



**Transmittal**

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**Date:** December 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 Region Santa Ana, CA 92707  
(RWQCB)  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, CA 90013

**Subject:** Remediation System Operational Status, November 2011

**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 November 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 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 November 22, 2011. 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
- Cleaning of the flame arrestor for the SVE catalytic oxidizer and calibration of the air flow meter

- Replacement of the temporary fluidized bed bioreactor with a new permanent fluidized bed bioreactor
- Replacement of the 9,000 gallon equalization tank with a 3,000 gallon equalization tank
- Installation of a proportional controller at the TFE/GWE influent to keep the TFE/GWE influent flow similar to the influent flow to the TBA treatment system
- Modification of the concrete containment berm heights (raised by 6 inches)
- Connection of the TFE/GWE system effluent flow meter to the digital chart recorder
- Connection of the TFE/GWE system influent and effluent flow meters to an independent power source.

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 newly installed 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 92 hours (14 percent uptime) from November 1 to November 29, 2011. The SVE system was off during most of November because of mechanical issues with the SVE flow sensor. Malfunctioning of the SVE flow sensor was due to damage to the flow sensor stainless steel tubing and a plugged flame arrestor. The stainless steel tubing for the flow sensor was replaced by KMEP's remediation contractor, Northstar. Northstar also inspected and cleaned the flame arrestor the week of November 7, 2011. On November 22, 2011, the flow recorder was recalibrated based on the blower curve of the blower. It is anticipated that during the next reporting period, pitot tubes will be installed to better estimate flow through the system.

On November 29, 2011, the system was off on arrival due to the pilot light malfunctioning. Troubleshooting of the pilot light has been ongoing and is expected to be resolved during December.

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

The TFE/GWE system was operational for approximately 284 hours (42 percent uptime) from November 1 to November 29, 2011. The TFE/GWE wells in operation at the end of November include MW-SF-11, 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.

On November 4, 2011, the system was off on arrival due to high level in the transfer tank, which was caused by the bag filters down stream of the oil water separator being clogged. The bag filters were replaced and the system was restarted the same day.

On November 7, 2011, and November 8, 2011, the system was down on arrival due to water in the product tank. The air vent for the transfer tank was blocked, which caused water to go into the product tank instead of being treated by the TFE/GWE system. The vent was repaired on November 8, 2011. The system stayed off to connect the new southeastern influent flow meter, total influent flow meter, and total effluent flow meter to a separate power source from the TFE/GWE and SVE systems. The system was restarted on November 15, 2011.

On November 27, 2011, the system was turned off to drain the 9,000 gallon equalization tank so that it could be moved and replaced with the 3,000 gallon equalization tank. The system was restarted on December 2, 2011.

Total groundwater extracted, treated, and discharged under the NPDES permit in November 2011 was approximately 281,827 gallons. The monthly southeastern area influent quantities were not calculated since the southeastern area influent meter was inoperable for the first half of November 2011.

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 November 22, 2011 <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	OFF	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	<b>ON</b>
	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	<b>ON</b>
	MW-SF-16	6/20/2007	78.21	20 - 40	SVE; TFE	OFF	<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	OFF	---
	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	OFF	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	OFF	OFF
	MW-O-2	1/23/1991	71.90	25 - 40	SVE; TFE	OFF	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	OFF	---
	GMW-O-20	6/15/1995	73.32	NA	SVE; TFE	OFF	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	OFF	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	OFF	<b>ON</b>
	GMW-O-18	7/25/1994	74.36	21 - 40	SVE; TFE	OFF	<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