

January 9, 2018

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

BY E-MAIL ONLY

**RE: PROGRESS REPORT, OCTOBER THROUGH DECEMBER 2017
REMEDIAL INVESTIGATION MONITORING AND FEASIBILITY STUDY
CAPITAL INDUSTRIES, INC., 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 fourth quarter of 2017, October through December, as part of the ongoing Remedial Investigation (RI) monitoring and Feasibility Study (FS) being conducted at the Capital Site at 5801 3rd Avenue South in Seattle, Washington. 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 Attachment A Figure 1. 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 Olympic Medical Facility at 5900 First Avenue South in Seattle, Washington. This work included periodic inspection of system operations.
- Responding to Ecology comments regarding the draft *Vapor Intrusion Mitigation Measures Status Report, Pacific Food Systems, Inc. North Building, 5815 Fourth Avenue South, Seattle, Washington* dated August 2017. This included a third-party inspection of the mitigation system conducted by Advanced Radon Technologies, Inc. (ART) of Spokane, Washington.



- Processing data from the semiannual groundwater monitoring and sampling event conducted in September 2017 for select SU2 monitoring wells.
- Responding to Ecology's comments regarding the draft *Conceptual Interim Action Work Plan, Site Unit 2, Seattle, Washington* dated July 27, 2017, prepared on behalf of Capital. This document was issued as final in the *Final Capital Industries Plant 4 Interim Action Work Plan, West of 4th Group Site, Capital Industries, Inc., 5815 4th Avenue South, Seattle, Washington* dated December 21, 2017 (Interim Action Work Plan).

These activities are summarized in the sections that follow.

VAPOR INTRUSION MITIGATION AND REPORTING

The SSDS applied vacuum has been maximized at the Pacific Food Systems North Building since the third quarter of 2016 to assess whether concentrations of tetrachloroethene and trichloroethene (TCE) in indoor air can be reduced below the applicable air cleanup levels. Regardless of the continued operation of the SSDS and modifications to the operations, TCE remains at concentrations slightly exceeding than the air cleanup level. The average applied vacuum has been between 6 and 7 inches of water, with corresponding flow rates ranging from 17 to 24 standard cubic feet per minute. Normal SSDS operation continued through December 2017.

On December 6, 2017, ART, Farallon, and Ecology conducted a Site visit to allow ART to independently review the SSDS design/operation and present recommendations, if necessary, for system modifications or operations. ART has issued a summary of the inspection results with recommendations that include conducting additional monitoring to verify the negative pressure throughout the building footprint prior to administering modifications to the SSDS. ART included recommendations for SSDS performance that will be considered following the negative field pressure monitoring work to be conducted beneath the slab. The ART inspection summary, scope of work for further actions, and schedule are being prepared for Ecology's review in January 2018. In the interim, the SSDS continues to operate.

Farallon prepared the draft *Vapor Intrusion Mitigation Measures Status Report, Pacific Food Systems, Inc. North Building, 5815 Fourth Avenue South, Seattle, Washington* dated August 2017 on behalf of Capital for Ecology's records. Ecology provided comments to the draft report in the letter regarding West of 4th Site, Agreed Order #DE 10402, Site Unit 2 VI Mitigation Measures Status Report – 5815 4th Avenue South dated August 21, 2017 from Mr. Ed Jones of Ecology to Ms. Dana Cannon, West of 4th Project Coordinator. A final version of the report will be issued in the first quarter of 2018 and will incorporate responses to Ecology's comments and results of the ART inspection.

The SSDS at the Olympic Medical Facility operated continuously during the fourth quarter of 2017. The SSDS was operating in accordance with standard operating conditions during the last inspection conducted by Farallon in September 2017. Operation of the SSDS at the Olympic Medical Facility will continue, and will be monitored in the first quarter of 2018.



GROUNDWATER MONITORING AND SAMPLING

Groundwater monitoring and sampling was performed during the week of September 25, 2017 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 samples were collected from monitoring wells MW-7, CI-12-WT, CI-12-60, CI-14-35, CI-14-70, CI-15-60, CI-19-30, CG-141-40, and CG-141-50. All samples were analyzed for chlorinated volatile organic compounds. Samples collected from monitoring wells CI-15-60, CG-141-40, and CG-141-50 were analyzed also for natural attenuation parameters, including nitrate, ferrous iron, sulfate, methane, total organic carbon, and ethane/ethene. The groundwater data are included on summary figures provided in Attachment B.

In general, the groundwater results continue to demonstrate that the Capital area plumes associated with the commingled Capital Plant 2/Blaser Die Casting sources, and the Capital Plant 4 source are stable to decreasing. However, the 2016/2017 data for monitoring well CI-19-30, proximate to the Lower Duwamish River, at the CertainTeed Gypsum, Inc. property (Attachment B Figure 2) indicates an increasing trend in vinyl chloride concentrations. The West of 4th Group is jointly conducting work in 2018 to refine the conceptual site model and fate and transport characteristics of the source(s) of elevated concentrations of vinyl chloride up-gradient of the CertainTeed Gypsum, Inc. property. Monitoring well CI-19-30 will continue to be monitored in 2018 to evaluate the status of vinyl chloride.

FEASIBILITY STUDY REPORT

Ecology and the West of 4th Group had agreed to evaluate the feasibility of select cleanup technologies that could reduce the time frame for cleanup and protect the Lower Duwamish Waterway using bench and/or field-scale pilot testing. In June 2017, the West of 4th Group concurred that changes to the SU2 pilot study location, the reduced scope of work, and the 1-year time frame to complete the pilot study would not achieve the objectives for reducing the contaminant mass in groundwater and providing data to improve the FS cleanup alternative evaluation. The West of 4th Group therefore proposed conducting pilot studies at SU1 and eliminating the SU2 pilot study, and conducting an interim action at the Capital Plant 4 Building instead. Ecology approved this proposal, and Capital is preparing planning documents for the interim action work that will occur in 2018.

INTERIM MEASURES

No interim measures were implemented during this reporting period. However, Capital issued the final Interim Action Work Plan that includes treatment of soil and groundwater at the Capital Plant 4 Building using in-situ chemical oxidation. A Draft Field Implementation Work Plan that will include specific details regarding the interim action at Capital Plant 4, a Sampling and Analysis Plan, a Quality Assurance Project Plan, and a Health and Safety Plan will be provided for Ecology in February 2018.



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 first quarter of 2018, January through March, is summarized below.

VAPOR INTRUSION

Capital will conduct an evaluation of the negative pressure field extension beneath the Pacific Food Systems North Building in January 2018. The results from the evaluation will determine further actions required regarding vapor intrusion mitigation at this location. Periodic monitoring of the SSDS at the Olympic Medical Facility will continue to be performed, including annual sampling in the first quarter of 2018.

MONITORING AND SAMPLING ACTIVITIES

A groundwater monitoring and sampling event will be scheduled for March 2018. The purpose of the ongoing groundwater monitoring is to evaluate the stability of the plumes, monitor the ongoing natural attenuation processes to refine the time frame for achieving cleanup levels, evaluate existing and potential vapor intrusion risk, and provide data to refine evaluation of the cleanup alternatives presented in FS.

FEASIBILITY STUDY WORK

The revised versions of the SU1 and SU2 FS Reports comprising the West of 4th Group FS are considered final versions of these reports. Following completion of the SU1 pilot study and Capital Plant 4 interim action in 2019, an addendum to the FS Reports will 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

The interim action proposed at Capital Plant 4 will be implemented upon Ecology approval of the final Field Implementation Work Plan. The current estimate is that the interim action measures will be implemented in the second quarter of 2018.

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 January through March 2018, and will be submitted on or before April 5, 2018.



CLOSING

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

Sincerely,

Farallon Consulting, L.L.C.

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

Attachments: Attachment A, Site Diagram
Attachment B, Groundwater Data Figures

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

E-mail 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

JK:mm

**ATTACHMENT A
SITE DIAGRAM**

PROGRESS REPORT, OCTOBER THROUGH DECEMBER 2017

Capital Industries, Inc.
Seattle, Washington

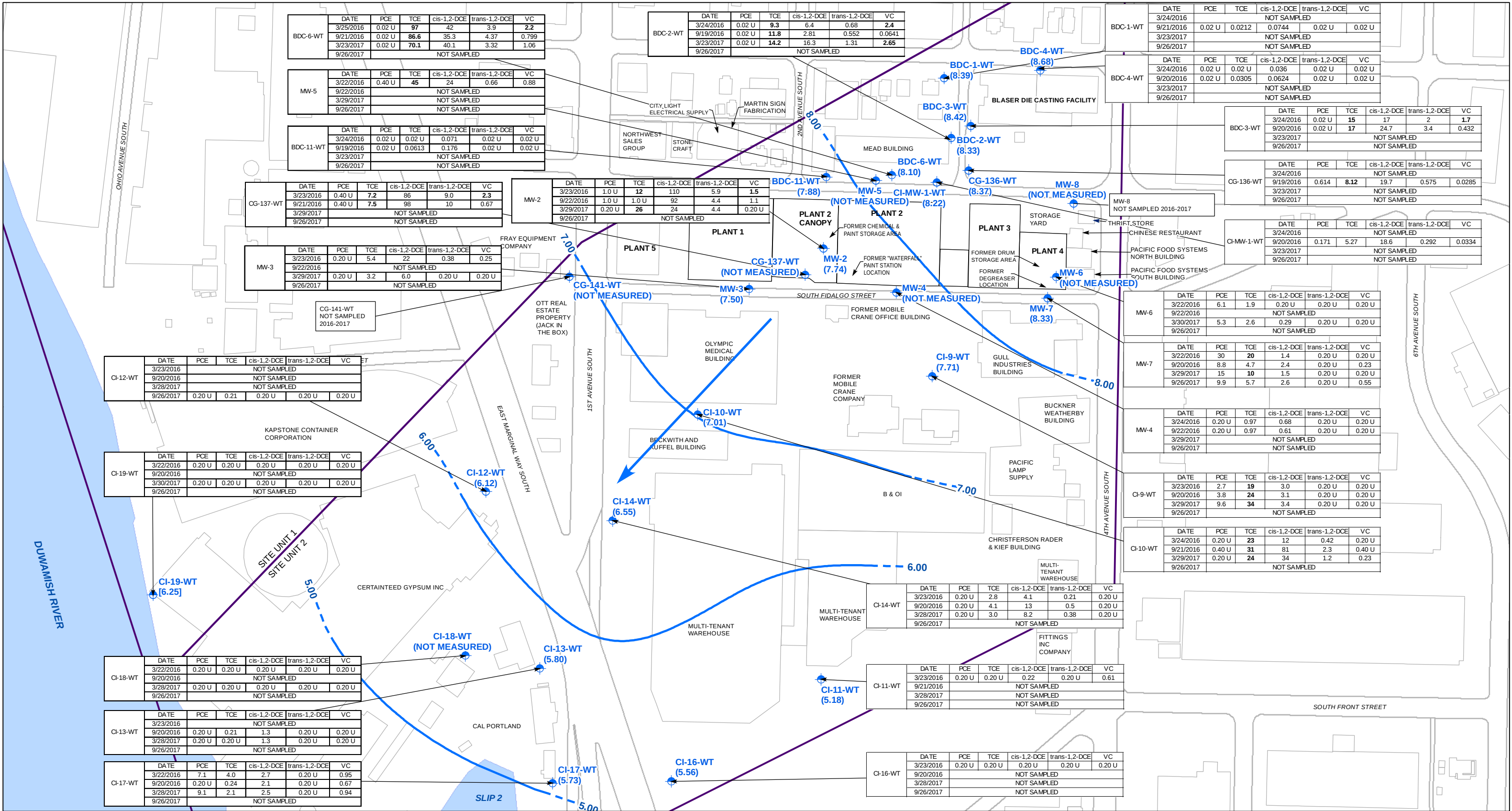
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ATTACHMENT B
GROUNDWATER DATA FIGURES

PROGRESS REPORT, OCTOBER THROUGH DECEMBER 2017

Capital Industries, Inc.
Seattle, Washington

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LEGEND

- WATER TABLE ZONE MONITORING WELL
- SITE UNIT BOUNDARY
- GROUNDWATER SURFACE ELEVATION CONTOUR (DASHED WHERE INFERRED)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER LEVEL ELEVATION NAVD88

ALL ANALYTICAL RESULTS IN MICROGRAMS PER LITER, SAMPLE DATES LISTED

- DCE = DICHLOROETHENE
- PCE = TETRACHLOROETHENE
- TCE = TRICHLOROETHENE
- VC = VINYL CHLORIDE
- BOLD** = INDICATES CONCENTRATIONS EXCEED WEST OF FOURTH GROUNDWATER PRELIMINARY CLEANUP LEVELS FOR PROTECTION OF AIR
- U = INDICATES CONCENTRATIONS NOT DETECTED ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT

[6.25] GROUNDWATER LEVEL WAS NOT USED FOR CONTOURING

DRAFT

0 100 200
SCALE IN FEET

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FIGURE 1

GROUNDWATER ANALYTICAL RESULTS FOR WATER TABLE ZONE: 2016 - 2017
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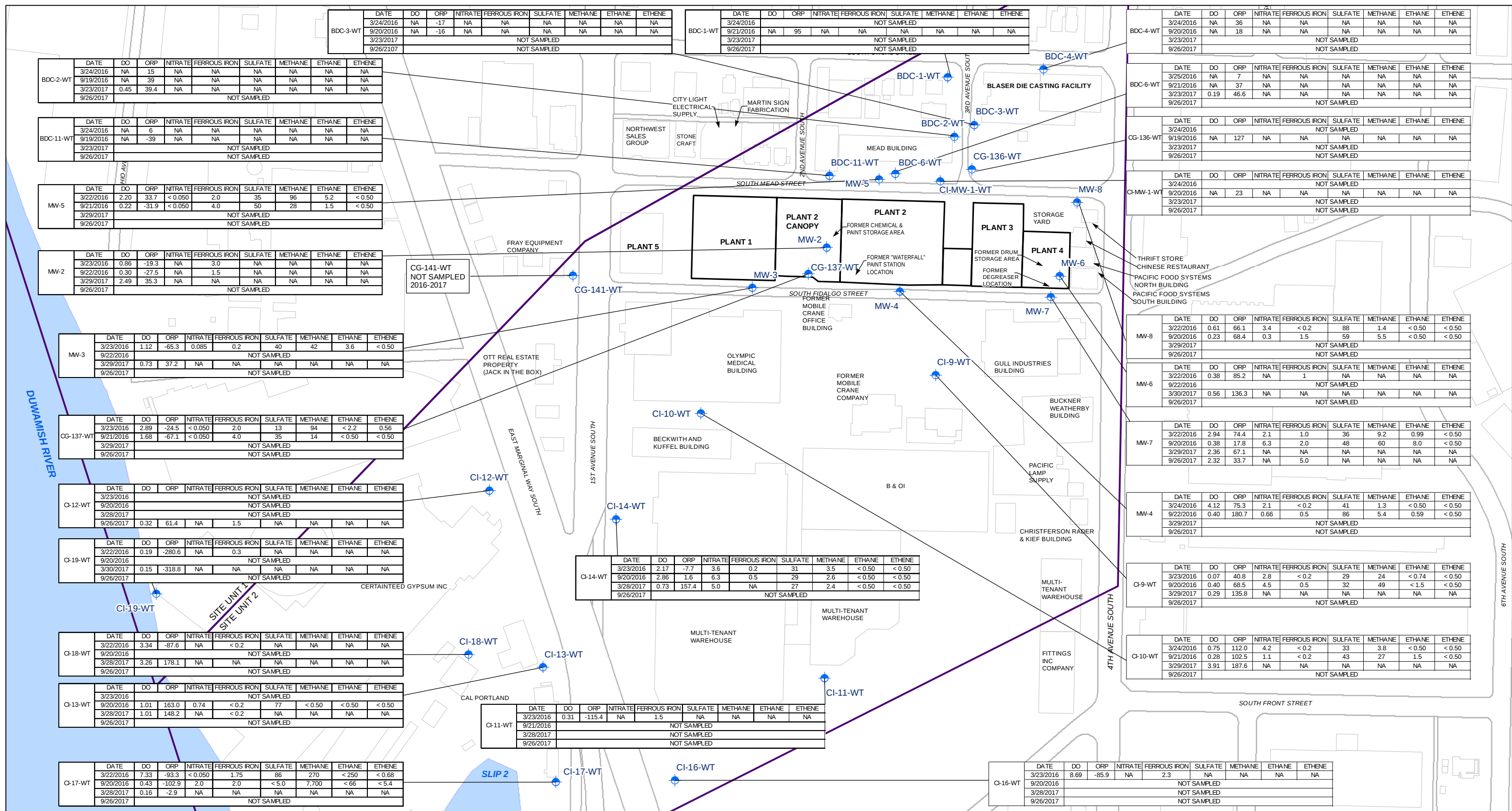
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Checked By: JK

Date: 1/2/2018

Disc Reference:

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WATER TABLE ZONE MONITORING WELL



SITE UNIT BOUNDARY

LEGEND

FERROUS IRON, NITRATE AND SULFATE IN MILLIGRAMS PER LITER UNITS
METHANE, ETHANE, AND ETHENE IN MICROGRAMS PER LITER UNITS

DO = DISSOLVED OXYGEN (MILLIGRAMS PER LITER)
ORP = OXIDATION REDUCTION POTENTIAL (MILLIVOLTS)
IE = INSTRUMENT ERROR
NA = NOT ANALYZED
< = ANALYTE NOT DETECTED AT OR EXCEEDING THE REPORTING LIMIT LISTED

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FIGURE 1A

NATURAL ATTENUATION PARAMETER RESULTS FOR
WATER TABLE ZONE: 2016 - 2017
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Checked By: JK

Date: 1/2/2018

Disc Reference:

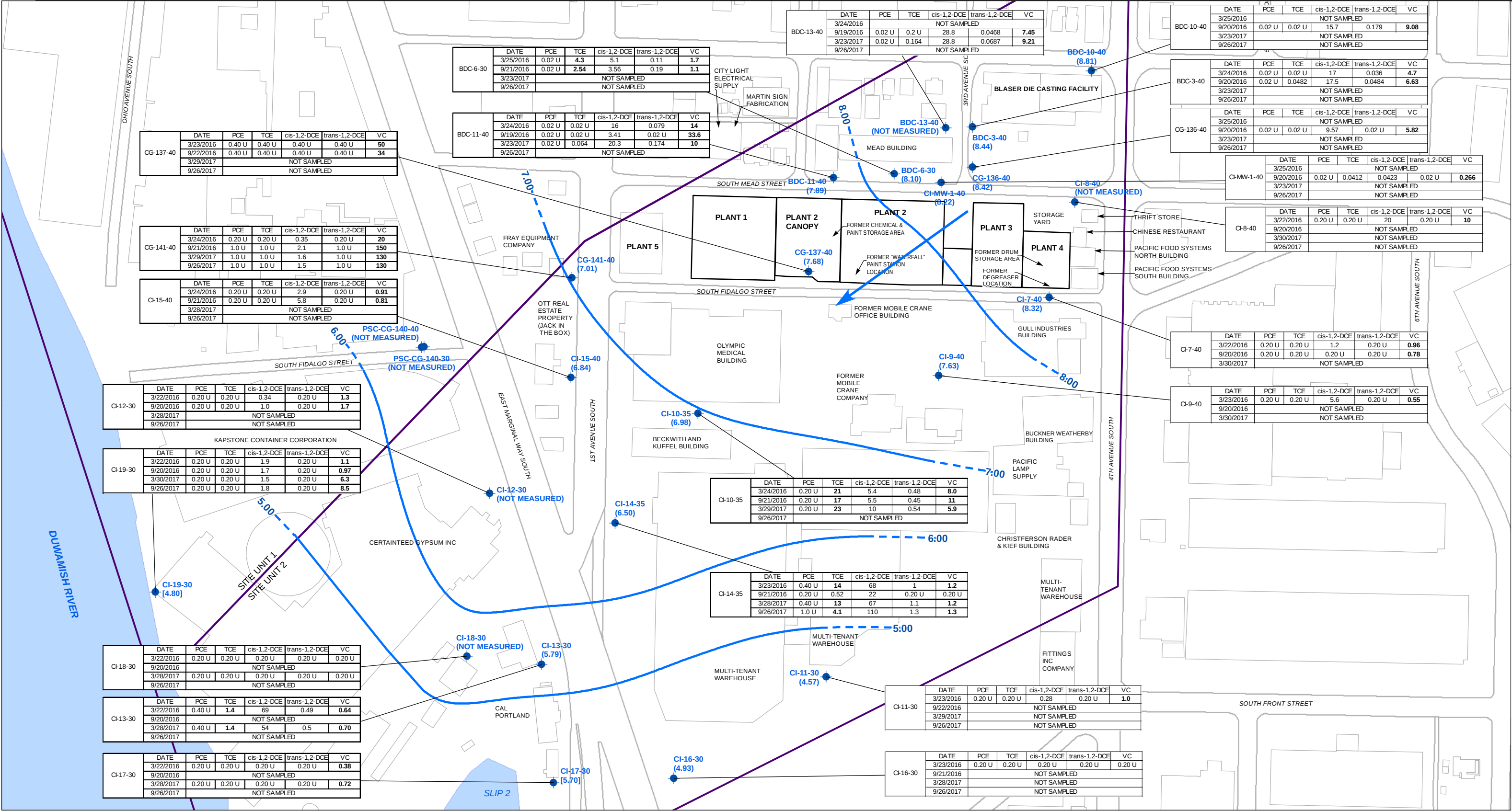


FIGURE 2
GROUNDWATER ANALYTICAL RESULTS FOR
SHALLOW ZONE: 2016 - 2017
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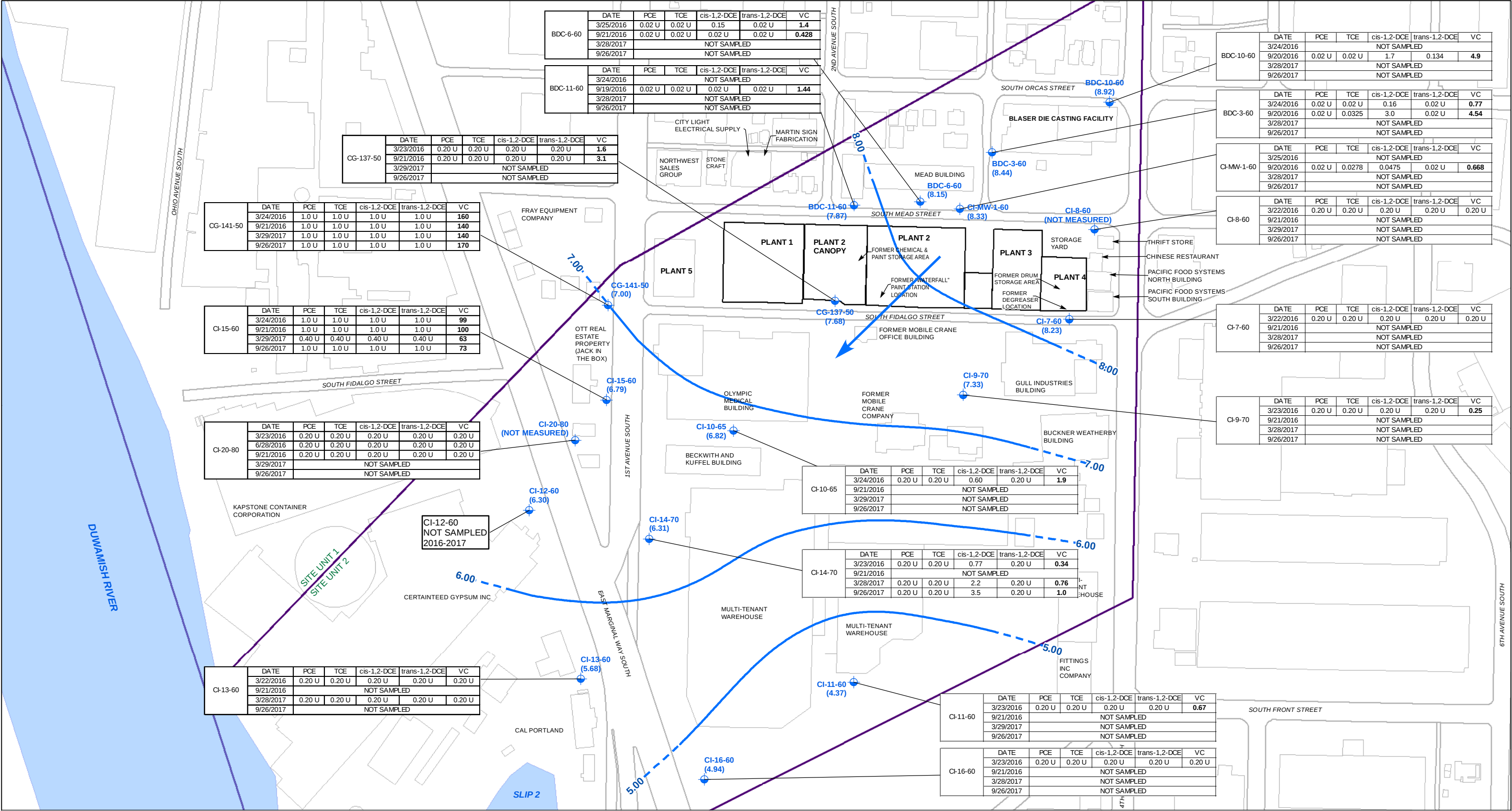
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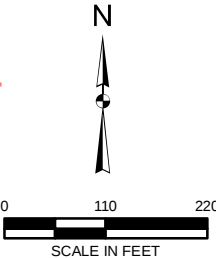
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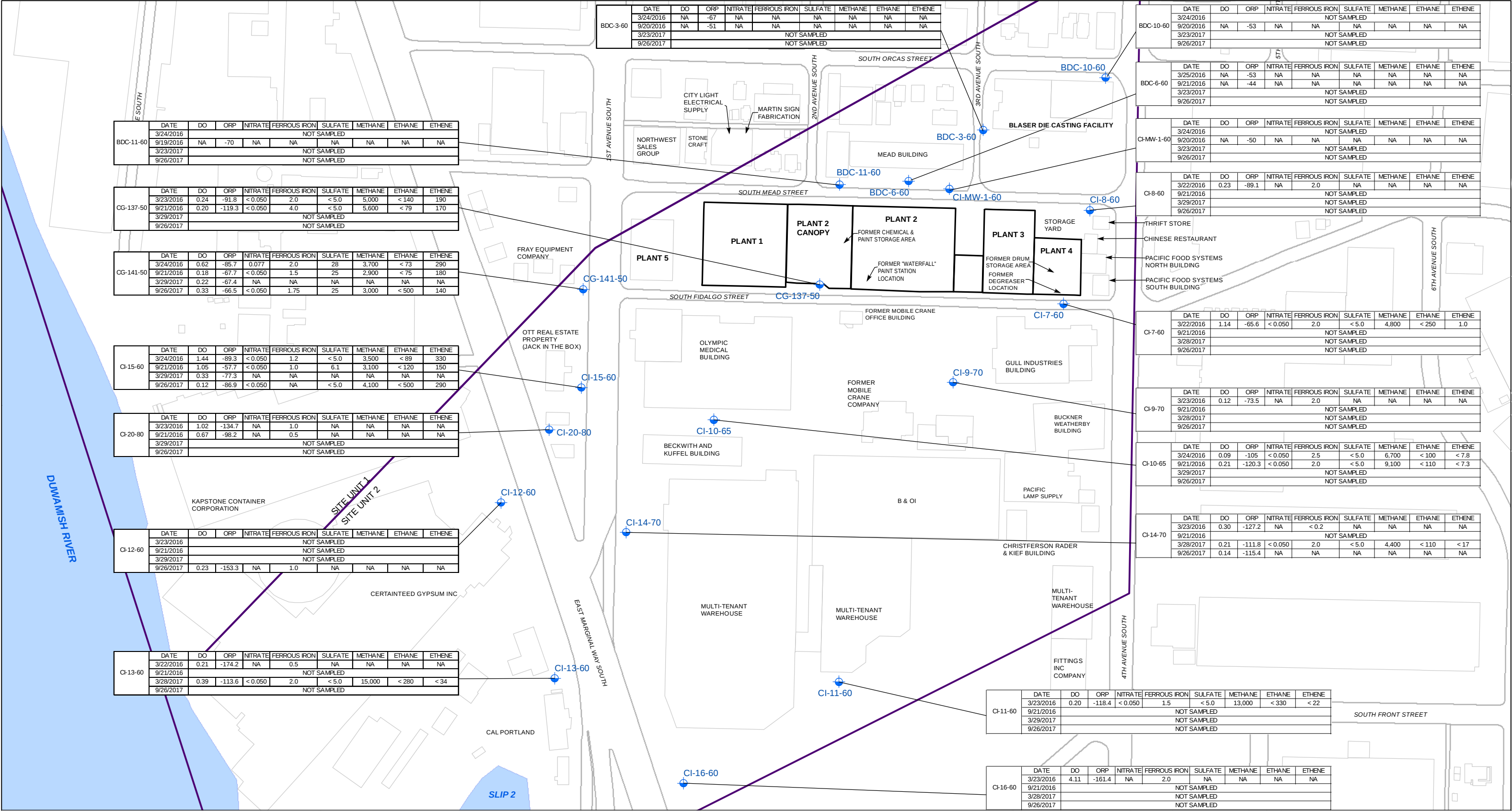
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FIGURE 3
GROUNDWATER ANALYTICAL RESULTS FOR
INTERMEDIATE ZONE: 2016 - 2017
REMEDIAL INVESTIGATION
CAPITAL INDUSTRIES, INC.
SEATTLE, WASHINGTON

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INTERMEDIATE WATER-BEARING ZONE WELL

SITE UNIT BOUNDARY

LEGEND

FERROUS IRON, NITRATE AND SULFATE IN MILLIGRAMS PER LITER UNITS
METHANE, ETHANE, AND ETHENE IN MICROGRAMS PER LITER UNITS

DO = DISSOLVED OXYGEN (MILLIGRAMS PER LITER)
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FIGURE 3A

NATURAL ATTENUATION PARAMETERS RESULTS FOR INTERMEDIATE ZONE: 2016 - 2017

REMEDIAL INVESTIGATION

CAPITAL INDUSTRIES, INC.

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Date: 1/2/2018

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