Responsiveness Summary
Periodic Review Report Public Comment Period
May 15-June 16, 2014
D Street Petroleum
Tacoma, Washington

Periodic Review Coordinator: Panjini Balaraju
Public Involvement Coordinator: Natalie Graves

We received 2 comments on the draft Periodic Review Report. The comments are in the site file at the Washington Department of Ecology's Southwest Regional Office. The Periodic Review Report is now final.

Comment 1: Thomas D. Douglas, PKMM Inc.

Based on the information presented in the May 15, 2014 WDOE Site Register, http://www.ecy.wa.gov/programs/tcp/pub_inv/pub_inv2.html

PKMM, Inc. would like the WDOE and the responsible parties at this facility and others to consider the use of a higher preference, available, and practical technology to meet the condition stated in the WDOE document dated March 2014 in Section 1(2)(e) "Availability and practicability of higher preference technologies.

PKMM, Inc. can implement a proven viable technology which could reduce petroleum and other contaminants in the soil and groundwater at this and other similar sites which is not currently being used in the state of Washington. Consideration of our unique delivery system(s) and proprietary ISCO products and services would reduce or eliminate environmental liability, eliminate the need or frequency for continuing groundwater and soil sampling, enhance natural attenuation of the contaminants of concern, and perhaps eliminate the need for institutional controls.

Please contact me if you would like more information.

Ecology Response:

We appreciate you taking the time to review the draft periodic review report of the D Street Petroleum Site. Also we appreciate your suggestion of using PKMM Company's proprietary chemical oxidants for treating the residual petroleum contamination present at this Site. However, the implemented remedy at this Site is currently working satisfactorily to meet the requirements of the Model Toxics Control Act Regulation (WAC 173-340) and is protective of human health and the environment. As a result, no active remedy is warranted at this time. If there is any indication in the future that the implemented remedy is ineffective in the

protection of human health and the environment, we will pursue additional active remedy to address the problem.

Once again we appreciate your interest at this Site.

Comment(s) 2: URS Corporation

Comment 1: Section 2.1, 1st paragraph, and other locations in the document reference current/active remedial activities. To clarify, there are no ongoing active remedial activities being conducted at the Site; however, natural attenuation is ongoing.

Response: *The text has been revised to include "Monitored Natural Attenuation" in the parenthesis.*

Comment 2: In Sections 2.1 and 3.4 of the review, Ecology incorrectly cites ConocoPhillips as the current operator. The current operator is Phillips 66. In section 2.1, Ecology also incorrectly references Shell as the property owner of the vacant property on F Street. Shell sold this property to Targa in 2012.\

Response: *The text is revised to include the correct property ownership.*

Comment 3: Section 2.2, 3rd paragraph, discusses groundwater flow toward the Thea Foss Waterway. This should be qualified/revised to state that "groundwater in the Upper Sand Unit beneath the Site generally flows toward the Thea Foss Waterway but is also very flat with little appreciable hydraulic gradient in the interior of the Site."

Response: *Ecology consulted the Tidal Assessment and Biotreatability Study conducted in October 2012. The results of this study showed a very flat hydraulic gradient within the interior of the Site. The text is revised as suggested.*

Comment 4: Section 2.2, 4th paragraph, the results for toluene and ethylbenzene are reversed.

Response: The text has been corrected.

Comment 5: Section 2.2, 5th paragraph, and bullets provide a summary of the site remediation and reference a horizontal barrier (cap) that was constructed in areas to reduce infiltration of surface runoff. In Section 2.4, 1st paragraph, it also references that "asphalt paving was placed in several areas to minimize surface water infiltration and vapor short circuiting".
URS reviewed available historical documents and drawings and no specific area was identified in historic text or drawings. URS will follow up with Ecology to determine specific location of the capped area. URS assumes it is the asphalt area between D Street and the shoreline or the primary areas of impact and/or historic releases.

Response: *Bullet 6 of the selected Remedial Alternative in the Cleanup Action Plan (CAP December 20, 1990, page 10) says "A horizontal barrier (cap) will be constructed in areas where needed to reduce infiltration of surface runoff into contaminated soils and to reduce the potential for short circuiting of the soil vapor extraction system."*

Though none of the figures show the exact area(s) of the additional new pavement, Ecology believes that wherever needed, some of the critical areas might have been paved (in addition to the existed pavement) to accomplish the stated goal. No changes are made to the text.

Comment 6: Section 2.4, 5th paragraph, final sentence should be revised: "Since system deactivation, petroleum hydrocarbon concentrations in groundwater in this area have remained below Site cleanup levels."

Response: *The text has been revised as suggested.*

Comment 7: Section 2.4, last paragraph, second to last sentence states "The system was restarted in 2007 and operated through the fall of 2008." This is incorrect. Once the system was shut off in October 2006 it was never re-started. This was discussed on an ongoing basis in the quarterly Remediation Progress Reports developed by Landau & Associates. Specifically the quarterly reports over the referenced period state that both the SVE system and the groundwater extraction system were not in operation.

Response: *The text has been revised to delete the sentence "The system was restarted in 2007 and operated through the fall of 2008."*

Comment 8: Section 2.5, 1st paragraph, bullets should be revised to the following:

(a) Upper Sand Unit – Sampling of groundwater from 16 wells on a quarterly basis with sampling of an additional 5 wells on an semiannual basis.

(b) Lower Sand Unit – Sampling of groundwater from three wells on a quarterly basis with sampling of an additional two wells on an annual basis.

(c) Surface Water – Sampling of water from six of surface water monitoring wells on a quarterly basis with sampling of one additional well on an annual basis.

Response: *The periodic review report has been revised to reflect the changes as indicated in (a), (b) and (c) above.*

Comment 9: Section 2.5, 4th paragraph, includes reference to the following that requires clarification:

(a) TPH-O should refer to Heavy Oil TPH (i.e., the heavier TPH fraction that is reported

in the NWTPH-Dx analytical method). TPH-O&G is no longer a part of the monitoring program at D St. This parameter was removed starting with the June 2012 sampling event.

Response: *Ecology consulted the previous groundwater monitoring results and the language used for the TPH-O, which is Heavy Oil TPH. The text has been revised accordingly. The reference to TPH-O&G was deleted from the report.*

(b) The following sentence should be revised: "To date, results of none of these parameters exceeded the MTCA Method A cleanup levels in any of the surface water point of compliance wells.

Response: *The text is revised to reflect the suggested change.*

(c) Lead has been consistently sampled on the site on an annual basis. It is not included in the revised quarterly sampling protocol initiated with the March 2014 sampling round.

Response: *The above comment is inconsistent with Dominick Reale's e-mail of February 24, 2014 regarding the type of groundwater monitoring parameters. This e-mail indicates that, there was a consensus between Ecology and the PLPs regarding the groundwater monitoring parameters. This new agreement includes the following parameters to be analyzed as a part of the groundwater monitoring program at this Site (which includes lead also):*

- *Benzene, Toluene, Ethylbenzene and Xylenes (BTEX)*
- *WTPH Gasoline, Diesel and Oil*
- *Hexane*
- *Naphthalene, and*
- *Lead*

Based on the above, we presume that the future groundwater monitoring events will include the analysis for all of the above parameters.

Comment 10: Section 3.3.3, Soil to Vapor Pathway, Ecology concludes that it is not critical that the vapor pathway be evaluated due to active soil vapor remediation at the site among other variables. There is no current active soil vapor remediation occurring at the Site; however, in addition to the other aspects which are correct, the site is capped in critical areas and there are no subsurface structures.

Response: *The text is revised to delete the reference to the active soil vapor extraction system.*

Comment 11: Section 3.5 states that free product is no longer observed. No measurable free product has been observed in any site well since December 2005, except for a trace amount that has been observed randomly in a couple wells at the Site.

Response: *Based on the information in the Fourth Quarter-2013 Groundwater Monitoring Report, the text has been revised to include the measurement of 0.04-foot of product in monitoring well MW-2 and oil sheen in the inactive groundwater recovery well RW-24.*