

**Exh. ECO-4
Dockets UE-170033/UG-170034
Witness: Elizabeth O'Connell**

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**DOCKETS UE-170033 and
UG-170034 (*Consolidated*)**

**EXHIBIT TO
TESTIMONY OF**

Elizabeth C. O'Connell

**STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

PSE Environmental remediation quarterly report, first quarter 2017.

June 30, 2017



May 4, 2017

Steven V. King
Executive Director and Secretary
Washington Utilities & Transportation Commission
PO Box 47250
Olympia, WA 98504

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**Subject: Docket UG-920781 (WNG)
Docket UE-911476 (PSP&L)
Docket UE-070724 (PSE)
Docket UE-072060 (PSE)
Docket UE-081016 (PSE)
Environmental Report for the quarter ending March 31, 2017**

Pursuant to the WUTC Order entered on 10/8/08, PSE now operates both its electric and gas deferred environmental accounting programs with a blanket authorization, provided the requisite criteria is met. This Order was issued under the following Docket Numbers: UE-070724, UE-072060, and UE- 081016.

PSE deferred accounting treatment matches the expenses of the remediation of these sites with the recovery of expenses from third parties. The costs for these sites currently exceed third party recoveries.

The attached spreadsheets represent a list of major sites PSE is currently investigating, monitoring and remediating and reflects actual costs at the end of Q1 2017. PSE requests this submittal to be treated as Confidential and Privileged. These spreadsheets show actual costs as the close of the quarter, costs incurred as well as an estimate of future project costs. Future Costs are confidential pursuant to WAC 480-07-160.

FORMER WNG SITES

A. Tacoma Gas Company Site (Upland Source Control)

PSE continues to work with the Washington Department of Ecology (WDOE) on developing the Remedial Investigation/Feasibility Study (RI/FS). A field well inventory was completed in January 2016 and a groundwater sampling and analysis plan was approved by Ecology in July 2016. Groundwater samples were obtained in mid-July and the results were submitted to Ecology in September. The purpose of the sampling was to begin the process to update the conditions at the site for incorporation into the RI/FS.

A meeting was held with Ecology in November to discuss the results and pathforward to achieve regulatory closure for the site. Participates at the meeting included Ecology, PSE, PacifiCorp, City of Tacoma and WSDOT. Ecology is working on preparing a new Agreed Order (AO). The goal of the AO is to gain approval from Ecology of the RI/FS so that a final Cleanup Action Plan can be prepared to close out the site. During the meeting it was agreed to complete a second round of update groundwater sampling and analysis. This sampling is scheduled to be completed in mid-December.

B. Thea Foss Waterway

The Thea Foss Waterway is part of the Commencement Bay Superfund site which is an EPA regulated cleanup site. PSE was involved as Potentially Responsible Party (PRP) due to its past ownership of a portion of the 22nd and A street MGP, and is part of a Utilities PRP subgroup. The majority of cleanup activities have been completed. PSE received proceeds from the Settlement with WSDOT for their contribution to cleanup of the contamination of the Thea Foss.

PSE, as part of the Utilities group, is currently complying with an EPA approved Operation and Monitoring Plan (OMMP) to monitor the effectiveness of the cleanup remedy. In April and May 2014 (Year 10 OMMP) the Utilities completed required site inspections and sediment sampling near the head of the waterway. Visual surveys were completed in 2015 and May 2016. The visual survey and available analytical data continued to show that the Utilities' remedy is functioning as intended and that the recontamination source remains storm water. Based on 10 years of sampling, the project team submitted a proposed work program and sampling schedule for future monitoring to EPA. The Utilities are waiting for EPA to respond to the monitoring proposal.

The City of Tacoma is responsible for remediation of the most of the waterway. The City completed its Year 10 OMMP sampling in 2016. EPA has expressed a desire to coordinate the OMMP sampling activities of PSE and the City of Tacoma with the Superfund required 5-year periodic reviews. The next periodic review is scheduled for 2019. It is anticipated the next OMMP sampling rounds will be completed in 2018.

C. Everett, Washington

PSE implemented an interim remedy consisting of soil excavation, installation of a containment wall along with groundwater monitoring at both ends and at the centerline of the containment wall. PSE continues regular monitoring of the results of the remediation already performed. Annual groundwater sampling performed continues to show the remedy is containing contaminated groundwater. PSE has received partial reimbursement from an agreement entered into with another PRP for past costs relating to interim remedy completion.

D. Chehalis, Washington

On April 30th, 2015 PSE received from Ecology a No Further Action letter confirming that PSE's remedy completed in October 2010 was successful. PSE continues to perform monitoring to show that the remedy is functioning as designed.

E. Gas Works Park Site

On November 1, 2012, the *Settlement, Release and Cost Allocation Agreement* between the City of Seattle and PSE for the remediation of the combined Gas Works Park uplands as well as the Lake Union sediments became effective. As part of this agreement, PSE has taken the lead for completing the investigation and remediation of the combined uplands and sediment sites. Costs associated with the RI/FS as well as construction and long-term maintenance of the remedy will be shared between PSE and the City.

Work is being performed under an Agreed Order. WDOE approved modification of the Agreed Order on March 15, 2013 to expand the Site boundaries to include Gas Works Park, Seattle Harbor Patrol and the near shore sediments surrounding the Park and Harbor Patrol. This modification ensures that the impacts from uplands to the lake and near shore sediments are addressed. PSE submitted a complete agency review draft RI/FS report to WDOE in March 2016. WDOE has provided preliminary comments on the draft RI/FS report and additional comments are in progress.

PSE completed treatability testing and supplemental investigation to evaluate in-situ treatment of arsenic in groundwater. Results of these studies are being used to design an injection system to reduce arsenic concentrations in groundwater. Treatment system infrastructure is scheduled to be installed in early 2017 in conjunction with a Seattle Parks and Recreation renovation project.

F. Quendall Terminals

EPA listed Quendall Terminals as a cleanup site on the National Priorities List (NPL) (i.e., a Superfund Site) on April 19, 2006 and has been leading an RI/FS effort since then. On March 6, 2014 PSE received a Notice of Potential Liability and Supplemental Request for Information from the EPA indicating that they believe PSE may be a PRP under CERCLA for costs associated with the cleanup of the site and requesting additional information pursuant to CERCLA Section 104(e). PSE reportedly sold tar from Gas Works to the Quendall facility as a useful product, but did not transport the byproduct to the Quendall facility.

In a letter dated October 7, 2015, EPA invited PSE, along with the current PRPs and other potential PRPs, to perform a pre-remediation design study pursuant to a negotiated administrative settlement agreement and order on consent (ASAOC). On December 4, 2015 PSE counsel sent a letter to EPA declining to submit an offer to negotiate an ASAOC for the proposed pre-remedial design study. EPA has indicated that it is moving forward with finalizing the RI/FS and selecting a remedy without the pre-remedial design study. PSE has reviewed the draft RI/FS and provided comments to EPA in April 2016.

On May 31, 2016, Vertellus Specialties, Inc., successor in interest to Reilly Chemical Company, who operated at the site for decades, filed for bankruptcy for the purpose of facilitating a sale of all assets. The sale will be free and clear – no liabilities will follow the acquirer.

PSE met with EPA on October 19, 2016 to discuss its comments on the RI/FS. EPA is in the process of finalizing the FS. Following the meeting, EPA indicated a willingness to engage in settlement negotiations with PSE.

G. Tacoma Tar Pits

PSE continues to operate and monitor the groundwater pump and treat system at the Tacoma Tar Pits site. Maintenance of site facilities and monitoring of ground water quality continues.

EPA completed its most recent Superfund mandated five year review in December 2014 and concluded that the remedy is still protective and performing as designed. However, as part of this review, EPA recommended follow-up actions including optimizing the groundwater containment and monitoring system, evaluating whether groundwater restoration at this site is feasible, requiring the current property owner to comply with site institutional controls (primarily maintenance/protection of the site cap) and update the existing Inspection and Maintenance Manual and groundwater monitoring program. The next five year review is to be completed in 2019. During the first quarter of 2016, PSE's consultant recommended that work begin to replace the existing groundwater treatment system due to its age. A cost estimate was prepared and EPA and City of Tacoma were notified of PSE's intent. A meeting was held with EPA on August 25, 2016 which confirmed the path forward concerning recommendations made in the latest 5 year review. PSE's consultant is moving ahead with design work to replace the existing hydraulic containment system.

H. Swarr Station

Lead and petroleum-contaminated soil was removed in 2003, however, arsenic-contaminated groundwater remains beneath the site. Groundwater was sampled in July 2016 to evaluate whether plume conditions substantially changed since 2011. The July 2016 analytical results look generally similar to the previous data and PSE is considering whether future actions are warranted.

I. Bay Station (Elliott Ave)

In the early 1900's, PSE's predecessors owned and operated an MGP in Seattle along the waterfront now known as Elliott Ave. In 2009, PSE was contacted by the then property owners regarding contamination in the subsurface at this location that appears to be associated with the former MGP.

On June 23, 2010 PSE purchased the property and is using the site as a material storage yard in support of PSE operations while PSE remediates the site. A preliminary site investigation was performed in August, 2010 and results of soil sampling confirmed the presence of soil contamination consistent with MGP releases.

In August 2013, PSE received a letter from WDOE stating that they had performed a Site Hazard Ranking Assessment and that they have ranked the site with a number 1 on a scale of 1 to 5 with the ranking of 1 having the highest potential risk. Hazardous Material surveys have been completed in preparation of the demolition of the structures and provide access to investigate the existence of underground storage tanks at the site as well as to develop a removal program for those UST's.

In September 2016, PSE received a letter alleging that contamination encountered on adjacent properties is associated with the historical operation of a manufactured gas plant on PSE's property. PSE is researching the merit of these claims.

J. Olympia (Columbia Street MGP)

From 1908 to approximately 1924, an MGP was located at this property in Olympia. In late 2006, PSE received a letter from a firm representing the owners at that time stating that contamination found in soil and groundwater was attributable to PSE's predecessors' ownership and operation on this site. In 2008, PSE conducted an initial investigation of environmental conditions beneath the property. Subsequent on-

and off-property investigations were conducted between 2009 and 2011 under WDOE's Voluntary Cleanup Program. These studies identified the presence of MGP-related contamination beneath the Property and extending onto adjacent properties. The full lateral extent of off-property impacts has not yet been identified.

PSE designed and implemented a remedial action for the Property and the construction work was completed in October 2012. In September 2015, PSE received a Property-specific No Further Action letter (NFA) from WDOE. Institutional controls and ongoing groundwater monitoring are required because some inaccessible contamination remains. Contamination that extends off the property will be addressed as a separate phase of the project in the future.

K. Verbeek Autowrecking

Remediation of the Verbeek property was completed in 2010 and WDOE issued a property specific No Further Action letter. A small amount of GWP contaminated fill remains in place on an adjacent property that could not be removed due to a building constructed over the top of the fill.

L. Downtowner Property

On April 7, 2014, PSE received a notice letter under the Model Toxics Control Act (MTCA) Washington State's cleanup law similar to the federal cleanup law, CERCLA or Superfund, from a law firm representing a property owner alleging contamination discovered at a property in downtown Seattle during excavation for underground parking. The property owner claimed the contamination was connected to a MGP that was operated between roughly 1875 and 1907 by PSE's predecessors. PSE researched the merit of this claim and responded to counsel for the property owner regarding certain of the allegations. PSE monitored the remedial excavation at the site being led by the property owner.

On April, 2015, the property owner, GRE 4th Avenue South, LLC filed suit against PSE, seeking a declaratory judgment that PSE is liable for remedial action costs under MTCA and contribution for remedial action costs the property owner has expended and will incur.

PSE settled this suit in September 2015. MGP-related contamination remains at depth beneath the building. PSE is responsible for future costs associated with the removal of DNAPL and soil vapor sampling.

FORMER PUGET POWER SITES

A. White River/Buckley Phase II Burn Pile and Wood Debris

PSE has satisfied the requirement to monitor and maintain the site rehabilitation activities performed in 2006, however, groundwater continues to be monitored to evaluate the effectiveness of the cleanup. While arsenic concentrations in groundwater do not appear to be substantially declining, the lateral extent of the plume does not appear to be expanding or approaching the White River.

B. Lower Duwamish Waterway

In December, 2005, PSE received a demand letter regarding the Malarkey Asphalt plant at Terminal 117 on the Duwamish waterway. Used transformer oil, containing PCBs, was burned by the operators as a boiler fuel. PSE has denied involvement at the site, and to date, no evidence linking PSE to the site has been discovered. Litigation involving other parties was resolved without PSE's involvement.

On November, 2012 PSE received a General Notice letter from EPA indicating that they believe PSE may be responsible under CERCLA for costs associated with the cleanup of the Lower Duwamish Waterway.

In August of 2014, PSE received notice from a neutral allocator inviting PSE to join an alternative dispute resolution (ADR) process to allocate liability for environmental remedial action at the site. PSE agreed on August 25, 2014 to participate in the ADR process, and since that time has been conducting research and preparing submittals about historical operations, including submitting questionnaire responses to the neutral allocator. PSE is currently preparing an expert report to submit to the allocator.

In February 2016, counsel for PSE received a Notice of Intent letter from the Elliott Bay Trustee Council indicating that PSE is a potentially liable party that has contributed to the release of hazardous substances that have injured natural resources. In March 2016, counsel for PSE submitted a letter to counsel for the Trustees denying liability for natural resource damages and declining to participate in the injury assessment.

C. Lower Baker Power Plant

In 1965 a landslide destroyed PSE's Lower Baker powerhouse facility. A number of oil-containing devices are assumed to be buried beneath the slide. A petroleum-like sheen was discovered in water discharging from a metal pipe extending from the concrete wall of the former powerhouse that remains in place. PSE installed a water treatment system to eliminate the sheen. The specific source(s) and extent of contamination in the landslide area has not been identified.

D. Snoqualmie Hydro Generation (Power Plant)

PSE began construction activities associated with the Snoqualmie Falls redevelopment project in the fall of 2009. Upgrades to electrical generating facilities at both power plants required the excavation of a significant quantity of soil and rock. During this process, contaminated soil was removed from the Plant 1 construction footprint between 2010 and 2013. Residual contaminated soil remains at some locations outside of the Plant 1 construction footprint, in areas where access would have been difficult. The cleanup completion report was finalized and no further actions are planned.

E. Bellingham South State Street MGP (*formerly known as Boulevard Park*)

In the late 1800's, PSE's predecessors owned and operated a MGP on Bellingham Bay. PSE sold the property to Cascade Natural Gas which dismantled the MGP and later sold the property to the City of Bellingham who developed the site as part of Boulevard Park. PSE was notified by the City of Bellingham of potential liability for contamination at the site. PSE has entered into a cost-sharing agreement with the City of Bellingham to complete a RI/FS for the former MGP site under an Agreed Order with the City and WDOE. The Agreed Order was issued on April 30, 2010 by WDOE.

PSE and the City of Bellingham performed an upland and sediment investigation under the Agreed Order. The draft remedial investigation was led by the City. WDOE provided comments on the draft RI report and requested supplemental investigation. All supplemental investigations have been completed and the revised RI report will be prepared in 2017, at which time PSE will begin preparing the feasibility study (FS).

F. Electron Flume

A wooden flume is used to convey water from the diversion dam to the Electron Powerhouse. The flume is approximately 10 miles long and is located on the southwest slope of the Puyallup River valley. PSE historically replaced portions of the flume during routine maintenance and repair activities. The removed wood was typically placed on the ground surface at the location of the repair. This produced piles of

wood debris that remained along the flume alignment. Based on historical information, some of this wood was treated with chemical preservatives.

In response to WDOE inquiries, PSE sent a letter in late 2006 committing to begin a project to remove the large debris immediately adjacent to the flume. Characterization has shown this debris to be a mix of both treated and untreated wood of similar properties to the debris piles formerly located at the Buckley Headwork's and qualifies for the arsenical-treated wood exclusion. At the direction of WDOE, all large piles of treated wood debris that could be addressed safely have been removed and sent off-site for proper disposal. The future cost estimate assumes that some previously unrecoverable treated wood may become assessable in the future as part of construction activities.

G. Puyallup Garage

During the early 90's, remediation was performed to remove the majority of accessible contaminated soil. However, contaminated soil remains beneath the former garage building. PSE expects to perform remediation at this site in the future when the soil becomes accessible.

H. Crystal Mountain Generator Station

PSE has now settled all civil penalty claims of the United States and WDOE as well as the natural resource damage claims of the Natural Resource Trustees originating from a diesel spill in 2006.

Final site restoration will be required after removing the trench and treatment system. Following the final restoration, groundwater monitoring will likely be necessary for a number of years to verify the success of the remediation.

I. City of Olympia vs. PSE (Plum Street Substation)

On March 7, 2012, the City of Olympia filed a lawsuit against PSE asserting that a predecessor of PSE owned and operated an MGP at an adjacent site and that PSE also is responsible as the current owner of the adjacent Plum Street Substation. During construction of the new City Hall, the City alleged that it had encountered contamination from past MGP operations. PSE is currently researching the merit of these allegations. PSE reached a settlement with the other defendants named in the lawsuit.

J. Buckley Headworks

Remediation of this site was completed in 2002 in accordance with MTCA. WDOE provided a No Further Action Letter in 2003. Future costs shown are associated with monitoring and maintenance of the remedy necessary to ensure its effectiveness.

Electric Operations Remediation

K. Talbot Hill Substation and Switchyard

During the investigation and remediation of a minor mineral oil release discovered in June 2009, contamination related to historic spills from electrical equipment was encountered at the site. Subsurface explorations identified contamination exceeding state cleanup levels beneath a portion of the site, including structural foundations supporting towers and electrical equipment. PSE completed an interim cleanup action that removed accessible contaminated soil from the site. Some contaminated soil remains beneath facility structures and will be addressed at a later date.

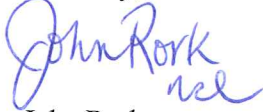
L. Sammamish Substation

On June 16, 2011, a failure of a large transformer at PSE's Sammamish Substation occurred causing a fire and release of non-PCB mineral oil. PSE has completed remediation of the majority of contaminated soil. However, there still remains some limited contamination adjacent to energized control cables that will need to be addressed sometime in the future when it becomes accessible. On May 28, 2014, PSE received a letter from WDOE informing PSE that the site would now be listed as a known and confirmed contaminated site.

M. Underground Storage Tanks Status

Please see the attached spreadsheet. This provides a summary of our ongoing efforts associated with the investigation, remediation, and/or removal of underground storage tanks (UST).

Sincerely,

A handwritten signature in blue ink that reads "John Rork" with a stylized flourish underneath.

John Rork
Manager-Environmental Program Services

cc: Daniel Doyle
Kathie Barnard
Lorna Luebbe
Matt Marcelia
Theresa Huizi
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