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DEPARTMENT OF ENVIRONMENTAL PROTECTION
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December 22, 2016

Kimberly O'Connell
Section Chief, Southern NJ Remediation Section
NJ Remediation Branch, Emergency & Remedial Response Division
EPA Region 2
290 Broadway, 19th Floor
New York, NY 10007

Re: Chevron's – Justification for Transition to Monitored Natural Attenuation/No Further Action for Benzene Impacts at Solid Waste Management Unit (SWMU) 39 and Area of Concern (AOC) 5, October 17, 2016
Chevron USA, Inc.
Perth Amboy, Middlesex County, New Jersey
SRP PI# 003621
RPC000005

Dear Ms. O'Connell,

The New Jersey Department of Environmental Protection (Department, NJDEP) has completed review of the above document, which were submitted pursuant to the Resource Conservation and Recovery Act (RCRA), Hazardous and Solid Waste Amendments (HSWA) Permit of 2013, and the Technical Requirements for Site Remediation at N.J.A.C. 7:26E (TRSR). The Department's comments are listed below.

Soil Issues

1. Based on the Facility's HSWA Permit Renewal (2013), the Corrective Measure (CM) proposed for Solid Waste Management Unit (SWMU) 39 included In-Situ Chemical Oxidation (ISCO) for benzene-impacted soil greater than 13 mg/kg, supplemented by enhanced bioremediation, if necessary. However, further data review of the 2005 isolated benzene exceedance that triggered the ISCO treatment determination for SWMU 39 revealed that the laboratory used an incorrect unit conversion, resulting in a value 1000X higher than the actual results. The laboratory, Eurofins, has provided a written report with this conclusion (Appendix A). Based on this new data interpretation, Chevron has concluded that a NFA determination for benzene in soil is warranted at SWMU 39.

   Based on the information presented, the Department concurs with the modification to the CM. The NFA proposal for benzene in soil at SWMU 39 is acceptable to the Department.

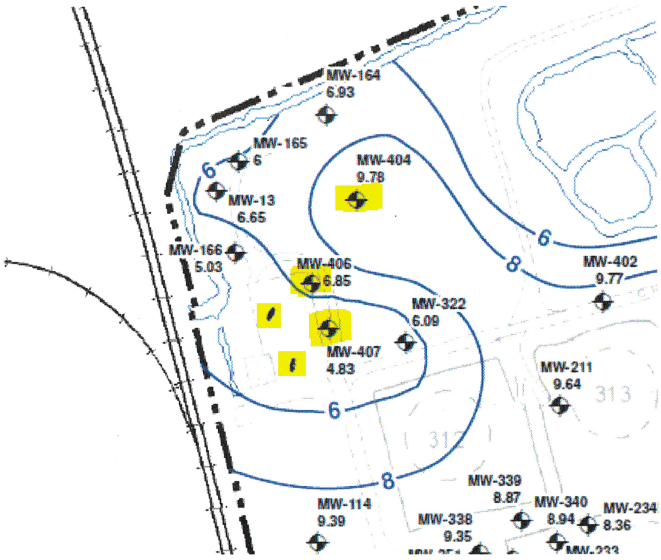
2. It should be noted that Chevron incorrectly states "benzene concentrations in soil above the NJDEP NRDCSCC will be addressed via Deed Notice." In fact, exceedances of the Residential Direct Contact Soil Remediation Standards require a deed notice (N.J.A.C. 7:26E-5.2[a]4) for all contaminants site wide (not just benzene).

Ground Water Issues

Background:

Benzene is observed in ground water in the southwest part of the SWMU 39 and AOC 5 area at H1445/MW-407 (35 ug/L) and H1445/MW-406 (16-130 ug/L), and in the approximate center of this SWMU/AOC area at H0158/MW-404 (13-54 ug/L), and nearby H1459 (14 ug/L). These concentrations (except for the first sampling event at MW-406) are below the active remediation corrective measure implementation (CMI) concentration for benzene (100 ug/L). Lead and arsenic ground water concentrations are also stated to be less than active remediation CMI concentrations (50 ug/L and 60 ug/L, respectively). Benzene, lead and arsenic continue to exceed Class IIA Ground Water Quality Standards (GWQS) of 1 ug/L, 5 ug/L and 3 ug/L, respectively, in shallow aquifer SWMU 39 and AOC 5, and lead in the deeper aquifer well MW-323.

Transition to MNA as the ground water remedy is requested for the ground water COCs in SWMU 39 and AOC 5 (benzene, lead, arsenic). MW-404, MW-406 and MW-407 will continue to be sampled on a semi-annual basis. The 2nd Quarter 2016 contour map for the area is provided below, with the semi-annual well sampling locations (and two unnumbered locations - MW-20 and MW-21) highlighted:



Comments:

Please supplement the submittal as follows:

- Provide the VOC data summary table for MW-404, MW-406 and MW-407. VOC TIC data is one concern in the absence of the VOC data summary table. SVOC and SVOC TIC data was summarized.

- Revise Figure 4 to include lead and arsenic data at monitor wells MW-404, MW-405 and MW-406. This data was provided at the locations bordering the tidal stream, and was included in the summary tables.

- Please include manganese data with the summary figure and well locations.

- Please provide ground water sampling documentation data collected during sampling (pH, redox, DO, color) in this area and identify if there is any color change/sedimentation of purge water. This is related to the high manganese concentrations.

Please discuss the following data:

Manganese concentrations in ground water are high (up to 8 mg/L historically, up to 4 mg/L currently and adjacent to surface water at MW-165 and MW-166). Manganese has a saline surface water quality standard (100 ug/L). In drinking water, the aesthetic effect of elevated manganese is typically identified before a health affect is reached, but health effects are associated with Manganese at 500 ug/L.

- Clarify the source of the high manganese concentrations in this area. For example, are the manganese concentrations land use related (retention basin, sludge drying area, landfarm for tank bottom sludge); related to the effects of land use (anaerobic conditions from biodegradation of organic COCs, etc.), fill material related (ash or spent catalysts), any or all of the above or something else? In general, manganese has not been this high in other parts of the site. In this areas the Department is concerned about potential human health issues and potential surface water impact from manganese.

- Clarify if ground water manganese concentrations in this area were considered when evaluating any prior surface water samples collected.

- Clarify if sediment evaluations for manganese meet sediment/eco criteria or screening levels. If so, clarify if current ground water concentrations are similar to or less than the concentrations during prior surface water/sediment/eco evaluations.

MNA Monitoring Plan:

- Evaluation of ground water quality data needs to consider locations where COCs are identified and if there are migration pathways to a receptor. MW-404, 406, 407 are identified as monitoring points with continued impacts above Ground Water Quality Standards (GWQS), but receptor monitoring locations or frequency are not identified. MW-164, MW-165, MW-166, MW-13, MW-20 and MW-21 are downgradient locations relative to MW-404, MW-406, MW-407 and need to document continued protection of the surface water receptor pending attainment of applicable remediation standards.

- MW-20 and MW-21 (not gauged in 2nd Quarter 2016) need to be included in the gauging program with the other wells in the SWMU 39/AOC 5 area and bordering the tidal creek to evaluate any changes in flow conditions and potential receptor monitoring locations.

If you have any questions, please contact me at 609-292-3007.

Sincerely,

Anne Pavelka

Anne Pavelka PG, CHMM
Case Manager
Bureau of Case Management

C: Jill Monroe, BGWPA
John Boyer, BEERA
Bob Mancini, Chevron