STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
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March 15, 2013

Ray Hoffman
Director Seattle Public Utilities
PO Box 34018
Seattle, WA 98124-4018

Steve Secrist
Vice President of General Counsel
Puget Sound Energy
P.O. Box 97034
Bellevue, WA 98009-9734

Re: Request to Amend Agreed Order DE 2008 – Gas Works Park Sediment Site

Dear Mr. Hoffman and Mr. Secrist:

Ecology has received your letter dated January 24, 2013, requesting that Agreed Order (AO) DE 2008 be modified to include Gas Works Park and Seattle Harbor Patrol properties within the area of investigation in order to evaluate the upland areas that may impact sediments. It has always been Ecology's intent that AO DE 2008 include upland impacts on sediments and the minor modifications to AO DE 2008 that you propose ensure that the upland to sediment pathway will be adequately characterized for the Site.

Consistent with sections IV.2 and V.4 of the Agreed Order, Ecology concurs that a minor modification addressing the scope of work and area of investigation described below are appropriate and will be incorporated as a minor modification to AO DE 2008.

- Modify the scope of work as described in the Supplemental Scope of Work for Exhibit B Statement of Work (attached) and Exhibit C revised schedule of Deliverables (attached).
- Expand the area of investigation as depicted in revised Exhibit D (attached).

The date posted on this letter will be the approval date for the minor modification for the items listed in your letter to amend AO DE 2008. Ecology appreciates the work that has been done at the Site and the work that will be done to comply with state and federal cleanup regulations.

Sincerely,

Libby S. Goldstein
Site Manager Gas Works Parks/Sediments
NWRO Toxics Cleanup Program

Attachments:

- Request to Amend Agreed Order DE 2008 Gas Works Park Sediment Site – January 24, 2013
- Supplemental Scope of Work for Agreed Order DE 2008 Exhibit B – Statement of Work
- Revision to Agreed Order DE 2008 Exhibit C – Schedule of Deliverables
- Revision to Agreed Order DE 2008 Exhibit D – Area of Investigation

cc: Pete Rude, City of Seattle, Seattle Public Utilities
David Graves, City of Seattle, Parks and Recreation
Laura Wishik, City of Seattle
Lorna Luebbe, Puget Sound Energy
John Rork, Puget Sound Energy
Harry Grant, Riddell Williams
Dan Baker, GeoEngineers
Dori Jaffe, Washington Attorney Generals Office
Bob Warren, Section Manager, NWRO TCP
Jim Pendowski, Program Manager, TCP
Lynda Priddy, US EPA Region 10

City of Seattle
Seattle Public Utilities

PUGET SOUND ENERGY

January 24, 2013

Libby Goldstein
Site Manager, Toxics Cleanup Program
Washington State Department of Ecology
Northwest Regional Office
3190 160th Avenue S.E.
Bellevue, WA 98008-5452

Re: Request to Amend Agreed Order DE 2008
Gas Works Park Sediment Site

Dear Libby:

The purpose of this letter is to request minor modifications to Agreed Order DE 2008, between PSE, the City of Seattle and the Washington State Department of Ecology, to allow incorporation of upland areas that may impact sediment.

The area of investigation will be expanded to include Gas Works Park and Harbor Patrol properties to evaluate upland areas that may impact sediments. By submittal of this letter, PSE and the City propose to modify the scope of work and area of investigation as follows:

- Modify the scope of work as described in the Supplemental Scope of Work for Exhibit B Statement of Work (attached) and Exhibit C Revised Schedule of Deliverables (attached).
- Expand the area of investigation as depicted in revised Exhibit D (attached).

We request that Ecology respond with a letter approving this request for minor modifications to Agreed Order DE 2008. We understand that the letter from Ecology will reference this letter and serve as the written agreement of the project coordinators modifying Exhibits B, C, and D of Agreed Order DE 2008. The date posted on Ecology's approval letter will be the Approval Date; tasks listed in the Revised Schedule of Deliverables will be based on the Approval Date.

Please contact us if you have any questions regarding this request.

Sincerely,

Ray Hoffman
Director
Seattle Public Utilities

Steve R. Secrist
Vice President, General Counsel, and
Chief Ethics & Compliance Officer
Puget Sound Energy

Attachments: Supplemental Scope of Work for Agreed Order Exhibit B – Statement of Work
Revision to Agreed Order Exhibit C – Schedules of Deliverables
Revision to Agreed Order Exhibit D – Area of Investigation

cc: Bob Warren, Department of Ecology
Dori Jaffe, Washington Attorney General
Lorna Luebbe, Puget Sound Energy
John Rork, Puget Sound Energy
Pete Rude, City of Seattle, Seattle Public Utilities
David Graves, City of Seattle, Parks and Recreation
Laura Wishik, City of Seattle
Harry Grant, Riddell Williams
Dan Baker, GeoEngineers

Gas Works Park Sediment Area
Supplemental Scope of Work for Agreed Order Exhibit B Statement of Work

Objective/Pathway	Scope of Work
Supplemental Investigation Work	
Primary Source Characterization	Additional characterization will be performed to assess potential primary upland sources to develop and refine the site-wide CSM. Maps of sample locations and historical MGP and other industrial facilities will be combined to determine where additional source characterization is needed. As necessary, supplemental investigation will be conducted at the location of potential primary contamination sources including the Cracking Tower area.
Soil Direct Contact/Inhalation	The primary areas where surface soils exceed cleanup levels are the NE corner, Kite Hill, and the adjacent Cracking Tower area. Surface soil concentrations will be mapped to identify soils exceeding cleanup levels for remedial action planning.
Sources of Groundwater Contamination (Leaching to Groundwater)	Additional characterization will be performed to assess potential ongoing sources of groundwater contamination such as the area of dissolved naphthalene near MW-09. Groundwater quality will be characterized in tar and DNAPL-impacted areas to assess their contribution to dissolved groundwater plumes. Groundwater sampling will be used to evaluate the leachability of tar and other sources of groundwater contamination.
Surface Soil Erosion to Sediment	Additional work will be performed to assess surface soil runoff as a potential uplands source of sediment recontamination.
Groundwater Migration to Sediment and Surface Water	Additional work will be performed to address the groundwater to sediment and surface water pathway. A site-wide evaluation of groundwater will be conducted to assess both groundwater flow and groundwater quality migrating from the uplands. Work will include an initial site-wide sampling event that includes sampling all existing wells. Additional monitoring wells will be installed to assess groundwater quality migrating to Lake Union. Areas that will be targeted for additional characterization include the shoreline downgradient of Kite Hill and other tar/NAPL-impacted and shoreline areas without adequate well coverage. Groundwater data will be used to develop and refine the CSM, assess dissolved contaminant flux from the uplands to Lake Union, and identify potential uplands sources of sediment recontamination.
NAPL Migration to Sediment and Surface Water	Additional work will be performed to assess potential DNAPL migration to sediment and surface water. Assessment of DNAPL will be performed to understand the current distribution of DNAPL and potential mobility. A site-wide evaluation of DNAPL will be conducted to identify areas where additional investigation is needed for selection of remedial alternatives. Existing information regarding NAPL migration will be evaluated and taken into account when drafting the supplemental investigation work plan. Areas that will be targeted for additional characterization include the shoreline downgradient of Kite Hill to determine whether it is an ongoing source of DNAPL migration to sediments, Harbor Patrol to evaluate the western extent of DNAPL, and other tar/NAPL-impacted and shoreline areas with inadequate coverage. DNAPL occurrence and mobility will be used to develop and refine the CSM, assess sources of dissolved contaminant flux from the uplands to Lake Union, and identify potential uplands sources of sediment recontamination. Additional monitoring wells may be installed along the shoreline to further assess NAPL mobility.
Storm Drain Discharge to Sediment and Surface Water	Additional work will be performed to assess storm drains to develop and refine the CSM and as a potential source of sediment recontamination.
Interim Action	
Kite Hill Soil	The PLPs are proposing to install a vegetated soil cap as an interim action on Kite Hill.
Remedial Investigation/Feasibility Study Report	
Evaluation of Existing and Supplemental Investigation Data	The PLPs will prepare a site-wide RI/FS. The RI/FS is anticipated to be a comprehensive document that combines usable existing data and new data collected during the supplemental RI field activities. Existing data will be compiled and evaluated with regard to usability. Data will be incorporated into the proposed RI and FS. Analytical data (existing and supplemental) will be organized in an electronic database, and submitted to Ecology's EIM. The RI/FS will include a site-wide RI report and an FS report that will, at a minimum, include upland areas to address upland to sediment pathways. The following specific elements will be incorporated into the RI/FS to address EPA concerns: • Assessment of whether groundwater plumes attenuate adequately to meet surface water standards. • Evaluation of contaminant flux to surface water • Assessment of groundwater as an ongoing source of sediment contamination. • Assessment of NAPL mobility and NAPL as a potential ongoing source of sediment contamination. • Evaluation of naphthalene at MW-9. • Evaluation of the shoreline downgradient of Kite Hill as a potential source of NAPL and/or dissolved phase groundwater contamination.
CSM	The CSM, including potential primary and secondary sources, extent of soil, groundwater, NAPL, and sediment impacts, and analysis of upland to sediment/surface water pathways, will be refined after supplemental data are collected.
Cleanup Standards/Risk Assessment	An objective of the RI/FS report will be to establish cleanup standards. The RI/FS report will include a re-evaluation of chemicals of concern and human and ecological risk evaluations. PLPs will work with Ecology and EPA to develop risk-based cleanup levels. Sediment cleanup levels will not be based solely on benthic toxicity and will consider other exposure pathways such as tribal seafood consumption and beach play. ARARs will be re-evaluated. Appropriate potable surface water ARARs as well as drinking water criteria and MCLs will be incorporated into the RI/FS. Points of compliance for groundwater will be re-evaluated during the RI/FS. Additional evaluation of ARARs and site conditions will be performed to evaluate the applicability of remediation levels and the shoreline and mudline as appropriate conditional/alternate points of compliance for site groundwater.
Alternatives Evaluation	The FS will consider potential upland and/or sediment remedial alternatives protective of human health and the environment by eliminating, reducing or otherwise controlling risks. Upland remedial alternatives will be re-evaluated during the FS. Re-evaluations will be performed to address the following specific EPA concerns: • Groundwater to surface water pathway (i.e., potential dissolved phase migration to Lake Union). Evaluate dissolved plume control (containment and/or plume stability) and the efficacy of upland and sediment technologies to prevent future groundwater migration to Lake Union at concentrations above cleanup levels. • Re-evaluation of appropriateness of natural attenuation for groundwater in the vicinity of NAPL impacts. • Potential tar/NAPL migration to sediment and surface water. • Tar/DNAPL that functions as an ongoing source of groundwater contamination. • Contamination of groundwater by the presence of source material. • The presence of soil on Kite Hill that exceeds cleanup levels. • Exposure to nearshore sediment. • Naphthalene in MW-9 area and other areas identified in the supplemental investigation work above. • Upwelling tar. The FS will consider the following remedial actions: • Source removal. • Source control/containment. • Groundwater containment technologies in the uplands and/or sediments. • Groundwater in situ treatment. • NAPL containment and removal to the extent practicable. • Sediment capping technologies including unamended sand, amended sand, and low-permeability caps. • Active measures for sediments. The site-wide FS will evaluate the effectiveness of previous cleanup activities with respect to complying with the updated cleanup action objectives. The feasibility study will include an evaluation of the relative costs and benefits of meeting cleanup levels at various locations (points of compliance) and using different remedial technologies. Source control will be integrated in the site-wide RI/FS and remedial actions so that recontamination of sediments will be minimized. Evaluation of sediment remedies will consider compliance with surface water ARARs. Explanation of how remedies will mitigate the risk will be included in the site-wide FS.

Exhibit C
Revised Schedule of Deliverables

Schedule of Deliverables under Existing Agreed Order DE2008
(Effective Date March 18, 2005)

Deliverable	Due Date	Date Completed
Draft Eastern Study Area RI/FS Work Plan (PSE)	Not later than 30 days after the Effective Date	October 14, 2004
Ecology's Comments on the Draft Eastern Study Area RI/FS Work Plan	Not later than 30 days following the receipt of the Draft RI/FS Work Plan, or 30 days after the effective date whichever is longer.	January 18, 2005
Draft Eastern Study Area RI/FS Report (PSE)	Not later than 270 days following the receipt of Ecology's comments on the draft work plan.	March 31, 2006
Ecology's Comments on the Draft Eastern Study Area RI/FS	Not later than 45 days after receipt of the Draft RI/FS	June 29, 2006
PSE responds with written comments to Ecology's Comments on the Draft RI/FS	Not later than 30 days after receipt of Ecology's comments.	July 31, 2006
Draft Western Study Area Current Situation Report and Work Plan (City)	Not later than 30 days after the effective date.	January 14, 2005
Ecology's Comments on the Draft Western Study Area Current Situation Report and Work Plan	Not later than 30 days after the receipt of the Draft Current Situation Report and Work Plan	February 23, 2005
Final Western Study Area Current Situation Report and Work Plan (City)	Not later than 60 days after the receipt of Ecology's comments on the Draft Current Situation Report and Work Plan	March 21, 2005
Draft Western Study Area Data Report (City)	Not later than 260 days following the receipt of Ecology's comments on the Draft Current Situation Report and Work Plan	December 7, 2005
Draft Western Study Area RI/FS Report (City)	Not later than 270 days following receipt of Ecology's comments on the Draft Data Report	May 25, 2007
Ecology's Comments on the Draft Western Study Area RI/FS	Not later than 45 days after receipt of the Draft RI/FS	July 16, 2007 December 7, 2007
The City responds with written comments in response to Ecology's Comments on the Draft RI/FS	Not later than 60 days following the receipt of Ecology's comments.	January 25, 2008

Exhibit C
Revised Schedule of Deliverables

Additional Schedule of Deliverables under Modified Agreed Order DE2008
(Approval Date March __, 2013)

Deliverable	Due Date
Agency Review Draft – Work Plan for Supplemental Investigation. Work plan (including SAP, etc.) specifying supplemental studies/data collection that will be performed to fill data gaps.	Not later than 30 days after the Approval Date.
Final – Work Plan for Supplemental Investigation. Work plan will be revised to incorporate agency comments.	Not later than 30 days after Ecology orders production of the Final Work Plan for Supplemental Investigation.
Agency Review Draft – Site-wide RI Report. Report will encompass sediments data, supplemental data, and existing uplands data necessary to address uplands to sediments pathways.	Not later than the later of 120 days after completion of field investigation activities or 300 days after Ecology's approval of the Final Work Plan for Supplemental Investigation.
Agency Review Draft – Site-wide FS Report. The FS will address sediments, inclusive of the shoreline area, and uplands areas that are part of uplands to sediments pathways.	Not later than 120 days after resolution of Ecology's comments on the Agency Review Draft – Site-wide RI Report.
Final Draft – Site-wide RI/FS Report delivered to Ecology. The RI/FS report will package the revised drafts of the RI and FS reports, incorporating agency comments.	Not later than 60 days after Ecology orders production of the Final Draft Site-wide RI/FS Report.

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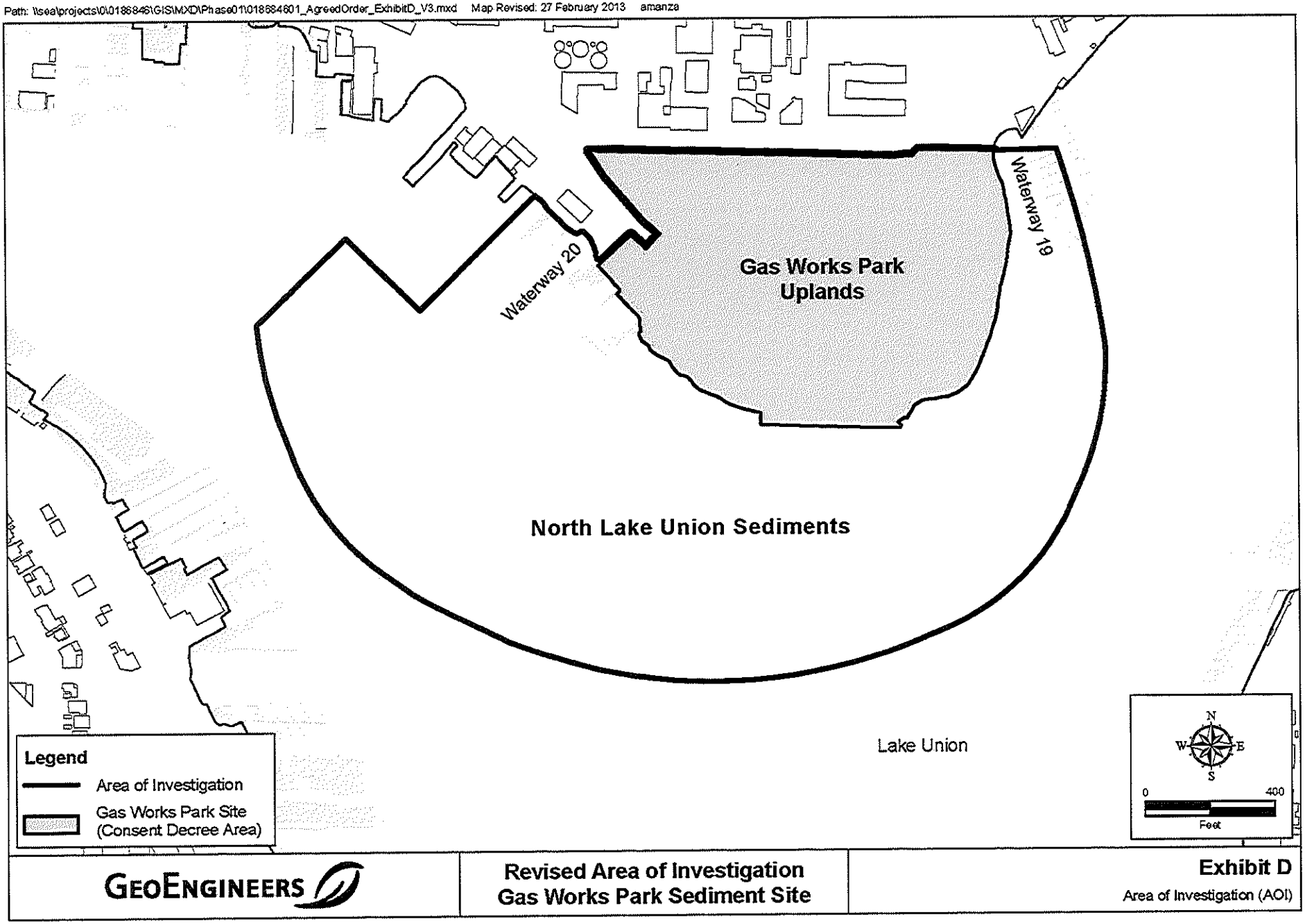

GeoEngineers

Revised Area of Investigation
Gas Works Park Sediment Site

Exhibit D
Area of Investigation (AOI)