

October 4, 2018

Mr. Ed Jones, Project Manager
Washington State Department of Ecology
3190 160th Avenue Southeast
Bellevue, Washington 98008-5452

BY EMAIL ONLY

**RE: PROGRESS REPORT, JULY THROUGH SEPTEMBER 2018
REMEDIAL INVESTIGATION MONITORING AND FEASIBILITY STUDY
CAPITAL INDUSTRIES, INC.
5801 THIRD AVENUE SOUTH, SEATTLE, WASHINGTON
AGREED ORDER NO. DE 10402
FARALLON PN: 457-008**

Dear Mr. Jones:

Farallon Consulting, L.L.C. (Farallon) has prepared this progress report on behalf of Capital Industries, Inc. (Capital) to summarize the activities conducted during the third quarter of 2018, July through September, as part of the ongoing remedial investigation monitoring and feasibility study being conducted at the Capital facility at 5801 3rd Avenue South in Seattle, Washington (herein referred to as the Capital Site). This progress report has been prepared in accordance with Agreed Order No. DE 10402 dated April 23, 2014, entered into by potentially liable persons that include Capital; Art Brass Plating, Inc.; Blaser Die Casting Co.; and PSC Environmental Services, LLC (Burlington Environmental, LLC is a wholly owned subsidiary of PSC Environmental Services, LLC, which is a wholly owned subsidiary of Stericycle Environmental Solutions, Inc.); and by the Washington State Department of Ecology (Ecology) (Agreed Order). Capital and the other potentially liable persons listed above are collectively referred to as the West of 4th Group. The West of 4th Group site under the Agreed Order consists of Site Unit 1 (SU1) and Site Unit 2 (SU2) as depicted on the figure presented in Attachment A. The Capital Site is located in SU2.

ACTIVITIES DURING REPORTING PERIOD

Activities completed during this progress reporting period included:

- Continuing operation of vapor intrusion mitigation subslab depressurization systems (SSDSs) at the Pacific Foods Systems North Building at 5815 4th Avenue South and the Natus Medical Facility at 5900 First Avenue South in Seattle, Washington.¹

¹ The Natus Medical Facility at 5900 First Avenue South in Seattle, Washington previously was known as the Olympic Medical Facility.



- Conducting an additional indoor air sampling event in the warehouse at the Natus Medical Facility on August 2, 2018 to resample an area where trichloroethene (TCE) was detected at an anomalously high concentration during the March 2018 indoor air sampling event.
- Submitting the *Final Revised Capital Industries Plant 4 Stage 1 Field Implementation Work Plan, West of 4th Group Site, Capital Industries, Inc., 5801 3rd Avenue South, Seattle, Washington* dated July 26, 2018, prepared by Farallon (Revised Stage 1 FIWP). The Revised Stage 1 FIWP was based on Ecology comments provided to Farallon on May 24, 2018. Stage 1 of the proposed interim action includes evaluation of in situ chemical oxidation (ISCO) as a potential cleanup technology for soil and groundwater at Capital Plant 4.
- Implementing Stage 1 of the interim action at Capital Plant 4. Stage 1 of the interim action included the following elements:
 - Baseline sampling of groundwater from observation wells OBW-1 through OBW-5 and monitoring wells MW-6 and MW-7.
 - Injection of a 3 percent solution of the chemical oxidant potassium permanganate at five injection locations within Capital Plant 4 and associated process monitoring to assess the feasibility of implementing ISCO.
 - Performance soil and groundwater monitoring.
- Conducting a semiannual groundwater monitoring and sampling event in September 2018 at select SU2 monitoring wells.

These activities are summarized in the sections that follow.

VAPOR INTRUSION MITIGATION AND REPORTING

The SSDS at the Pacific Food Systems North Building operated continuously during the third quarter of 2018, with the exception of a 24-hour period from August 22 to 23. The SSDS was turned off during this 24-hour period while potassium permanganate was injected into a boring proximate to the property boundary between Capital Industries and Pacific Food Systems as a part of Stage 1 of the interim action at Capital Plant 4 (Attachment B).

The SSDS at the Natus Medical Facility operated continuously during the third quarter of 2018. TCE was detected at a concentration of 25.3 micrograms per cubic meter in the indoor ambient air sample collected from the warehouse at the Natus Medical Facility in March 2018. In the letter regarding West of 4th Site, Agreed Order #DE 10402, Site Unit 2, Vapor Intrusion Mitigation at the Natus Medical Facility dated July 18, 2018, from Mr. Ed Jones of Ecology to Ms. Dana Cannon of West of Aspect Consulting, Ecology required resampling be conducted at the warehouse to assess whether concentrations of TCE in indoor air had decreased to acceptable levels. Farallon performed the additional air sampling event on August 2, 2018. An indoor ambient air sample was collected from the warehouse and an outdoor ambient air sample was collected from an outdoor location in an upwind direction southwest of the Natus Medical Facility. TCE and other chlorinated volatile organic compounds (CVOCs) were not detected at the laboratory practical quantitation



limits in the indoor and outdoor ambient air samples collected on August 2, 2018. Analytical results for this sampling event are provided in Attachment C. Farallon was not able to ascertain a specific source of the TCE detected in the indoor ambient air sample collected in the warehouse in March 2018. It is possible that the source of TCE was related to a commercial construction project on the east-adjacent parcel that was ongoing in March 2018. Construction of this commercial structure is now complete.

FEASIBILITY STUDY REPORT

A pilot study is being conducted at SU1 and an interim action is being conducted at SU2 at Capital Plant 4 as a part of the feasibility study for the West of 4th Group site. Stage 1 of the interim action at Capital Plant 4 concluded in September 2018. Performance monitoring samples are being analyzed at the analytical laboratory. The interim action at Capital Plant 4 is further discussed in the following section.

INTERIM MEASURES

Capital issued the Revised Stage 1 FIWP to provide Ecology a detailed framework and technical approach to Stage 1 of the interim action. Stage 1 of the interim action comprised a pilot study stage of work to evaluate ISCO as a cleanup technology for soil and groundwater. The Stage 1 work included injecting a 3 percent solution of the chemical oxidant potassium permanganate into subsurface soil and groundwater at five locations at Capital Plant 4 and conducting process and performance monitoring to evaluate whether and, if so, how ISCO can be applied more extensively to eliminate a source of tetrachloroethene and TCE at Capital Plant 4.

Farallon conducted a baseline groundwater monitoring event on July 2, 2018 to evaluate concentrations of CVOCs and metals in groundwater prior to the Stage 1 ISCO injections. The Stage 1 ISCO injections were performed at locations B3, C5, D4, E5, and F5 from August 18 through 22, 2018 (Attachment B). Performance groundwater monitoring was initiated immediately after completion of the Stage 1 ISCO injections, and was completed on September 18, 2018. A series of performance borings were advanced immediately after the completion of the Stage 1 ISCO injections to assess the lateral and vertical distribution of the injected potassium permanganate, concentrations of CVOCs, and permanganate natural oxidant demand in the soil at various depths and distances proximate to the injection locations. A second series of borings were advanced in similar locations on September 19 and 20, 2018 to assess whether the potassium permanganate had been expended and, if so, whether concentrations of CVOCs had been reduced by contact with the oxidant. The Stage 1 interim action work will be discussed with Ecology at an upcoming meeting in October 2018 and summarized in a future report upon concurrence from Ecology. If appropriate, Stage 2 of the interim action would include application of ISCO throughout Capital Plant 4.

GROUNDWATER MONITORING AND SAMPLING

Groundwater monitoring and sampling were performed on September 24 and 25, 2018 in accordance with the technical memorandum regarding FINAL West of 4th Groundwater Monitoring Program Plan, 2017 through Draft Cleanup Action Plan, W4 Joint Deliverable, Agreed



Order No. DE 10402 dated March 21, 2017, from Ms. Janet Knox of Pacific Groundwater Group to Mr. Jones of Ecology. Groundwater elevation data were collected at select SU2 monitoring wells. Groundwater samples were collected from monitoring wells scheduled for sampling and analyzed for CVOCs. Groundwater samples from select monitoring wells also were analyzed for natural attenuation parameters, including nitrate, ferrous iron, sulfate, methane, total organic carbon, and ethane/ethene. Summary figures and tables will be provided to Ecology and will be included in the fourth quarter 2018 progress report.

PUBLIC COMMUNICATIONS

No public communication activities were completed by Capital during this period.

ANTICIPATED WORK IN THE NEXT QUARTER

Work anticipated to be performed during the fourth quarter of 2018, October through December, is summarized below.

MONITORING WELL MAINTENANCE

Evaluation of the condition of the monitoring wells is conducted during each semi-annual groundwater monitoring event. Based on the results of the September 2018 groundwater monitoring event, routine monitoring well maintenance activities, including replacement of monuments at monitoring wells CI-12-WT, CI-12-60, MW-4, and CI-14-70, will be conducted during the fourth quarter of 2018.

FEASIBILITY STUDY WORK

Following completion of the SU1 pilot study and Capital Plant 4 interim action, an addendum to the Feasibility Study Reports may be prepared, and a final remedial alternative will be proposed for Ecology approval. A Draft Cleanup Action Plan will be prepared for SU1 and SU2 upon concurrence of the West of 4th Group and Ecology regarding the selected remedial alternative.

INTERIM MEASURES

A meeting with Ecology will be scheduled in October 2018 following receipt and compilation of the Stage 1 ISCO results. The discussion during this meeting will involve an evaluation of Stage 1 ISCO results and whether ISCO is an appropriate technology to achieve the interim action objectives, or an evaluation of alternative remedial technologies for treating vadose zone soil beneath Capital Plant 4. Future work may include summarizing the Stage 1 ISCO results in a formal report or memorandum, developing a work plan for Stage 2 ISCO work, or developing a work plan for evaluation of an alternative remedial technology.

GROUNDWATER MONITORING AND SAMPLING

Analytical results from the semi-annual groundwater monitoring and sampling event conducted in September 2018 will be summarized in figures and tables and provided to Ecology and included in the fourth quarter 2018 progress report.



PUBLIC COMMUNICATIONS

The project website (<http://www.farallonconsulting.com/457-capital-industries>) will be updated with an electronic copy of this progress report.

The next progress report will summarize activities completed from October through December 2018, and will be submitted on or before January 7, 2019.

CLOSING

Farallon trusts that this quarterly progress report provides sufficient information for Ecology needs. If you have questions regarding this project, please contact either of the undersigned at (425) 295-0800.

Sincerely,

Farallon Consulting, L.L.C.

Jennifer L. Moore
Senior Scientist

Jeffrey Kaspar, L.G., L.H.G.
Principal Geologist

Attachments: Attachment A, Site Diagram
Attachment B, Interim Action Injection Location Figure
Attachment C, Laboratory Analytical Results

cc: Ron Taylor, Capital Industries, Inc. (by email)
Donald Verfurth, Gordon and Rees, L.L.P. (by email)

Email with link to electronic copy on project website:

Janet Knox, Pacific Groundwater Group
Dana Cannon, Aspect Consulting
Bill Carroll, Arrow Environmental
Bill Beck, PSC Environmental Services, LLC

JM/JK:tlc

ATTACHMENT A
NATUS MEDICAL FACILITY LABORATORY DATA

PROGRESS REPORT, JULY THROUGH SEPTEMBER 2018

Capital Industries, Inc.
5801 Third Avenue South
Seattle, Washington

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ATTACHMENT B
INTERIM ACTION INJECTION LOCATION FIGURE

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ATTACHMENT C
LABORATORY ANALYTICAL RESULTS

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