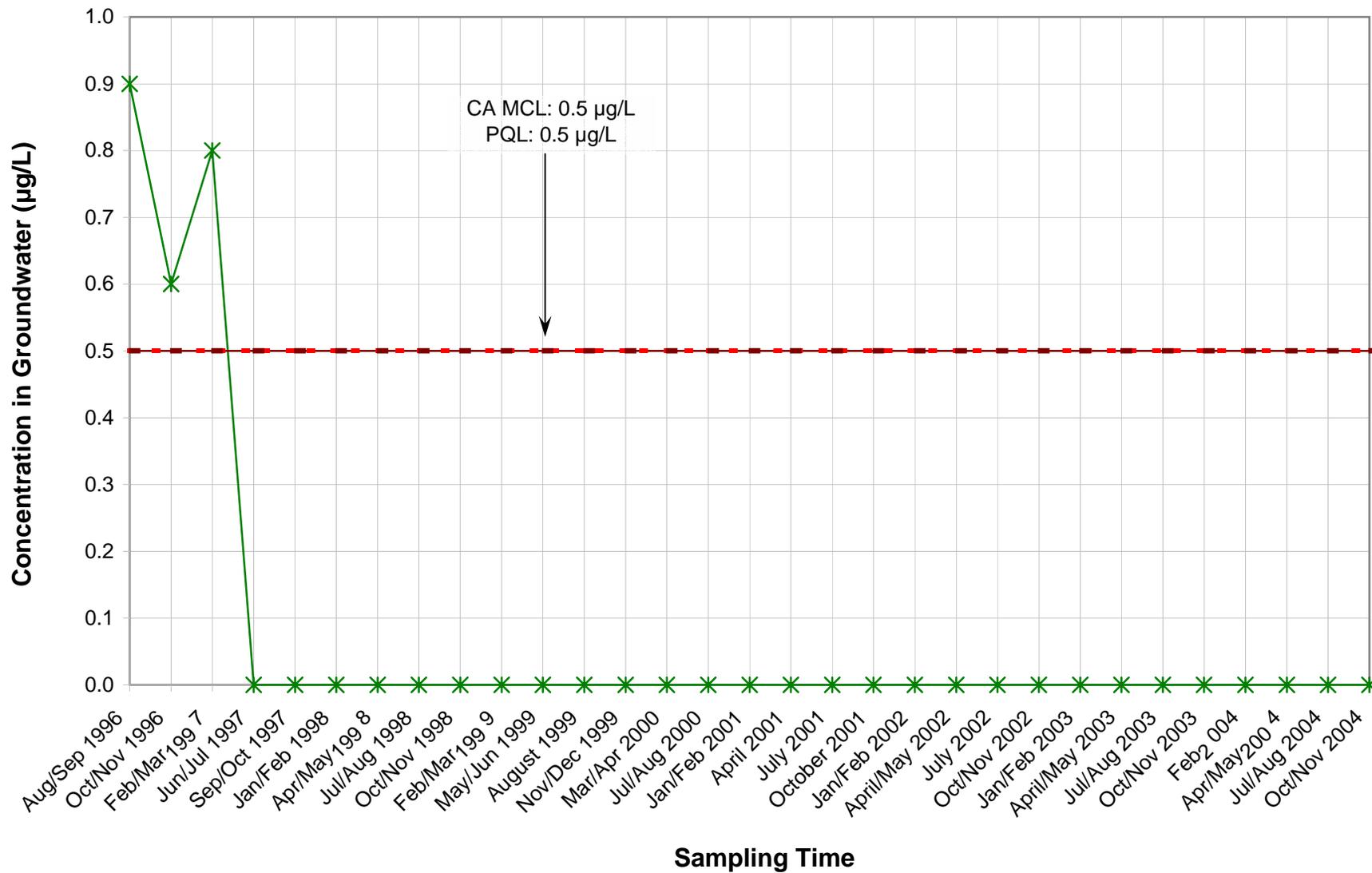
Legend

- * Screen 2
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-16
TRICHLOROETHENE DETECTED AT MW-4
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

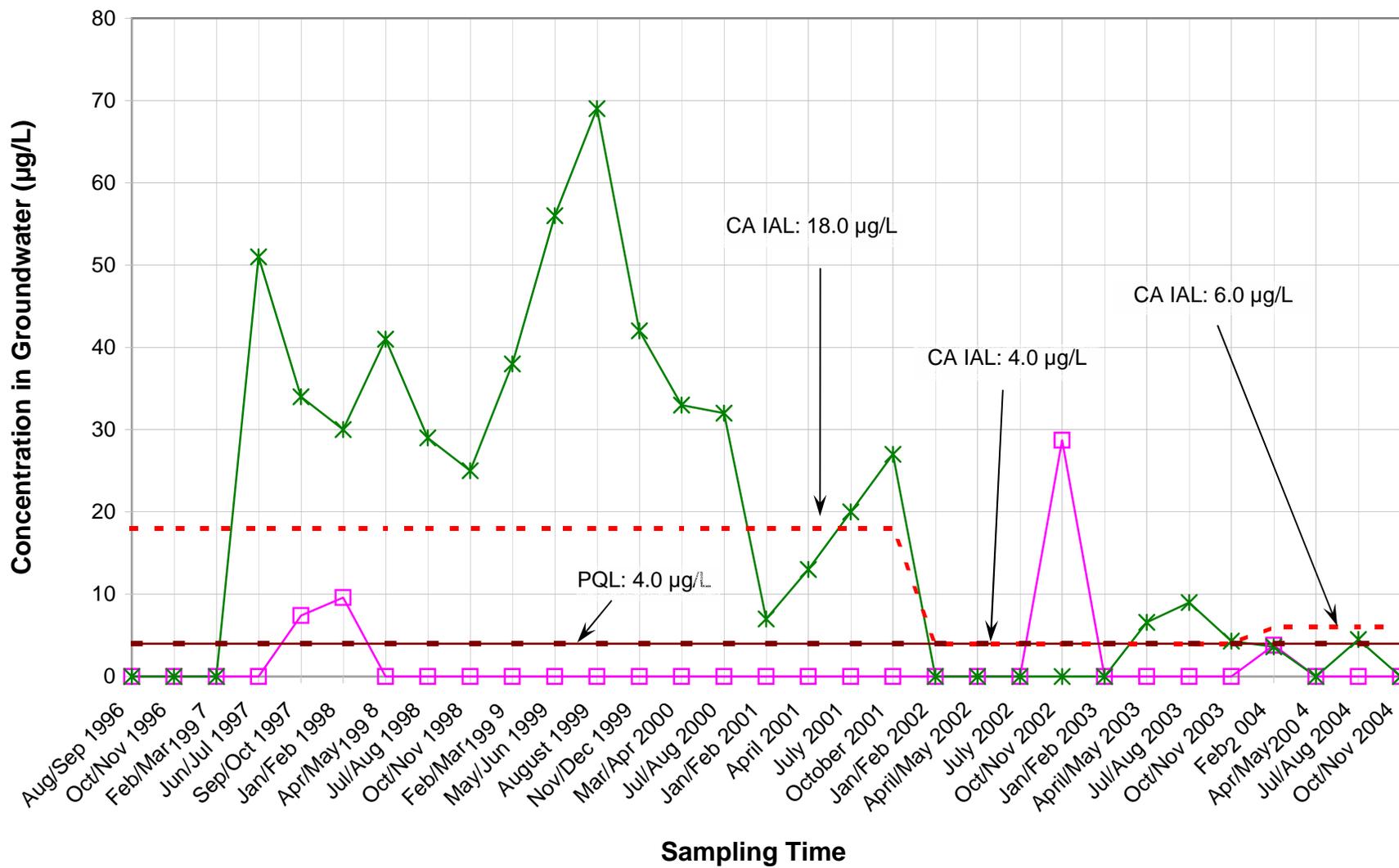
- *— Screen 2
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-17
1, 2-DCA DETECTED AT MW-4
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California





Legend

- Screen 1
- *— Screen 2
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.

Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

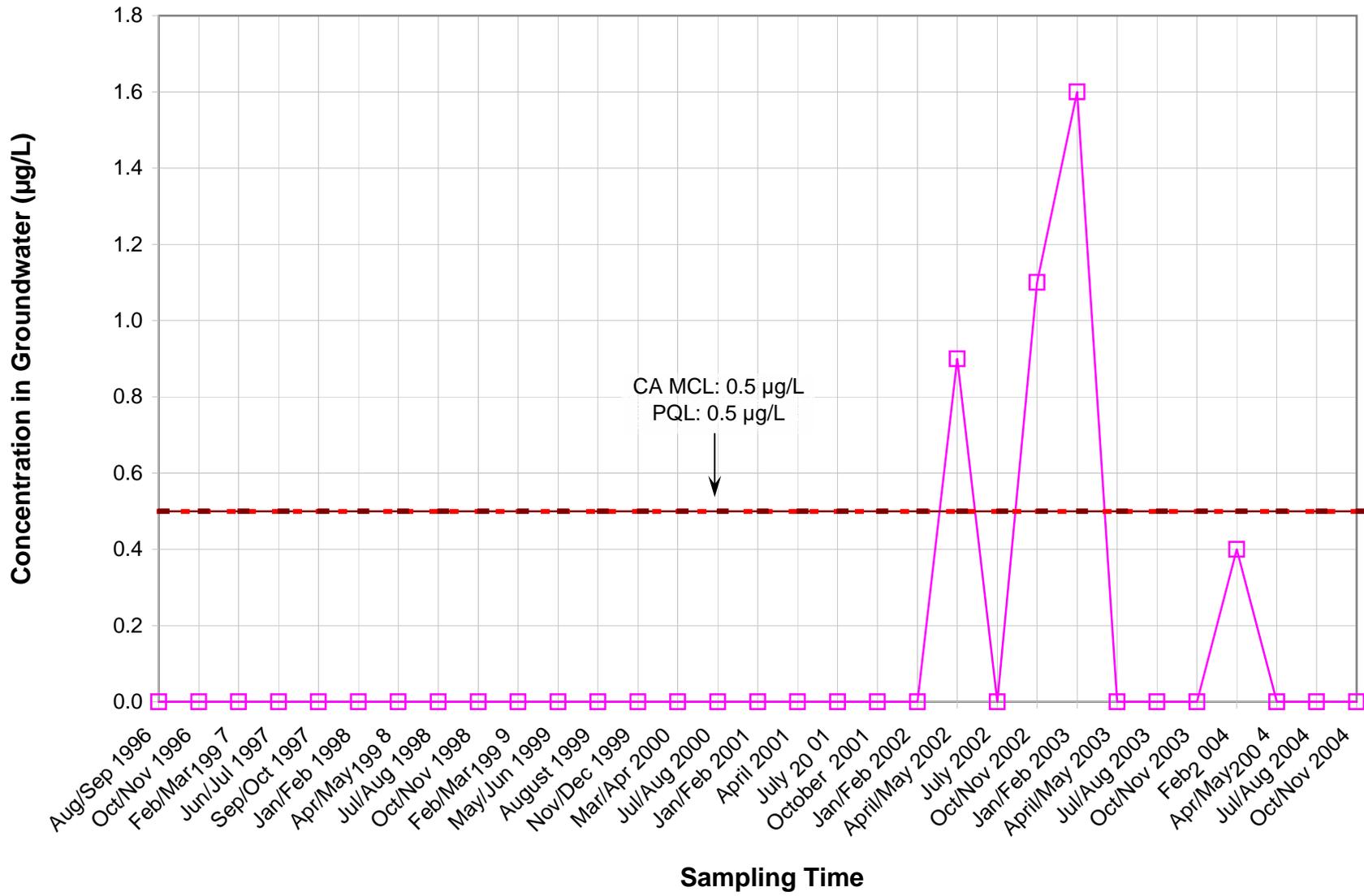
California Interim Action Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 µg/L to 6 µg/L.

FIGURE 3-18

**PERCHLORATE DETECTED AT MW-4
FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
Pasadena, California





Legend

—□— Shallow Well —●— PQL - - - CA IAL

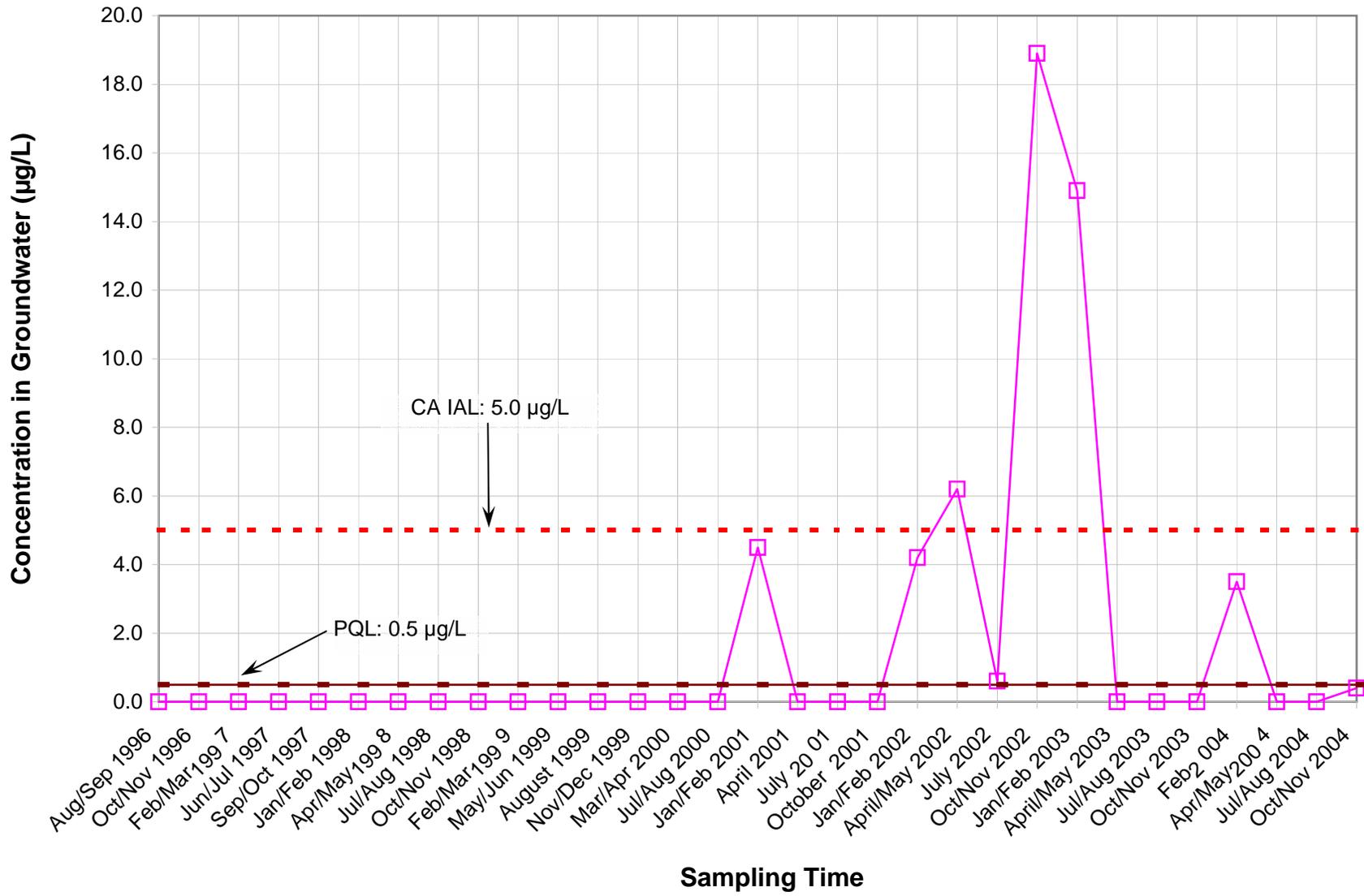
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-19

**CARBON TETRACHLORIDE DETECTED AT MW-5
 FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
 Pasadena, California





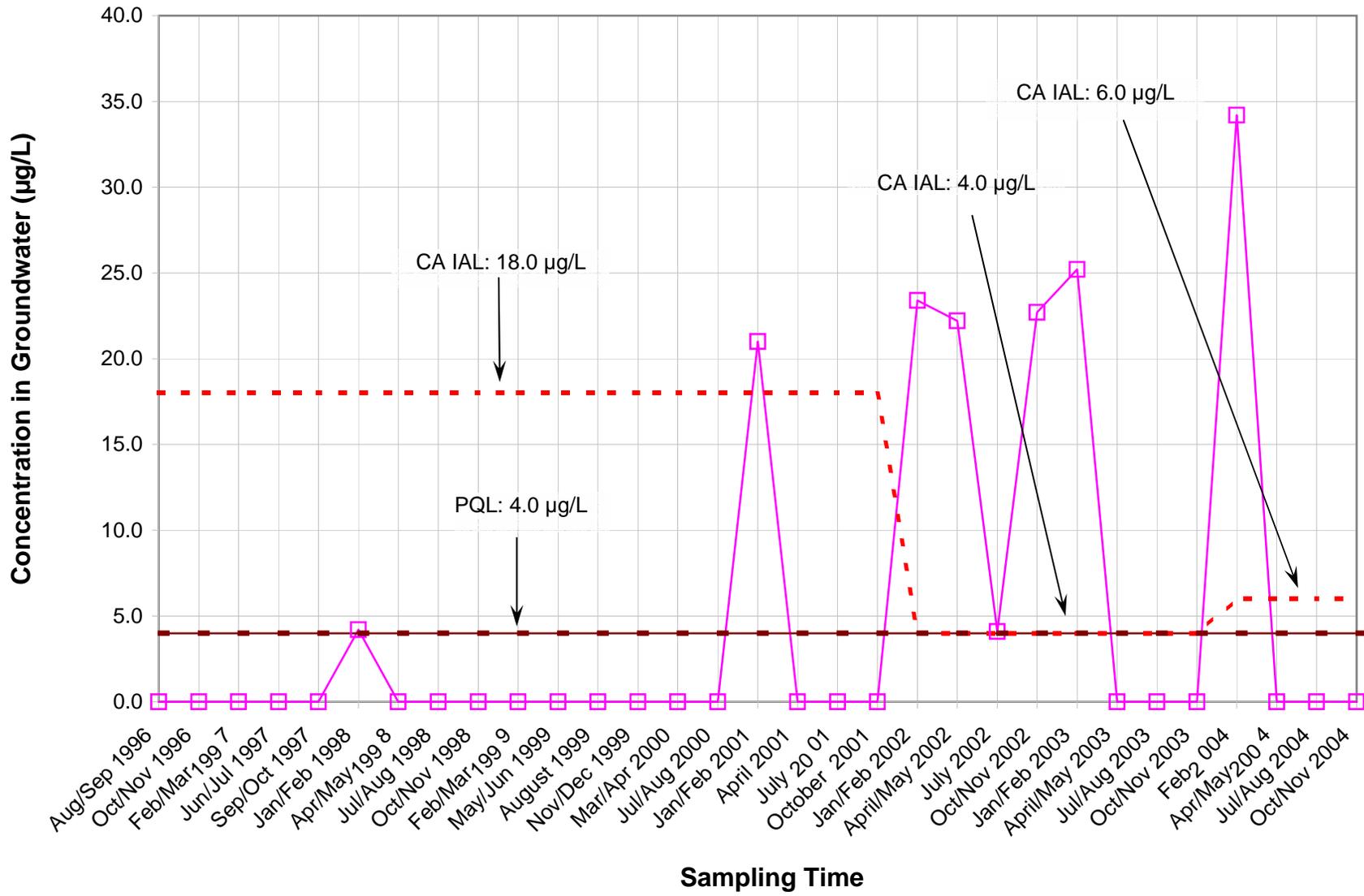
Legend

- Shallow Well
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-20
TRICHLOROETHENE DETECTED AT MW-5
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California

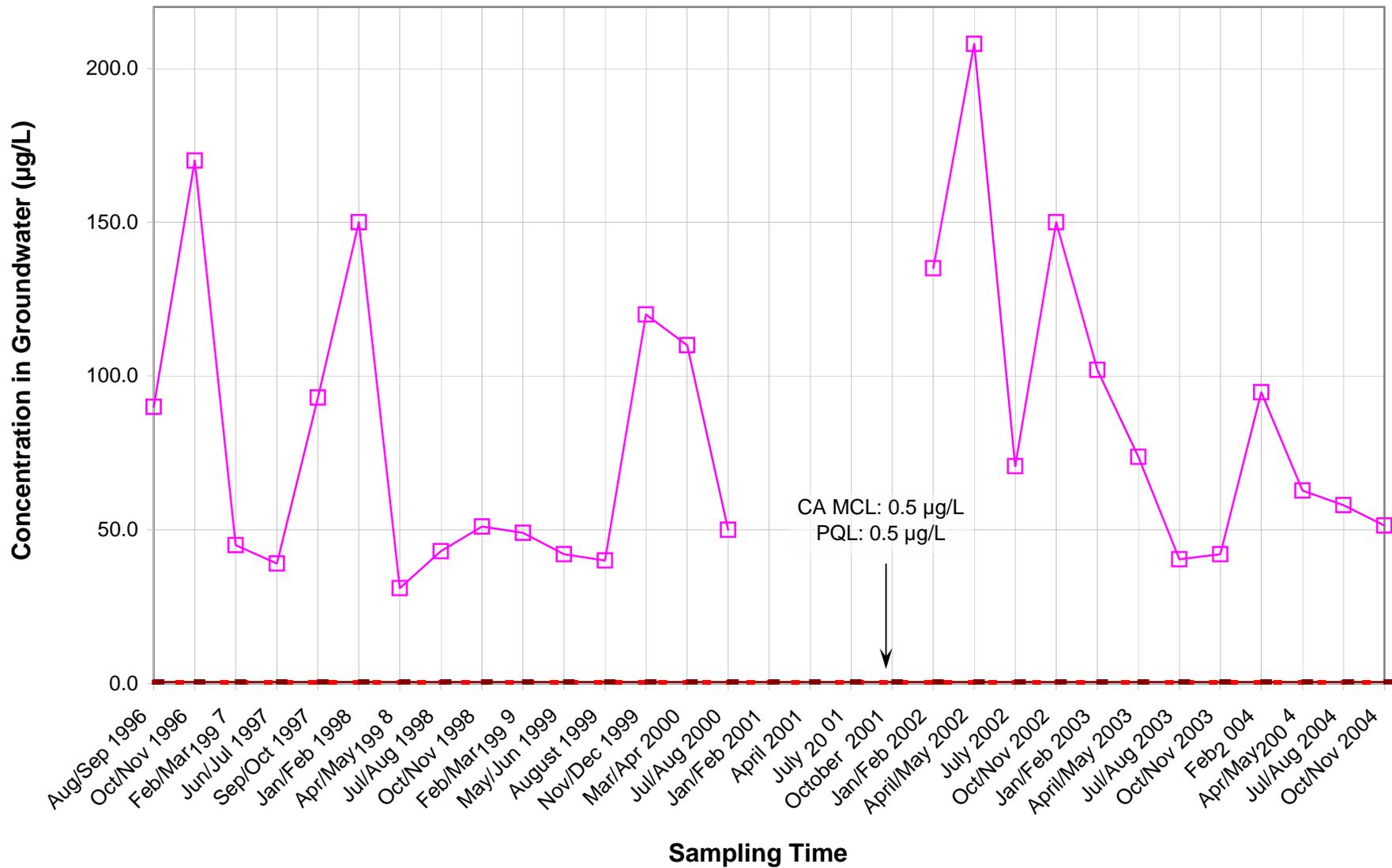


Legend

—□— Shallow Well —■— PQL - - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Action Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 µg/L to 6 µg/L.

FIGURE 3-21
PERCHLORATE DETECTED AT MW-5 FROM AUG/SEP 1996 TO OCT/NOV 2004
Jet Propulsion Laboratory Pasadena, California

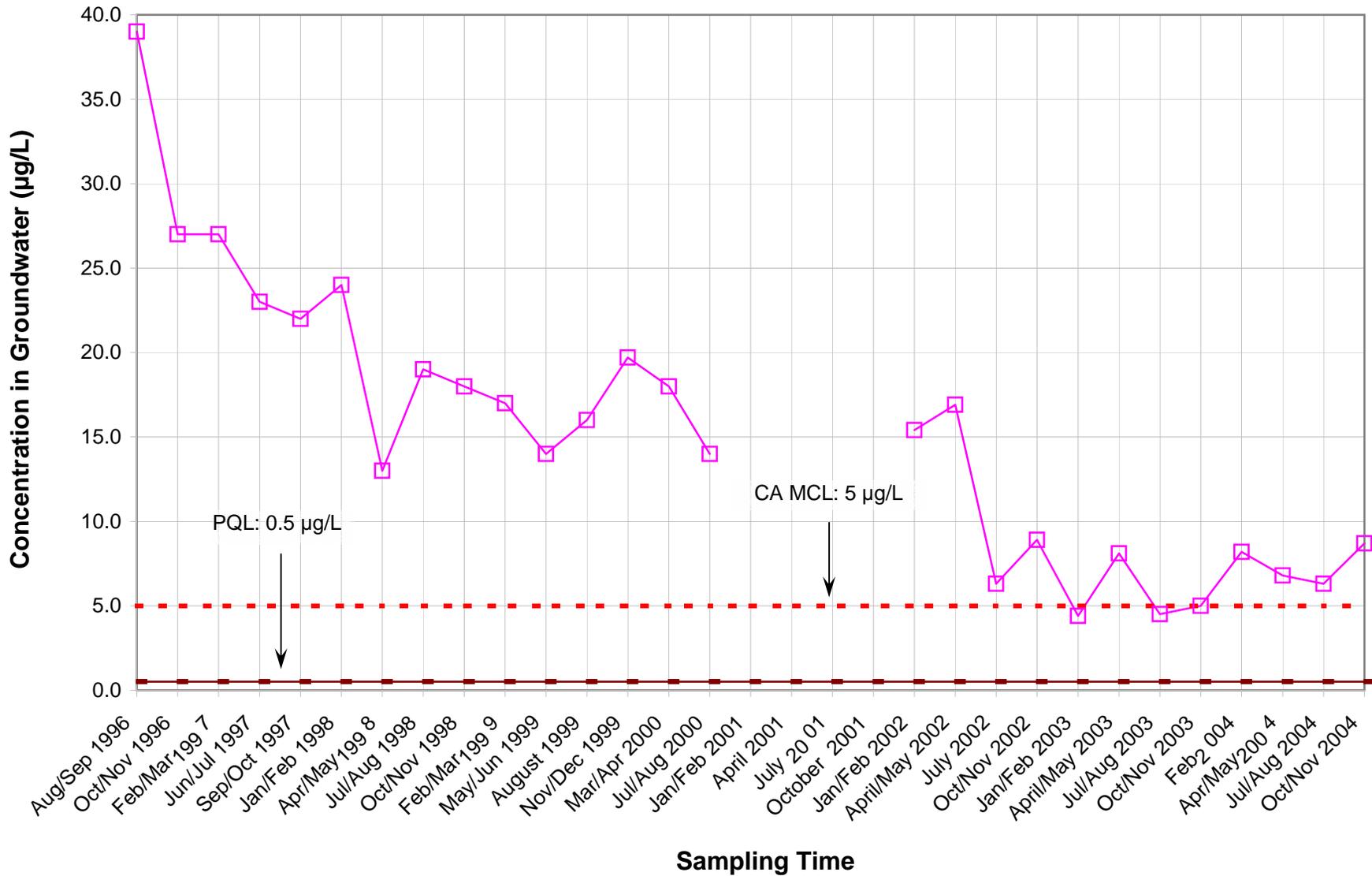
Legend

- Shallow Well
- PQL
- - - CA MCL

No sample was collected during Jan/Feb, April, July, and October 2001 events due to the ongoing Pilot Test at MW-7 (Reference US Filter Pilot Test Report for current water quality data).
 Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-22
CARBON TETRACHLORIDE DETECTED AT MW-7
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

—□— Shallow Well — PQL - - - CA MCL

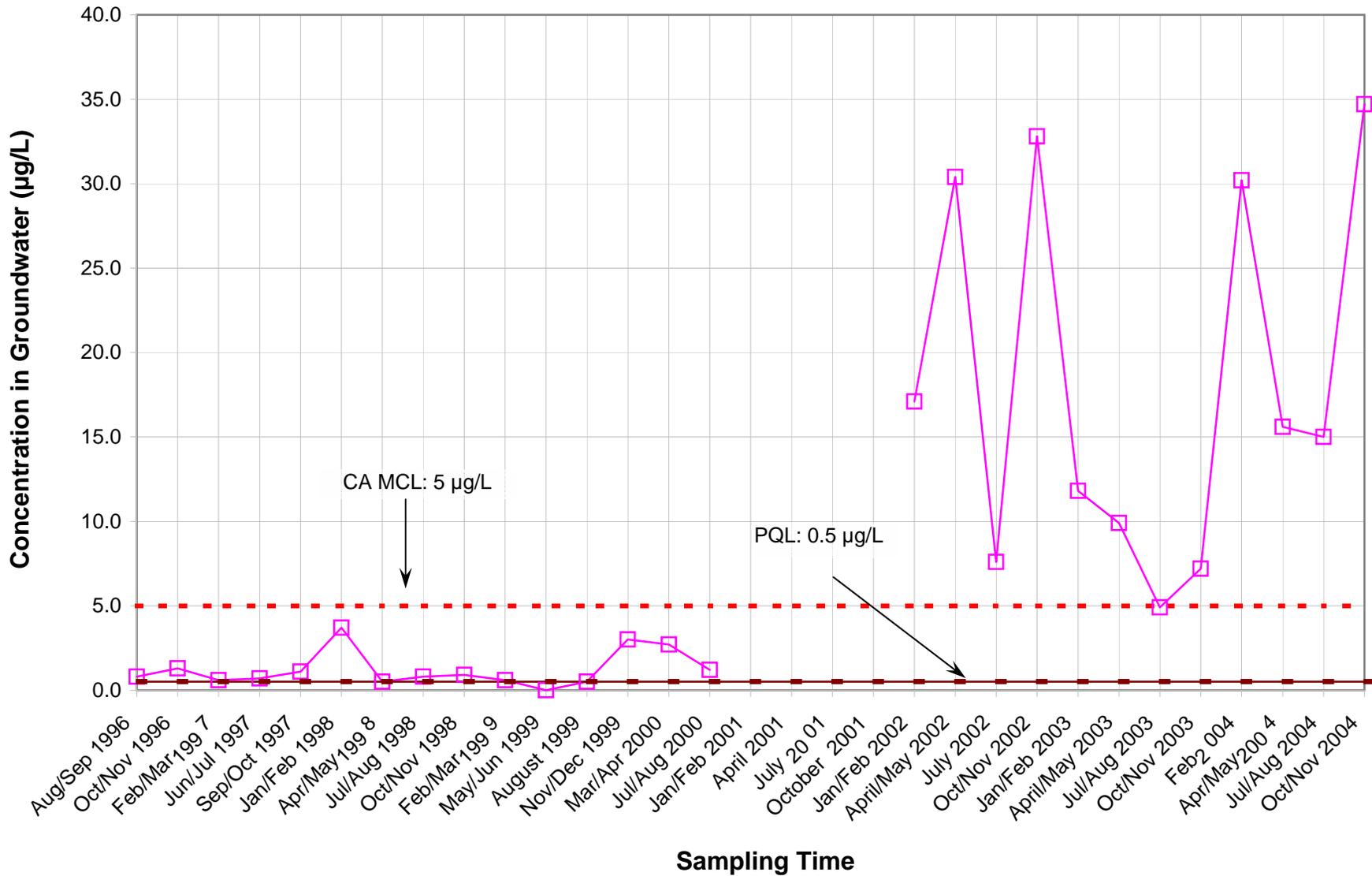
No sample was collected during Jan/Feb, April, July, and October 2001 events due to the ongoing Pilot Test at MW-7 (Reference US Filter Pilot Test Report for current water quality data).
 Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-23

**TRICHLOROETHENE DETECTED AT MW-7
 FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
 Pasadena, California





Legend

—□— Shallow Well — PQL - - - CA MCL

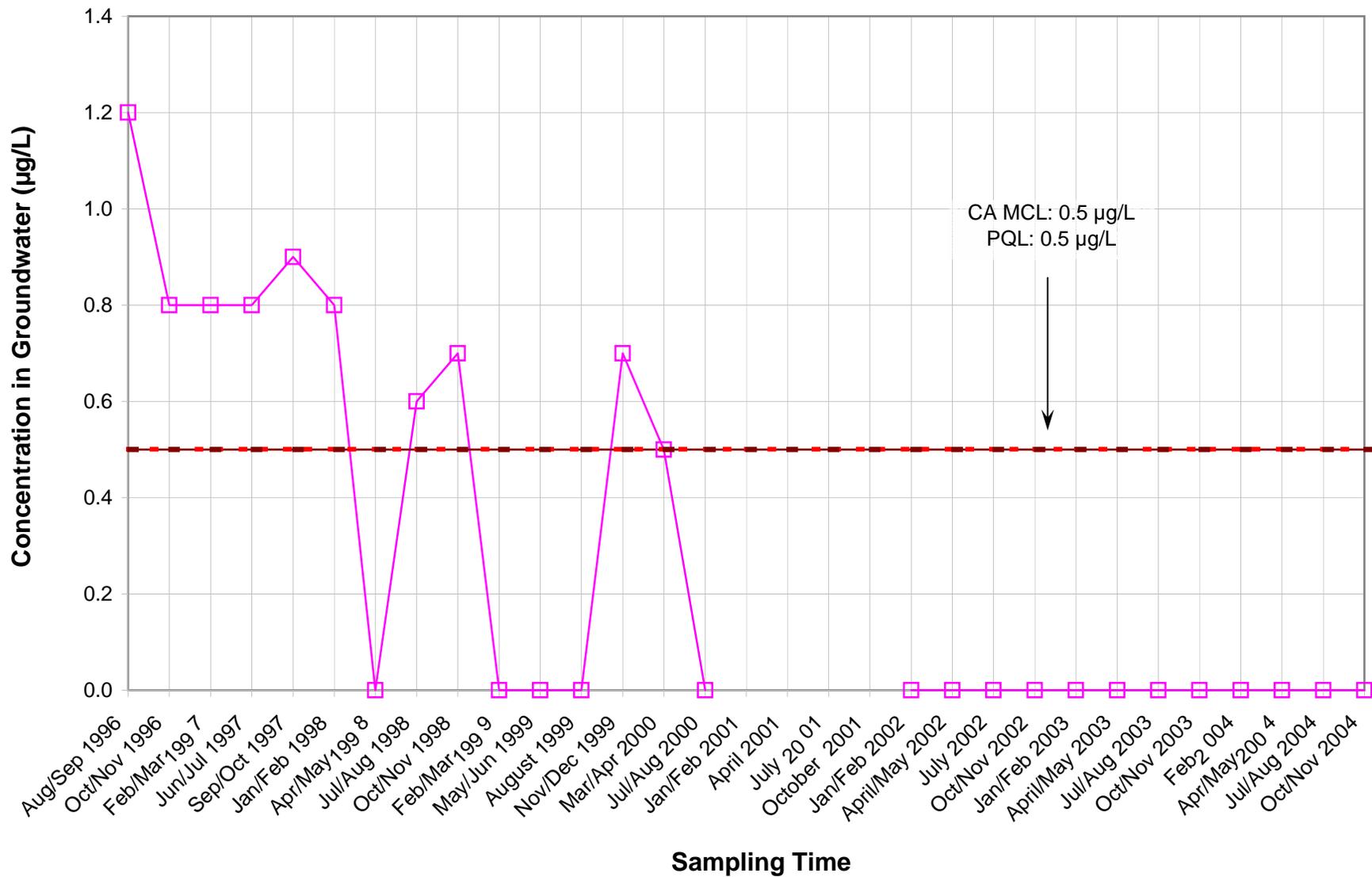
No sample was collected during Jan/Feb, April, July, and October 2001 events due to the ongoing Pilot Test at MW-7 (Reference US Filter Pilot Test Report for current water quality data).
 Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-24

**TETRACHLOROETHENE DETECTED AT MW-7
 FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
 Pasadena, California





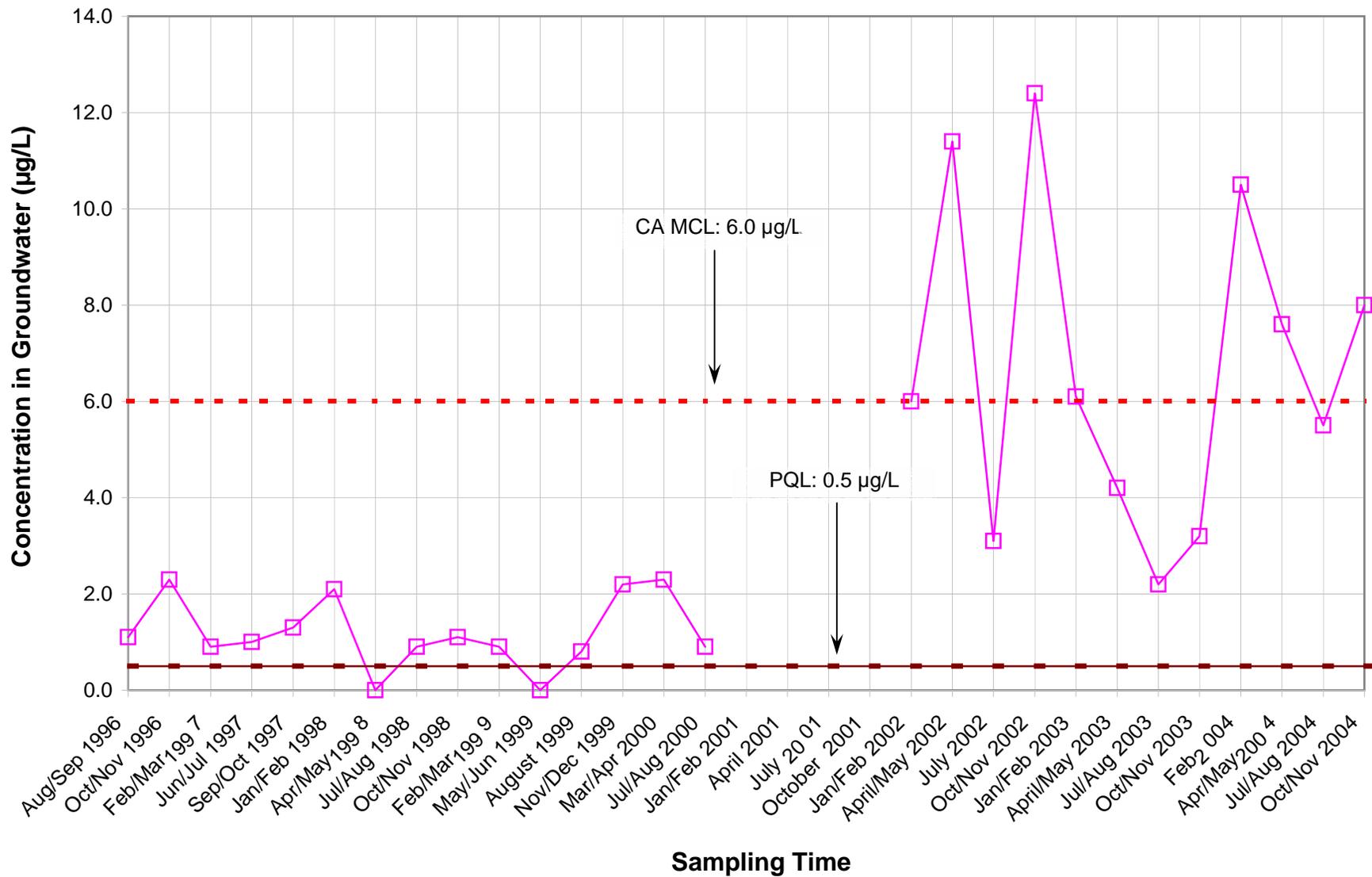
Legend

—□— Shallow Well ——— PQL - - - CA MCL

No sample was collected during Jan/Feb, April, July, and October 2001 events due to the ongoing Pilot Test at MW-7 (Reference US Filter Pilot Test Report for current water quality data).
 Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-25
1,2-DCA DETECTED AT MW-7
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

- Shallow Well
- PQL
- - - CA MCL

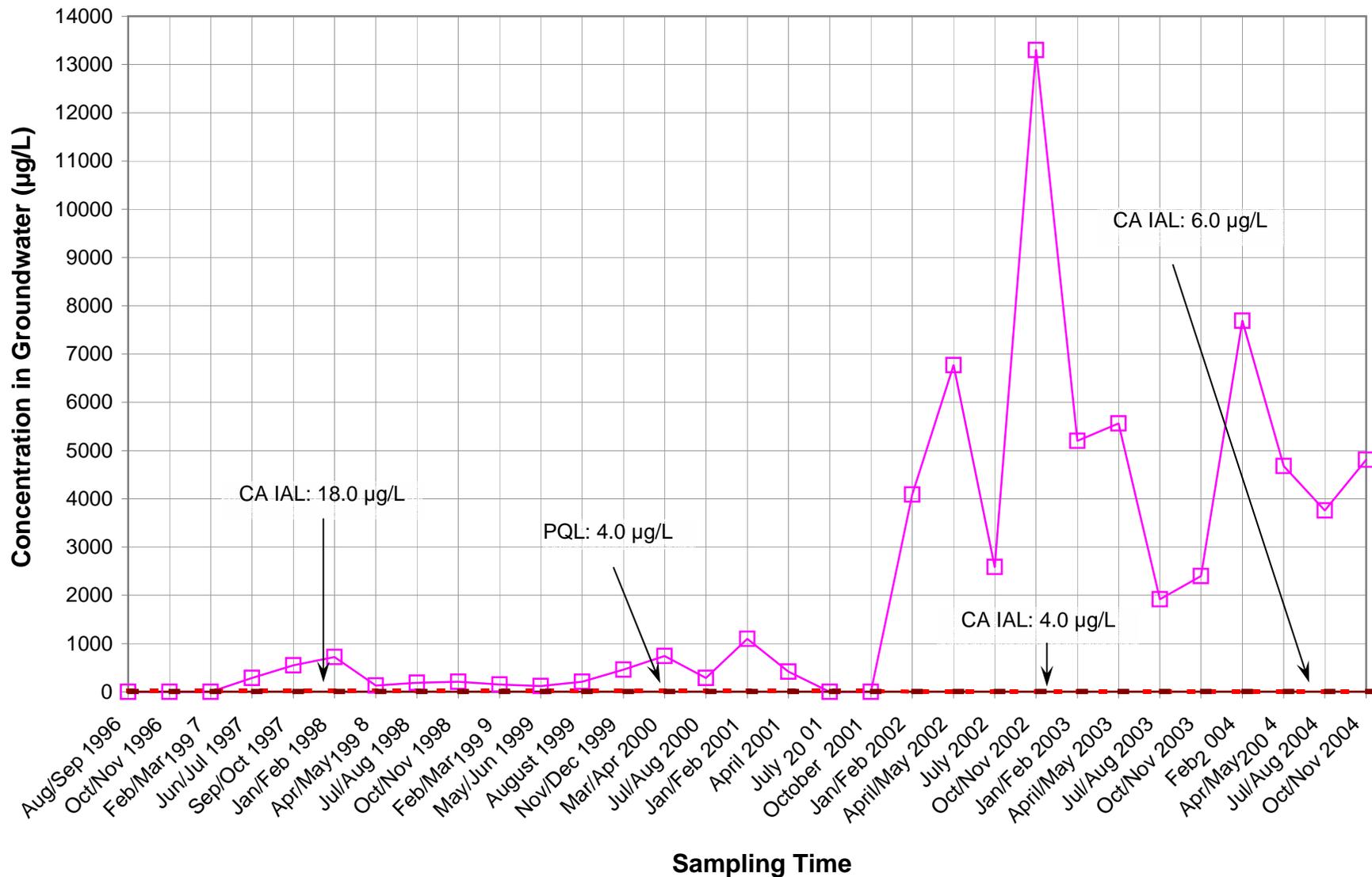
No sample was collected during Jan/Feb, April, July, and October 2001 events due to the ongoing Pilot Test at MW-7 (Reference US Filter Pilot Test Report for current water quality data).
 Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-26

**1,1-DCE DETECTED AT MW-7
 FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
 Pasadena, California





Legend

—□— Shallow Well — PQL - - - CA MCL

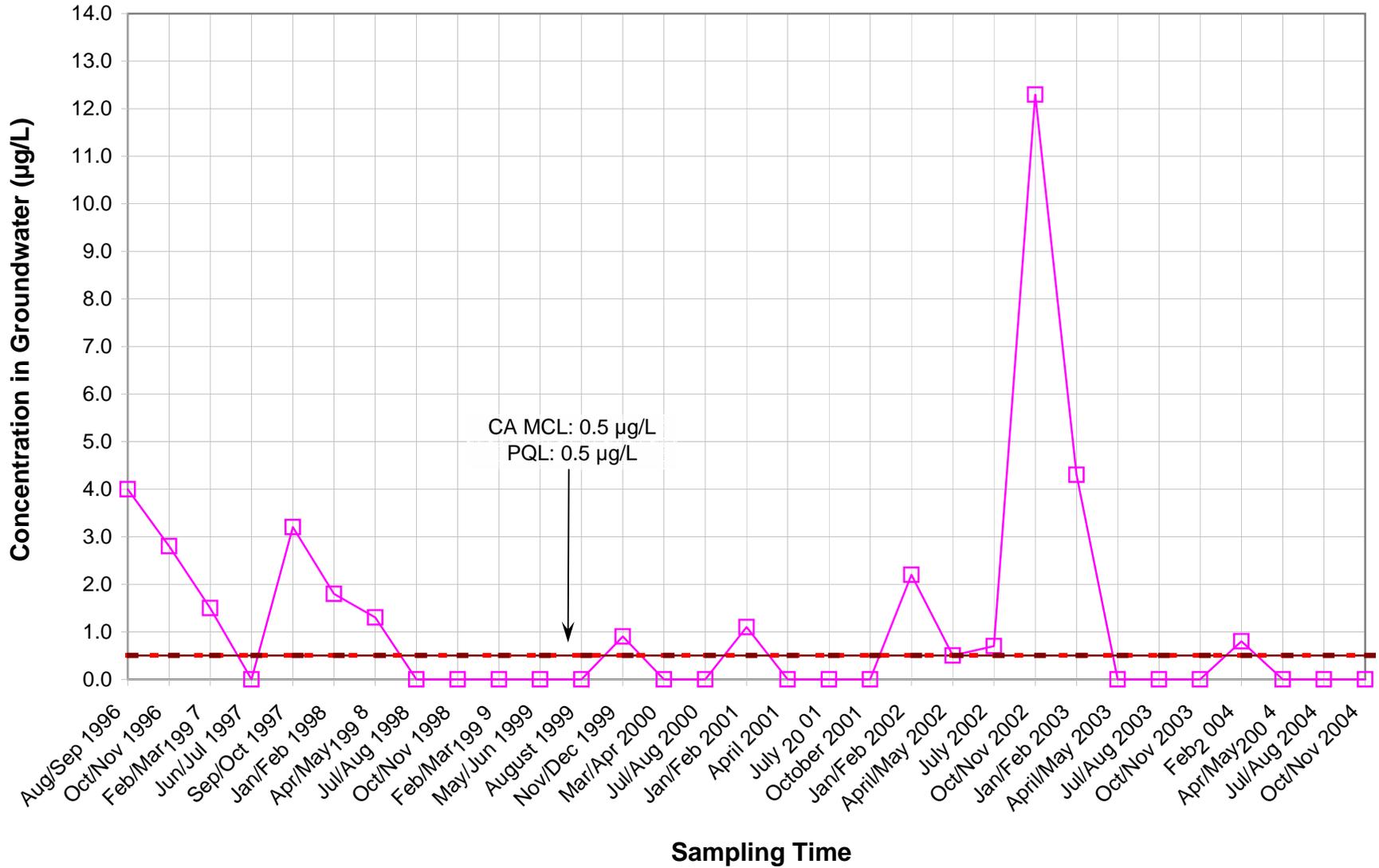
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.

Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

California Interim Acton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-27
PERCHLORATE DETECTED AT MW-7
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
Pasadena, California



Legend

—□— Shallow Well — PQL - - - CA MCL

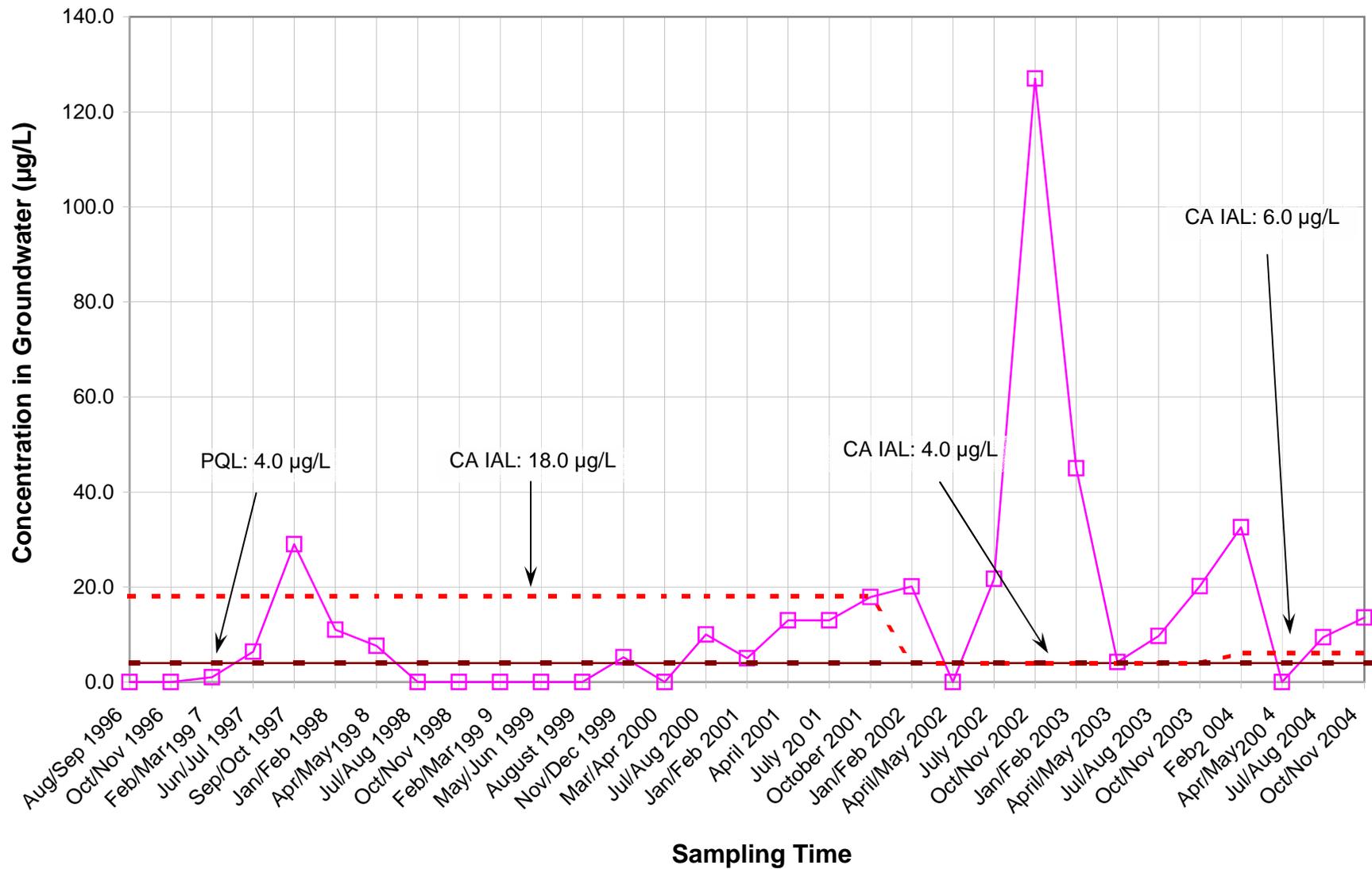
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-28

**CARBON TETRACHLORIDE DETECTED AT MW-8
 FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
 Pasadena, California





Legend

—□— Shallow Well — PQL - - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.

Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

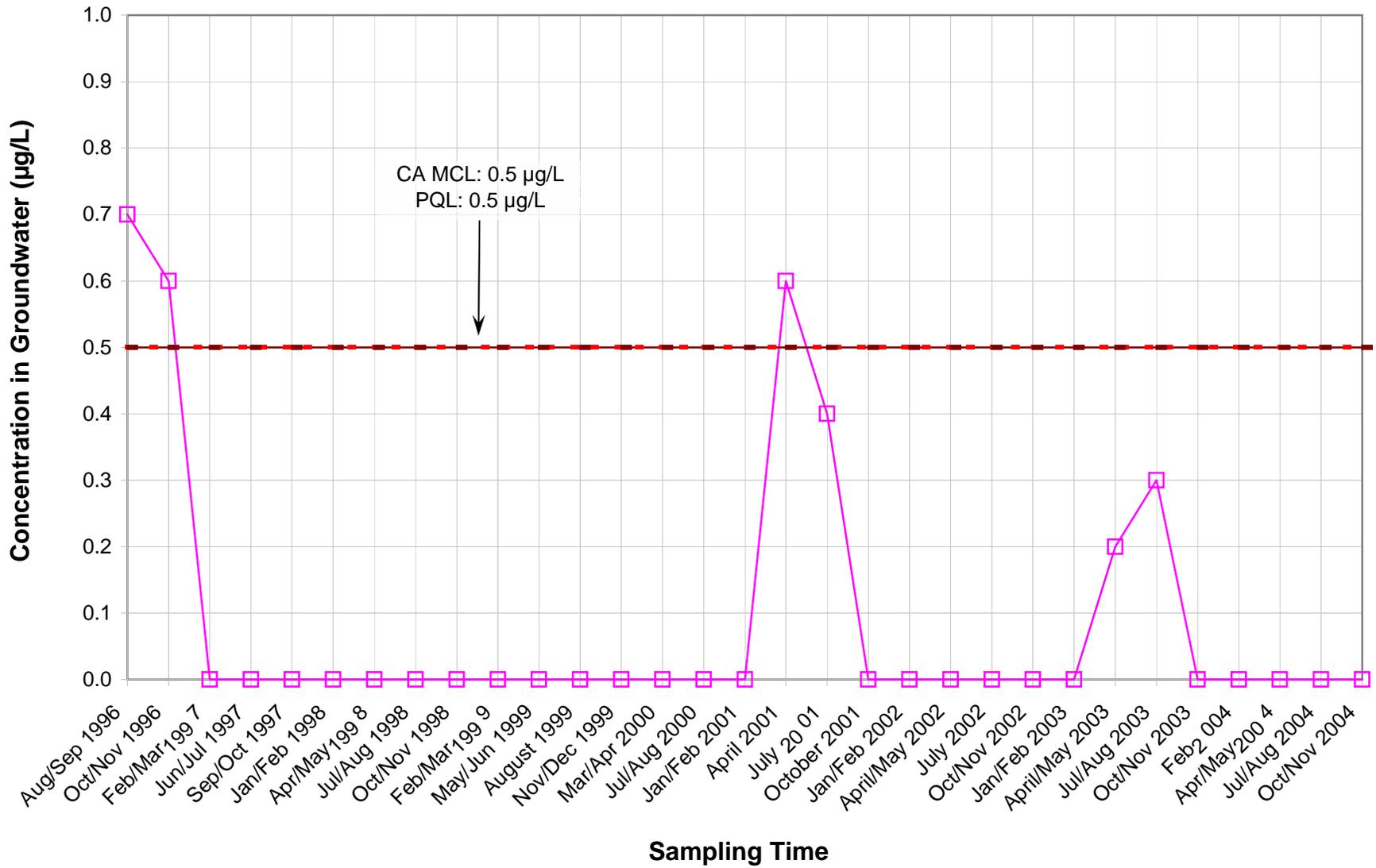
California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-29

**PERCHLORATE DETECTED AT MW-8
FROM AUG/SEP 1996 TO OCT/NOV 2004**

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Pasadena, California





CA MCL: 0.5 µg/L
PQL: 0.5 µg/L

Legend

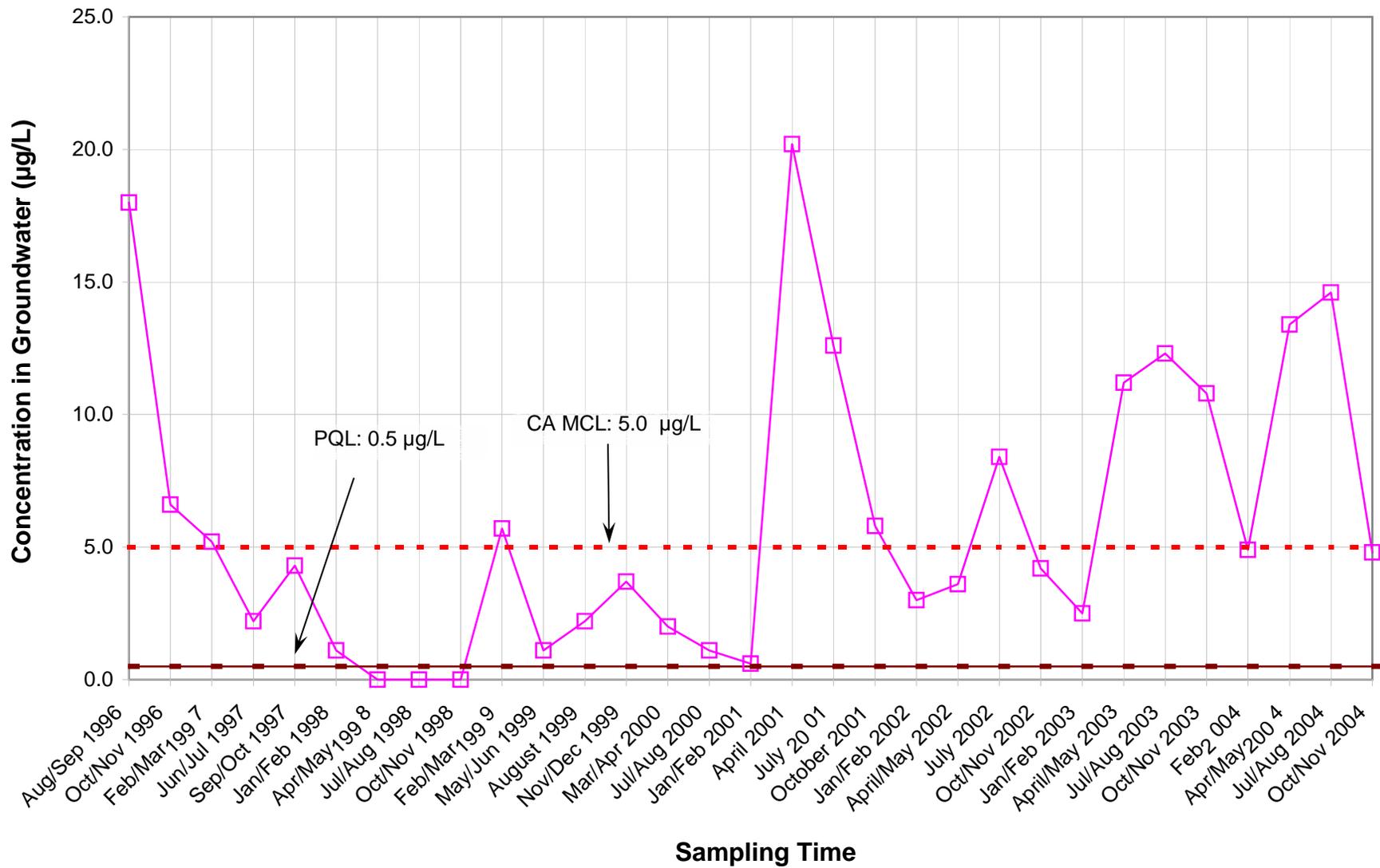
—□— Shallow Well — PQL - - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-30
CARBON TETRACHLORIDE DETECTED AT MW-10
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
Pasadena, California





Legend

—□— Shallow Well — PQL - - - CA MCL

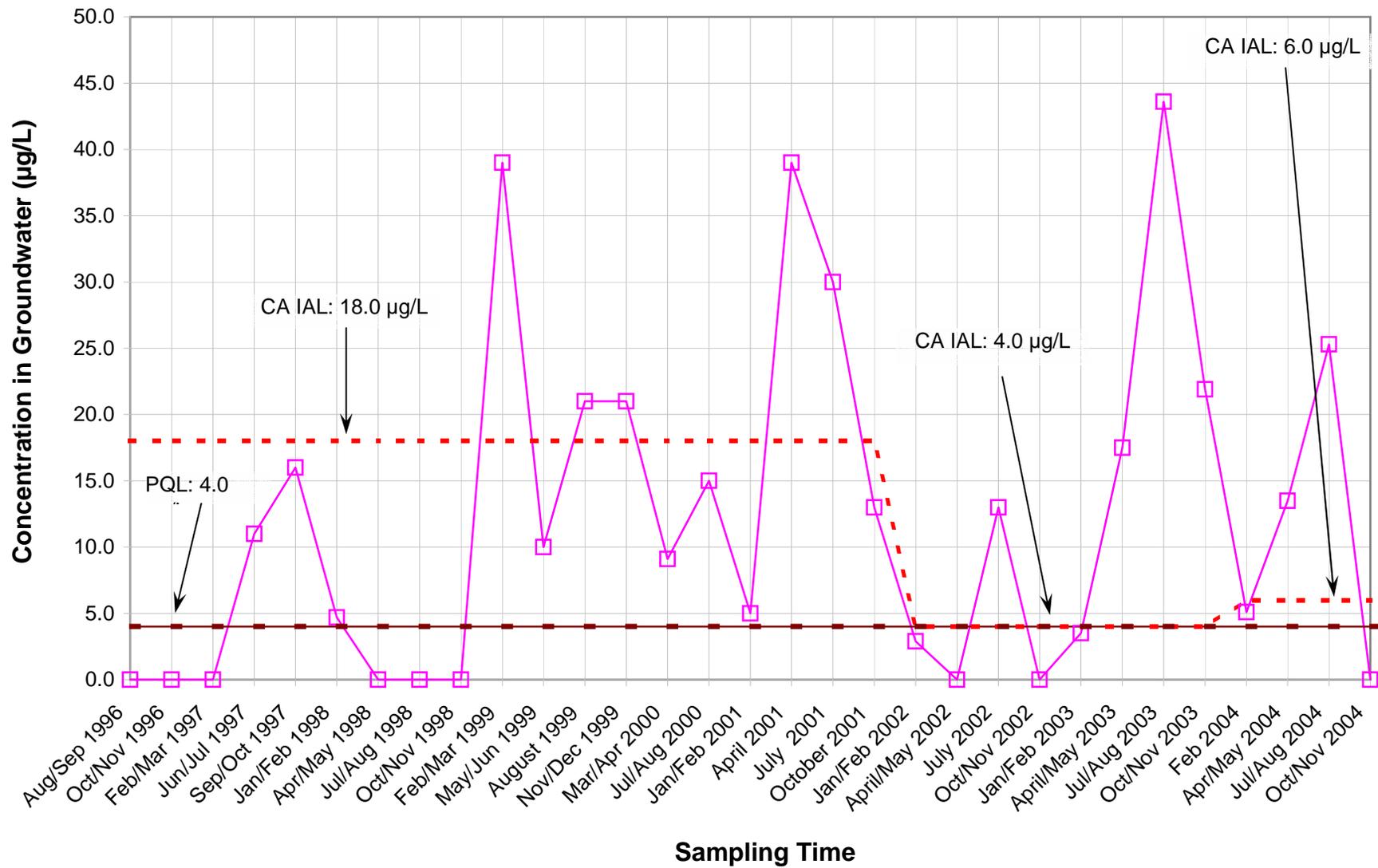
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-31

TRICHLOROETHENE DETECTED AT MW-10
 FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California





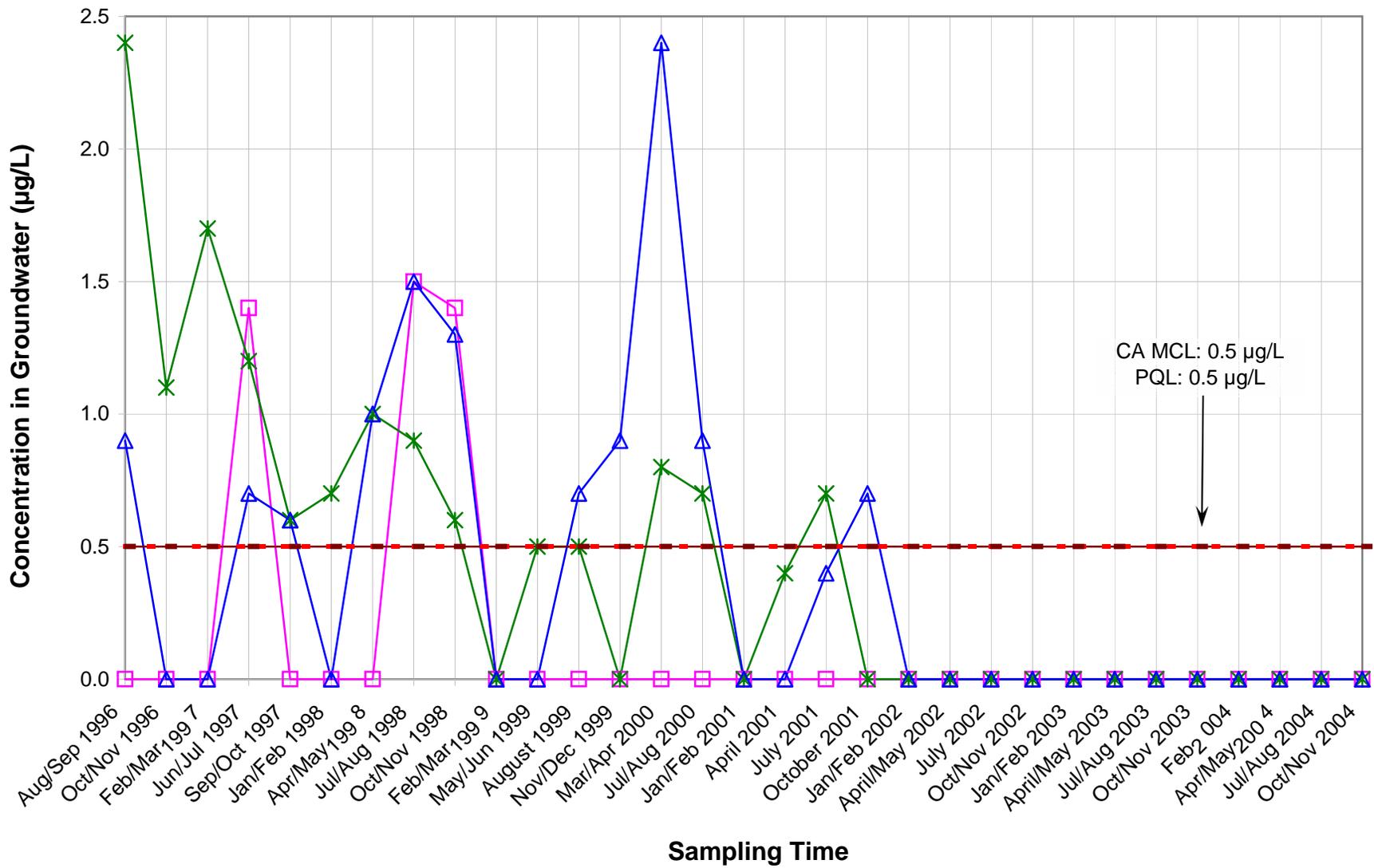
Legend

- Shallow Well
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-32
PERCHLORATE DETECTED AT MW-10
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California

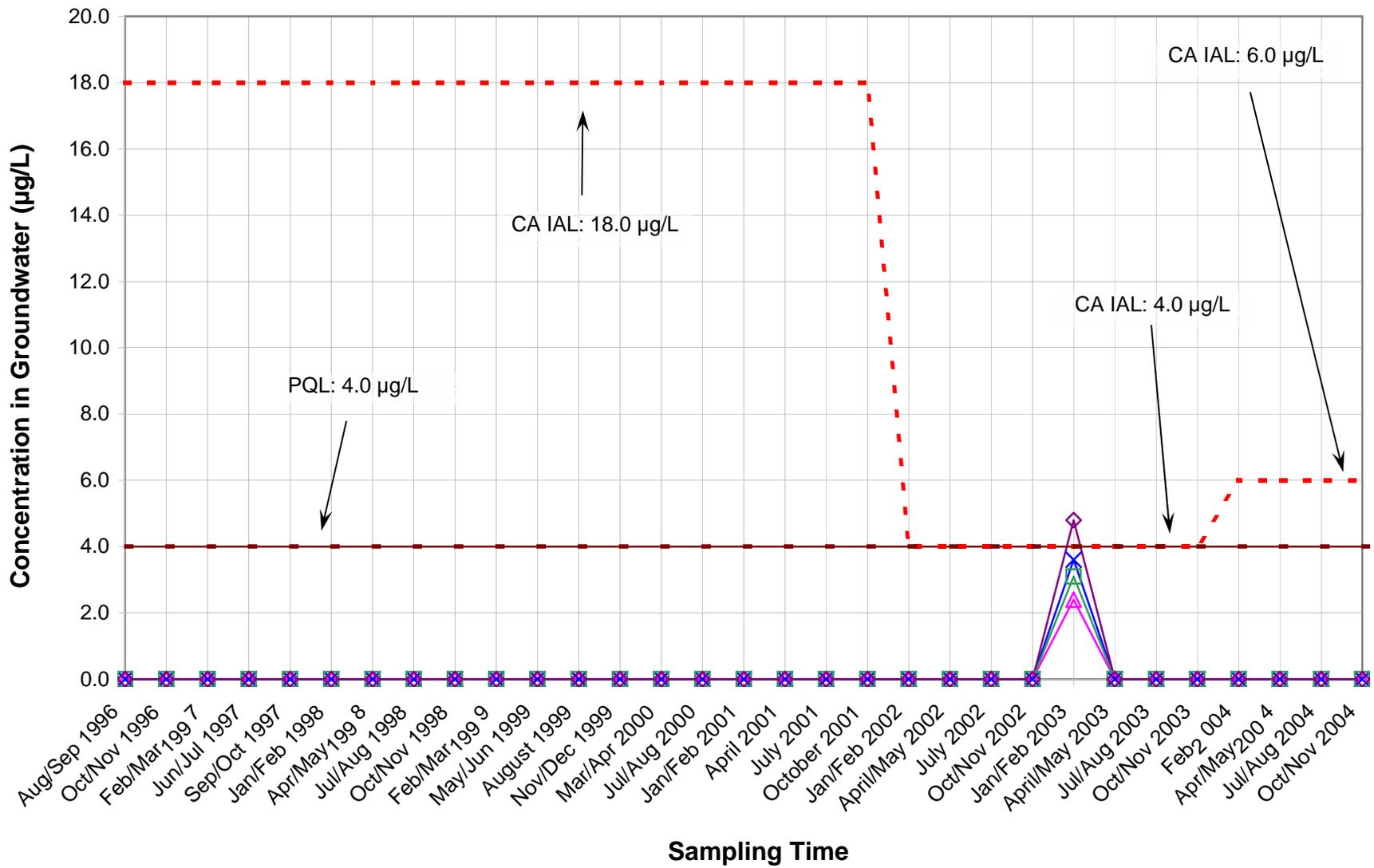


Legend

- Screen 1 —*— Screen 2 —△— Screen 3 —●— PQL - - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports

FIGURE 3-33
CARBON TETRACHLORIDE DETECTED AT MW-11 FROM AUG/SEP 1996 TO OCT/NOV 2004
Jet Propulsion Laboratory Pasadena, California

Legend

—△— Screen 1
 —×— Screen 2
 —□— Screen 3
 —◇— Screen 4
 — — — PQL
 - - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.

Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

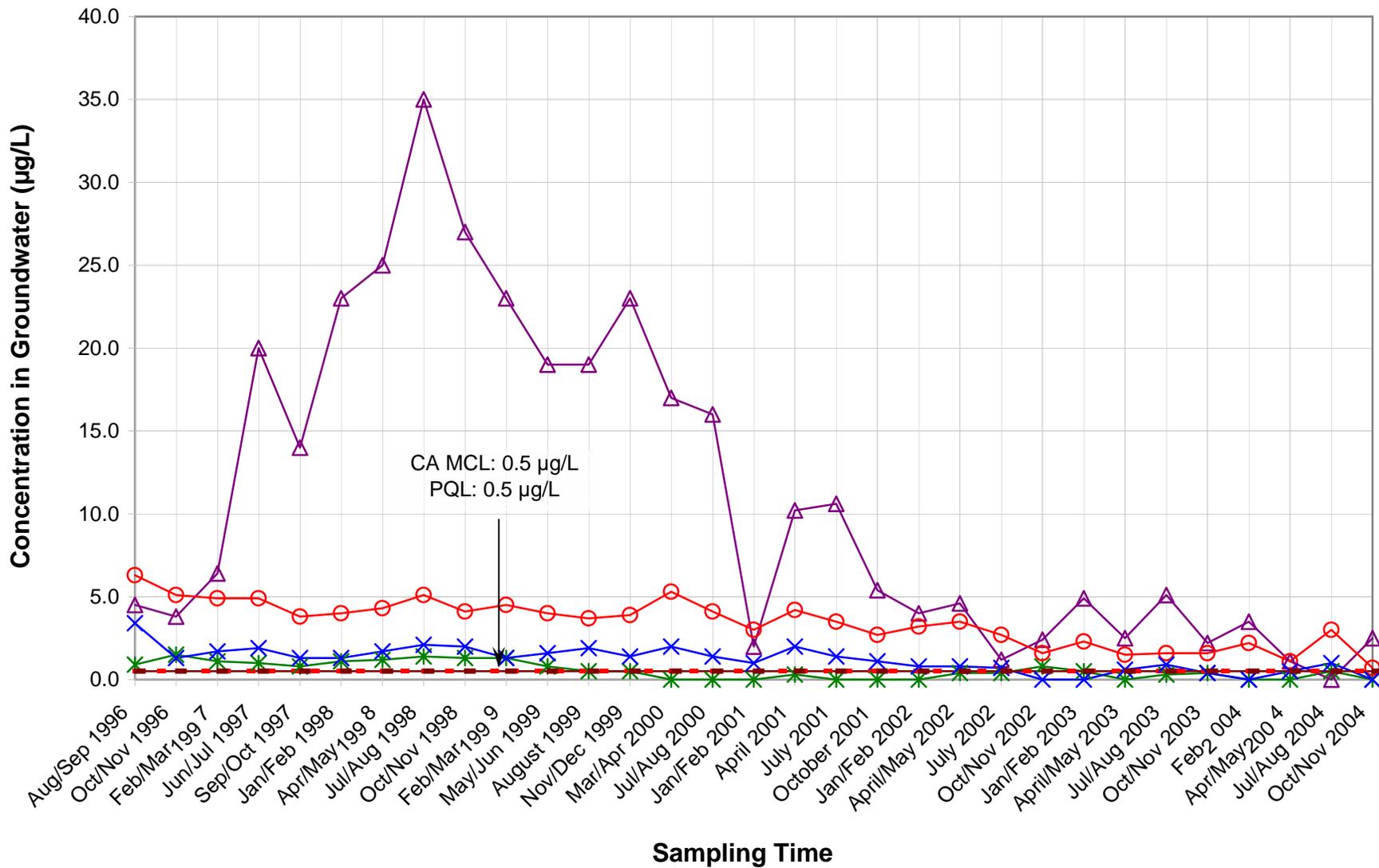
California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-34

**PERCHLORATE DETECTED AT MW-11
FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
Pasadena, California





Legend

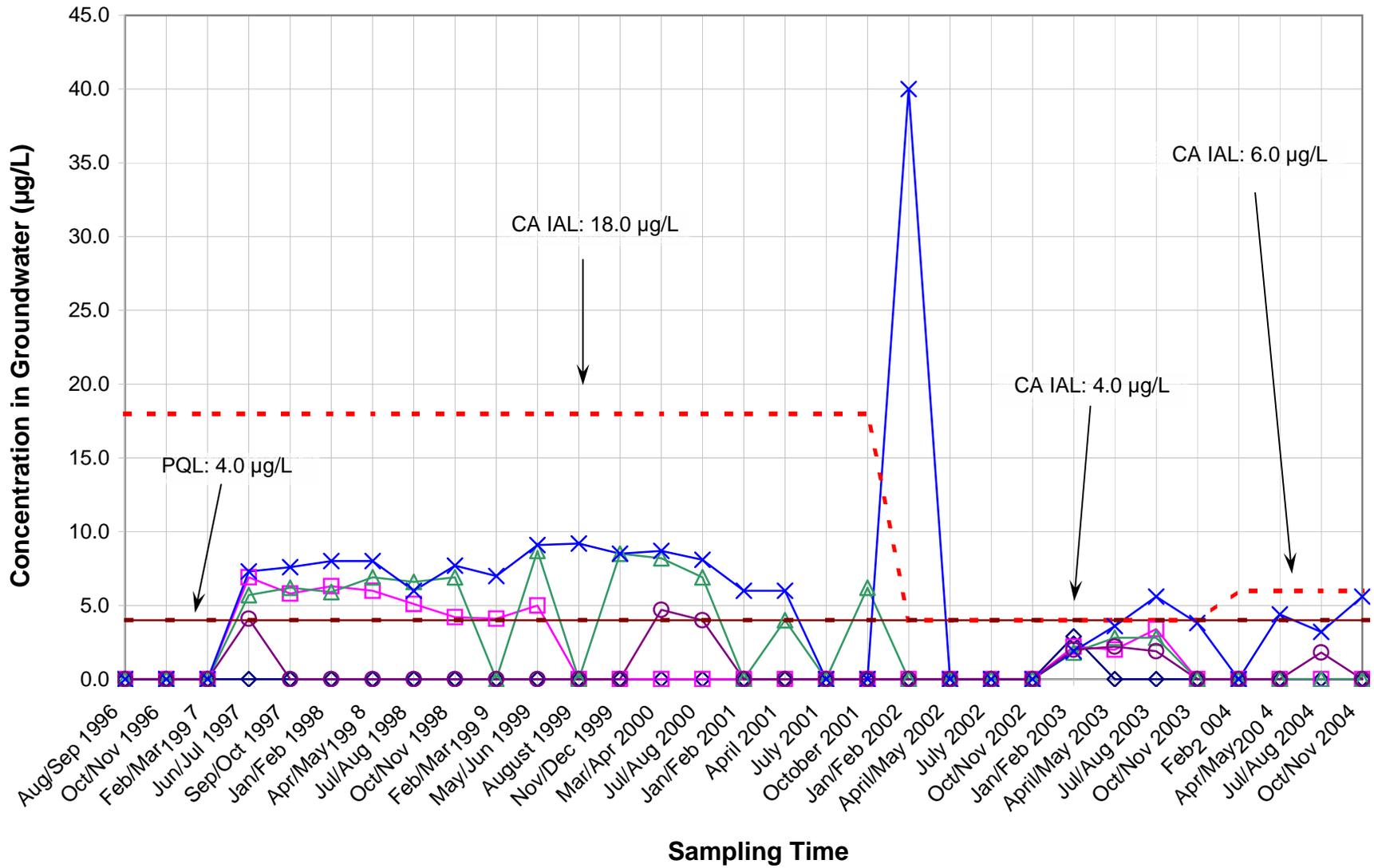
- Screen 2 (Green asterisk)
- Screen 3 (Purple triangle)
- Screen 4 (Red circle)
- Screen 5 (Blue cross)
- PQL (Red dash-dot line)
- CA MCL (Red dashed line)

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-35
CARBON TETRACHLORIDE DETECTED AT MW-12
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
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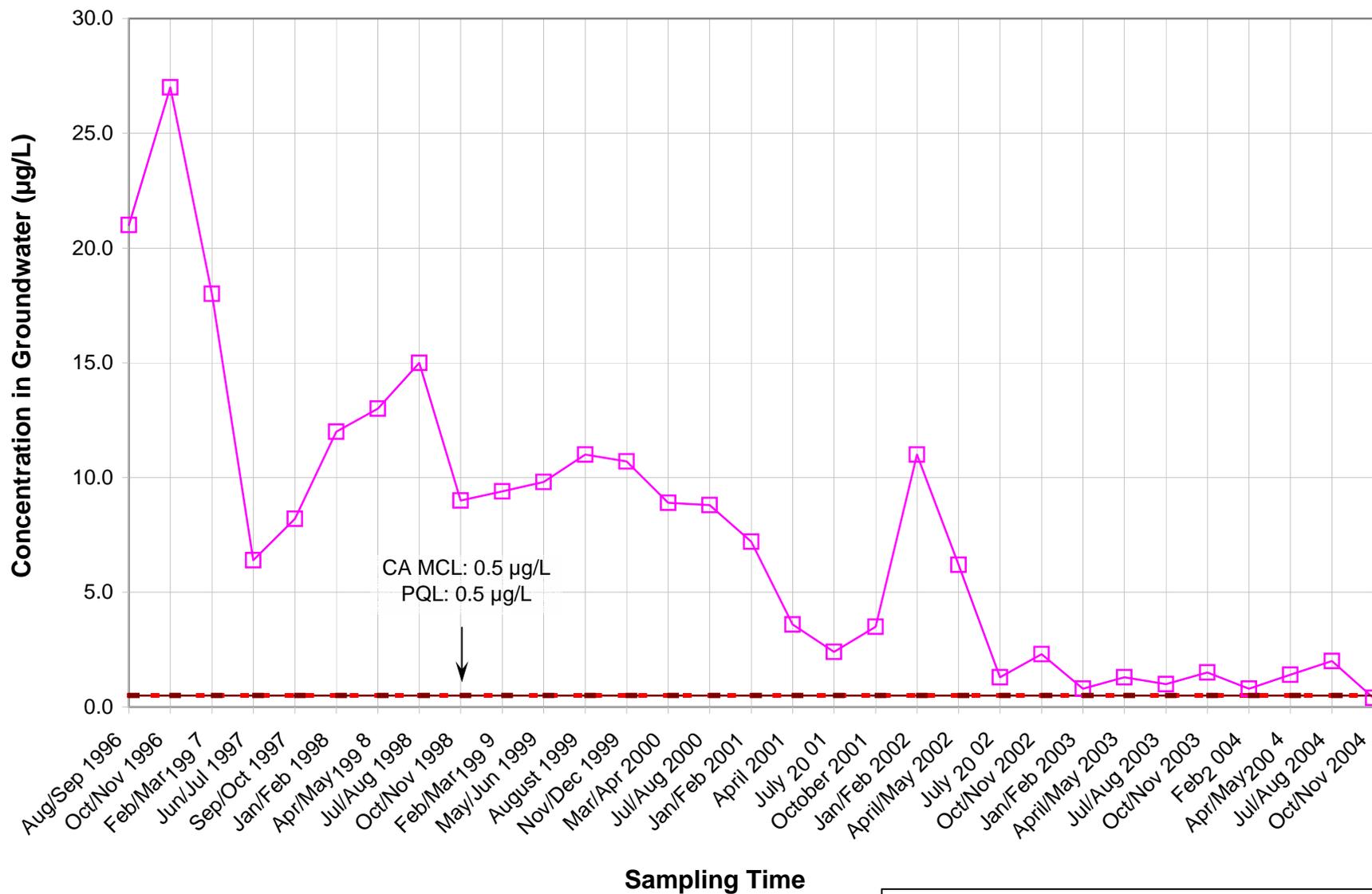
Legend

- ◆ Screen 1
- ◻ Screen 2
- △ Screen 3
- × Screen 4
- Screen 5
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-36
PERCHLORATE DETECTED AT MW-12
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

- Shallow Well
- PQL
- - - CA MCL

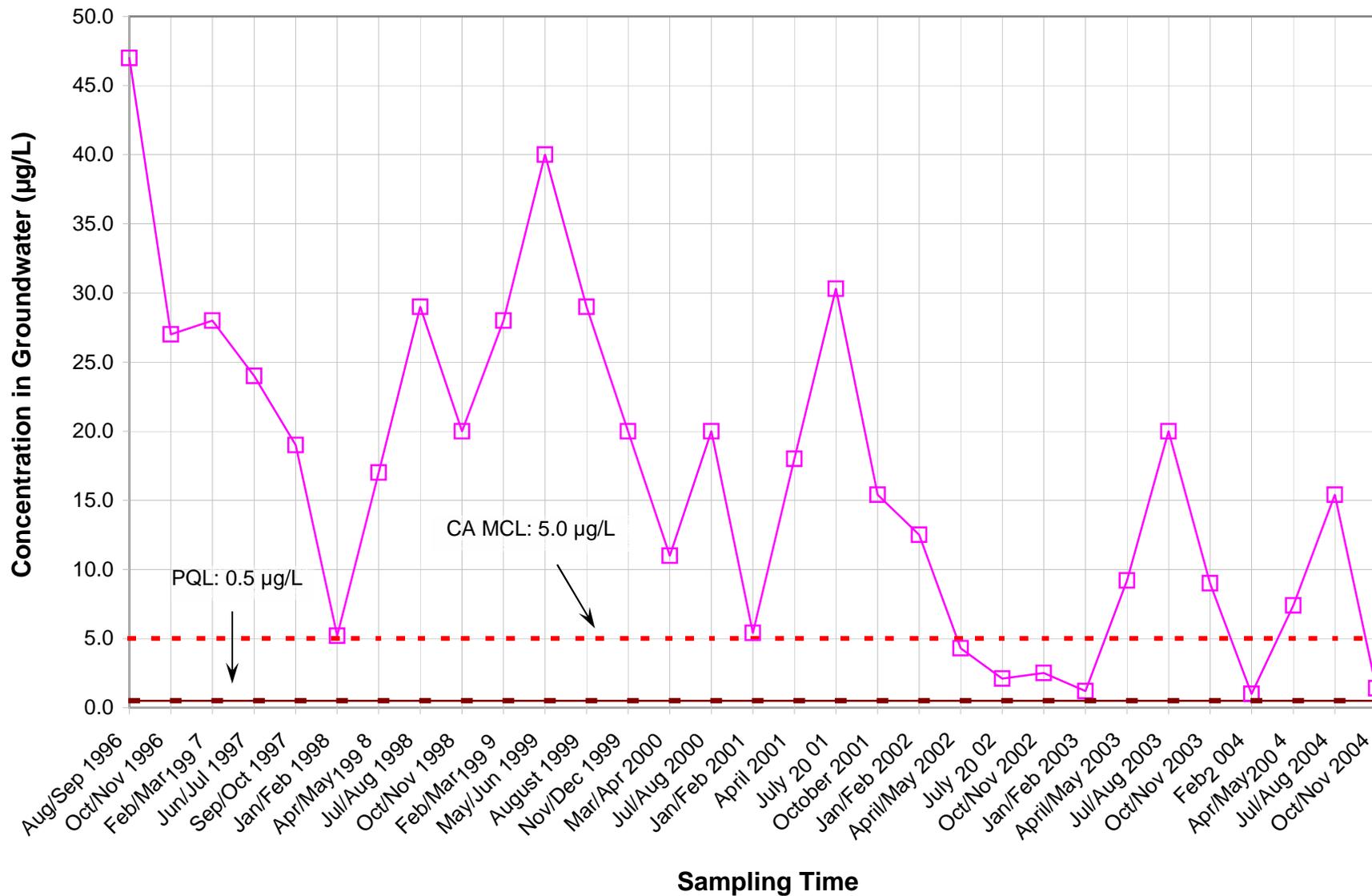
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-37

**CARBON TETRACHLORIDE DETECTED AT MW-13
 FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
 Pasadena, California





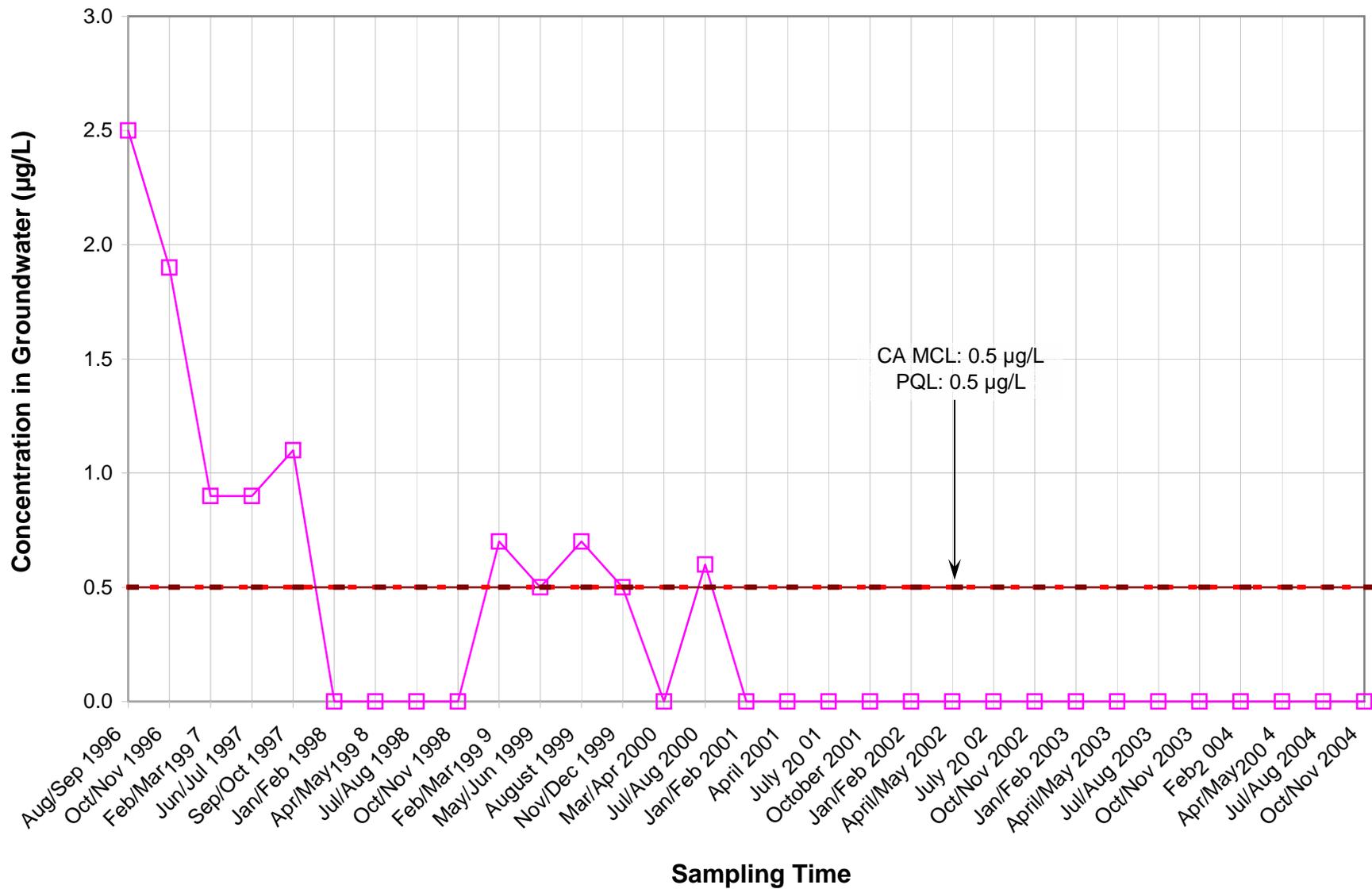
Legend

—□— Shallow Well — PQL - - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-38
 TRICHLOROETHENE DETECTED AT MW-13
 FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



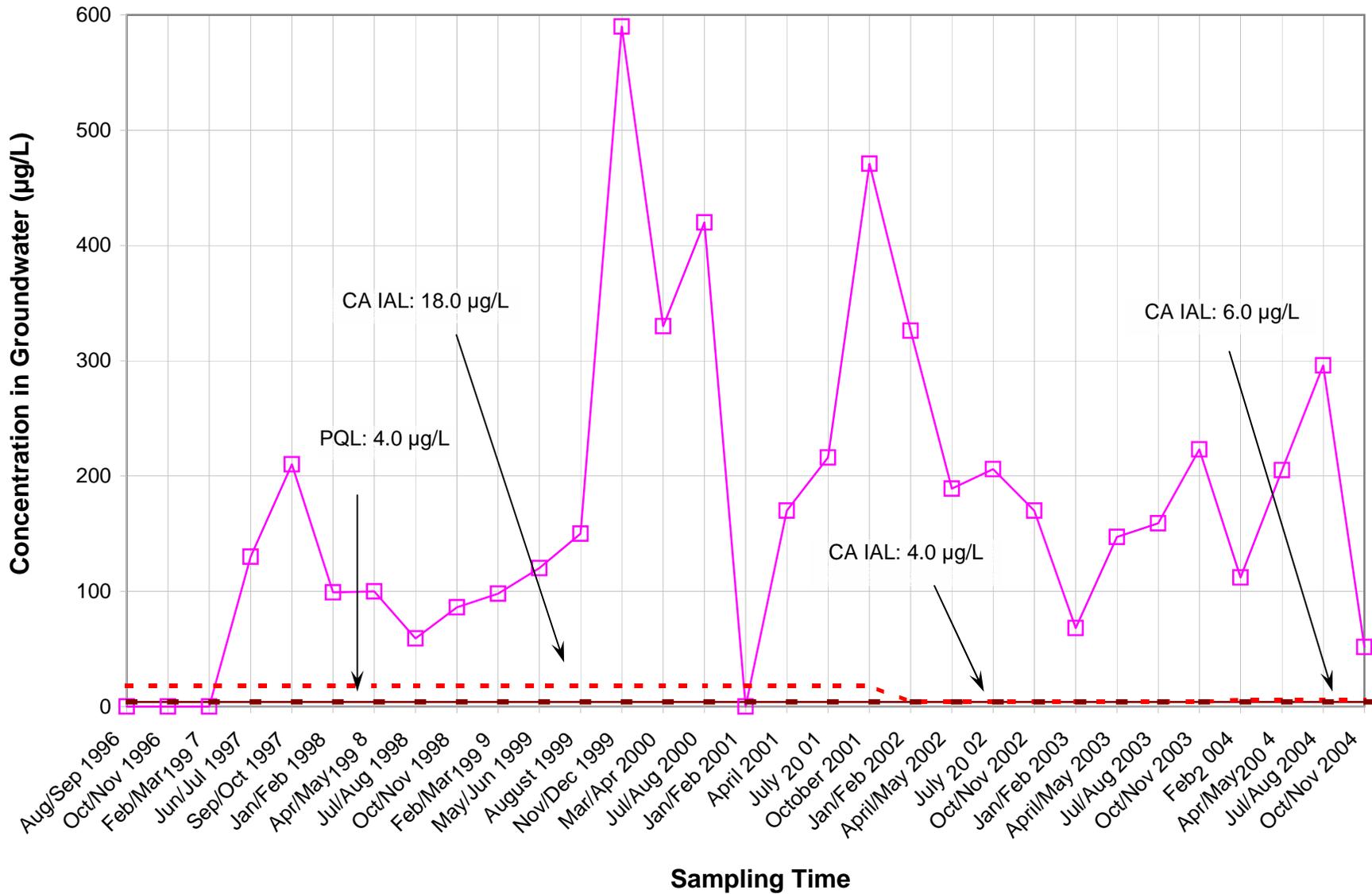
Legend

- Shallow Well
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-39
1,2-DCA DETECTED AT MW-13
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

- Shallow Well
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.

Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

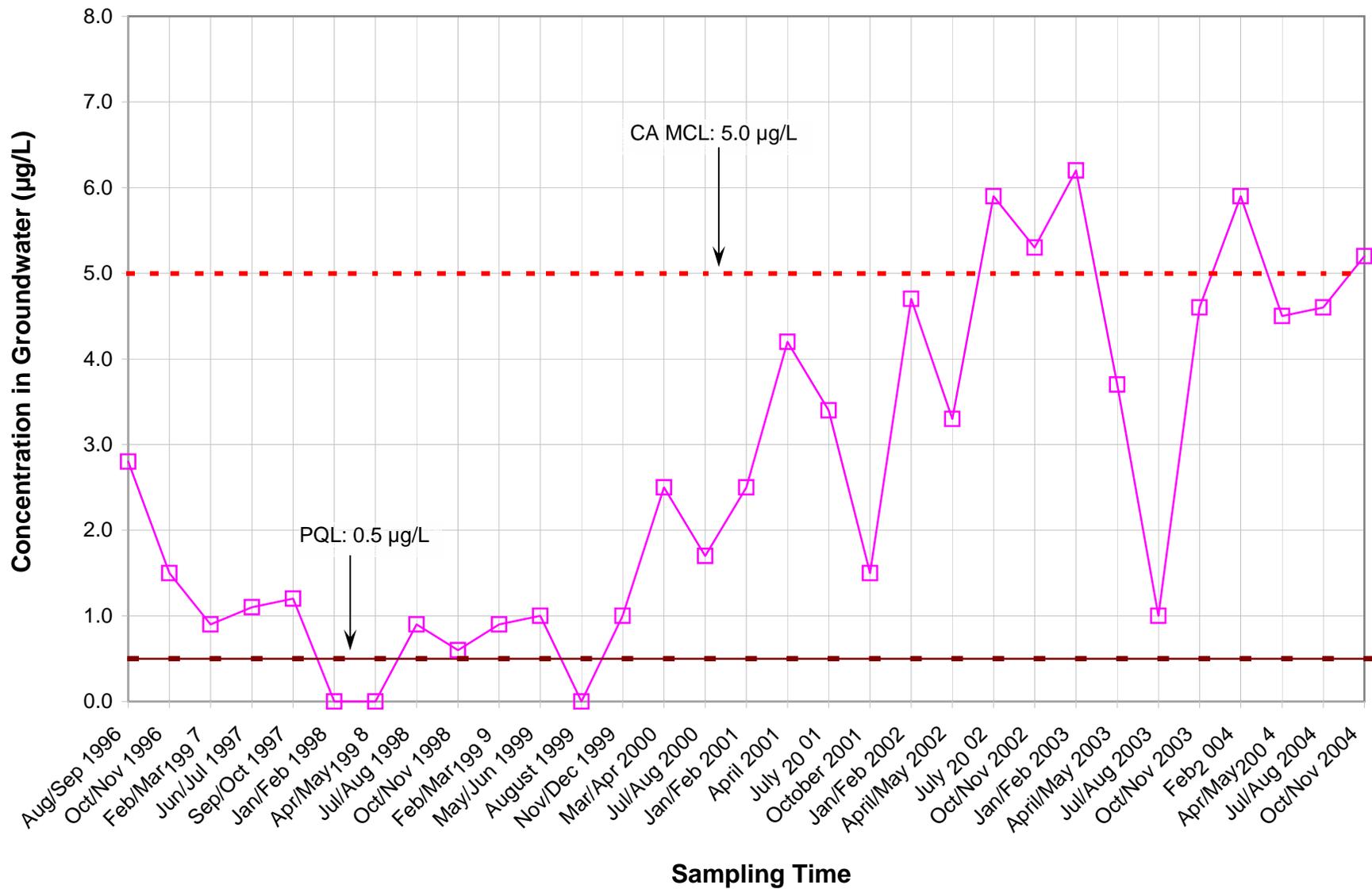
California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-40

**PERCHLORATE DETECTED AT MW-13
FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
Pasadena, California





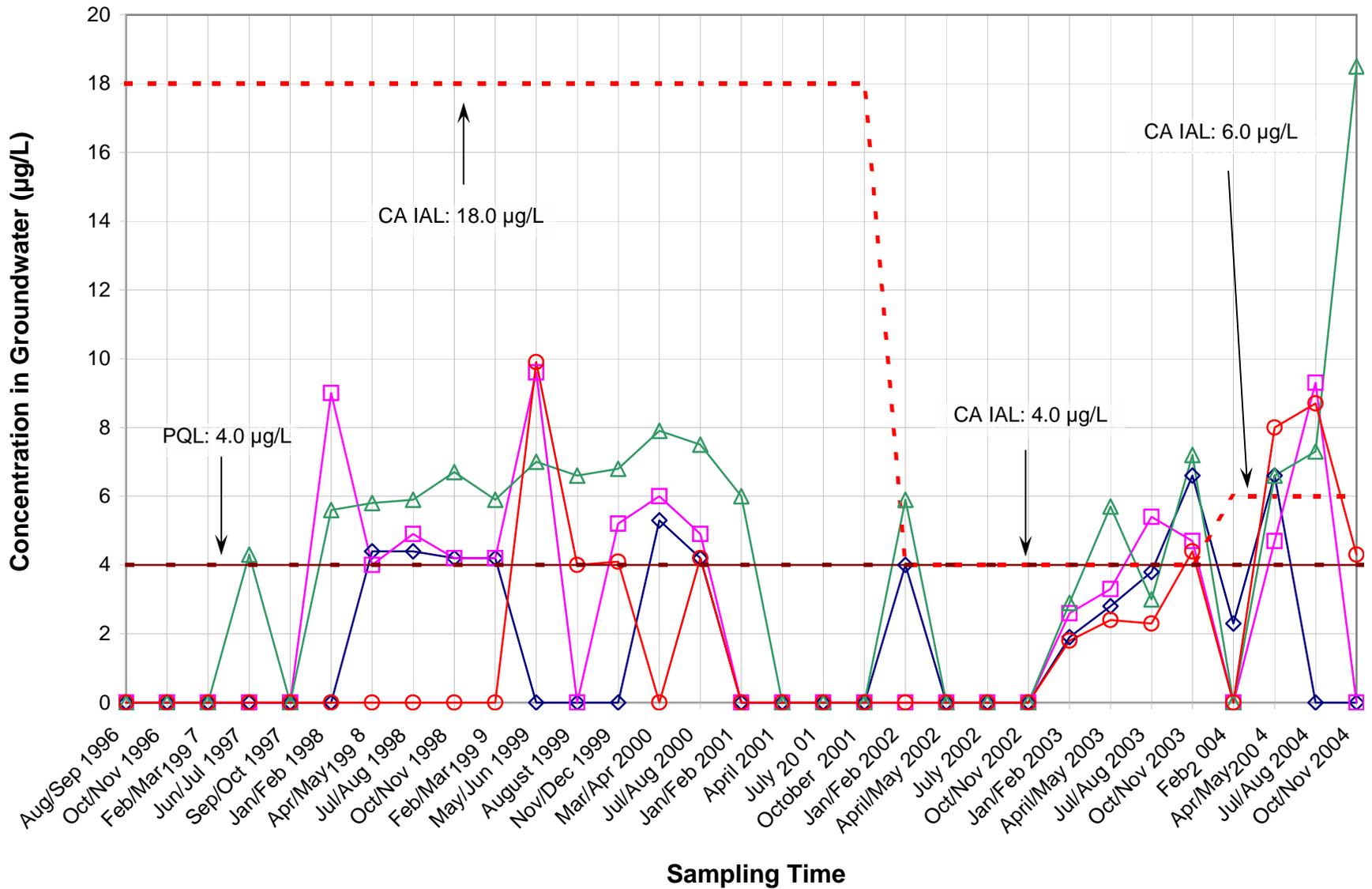
Legend

- Screen 2
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-41
TRICHLOROETHENE DETECTED AT MW-14
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



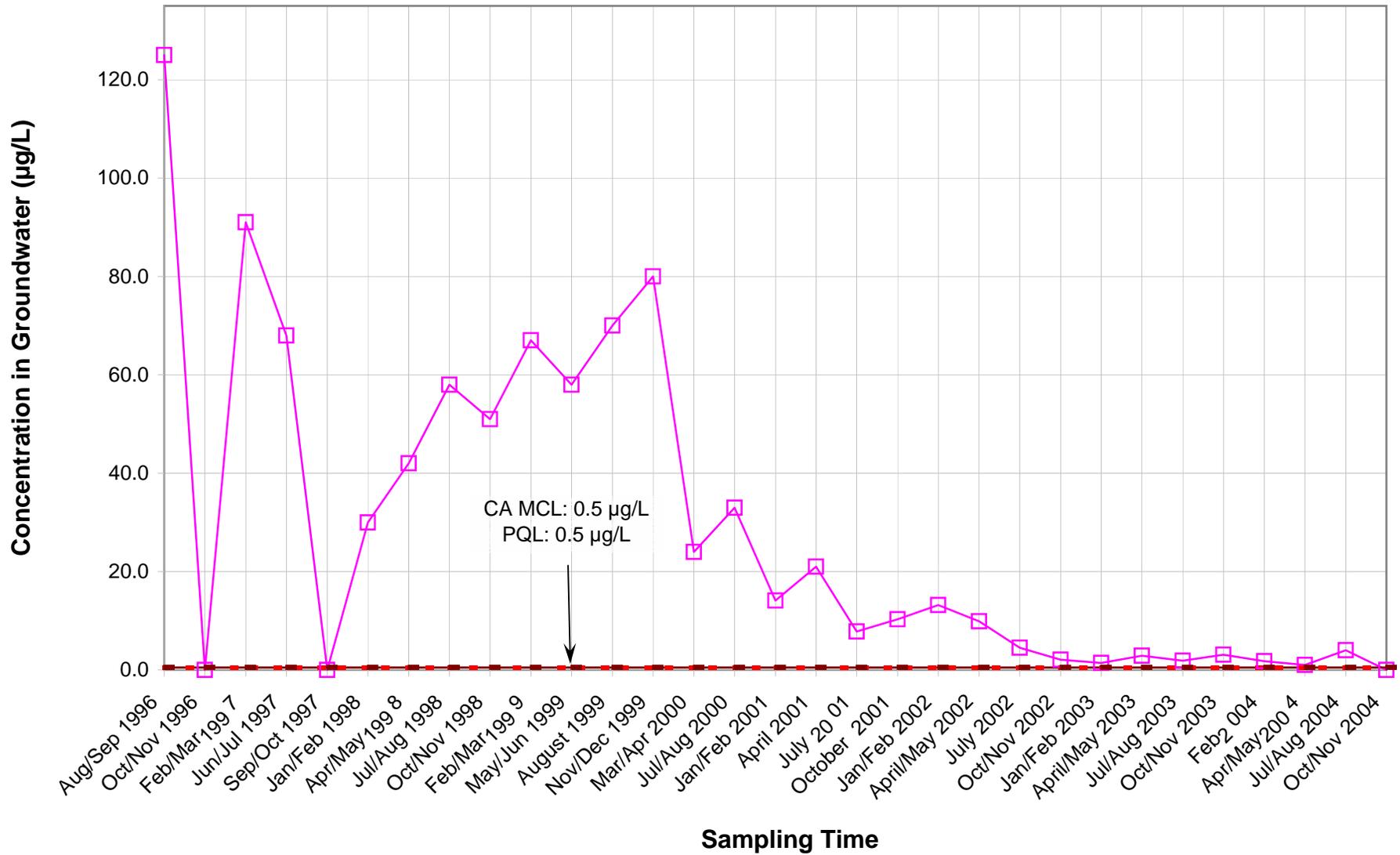
Legend

- Screen 1 (blue diamond)
- Screen 2 (magenta square)
- Screen 3 (green triangle)
- Screen 4 (red circle)
- PQL (brown dashed line)
- CA IAL (red dashed line)

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-42
PERCHLORATE DETECTED AT MW-14
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



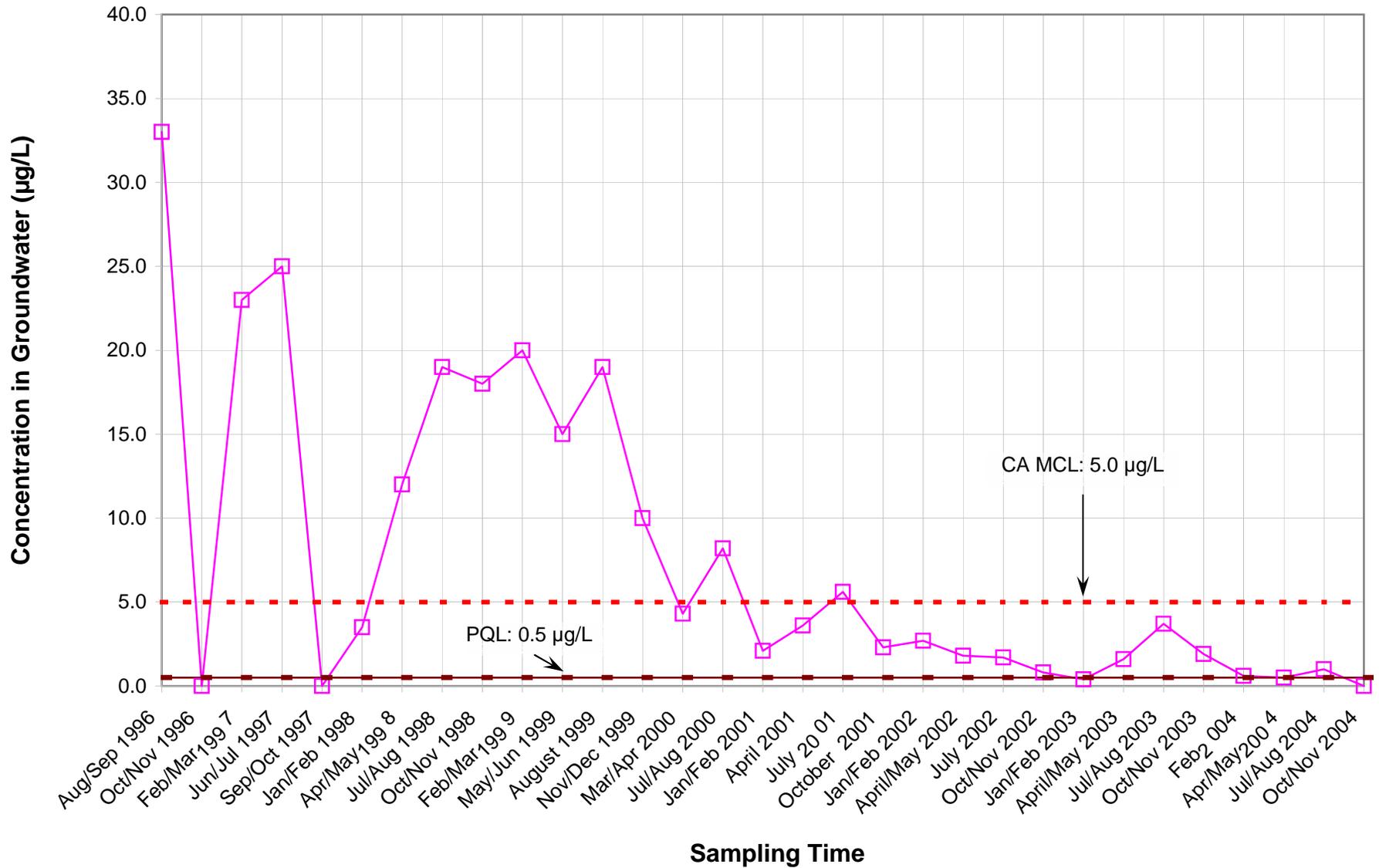
Legend

- Shallow Well
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-43
CARBON TETRACHLORIDE DETECTED AT MW-16
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

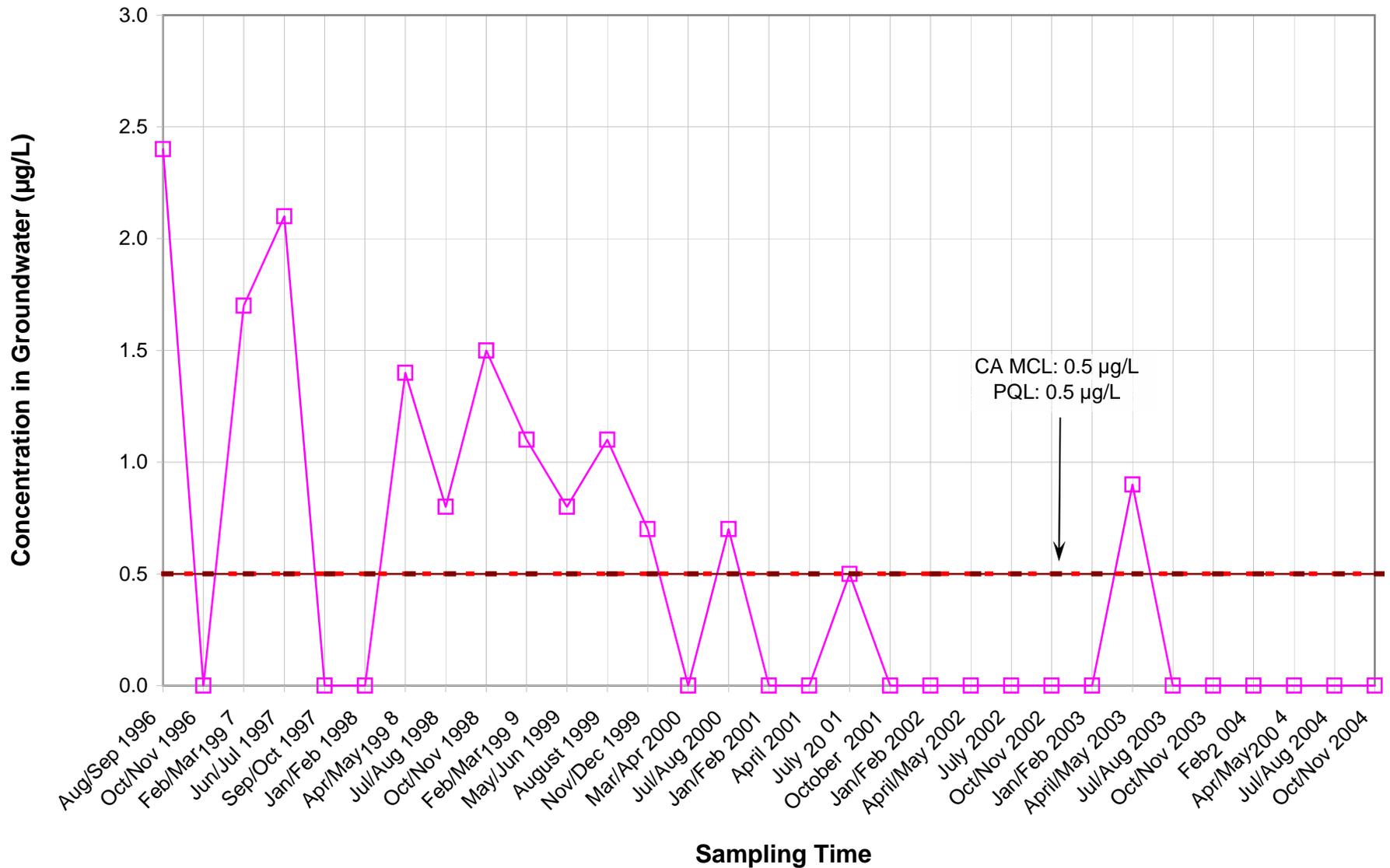
—□— Shallow Well
 —■— PQL
 - - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-44
TRICHLOROETHENE DETECTED AT MW-16
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California





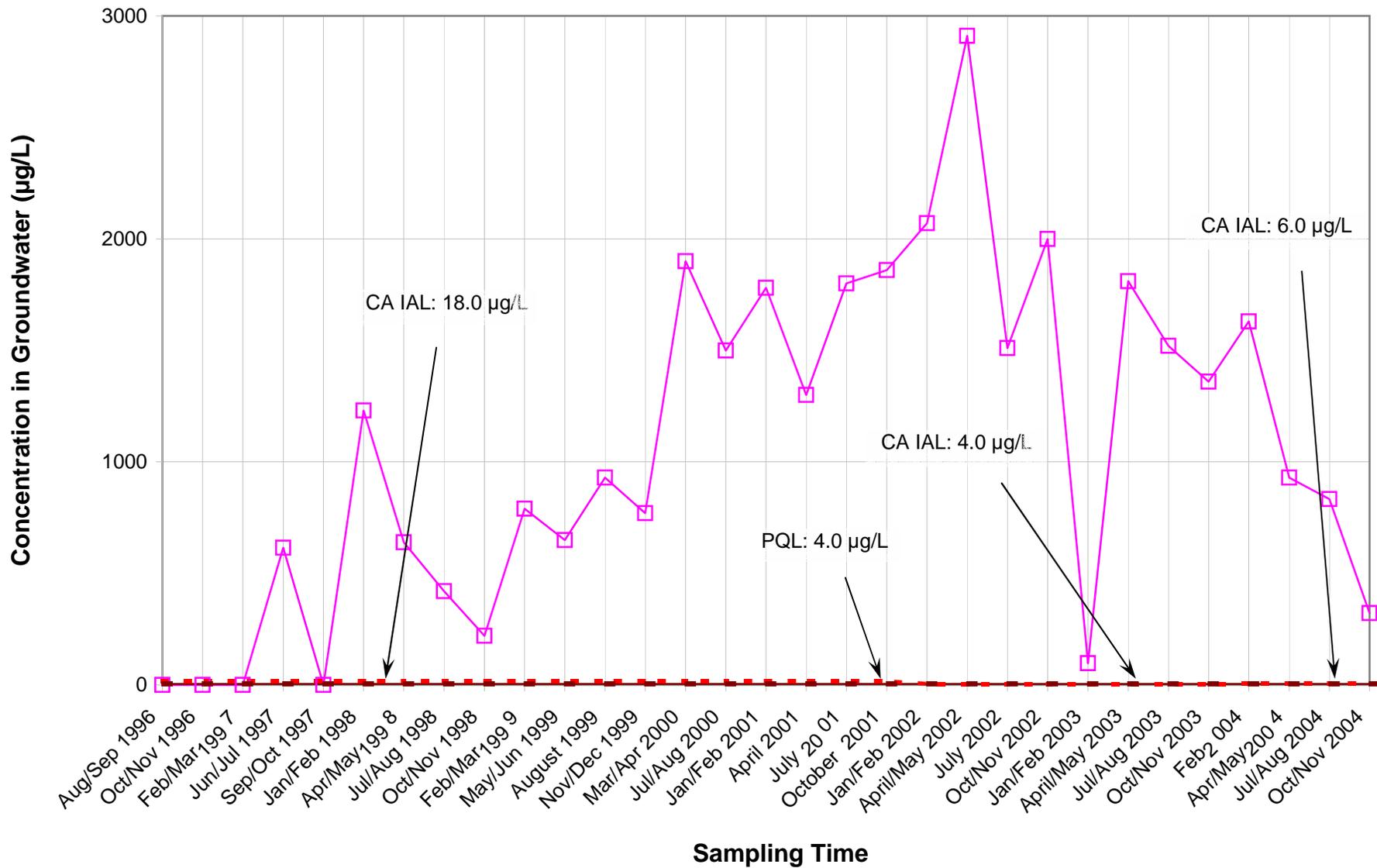
Legend

—□— Shallow Well
 —●— PQL
 - - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-45
1, 2-DCA DETECTED AT MW-16
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



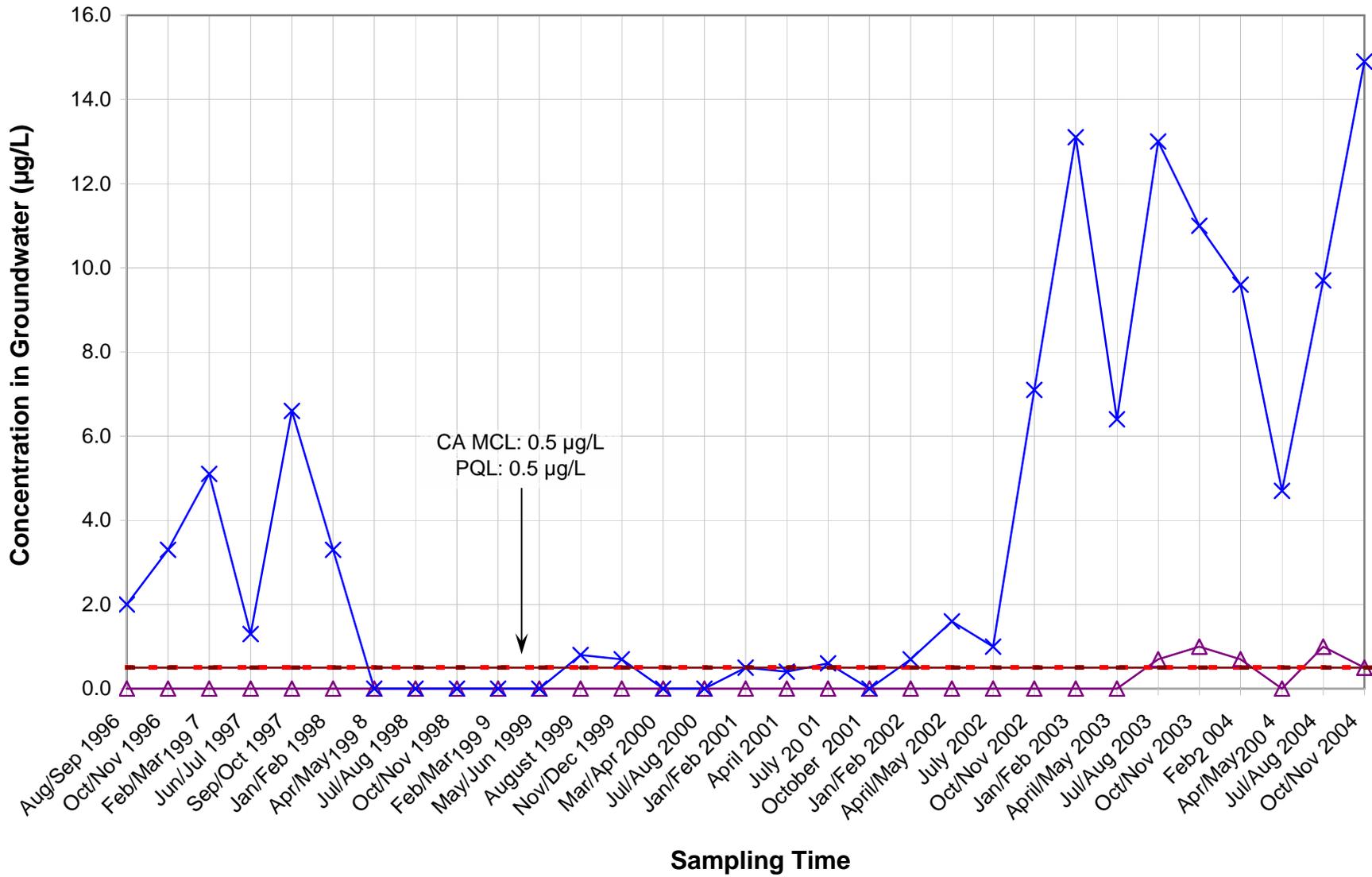
Legend

- Shallow Well
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-46
PERCHLORATE DETECTED AT MW-16
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



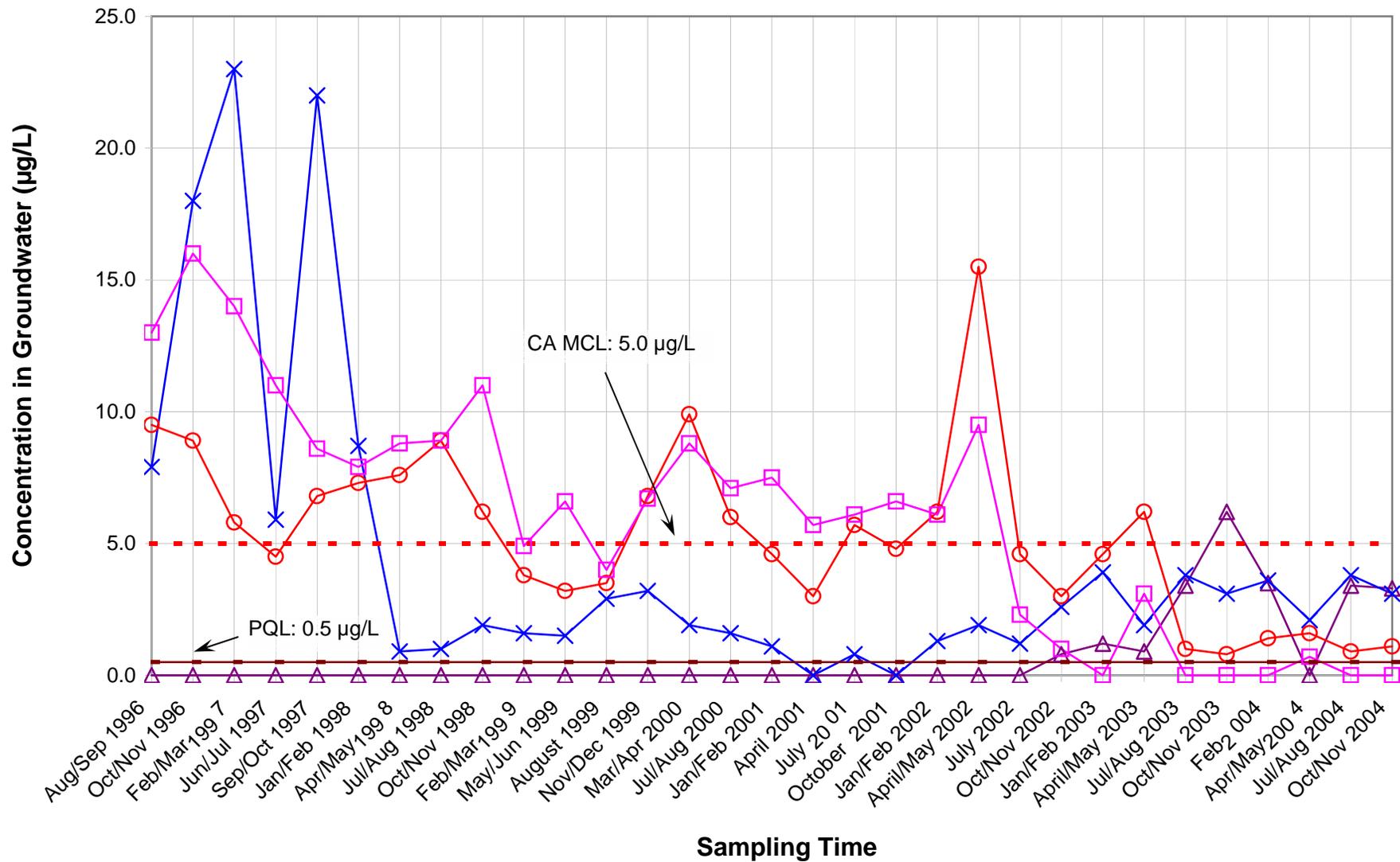
Legend

- △— Screen 2
- ×— Screen 3
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-47
CARBON TETRACHLORIDE DETECTED AT MW-17
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

▲ Screen 2
 ✕ Screen 3
 ○ Screen 4
 ◻ Screen 5
 — PQL
 - - - CA MCL

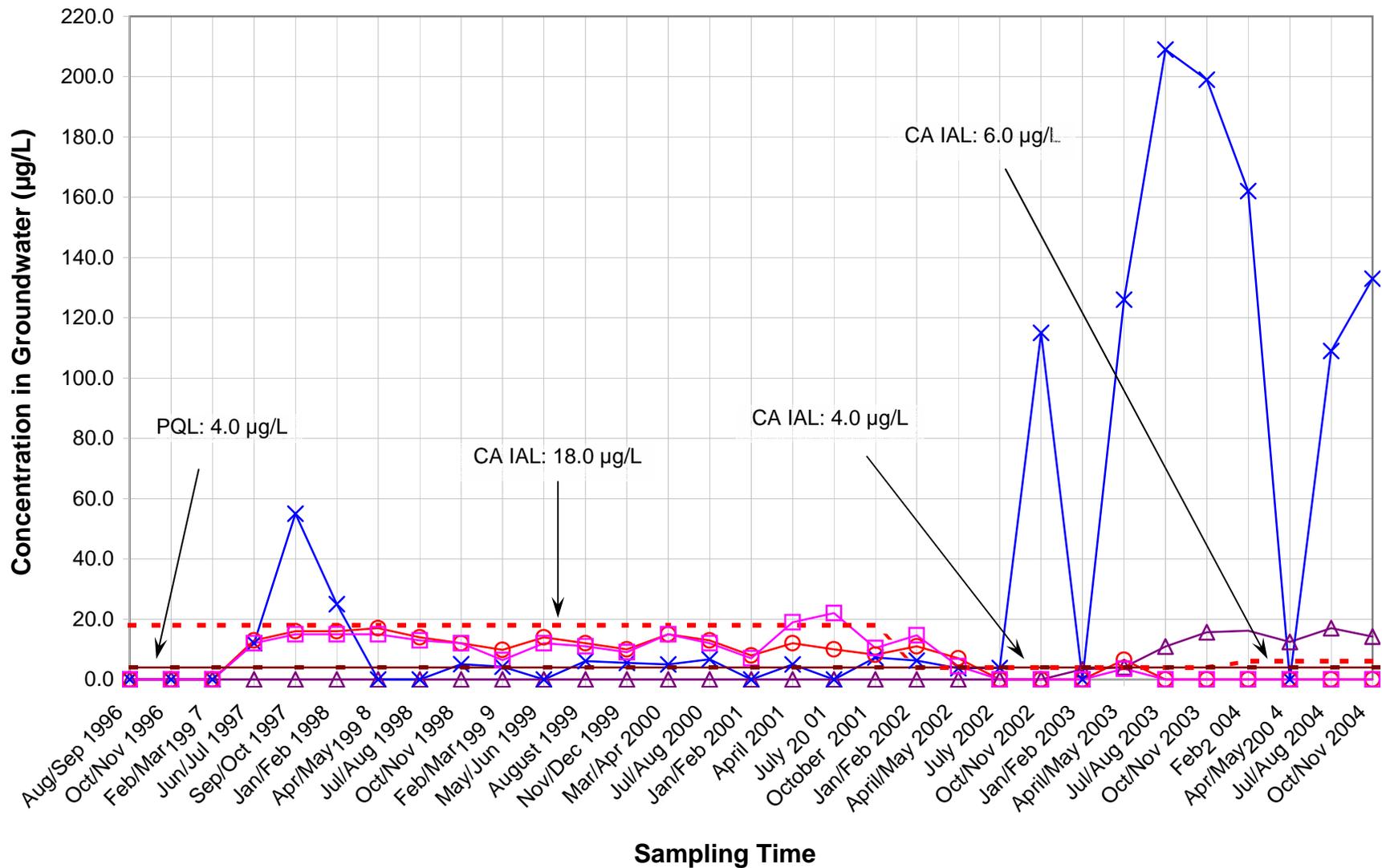
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-48

TRICHLOROETHENE DETECTED AT MW-17
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
Pasadena, California





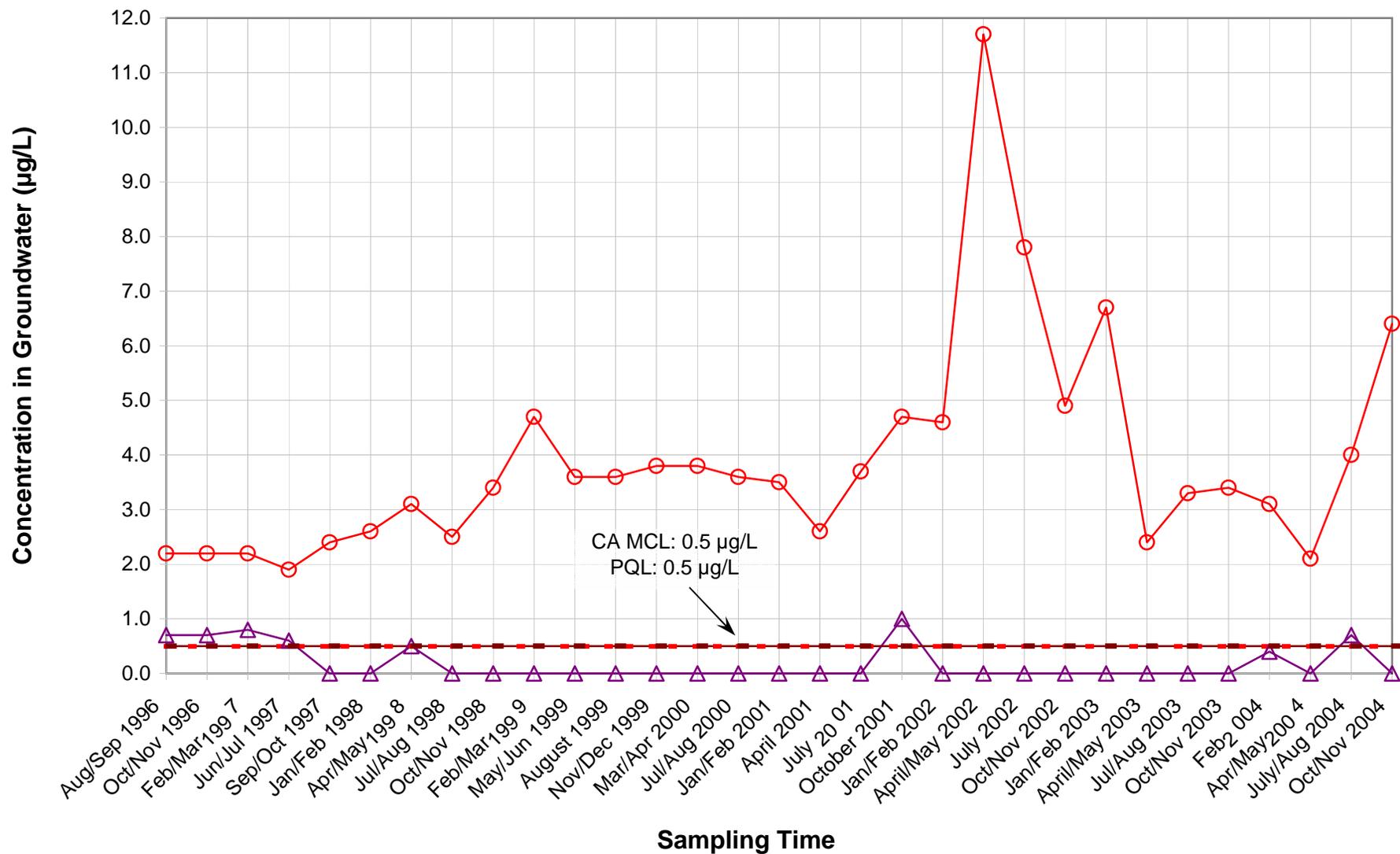
Legend

- △— Screen 2
- ×— Screen 3
- Screen 4
- Screen 5
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-49
PERCHLORATE DETECTED AT MW-17
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



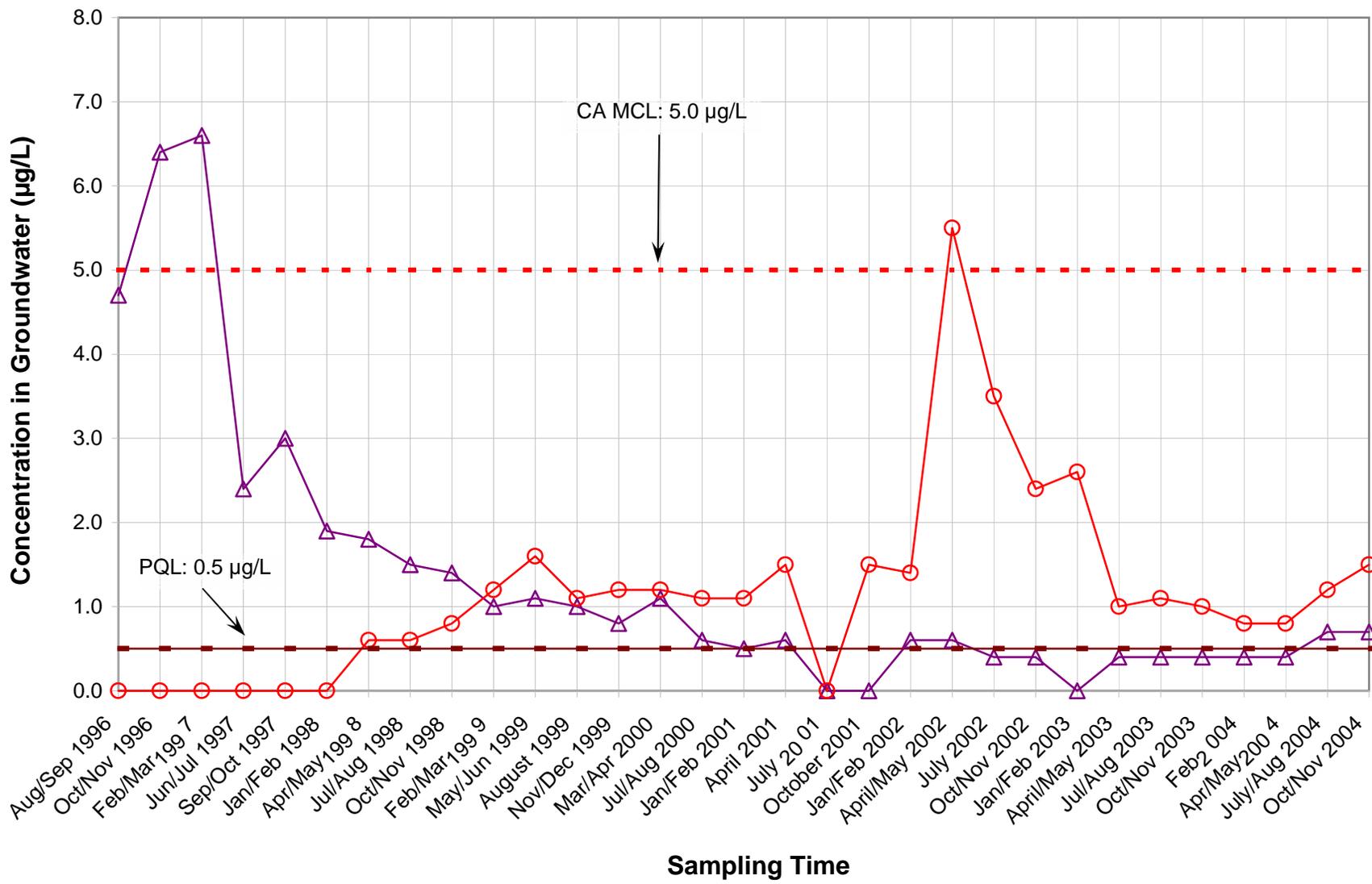
Legend

- △— Screen 3
- screen 4
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-50
CARBON TETRACHLORIDE DETECTED AT MW-18
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

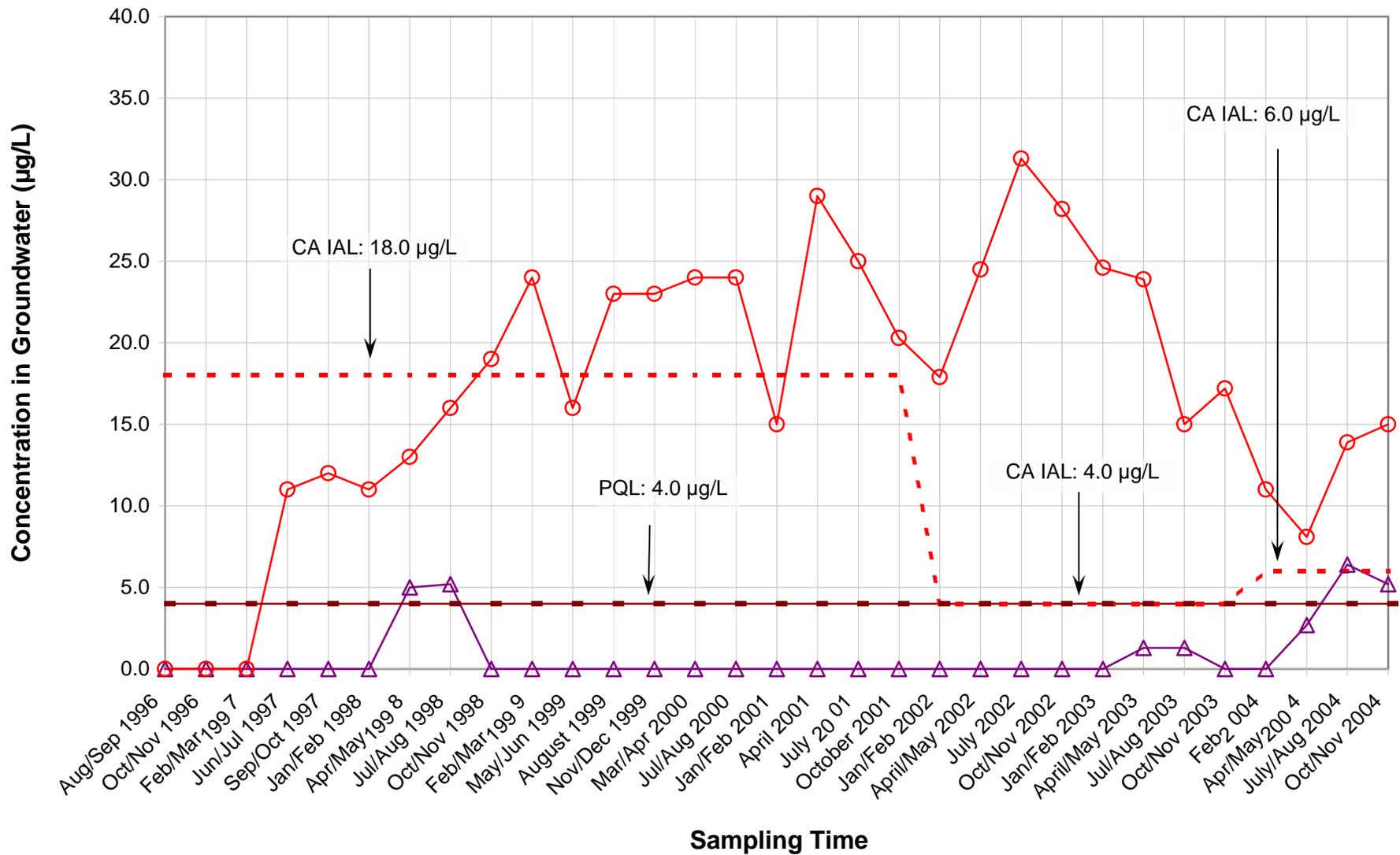
- ▲ Screen 3
- Screen 4
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-51
TRICHLOROETHENE DETECTED AT MW-18
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California





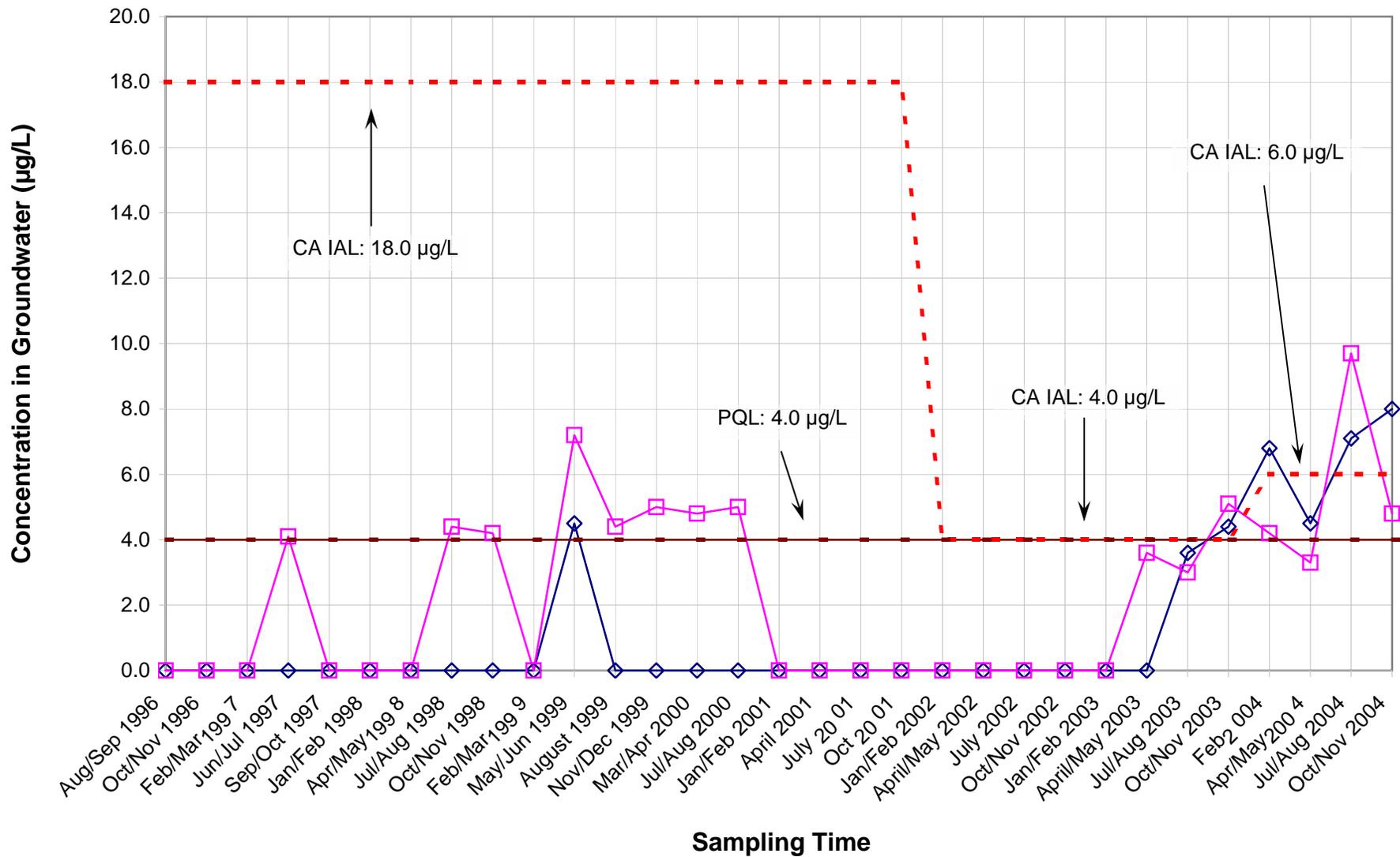
Legend

- ▲— Screen 3
- Screen 4
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-52
PERCHLORATE DETECTED AT MW-18
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

- ◆ Screen 2
- ◻ Screen 3
- PQL
- - - CA IAL

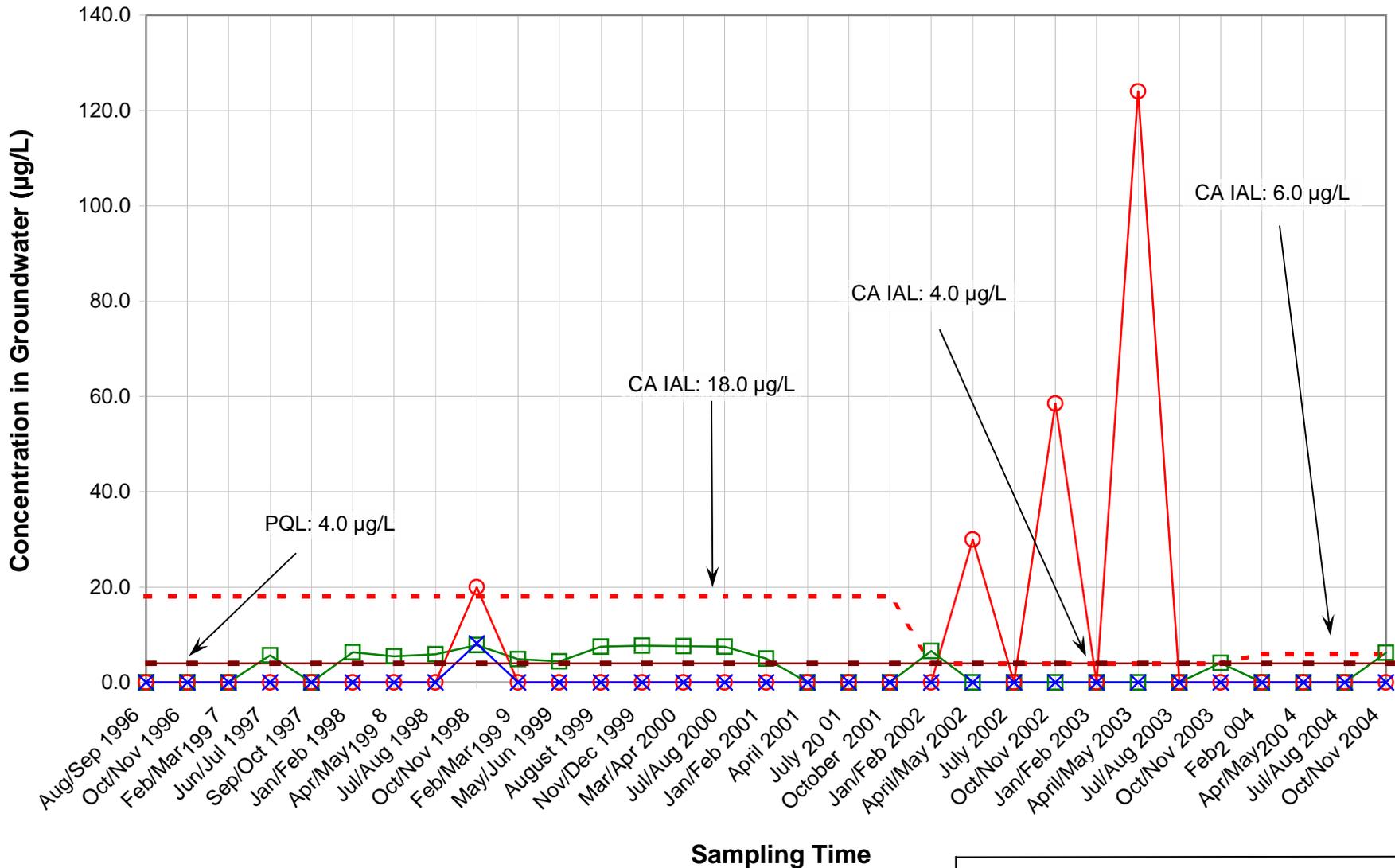
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-53

**PERCHLORATE DETECTED AT MW-19
 FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
 Pasadena, California





Legend

- Screen 1
- Screen 4
- ×— Screen 5
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.

Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

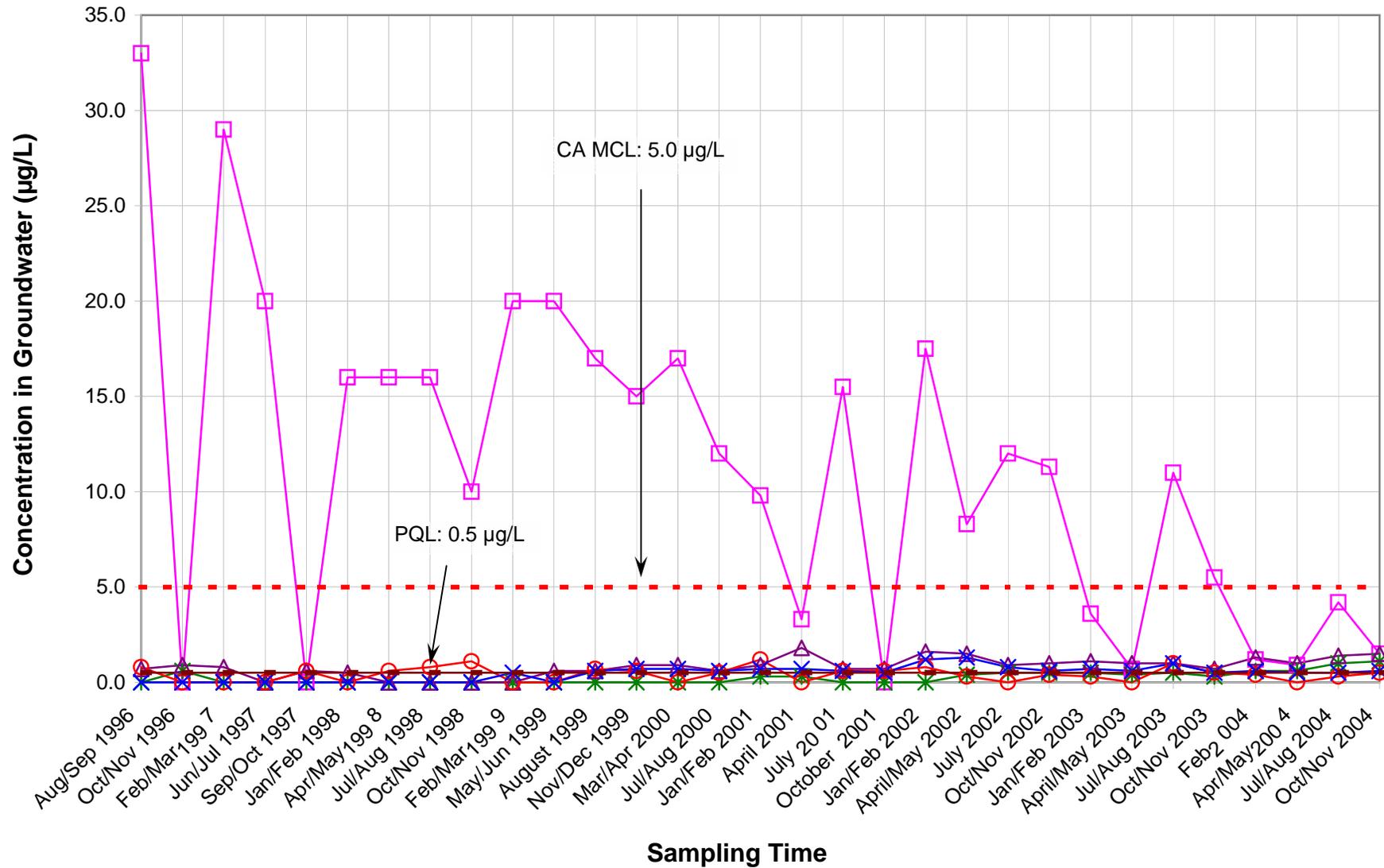
California Interim Action Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 µg/L to 6 µg/L.

FIGURE 3-54

**PERCHLORATE DETECTED AT MW-20
FROM AUG/SEP 1996 TO OCT/NOV 2004**

Jet Propulsion Laboratory
Pasadena, California





Legend

- Screen 1
- *— Screen 2
- △— Screen 3
- Screen 4
- ×— Screen 5
- PQL
- - - CA MCL

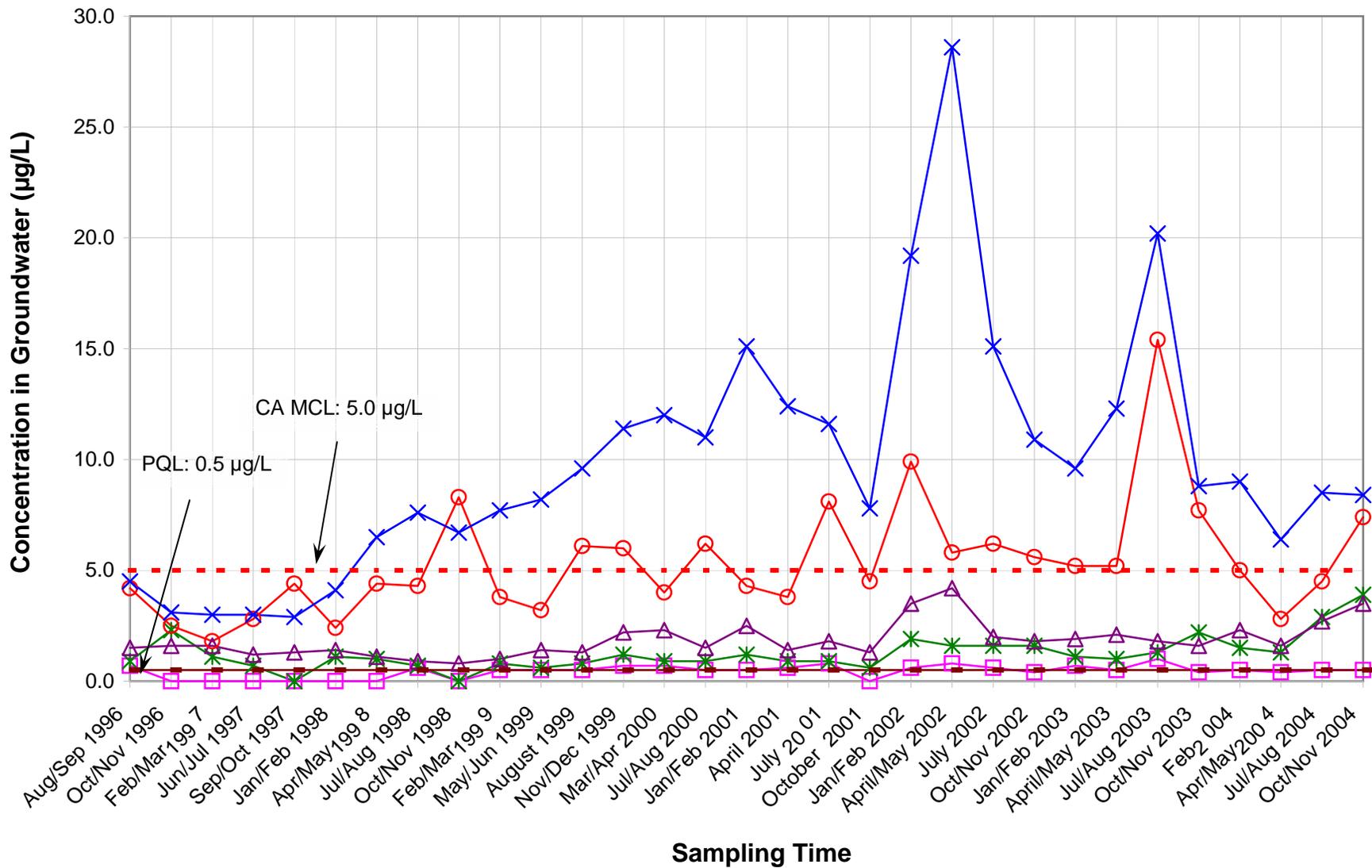
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-55

TRICHLOROETHENE DETECTED AT MW-21
 FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California





Legend

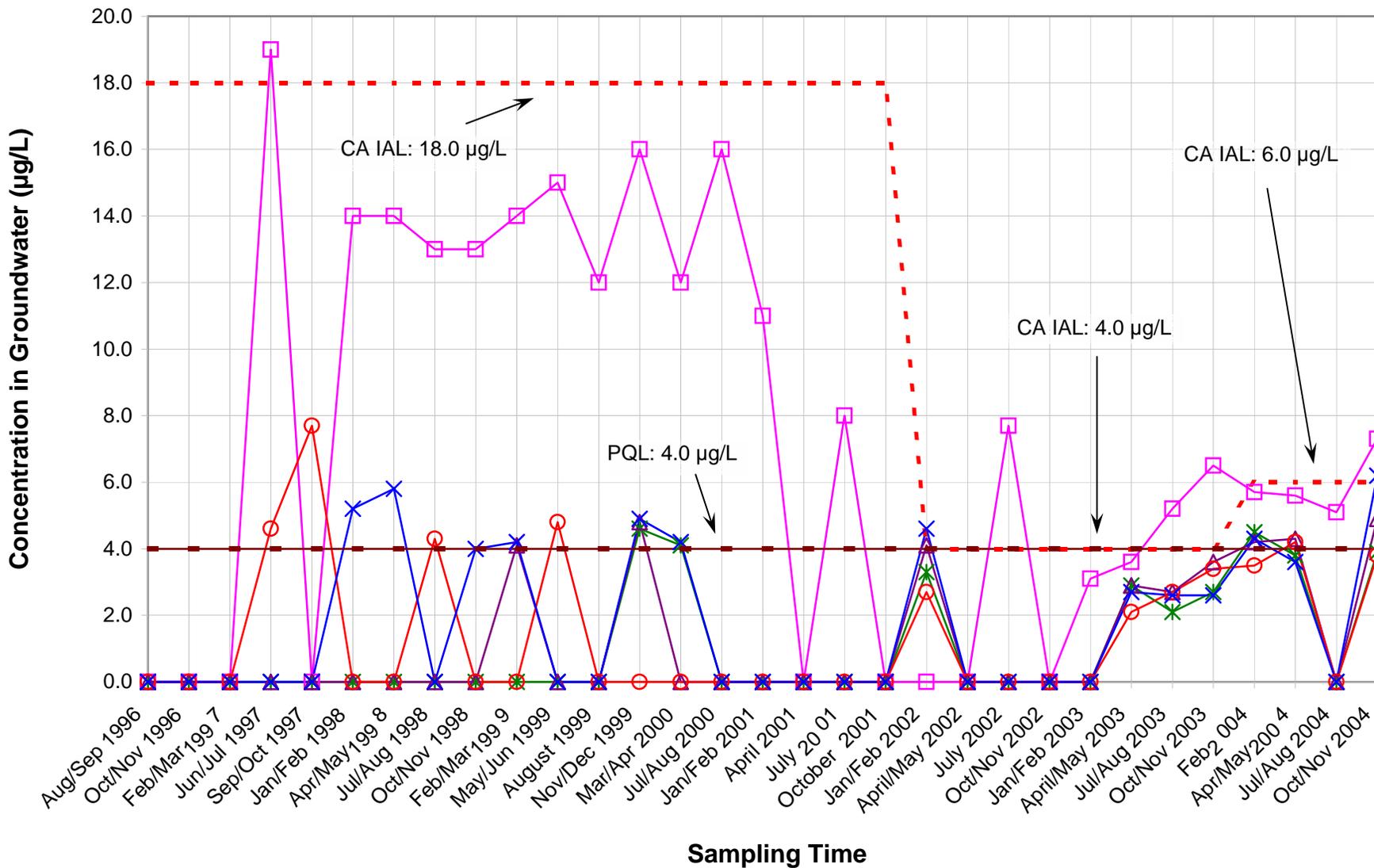
- Screen 1
- *— Screen 2
- △— Screen 3
- Screen 4
- ×— Screen 5
- PQL
- - - — CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-56
TETRACHLOROETHENE DETECTED AT MW-21
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California





Legend

- Screen 1
- *— Screen 2
- △— Screen 3
- Screen 4
- ×— Screen 5
- PQL
- - - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.

Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

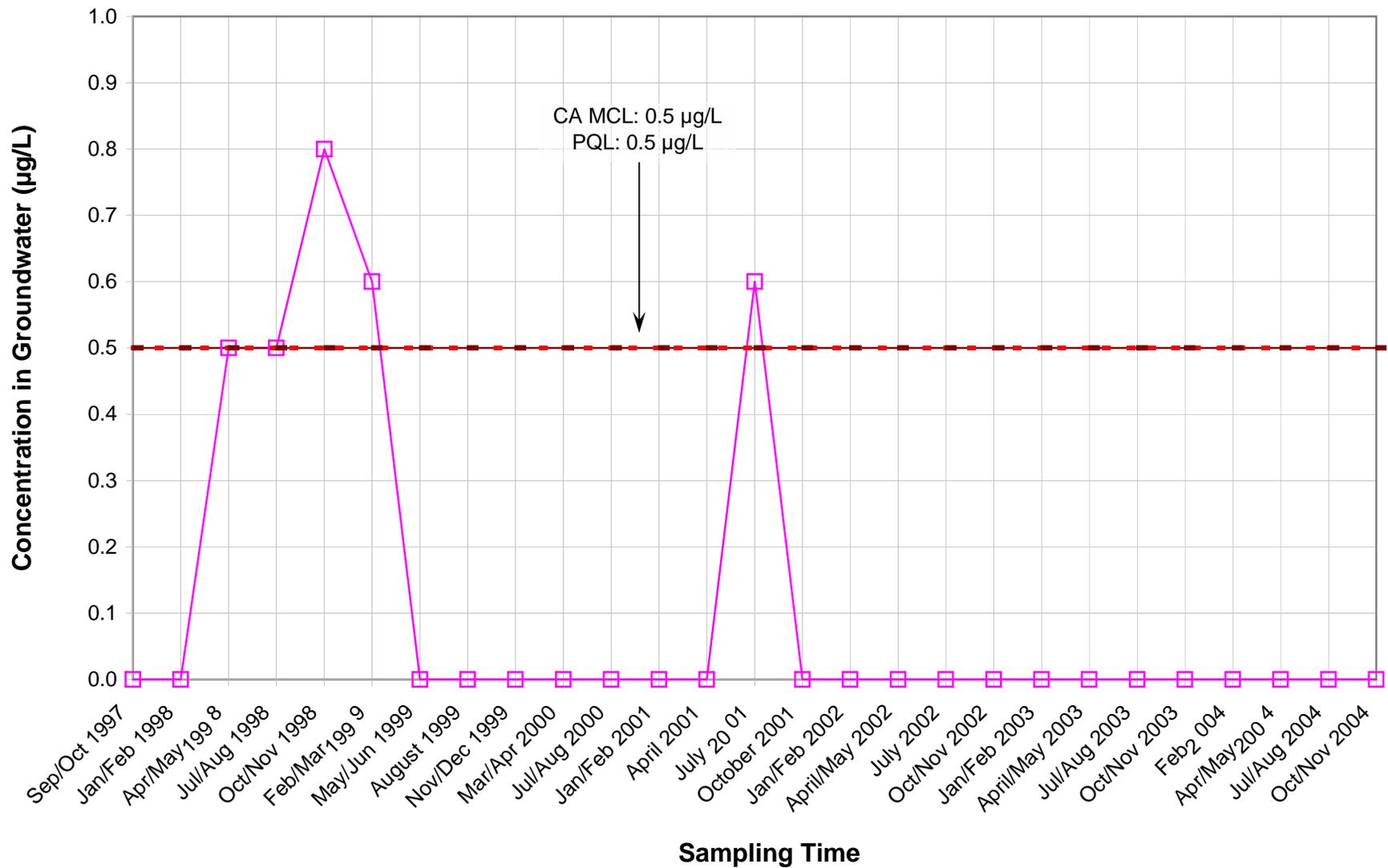
California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-57

PERCHLORATE DETECTED AT MW-21
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
Pasadena, California





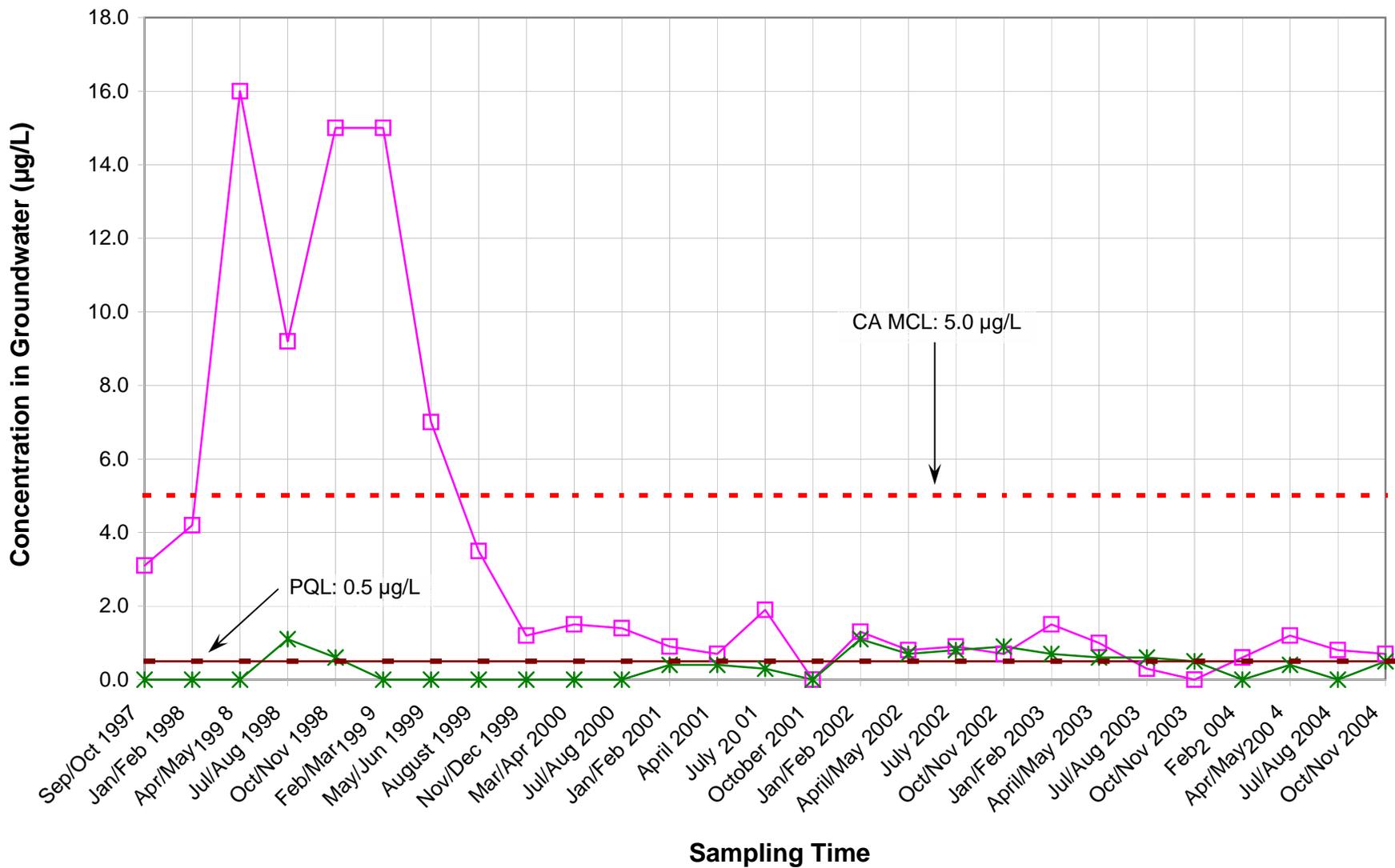
Legend

—□— Screen 1 — PQL - - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-58
CARBON TETRACHLORIDE DETECTED AT MW-23
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



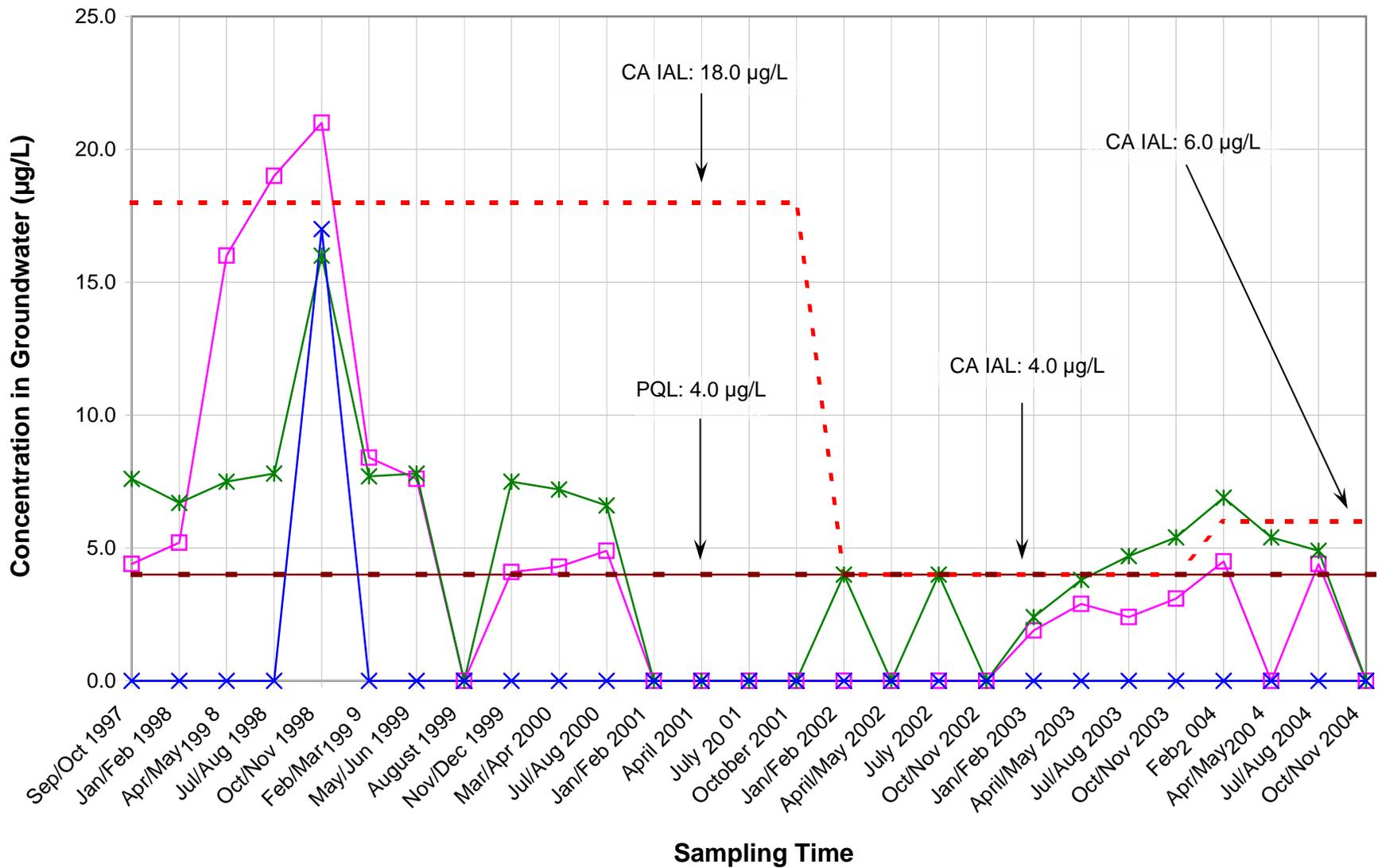
Legend

- Screen 1
- *— Screen 2
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-59
TRICHLOROETHENE DETECTED AT MW-23
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



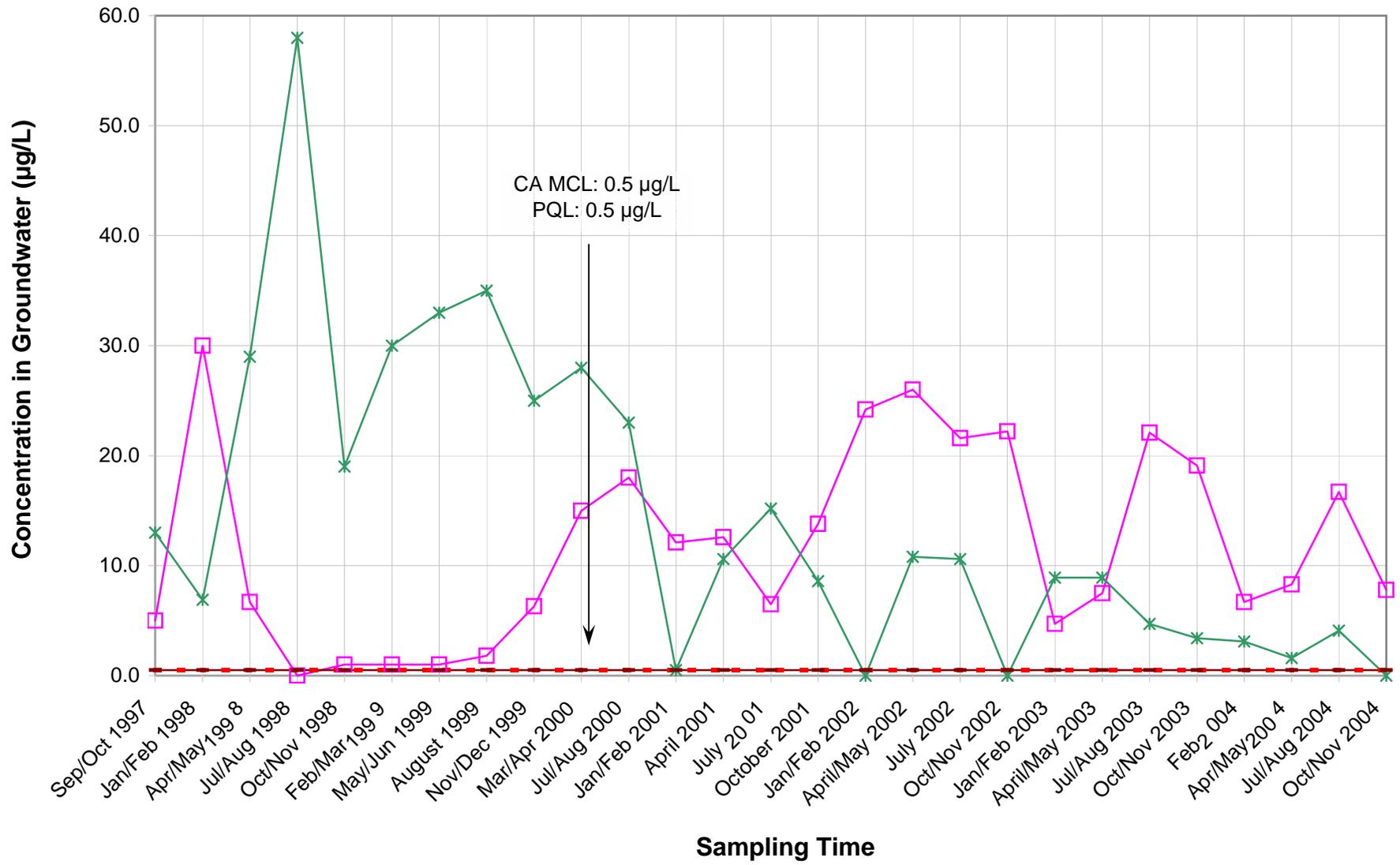
Legend

- Screen 1
- *— Screen 2
- x— Screen 5
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-60
PERCHLORATE DETECTED AT MW-23
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California

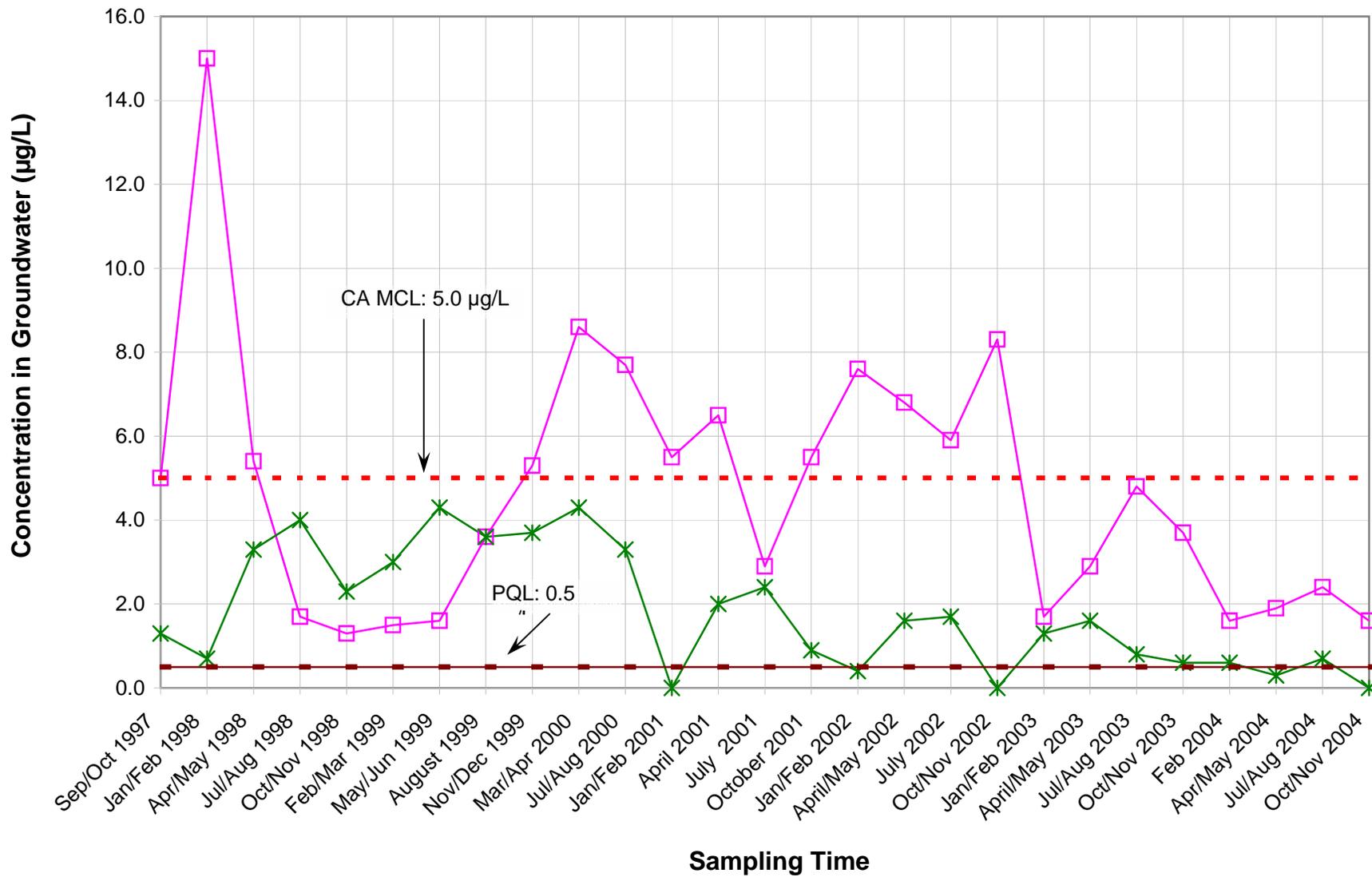


Legend

- Screen 1
- *— Screen 2
- PQL
- - - CA MCL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-61
CARBON TETRACHLORIDE DETECTED AT MW-24 FROM AUG/SEP 1996 TO OCT/NOV 2004
Jet Propulsion Laboratory Pasadena, California



Legend

- Screen 1
- *— Screen 2
- PQL
- - - CA MCL

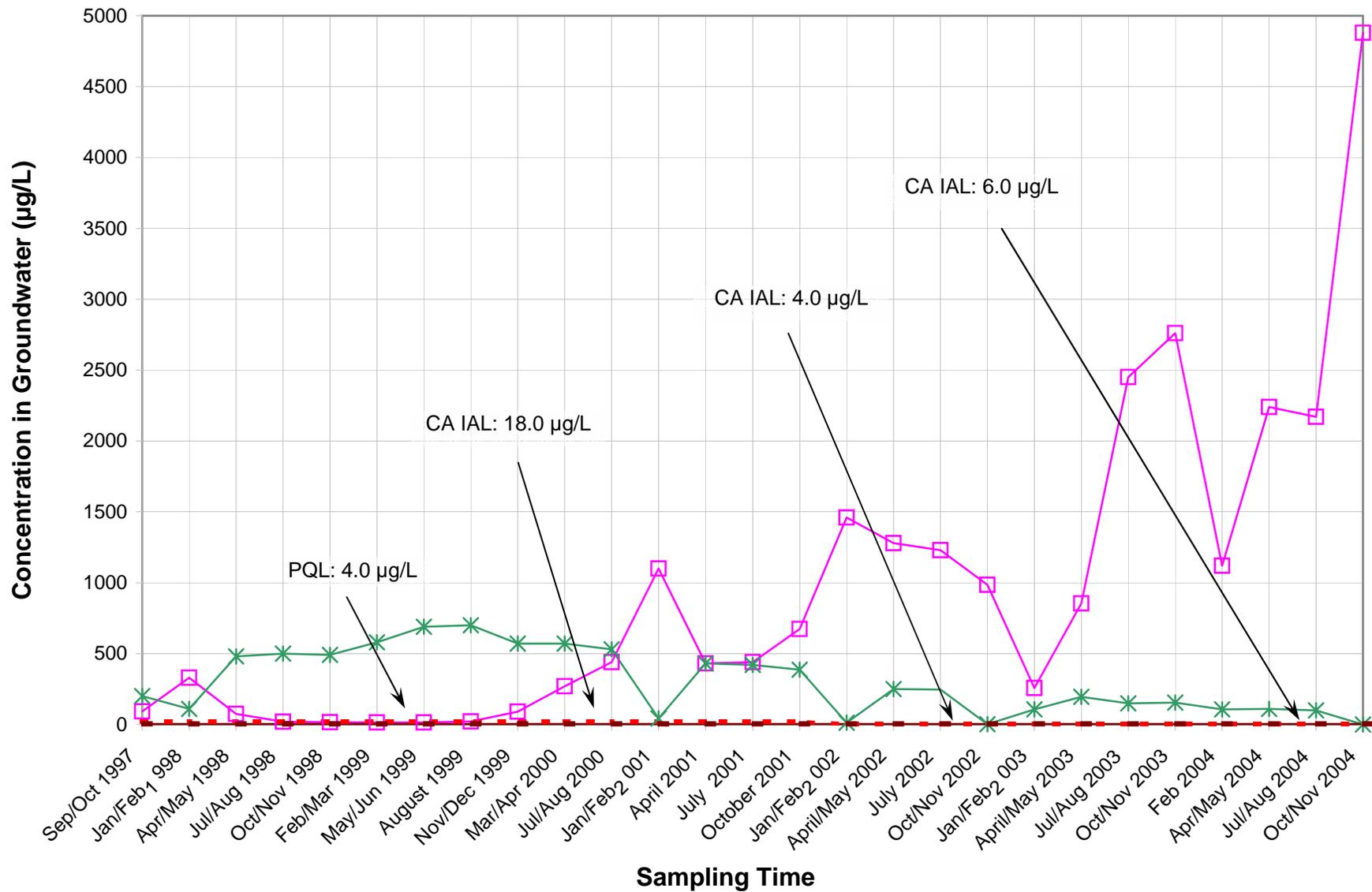
Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.

FIGURE 3-62

TRICHLOROETHENE DETECTED AT MW-24
 FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California





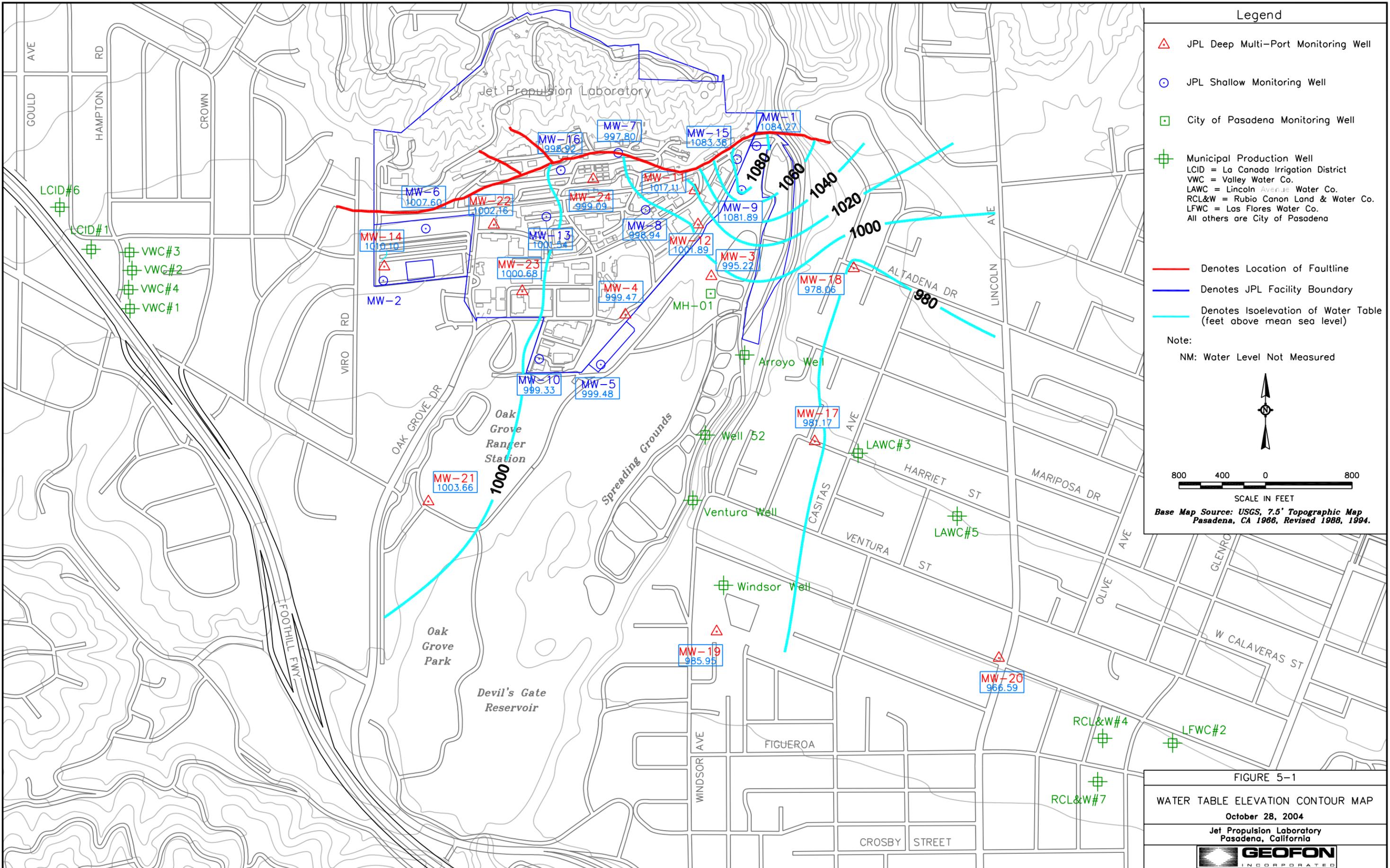
Legend

- Screen 1
- *— Screen 2
- PQL
- - - CA IAL

Data before Jan/Feb 2001 was obtained from Foster Wheeler Reports.
 Data before Jan/Feb 2003 was obtained from SOTA Environmental Reports.
 California Interim Aciton Level (CA IAL) was modified by the Dept. of Health Services in March 2004 from 4 ug/L to 6 ug/L.

FIGURE 3-63
PERCHLORATE DETECTED AT MW-24
FROM AUG/SEP 1996 TO OCT/NOV 2004

Jet Propulsion Laboratory
 Pasadena, California



Legend

- △ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
 LCID = La Canada Irrigation District
 VWC = Valley Water Co.
 LAWG = Lincoln Avenue Water Co.
 RCL&W = Rubio Canon Land & Water Co.
 LFWC = Las Flores Water Co.
 All others are City of Pasadena
- Denotes Location of Faultline
- Denotes JPL Facility Boundary
- Denotes Isoelevation of Water Table (feet above mean sea level)

Note:
 NM: Water Level Not Measured





SCALE IN FEET

Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

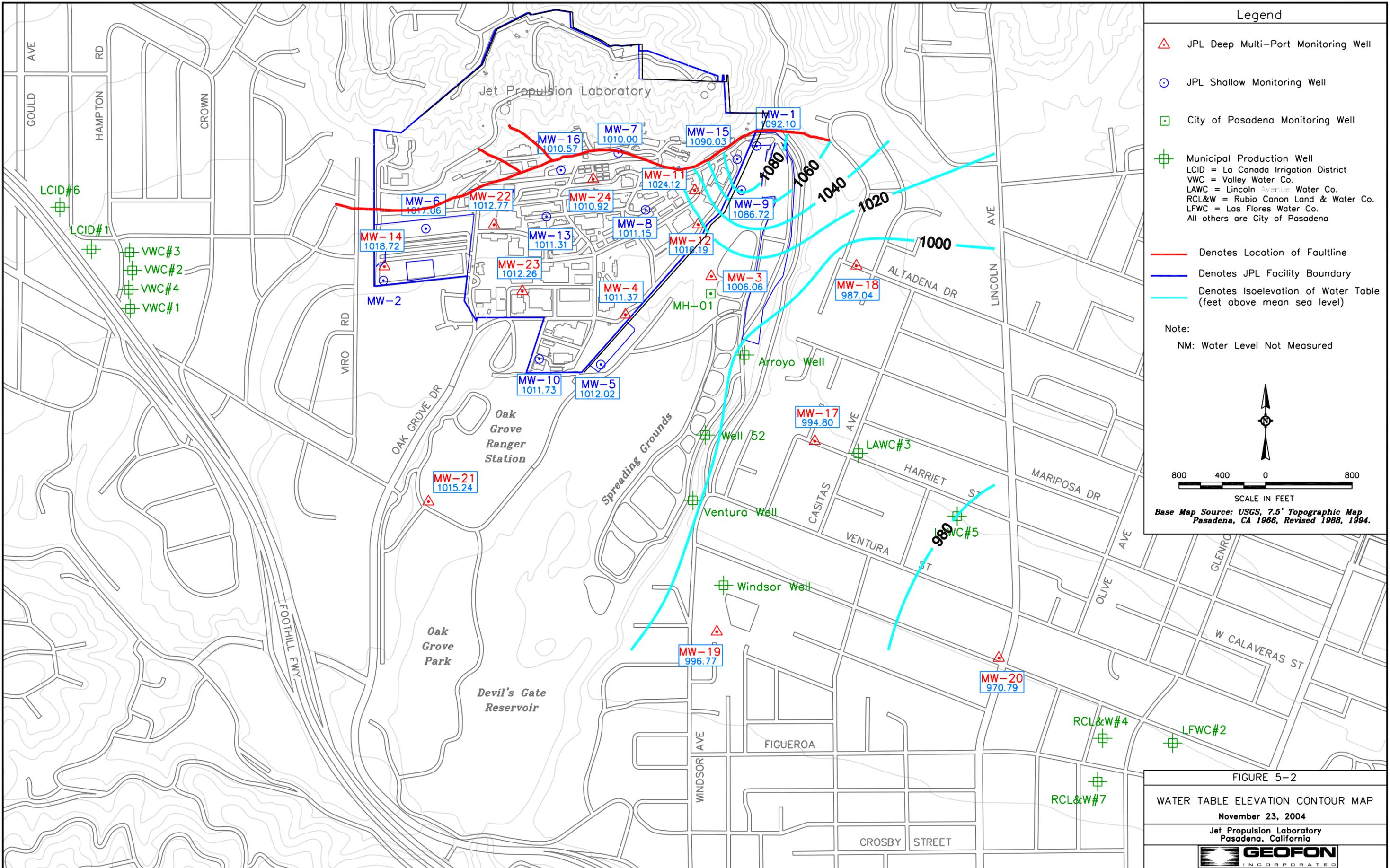
FIGURE 5-1

WATER TABLE ELEVATION CONTOUR MAP

October 28, 2004

Jet Propulsion Laboratory
Pasadena, California

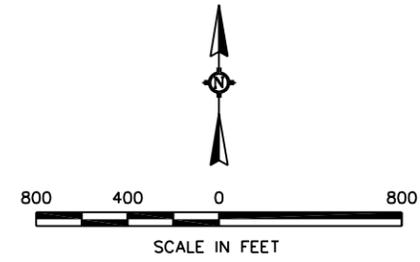




Legend

- ▲ JPL Deep Multi-Port Monitoring Well
- JPL Shallow Monitoring Well
- City of Pasadena Monitoring Well
- ⊕ Municipal Production Well
 LCID = La Canada Irrigation District
 VWC = Valley Water Co.
 LAWLC = Lincoln Avenue Water Co.
 RCL&W = Rubio Canon Land & Water Co.
 LFWC = Las Flores Water Co.
 All others are City of Pasadena
- Denotes Location of Faultline
- Denotes JPL Facility Boundary
- Denotes Iselevation of Water Table (feet above mean sea level)

Note:
 NM: Water Level Not Measured



Base Map Source: USGS, 7.5' Topographic Map Pasadena, CA 1966, Revised 1988, 1994.

FIGURE 5-2

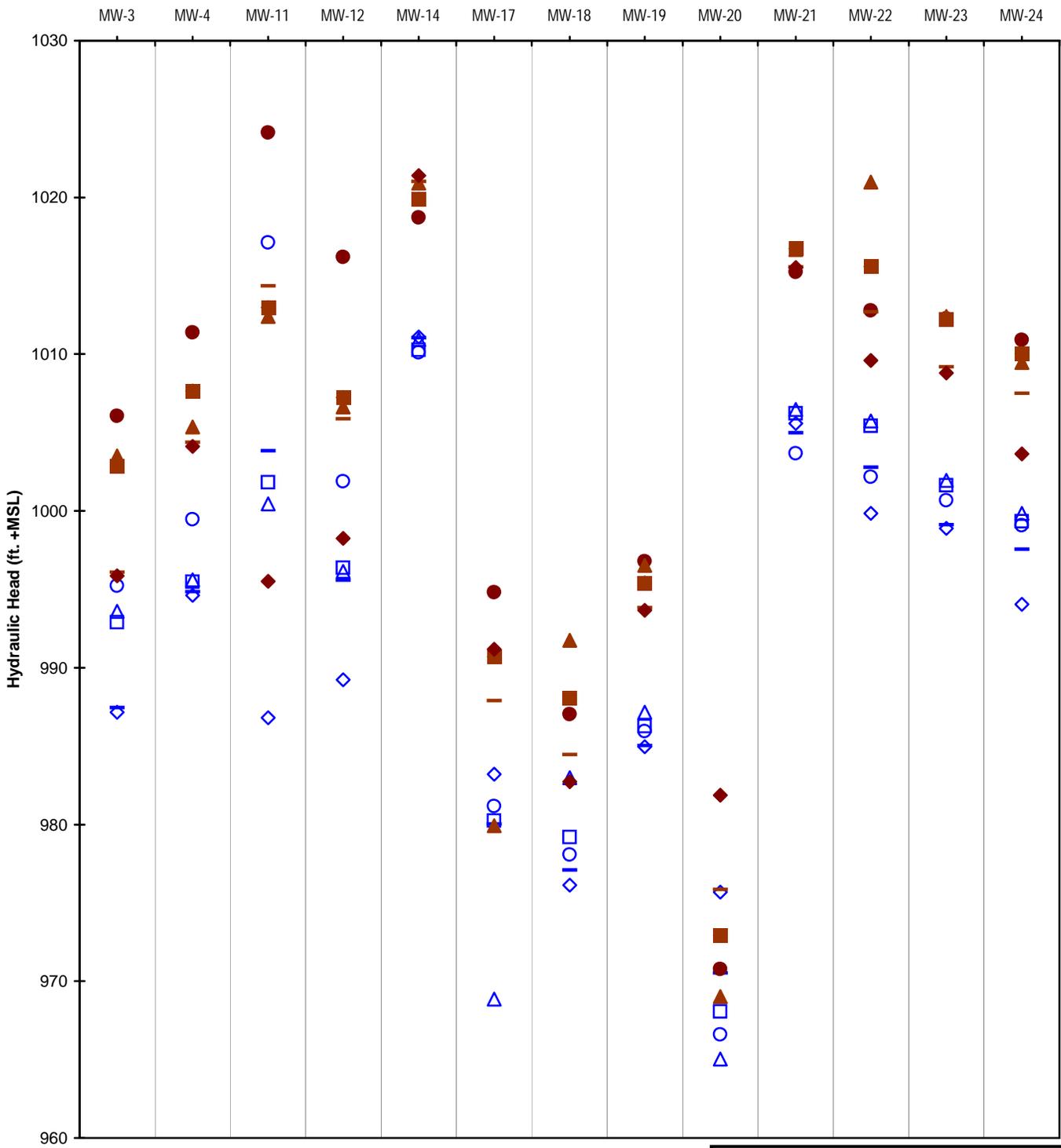
WATER TABLE ELEVATION CONTOUR MAP

November 23, 2004

Jet Propulsion Laboratory
 Pasadena, California



Monitoring Well



October 28, 2004				
○	□	△	—	◇
Screen 1	Screen 2	Screen 3	Screen 4	Screen 5
November 23, 2004				
●	■	▲	—	◆
Screen 1	Screen 2	Screen 3	Screen 4	Screen 5

FIGURE 5-3
Hydraulic Head Elevations From Deep Multi-Port Wells October-November 2004
Jet Propulsion Laboratory Pasadena, California