



**Transmittal**

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**Date:** February 15, 2012 **From:** Vladimir Carino  
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**Subject:** Remediation System Operational Status, January 2012  
**Project Name:** SFPP Norwalk Pump Station, Norwalk, California

Item	Description
1	Table 1 – Remediation Well Construction and Status

**Remarks**

On behalf of SFPP, L.P., (SFPP) an operating partnership of Kinder Morgan Energy Partners, L.P. (KMEP), CH2M HILL is transmitting this monthly remediation system operational status for January 2012. 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 the National Pollutant Discharge Elimination System (NPDES) permit
3. System downtime, 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 January 31, 2012. Operational status and maintenance of the system are 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 soil vapor extraction (SVE) and total fluids extraction/groundwater extraction (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 groundwater samples
- Collection and analysis of treatment system effluent soil vapor and water samples

- Replacement of the SVE flow sensor with a pitot tube to more accurately measure flow through the system
- Replacement of the memory card for the digital chart recorder
- Installation of a new transfer pump downstream of the oil water separator (OWS)
- Replacement of carbon from the lead polishing liquid phase granular activated carbon (LGAC) vessel.

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. Effluent flow readings for the TFE/GWE system and SVE system temperature and flow readings are recorded daily using the digital chart recorder. These data are downloaded by the KMEP technicians at least weekly.

### **Soil Vapor Extraction and Treatment System**

The SVE system was on for approximately 732 hours (95 percent uptime) from December 30 to January 31, 2012. The following SVE wells in operation at the end of January include: MW-SF-3, MW-SF-9, MW-SF-11, MW-SF-12, MW-SF-16, GMW-9, GMW-10, GMW-22, GMW-24, GMW-25, GWR-3, MW-O-1, MW-O-2, GMW-O-11, GMW-O-12, GMW-O-20, GMW-O-23, GMW-O-15, and GMW-O-18. The SVE system was shut down on January 3, 2012 to troubleshoot the chart recorder. The system could not be turned back on due to a temperature control issue. The temperature control was reprogrammed on January 4, 2012 and the system was restarted. The system was turned off on January 6, 2012 to replace the memory card of the chart recorder. The system was turned back on the same day. On January 10, 2012, the system was turned off to replace the effluent sample tubing. The system was turned back on the same day.

### **Total Fluids and Groundwater Extraction and Treatment System**

The TFE/GWE system was operational for approximately 409 hours (53 percent uptime) from December 30 to January 31, 2012. The TFE/GWE wells in operation at the end of January include MW-SF-3, MW-SF-11, MW-SF-14, 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 system was shut down between December 30, 2011 and January 2, 2012 due to malfunctioning of the chart recorder which records daily effluent flow. The system was restarted on January 3, 2012. The memory card was discovered to be faulty and was replaced on January 6, 2012. On January 17, 2012, the system was off on arrival due to a high level in the transfer tank. The transfer pump was inoperable and therefore, it was replaced on January 19, 2012. The TFE/GWE system was restarted the next day on January 20, 2012. The system was off on arrival on January 24, 2012 due to a high level in the transfer tank. The bag filters downstream of the transfer tank were replaced and the LGAC vessels downstream of the bag filters were backwashed. The TFE/GWE system was restarted on the same day. Occasional shutdowns of the system have also occurred due to precipitates clogging the lead polishing LGAC vessel downstream of the fluidized bed bioreactors. Currently, the pH is being adjusted at the bioreactors to reduce the formation of these precipitates. Additional pH adjustments will also be made at the process stream just prior to the lead LGAC polishing vessel.

Total groundwater extracted, treated, and discharged under the NPDES permit in January 2012 was approximately 358,498 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 January 31, 2012 <sup>1</sup>	
						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	<b>ON</b>	<b>ON</b>
	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	<b>ON</b>	---
	MW-SF-10	9/23/2003	76.53	10 - 30	SVE	OFF	---
	MW-SF-11	6/19/2007	78.56	20 - 40	SVE; TFE	<b>ON</b>	<b>ON</b>
	MW-SF-12	6/18/2007	78.07	20 - 40	SVE; TFE	<b>ON</b>	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	<b>ON</b>
	MW-SF-15	6/21/2007	78.27	20 - 40	SVE; TFE	OFF	<b>ON</b>
	MW-SF-16	6/20/2007	78.21	20 - 40	SVE; TFE	<b>ON</b>	<b>ON</b>
	GMW-9	7/8/1991	74.44	20 - 50	SVE; TFE	<b>ON</b>	OFF
	GMW-10	7/8/1991	74.67	25 - 50	SVE	<b>ON</b>	---
	GMW-22	8/2/1991	74.17	25 - 60	SVE; TFE	<b>ON</b>	OFF
	GMW-24	8/5/1991	74.04	25 - 60	SVE; TFE	<b>ON</b>	OFF
	GMW-25	1/10/1992	74.29	20 - 50	SVE; GWE	<b>ON</b>	OFF
	GWR-3	1/10/1992	74.93	20 - 50	SVE; GWE	<b>ON</b>	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	<b>ON</b>	OFF
	MW-O-2	1/23/1991	71.90	25 - 40	SVE; TFE	<b>ON</b>	OFF
	GMW-O-11	5/20/1992	74.17	20 - 50	SVE; TFE	<b>ON</b>	OFF
	GMW-O-12	5/21/1992	73.49	20 - 50	SVE	<b>ON</b>	---
	GMW-O-20	6/15/1995	73.32	NA	SVE; TFE	<b>ON</b>	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	<b>ON</b>	OFF	
MW-18 (MID)	6/10/1991	75.67	50 - 60	SVE	OFF	--	
HW-2	NA	NA	NA	SVE	OFF	--	
Southeastern	GMW-O-15	4/19/1994	74.23	20 - 50	SVE; TFE	<b>ON</b>	<b>ON</b>
	GMW-O-18	7/25/1994	74.36	21 - 40	SVE; TFE	<b>ON</b>	<b>ON</b>
	GMW-36	4/11/1994	74.53	20 - 50	TFE	---	<b>ON</b>
	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