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March 19, 2012

Mr. Paul Cho, PG  
Los Angeles Regional Water Quality Control Board  
320 West Fourth Street, Suite 200  
Los Angeles, CA 90013

**Subject: Modification to Groundwater Analytical Program  
Total Petroleum Hydrocarbons Quantified as Fuel Product  
SFPP Norwalk Pump Station, Norwalk, California**

Dear Mr. Cho:

On behalf of SFPP, L.P. (SFPP), an operating partnership of Kinder Morgan Energy Partners, L.P. (KMEP), CH2M HILL is transmitting this request to change the way total petroleum hydrocarbons are reported for SFPP's groundwater monitoring program. The current laboratory analytical program for the sampling events includes the analyses for the following:

- TPH using United States Environmental Protection Agency (EPA) Method 8015B following both the purge and trap preparation technique, and the solvent -extraction sample preparation technique; and
- VOCs using EPA Method 8260B.

Results for TPH analyses using the purge and trap preparation technique are quantified and reported against a commercial gasoline standard and is abbreviated as "TPH-g". Results for TPH analyses using solvent-extraction sample preparation are quantified and reported against a standard of site fuel collected from the north-central remediation system in 1999. These results are abbreviated as "TPH-fp". The carbon ranges for TPH-g and TPH-fp are approximately C4 to C13 and C8 to C22, respectively. All groundwater samples are submitted to Alpha Analytical, Inc. (Alpha) of Sparks, Nevada for analysis. Alpha is certified by the Environmental Laboratory Accreditation Program of the California Department of Public Health.

The primary concern with reporting TPH-g and TPH-fp is that the carbon ranges for these compounds overlap and therefore the hydrocarbons are double counted, potentially yielding false high total TPH values. For example, the TPH plume figure that is presented in the semiannual groundwater monitoring reports display TPH contours that represent the summation of TPH-g and TPH-fp. This representation of TPH concentration can be biased high because the hydrocarbon range for TPH-g and TPH-fp overlap.

Mr. Paul Cho  
March 19, 2012  
Page 2

An additional concern is that the original fuel mixture that was used for TPH-fp calibration was collected from DLA Energy's north-central remediation area (mostly impacted by jet fuels JP-4, JP-5, and JP-8) and is not representative of current conditions in SFPP's south-central and southeastern remediation areas, which are mostly impacted by gasoline and diesel. As presented in the LNAPL characterization report (CH2M HILL, 2012), the two fuel product samples collected from wells in the south-central area (MW-SF-15) and southeastern area (GMW-36), contained hydrocarbons primarily in the gasoline and diesel ranges. The GMW-36 product sample had approximately 50 percent gasoline (C4-C13) and 50 percent diesel (C14 to C23) hydrocarbon ranges, whereas, the MW-SF-15 product sample had approximately 75 percent gasoline and 25 percent diesel hydrocarbon ranges. Oil-range hydrocarbons (greater than C23) were 1 percent or less in both LNAPL samples.

A more accurate representation of TPH in SFPP's remediation areas would be to quantitate TPH against gas and diesel standards, rather than gas and fuel product standards. Because the Alpha-defined carbon ranges for TPH-g (C4 to C13) and TPH-d (C13 to C22) match up back-to-back, both gasoline and diesel fuels are more accurately measured by the combination of these two methods. In addition, because the TPH-g and TPH-d analytical methods include hydrocarbons between C4 to C22, all site jet fuels (e.g., JP-4, JP-5, and JP-8) will be reported within the overall umbrella of these carbon ranges.

SFPP is therefore requesting to change the way TPH is reported by replacing TPH-fp (C8 to C22) with the TPH-d (C13 to C22) for future groundwater monitoring events. VOCs and TPH-g analysis of groundwater samples would also continue.

Feel free to contact me at (213) 228-8271 if you have any questions or concerns. The KMEP Project Manager, Mr. Stephen Defibaugh, can be reached at (714) 560-4802.

We look forward to your response.

Sincerely,

CH2M HILL



Dan Jablonski, REA  
Project Scientist

Mr. Paul Cho  
March 19, 2012  
Page 3

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