



Transmittal

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Date: March 15, 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, February 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 February 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 February 22, 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, TFE/GWE, 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; and
- Rewiring of the SVE system thermocouples.

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 643 hours (96% uptime) during February 2011. The SVE wells in operation during February include GMW-10, GMW-O-11, GMW-O-12, GMW-O-20, GMW-O-23, GWR-3, MW-O-1, MW-O-2, MW-SF-15, MW-SF-16 from the south central area; and GMW-O-15 and GMW-O-18 from the southeastern area. The SVE system was shut down on February 8, 2011 to remove water from the SVE manifold. The SVE system was off on arrival on February 15, 2011. The cause of the shutdown is unknown as there was no alarm indicated. The system was turned on the same day. There were no shut downs of the SVE system due to high temperature alarms during the month of February. It is suspected that the frequent high temperature alarms during previous months were the result of faulty wiring of the thermocouples. KMEP technicians, with assistance from a remediation system contractor, have initiated the re-wiring of the thermocouples and will continue to upgrade the wiring to the SVE system.

Total Fluids and Groundwater Extraction and Treatment System

The TFE/GWE system was operational for approximately 599 hours (89% uptime) during February 2011. The TFE/GWE wells in operation during February include MW-SF-3, MW-SF-11, MW-SF-13, MW-SF-14, MW-SF-15, MW-SF-16, GMW-22, and GMW-O-21 in the south-central area; and GMW-O-15, GMW-O-18, and GMW-36 in the southeastern area. As stated in the January 2011 Remediation System Operational Status report, there was no flow from the southeastern area wells to the TFE/GWE system during the first week of February 2011 due to a break in the 1-inch diameter water line near well GMW-36. The 1-inch diameter water line to this well is encased by a 4-inch diameter vapor line; therefore, the extracted groundwater that leaked from the 1-inch diameter line was contained in the outer 4-inch diameter line. The line was repaired on February 10, 2011, immediately after the break was discovered, and normal groundwater extraction from this area subsequently resumed. The TFE/GWE system was off on arrival on February 22, 2010 due to a high water level alarm for the transfer tank. The bag filters were clogged and were changed out the same day. On February 28, 2011, the TFE/GWE system was off on arrival due to a broken transfer pump. The TFE/GWE system remains shutdown but it is anticipated the system will be in operation later this week, once the transfer pump is replaced.

Groundwater extracted, treated, and discharged under the NPDES permit in February 2011 is as follows:

- Groundwater extracted from the south-central area wells: 1,113,496 gallons
- Groundwater extracted from the southeastern area wells: 105,639 gallons
- Treated groundwater discharged under NPDES: 1,219,135 gallons

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 February 22, 2011 ¹
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	OFF; ON
	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	--	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; ON
	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; ON
	MW-SF-14	6/21/2007	78.16	20 - 40	SVE; TFE	OFF; ON
	MW-SF-15	6/21/2007	78.27	20 - 40	SVE; TFE	ON; 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; ON
	GMW-24	8/5/1991	74.04	25 - 60	SVE; TFE	OFF; OFF
	GMW-25	1/10/1992	74.29	20 - 50	SVE; GWE	OFF; OFF
	GWR-3	1/10/1992	74.93	20 - 50	SVE; GWE	ON; OFF
	VEW-1	--	--	--	SVE	OFF
	VEW-2	--	--	--	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	--	SVE; TFE	ON; OFF
	GMW-O-21	10/1/1997	71.43	26 - 46	TFE	ON
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	
HW-2	--	--	--	SVE	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. The well operations listed correspond to the well functions indicated in the previous column. Based on information provided by SFPP, L.P.

Abbreviations

-- = 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