



Transmittal

Sent Via: **Messenger** **U.S. Mail** **Overnight Mail**

Date: March 2, 2012 **From:** Dan Jablonski
To: Mr. Paul Cho CH2M HILL
California Regional Water Quality 1000 Wilshire Blvd., 21st Floor
Control Board – Los Angeles Los Angeles, CA 90017
Region (RWQCB)
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: First Quarter 2012 (Sentry) and January 2012 Monthly
Monitoring Event Submittal

Project Name: Defense Fuel Support Point (DFSP) Norwalk

Item	Description
1	Table 1 - Summary of Groundwater Elevations, First Quarter 2012 Sentry Event
2	Table 2 - Summary of Groundwater Analytical Data, First Quarter 2012 Sentry Event
3	Table 3 - Summary of Miscellaneous Compounds Detected in Groundwater Samples, First Quarter 2012 Sentry Event
4	Table 4 - Summary of Total Fluids and Groundwater Extraction Pump Operation, First Quarter 2012 Sentry Event
5	Attachment 1 – Concentration Time Series Charts – Wells PZ-5 and GMW-O-18

Remarks

On behalf of SFPP, L.P., an operating partnership of Kinder Morgan Energy Partners, L.P. (KMEP), CH2M HILL is transmitting the groundwater monitoring results for the first quarter 2012 sentry event conducted at the DFSP Norwalk site. The January 2012 monthly groundwater samples for wells in the southeastern area were collected in parallel with the sentry event; therefore, the sentry and monthly monitoring event submittals have been combined into one document. Groundwater elevations and analytical data for wells monitored during this event are summarized in Tables 1 through 3, and are briefly discussed below. The operation of SFPP's wells during this event is summarized in Table 4.

- 1) Twenty one wells located in the south-central/intermediate 24-inch block valve, southeastern, southern off-site, and western off-site areas were sampled by Blaine Tech Services, Inc. (Blaine Tech) on behalf of SFPP during this sentry event. Samples were collected from southeastern area extraction wells GMW-36, GMW-O-15, and GMW-O-18 through the wellhead sampling ports. Samples were collected from the other 18 wells using low-flow sampling methods. Groundwater levels were collected from 39 wells while the total fluids extraction system was operating. Well GMW-O-18 was not gauged due to the presence of the extraction pump.

- 2) Groundwater elevations have generally decreased in the uppermost aquifer and increased in the Exposition aquifer beneath the site since the July 2011 sentry event. The groundwater extraction system was in operation during this monitoring event, thus the groundwater levels do not reflect the static water level conditions in the area. Free product was not detected in any of the 39 wells gauged during this sentry event.
- 3) In the Exposition aquifer wells, volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) quantified as gasoline (TPH-g) and fuel product (TPH-fp) were not detected in groundwater samples collected from EXP-1, EXP-2, and EXP-5. A trace detection of methyl tertiary butyl ether (MTBE) (0.66 µg/L) was reported in well EXP-3; TPH-g, TPH-fp, and remaining VOCs were non-detect.
- 4) The southeastern area extraction wells (GMW-36, GMW-O-15, and GMW-O-18) were in operation during the first quarter 2012. Groundwater monitoring in the southeastern area will continue and groundwater conditions will continue to be evaluated as additional groundwater monitoring and remediation system operation data are obtained.
- 5) In the southeastern area, the RWQCB requested SFPP to increase the monitoring frequency from quarterly to monthly for wells GMW-36, GMW-O-15, GMW-O-16, GMW-O-18, GMW-O-19, and PZ-5. SFPP began monthly monitoring at these wells in March 2010. The results of this monthly monitoring are provided in monthly transmittals to the RWQCB. During the January 2012 event, concentrations of TPH-g, TPH-fp, and most VOCs in well GMW-36 were generally lower than concentrations reported during the December 2011 monthly event. The tertiary butyl alcohol (TBA) concentration reported in well GMW-36 increased by approximately one order of magnitude from December 2011 (340 µg/L) to January 2012 (4,900 µg/L). A decrease in TPH-g, toluene, total xylenes, and TBA was reported in well GMW-O-15, relative to concentrations reported in December 2011. TPH-fp, ethylbenzene, and MTBE concentrations in well GMW-O-15 increased in January 2012.

TPH-g, TPH-fp, and VOCs were not detected in wells GMW-O-16 and GMW-O-19 with the exception that total xylenes and MTBE were detected at low concentrations in well GMW-O-16 (1.4 µg/L and 3.4 µg/L, respectively). Concentrations of TPH-g, TPH-fp and most VOCs in well PZ-5 decreased since the December 2011 sampling event. The TBA concentration in this well decreased by approximately one half of the concentration reported in December 2011.

TPH-g, TPH-fp, and VOCs were not detected in wells GMW-38 and GMW-39 with the exception that TBA was detected in well GMW-39 at a concentration of 58 µg/L. The TBA concentration reported in well GMW-39 during the October 2011 semiannual sampling event was 96 µg/L. The decrease in TBA concentration in this well could be due to seasonal trends.

Concentration time series charts for wells PZ-5 and GMW-O-18 are included in Attachment 1. Fluctuation of contaminant concentrations in well GMW-O-18 is likely due to operation of the extraction pump in this well. Expansion of TFE to include well GMW-O-18 occurred in April 2010, which is generally consistent with the time period when the variability in concentrations was first apparent. Concentrations in monitoring well PZ-5 have been stable or slightly increasing since approximately 2008. A possible reason for this increasing trend is that well GMW-O-18 has been extracting groundwater efficiently and pulling hydrocarbons in groundwater toward the PZ-5/GMW-O-18 area. This trend would be expected and confirms that well GMW-O-18 is containing the plume in this area.

- 6) In the southern off-site area, TPH-g, TPH-fp, and VOCs were not detected in wells GMW-O-1, GMW-O-2, and GMW-O-3. The detected concentrations of TPH-g, TPH-fp, and VOCs in well GMW-O-14 increased relative to the concentrations reported during the July

2011 sentry event. The increases in concentrations are likely a result of seasonal fluctuations in groundwater elevations as this phenomenon has been observed during previous monitoring events. Groundwater quality in well GMW-O-14 will continue to be monitored on a quarterly basis.

- 7) In the south-central onsite area, TPH-g, TPH-fp, benzene, ethylbenzene and total xylenes concentrations increased since the July 2011 sentry event in wells MW-SF-1 and MW-SF-4. A decrease in toluene and MTBE was reported in well MW-SF-4; an increase in toluene was reported in well MW-SF-1.
- 8) In the western off-site area, TPH-g, TPH-fp, and VOCs were not detected in well WCW-13. 1,2-DCA was detected in wells WCW-3 and WCW-7 at concentrations of 2.3 µg/L and 16 µg/L, respectively. MTBE and diisopropyl ether (DIPE) were also detected in well WCW-7 (1.1 µg/L and 2.1 µg/L, respectively). TPH-fp was detected in well WCW-7 at the reporting limit of 100 µg/L. The detected concentrations of 1,2-DCA and MTBE in this area remained below the risk-based corrective action levels of 70 µg/L for 1,2-DCA and 40 µg/L for MTBE.
- 9) Two equipment blanks and two trip blank samples were collected during this sampling event. No VOCs, TPH-g, or TPH-fp were detected at or above laboratory reporting limits in the equipment or trip blank samples.

Please contact Dan Jablonski at 213.228.8271 if you have any questions.

Distribution List

Mr. Steve Defibaugh, KMEP
LTC Tam Gaffney, DLA Energy
Mr. Matt Young, DLA Energy
Mr. Redwan Hassan, Parsons
Ms. Mary Lucas, Parsons
Ms. Mary Jane McIntosh, RAB
Dr. Eugene Garcia, RAB
Mr. Bob Hoskins, RAB
Ms. Tracy Winkler, RAB
Mr. Everett Ferguson, WRD

Ms. Ly Phuong, WRD
Ms. Minxia Dong, Norwalk Regional Library
Ms. Adriana Figueroa, City of Norwalk
Mr. Norman Dupont, Richards/Watson/Gershon
Mr. Charles Emig, City of Cerritos
Mr. Gary Lynch, Park Water Company
Office of Congresswoman Grace F. Napolitano
Mr. Tim Whyte, URS
Mr. Mark Wuttig, CH2M HILL

TABLE 1

**SUMMARY OF GROUNDWATER ELEVATIONS
FIRST QUARTER 2012 SENTRY EVENT**

Defense Fuel Support Point Norwalk
Norwalk, California

Well	Date	Top of Casing Elevation (feet msl)	Depth to Product (feet btoc)	Depth to Water (feet btoc)	Apparent Product Thickness (feet)	Groundwater Elevation (feet msl)
EXP-1	1/9/2012	78.44	---	52.67	NC	25.77
EXP-2	1/9/2012	79.43	---	52.98	NC	26.45
EXP-3	1/9/2012	77.58	---	51.67	NC	25.91
EXP-5	1/9/2012	72.41	---	46.53	NC	25.88
GMW-1	1/9/2012	74.77	---	26.68	NC	48.09
GMW-27	1/9/2012	74.41	---	26.84	NC	47.57
GMW-30	1/9/2012	74.91	---	27.12	NC	47.79
GMW-36	1/9/2012	74.53	---	27.26	NC	47.27
GMW-37	1/9/2012	77.32	---	29.72	NC	47.60
GMW-38	1/9/2012	75.47	---	27.90	NC	47.57
GMW-39	1/9/2012	75.05	---	28.44	NC	46.61
GMW-O-1	1/9/2012	71.45	---	23.35	NC	48.10
GMW-O-2	1/9/2012	72.54	---	24.50	NC	48.04
GMW-O-3	1/9/2012	72.19	---	24.29	NC	47.90
GMW-O-9	1/9/2012	73.50	---	26.02	NC	47.48
GMW-O-10	1/9/2012	73.98	---	26.82	NC	47.16
GMW-O-12	1/9/2012	73.49	---	25.12	NC	48.37
GMW-O-14	1/9/2012	74.08	---	26.14	NC	47.94
GMW-O-15	1/9/2012	74.23	---	27.67	NC	46.56
GMW-O-16	1/9/2012	74.10	---	26.98	NC	47.12
GMW-O-17	1/9/2012	73.78	---	25.32	NC	48.46
GMW-O-19	1/9/2012	74.46	---	26.56	NC	47.90
GMW-O-20	1/9/2012	73.32	---	24.68	NC	48.64
GMW-O-23	1/9/2012	73.63	---	25.91	NC	47.72
GMW-SF-8	1/9/2012	76.75	---	28.92	NC	47.83
HL-2	1/9/2012	76.94	---	29.10	NC	47.84
MW-8	1/9/2012	76.06	---	28.31	NC	47.75
MW-O-2	1/9/2012	71.90	---	28.13	NC	43.77
MW-SF-1	1/9/2012	78.93	---	31.25	NC	47.68
MW-SF-2	1/9/2012	78.53	---	30.52	NC	48.01
MW-SF-4	1/9/2012	79.38	---	32.07	NC	47.31
MW-SF-5	1/9/2012	79.74	---	32.12	NC	47.62
MW-SF-6	1/9/2012	76.80	---	29.03	NC	47.77
MW-SF-9	1/9/2012	74.10	---	25.98	NC	48.12
PZ-2	1/9/2012	73.96	---	27.21	NC	46.75
PZ-5	1/9/2012	73.97	---	26.47	NC	47.50
WCW-3	1/9/2012	76.16	---	29.00	NC	47.16
WCW-7	1/9/2012	76.44	---	29.35	NC	47.09
WCW-13	1/9/2012	77.70	---	30.24	NC	47.46

Abbreviations

--- = not detected.

NC = not calculated.

NM = not measured due to the presence and/or operation of the extraction pump.

feet btoc = feet below top of casing.

feet msl = feet above mean sea level based on the National Geodetic Vertical Datum of 1929.

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA
FIRST QUARTER 2012 SENTRY EVENT

Defense Fuel Support Point Norwalk
 Norwalk, California

Results reported in micrograms per liter (µg/L)

Well	Well	Date	TPH-g	TPH-fp	Benzene	Toluene	Ethyl-benzene	Total Xylenes ¹	1,2-DCA	MTBE	TBA	DIPE	ETBE	TAME
Exposition Aquifer	EXP-1	01/09/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1
	EXP-2	01/09/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1
	EXP-3	01/09/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	0.66	<10	<1	<1	<1
	EXP-5	01/09/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1
Southeastern Area	GMW-36	01/10/12	380	290	78	1.6	5.1	13	<0.50	94	4,900	<1	<1	1.3
	GMW-38	01/10/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1
	GMW-39	01/10/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	58	<1	<1	<1
	GMW-O-15	01/10/12	470	1,200	110	1.3	6.9	15	<1	86	4,300	<1	<1	1.2
	GMW-O-16	01/09/12	<50	<100	<0.50	<0.50	<0.50	1.4	<0.50	3.4	<10	<1	<1	<1
	GMW-O-18	01/10/12	570	1,400	100	<0.50	5.3	3.9	<1	110	4,800	<1	<1	2.2
	GMW-O-19	01/10/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1
PZ-5	01/10/12	5,400	1,900	2,000	44	140	330	<20	200	38,000	<20	<20	<20	
South-central Area	MW-SF-1	01/10/12	15,000	13,000	7,300	94	140	140	<100	240	<1,000	<100	<100	<100
	MW-SF-4	01/10/12	22,000	54,000	4,900	<25	590	770	<50	160	<500	<50	<50	<50
Southern Off-site Area	GMW-O-1	01/09/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1
	GMW-O-2	01/09/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1
	GMW-O-3	01/09/12	<50	120	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1
	GMW-O-14	01/09/12	38,000	11,000	9,000	2,200	1,200	4,300	<200	<100	<2,000	<200	<200	<200
Western Off-site Area	WCW-3	01/09/12	<50	<100	<0.50	<0.50	<0.50	<0.50	2.3	<0.50	<10	<1	<1	<1
	WCW-7	01/09/12	<50	100	<0.50	<0.50	<0.50	<0.50	16	1.1	<10	2.1	<1	<1
	WCW-13	01/09/12	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1	<1	<1

Notes

1. The total xylenes result is the sum of m,p-xylenes and o-xylenes when detected.

Abbreviations

<50 = not detected at or above the laboratory reporting limit shown.

1,2-DCA = 1,2-dichloroethane.

DIPE = diisopropyl ether.

ETBE = ethyl tertiary butyl ether.

MTBE = methyl tertiary butyl ether.

TAME = tertiary amyl methyl ether.

TBA = tertiary butyl alcohol.

TPH-fp = total extractable petroleum hydrocarbons quantified using a site fuel product standard.

TPH-g = total purgeable petroleum hydrocarbons quantified using a gasoline standard (C4-C13).

TABLE 3

**SUMMARY OF MISCELLANEOUS COMPOUNDS DETECTED IN GROUNDWATER SAMPLES
FIRST QUARTER 2012 SENTRY EVENT**

Defense Fuel Support Point Norwalk
Norwalk, California

Results reported in micrograms per liter ($\mu\text{g/L}$)

Sample ID	Date	1,2,4- Trimethylbenzene	1,3,5- Trimethylbenzene	n-Propylbenzene
GMW-36	01/10/12	3.3	2.6	<1
GMW-O-14	01/09/12	790	<200	<200
GMW-O-15	01/10/12	5.6	4.1	<1
MW-SF-4	01/10/12	420	69	95
PZ-5	01/10/12	68	<20	<20

Notes

<20 = not detected at or above the laboratory reporting limit shown.

TABLE 4

**SUMMARY OF TOTAL FLUIDS AND GROUNDWATER EXTRACTION PUMP OPERATION
FIRST QUARTER 2012 SENTRY EVENT**
Defense Fuel Support Point Norwalk
Norwalk, California

Remediation Area	Remediation Well ID	Pump Type	1/10/12 Pump Status (ON/OFF)	Comments
South-Central Area	GMW-9	TFE	OFF	
	GMW-22	TFE	OFF	
	GMW-24	TFE	OFF	
	GMW-25	GWE	OFF	
	GWR-3	GWE	OFF	
	MW-SF-2	TFE	OFF	
	MW-SF-3	TFE	ON	
	MW-SF-6	TFE	OFF	
	MW-SF-11	TFE	ON	
	MW-SF-12	TFE	OFF	
	MW-SF-13	TFE	OFF	
	MW-SF-14	TFE	OFF	
	MW-SF-15	TFE	ON	
	MW-SF-16	TFE	OFF	
	MW-O-1	TFE	OFF	
	MW-O-2	TFE	OFF	
	GMW-O-11	TFE	OFF	
	GMW-O-20	TFE	OFF	
	GMW-O-21	TFE	OFF	
GMW-O-23	TFE	OFF		
Southeastern Area	GMW-O-15	TFE	ON	
	GMW-O-18	TFE	ON	
	GMW-36	TFE	ON	

Notes

Data reported based on information provided by SFPP, L.P.

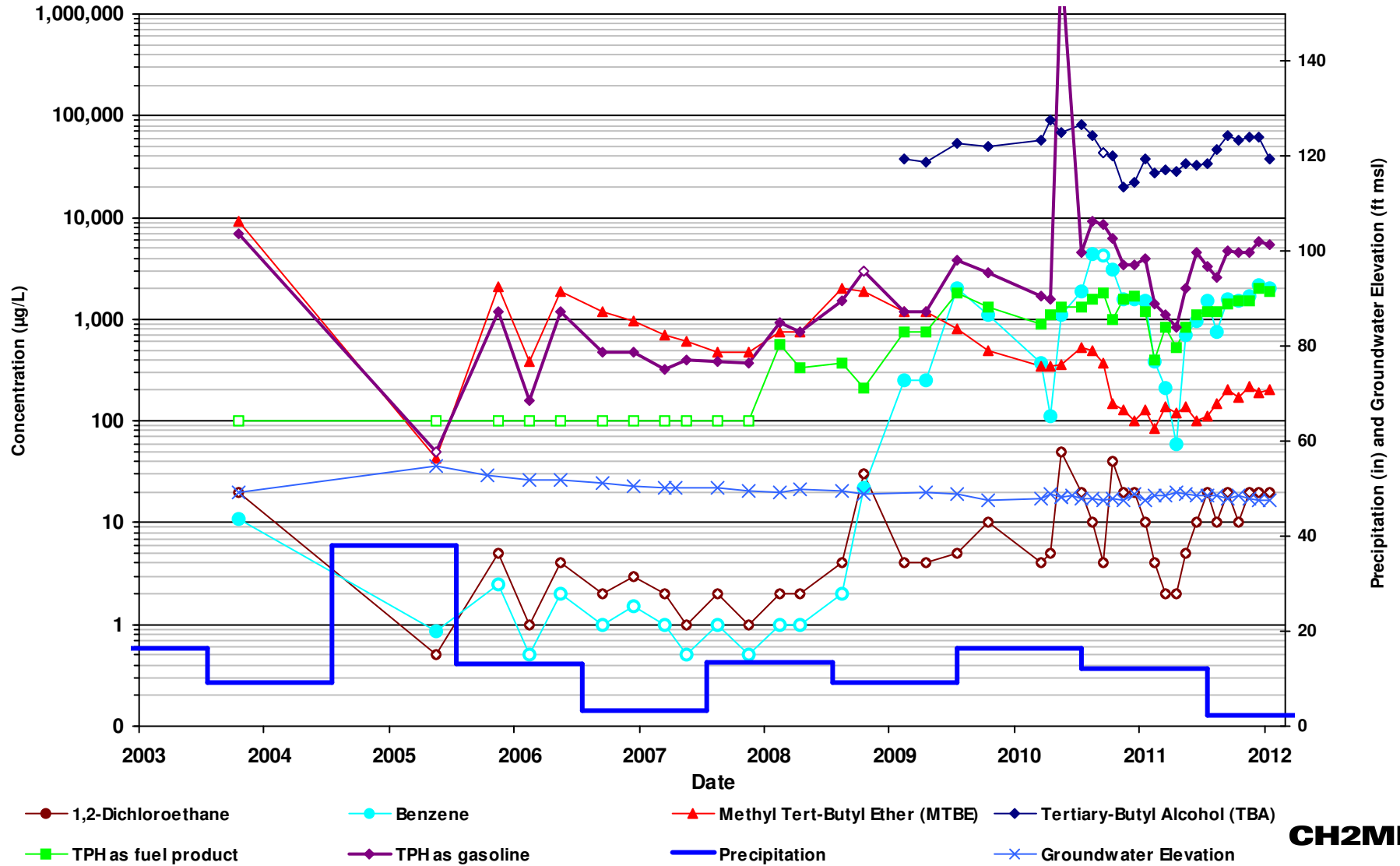
Abbreviations

GWE = groundwater extraction.

TFE = total fluids extraction.

Attachment 1
Concentration Time Series Charts
Wells PZ-5 and GMW-O-18

PZ-5

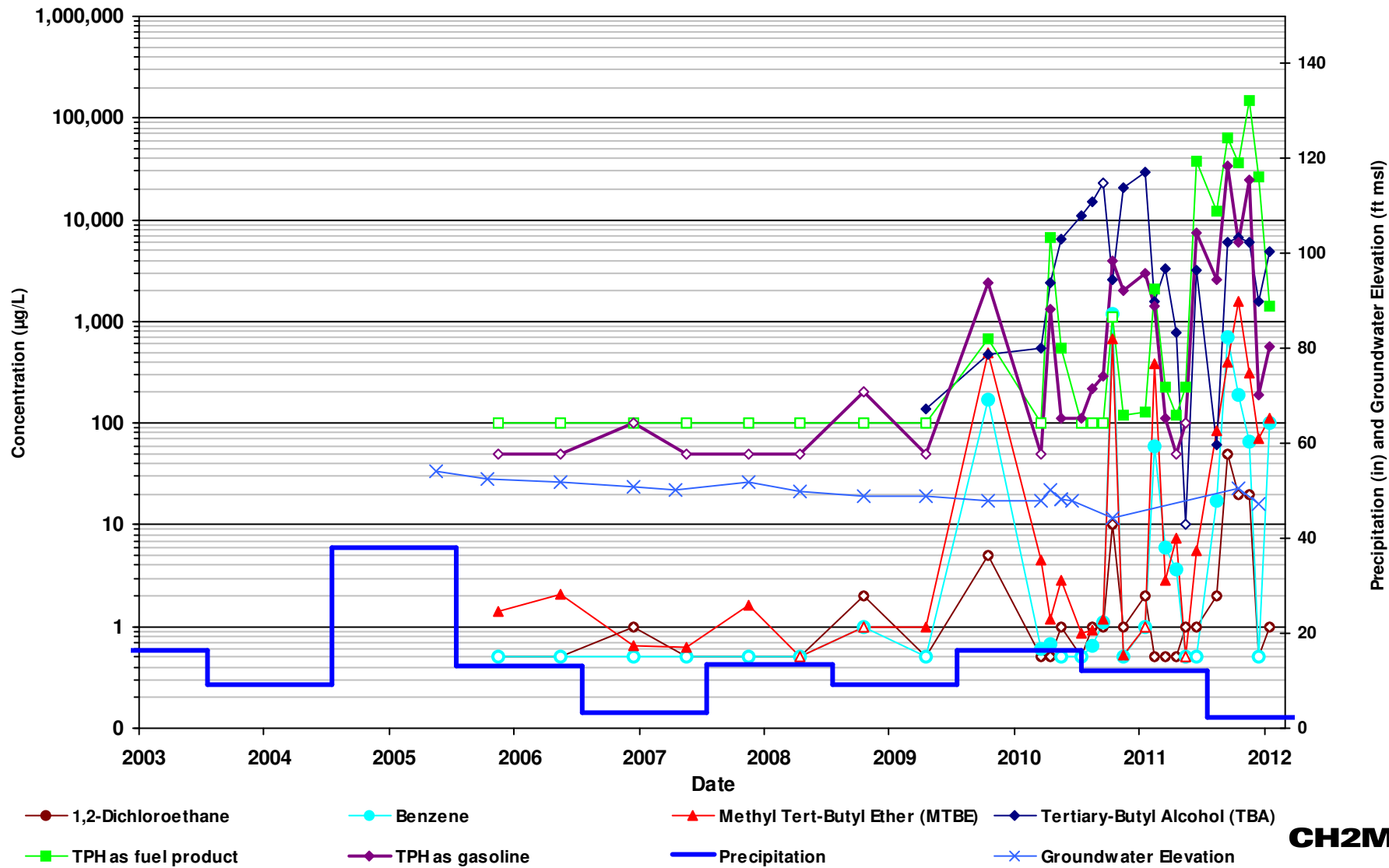


CH2MHILL

Non detect results (ND) are plotted with an open symbol using the laboratory reporting limit.

Precipitation data reported as annual rainfall which is calculated from Long Beach CIMIS #174 weather station. source: <http://www.ipm.ucdavis.edu/weather/sites/losangeles.html>

GMW-O-18



CH2MHILL

Non detect results (ND) are plotted with an open symbol using the laboratory reporting limit.

Precipitation data reported as annual rainfall which is calculated from Long Beach CIMIS #174 weather station. source: <http://www.ipm.ucdavis.edu/weather/sites/losangeles.html>