



Transmittal

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Date: August 12, 2011 **From:** Vladimir Carino
To: Mr. Paul Cho CH2M HILL
California Regional Water Quality 6 Hutton Centre Drive, Suite 700
Control Board – Los Angeles Santa Ana, CA 92707
Region (RWQCB)
320 West 4th Street, Suite 200
Los Angeles, CA 90013

Subject: Remediation System Operational Status, July 2011

Project Name: Defense Fuel Support Point (DFSP) Norwalk

Item Description

1 Table 1 – Remediation Well Construction and Status

Remarks

On behalf of SFPP, L.P., an operating partnership of Kinder Morgan Energy Partners, L.P. (KMEP), CH2M HILL is transmitting this monthly remediation system operational status for July 2011. As requested in the RWQCB's July 20, 2010 e-mail, this status report includes the following:

1. Groundwater and soil vapor extracted from individual wells for treatment;
2. Treated groundwater discharged under NPDES; and
3. System down time, wells affected, and reason for downtime.

A summary of remediation wells in the south-central, southeastern, and West Side Barrier areas is presented in Table 1. Table 1 includes well identifications, well construction details, well use, and operational status as of July 30, 2011. Operational status and maintenance of the system is briefly discussed below.

Tasks performed for operation and maintenance of the remediation systems during the reporting period included:

- Weekly maintenance and monitoring of the south-central and southeastern SVE and TFE/GWE wells, and soil vapor and groundwater treatment systems (collectively referred to as remediation systems);
- Inspection of groundwater extraction pumps;
- Collection and analysis of treatment system influent soil vapor and groundwater samples;
- Collection and analysis of treatment system effluent soil vapor and water samples;
- Extraction well redevelopment;
- Installation of a new chart recorder to document air flow and temperatures for the SVE system and daily flow for the TFE/GWE system;

- Replacement and calibration of total influent and southeastern area influent flow meters and flow sensors; and
- Installation of solenoid valves to pneumatic pump air compressors.

During the reporting period, remediation system inspections were performed on a weekly basis and volumes of extracted groundwater, hours of operation, and other system parameters were recorded on an approximately weekly basis during system operation.

Soil Vapor Extraction and Treatment System

The SVE system was operational for approximately 498 hours (65% uptime) from July 1, 2011 to August 2, 2011. The SVE wells in operation during July include MW-SF-3, MW-SF-16, GMW-10, GMW-24, GMW-25, GWR-3, MW-O-1, MW-O-2, GMW-O-11, GMW-O-12, GMW-O-20, and GMW-O-23 in the south-central area; and GMW-O-15 and GMW-O-18 in the southeastern area. The system was turned off on June 27, 2011 to repair the actuator and motor for the dilution and process valves of the system and to install a digital chart recorder. The repairs were completed and the system was back online on July 12, 2011.

Total Fluids and Groundwater Extraction and Treatment System

During the last reporting period, KMEP's remediation contractor (Cardno ERI), completed installation of the above-ground electrical and plumbing for the two temporary Fluidized Bed Bioreactor (FBBR) units, which are used in conjunction with the existing (upstream) groundwater treatment system to treat tertiary-butyl alcohol (TBA), a new NPDES discharge parameter. The FBBR units are fully operational but performance testing will continue through the next reporting period.

The TFE/GWE system was operational for approximately 670 hours (87% uptime) from July 1, 2011 to August 2, 2011. The TFE/GWE wells in operation at the end of July include MW-SF-15 and MW-SF-16 in the south-central area; and GMW-O-15, GMW-O-18, and GMW-36 in the southeastern area. The following extraction wells were redeveloped from July 13 to 22, 2011: GMW-22, GWR-3, GMW-9, MW-SF-2, MW-SF-3, and MW-SF-12 through MW-SF-16. The TFE/GWE system remained online during well redevelopment activities. On July 26, 2011, the TFE/GWE system was off on arrival due to a high water level in the transfer tank. The bag filters were replaced and the system was restarted on the same day. On July 27, 2011, the TFE/GWE system was again off on arrival due to a high level in the transfer tank. In the afternoon of July 27, 2011, the second FBBR unit turned off due to a clogged pump from its effluent tank. To equalize the flow entering the upstream treatment system and the first FBBR unit, one extraction well was turned off. On July 29, 2011, the TFE/GWE system was off on arrival due to the high level in the transfer tank. The motor starter for the transfer pump was discovered to be faulty and may have been the reason for the system shut-downs on July 26 and 27, 2011. The pump motor was repaired and the system was restarted on the same day.

Total groundwater extracted, treated, and discharged under the NPDES permit in July 2011 was 596,327 gallons. The southeastern area influent quantities were not calculated for July since the southeastern area influent meter was inoperable. The electrical wiring for the new flow meter is being re-routed to an independent power source. It is anticipated that the new meter will be operational later this quarter.

Please contact Vladimir Carino at 714.435.6017 if you have any questions.

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**TABLE 1
REMEDIATION WELL CONSTRUCTION AND STATUS**

SFPP, L.P.
Defense Fuel Support Point Norwalk
Norwalk, California

Remediation Area	Remediation Well ID	Installation Date	Top of Well Casing Elevation (ft msl)	Well Screen Interval (ft bgs)	Remediation Well Function	Well Operation Status on July 30, 2011 ¹	
						SVE	TFE/GWE
South-Central	MW-SF-1	6/18/1990	78.93	25 - 40	SVE	OFF	---
	MW-SF-2	6/18/1990	78.53	25 - 40	SVE; TFE	OFF	OFF
	MW-SF-3	6/18/1990	78.12	25 - 40	SVE; TFE	ON	OFF
	MW-SF-4	6/19/1990	79.38	25 - 40	SVE	OFF	---
	MW-SF-5	9/19/1990	79.74	23 - 38	SVE	OFF	---
	MW-SF-6	9/19/1990	76.80	25 - 40	SVE; TFE	OFF	OFF
	MW-SF-9	6/15/1995	74.10	NA	SVE	OFF	---
	MW-SF-10	9/23/2003	76.53	10 - 30	SVE	OFF	---
	MW-SF-11	6/19/2007	78.56	20 - 40	SVE; TFE	OFF	OFF
	MW-SF-12	6/18/2007	78.07	20 - 40	SVE; TFE	OFF	OFF
	MW-SF-13	6/19/2007	73.40	20 - 40	SVE; TFE	OFF	OFF
	MW-SF-14	6/21/2007	78.16	20 - 40	SVE; TFE	OFF	OFF
	MW-SF-15	6/21/2007	78.27	20 - 40	SVE; TFE	OFF	ON
	MW-SF-16	6/20/2007	78.21	20 - 40	SVE; TFE	ON	ON
	GMW-9	7/8/1991	74.44	20 - 50	SVE; TFE	OFF	OFF
	GMW-10	7/8/1991	74.67	25 - 50	SVE	ON	---
	GMW-22	8/2/1991	74.17	25 - 60	SVE; TFE	OFF	OFF
	GMW-24	8/5/1991	74.04	25 - 60	SVE; TFE	ON	OFF
	GMW-25	1/10/1992	74.29	20 - 50	SVE; GWE	ON	OFF
	GWR-3	1/10/1992	74.93	20 - 50	SVE; GWE	ON	OFF
	VEW-1	NA	NA	NA	SVE	OFF	---
	VEW-2	NA	NA	NA	SVE	OFF	---
	MW-O-1	1/22/1991	75.48	25 - 40	SVE; TFE	ON	OFF
	MW-O-2	1/23/1991	71.90	25 - 40	SVE; TFE	ON	OFF
	GMW-O-11	5/20/1992	74.17	20 - 50	SVE; TFE	ON	OFF
	GMW-O-12	5/21/1992	73.49	20 - 50	SVE	ON	---
	GMW-O-20	6/15/1995	73.32	NA	SVE; TFE	ON	OFF
	GMW-O-21	10/1/1997	71.43	26 - 46	TFE	---	OFF
	GMW-O-23	6/25/2007	73.63	20 - 40	SVE; TFE	ON	OFF
	MW-18 (MID)	6/10/1991	75.67	50 - 60	SVE	OFF	OFF
HW-2	NA	NA	NA	SVE	OFF	OFF	
Southeastern	GMW-O-15	4/19/1994	74.23	20 - 50	SVE; TFE	ON	ON
	GMW-O-18	7/25/1994	74.36	21 - 40	SVE; TFE	ON	ON
	GMW-36	4/11/1994	74.53	20 - 50	TFE	---	ON
	GMW-SF-9	4/1/2003	73.00	37 - 46	GWE	---	OFF
	GMW-SF-10	4/2/2003	75.77	37 - 46	GWE	---	OFF
West Side Barrier	BW-2	5/20/1996	73.57	27 - 47	GWE	---	OFF
	BW-3	5/17/1996	74.16	31 - 50	GWE	---	OFF
	BW-4	5/20/1996	74.61	28 - 47	GWE	---	OFF
	BW-5	5/23/1996	73.59	27 - 46	GWE	---	OFF
	BW-6	5/22/1996	73.48	28 - 47	GWE	---	OFF
	BW-7	5/22/1996	74.65	27 - 46	GWE	---	OFF
	BW-8	5/21/1996	75.08	27 - 46	GWE	---	OFF
	BW-9	5/21/1996	76.19	27 - 46	GWE	---	OFF

Notes

1. Based on information provided by SFPP, L.P.

Abbreviations

--- = not applicable
 NA = information not available
 ft msl = feet above mean sea level based on the National Geodetic Vertical Datum of 1929.
 ft bgs = feet below ground surface
 GWE = groundwater extraction
 SVE = soil vapor extraction
 TFE = total fluids extraction