

March 10, 2011

Mr. Paul Cho, PG, Site Cleanup Unit IV
California Environmental Protection Agency
California Regional Water Quality Control Board, Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013

Re: 2011 First Quarter Groundwater Monitoring Results
DFSP Norwalk Facility, Norwalk
NPDES No. CAC834001
File No. 90-02

Dear Mr. Cho:

Parsons is transmitting the groundwater monitoring results for the 2011 first quarter sentry event at the DFSP Norwalk Facility in Norwalk, California. A summary of the results is presented here and the details, including field and laboratory reports, will be included in the first 2011 semiannual report that will be prepared by CH2M Hill reporting the data from the entire site.

Groundwater gauging, monitoring, sample collection and laboratory analyses were performed in accordance with the sampling plan. Field activities included measuring water levels and free product thicknesses and purging and sampling of the designated wells. Eighty six (86) wells have been gauged for groundwater levels and free product. Groundwater elevations and LNAPL thickness are presented in Table 1.

In addition, fourteen wells were purged and sampled on January 10 and 11, 2011. Wells sampled by Blaine Tech Services, Inc. on behalf of Parsons were purged and sampled using low-flow methods in general conformance with ASTM D6771-02. All purged groundwater was transferred to the onsite groundwater treatment system.

All groundwater samples were labeled, entered onto a chain-of-custody form, and delivered to Calscience Environmental Laboratories, Inc., a State-certified analytical laboratory in Garden Grove, California. Groundwater samples were analyzed using U.S. Environmental Protection Agency (EPA) Method 8015 modified for total petroleum hydrocarbons (TPH) as jet propellant 5 (TPH as JP5). Groundwater samples were also analyzed for volatile organic compounds (VOCs) using EPA Method 8260B, which includes methyl-t-butyl ether (MTBE) and oxygenates. Some selected samples were also analyzed for TPH as gasoline (TPHg). Table 2 presents a summary of analytical results for TPH, BTEX, MTBE, and tert-butyl alcohol (TBA) detected in the sampled wells. Table 3 presents a summary of miscellaneous VOC compounds detected in groundwater.

2011 First Quarter Groundwater Monitoring Results

TPH was not detected in groundwater samples collected from the Exposition aquifer monitoring wells, EXP-1, EXP-2, or EXP-3. However, as shown on Table 2, there was one detection of 1,2-Dichloroethane (1,2-DCA) and MTBE in EXP-3 at 0.64 micrograms per liter ($\mu\text{g/L}$) and 1.0 $\mu\text{g/L}$, respectively.

TPH as JP5 was detected in five of the sampled wells, with GMW-59 indicating the highest concentration at 4,100 $\mu\text{g/L}$. The detected TPH as JP5 concentration of 4,100 $\mu\text{g/L}$ is higher comparing to concentration reported during previous semiannual sampling report (1,500 $\mu\text{g/L}$ in October 6, 2011). TPHg was analyzed and detected at three wells, with a maximum concentration of 3,200 $\mu\text{g/L}$ at GMW-60, which is also higher than the previous quarter.

Benzene was detected in five wells sampled, with the highest concentration present in GMW-59 (1,100 $\mu\text{g/L}$) which is higher than the previous quarter (October 6, 2010). Toluene was detected below its reporting limit of 0.50 $\mu\text{g/L}$ in all wells. The highest concentrations of ethylbenzene and total xylenes were detected at wells GMW-60 (12 $\mu\text{g/L}$) and GMW-61 (0.48 $\mu\text{g/L}$), respectively. MTBE was detected in six wells with the highest concentration of 8.8 $\mu\text{g/L}$ at GMW-59. TBA was detected in three wells with concentrations of 17 $\mu\text{g/L}$, 23 $\mu\text{g/L}$ (19 $\mu\text{g/L}$ in a field duplicate), and 10 $\mu\text{g/L}$ in wells GMW-47, GMW-59 and MW-22 MID, respectively.

Other VOCs detected during this sampling quarter included isopropylbenzene, n-butylbenzene, sec-butylbenzene, tert-butylbenzene, 1,1-dichloroethane (1,1-DCA), 1,2-DCA, cis-1,2-dichloroethene (cis-1,2-DCE), naphthalene, n-propylbenzene, diisopropyl ether (DIPE), and trichloroethene (TCE). Summary of miscellaneous VOC compounds detected is presented in Table 3.

The information presented in this letter-report will also be included in the 2011 first semiannual groundwater monitoring report for the site. If you have any questions, please call me at 602-734-1083 or Mary Lucas at 626-440-6032.

Sincerely,



Redwan Hassan, PG
Project Manager

PARSONS

Attachments: Table 1 – Groundwater Elevations
Table 2 – Summary of Groundwater Analytical Data
Table 3 – Summary of Miscellaneous Compounds Detected in Groundwater

2011 First Quarter Groundwater Monitoring Results

Distribution:

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Table 1
Groundwater Elevations
First Quarter 2011 Sentry Event
 Defense Fuel Support Point, Norwalk
 Norwalk, California

Well	Date	Casing Diameter (inches)	Casing Elevation (ftmsl)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Groundwater Elevation (ftmsl)
EXP-1	1/6/2011	4	78.44	--	54.99	--	23.45
EXP-2	1/6/2011	4	79.43	--	55.48	--	23.95
EXP-3	1/8/2011	4	77.58	--	53.91	--	23.67
GMW-5	1/6/2011	4	77.61	--	30.70	--	46.91
GMW-6	1/6/2011	4	77.31	--	30.23	--	47.08
GMW-7	1/8/2011	4	75.84	--	28.62	--	47.22
GMW-12	1/8/2011	4	75.21	--	28.05	--	47.16
GMW-15	1/6/2011	4	76.21	--	29.10	--	47.11
GMW-16	1/8/2011	4	77.00	--	26.47	--	50.53
GMW-17	1/8/2011	4	74.66	--	NM	--	--
GMW-18	1/8/2011	4	75.36	--	27.86	--	47.50
GMW-19	1/8/2011	4	76.83	--	NM	--	--
GMW-20	1/8/2011	4	75.10	--	27.81	--	47.29
GMW-31	1/7/2011	4	76.50	--	29.40	--	47.10
GMW-35	1/8/2011	4	76.12	29.03	29.04	0.01	47.09
GMW-40	1/7/2011	4	73.13	--	NM	--	--
GMW-41	1/7/2011	4	74.46	--	27.58	--	46.88
GMW-42	1/8/2011	4	75.50	--	28.03	--	47.47
GMW-43	1/8/2011	4	74.44	--	26.95	--	47.49
GMW-44	1/8/2011	4	74.45	--	27.47	--	46.98
GMW-45	1/6/2011	4	75.67	--	28.75	--	46.92
GMW-47	1/6/2011	4	75.98	--	29.05	--	46.93
GMW-48	1/6/2011	4	75.03	--	27.29	--	47.74
GMW-50	1/6/2011	4	75.51	--	28.58	--	46.93
GMW-51	1/6/2011	4	75.93	--	28.96	--	46.97
GMW-52	1/8/2011	4	75.03	--	27.77	--	47.26
GMW-53	1/8/2011	4	74.90	--	27.67	--	47.23
GMW-54	1/7/2011	4	75.16	--	28.14	--	47.02
GMW-55	1/7/2011	4	74.60	--	27.61	--	46.99
GMW-56	1/6/2011	4	76.52	--	29.46	--	47.06
GMW-57	1/6/2011	4	76.66	--	29.87	--	46.79
GMW-58	1/10/2011	4	75.48	--	27.38	--	48.10
GMW-59	1/6/2011	4	75.28	--	27.18	--	48.10
GMW-60	1/8/2011	4	76.24	--	29.09	--	47.15
GMW-61	1/8/2011	4	75.60	--	28.37	--	47.23
GMW-62	1/10/2011	4	76.34	28.78	29.08	0.30	47.51
GMW-63	1/8/2011	4	77.32	--	29.35	--	47.97
GMW-64	1/8/2011	4	75.84	--	27.81	--	48.03
GMW-65	1/8/2011	4	76.78	--	29.39	--	47.39
GW-1	1/6/2011	4	75.46	--	29.99	--	45.47
GW-2	1/6/2011	4	76.39	--	32.45	--	43.94
GW-4	1/6/2011	4	74.77	--	NM	--	--
GW-5	1/6/2011	4	76.99	--	30.18	--	46.81
GW-6	1/6/2011	4	76.38	--	29.45	--	46.93
GW-7	1/7/2011	4	76.76	--	28.12	--	48.64
GW-8	1/6/2011	4	76.15	--	29.32	--	46.83
GW-13	1/6/2011	6	77.00	--	33.10	--	43.90
GW-14	1/8/2011	6	76.54	--	29.45	--	47.09
MW-10	1/6/2011	4	79.12	--	32.22	--	46.90

Table 1
Groundwater Elevations
First Quarter 2011 Sentry Event
Defense Fuel Support Point, Norwalk
Norwalk, California

Well	Date	Casing Diameter (inches)	Casing Elevation (ftmsl)	Depth to LNAPL (ft)	Depth to Water (ft)	LNAPL Thickness (ft)	Groundwater Elevation (ftmsl)
MW-11	1/7/2011	4	78.17	--	31.12	--	47.05
MW-13	1/6/2011	4	78.25	--	31.27	--	46.98
MW-14	1/6/2011	4	78.60	--	32.86	--	45.74
MW-16	1/8/2011	4	76.87	--	29.63	--	47.24
MW-17	1/6/2011	4	77.86	--	30.93	--	46.93
MW-22 (MID)	1/7/2011	4	79.57	--	34.50	--	45.07
MW-23 (MID)	1/6/2011	4	79.59	--	32.53	--	47.06
MW-24	1/6/2011	4	78.51	--	31.96	--	46.55
MW-25	1/7/2011	4	79.15	--	32.76	--	46.39
MW-26	1/7/2011	4	77.40	--	30.77	--	46.63
MW-27	1/7/2011	4	78.46	--	31.53	--	46.93
MW-28	1/7/2011	4	78.53	--	31.13	--	47.40
MW-29	1/8/2011	4	79.13	--	31.90	--	47.23
PZ-3	1/8/2011	2	76.17	--	28.85	--	47.32
PZ-4	1/8/2011	2	76.13	--	28.98	--	47.15
TF-8	1/7/2011	4	74.86	--	27.90	--	46.96
TF-9	1/7/2011	4	74.47	--	27.38	--	47.09
TF-10	1/7/2011	4	73.61	--	26.64	--	46.97
TF-11	1/8/2011	4	74.40	--	27.17	--	47.23
TF-13	1/8/2011	4	75.47	--	28.21	--	47.26
TF-15	1/8/2011	4	74.78	--	27.55	--	47.23
TF-16	1/8/2011	4	75.89	--	28.72	--	47.17
TF-18	1/8/2011	4	73.94	26.65	26.86	0.21	47.26
TF-19	1/8/2011	4	75.61	--	27.66	--	47.95
TF-20	1/8/2011	4	75.59	--	28.73	--	46.86
TF-21	1/8/2011	4	75.60	--	27.89	--	47.71
TF-23	1/8/2011	4	75.31	--	27.88	--	47.43
TF-24	1/6/2011	4	76.43	--	29.45	--	46.98
TF-25	1/7/2011	4	74.85	--	27.63	--	47.22
WCW-2	1/8/2011	4	75.34	--	28.36	--	46.98
WCW-3	1/8/2011	4	76.16	--	29.58	--	46.58
WCW-4	1/8/2011	4	78.05	--	31.57	--	46.48
WCW-5	1/8/2011	4	73.49	--	26.15	--	47.34
WCW-6	1/8/2011	4	75.52	--	28.58	--	46.94
WCW-7	1/8/2011	4	76.44	--	30.23	--	46.21
WCW-8	1/8/2011	4	77.34	--	31.27	--	46.07
WCW-9	1/8/2011	4	77.74	--	31.37	--	46.37
WCW-10	1/8/2011	4	74.06	--	25.92	--	48.14
WCW-11	1/8/2011	4	75.29	--	27.67	--	47.62
WCW-12	1/8/2011	4	76.27	--	29.16	--	47.11
WCW-13	1/8/2011	4	77.70	--	31.00	--	46.70
WCW-14	1/8/2011	4	78.81	--	32.13	--	46.68

Table 2
Summary of Groundwater Analytical Data
First Quarter 2011 Sentry Event
 Defense Fuel Support Point, Norwalk
 Norwalk, California

Results reported in micrograms per liter (µg/L)

Well	Sample Date	TPH as JP5 ¹	TPHg ²	Benzene	Toluene	Ethyl-benzene	O-xylene	P/M-xylene	1,2-DCA ³	MTBE ⁴	TBA ⁵
EXP-1	10-Jan-11	< 100	< 100	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 10
EXP-2	10-Jan-11	< 100	< 100	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 10
EXP-3	10-Jan-11	< 100	< 100	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.64	1	< 10
GMW-47	11-Jan-11	1600	--	5.2	< 0.50	0.75	< 0.50	< 0.50	< 0.50	1.2	17
GMW-57	10-Jan-11	< 100	--	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 10
GMW-58	10-Jan-11	410	--	5.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.46	< 10
GMW-58 DUP	10-Jan-11	410	--	5.8	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.43	< 10
GMW-59	11-Jan-11	4100	2500	1100	< 0.50	1.1	< 0.50	< 0.50	< 0.50	8.8	23
GMW-59 DUP	11-Jan-11	3900	--	1100	< 0.50	1	< 0.50	< 0.50	< 0.50	8.3	19
GMW-60	11-Jan-11	2100	3200	870	< 0.50	12	< 0.50	< 0.50	< 0.50	< 0.50	< 10
GMW-61	10-Jan-11	910	800	190	< 0.50	1.8	< 0.50	0.48	< 0.50	< 0.50	< 10
GMW-63	10-Jan-11	< 100	--	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 10
GMW-64	10-Jan-11	< 100	--	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 10
GMW-65	10-Jan-11	< 100	--	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 10
MW-14	10-Jan-11	< 100	--	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.66	< 10
MW-22 MID	10-Jan-11	120	--	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	4.8	6.2	10

Notes:

¹TPH as JP5 = total petroleum hydrocarbons against a jet propellant 5 standard.

²TPHg = total petroleum hydrocarbons against a gasoline standard.

³1,2-DCA = 1,2-Dichloroethane.

⁴MTBE = Methyl tert-butyl ether.

⁵TBA = Tert-butyl alcohol.

⁶< 100 = compound not detected at or above the indicated reporting limit.

⁷DUP = duplicate.

Table 3
Summary of Miscellaneous VOC Compounds Detected in Groundwater
First Quarter 2011 Sentry Event
 Defense Fuel Support Point, Norwalk
 Norwalk, California

Results reported in micrograms per liter (µg/L)

Well	Sample Date	1,1-Dichloroethane	c-1,2-Dichloroethene	Diisopropyl Ether (DIPE)	Isopropylbenzene	Naphthalene	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	tert-Butylbenzene	Trichloroethene
EXP-1	10-Jan-11	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
EXP-2	10-Jan-11	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	0.31
EXP-3	10-Jan-11	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
GMW-47	11-Jan-11	< 1.0	< 1.0	< 2.0	17	6.1	< 1.0	1.6	2.1	0.61	< 1.0
GMW-57	10-Jan-11	< 1.0	< 1.0	< 2.0	0.32	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
GMW-58	10-Jan-11	0.62	< 1.0	< 2.0	2.4	< 10	< 1.0	< 1.0	0.33	0.33	< 1.0
GMW-58 DUP	10-Jan-11	0.69	< 1.0	< 2.0	2.5	< 10	< 1.0	< 1.0	0.3	0.31	< 1.0
GMW-59	11-Jan-11	< 1.0	3.5	< 2.0	24	22	0.6	16	2.9	0.82	< 1.0
GMW-59 DUP	11-Jan-11	< 1.0	3.4	< 2.0	25	22	1	17	3.1	0.88	< 1.0
GMW-60	11-Jan-11	< 1.0	< 1.0	< 2.0	92	130	4.5	94	12	1.8	< 1.0
GMW-61	10-Jan-11	< 1.0	< 1.0	< 2.0	43	7.5	1.3	13	6.4	0.99	< 1.0
GMW-63	10-Jan-11	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
GMW-64	10-Jan-11	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
GMW-65	10-Jan-11	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MW-14	10-Jan-11	< 1.0	< 1.0	< 2.0	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
MW-22 MID	10-Jan-11	< 1.0	< 1.0	0.82	< 1.0	< 10	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0

Notes:

¹<1.0 = compound not detected at or above the indicated reporting limit.