



Transmittal

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Date: June 15, 2011 **From:** Vladimir Carino
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Subject: Remediation System Operational Status, May 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 May 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 May 20, 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;
- Replacement of carbon from the granular activated carbon (GAC) vessels; and
- Connection of a fluidized bed bioreactor (FBBR).

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 658 hours (86% uptime) from April 29, 2011 to May 31, 2011. The SVE wells in operation during May include MW-SF-3, MW-SF-12, MW-SF-16, GMW-10, 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 May 3, 10, 17, and 20, 2011 for routine system maintenance. The SVE system was restarted during those respective days. The SVE system was turned off from May 24 through May 27, 2011 to allow the collection of routine (pumping) water levels from select monitoring wells in the south-central and southeastern areas.

Total Fluids and Groundwater Extraction and Treatment System

The TFE/GWE system was operational for approximately 658 hours (86% uptime) from April 29, 2011 to May 31, 2011. The TFE/GWE wells in operation during May include MW-SF-11, MW-SF-13, 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 TFE/GWE system was off on arrival on May 3, 6, 17, and 31, 2011 due to clogged bag filters. The clogged bag filters caused water in the transfer tank to reach the high level switch, which shuts down the TFE/GWE system. The TFE/GWE system was turned off on May 10, 2011 to clean the oil water separator, transfer tank, and the bag filter housing. The TFE/GWE system was restarted on the same day. On May 20, 2011, the TFE/GWE system was turned off to change the carbon from the lead GAC vessel. The system was restarted on May 21, 2011.

KMEP's remediation contractor, Cardno ERI, completed installation of the above-ground electrical and plumbing for the first temporary FBBR unit, which will be used in conjunction with the existing groundwater treatment system to treat tertiary-butyl alcohol (TBA). The FBBR unit is currently being operated and tested for performance, and is anticipated to be fully operational by late June 2011. A second FBBR unit also has been delivered to the site. This unit will be installed in parallel with the first FBBR unit, and is anticipated to be online by August 2011.

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

- Groundwater extracted from the south-central area wells: 926,908 gallons
- Groundwater extracted from the southeastern area wells: 365,455 gallons
- Treated groundwater discharged under NPDES: 1,292,363 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 May 20, 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	ON
	MW-SF-12	6/18/2007	78.07	20 - 40	SVE; TFE	ON	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	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	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	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