

Puget Sound Energy P.O. Box 97034 Bellevue, WA 98009-9734 **PSE.com** 

January 13, 2014

Mr. David W. Danner Executive Director and Secretary Washington Utilities & Transportation Commission PO Box 47250 Olympia, WA 98504

2014 JAN 15 PH 2: RECEIVED Received

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, 2013

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 that does not require additional deferred accounting petitions, provided the requisite criteria is met. This Order was issued under the following Docket Numbers: UE-070724, UE-072060, and UE- 081016. In short, the electric deferred system now operates much like the PSE gas deferred accounting order.

### 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) documents. PSE believes that a range of costs more accurately reflects the potential range of risks faced by PSE at this site

Actual cost balance 9/30/13	\$775,086
Add: Costs incurred in 4th Qtr	\$0
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$775,086
Estimate:	\$ 1,500,000 - \$ 2,500,000

### **B.** Thea Foss Waterway

On November 16<sup>th</sup>, 2007 the Commencement Bay Natural Resource Trustees delivered the revised Natural Resource Damage (NRD) Settlement Proposal Report to the PRPs. Since then, PSE has continued to participate as part of the steering committee that was formed to represent the greater PRP group. The PRP group submitted a settlement offer to the Trustees in the second quarter of 2010 and is actively engaged in negotiations with the Trustees.

In 2009, EPA completed its mandated five year review of the Thea Foss remedy. This review addressed the storm-water recontamination issue, and did not require further remedial action by PSE.

As required by the EPA approved Operation and Monitoring Plan (OMMP), in May 2011 (Year 7 OMMP) the Utilities completed site inspections and sediment sampling near the head of the waterway. The analytical data was reviewed and analyzed. The data continued to show that the Utilities' remedy is functioning as intended and that the recontamination source remains storm water.

Actual cost balance 9/30/13	\$3,735,153
Add: Costs incurred in 4th Qtr	1,467
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$3,736,620
Estimate:	\$15,000,000 (Change)

### C. Everett, Washington

The remedy implemented was a containment wall with groundwater monitoring at both ends. PSE continues regular monitoring of the results of the remediation already performed. Annual groundwater sampling performed continues to show the remedy is functioning as designed.

Actual cost balance 9/30/13	\$637,205
Add: Costs incurred in 4th Qtr	\$2,265
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$639,470
Estimate:	\$2,991,000 (Change)

# D. Chehalis, Washington

Construction of the remedy was completed in October 2010. PSE submitted a report documenting the construction activities to WDOE and is performing long-term groundwater monitoring to verify that the remedy was successful.

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Add: Costs incurred in 4th Qtr	\$21,934
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$3,909,978
Estimate:	\$4,250,000 (No Change)

# E. Gas Works Park

The cleanup action, consisting of a soil cap, a groundwater remediation system, and monitored natural attenuation was implemented in 2001. The City of Seattle has been the lead on operation, maintenance and monitoring activities and shut down the groundwater remediation system in late 2006. WDOE completed a 10-year review of groundwater monitoring data in February 2012 and concluded that concentrations are below remediation levels and stable or declining in compliance wells.

The City of Seattle began investigating potential upland sources of sediment recontamination in 2009. Work has included storm drain, catch basin and surface soil sampling, and storm drain video surveys. Results indicate elevated levels of contaminants in surface soils and solids entering storm drains in GWP.

In response to comments from EPA, WDOE hired contractors to prepare a remedial investigation (RI) report, including a human health and ecological risk assessment for Gas Works Park, and install a soil cap in the northeastern portion of Gas Works Park. Construction of the soil cap was completed in December 2012. WDOE submitted a revised draft RI report to EPA in February 2012 and a data gaps report in March 2012.

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 as well as remediation of the site and costs will be shared at a set percentage. PSE is preparing a work plan identifying additional work to close the remaining data gaps for submittal to Ecology and EPA in January 2012.

PSE, the City of Seattle, and WDOE met with EPA in October 2012 to discuss whether EPA would take a more active role. PSE is working with WDOE on a response to EPA comment letters

Actual cost balance 9/30/13	\$16,354,173
Add: Costs incurred in 4th Qtr	\$447,436
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$16,801,609
Estimate:	\$22,455,000 (Change)

# F. Quendall Terminals

On December 23, 2010, PSE received a 104e Information Request from the EPA. EPA requested information regarding PSE's past ownership and operation of the Manufactured Gas Plant (MGP) that was operated on the site now known as Gas Works Park. PSE sold tar from Gas Works to the Quendall facility and did not transport it or dispose of it as a waste. EPA listed Quendall Terminals as an NPL (i.e., Superfund) Site on April 19, 2006. PSE has not received any further communications from EPA but believes that a range of costs more accurately reflects the potential range of risks faced at this site.

Actual cost balance 9/30/13	\$0
Add: Costs incurred in 4th Qtr	\$0
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$0
Estimate:	\$1,000,000 - \$3,500,000 (No Change)

# G. Lake Union Sediments

PSE is conducting an RI/FS under the Agreed Order between WDOE, PSE and the City of Seattle executed on March 18, 2005. PSE submitted a Draft RI/FS report for the Eastern Study Area offshore of Gas Works Park to WDOE in 2006 and the City of Seattle submitted their draft RI/FS report for the adjacent Western Study Area to WDOE in 2007.

EPA submitted comments on the sediment RI/FS's and uplands work (Gas Works Park Site) in June 2009. In response to these comments, PSE and the City of Seattle conducted a site-specific assessment of risks to human health and ecological receptors, and completed a supplemental hydrogeologic investigation in 2010. PSE and the City addressed WDOE and the Muckleshoot Indian Tribe comments on the risk assessment work, and submitted a draft final report in February 2012; EPA did not engage in the review process. Results of the hydrogeologic investigation were used to refine the conceptual site model and develop a site-wide groundwater flow model. PSE, the City of Seattle, and WDOE met with EPA in October 2012 to discuss whether EPA would take a more active role.

PSE received a letter from the Washington Department of Natural Resources in December 2010 agreeing to charge only its administrative costs for a long-term easement for capping contaminated sediments on state-owned aquatic land offshore of Gas Works Park if PSE and the City agree to not seek cost recovery for remedial actions.

On November 1, 2012, the *Settlement, Release and Cost Allocation Agreement* between the City 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 as well as remediation of the site and proposed to prepare a single site-wide RI/FS for the combined uplands and sediment sites. As part of this agreement, 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.

Actual cost balance 9/30/13	\$12,382,378
Add: Costs incurred in 4th Qtr	\$225,294

\$12,607,672

Less: Amortization costs in 4th Qtr

Balance of actual costs 12/31/13

Estimate:

\$35,000,000 - \$45,000,000 (No Change)

# H. Tacoma Tar Pits

PSE submitted the results of a groundwater update to EPA in May 2009 using the groundwater optimization model requested by EPA. The updated results were consistent with PSE's evaluation of data collected as part of the long-term groundwater monitoring program. PSE continues to operate and monitor the groundwater pump and treat system. Maintenance of site facilities and monitoring of ground water quality continues.

EPA completed its Superfund mandated 5 year review in 2009. The overall purpose of the review is to assess whether the remedy implemented at the site is still protective of human health and the environment. The five year review concluded that the remedy is still protective. The next five year review is scheduled for 2014.

In April 2011, PSE met with EPA to generally discuss project status. At the meeting EPA requested that PSE prepare work plans to address two issues. The first work plan is directed at assessing the permeability of the asphalt lining of the detention basins, while the second work plan is directed at assessing the potential of contaminated groundwater to move through sanitary sewer pipe bedding material towards the Puyallup River. Both plans have been submitted to and approved by EPA. The asphalt testing work plan was implemented and the results of the testing were submitted to EPA in May 2012. The permeability of one of eight samples was slightly above the performance criterion. The testing results are currently being reviewed by EPA.

PSE reached consensus with EPA on the details of testing the sewer trench in April 2012 and sampling was completed in mid-June 2012. The results have been received and are being reviewed. A report was submitted to EPA in September 2012.

Actual cost balance 9/30/13	\$38,485,366
Add: Costs incurred in 4th Qtr	\$53,672
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$38,539,038
Estimate:	\$295,000 (Change)

### I. Swarr Station

Lead and petroleum-contaminated soil was removed from the site in 2003. However, arseniccontaminated groundwater remains beneath the site. PSE has recently stopped monitoring groundwater conditions because the footprint of the arsenic plume does not appear to have substantially changed since monitoring began and remains beneath the facility and does not extend off PSE property.

Actual cost balance 9/30/13	\$279,321
Add: Costs incurred in 4th Qtr	\$0
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$279,321
Estimate:	\$350,000 to \$500,000

# J. Bay Station

In the early 1900's, PSE's predecessors owned and operated an MGP in Seattle along the waterfront now known as Elliott Ave. PSE was contacted by the 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 will be 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. The analytical results of soil samples have been received and confirmed the presence of contamination consistent with MGP releases. A report was prepared documenting the results of this investigation.

Actual cost balance 9/30/13	\$229,409
Add: Costs incurred in 4th Qtr	\$0
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$229,409
Estimate:	\$ 1,500,000 - \$ 4,000,000

# K. Olympia (Columbia Street)

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 response to the owners' request, PSE conducted an initial investigation of environmental conditions beneath the property in 2008. 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 been identified.

PSE selected and designed a remedial action for the Property. The cleanup was completed in October 2012. The cleanup consisted of removing as much contaminated soil from the Property as practicable. WDOE has indicated that they will issue a Property-specific No Further Action letter. Institutional controls and ongoing groundwater monitoring will be required because some inaccessible contamination remains. Contamination that extends off the property contamination must still be addressed to achieve regulatory closure for the larger MTCA Site.

Actual cost balance 9/30/13	\$998,518
Add: Costs incurred in 4th Qtr	\$68,424
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$1,066,942
Estimate:	\$ 178,000 (Change)

### L. Verbeek Autowrecking

Remediation of the Verbeek property was completed in accordance with an approved Interim Remedial Action Plan (IRAP) in 2010 and WDOE issued a property specific No Further Action letter. A small amount of GWP fill containing tarry residues on an adjacent property could not be removed because a building had been constructed over the GWP fill. The adjustment on the cost balance represents the reimbursement received from the City of Seattle for their share of the cost.

Actual cost balance 9/30/13	\$2,049,653
Add: Costs recovered in 4th Qtr	\$-1,114,593
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$934,950
Estimate:	\$ 1,200,000 - \$ 2,500,000

# FORMER PUGET POWER SITES

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

PSE recently 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 currently expanding or approaching the White River.

Actual cost balance 9/30/13	\$2,036,440
Add: Costs incurred in 4th Qtr	\$100,304

Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$2,136,744
Future Estimated Cost:	\$250,000 - 1,500,000 (No Change)

# **B.** Duwamish Waterway (Terminal 117 & Georgetown Steam Plant)

On December 21, 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 has been resolved without PSE's involvement.

On January 29<sup>th</sup> 2009, PSE received a 104e Information Request from the EPA as part of the Lower Duwamish Waterway Superfund Site. EPA requested information regarding PSE's past ownership and operation of the Georgetown Steam Plant and nearby facilities. PSE has completed its responses to these requests and submitted them to EPA at the end of July, 2009.

On November 8<sup>th</sup>, 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.

The range of costs shown below continues to reflect the uncertainty pertaining to the exposure that PSE may receive in the Duwamish River.

Actual cost balance 9/30/13	\$79,844
Add: Costs incurred in 4th Qtr	\$0
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$79,844
Estimate:	\$200,000 - \$3,000,000 (No Change)

# C. Lower Baker Power Plant

In 1965 a landslide destroyed PSE's Lower Baker powerhouse facility. It is believed that a number of oil-containing devices remain 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 evaluated the sheen and 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.

The range of costs shown below reflects the uncertainty pertaining to the extent of contamination at the site.

Add: Costs incurred in 4th Qtr	\$3,869
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$375,276
Estimate:	\$291,000 (Change)

# 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 are requiring the excavation of a significant quantity of soil and rock. Soil beneath a portion of the Power Plant I site contains hazardous substances at concentrations exceeding state cleanup levels. The majority of the accessible contaminated soil was removed during 2010 and 2011 construction activities with the remaining accessible contaminated soil removed in 2013

Actual cost balance 9/30/13	\$1,873,488
Add: Costs incurred in 4th Qtr	\$0
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$1,873,488
Estimate:	\$ 2,750,000 - \$ 3,200,000 (No Change)

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

As early as 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 it 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 signed an agreement whereas costs associated with the development of the RI/FS are shared between the City and PSE at a set percentage

In 2009, the City of Bellingham and WDOE completed a focused environmental site assessment of sediments in Bellingham Bay beneath the area of a proposed over-water walkway that would terminate at the north end of Boulevard Park. 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 completed an upland and sediment investigation under the Agreed Order. The initial investigation was completed in 2010, with follow-up investigations completed to fill data gaps in July 2011, February 2012, and most recently October 2012. Analytical results from the October 2012 sampling event are being evaluated to determine whether the MTCA Site boundary must be expanded based on the extent of soil and groundwater impacts. WDOE has also requested additional testing on an adjacent property to evaluate potential impacts to indoor air. The City is

developing a sampling plan to evaluate this pathway. These additional sampling events will likely necessitate an extension of the schedule for completion of the RI.

Though the City of Bellingham has estimated \$8,000,000 to fully investigate and remediate the site, PSE believes that a range of costs shown more accurately reflects the potential range of risks faced by PSE at this site

Actual cost balance 9/30/13	\$1,1911,137
Add: Costs incurred in 4th Qtr	\$19,704
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$1,930,841
Estimate:	\$1,567,000 (Change)

### 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 remain along the flume alignment today. Based on historical information, some of this wood was treated with chemical preservatives.

In late 2006, PSE sent a letter in response to WDOE inquiries to begin a project to remove the 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 Headworks and qualifies for the arsenical-treated wood exclusion. PSE believes the range of costs shown below reflects the potential risks faced by PSE at this site.

Actual cost balance 9/30/13	\$624,772
Add: Costs incurred in 4th Qtr	\$16,161
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$640,933
Estimate:	\$800,000 - 1,500,000 (No Change)

#### G. 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.

Given the uncertainty related to the extent of contamination that is likely below some of these existing structures, PSE believes the range of costs shown below reflects the potential risks faced by PSE at this site.

Actual cost balance 9/30/13	\$224,880
Add: Costs incurred in 4th Qtr	\$0
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$224,880
Estimate:	\$350,000 - \$ 750,000 (No Change)

# H. Puyallup Garage

PSE expects to perform remediation at this site in the future, but is presently only monitoring the property. Contaminated soil remains beneath the former garage building.

Actual cost balance 9/30/13	\$453,028
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$453,028
Estimate:	\$468,000 - \$600,000 (No Change)

#### I. Crystal Mountain Generator Station

PSE has now settled all civil penalty claims of the United States and natural resource damage claims of the Natural Resource Trustees, as well as the civil penalty with WDOE.

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.

Actual cost balance 9/30/13	\$14,583,473
Less: Amortization costs in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$14,583,473
Estimate:	\$500,000 - \$1,500,000

### J. Tenino Service Center UST

The Tenino Service Center was in operation from 1959 to 1995. Soil and groundwater beneath the site were impacted by petroleum releases from historic fueling facilities. The fueling facilities and most of the contaminated soil were removed from the site in 1991, except for inaccessible contaminated soil located beneath an on-site building. The building and underlying contaminated soil were removed from the site at the end of 2009. Groundwater monitoring was completed in 2012. No further action is planned

The estimated costs presented below reflect the 2009 remedial action and subsequent groundwater monitoring costs, but not earlier actions performed in 1991.

Actual cost balance 9/30/13	\$196,738
Costs incurred in 4th Qtr	\$1,354
Balance of actual costs 12/31/13	\$198,092
Estimate:	\$250,000 - \$300,000 (No Change)

### K. 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. The current estimate for the remediation is shown below.

Actual cost balance 9/30/13	\$400,495
Costs incurred in 4th Qtr	\$0
Balance of actual costs 12/31/13	\$400,495
Estimate:	\$ 433,000 (No Change)

#### N. 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. Preliminary evaluation of the available data suggests that the substation site was not a contributor to the City of Olympia property.

Actual cost balance 9/30/13	\$3,041
Costs incurred in 4th Qtr	\$13,301
Balance of actual costs 12/31/13	\$16,342
Estimate:	\$135,000 (Change)

# P. 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).

This list represents current major sites PSE is investigating, monitoring, or remediating.

Sincerely,

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Lorna Luebbe Asst. General Counsel Director, Environmental Services Dept.

cc: Daniel Doyle Steve Secrist Durga Doraisamy Lorna Luebbe Della Cheung Ken Johnson Susan Free Eric Englert John Chao Jeff Thomas David Brenner PUGET SOUND ENERGY, INC. Deferred Environmental Cost Summary Electric December 31, 2013

September 2000 - forward SAP Order SAP Accour	000 - forward SAP Account	Site Description	Account Balance 9/30/2013 (a)	Quarterly Activity (b)	Account Balance 12/31/2013 (c) = (a) + (b)	Through 12/31/2013 (d)	Lost Estimates (e)	Estimates	12/31/2013 (a)
18230009	1823221 18232251	Env Rem - White River/Buckley Phase II Burn Pile and Wood Debris (Future Cost Est.) Env Rem - White River/Buckley Phase II Burn Pile and Wood Debris Subtodie White River/Buckley Phase II Burn Pile and Wood Debris Site	(4) 550,000.00 2,140,988.39 2,690,988.39	0.0 00.0 00.0	(c) - (a) - (b) 550,000.00 2,140,988.39 2,690,988.39	0.00 2,140,988.39 2,140,988.39	550,000.00 E5 0.00 E5 550,000.00	550,000.00 550,000.00 2,140,988.39 2,690,988.39	0.00
18230021	18232261 18232271	Env Rem - Lower Duwamish Waterway (Future Cost Est.) Env Rem - Lower Duwamish Waterway Subtotal Lower Duwamish Waterway Site	120,000.00 79,843.87 199,843.87	0.0 0.00 0.00	120,000.00 79,843.87 <b>199,843.87</b>	0.00 79,843.87 <b>79,843.87</b>	120,000.00 E5 0.00 120,000.00	120,000.00 79,843.87 <b>199,843.87</b>	00.0 00.0
	18230311	Env Rem - Whidbey Service Center UST (Future Cost Est.)	15,000.00	0.00	15,000.00	0.00	15,000.00 E9	15,000.00	0.00
18230041	18230321 18233091	Env Rem - Tenino Service Center UST (Future Cost Est.) Env Rem - Tenino Service Center UST Subtotal Tenino Service Center UST	50,000.00 198,092.16 <b>248,092.16</b>	00.0 00.0	50,000.00 198,092.16 248,092.16	0.00 198,092.16 <b>198,092.16</b>	50,000.00 E7 0.00 <b>50,000.00</b>	50,000.00 198,092.16 <b>248,092.16</b>	0.0 00.0
	18233061	Env Rem - Poulsbo Service Center UST (Future Cost Est.) Env Rem - Poulsbo Service Center UST Subtotal Poulsbo Service Center UST	10,000.00 0.00 <b>10,000.00</b>	00.0 00.0	10,000.00 0.00 10,000.00	00.0 00.0	10,000.00 E9 0.00 <b>10,000.00</b>	10,000.00 0.00 <b>10,000.00</b>	0.0 0.00
		Subtotal 182.3	3,163,924.42	0.00	3,163,924.42	2,418,924.42	745,000.00	3,163,924.42	0.00
18601120	18608011 18608001	Env Rem - Lower Baker Power Plant (Future Cost Est.) Env Rem - Lower Baker Power Plant Subtotal Lower Baker Power Plant Site	295,267.50 371,406.83 <b>666,674.33</b>	(3,869.00) 3,869.00 0.00	291,398.50 375,275.83 <b>666,674.33</b>	0.00 375,275.83 375,275.83	291,398.50 E5 0.00 291,398.50	291,398.50 375,275.83 <b>666,674.33</b>	00.0 00.0
18601121	18608031 18608021	Env Rem - Snoqualmie Hydro Generation (Power Plant) Future Cost Est.) Env Rem - Snoqualmie Hydro Generation (Power Plant) Subtotal Snoqualmie Hydro Generation Site	489,684.25 2,252,566.67 <b>2,742,250.92</b>	0.00 00.00	489,684.25 2,252,566.67 <b>2,742,250.92</b>	0.00 2,252,566.67 2,252,566.67	489,684.25 E5 0.00 489,684.25	489,684.25 2,252,566.67 <b>2,742,250.92</b>	0.0 0.0 0.0
18601122	18608041 18608041	Env Rem - Bellingham South State Street MGP (former Blvd Park) (Future Cost Est.) Env Rem - Bellingham South State Street MGP (former Blvd Park) Subtotal Bellingham South State Street MGP (former Blvd Park) Site	1,587,017.07 1,911,137.44 3,498,154.51	(19,703.98) 19,703.98 0.00	1,567,313.09 1,930,841.42 <b>3,498,154.51</b>	0.00 1,930,841.42 <b>1,930,841.42</b>	1,567,313.09 E6 0.00 1,567,313.09	1,567,313.09 1,930,841.42 <b>3,498,154.51</b>	00.0 00.0
18601125	18608111 18608081	Env Rem - Electron Flume (Future Cost Est.) Env Rem - Electron Flume Subtotal Electron Flume Site	250,000.00 659,654.59 <b>909,654.59</b>	0.00 0.00 0.00	250,000.00 659,654.59 909,654.59	0.00 659,654,59 659,654,59	250,000.00 E6 0.00 <b>250,000.00</b>	250,000.00 659,654.59 <b>909,654.59</b>	0.00 0.00
18601128	18608151 18608141	Env Rem - Talbot Hill Substation and Switchyard (Future Cost Est.) Env Rem - Talbot Hill Substation and Switchyard Subtotal Talbot Hill Substation & Switchyard Site	75,000.00 224,879.76 <b>299,879.76</b>	0.00 0.00 0.00	75,000.00 224,879.76 <b>299,879.76</b>	0.00 224,879.76 224,879.76	75,000.00 E6 0.00 <b>75,000.00</b>	75,000.00 224,879.76 <b>299,879.76</b>	0.0 0.00
18601129	18608171	Env Rem - Everett Asarco Subtotal Everett Asarco Site	212,588.68 212,588.68	0.00 <b>0.00</b>	212,588.68 212,588.68	212,588.68 212,588.68	0.00 E8 0.00	212,588.68 212,588.68	00.0 0.00
18601130	18608181 18608191	Env Rem - Sammarnish Substation (Future Cost Est.) Env Rem - Sammarnish Substation Subtotal Sammamish Substation Site	50,000.00 400,495.47 <b>450,495.47</b>	0.00 0.00	50,000.00 400,495,47 <b>450,495.47</b>	0.00 400,495.47 400,495.47	50,000.00 E7 0.00 <b>50,000.00</b>	50,000.00 400,495.47 <b>450,495.47</b>	0.0 0.0 0.0
18601151	18608211	Env Rem - Pt. Robinson Cable Station Subtotal Pt. Robinson Cable Station	111,880.23 111,880.23	0.00 0.00	111,880.23 111,880.23	111,880.23 111,880.23	0.00 E8 0.00	111,880.23 111,880.23	0.0
18601161	18608221 18608231	Env Rem - City of Olympia v PSE (Future Cost Est.) Env Rem - City of Olympia v PSE Subtotal City of Olympia v PSE	148,615.45 3,040.26 151,655.71	(13,301.25) 1 <b>3,301.25</b> 0.00	135,314.20 16,341.51 151,655.71	0.00 16,341.51 16,341.51	135,314.20 E7 0.00 135,314.20	135,314.20 16,341.51 <b>151,655.71</b>	0.00 0.00
18601171	18608241 18608251	Env Rem - Whitehorn US1 Remediation (Future Cost Est.) Env Rem - Whitehorn UST Remediation Subtotal Whitehorn UST	80,000.00 0.00 80,000.00	00.0 00.0 00.0	80,000.00 0.00 80,000.00	0.00 0.00	80,000.00 E9 0.00 80,000.00	80,000.00 0.00 80,000.00	0.00
		Subtotal 186	9,123,234.20	0.00	9,123,234.20	6,184,524.16	2,938,710.04	9,123,234.20	0.00
		Tutal Asset	12 287,158.62		10 907 1KB 60	9 CO3 448 59	2 200 140 04	10 00E 150 00	000

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# PUGET SOUND ENERGY, INC. Deferred Environmental Cost Summary Electric December 31, 2013

September ; SAP Order	September 2000 - forward SAP Order SAP Account	Site Description	SAP Account Balance 9/30/2013	Quarterly Activity	SAP Account Balance 12/31/2013	Actual Costs Through 12/31/2013	Future Cost Estimates	ш	Total Cost Estimates	Recoveries Through 12/31/2013
22840081	22840081	Env Rem - Puyallup Garage Site	( <b>a</b> ) (453,028.42)	( <b>b</b> )	<b>(c) = (a) + (b)</b> (453,028.42)	(d) 14,971.58	(e) 453,028.42	E7	<b>) = (d) + (e)</b> 468,000.00 (B)	( <b>3</b> 50,000.00
22840131	22840131	Env Rem - Crystal Mountain Generator Station Site	(200'000.00)	0.00	(200'000'00)	14,583,472.68 E7	500,000.00	(A)	15,083,472.68 (B)	(11,938,563.00
22840031	22840031	Env Rem - Olympia Service Center UST	(129,471.05)	0.00	(129,471.05)	20,528.95	129,471.05	E9	150,000.00 (B)	(150,000.00
	22841001	Accum Misc Oper Provi Unallocated Def Elec Env Rem Recoveries	(4,564,134.08)	0.0	(4,564,134.08)	0:00	0.00		00.0	(4,564,134.08)
		Total Liabilities	(5,646,633.55)	0.00	(5,646,633.55)	14,618,973.21	1,082,499.47	-	15,701,472.68	(17,002,697.08
		Grand Total	6,640,525.07	0.00	6,640,525.07	23,222,421.79	4,766,209.51	a	27,988,631.30	(17,002,697.08

Footholes: (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 through report date. (B) Represents allocated proceeds from the insurance recoveries.

PUGET SOUND ENERGY, INC. Deferred Environmental Cost Summary Gas December 31, 2013
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	SAP Order SAP Account	Site Description	Account Balance 9/30/2013	Activity	Account Balance 12/31/2013	12/31/2013	Estimates	Estimates	12/31/2013
		FORMER MANUFACTURED GAS SITES:	(a)	(q)	(c) = (a) + (b)	(9)	(e)	(t) = (d) + (e)	(6)
18606102	18609572 18608612	Tacoma Gas Company (Upload Source Control) (Future Cost Est.) Tacoma Gas Company (Upload Source Control) (Remediation Costs) Subtotal Tacoma Gas Company	725,000.00 775,086.80 <b>1,500,086.80</b>		725,000.00 775,086.80 <b>1,500,086.80</b>	775,086.80 <b>775,086.80</b>	725,000.00 E1	725,000.00 775,086.80 <b>1,500,086.80</b>	
18607102 18607203	18609582 18608712 18608742 18607772	Thea Foss Waterway (Future Cost Est.) Thaa Foss Waterway (Remediation Costs) (B) Thea Foss Waterway (Legal Costs) Thea Foss Waterway (MADOT Settlement) Subtotal Thea Foss Waterway	1,498,581.30 4,058,988,85 4,499,203.59 10,056,673.74	1,467,25 (1,467,25) (4,820,005,10) (4,820,005,10)	1,500,048.55 4,057,421.60 4,499,203.59 (4,820,005.10) (D) 5,236,668.64	4,057,421.60 4,499,203.59 (4,820,005.10) 3,736,620.09	1,500,048.55 E2 - 1,500,048.55 -	1,500,048.55 4,057,421.60 4,499,203.59 (4,820,005.10) 5,236,668.64	
18602102	18609592 18608212 18608782	Everett Washington (Future Cost Ext.) Everett Washington (Remediation Costs) Everett Washington (WADOT Settlement) Subtotal Everett Washington	2,992,785.17 1,438,755.06 4, <b>431,540.23</b>	(2,265.33) 2,265.33 (801,550.75) <b>(801,550.75)</b>	2,990,519,84 1,441,020.39 (801,550.75) (D) <b>3,629,989,48</b>	1,441,020.39 (801,550.75) <b>639,469.64</b>	2,990,519.84 E2 2,990,519.84	2,990,519.84 1,441,020.39 (801,550.75) <b>3,629,989.48</b>	
18603102	18609602 18608312	Chehalis Washington (Future Cost Est.) Chehalis Washington (Remediation Costs) Subtotal Chehalis Washington	250,000.00 3,929,425.90 <b>4,179,425.90</b>		250,000.00 3,928,425.90 4, <b>179,425.90</b>	3,929,425.90 3,929,425.90	250,000.00 E2 	250,000.00 3,929,425.90 <b>4,179,425.90</b>	
18606302 18604102 18614102	18609422 18609432 18608412 18609312	Gas Works Park (Future Cost Est.) Post - Nov 2012 Gas Works Park (Remediation Costs) Pre-Nov 2012 Gas Works Park (Remediation Costs) Pre-Nov 2012 Lake Union Sediments (Remediation Costs) Subtotal Gas Works Park & Lake Union	22,902,309,11 1.227,636,76 2,651,381,74 12,405,154,71 <b>39,256,482.32</b>	(447,436.11) 447,436.11 -	22,454,873.00 1,745,072.87 (C) 2,651,381,74 12,405,154.71 39,256,482.32	1,745,072,87 2,651,381,74 12,405,154,71 16,801,509,32	22,454,873.00 E2 - - 22,454,873.00	22,454,873.00 1,745,072,87 2,651,381.74 12,405,154.71 39,256,482.32	
18612102	18609512 18609512	Quendail Terminal (Future Cost Est.) Quendail Terminal (Remediation Costs) Subtotal Quendall Terminal	1,000,000.00 - 1,000,000.00		1,000,000.00 1,000,000.00		1,000,000.00 E3	1,000,000.00 1,000,000.00	
18601102 18601102	18609642 18608112 18608112	Tacoma Tar Pits (Future Cost Est.) Post-June 1999 Tacoma Tar Pits (Remediation Costs) Pre June 1999 Tacoma Tar Pits (Remediation Costs) Subtotal Tacoma Tide Flats	348,369.09 3, <b>658,420.53</b> 34,826,945,69 38,833,735.31	(53,671.94) 53,671.94	294,697.15 3,712,092.47 34,826,945.69 <b>38,833,735.31</b>	3,712,092,47 34,826,945,69 <b>38,539,038,16</b>	294,697.15 E3 	294,697.15 3,712,092.47 34,826,945.69 <b>38,833,735.31</b>	
18603202	18609652 18609532	Bay Station (Future Cost Est.) Bay Station (Remediation Costs) Subtotal Bay Station	1,270,000.00 230,349.84 1,500,349.84		1,270,000.00 230,349.84 1,500,349.84	230,349.84 <b>230,349.84</b>	1,270,000.00 E4 1,270,000.00	1,270,000.00 230,349.84 <b>1,500,349.84</b>	
18614402	18609662 18609542 18608792	Olympia Columbia Street MGP (Future Cost Est.) Olympia Columbia Street MGP (Remediation Costs) Olympia Columbia Street MGP (WADOT Settlement) Subtotal Olympia Columbia Street MGP	246,513.77 1,158,828.39 <b>1,405,342.16</b>	(68,423.79) 68,423.79 (160,310.15) (160,310.15)	178,089.98 1,227,252.18 (160,310.15) (D) 1,245,032.01	1,227,252.18 (160,310.15) <b>1,066,942.03</b>	178,089.98 E4 178,089.98	178,089.98 1,227,252.18 (160,310.15) <b>1,245,032.01</b>	1 1 1
18608302 18608304	18609672 18608752 18608752	Verbeek Autowrecking (Future Cost Est.) Verbeek Autowrecking (Remediation Costs) Verbeek Autowrecking (Reimbursement of Remed Cost from 3rd Party) Subtotal Verbeek Autowrecking	300,000.00 2,050,122.67 (1,114,592.67) 1,235,530.00	, , , , ,	300,000.00 2,050,122.67 (1,114,592.67) 1,235,530.00	2,050,122.67 (1,114,592.67) 935,530.00	300,000.00 E4 300,000.00	300,000.00 2,050,122.67 (1,114,592.67) 1,235,530.00	
	18608062	Unallocated insurance and Third Party Recoveries TOTAL - MANUFACTURED GAS SITES	\$ 103,399,166.30 \$ (5,781,866.00) \$ 97,617,300.30	\$ (5,781,866.00)	\$ 97,617,300.30 \$	66,654,071.78	\$ 30,963,228.52	\$ 97,617,300.30	(53,387,440.39) <b>\$ (53,387,440.39)</b>

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PUGET SOUND ENERGY, INC. Deferred Environmental Cost Summary Gas December 31, 2013

September 1998 - forward SAP Order SAP /	forward SAP Account	Site Description	SAP Account Balance 9/30/2013	Quarterly Activity	SAP Account Balance 12/31/2013	Actual Costs Through 12/31/2013	Future Cost Estimates	Total Cost Estimates	Recoveries Through 12/31/2013
	18609682	GAS UNDERGROUND STORAGE TANKS AND OTHER SITES SWARR STATION (Future Cost Est.)	70,000.00		70,000.00		70,000.00 E3	70,000.00	
18230212	18237112	SWARR STATION	279,321.20		279,321.20	279,321.20	•	2	ı
			349,321.20		349,321,20	279,321.20	70,000.00	349,321.20	
0,000	18609692	NORTH OPERATING BASE (Future Cost Est.)	50,000.00	•	50,000.00		50,000.00 E9	50,000.00	
18230210	18230912		50,000.00		- <u>50,000.00</u> -		20,000.00	50,000.00	•
	18237122	(A) SOUTH SEATTLE GATE STATION	169,602.13		169,602.13	169,602.13		169,602.13	•
	18237132	(A) NORTH TACOMA GATE STATION	133,750.43	•	133,750.43	133,750.43		133,750.43	
	18237142	(A) NORTH SEATTLE GATE STATION	53,995.63	•	53,995.63	53,995.63		53,995.63	•
	18237152	(A) COVINGION GATE STATION	61,987.45	•	61,987.45	61,981.45		61,981.45	•
		TOTAL - GAS UNDERGROUND STORAGE TANKS	\$ 824,656.84		824,656.84	\$ 704,656.84	\$ 120,000.00	\$ 824,656.84	•
		TOTAL - GAS STORAGE TANKS AND	\$ 104,223,823.14	\$ (5,781,866.00) \$	\$ 98,441,957.14	\$ 67,358,728.62	\$ 31,083,228.52	\$ 98,441,957.14	\$ (53,387,440.39)
		MANUFACTURED GAS SITES							

Footnotes: (A) Represents sites where no additional remedial actions are planned. Currently anticipating entering into insurance recoveries discussion in 2014. (B) Order 18607203 was re-opened in the 3/d CI 2010 for positing legal cost related to THEA FOSS WITERWAY. (C) 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 (RHFS) for the Gas Morks site, for the period of 1/2/15/2013 - 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 December 2013)

PSE Facility/Location		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	A. VCP Program and GW Monitoring (New Wells) B. Soil excavation when building(s) is removed	A. 30,000 B.15,000
Tenino Service Center Tenino, WA	USTs and majority of contaminated soil removed in 1991. Remaining small volume of contaminated soil removed Q4 2009.	<ul> <li>A. Groundwater monitoring completed in 2012. Well abandonment to be completed in the future.</li> <li>B. Remedial excavation completed in Q4 2009.</li> </ul>	A. 5,000 B. 0
Poulsbo Service Center Poulsbo, WA	6,000 gal. Gas & Diesel USTs	<ul> <li>A. Natural Attenuation</li> <li>B. Soil excavation when building is removed.</li> </ul>	A. 0 B. 10,000
Olympia Service Center (Fuel Island) Olympia, WA	10,000 gal. Gas & Diesel USTs Gas spill Nov. '99	<ul> <li>A. Natural Attenuation and GW Monitoring (Existing Wells)</li> <li>B. Soil excavation when Fuel Island is removed</li> </ul>	A. 15,000 B. 29,000
Olympia Service Center (Post-EPRI Diesel Remediation) Olympia, WA	Diesel UST removed. Contaminated soil and ground water remains after EPRI air sparging program.	<ul> <li>A. Natural Attenuation and GW Monitoring (Existing Wells)</li> <li>B. Soil excavation when building(s) is removed</li> </ul>	A. 15,000 B. 100,000
North Operating Base Seattle, WA	USTs removed in 1999. Diesel- contaminated soil remains beneath fuel island.	<ul> <li>A. Site Characterization and GW Monitoring (New Wells)</li> <li>B. Soil excavation when fuel island is removed</li> </ul>	A. 20,000 B. 50,000
Whitehorn Combustion Turbine	Leaking false start USTs discovered. Contaminated soil and groundwater is present.	A. Site Characterization and Groundwater Monitoring B. 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 A.40,000 future.	A.40,000 B.80,000

Notes shown on Page 2 of 2

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

PSE Facility/Location	Site Status	Proposed Remedial Action	Estimated Cost of Proposed Remedial Action (\$)
Green Mtn. Micro Wave Bremerton, WA	One UST	None	0
Rattlesnake Mtn. Micro Wave 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	None	0
Electron Forebay Orting, WA	550 gal. Gas and Diesel USTs	None	0
Factoria Service Center Bellevue, WA	10,000 gal. Gas and Diesel USTs	None	0
Kittitas Service Center Thorp, WA	5,000 gal. Gas and Diesel USTs	None	0
	A. Groundwater Monitoring. Site Characterizat	A Groundwater Monitoring Site Characterization Natural Attenuation Only (No Remediation)	\$125,000

Cost Estimate Totals: B. Remediation Only (No Monitoring) A. & B. Groundwater Monitoring Follo
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<sup>1</sup> 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.

<sup>3</sup> All estimated costs should be considered conceptual. They are not based on a detailed scope of service or design.