



Transmittal

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To: Mr. Paul Cho
California Regional Water Quality
Control Board – Los Angeles
Region (RWQCB)
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Project Number: 1603.044 C
Project Name: Defense Fuel Support Point (DFSP) Norwalk

Item	Description
1	Table 1 - Summary of Groundwater Elevations, First Quarter 2010 Sentry Event
2	Table 2 - Summary of Groundwater Analytical Data, First Quarter 2010 Sentry Event
3	Table 3 - Summary of Groundwater Extraction Pump Operation

Remarks

On behalf of SFPP, L.P., an operating partnership of Kinder Morgan Energy Partners, L.P. (KMEP), AMEC Geomatrix, Inc., is transmitting the groundwater monitoring results for the first quarter 2010 sentry event conducted at the DFSP Norwalk site. Groundwater elevations and analytical data for wells monitored during this event are summarized in Table 1 and Table 2, respectively, and are briefly discussed below.

- 1) Twenty (20) wells located in the south-central, intermediate 24-inch block valve, off-site 24-inch block valve, and western off-site areas were gauged by Blaine Tech Services, Inc., on behalf of SFPP during this sentry event.
- 2) Groundwater elevations have generally decreased in the uppermost aquifer and increased in the Exposition aquifer beneath the site since the second semi-annual monitoring event in October 2009.
- 3) Volatile organic compounds (VOCs) and total petroleum hydrocarbons (TPH) quantified as gasoline (TPHg) and fuel product (TPHfp) were not detected in groundwater samples collected from Exposition aquifer wells.
- 4) Well MW-SF-4 located in the intermediate block valve area contained free product and therefore, was not sampled during this monitoring event. Free product has been detected previously in this well. Wells GMW-36 and GMW-O-15 were pumping during the sentry event. Groundwater samples were collected from the pump discharge at these locations.
- 5) Wells MW-SF-1, MW-SF-4, and GMW-38 were voluntarily monitored by KMEP during the sentry event.



- 6) The RWQCB requested KMEP 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 located in the southeastern offsite area. KMEP began monthly monitoring at these wells in March 2010. During this sentry monitoring event, concentrations of VOCs, TPHg, and TPHfp in wells GMW-36, GMW-O-16, GMW-O-18, and PZ-5 were generally lower than those detected in the same wells during October 2009. No VOCs, TPHg, or TPHfp were detected in well GMW-O-19. No TPHg or TPHfp were detected in well GMW-O-18 and concentrations of benzene and methyl tert-butyl ether (MTBE) in this well were generally low. Tert-butyl alcohol (TBA) was detected in the primary and duplicate sample pair collected from GMW-O-18 at concentrations of 550 µg/L and 450 µg/L, respectively. TBA was also detected in the primary and duplicate sample pair collected from PZ-5 at concentrations of 58,000 µg/L and 60,000 µg/L, respectively, similar to previously detected concentrations. Groundwater extraction was recently restarted at nearby well GMW-O-18, which is expected to improve groundwater quality at PZ-5. KMEP has installed a total fluids extraction pump in well GMW-O-18 and started groundwater extraction from this well on March 29, 2010. Groundwater extraction in wells GMW-36 and GMW-O-15 has resumed since February 4, 2010, and the operation of all extraction wells during February and March 2010 is summarized in Table 3. The results of this sentry event indicate that groundwater conditions in the southeastern area have improved since the October 2009 monitoring event.
- 7) In the southern off-site area, no VOCs, TPHg, or TPHfp were detected in wells GMW-O-1, GMW-O-2, and GMW-O-3. The detected concentrations of VOCs, TPHg, and TPHfp in well GMW-O-14 were within recent historical ranges for this well.
- 8) In the western off-site area, no VOCs, TPHg, or TPHfp were detected in well WCW-13. 1,2-dichloroethane (1,2-DCA) was detected in wells WCW-3 and WCW-7. TPHfp, MTBE, and diisopropyl ether were the only analytes detected in well WCW-7. 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) An equipment blank sample was collected each day of sampling. No VOCs, TPHg, or TPHfp were detected at or above laboratory reporting limits in any of the equipment samples.

Please contact Shioh-Whei Chou or Thandar Phyu at (949) 642-0245 if you have any questions. Thank you.

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TABLE 1

**SUMMARY OF GROUNDWATER ELEVATIONS
FIRST QUARTER 2010 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	3/15/2010	78.44	---	55.01	---	23.43
EXP-2	3/15/2010	79.43	---	55.22	---	24.21
EXP-3	3/15/2010	77.58	---	54.10	---	23.48
EXP-5	3/15/2010	72.41	---	49.02	---	23.39
GMW-36	3/15/2010	74.53	---	26.80	---	47.73
GMW-38	3/15/2010	75.47	---	27.92	---	47.55
GMW-39	3/15/2010	75.05	---	27.41	---	47.64
GMW-O-1	3/15/2010	71.45	---	23.90	---	47.55
GMW-O-14	3/15/2010	74.08	---	26.71	---	47.37
GMW-O-16	3/15/2010	74.10	---	26.30	---	47.80
GMW-O-18	3/15/2010	74.36	---	26.54	---	47.82
GMW-O-19	3/15/2010	74.46	---	26.16	---	48.30
GMW-O-2	3/15/2010	72.54	---	25.10	---	47.44
GMW-O-3	3/15/2010	72.19	---	24.77	---	47.42
MW-SF-1	3/15/2010	78.93	---	31.74	---	47.19
MW-SF-4	3/15/2010	79.38	31.91	31.95	0.04	NC
PZ-5	3/15/2010	73.97	---	25.99	---	47.98
WCW-13	3/15/2010	77.70	---	31.34	---	46.36
WCW-3	3/15/2010	76.16	---	29.44	---	46.72
WCW-7	3/15/2010	76.44	---	30.00	---	46.44

Abbreviations

--- = not detected.

feet btoc = feet below top of casing.

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

NC = not calculated due to the presence of free product in the well.

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL DATA
FIRST QUARTER 2010 SENTRY EVENT
 Defense Fuel Support Point Norwalk
 Norwalk, California

Results reported in micrograms per liter (µg/L)

Sample ID ¹	Date	TPHg	TPHfp	Benzene	Toluene	Ethyl-benzene	Total Xylenes ²	1,2-DCA	MTBE	TBA	DIPE	ETBE	TAME
EXP-1	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
EXP-2	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
EXP-3	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
EXP-5	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
GMW-36	3/16/2010	8000	22,000	830	1100	140	700	<10	16	690	<10	<10	<10
GMW-38	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
GMW-39	3/16/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	130	<1.0	<1.0	<1.0
GMW-O-1	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
GMW-O-2	3/16/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
GMW-O-3	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
GMW-O-14	3/16/2010	57,000	24,000	14,000	6200	1700	4700	<200	<100	<2000	310	<200	<200
GMW-O-14 (DUP)	3/16/2010	50,000	20,000	12,000	5700	1600	4300	<200	<100	<2000	270	<200	<200
GMW-O-15	3/16/2010	530	8,900	10	1.1	0.64	2.7	<0.50	400	<10	<1.0	<1.0	1.9
GMW-O-16	3/16/2010	<50	140	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
GMW-O-18	3/16/2010	<50	<100	0.60	1.3	<0.50	1.77	<0.50	4.5	550	<1.0	<1.0	<1.0
GMW-O-18 (DUP)	3/16/2010	<50	<100	0.50	1.1	<0.50	1.48	<0.50	3.6	450	<1.0	<1.0	<1.0
GMW-O-19	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
MW-SF-1	3/16/2010	13,000	12,000	5900	56	120	55	<50	650	<500	<50	<50	<50
PZ-5	3/16/2010	1700	890	370	2.1	33	9.4	<4.0	350	58,000	<4.0	<4.0	<4.0
PZ-5 (DUP)	3/16/2010	1700	850	360	<2.0	33	9.7	<4.0	340	60,000	<4.0	<4.0	<4.0
WCW-13	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<10	<1.0	<1.0	<1.0
WCW-3	3/15/2010	<50	<100	<0.50	<0.50	<0.50	<0.50	3.5	<0.50	<10	<1.0	<1.0	<1.0
WCW-7	3/15/2010	<50	130	<0.50	<0.50	<0.50	<0.50	30	1.8	<10	4.0	<1.0	<1.0

Notes

- Well MW-SF-4 was not sampled because free product was detected in this well during this sampling event.
- 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.
 DUP = duplicate sample.
 ETBE = ethyl tert-butyl ether.
 MTBE = methyl tert-butyl ether.
 TAME = tert-amyl methyl ether.
 TBA = tert-butyl alcohol.

TPHfp = total extractable petroleum hydrocarbons quantified using a site fuel product standard.
 TPHg = total purgeable petroleum hydrocarbons quantified using a gasoline standard (C4-C13).

TABLE 3
SUMMARY OF GROUNDWATER EXTRACTION PUMP OPERATION
FIRST QUARTER 2010 SENTRY EVENT
 Defense Fuel Support Point Norwalk
 Norwalk, California

Location	Remediation Well ID	Date	Status (ON/OFF)	Comments
South-Central Area	GMW-9	3/19/2010	OFF	Off due to high selenium concentration
	GMW-22	3/19/2010	OFF	Off due to high selenium concentration
	GMW-24	3/19/2010	ON	--
	GMW-25	3/19/2010	OFF	Off due to high selenium concentration
	GWR-3	3/19/2010	OFF	Off due to high selenium concentration
	MW-SF-2	3/19/2010	OFF	Off due to high selenium concentration
	MW-SF-3	3/19/2010	OFF	Off due to high selenium concentration
	MW-SF-6	3/19/2010	OFF	Off due to high selenium concentration
	MW-SF-11	3/19/2010	OFF	Off due to high selenium concentration
	MW-SF-12	3/19/2010	ON	--
	MW-SF-13	3/19/2010	ON	--
	MW-SF-14	3/19/2010	OFF	Off due to high selenium concentration
	MW-SF-15	3/19/2010	OFF	Off due to high selenium concentration
	MW-SF-16	3/19/2010	ON	--
	MW-O-1	3/19/2010	OFF	Off due to high selenium concentration
	MW-O-2	3/19/2010	OFF	No flow, needs to be checked
	GMW-O-11	3/19/2010	ON	--
GMW-O-20	3/19/2010	OFF	Off due to high selenium concentration	
GMW-O-21	3/19/2010	OFF	Off due to high selenium concentration	
GMW-O-23	3/19/2010	ON	--	
South-Eastern Area	GMW-O-15	3/19/2010	ON	--
	GMW-O-18	3/29/2010	ON	Installed new pump to expand groundwater extraction system
	GMW-36	3/29/2010	OFF	Pump needs repair