



Los Angeles Regional Water Quality Control Board

June 27, 2012

Ms. Kathryn A. Gleeson
Paramount Petroleum Corporation
14700 Downey Avenue
Paramount, California 90723

REVISED MONITORING AND REPORTING PROGRAM – PARAMOUNT PETROLEUM GX-145 PIPELINE RELEASE AREA, 18900 BLOCK OF SANTA FE AVENUE AT COMPTON CREEK, RANCHO DOMINGUEZ, CALIFORNIA (FILE NO. 98-135, WDR ORDER NO. R4-2011-0089, CI-9643, SCP NO. 0532B, CAO NO. 98-075, SITE ID NO. 2045K00, GLOBAL ID WDR100000416)

Dear Ms. Gleeson:

On May 5, 2011, Paramount Petroleum Corporation (PPC) was enrolled under the Los Angeles Regional Water Quality Control Board (Regional Board) Order No. R4-2011-0089, "Waste Discharge Requirements (WDR) For Pilot Tests For The Injection Of Surfactants Into Subsurface To Remediate Petroleum Hydrocarbon Impacted Groundwater," adopted by this Regional Board on May 5, 2011, for the injection of surfactants into existing injection wells. Upon adoption of WDR, PPC was required to implement Monitoring and Reporting Program (MRP) No. CI-9643.

On April 9, 2012, TRC Environmental Corporation, on behalf of PPC proposed to modify the MRP with the following requests:

- 1) Remove down-gradient groundwater monitoring well B'11MW from the sampling program. Based upon review of analytical data, monitoring wells MW-2D and B'8MW located approximately 40 feet to the northwest and 80 feet to the southeast of B'11MW, respectively, provide adequate coverage for the purpose of monitoring groundwater quality at down-gradient locations from the injections of surfactants at the site.
- 2) Reduce the monitoring and sampling frequency for all monitoring wells from Baseline and 4 post-Pilot sampling events (after 1 hour, 1 week, 1 month, 2 months) to 2 times (after 1 hour, 1 month) after each injection of surfactants. The constituents and concentrations analyzed during the four sampling events after the first injection of surfactants into groundwater at the site were compared to their baseline data collected before the injection and no significant change in concentrations or measurements was reported.

After review, Regional Board staff concurs with the request, and the MRP No. CI-9643 is therefore modified as follows:

- 1) Remove down-gradient groundwater monitoring; well B'11MW from the sampling program.
- 2) Modify the monitoring and sampling frequency for all monitoring wells to 2 times (after 1 hour, 1 month) after each injection of surfactants. The report for the 1 hour and 1 month sampling events shall be submitted to the Regional Board no later than the end of the third month following surfactant injection.

The Permittee shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100000416. ESI training video is available at: <https://waterboards.webex.com/waterboards/ldr.php?AT=pb&SP=MC&riD=44145287&rKey=7dad4352c990334b>

Please see Paperless Office Notice for GeoTracker Users, dated December 12, 2011 for further details at: <http://www.waterboards.ca.gov/losangeles/resources/Paperless/Paperless%20office%20for%20OGT%20Users.pdf>

If you have any additional questions, please contact the Project Manager, Mr. David Koo at (213) 620-6155 (dkoo@waterboards.ca.gov) or the Unit Chief, Dr. Eric Wu at (213) 576-6683 (ewu@waterboards.ca.gov) regarding this matter.

Sincerely,


Samuel Unger, P.E.
Executive Officer

Enclosures:

1. Monitoring and Reporting Program No. CI-9643 revised on May 22, 2012
2. December 12, 2011 ESI letter

cc: Mr. Chris D'Sa, TRC
Mr. Luis Ramirez, Los Angeles County Department of Public Works
Mr. Tony Jimenez, Los Angeles County Fire Department
Mr. Jackie Takeda, California Water Service Company
Mr. Kylan D. Crawford, Union Pacific Railroad Company

STATE OF CALIFORNIA
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

REVISED MONITORING AND REPORTING PROGRAM NO. CI-9643
FOR
PARAMOUNT PETROLEUM CORPORATION
GX-145 PIPELINE RELEASE AREA
RANCHO DOMINGUEZ, CALIFORNIA

(FILE NO. 98-135, SCP NO. 532B)

Paramount Petroleum Corporation (hereafter Discharger) shall implement this revised Monitoring and Reporting Program under Regional Board Order No. R4-2011-0089.

I. GROUNDWATER MONITORING PROGRAM

It is anticipated that injection activities will be initiated in the third or fourth quarter of 2012. Monitoring of the injection of surfactant Ivey-sol[®] shall consist of samples collected from the following groundwater wells:

Injection Wells (IW):	W-06, W-07 to be used for the initial pilot test. Additional wells will be determined in subsequent pilot tests, according to the list of wells proposed in <i>Pilot Study Implementation Plan</i> dated July 21, 2010, which is a supporting document to Form 200 submitted for the Site.
Recovery Wells (RW):	W-05, W-8, W-09, W-10, W-13, W-12, <i>MW1D*</i> to be used for the initial pilot test. Additional wells will be determined in subsequent pilot tests, according to the list of wells proposed in <i>Pilot Study Implementation Plan</i> dated July 21, 2010.
Clean Water Flushing Wells (FWs)	W-11, W-21, W-22, <i>MW5D*</i> , <i>MW6D*</i> to be used for the initial pilot test, if necessary. Additional existing wells will be added in the upgradient direction as FWs, if needed. Additional wells will be determined in subsequent pilot tests, according to the list of wells proposed in <i>Pilot Study Implementation Plan</i> dated July 21, 2010.
Group A (Downgradient Area):	W-20, <i>B'8MW*</i> , <i>MW-2D*</i> to be used for the initial pilot test. Additional wells will be determined in subsequent pilot tests, according to the list of wells proposed in <i>Pilot Study Implementation Plan</i> dated July 21, 2010.
Group B (Upgradient Area):	W-01, W-02, W-03 to be used for the initial pilot test. Additional wells will be determined in subsequent pilot tests, according to the list of wells proposed in <i>Pilot Study Implementation Plan</i> dated July 21, 2010.
Group C (Crossgradient Area)	W-23, W-14 (or W-14a) to be used for the initial pilot test. Additional wells will be determined in subsequent pilot tests, according to the list of wells proposed in <i>Pilot Study Implementation Plan</i> dated July 21, 2010.

* Wells from adjacent property (Los Angeles County Fire Station No. 105) are shown in italics. For ease of reference, these wells have been relabeled as per the following: MW1D relabeled to FSMW1D; FSMW5D relabeled to MW5D; FSMW6D relabeled to MW6D; B'8MW relabeled to FSB8MW; and MW-2D relabeled to FSMW2D.

Figure 1 shows the Site location and the groundwater monitoring wells located at the Site and the adjacent properties. IWs and RWs are located in the treatment zone where injection and multi-phase extraction (MPE) will be conducted. Group A wells are located in the downgradient area from the treatment zone, group B wells are located in the upgradient area, and group C wells are located in the crossgradient area.

In September 2011, groundwater samples were collected from selected IWs, RWs, FWs, Groups A, B, and C wells prior to injection, providing the baseline. If necessary after the surfactant injection, clean potable water will be flushed into the FWs to create a hydraulic barrier to prevent migration of surfactants outside the treatment area. Once injection ends and the pilot test/MPE is shut-down, groundwater samples shall be collected and analyzed in accordance with the following program.

CONSTITUENT	UNITS	TYPE OF SAMPLE	MINIMUM FREQUENCY OF ANALYSIS
Total Daily Injections of Surfactant and Clean Water	Liters (L) or Gallons (G)	Measurement	Per injection
Depth to Groundwater	Feet below ground surface (ft bgs)	In situ	<u>All wells listed as IWs, RWs, FWs, Groups A, B and C: 1 hour, and 1 month after MPE shutdown</u>
Groundwater Elevation	Feet above mean sea level	Calculation	
Depth to Free Product	ft bgs	In-situ	
Field parameters: pH, DO ORP EC Temperature TDS Ferrous (II) iron, Turbidity	pH units, µg/L mV µS/cm °C/°F µg/L µg/L NTU	Grab	<u>All wells listed as IWs, RWs, FWs, Groups A, B and C: 1 hour, and 1 month after MPE shutdown</u>
Alkalinity, methane, and anions (sulfate, nitrate, nitrite, and chloride)	µg/L	Grab	<u>IWs and RWs: 1 hour, and 1 month after MPE shutdown</u> <u>FWs: 1 month after MPE shutdown</u> <u>Groups A, B, and C: 1 month after MPE shutdown</u>
TOC	µg/L	Grab	<u>IWs and RWs: 1 hour, and 1 month after MPE shutdown</u>
TPH-IIN, TPH-ORO, TPH-DRO, TPH-GRO, BTEX, MTBE, and TBA using EPA Method 8015B/8260B	µg/L	Grab	<u>IWs and RWs: 1 hour, and 1 month after MPE shutdown</u> <u>FWs: 1 month after MPE shutdown</u> <u>Groups A, B, and C: 1 month after MPE shutdown</u>
Qualitative surfactant concentrations using plate glass	Presence or absence	Grab	<u>IWs, RWs, and FWs: 1 hour, and 1 month after MPE shutdown</u> <u>Groups A, B, and C: 1 month after MPE shutdown</u>
Quantitative readings for CTAS/non-ionic surfactants using EPA Method SM5540D	µg/L	Grab	<u>IWs and RWs: 1 hour, and 1 month after MPE shutdown</u> <u>FWs: 1 week and 1 month after MPE shutdown</u> <u>Groups A, B, and C: 1 month after MPE shutdown</u>

Notes:

TPH-DRO = total petroleum hydrocarbons extractable diesel-range organics (C10 to C28)

TPH-GRO = total petroleum hydrocarbons gasoline-range organics (C6 to C10)

TPH-HN = total petroleum hydrocarbons heavy naphtha (C10 to C28+)

TPH-ORO = total petroleum hydrocarbons heavy extractable oil-range organics (C28+)

BTEX = benzene, toluene, ethylbenzene, and xylenes

MTBE = methyl-tert-butyl ether

TBA = tert-butyl alcohol

CTAS = cobalt thiocyanate active substances

*If free product is encountered in any of the wells, the well will not be sampled. However, the amount of free product will be measured and recorded. If the well is not already part of the free product recovery program, it will be added

II. SURFACTANT INJECTION REPORTING REQUIREMENTS

The monitoring reports shall contain the following information regarding injection/extraction activities:

- a. Measurement of vacuum, extraction flow rates, groundwater elevations (drawdown);
- b. Quantity and date of surfactant and clean water injected;
- c. Concentration of surfactant injected; and
- d. Total amount of surfactant injected.

III. GROUNDWATER MONITORING REPORTING REQUIREMENTS

The Discharger is required to submit MRP reports that include data collected during the sampling events. All groundwater monitoring reports must include, at a minimum, the following:

- a. Well identification, date and time of sampling;
- b. Sampler identification and laboratory identification; and
- c. Routine observation of groundwater elevations, recorded to 0.01 feet above mean sea level (ft amsl) and groundwater flow direction.

All groundwater monitoring wells shall be gauged and sampled as outlined in Sections I and II, and results shall be reported to the California Regional Water Quality Control Board, Los Angeles Region (Regional Board) under the MRP for the Individual Waste Discharge Requirements according to the following schedule:

Reporting Period	Sampling Schedule	Report Due Date
January- June or July – December	Post-Injection: 1 hour, and 1 Month after injection event.	No later than the end of three months following surfactant injection

Any future changes in additional/subsequent pilot tests, sampling, and reporting schedule will be provided in a revised MRP issued by the Regional Board in advance. If there is no discharge or injection during the reporting period, the report shall so state. Groundwater monitoring reports must be addressed to the Regional Board, Attention: Information Technology Unit.

Whenever wastes associated with the discharge under this Order are transported to a different disposal site, the following shall be reported in the monitoring report: type and quantity of wastes; name and address of the hauler (or transport method if other than by hauling); and of the final disposal location(s).

VII. ELECTRONIC SUBMITTAL OF INFORMATION (ESI) TO GEOTRACKER

The Discharger shall comply with the Electronic Submittal of Information (ESI) requirements by submitting all reports required under the MRP, including groundwater monitoring data, discharge location data, and pdf monitoring reports to the State Water Resources Control Board GeoTracker database under Global ID WDR100000416.

Ordered by:


Samuel Unger, P.E.
Executive Officer

Date: June 27, 2012



W-11 Paramount groundwater/product recovery well
 FSW5 LA County Fire Station well (adjacent site)

IW Surfactant Injection Well
 RW HVDPE Recovery Well
 FW Flushing (Barrier) Well (if necessary)
 A, B, C. Group A, B, C wells (see tentative WDR MRP)

Based on the results of the first event, TRC may change the IWs, RWs, FWs and other monitoring wells.

	GATX GX-145 RELEASE 18905 S SANTA FE AVE	SIZE LTR		SHEET TITLE LOCATIONS OF PILOT TEST WELLS	REV
	DRAWN CPD APPROVED BY: GK	PN 004056	CLIENT Paramount Petroleum	PPC_SER_FIGS 5-7.VSD	FIGURE NO 1
SCALE 0 ft 80 ft					



Matthew Rodriguez
Secretary for
Environmental Protection

California Regional Water Quality Control Board Los Angeles Region

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Edmund G. Brown Jr.
Governor

December 12, 2011

Electronic Submittal to the Los Angeles Regional Board for GeoTracker Users

To Interested Parties:

Effective November 1, 2011, the Los Angeles Regional Water Quality Control Board (Regional Board) implemented a Paperless Office system. Interested parties were notified of this intent in a letter dated October 20, 2011 (the announcement can be seen at <http://www.waterboards.ca.gov/losangeles/resources/Paperless/>).

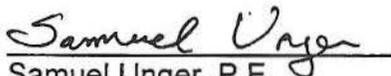
This letter is intended to clarify the electronic submittal process for all **GeoTracker** users in accordance with the October 20, 2011 Paperless Office announcement.

For all parties who upload electronic documents to State Database GeoTracker, it is no longer necessary to email a copy of these documents to losangeles@waterboards.ca.gov or submit hard copies to our office.

The Regional Board will no longer accept documents (submitted by either hard copy or email) already uploaded to GeoTracker. In special circumstances where GeoTracker may not be the best place to submit correspondence, such as oversized or confidential documents, please contact case staff directly to arrange a submittal method.

If you have questions regarding this matter, please contact the appropriate staff assigned to your program or project. You may refer to the Regional Boards' Departmental Listing for contact information.

Sincerely,


Samuel Unger, P.E.
Executive Officer

California Environmental Protection Agency

