



**Transmittal**

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**Subject:** Remediation System Operational Status, February 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 February 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 February 28, 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
- Inspection and minor repairs of soil vapor extraction wells
- Draining of the SVE well manifold of condensate
- Collection and analysis of treatment system influent and midpoint groundwater samples

- Collection and analysis of treatment system effluent soil vapor and water samples
- Replacement of carbon from the lead polishing liquid phase granular activated carbon (LGAC) vessel
- Installation of oxygen booster for one of the fluidized bed bioreactors
- Replacement of solenoid valve for the proportional controller with an actuated ball valve.

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 574 hours (85 percent uptime) from January 31 to February 28, 2012. The following SVE wells in operation at the end of February include: MW-SF-3, MW-SF-12, MW-SF-16, GMW-10, GMW-24, GMW-25, GWR-3, MW-O-1, MW-O-2, GMW-O-12, GMW-O-20, GMW-O-23, HW-2 and southeastern wells GMW-O-15, and GMW-O-18. The SVE system was shut down on February 24, 2012 to drain the condensate from the SVE manifold. The SVE was turned back on the same day and the technicians left the site. However, the system unexpectedly shut down minutes after the technicians left the site. The system was off until the technicians came back the following Tuesday, February 28, 2012 to turn on the system. The SVE system has been fully operational since this time.

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

The TFE/GWE system was operational for approximately 633 hours (94 percent uptime) from January 31 to February 28, 2012. The TFE/GWE wells in operation at the end of February include MW-SF-3, MW-SF-14, MW-SF-16, and GMW-O-21 in the south-central area; and GMW-O-15 and GMW-O-18 in the southeastern area. The pump in GMW-36 in the southeastern wells was removed, inspected, and repaired. The pump was put back in place on March 6, 2012, and is now fully operational.

A high level in the equalization tank would occasionally turn the system off earlier in the month. The reason for the high level was due to the lack of flow through the polishing LGAC vessels. The carbon in the lead LGAC vessel would solidify, which reduced the flow through the system. The carbon in the lead LGAC vessel was changed out on January 31 and February 1, 2012. In addition, the solenoid valve for the proportional controller did not function properly and was replaced with an actuated ball valve during the week of February 13, 2012. The proportional controller slows down the influent flow (from the extraction wells) to match the flow through the bioreactors. With the proportional controller working properly, the high level in the equalization tank was never activated and therefore, less shutdowns during the end of the month. Due to the low concentrations of dissolved oxygen in one of the fluidized bed bioreactors, solids formed from dying biomass and clogged the bag filters downstream of the bioreactor. An oxygen booster was installed at the bioreactor on February 24, 2012, to provide sufficient oxygen to keep the biomass healthy.

Total groundwater extracted, treated, and discharged under the NPDES permit in February 2012 was approximately 627,314 gallons.

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

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**TABLE 1  
REMEDATION 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 28, 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	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	<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	OFF
	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	OFF	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	OFF	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	OFF	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	--	<b>ON</b>
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	<b>ON</b>	--	
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	---	OFF
	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