



February 7, 2017

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

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STATE OF WASH.
UTIL. AND TRANSP.
COMMISSION

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 December 31, 2016

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 Q4 2016. All additional information is redacted and considered confidential.

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. Participants 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 Services

cc: Daniel Doyle
Kathie Barnard
Lorna Luebbe
Matt Marcelia
Theresa Huizi
Alborada Mata-Cazares
Susan Free
Eric Englert
Julie Yount
Jeff Thomas

PUGET SOUND ENERGY, INC.
Deferred Environmental Cost Summary Electric
December 31, 2016

September 2000 - forward SAP Order Liability Account	SAP Account	Site Description	SAP		SAP		Actual Costs Through 12/31/2016
			Account Balance 9/30/2016	Quarterly Activity	Account Balance 12/31/2016	(c) = (a) + (b)	
A	18230010	Env Rem - White River/Buckley Phase II Headworks (Remediation Cost)	5,906.25	18,070.56	23,976.81	23,976.81	REDACTED
		Subtotal White River/Buckley Phase II Headworks Site					
		Env Rem - White River/Buckley Phase II Burn Pile and Wood Debris (Remediation Cost)	2,147,559.11	8,926.29	2,156,485.40	2,156,485.40	REDACTED
		Subtotal White River/Buckley Phase II Burn Pile and Wood Debris Site					
B	18230021	Env Rem - Lower Duwamish Waterway (Remediation Cost)	465,045.94	2,783.66	467,829.60	467,829.60	REDACTED
		Subtotal Lower Duwamish Waterway Site					
		Env Rem - Lower Duwamish Waterway - Insurance Recoveries	(771,171.44)	-	(771,171.44)	(771,171.44)	REDACTED
L	22840051	Env Rem - Poulsbo Service Center UST (Remediation)	-	-	-	-	REDACTED
		Subtotal Poulsbo Service Center UST					
L	22840111	Env Rem - Tenino Service Center UST (Remediation)	198,092.16	-	198,092.16	198,092.16	REDACTED
		Subtotal Tenino Service Center UST					
L	22840171	Env Rem - Lower Baker Power Plant (Remediation Cost)	440,996.89	2,381.25	443,378.14	443,378.14	REDACTED
		Subtotal Lower Baker Power Plant Site					
L	22840191	Env Rem - Snoqualmie Hydro Generation (Remediation Cost)	2,254,508.17	-	2,254,508.17	2,254,508.17	REDACTED
		Subtotal Snoqualmie Hydro Generation Site					
E	18601122	Env Rem - Bellingham South State Street MGP (Remediation)	2,242,411.06	34,217.35	2,276,628.41	2,276,628.41	REDACTED
		Subtotal Bellingham South State Street MGP (former Blvd Park) Site					
		Env Rem - Bellingham South State Street MGP - Insurance Rec	(662,553.87)	-	(662,553.87)	(662,553.87)	REDACTED
		Subtotal Electron Flume Site					
		Env Rem - Electron Flume (Remediation Cost)	669,654.59	10,000.12	669,654.71	669,654.71	REDACTED
		Subtotal Talbot Hill Substation and Switchyard (Remediation Cost)					
		Env Rem - Talbot Hill Substation and Switchyard (Remediation Cost)	224,879.76	-	224,879.76	224,879.76	REDACTED
		Subtotal Talbot Hill Substation & Switchyard Site					
J	18601130	Env Rem - Sammamish Substation (Remediation Cost)	400,495.47	-	400,495.47	400,495.47	REDACTED
		Subtotal Sammamish Substation Site					

SAP Order	Liability Account	SAP Account	Site Description	SAP		SAP		Actual Costs Through 12/31/2016
				Account Balance 9/30/2016	Quarterly Activity (b)	Account Balance 12/31/2016	(c) = (a) + (b)	
K	18601161	18608231	Env Rem - City of Olympia v PSE Plum Street Station (Remediation)	(a)	(b)	(c) = (a) + (b)	(d)	
			Subtotal City of Olympia v PSE Plum Street Station	231,698.24	-	231,698.24	231,698.24	
Elec. UNDERGROUND STORAGE TANKS AND OTHER SITES								
L	18601171	18608241	Env Rem - Whitehorn UST (Remediation)	695.75	-	695.75	695.75	
			Subtotal Whitehorn UST	695.75	-	695.75	695.75	
1	18601129	18608171	Env Rem - Everett Asarco	212,598.68	-	212,598.68	212,598.68	
			Subtotal Everett Asarco Site	212,598.68	-	212,598.68	212,598.68	
L	18601151	18608211	Env Rem - Pt. Robinson Cable Station	111,880.23	-	111,880.23	111,880.23	
			Subtotal Pt. Robinson Cable Station	111,880.23	-	111,880.23	111,880.23	
			Subtotal 186	(662,563.87)	-	(662,563.87)	-	
H	22840081	22840081	Env Rem - Puyallup Garage Site	(550,000.00)	-	(550,000.00)	14,834.14	
			Subtotal Puyallup Garage Site	(550,000.00)	-	(550,000.00)	14,834.14	
I	22840131	22840131	Env Rem - Crystal Mountain Generator Station Site Remediation					
			Subtotal Crystal Mountain Generator Station Site					
L	22840031	22840031	Env Rem - Olympia Service Center UST	(258,000.00)	-	(258,000.00)	20,528.95	
2	22841001	22841001	Accum Misc Oper Provi - Unallocated Del Elec Env Rem Recoveries	(4,610,484.08)	-	(4,610,484.08)	-	
			Total Liabilities	(5,418,484.08)	-	(5,418,484.08)	35,363.09	
			Grand Total	(5,081,037.95)	-	(5,081,037.95)	35,363.09	

REDACTED

Footnotes:
 (A) The total estimated costs for the Crystal Mountain Site of \$15,083,472.68 include PSE Insurance Recoveries of \$11,938,563, Future Cost Estimate of \$500,000 and Expensed amount of \$2,644,909.68 (Actual Costs less Recoveries) through report date.
 (B) Represents allocated proceeds from the insurance recoveries.

PUGET SOUND ENERGY, INC.
Deferred Environmental Cost Summary Gas
 December 31, 2016

September 1998 - forward	Liability	SAP Account	Site Description	SAP Account Balance 9/30/2016	Quarterly Activity (b)	SAP Account Balance (c) = (a) + (b)	Actual Costs Through 12/31/2016	Future Cost Estimates (e)	Total Cost Estimate (f) = (d) + (e)	Recoveries Through 12/31/2016
			FORMER MANUFACTURED GAS SITES:							
			Tacoma Gas Company (Upload Source Control) (Future Cost Est.)							
1860102	22840012	18609572	Tacoma Gas Company (Upload Source Control) (Remediation Costs)	789,957.33	6,501.30	792,458.63	792,458.63			
			Subtotal Tacoma Gas Company							
			Thra Foss Waterway (Future Cost Est.)							
18607102	22840022	18609582	Thra Foss Waterway (Remediation Costs)	5,361,208.37	(477.50)	5,360,730.47	5,360,730.47			
18607103		18609722	Thra Foss Recovery	8,781.25		8,781.25	8,781.25			
18607203		18609742	(B) Thra Foss Waterway (Legal Costs)	-		-	-			
			Subtotal Thra Foss Waterway							
			Thra Foss Waterway (WADOT Settlement)	(3,488,999.10)	-	(3,488,999.10)	(3,488,999.10)			
			Everett MGP (Future Cost Est.)							
18602102	22840032	18609592	Everett MGP (Remediation Costs)	1,470,862.25	4,945.45	1,475,797.70	1,475,797.70			
			Subtotal Everett MGP							
			Everett MGP (WADOT Settlement)	(801,550.75)	-	(801,550.75)	(801,550.75)			
			Chenahls MGP (Future Cost Est.)							
18603102	22840042	18609602	Chenahls MGP (Remediation Costs)	3,961,262.00	244.13	3,961,506.13	3,961,506.13			
			Subtotal Chenahls MGP							
			Gas Works Park (Future Cost Est.)							
18609302	22840332	18609422	Post - Nov 2012 Gas Works Park (Remediation Costs)	6,872,373.62	547,286.88	7,419,660.50	7,419,660.50			
18604102		18609432	Pre-Nov 2012 Gas Works Park (Remediation Costs)	2,651,381.74	-	2,651,381.74	2,651,381.74			
18614102		18609312	Pre-Nov 2012 Lake Union Sediments (Remediation Costs)	12,405,154.71	-	12,405,154.71	12,405,154.71			
			Subtotal Gas Works Park & Lake Union							
			Quendall Terminal (Future Cost Est.)							
18612102	22840062	18609622	Quendall Terminal (Remediation Costs)	227,819.36	10,864.64	238,684.00	238,684.00			
			Subtotal Quendall Terminal							
			Tacoma Tar Pits (Future Cost Est.)							
18601102	22840082	18609642	Post-June 1999 Tacoma Tar Pits (Remediation Costs)	4,147,808.85	68,921.12	4,216,729.97	4,216,729.97			
186081102		18609112	Pre-June 1999 Tacoma Tar Pits (Remediation Costs)	34,881,722.38	-	34,881,722.38	34,881,722.38			
			Subtotal Tacoma Tar Pits							
			Bay Station (Future Cost Est.)							
18603202	22840092	18609652	Bay Station (Remediation Costs)	438,856.74	42,670.21	479,528.95	479,528.95			
			Subtotal Bay Station							
			Olympia Columbia Street MGP (Future Cost Est.)							
18614402	22840102	18609662	Olympia Columbia Street MGP (Remediation Costs)	1,263,973.54	1,679.77	1,265,653.31	1,265,653.31			
			Subtotal Olympia Columbia Street MGP							
			Olympia Columbia Street MGP (WADOT Settlement)	(160,310.15)	-	(160,310.15)	(160,310.15)			
			Verbeek Autowrecking (Future Cost Est.)							
18608302	22840112	18609672	Verbeek Autowrecking (Remediation Costs)	2,050,122.67	-	2,050,122.67	2,050,122.67			
			Subtotal Verbeek Autowrecking							
18609304		18609752	Verbeek Autowrecking (Reimbursement of Remed Cost from 3rd Party)	(1,114,592.67)	-	(1,114,592.67)	(1,114,592.67)			
			Downtowner Property (Future Cost Est.)							
18607104	22840162	18609012	Downtowner Property (Remediation Costs)	518,202.47	110,734.98	628,937.45	628,937.45			
			Subtotal Downtowner Property							
			Unallocated Insurance and Third Party Recoveries	(50,267,724.64)	-	(50,267,724.64)	-			

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PUGET SOUND ENERGY, INC.
Deferred Environmental Cost Summary Gas
December 31, 2016

September 1988 - forward SAP Order	Liability	SAP Account	Site Description	SAP Account Balance 9/30/2016	Quarterly Activity	SAP Account Balance 12/31/2016	Actual Costs Through 12/31/2016	Future Cost Estimates	Total Cost Estimates	Recoveries Through 12/31/2016
GAS UNDERGROUND STORAGE TANKS AND OTHER SITES										
22840122		18609892	SWARR STATION (Future Cost Est.)							
18230212		18237112	SWARR STATION	289,121.19	5,107.65	294,228.84	294,228.84			
			Subtotal SWARR Station							
22840132		18609892	NORTH OPERATING BASE (Future Cost Est.)							
18230210		18236912	NORTH OPERATING BASE	-	-	-	-			
			Subtotal NORTH Operating Base							
		18237122	(A) SOUTH SEATTLE GATE STATION	169,602.13	-	169,602.13	169,602.13			
		18237132	(A) NORTH TACOMA GATE STATION	133,750.43	-	133,750.43	133,750.43			
		18237142	(A) NORTH SEATTLE GATE STATION	53,995.63	-	53,995.63	53,995.63			
		18237152	(A) COVINGTON GATE STATION	67,987.45	-	67,987.45	67,987.45			
TOTAL - GAS STORAGE TANKS AND OTHER SITES (182.3)				\$ 714,456.83	\$ 5,107.65	\$ 719,564.48	\$ 719,564.48			
Estimate Subtotal										
Pre-Costs Subtotal										
TOTAL - FORMER MANUFACTURED GAS SITES (186.0)				\$ (55,833,177.31)	\$ -	\$ (55,833,177.31)	\$ -			
MANUFACTURED GAS SITES (182.3 and 186.0)				\$ (55,118,720.48)	\$ 5,107.65	\$ (55,113,612.83)	\$ 719,564.48			

REDACTED

Footnotes:
 (A) Represents sites where no additional remedial actions are planned. Currently anticipating entering into insurance recoveries discussion in 2016.
 (B) Order 18607203 was re-opened in the 3rd Qtr of 2010 for posting legal cost related to THEA FOSS WATERWAY.
 (C) Content not used - includes the reimbursement from Seattle Public Utilities for site-wide costs that PSE incurred to support the development of the Remedial Investigation and Feasibility Studies (R/FS) for the Gas Works site, for the period of 12/15/2012 - 6/14/13 (\$185,450.59).
 (D) Represents the legal dispute settlement between WADOT, Pacific and PSE on 10/22/2013.

PUGET SOUND ENERGY UST REMEDIAL COST ESTIMATES (Page 1 of 2)
(Updated DEC 2016)

Facility/Location	PSE	Site Status	Proposed Remedial Action	Estimated Cost of Proposed Remedial Action (\$)
Whidbey Service Center Oak Harbor, WA		USTs and majority of contaminated soil removed in 1999. Small volume of contaminated soil remains beneath building	VCP Program and GW Monitoring (New Wells) Soil excavation when building (\$) is removed	REDACTED
Terrino Service Center Terrino, WA		removed in 1991. Remaining small volume of contaminated soil removed Q4 2009.	Groundwater monitoring completed in 2012. Well abandonment to be completed in the future. Remedial excavation completed in Q4 2009.	REDACTED
Poulsbo Services Center Poulsbo, WA		6,000 gal. Gas & Diesel USTs	Natural Attenuation Soil excavation when building is removed.	
Olympia Service Center (Post-EPRI Diesel Remediation) Olympia, WA		Diesel UST removed. Contaminated soil and ground water remains after EPRI air sparging program. Gas Spill Nov 99	Natural Attenuation and GW Monitoring (Existing Wells) Soil excavation when building (\$) is removed	
North Operating Base Seattle, WA		USTs removed in 1999. Diesel-contaminated soil remains beneath fuel island.	Site Characterization and GW Monitoring (New Wells) Soil excavation when fuel island is removed	
Whitehorn Combustion Turbine		Leaking false start USTs discovered. Contaminated soil and groundwater is present.	Site Characterization and Groundwater Monitoring Three false start tanks removed and one decommissioned in-place in 2012. Accessible contaminated soil was removed. Contaminated soil remains adjacent to buildings at two locations. Soil excavation to be completed if buildings are removed in the future.	REDACTED

Notes shown on Page 2 of 2

PUGET SOUND ENERGY UST REMEDIAL COST ESTIMATES (Page 2 of 2)

Facility/Location	PSE	Site Status	Proposed Remedial Action	Estimated Cost of Proposed Remedial Action (\$)
Green Mt. Micro Waste Brenton, WA		One UST	None	0
Rattlesnake Mt. Micro Waste Issaquah, WA		One UST	None	0
Baker River Lower Concrete, WA		2,500 gal. Gas and Diesel USTs	None	0
Baker River Upper Concrete, WA		1,000 gal. Gas and Diesel USTs	None	0
Bellingham Service Center Bellingham, WA		10,000 gal. Gas and Diesel USTs removed Feb. 2016. No known USTs remain at site.	None	REDACTED
Factoria Service Center Kittitas Service Center Thorp, WA		10,000 gal. Gas and Diesel USTs	None	0
		5,000 gal. Gas and Diesel USTs	None	0
Cost Estimate Totals:				

- Notes
- ¹ Unless noted, remedial costs do not include demolition of facilities and buildings to access contaminated soil.
 - ² Unless noted, groundwater monitoring estimate assumes three years of monitoring/sampling.
 - ³ All estimated costs should be considered conceptual. They are not based on a detailed scope of service or design.