LFR an ARCADIS company

October 8, 2009 028-07838-12

Ms. Alyx Karpowicz
California Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street
Suite 1400
Oakland, California 94612

Subject: **Response to Comments – Remedial Action Plan**
SFPP, L.P. San Jose Terminal, 2150 Kruse Drive, San Jose, California

Dear Ms. Karpowicz:

On behalf of Kinder Morgan Energy Partners, L.P. (KMEP), LFR Inc. (LFR) has prepared this letter summarizing our responses to your comments on the "Remedial Action Plan" report prepared by LFR and dated July 27, 2007 (the July 27 RAP). You presented comments on the subject report in an email attachment to LFR dated June 8, 2009, and requested an addendum to the July 27 RAP; this letter constitutes the requested addendum. Your comments are re-iterated below, and our responses to your comments are presented following each comment.

Comment 1

"Section 3.3 - Mean sea level and below ground surface appear to be used interchangeably, which datum is being used, and which reference do you want to use?"

Comment 1 Response

As presented in Section 4.0 of the July 27 RAP, the reference datum for water levels in Coyote Creek is elevation in feet, mean sea level (ft msl). Section 3.3 erroneously presented the water levels in Coyote Creek recorded in October 2006 and April 2008 as being referenced to feet below ground surface (bgs).

Comment 2

"Section 4.2, October 2006 Event - First Bullet: If MW-22 had the only pressure transducer that was operating properly, is the hydrogeologic data collected from the other 5 monitored wells accurate, and are your conclusions based off this data accurate? Were the pressure transducers fixed before the April 2007 event?"

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Comment 2 Response

As shown on Figure 14 of the July 27 RAP, water levels were recorded by each of the deployed pressure transducers during the October 2006 water level monitoring event. While the graphs of water levels at individual pressure transducer locations exhibit significant diurnal fluctuations due to daily barometric pressure changes, the relative magnitude of water level elevations in site monitoring wells and Coyote Creek are easily discernable in the data set recorded in October 2006. Different pressure transducers that were properly operating to correct barometric pressure fluctuations were used during the April 2007 monitoring event, and data collected during the two monitoring events are generally comparable.

Since the relationship of water level elevations between Coyote Creek and the site monitoring wells included in the evaluation is not masked by the daily barometric fluctuations, the data recorded during the October 2006 monitoring event are still useful for assessing the gradient between the site monitoring wells and Coyote Creek. Therefore, the conclusions based on these data that groundwater in the vicinity of Coyote Creek may be discharging to Coyote Creek are accurate and are consistent with the April 2007 data set and previous hydrogeological studies of the relationship between groundwater and water within Coyote Creek.

Comment 3

"Section 4.2, October 2006 Event - Fourth Bullet: The MTBE concentration for Fourth Quarter 2006 actually lists the MTBE concentration for first quarter 2007 in MW-10."

Comment 3 Response

Noted. The fourth bullet of Section 4.2 of the July 27 RAP erroneously indicates that the MTBE concentration during the fourth quarter of 2006 was 21 micrograms per liter (μg/l). As you state, this datum is actually the MTBE concentration reported during the first quarter of 2007; the MTBE concentration during the fourth quarter of 2006 was 26 μg/l.

Comment 4

"Section 4.3 - Conclusions state that MTBE concentrations are decreasing based on data from October 2006 and April 2007 monitoring events, but concentrations are lower in April 2007 after rain dilution- quarterly monitoring that followed in the fourth quarter of 2007 shows similar concentrations (except for MW-33). Also, would you really expect to see MTBE concentrations in the surface water of a fast moving creek?? I don't think the conclusion can be made that MNA is "effectively preventing the migration of detectable mass of MTBE from groundwater to surface water". Concentrations of MTBE are detected in the MWs along the creek bank, so the MTBE plume is obviously moving in that direction, as the isoconcentration maps show."

Comment 4 Response

Based on MTBE concentration data collected since completion of the July 27 RAP, and as shown on the attached time versus concentration graphs, MTBE concentrations in wells referenced as part of the hydrogeological evaluation (MW-9, MW-10, MW-33), and other site wells located adjacent to Coyote Creek (MW-5, MW-7, and MW-26) have exhibited decreasing trends (MW-5, MW-7, MW-10, MW-26, MW-33), or stable trends at very low concentrations (MW-9). These data strongly suggest natural attenuation of petroleum hydrocarbons and fuel oxygenates is occurring in groundwater beneath the site. These data, along with the lack of detections of MTBE at Coyote Creek gauging stations supports the contention that natural attenuation mechanisms are in fact preventing migration of detectable mass of MTBE from groundwater to surface water.

As you are aware, there are several examples of surface water bodies, including creek and tidal channels that exhibit detectable concentrations of MTBE from groundwater discharges containing MTBE in the Bay Area. In addition, while you query whether or not MTBE would be expected to be detected in a flowing creek, the implication of this question is that dilution would preclude detection in the case where very low concentrations of MTBE are discharging to surface water from groundwater. The EPA defines natural attenuation as the following: “These in-situ processes [natural attenuation] include biodegradation; dispersion; dilution; sorption; volatilization; radioactive decay; and chemical or biological stabilization, transformation, or destruction of contaminants" (EPA, OSWER Directive 9200.4-17P). This definition is consistent with the conceptual model of potential discharges of very low concentrations of MTBE from groundwater into a flowing stream. In this case, dilution, and very likely additional biodegradation processes that occur within the streambed sediments, is contributing to attenuation of MTBE to concentrations that are below laboratory reporting limits.

Comment 5

“Section 5.2.4 - Add TBA to graphs to help show correlation between the MTBE degradation and the increasing concentrations of TBA.”

Comment 5 Response

Graphs showing petroleum hydrocarbon and fuel oxygenate concentrations versus time have been revised to include TBA data and are included as Attachment 1 to this letter. Future groundwater monitoring reports will include these data.

Comment 6

"Section 6.2 and 7.2 - These sections will both need to be revised to reflect current ESLs/MCLs."

Comment 6 Response

Tables originally presented in Sections 6.2 and 7.2 of the July 27 RAP providing comparisons of maximum detected concentrations of petroleum hydrocarbons and fuel oxygenates to relevant environmental screening levels (ESLs) and/or maximum contaminant levels (MCLs) have been revised to reflect current ESLs and MCLs, and are included as Attachment 2 to this letter.

Comment 7

"Have naphthalene and methylnaphthalene ever been tested for? These are common constituents of diesel fuel and should be included in the monitoring program as long as diesel fuel is a constituent of concern."

Comment 7 Response

Analysis for naphthalene and methylnaphthalene has not been included in previous sampling events. We will analyze for naphthalene and methylnaphthalene during the next sampling event. If concentrations are detected, we will evaluate the data and include these compounds in future groundwater sampling activities.

Comment 8

"MW-6 has been dry on and off for the past 10 years, this well may need to be abandoned."

Comment 8 Response

Noted. An evaluation of the historical and current utility of well MW-6 will be performed, and recommendations for maintaining this well in the on-going monitoring program or abandoning the well will be presented in the next semi-annual monitoring report.

Closing

We appreciate your continued assistance on this project. Please feel free to call us at (650) 469-7230 (Jennifer Boyer) or (916) 786-0320 (David Hull), if you have any questions or additional comments.

Sincerely,

Jennifer D. Boyer
Senior Project Scientist

David H. Hull, P.G
Senior Associate Geologist (6389)

cc: Rob Truedinger, KMEP

Attachments:

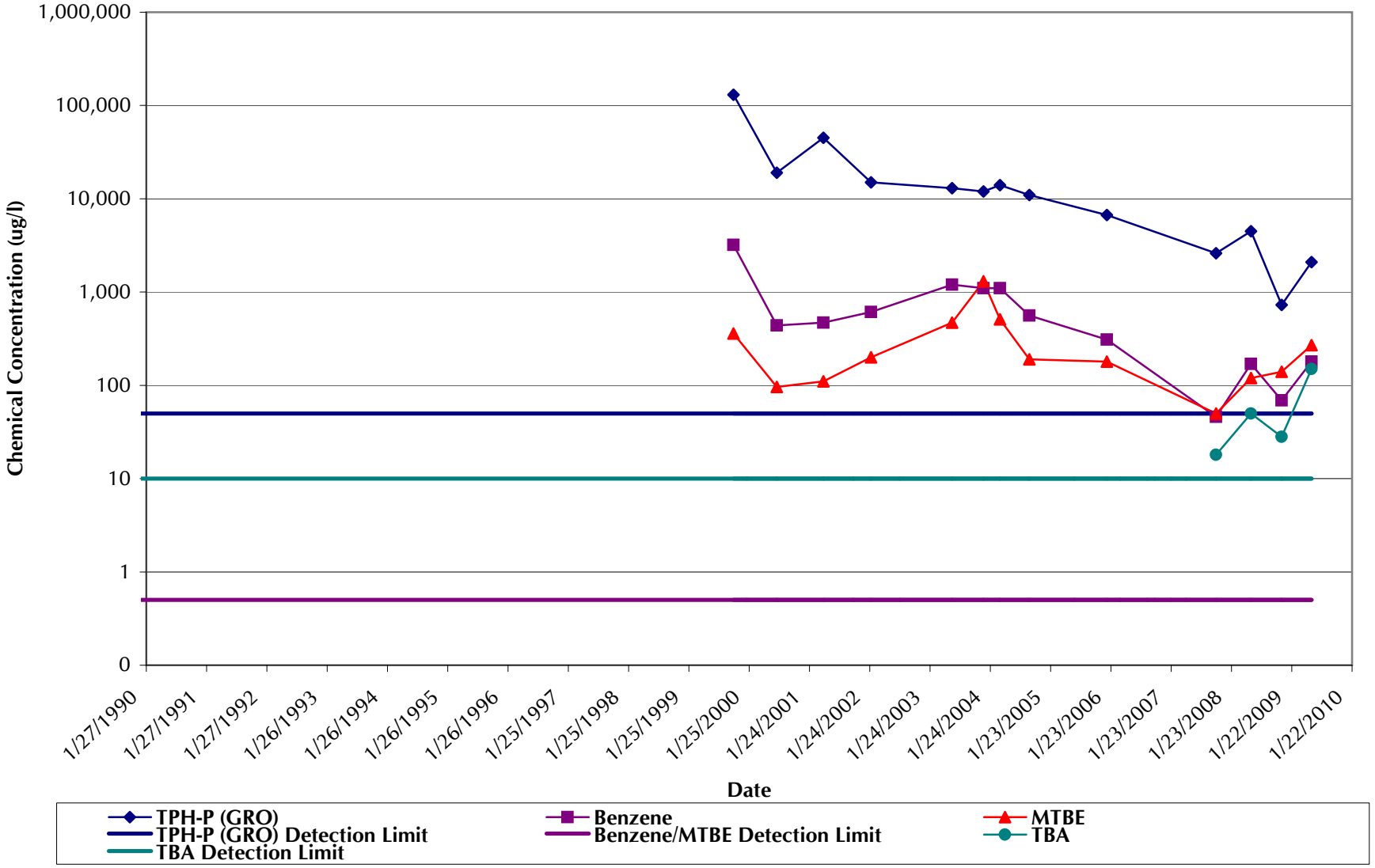
Attachment 1 – Time-versus-Concentration Graphs for Select Site Wells

Attachment 2 – Revised Maximum Detected Concentration/ESL/MCL Comparison Tables

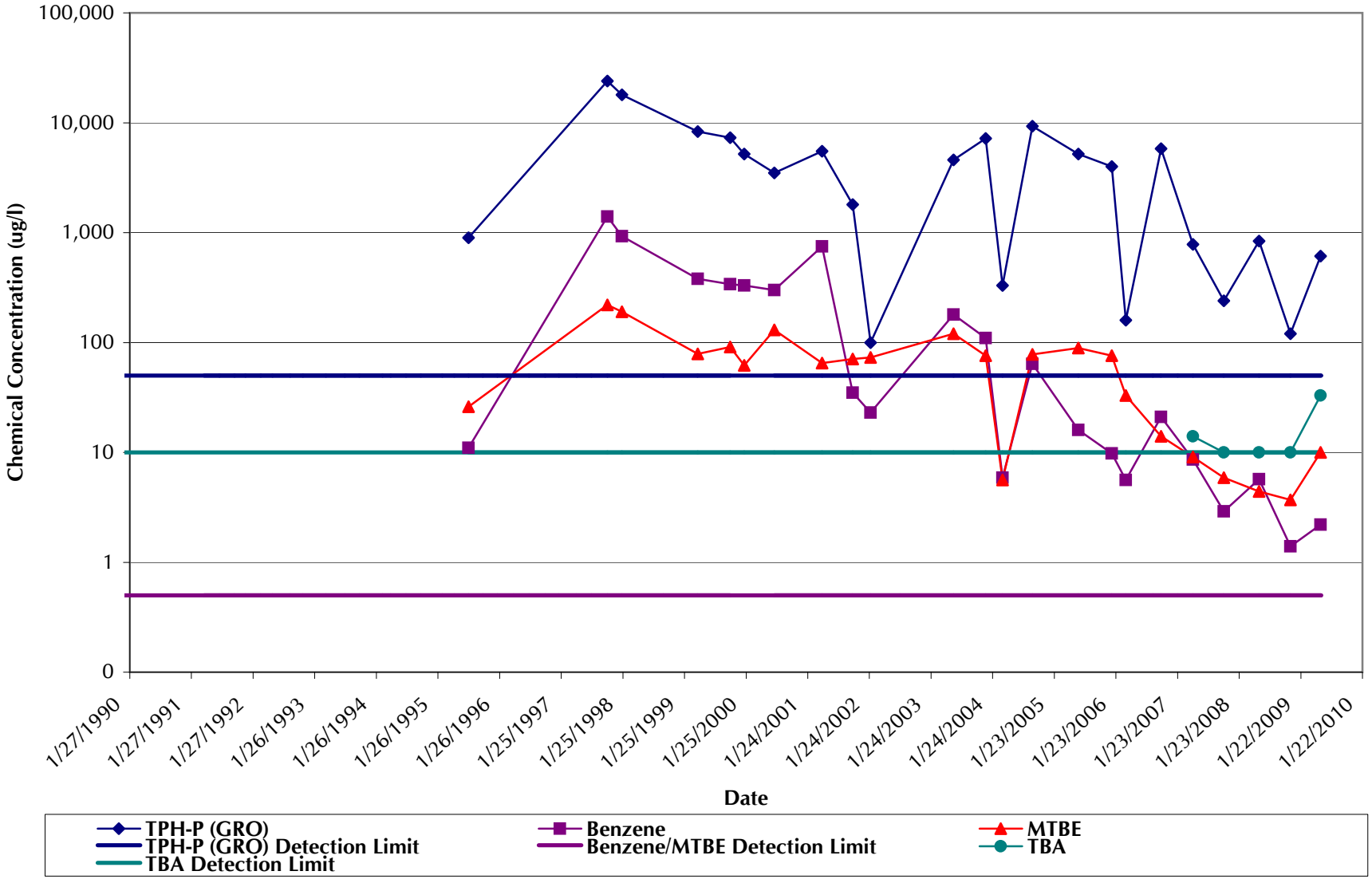
Attachment 1

Time-versus-Concentration Graphs for Select Site Wells

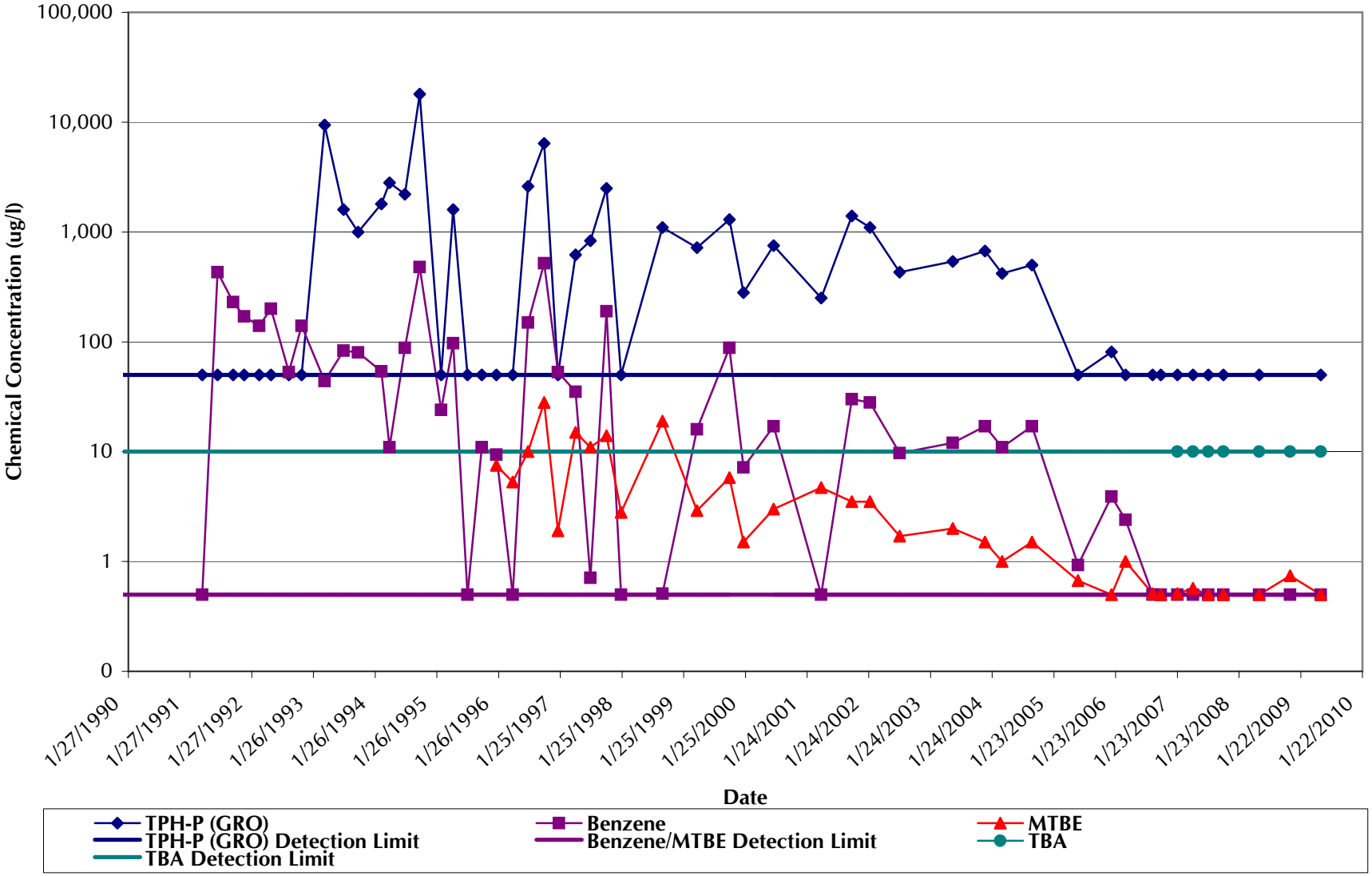
Attachment 1
Time vs. Concentration Graph
MW-2
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



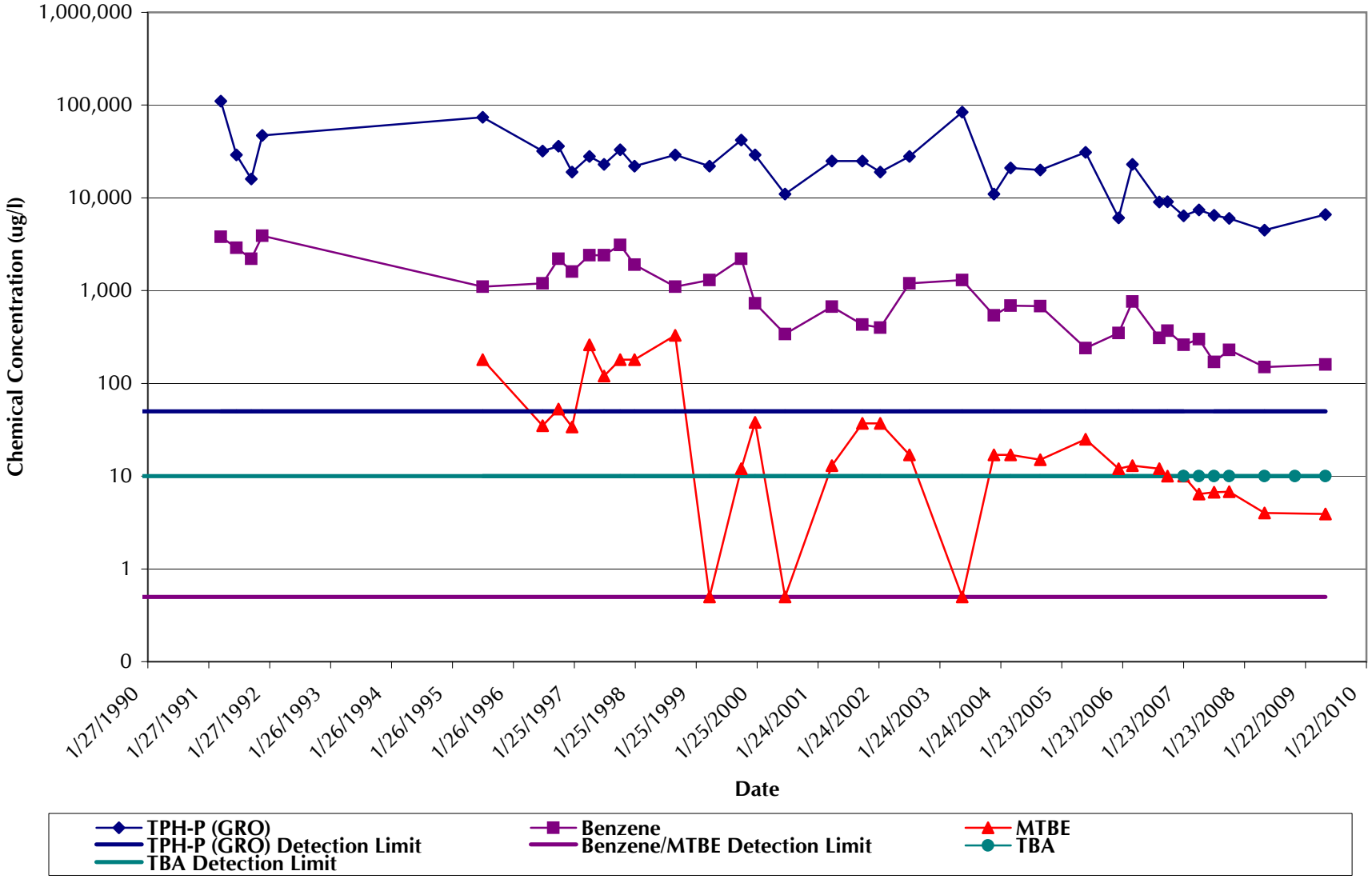
Attachment 1
Time vs. Concentration Graph
MW-3
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



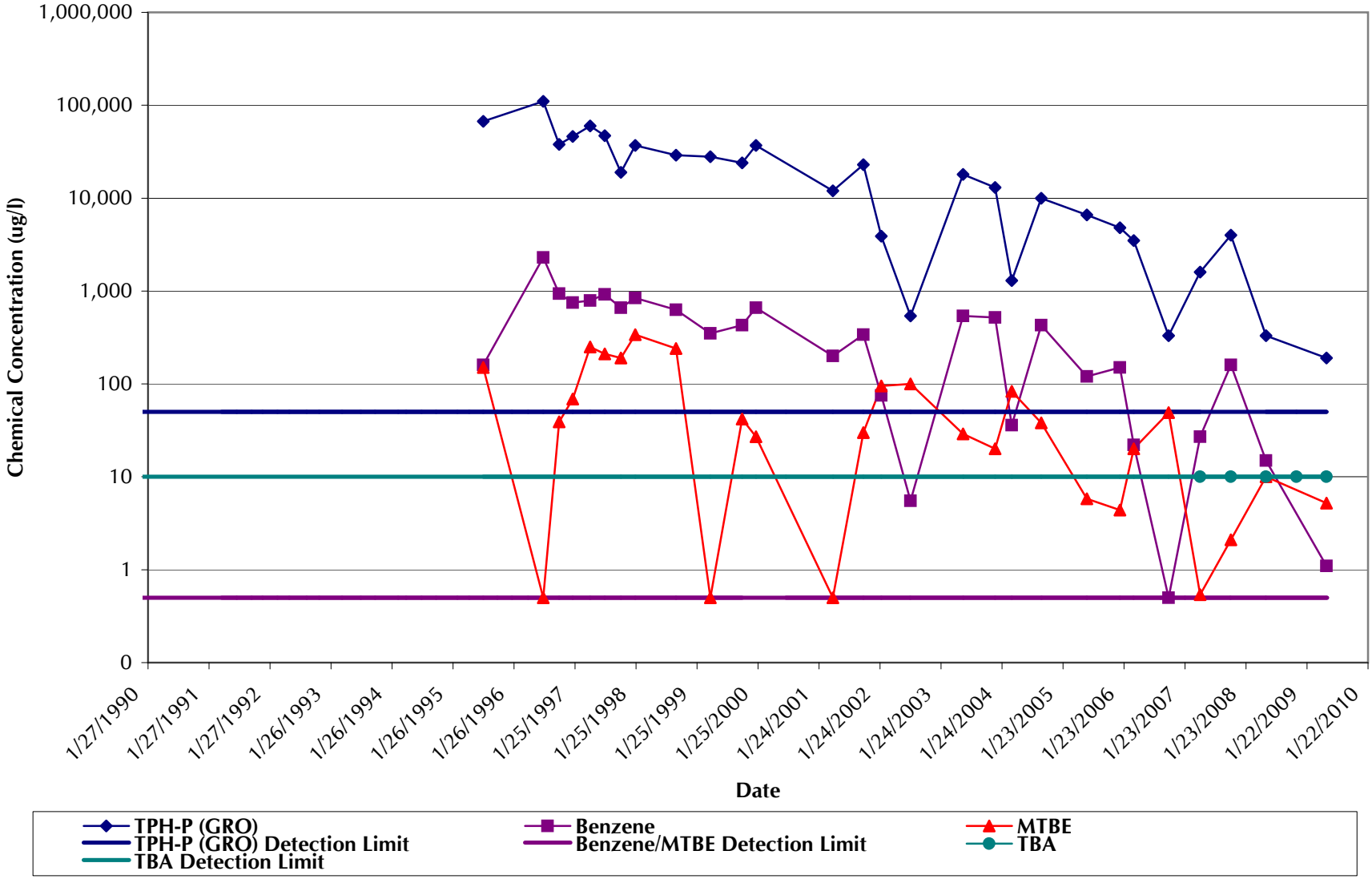
Attachment 1
Time vs. Concentration Graph
MW-4
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



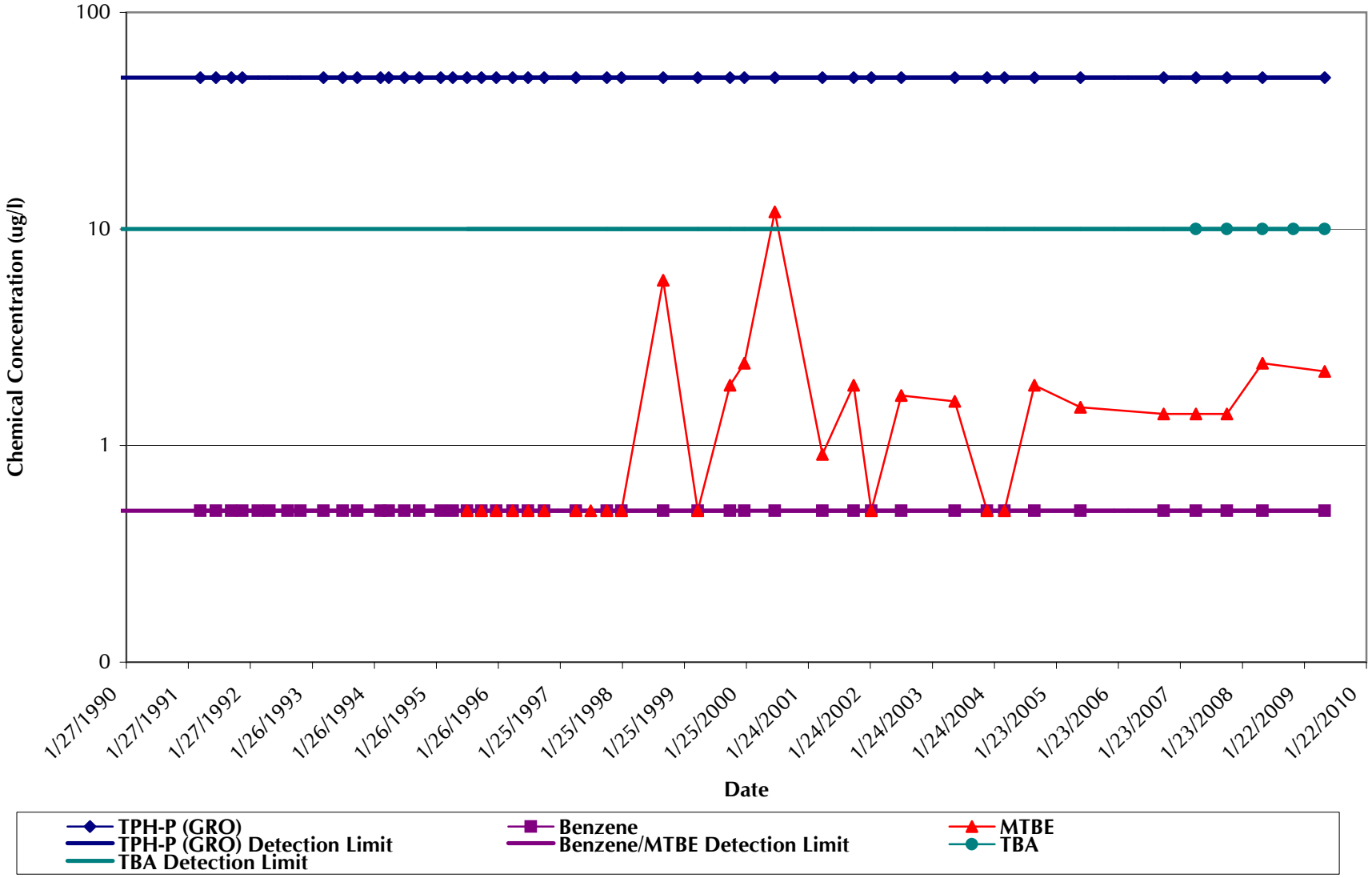
Attachment 1
Time vs. Concentration Graph
MW-5
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



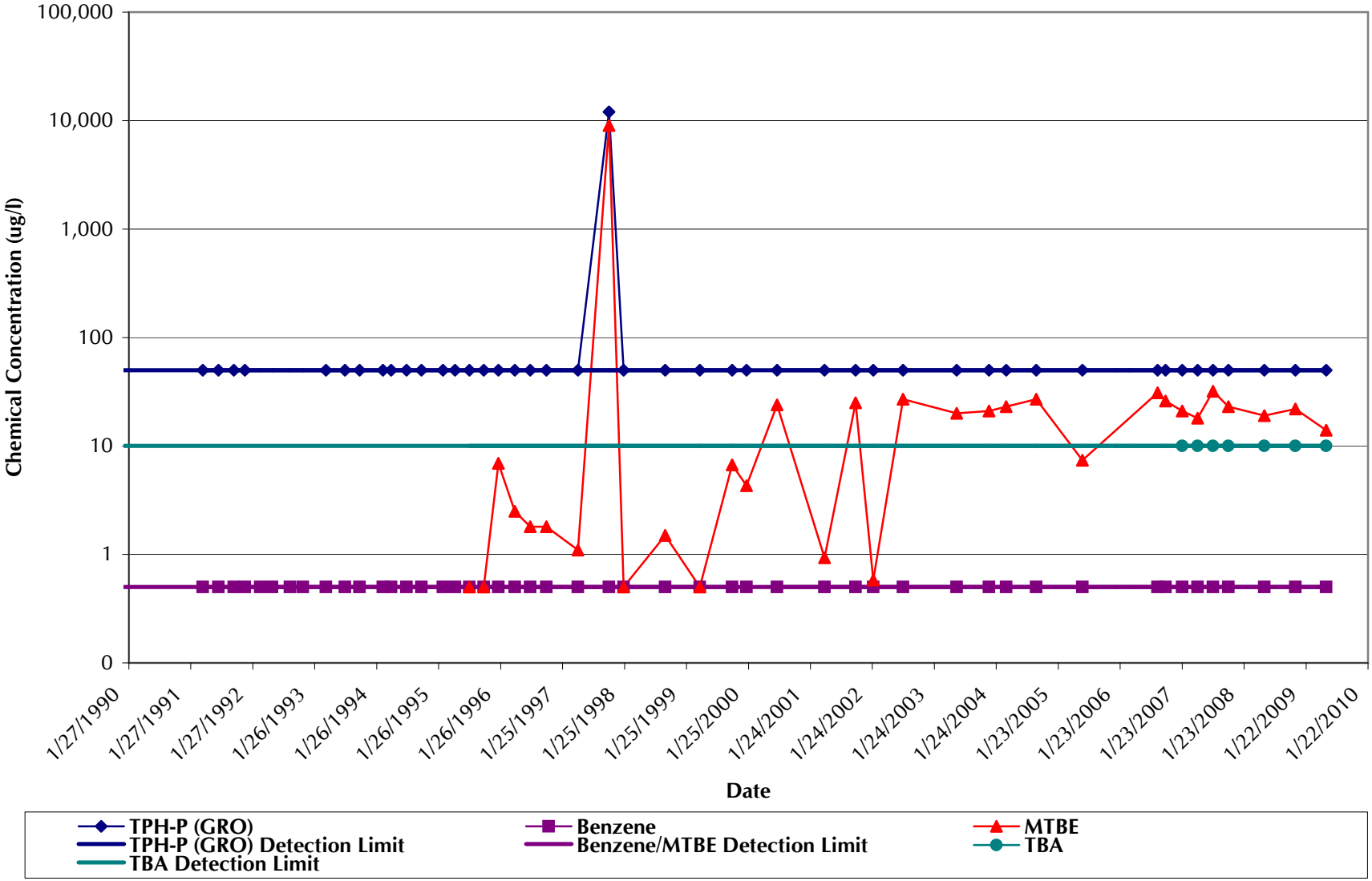
Attachment 1
Time vs. Concentration Graph
MW-7
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



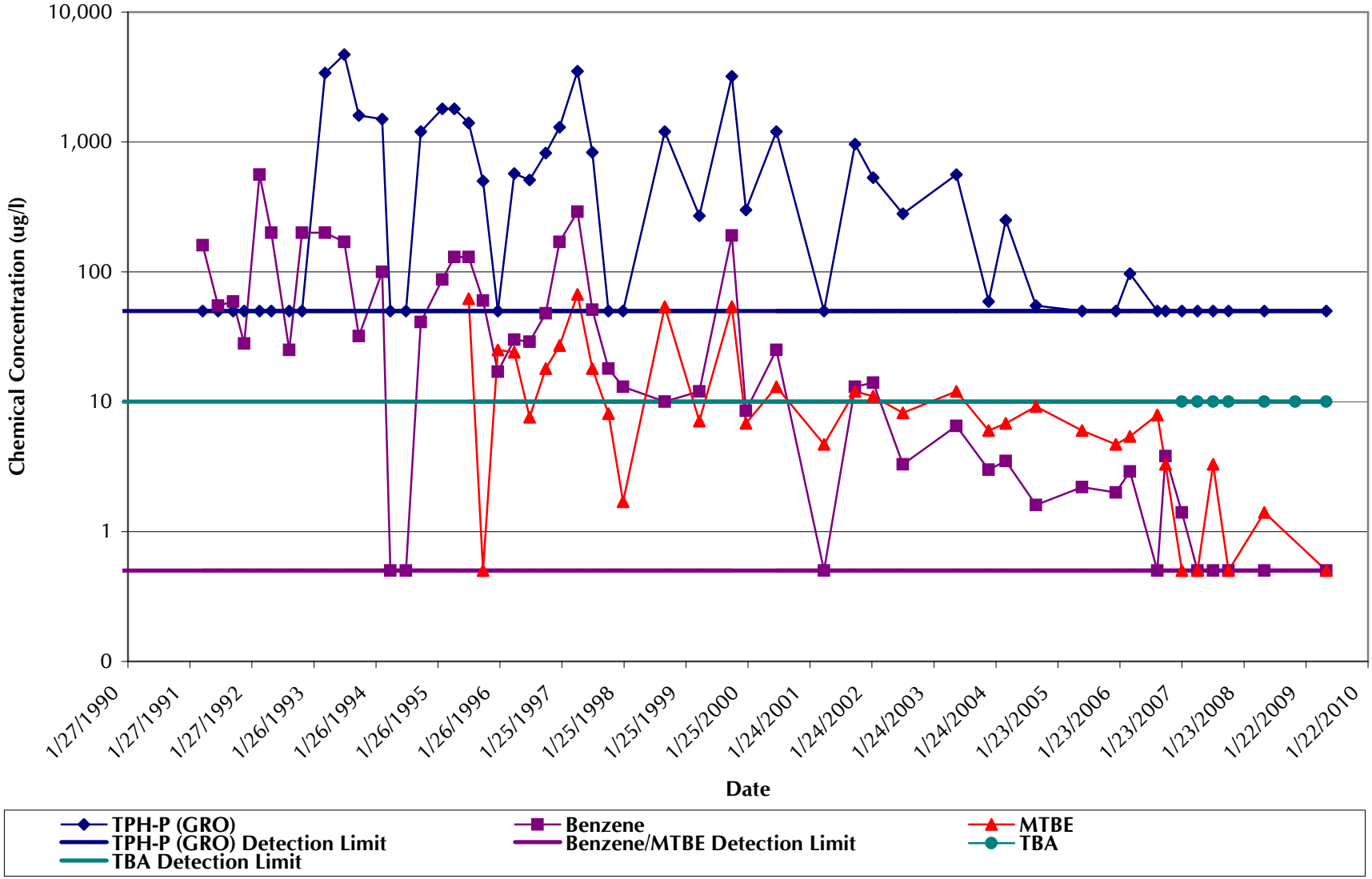
Attachment 1
Time vs. Concentration Graph
MW-9
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



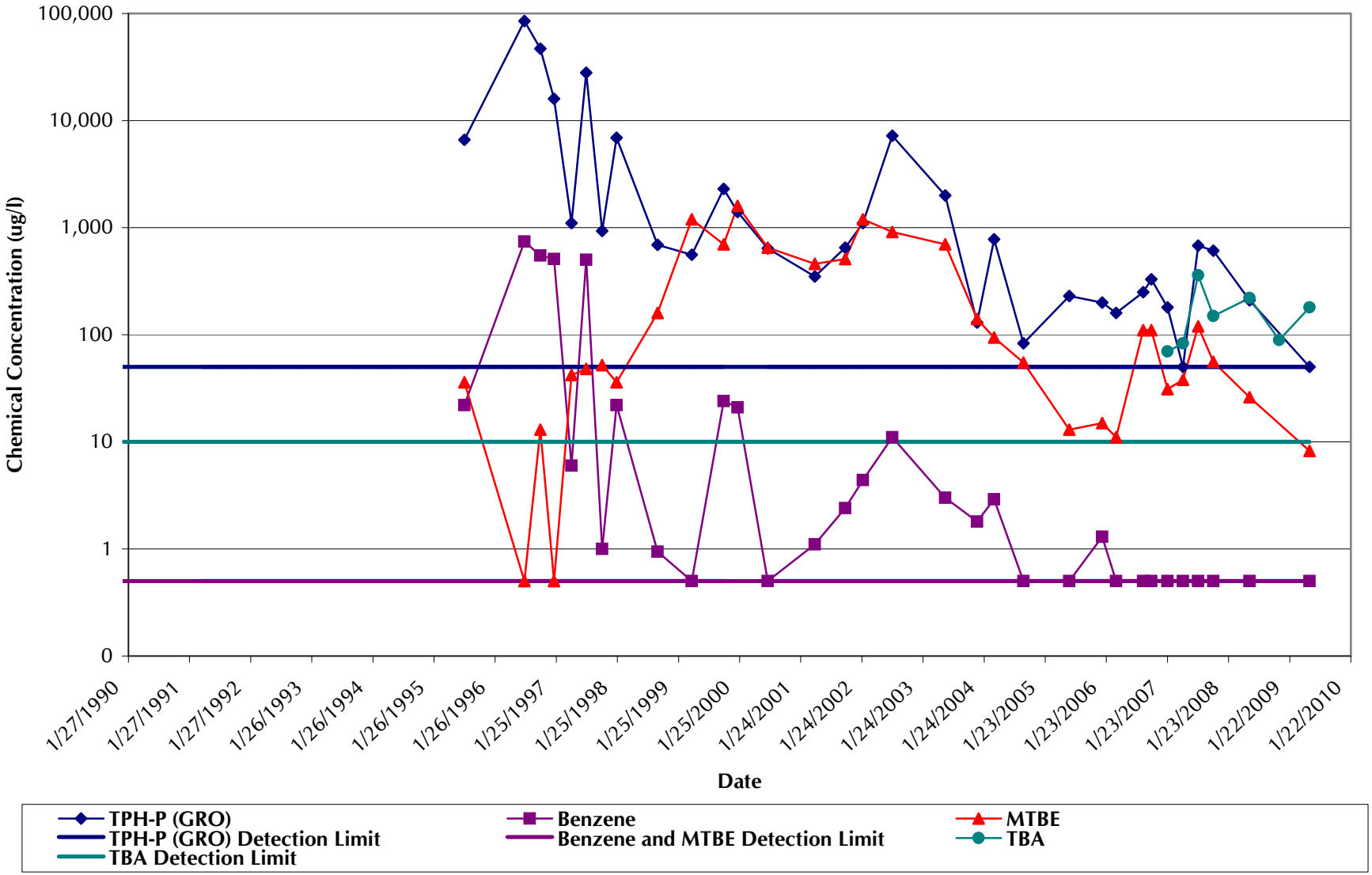
Attachment 1
Time vs. Concentration Graph
MW-10
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



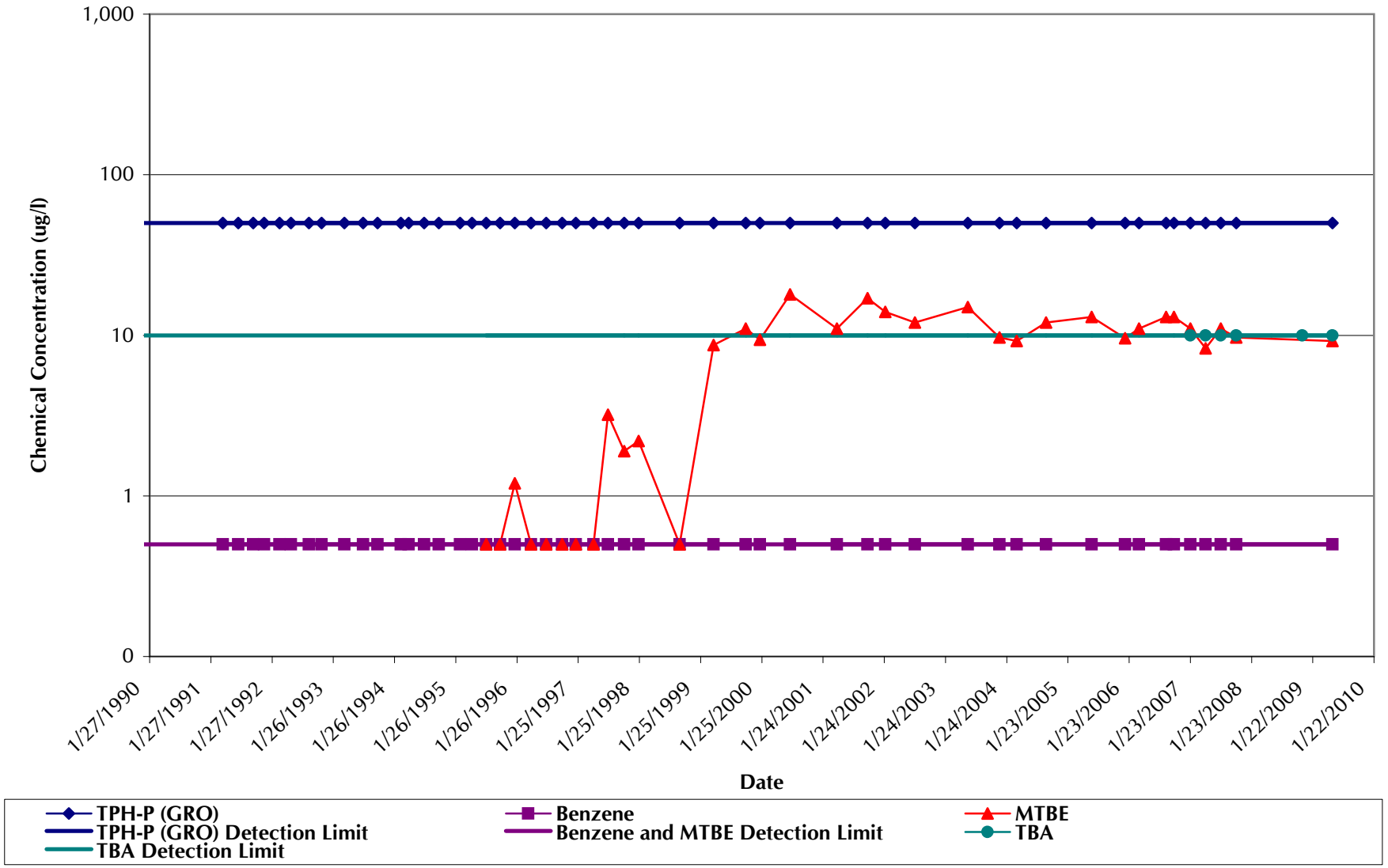
Attachment 1
Time vs. Concentration Graph
MW-11
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



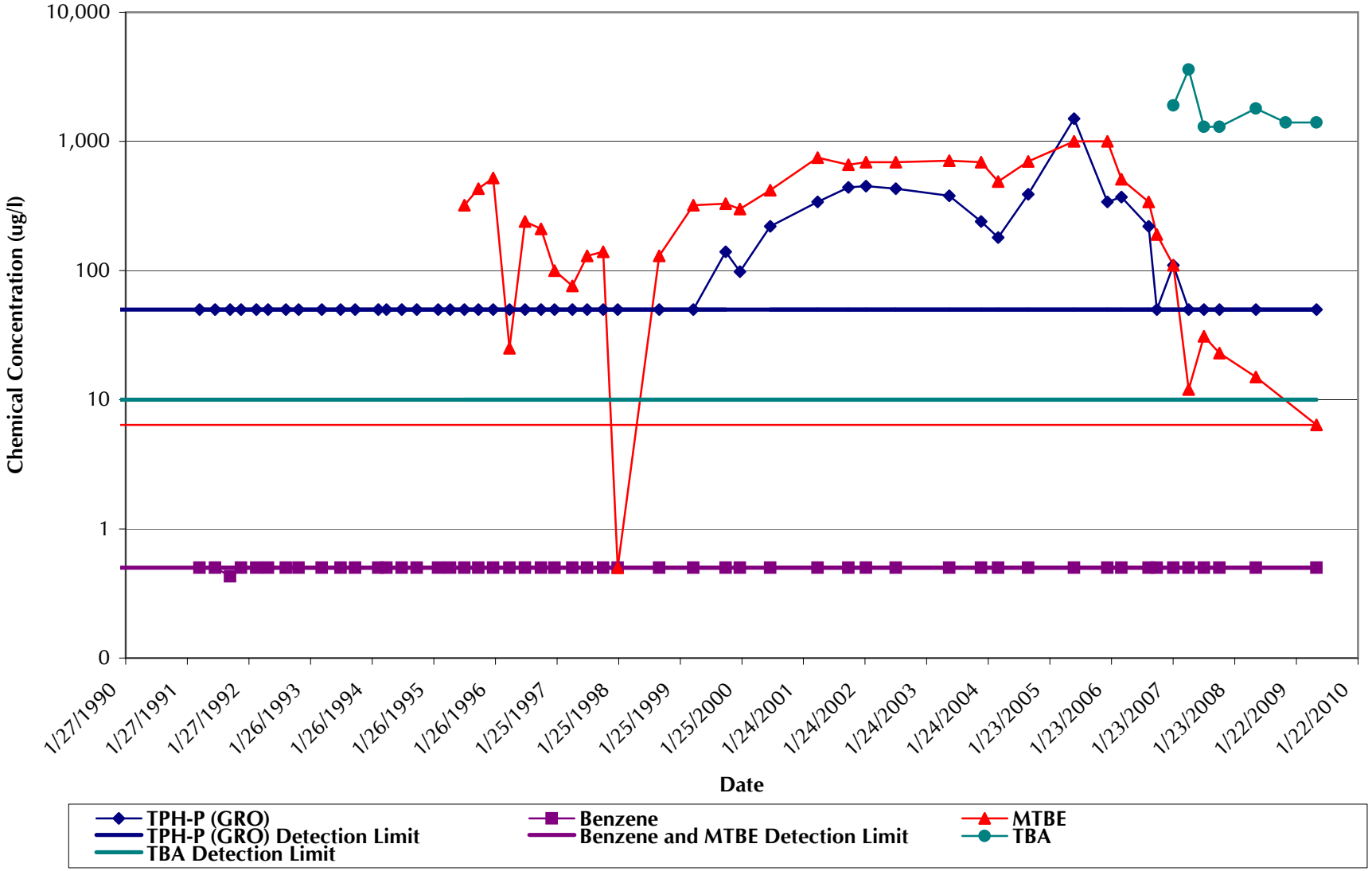
Attachment 1
Time vs. Concentration Graph
MW-12
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



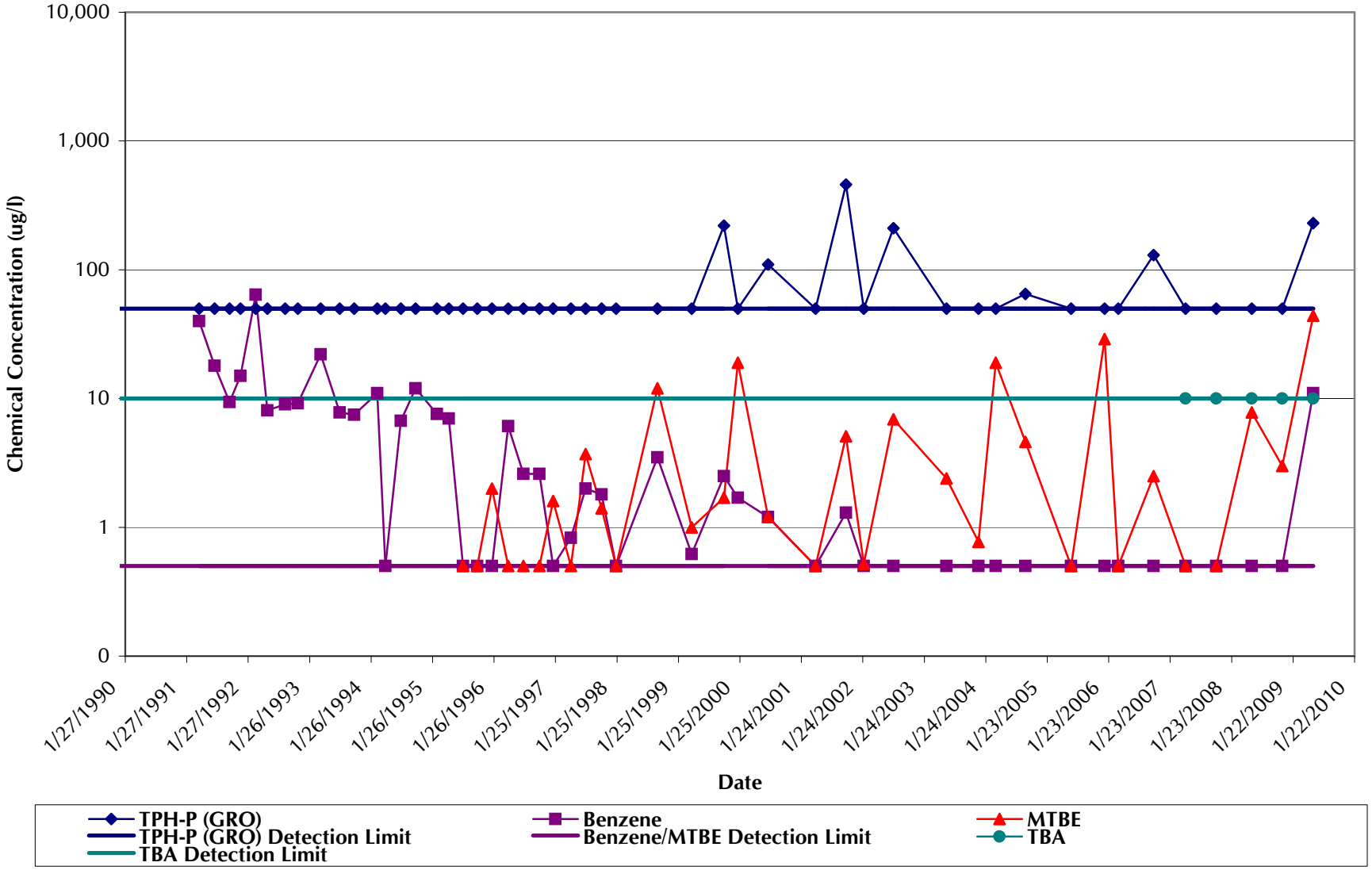
Attachment 1
Time vs. Concentration Graph
MW-18
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



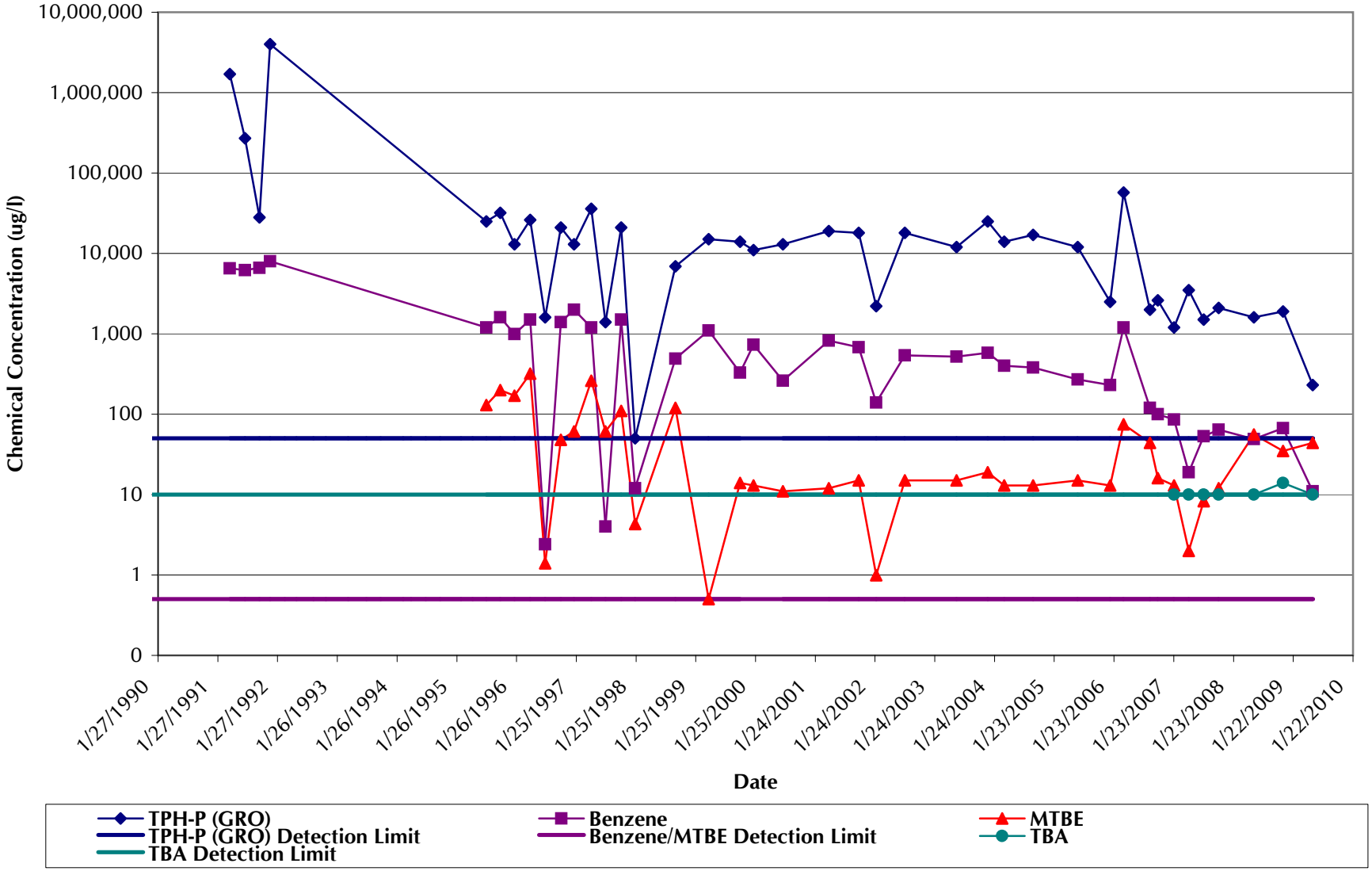
Attachment 1
Time vs. Concentration Graph
MW-19
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



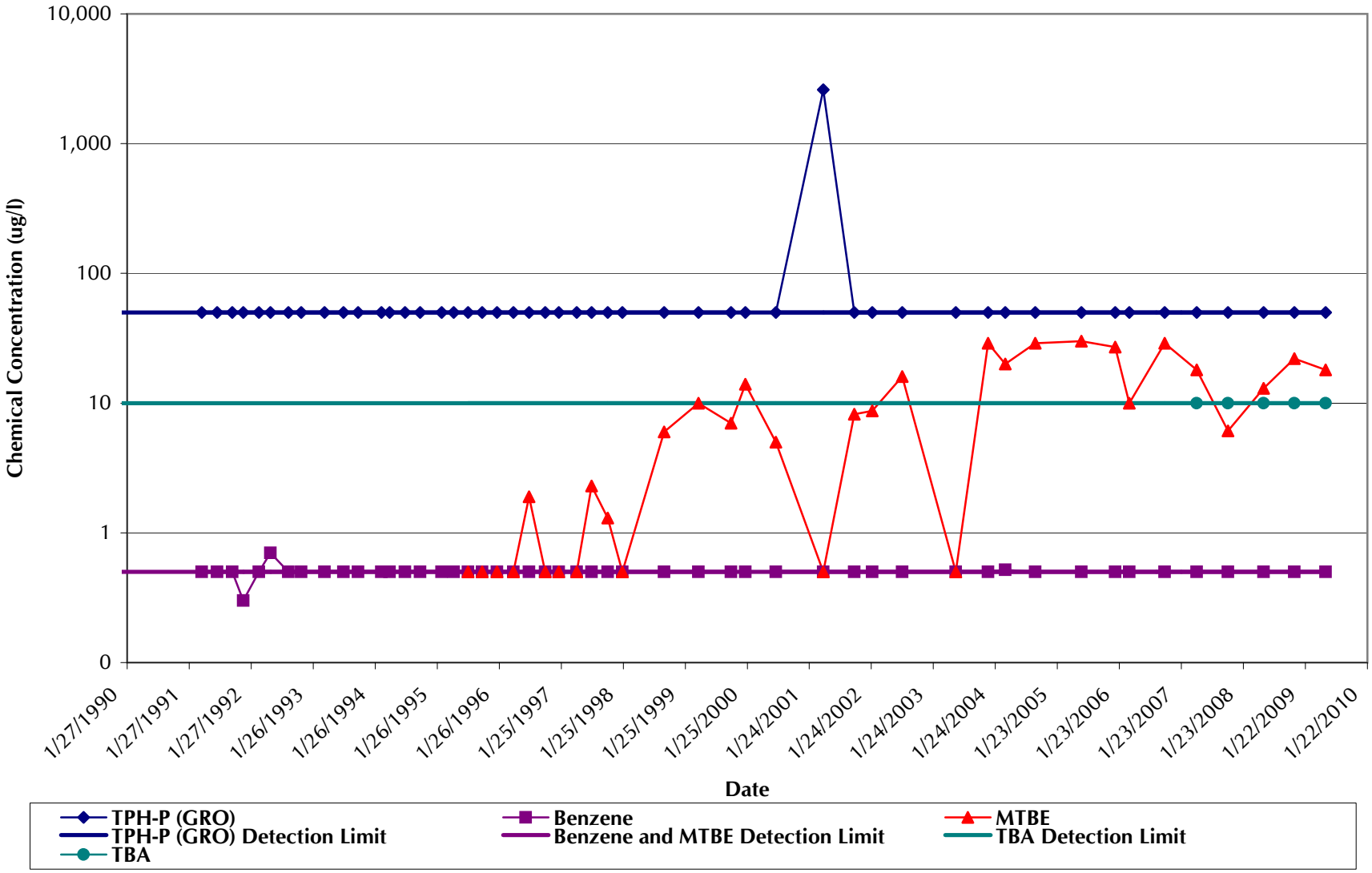
Attachment 1
Time vs. Concentration Graph
MW-22
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



Attachment 1
Time vs. Concentration Graph
MW-23
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



Attachment 1
Time vs. Concentration Graph
MW-27
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California



Attachment 2

Revised Maximum Detected Concentration/ESL/MCL Comparision Tables

Attachment 2
Table B - Comparison of Maximum Detected Concentration to Groundwater ESLs Protective of Indoor Air
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California

Constituent	Maximum Detected Concentration [b]	ESL for the Protection of Indoor Air
	(μg/l)	(μg/l) [a]
TPH-E (DRO)	160	NA
TPH-P (GRO)	3,500	NA[c]
Benzene	19	1,800
Toluene	73	530,000
Ethylbenzene	61	170,000
Xylenes	207	160,000
MTBE	2.0	80,000
TBA	< 20	NA

Notes:

a = Groundwater ESLs for protection of the commercial receptor exposed to indoor air (Table E-1-Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns for Commercial/Industrial Land Use with highly permeable vadose-zone soil types). (SF RWQCB, May 2008)

b = Maximum detected concentrations were collected from April 2007 chemical concentrations from monitoring well MW-23.

c = No ESL listed. Table E-1 refers to Table E-2 – Shallow Soil Vapor Screening Levels for Evaluation of Potential Vapor Intrusion Concerns. Shallow soil gas ESL for commercial receptor listed as 29,000 mg/m3 for TPH-P (GRO).

Bold indicates the detected constituent concentration exceeds established ESL.

μg/l = micrograms per liter

Attachment 2
Table C - Comparison of Maximum Detected Concentration to Proposed Soil ESLs for Direct Exposure of Construction or Trench Workers
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California

Constituent	Maximum Detected Concentration	ESL for the Protection of Construction/Trench Worker
	(mg/kg)	(mg/kg) [a]
TPH-E (DRO)	**18,000**	4,200
TPH-P (GRO)	**76,000**	4,200
Benzene	**852**	12
Toluene	**2,700**	650
Ethylbenzene	**1,600**	210
Xylenes	**8,700**	420
MTBE	1,600	2,800
TBA	NA	320,000

Notes:

a - Soil ESLs for protection of Direct Exposure Soil Screening Level Construction or Trench Worker Exposure Scenario (Table K-3). (RWQCB, May 2008)

Bold indicates the detected constituent concentration exceeds established ESL.

mg/kg = milligrams per kilogram

Attachment 2
Table D - Comparison of Maximum Detected Soil Concentration to Proposed Soil ESLs for Soil Leaching into Groundwater for a Drinking Source
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California

Constituent	Maximum Detected Concentration	ESL for the Protection of a Drinking Water Resource from Leaching
	(mg/kg)	(mg/kg) [a]
TPH-E (DRO)	**18,000**	83
TPH-P (GRO)	**76,000**	83
Benzene	**852**	0.044
Toluene	**2,700**	2.9
Ethylbenzene	**1,600**	3.3
Xylenes	**8,700**	2.3
MTBE	**1,600**	0.023
TBA	NA	0.075

Notes:

a - Soil ESLs for protection of drinking water resource with soil leaching concerns (Table G) (RWQCB, May 2008)

Bold indicates the detected constituent concentration exceeds established ESL.

mg/kg = milligrams per kilogram

Attachment 2
Table E - Comparison of Maximum Detected Concentration to MCLs for Drinking Water Contaminants
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California

Constituent	Maximum Detected Concentration	MCL for Drinking Water Contaminants [a]
	(μg/l)	(μg/l)
TPH-E (DRO)	**12,000**	100*
TPH-P (GRO)	**7,400**	100*
Benzene	**300**	1
Toluene	73	150
Ethylbenzene	**410**	300
Xylenes	587	1,750
MTBE	**38**	13
TBA	3,600	NA

Notes:

a = Federal and State MCLs – Maximum Contaminant Levels and Regulatory Dates for Drinking Water Contaminants, CDPH, November 2008

b = Maximum detected concentrations from current site conditions (April 2007).

* = Value indicates ESL as presented in Table A value for TPH in groundwater, as MCL concentrations are not available. (SF RWQCB 2007)

Bold indicates the detected constituent concentration exceeds established MCL.

μg/l = micrograms per liter

Attachment 2
Table F - Comparison of Maximum Detected Concentration to ESLs for Potential Groundwater Discharge to Fresh Water Habitats
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California

Constituent	Maximum Detected Concentration	ESL for the Protection of Groundwater Discharge to Fresh Water Habitat
	(μg/l)	(μg/l)
TPH-E (DRO)	**360**	100
TPH-P (GRO)	**7,400**	100
Benzene	**300**	1.0
Toluene	0.52	40
Ethylbenzene	**410**	30
Xylenes	**587**	20
MTBE	**38**	5.0
TBA	**3,600**	12

Notes:

a = Groundwater ESLs for protection of discharge to freshwater habitat from groundwater that is a current or potential drinking water resource (Table F-1a). (RWQCB, May 2008)

b = Maximum detected concentrations were assemble from current site conditions (April 2007) in monitoring wells MW-5, MW-7, MW-8, MW-9, MW-10, MW-19, MW-20, MW-26, MW-32 and MW-33.

Bold indicates the detected constituent concentration exceeds established ESL.

μg/l = micrograms per liter

Attachment 2
Table G - Comparison of Maximum Detected Concentration to ESLs for Freshwater Habitats
SFPP, L.P. San Jose Terminal
2150 Kruse Drive, San Jose, California

Constituent	Maximum Detected Concentration	ESL for the Protection of Groundwater Discharge to Fresh Water Habitat
	(μg/l)	(μg/l)
TPH-E (DRO)	NA	100
TPH-P (GRO)	<50	100
Benzene	<0.50	1.0
Toluene	<0.50	40
Ethylbenzene	<0.50	30
Xylenes	<0.50	20
MTBE	<0.50	5.0
TBA	NA	12

Notes:

a = Groundwater ESLs for protection of freshwater habitats (Table F-2a). (RWQCB, May 2008)

Bold indicates the detected constituent concentration exceeds establish ESL.

NA = not analyzed

<0.50 = analyte not detected at or above noted LMDL.

μg/l = micrograms per liter