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August 11, 2010

John Kieling, Program Manager
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, Bldg 1
Santa Fe, NM 87505-6303

Re: Response to APPROVAL WITH DIRECTION
2009 Groundwater Remediation and Monitoring Annual Report
Western Refining Southwest, Inc., Bloomfield Refinery
EPA ID# NMD089416416
HWB-GRCB-10-004

Dear Mr. Kieling:

Please find attached the requested addendum in response to your Comment 1 (dated July 19, 2010) on the referenced 2009 Groundwater Remediation and Monitoring Annual Report.

If you have questions or would like to discuss the revised work plan, please contact me at (505) 632-4171.

Sincerely,

James R. Schmaltz
Environmental Manager
Western Refining Southwest, Inc.
Bloomfield Refinery

cc: Hope Monzeglio – NMED HWB
Carl Chavez – NMOCD (w/attachment)

2.0

Scope of Activities

Western Refining indefinitely suspended refining operations at the Bloomfield Refinery on November 23, 2009. The crude unloading and product loading racks, storage tanks and other supporting equipment remain in operation. Guidelines from the *Facility-Wide Groundwater Monitoring Plan December 2007(Revised May 2008)* will continue to be followed.

The following is a summary of the activities conducted in 2009.

Below-grade Testing

Throughout 2009, pursuant to conditions of approval stated in Discharge Permit GW-001 (regulated by the Oil Conservation Division), Bloomfield Refinery personnel conducted annual below-grade sump testing and underground process/wastewater line testing.

In June 2009, All water-draw sumps located in the Tank Farm were cleaned out with a vacuum truck, visually inspected, and hydrostatically tested to insure integrity. All sumps passed the hydrostatic test, and double-walled steel (DW Steel) sumps were also inspected through the leak detection port. No evidence of moisture was seen.

Visual inspection of Sump #37 – a DW steel sump – at Tank #35 indicated pitting and metal loss. Even though the sump passed the hydrostatic test and continued to pass the leak detection port inspection, Bloomfield Refinery management (with OCD approval) opted to replace the sump (in kind) at the recommendation of the Plant Inspector before metal failure could occur.

Beginning the week of April 28, 2009, all sewer boxes within the facility were cleaned out with a vacuum truck and inspected.

From June 2009 to October 2009, 4668 feet of underground piping was hydrostatically tested at Bloomfield Refinery. The piping was located in the Poly Unit, the Fluid Catalytic Cracking Unit (FCCU), the Treater unit, and effluent transfer to the Injection Well.

Below-grade testing spreadsheets are located in Section 13.0

North Boundary Barrier Wall

Installation of the North Boundary Barrier Wall and Collection System was completed by late April 2005. A biweekly fluid measurement plan was established in August 2005 and continued throughout 2009. This plan requires monitoring of all observation and collection wells as well as MW #11, MW #12, MW #20, MW #21, MW #39, MW#45, MW #46, and MW #47.

From April 2005 to March 31, 2008, a vacuum truck was used to remove fluids from the collection and observation wells on a 3 times per week basis. Since April 2008, fluid removal from the observation and collection wells along Hammond Ditch has consisted of using a hand bailer to periodically pull separate phase hydrocarbon from OW 0 +60, OW 1+50, OW 3+85, OW 11+15, MW #45, and MW #47. All purged water was collected in a 55-gallon drum and disposed of through the refinery wastewater system.

Semi-Annual sample collection began during the week of April 6, 2009. Samples were collected from observation wells and analyzed for benzene, toluene, ethylbenzene, xylene (BTEX), and MTBE using EPA Method 8260B as well as Diesel Range Organics (DRO) and Gasoline Range Organics (GRO) using EPA Method 8015B. Collection well samples were analyzed for BTEX, MTBE (EPA Method 8260B) and DRO (8015B). Field measurements of pH, temperature, electrical conductivity (E.C.) and total dissolved solids (TDS) were also collected.

Annual sampling occurred the week of August 17, 2009. Observation well samples were analyzed for BTEX, MTBE (EPA Method 8260B), and DRO/GRO(8015B). Collection well samples were analyzed for BTEX, MTBE (EPA Method 8260) and DRO (8015B). Field measurements of pH, temperature, E.C., and TDS were also recorded.

During both sampling events, groundwater samples were collected from all observation wells and two collection wells (CW 0+60 and CW25+95) with the exception of wells that contain separate phase hydrocarbon or wells that were dry or did not contain enough water to collect a sample.

Measured depth-to-groundwater tables, analytical results, and field measurements are summarized in Appendix A – Tabs 1-16.

Seeps/Sump Wells

A bi-weekly visual inspection of Seeps 1-9 and the San Juan River Bluff occurred throughout 2009.

During the week of April 6, 2009 semi-annual samples were collected from Seeps 1, 3, 6, 8, and 9 and analyzed for BTEX (EPA 8260B), SVOCs (EPA 8270), Alkalinity/Carbon Dioxide (SM2320B), and general chemistry (EPA 300.0). The analytical laboratory analyzed for combined Nitrate (as N) + Nitrite (as N) to meet holdtime in Seeps 6, 8, and 9. Field measurements of pH, temperature, E.C., and TDS were also recorded.

During the week of August 17, 2009, samples were collected from Seeps 1, 3, and 6 and analyzed for BTEX and MTBE (EPA 8260B), SVOCs (EPA 8270), Alkalinity/Carbon Dioxide (SM2320B), and general chemistry (EPA 300.0). Field measurements of pH, temperature, E.C., and TDS were also collected.

Seeps 2, 4, 5, and 7 were dry during both sampling events and were not sampled. Seeps 8 and 9 were dry in August and not sampled during the Annual Groundwater Monitoring Event.

Analytical results can be found in Section 8.0 - Tab 8.0. Field measurements can be found in Section 8.0 – Tab 3.0.

A bi-weekly fluid measurement program was utilized throughout 2009 to monitor the sump wells. Measured depth to groundwater tables can be found in Section 8.0 - Tab 2.0.

Groundwater Monitoring

Tank #33 effluent was sampled and analyzed for BTEX and MTBE (EPA Method 8260B) on a monthly basis throughout 2009. Analytical results are in Section 8.0 - Tab 9.0.

The facility-wide semi-annual monitoring event occurred during the week of April 6, 2009. Guidelines from the *Facility-Wide Groundwater Monitoring Plan (revised December 2007)* were followed. East Outfall #2 and East Outfall #3 were sampled and analyzed for BTEX/MTBE (EPA 8260B), Dissolved Metals (EPA 6010B), Total Metals (EPA 6010B & 7470), Anions (EPA 300.0), and Alkalinity/Carbon Dioxide (SM 2320B). Field measurements of E.C., pH, and temperature were also collected. The analytical laboratory analyzed for combined Nitrate (as N) + Nitrite (as N) to meet holdtime for both outfalls. Analytical results are in Section 8.0 - Tab 8.0 and field measurements are located in Section 8.0 – Tab 3.0.

Samples were collected from MW #1, MW #8, MW #12, MW #13, MW #30, MW #33, MW #35, MW #37, and MW #38 and analyzed for BTEX/MTBE (EPA 8260B) and GRO/DRO (EPA 8015B). Analytical results are summarized in Section 8.0 Tabs 4.0 – 7.0. Field measurements are located in Section 8.0 – Tab 3.0.

MW #6 was dry and not sampled and MW #20 contained separate phase hydrocarbon and was not sampled. Field measurements of Dissolved Oxygen (D.O.), Oxidation Reduction Potential (O.R.P.) were inadvertently not collected during the semi-annual monitoring event.

Annual sampling started the week of August 17, 2009. The *Facility-Wide Groundwater Monitoring Plan (Revised December 2007)* was followed. The following wells were sampled; MW #1, MW #4, MW #8, MW #11, MW #12, MW #13, MW #26, MW #27, MW #29, MW #30, MW #31, MW #32, MW #33, MW #34, MW #35, MW #37, MW #38, MW #40, MW #44, RW #1, RW #9, RW #15, RW #23, O/F #2, and O/F #3. The samples were analyzed for VOCs by using EPA Method 8260B, SVOCs by EPA Method 8270, TPH through EPA Method 8015B, Total RCRA 8 Metals using EPA Methods 6010B/7470, WQCC

Dissolved Metals using EPA Method 6010B, Anions using EPA Methods 300.0, and Alkalinity/Carbon Dioxide by SM 2320B. Field measurements of D.O., O.R.P., E.C., pH, TDS, and temperature were also collected.

East Outfall #2 and East Outfall #3 were sampled and analyzed for BTEX/MTBE (EPA 8260B), Dissolved Metals (EPA 6010B), Total Metals (EPA 6010B & 7470), Anions (EPA 300.0), and Alkalinity/Carbon Dioxide (SM 2320B). Field measurements of E.C., pH, and temperature were also collected.

The analytical laboratory analyzed for combined Nitrate (as N) + Nitrite (as N) to meet holdtime for MW #30, MW #37, MW #38, and MW #40. Due to matrix interferences, the total selenium reporting level on MW #13, MW #37, MW #38, MW #40, RW #1, RW #9, and RW#23 is above the regulatory level of 0.05 mg/L. Hall Environmental Analytical Laboratory felt it was necessary to dilute the sample in order to accurately report selenium.

Comment 9 of the NMED letter *Approval with Direction 2008 Groundwater Remediation and Monitoring Annual Report* dated September 1, 2009 states "In Section 9.0 (Tables), Western applied NMED's Total Petroleum Hydrocarbon Screening Guidelines, diesel #2/crankcase oil (1.72 mg/kg) for diesel range organics (DO). Western must apply the "unknown oil" screening guidelines of 0.2 mg/L to future annual groundwater monitoring reports." The semi-annual and annual sampling events had already occurred when Western received this letter. Therefore, the previous reporting limit of 1.0 mg/L for DRO is used throughout the 2009 Annual Groundwater Report. Future reports will apply the 0.2 mg/L screening guideline.

MW #3, MW #5, and MW #6 were dry and no samples were collected. MW #20, MW#21, RW #18, RW #28, RW #42, and RW #43 contained separate phase hydrocarbon and were not sampled.

Analytical results are summarized in Section 8.0 -Tabs 4.0 -8.0. Field measurements are located in Section 8.0 – Tab 3.0.

San Juan River

The San Juan River was sampled on a semi-annual basis in 2009. Samples were collected in April and August and analyzed for BTEX/MTBE (EPA Method 8260B), TPH (EPA Method 8015B), Total RCRA 8 Metals (EPA Methods 6010B/7470), WQCC Dissolved Metals (EPA Method 6010B), Cations, Anions (EPA Method 300.0), and Alkalinity/Carbon Dioxide using SM 2320B.

Analysis is summarized in Section 8.0 - Tab 10.0.

Field Data Collection

All facility monitoring wells, recovery wells, observation and collection wells were measured for groundwater elevation in February, April, August, and November. Water elevation measurements were collected in all wells while the recovery

wells were in operation and again after the pumps were removed and water levels had stabilized.

All water/product levels were measured to an accuracy of 0.01 foot using a Geotech Interface Probe. After determining water levels, initial well volumes are calculated. Total purge volume is determined by monitoring electrical conductance, pH, temperature, O.R.P., and T.D.S. after every two gallons or each well volume, whichever is less, has been purged from the well. The wells were considered satisfactorily purged when the field parameter values did not vary by more than 10 percent for at least three measurements. Field parameters are measured using an Ultrameter 6P.

All purged water was collected in a 55-gallon drum and disposed of through the refinery wastewater system.

Field data and well elevations can be found in Section 8.0, Tabs 1.0 – 3.0 and in Appendix A – Tabs 1.0 -15.0.