



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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January 12, 2018

Ms. Dana Cannon  
West of 4<sup>th</sup> Project Coordinator  
Aspect Consulting  
401 2nd Ave S, Suite 201  
Seattle, WA 98104

Re: **West of 4<sup>th</sup> Site**  
**Agreed Order #DE 10402**  
**Site Unit 2: Capital Industries Plant 4 Interim Action Work Plan**

Dear Ms. Cannon:

On December 23, 2017, the Washington State Department of Ecology (Ecology) received an Emailed copy of the revised Site Unit 2 *Capital Industries Plant 4 Interim Action Work Plan*. The revised Work Plan was submitted by the West of 4<sup>th</sup> PLPs in accordance with Agreed Order (AO) 10402, amended on November 21, 2017. Thank you for submitting the revised Work Plan by its due date.

Both the July 2017 draft Work Plan and its December revision have been characterized as “conceptual” interim action design proposals. As such, their purpose has been to propose the Plant 4 in situ chemical oxidation (ISCO) interim action, and related logistics and project monitoring, in more general terms than would be required in a final RD/RA Work Plan. The next design document, the draft Field Investigation Work Plan (FIWP) will include more detailed proposals and contain a project-specific SAP, QAPP, H&SP, etc.

The December Work Plan is hereby approved, and the PLPs should proceed to implement the interim action in accordance with the project schedule contained in Section 7 of the document. Ecology approval, however, is contingent on the understanding that the draft FIWP will include the following information:

- a) The content proposed for inclusion by the PLPs’ revised Capital Industries Plant 4 Interim Action Work Plan, now approved;



- b) The content specified in Ecology's November 22, 2017, comment letter. In particular, this includes information requested in Specific Comments #8 - 10,<sup>1</sup> 13, 16, 17, 19, 25, and 26; and,
- c) Satisfactory responses to the following requests, many of which were communicated on November 22, but not fully addressed in the revised Work Plan:
- (1) A proposal describing how the PLPs intend to differentiate CVOC rebound in groundwater (due to incomplete interim action treatment) from any increasing CVOC levels in the project area caused by upgradient migration contributions.
  - (2) The draft FIWP should clearly differentiate between the percentage of KMnO<sub>4</sub> chosen for the delivery/injection solution and those target MnO<sub>4</sub><sup>-</sup> concentrations in soils and groundwater the action is expected to achieve. The document should provide these latter concentrations regardless of what percentage of KnMnO<sub>4</sub> is proposed for delivery/injection.
  - (3) The draft FIWP should clearly identify the well locations and sampling events associated with groundwater baseline sampling and post-injection monitoring events. A more comprehensive analyte list should be proposed for certain wells and sampling events that includes major cations/anions, TDS, iron, and manganese (Mn<sup>+2</sup>). In addition, the FIWP should: a) clarify that baseline groundwater data from the new 1" wells will be collected, as well as from MW-6 and MW-7; and, b) describe which wells, during Stage 1 groundwater monitoring, will be sampled within two weeks of the injection event (Section 5.6.1 appears to propose that samples will be collected from all five of the new 1" wells, MW-6, and MW-7. Will valuable Stage 1 data be obtained from all seven locations this early following injection?).
  - (4) In providing the content requested in Ecology's Specific Comments #8, 9, and 25 (discussed in our November 22, 2017, comment letter), the draft FIWP should identify subsurface areas in and near the project footprint where vulnerable (to contact with an oxidizing agent) subsurface utilities or other buried cables/structures are located. Or, it should describe how these subsurface features will be identified later, prior to injection.
  - (5) The draft FIWP should provide a project schedule in timeline format that includes all milestone dates, as well as submittal of the interim action Completion Report. The SU2 timeline submitted electronically last September may be used as a model.

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<sup>1</sup> The colorimeter Ecology recommended for the interim action is capable of quantifying permanganate concentrations. It was not clear in the revised Work Plan if the PLPs intended to use this device for measuring permanganate or manganese.

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The draft SU2 interim action FIWP is due to Ecology within forty-five (45) days of receipt of today's letter. If you have any questions, or would like to schedule a meeting or conference call to discuss the content of the draft FIWP prior its submittal, please contact me at (425) 649-4449 or [ejon461@ecy.wa.gov](mailto:ejon461@ecy.wa.gov).

Sincerely,



Ed Jones

Environmental Engineer

Hazardous Waste and Toxics Reduction Program

By certified mail: 9171 9690 0935 0169 7332 59

cc: Jeff Kaspar/Peter Jewett, Farallon  
William Carroll, PCE  
Janet Knox, PGG  
Ronald Taylor, CI  
Donald Verfurth, G&R  
Marlys Palumbo, VNF  
William Joyce/Ian Sutton, SJZ  
William Beck, Stericycle/PSC  
Laura Castrilli, EPA R10  
Central Files  
PLPs' W4 repository

ecc: Tong Li, GWS  
Peter Hapke, ALG  
Nels Johnson, AAG  
Patty Foley/Sherell Ehlers, GTCC