



ENVIRONMENTAL REMEDIATION

ANNUAL REPORT

12/31/2019

WRITE-UP FOR ENVIRONMENTAL REMEDATION SITES

The following 8 pages contain a write-up for environmental remediation sites.

FORMER WNG SITES

A. Tacoma Gas Company Site (Upland Source Control)

Beginning in 1884, a Manufactured Gas Plant (MGP) operated at 22nd & A Street in Tacoma and after the plant was closed in the early 1920's, the site was used to store various products including oil and creosote. Contamination at the site was identified during the late 1980s and various limited cleanup actions have been taken since then. PSE continues to work with the Washington Department of Ecology (WDOE) on developing a comprehensive Remedial Investigation/Feasibility Study (RI/FS). A new Agreed Order (AO) was negotiated with WDOE to complete the RI/FS and a draft Cleanup Action Plan (dCAP) that became effective on September 13, 2018. Signatories to the new AO are PSE, PacifiCorp, City of Tacoma and Washington State Department of Transportation. The goal of the AO is to gain approval from WDOE of the RI/FS so that a final CAP can be prepared to close out the site.

A groundwater sampling and analysis plan was submitted and approved by WDOE in July 2016. Addendums to the plan were submitted to identify and sample groundwater seeps. Groundwater samples were obtained in July and December 2016, April, August and December 2017, and April and July 2018. The purpose of the sampling is to update the conditions at the site for incorporation into the RI/FS.

A draft RI was submitted to WDOE in July 2018 and is being revised based on WDOE comments. Completion of the draft RI and progress on the FS and dCAP continued in 2019.

B. Thea Foss Waterway

The Thea Foss Waterway is part of the Commencement Bay Superfund site which is an Environmental Protection Agency (EPA) regulated cleanup site. PSE was involved as Potentially Responsible Party (PRP) due to its past ownership of a portion of the 22nd & A Street MGP that was located near the Waterway, and is part of a Utilities PRP subgroup. PSE and PacifiCorp (Utilities) are responsible for cleanup and monitoring of the south 1,000 feet of the waterway (Head of Thea Foss also known as the Utilities Work Area). The City of Tacoma is responsible for the rest of the waterway. Cleanup activities have been completed and the site is in the performance monitoring portion of the process. 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 the spring of 2018 (Year 14 since cleanup was accomplished) the Utilities completed required site inspections and sediment sampling near the head of the waterway. The work included a low tide visual survey, diver survey of a sheet pile wall, sediment coring and sampling/analysis of core samples. The surveys and available analytical data continued to show that the Utilities' remedy is functioning as intended and that the recontamination source (to surface sediments) remains storm water. The original OMMP covered Years 1 (2004) to 10 (2014). Based on data collected during these monitoring events, a new long-term plan was approved by EPA that generally includes visual/bathymetric surveys every 5 years, and diver surveys/sediment coring every ten years. The available information will be used by EPA to complete their required 5-year periodic review scheduled for 2019. EPA is also compiling information for the administrative record to complete delisting of the Thea Foss, although monitoring will need to be continued.

In 2019 a long-term monitoring plan for the site was agreed to by EPA and will extend to 2037.

C. Everett, Washington

PSE's predecessors operated an MGP east of downtown Everett and PSE currently uses the property for an operating base. Contamination was identified in the 1990s and removal actions, an RI/FS and remediation were completed. 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 annual monitoring of the results of the remediation already performed. Annual groundwater sampling performed continues to show the remedy is containing contaminated groundwater. PSE continues to receive partial reimbursement from an agreement entered into with another PRP for past costs relating to interim remedy completion.

D. Chehalis, Washington

PSE's predecessor operated an MGP in Chehalis, WA. The property is still owned by PSE and currently vacant. PSE identified contamination in the 1990s, completed removal activities, an RI/FS and a final cleanup. On April 30th, 2015 PSE received from WDOE a No Further Action (NFA) 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.

In 2019, Ecology performed a 5-year periodic review of the site. Based on Ecology review a reduced compliance groundwater sampling schedule was adopted.

E. Gas Works Park Site

Gas Works Park is the site of a former MGP (operated by PSE's predecessor), a tar refinery and other industrial activities and is currently a City of Seattle park. 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 took 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 are 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. PSE is engaging with WDOE to address their comments on the draft RI/FS report and expects to complete the public review draft RI/FS report in the second quarter of 2019.

PSE is operating an injection system to reduce arsenic concentrations in groundwater. The first injection performed in November of 2017 reduced arsenic concentrations. PSE plans to perform a second injection event in late 2018. Performance and confirmational monitoring will determine whether additional injection is needed to meet the goals of this interim action.

Activities in 2019 included additional RI/FS work required by Ecology to ensure the work is consistent with Washington's new Sediment Management Standards

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 the MGP formerly located at Gas Work Park 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 and 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.

EPA conducted pilot scale testing of the Self-Sustaining Treatment for Active Remediation (STAR) technology at the site in July 2018 and intends integrate this technology into its selected upland remedy. In September of 2019, EPA issued the Proposed Plan for comment. EPA is reviewing those comments and expects to issue a Record of Decision in 2020.

G. Tacoma Tar Pits

Tacoma Tar Pits is a site in Tacoma where an MGP was operated. The site was named to the federal Superfund list in 1980 and investigation and cleanup was completed by 1994. 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. 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 updating the existing Inspection and Maintenance Manual and groundwater monitoring program. The next five year review is to be completed in 2019.

In 2016, in consideration of EPA's recommendations, as well as, the age of the system, PSE replaced the existing groundwater treatment system. PSE subsequently prepared cost estimate and provided notice to EPA and City of Tacoma and met with EPA. A treatment plant design Engineering Report was approved by the City of Tacoma and EPA and the new treatment system was installed in November 2017 with full operation beginning in December 2017. The initial results from the operation of the system show that groundwater conditions are improving around the perimeter of the site.

In 2019 EPA completed their required 5-year review of the THCGS remedy. Conversations with EPA suggest no significant changes to the overall operation of the site.

H. Swarr Station

The SWARR Station is a liquefied propane storage facility designed to help meet customer needs during periods of peak demands. In 2003 a release of ethylene glycol and lubricating oil was discovered. 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 analytical results appear generally similar to the previous data and PSE is considering what additional options are available to address the residual contamination given the structures that are in place.

I. Bay Station (Elliott Ave)

PSE's predecessors owned and operated the Bay Station 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. The demolition of the structures was completed in July of 2017 to provide access to fully investigate the site in anticipation of developing a remedy.

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 worked with the owner of that property to develop agreement on an investigation and remedy. PSE has begun to implement further site investigation pursuant to that agreement with the adjacent property owner.

J. Olympia (Columbia Street MGP)

PSE's predecessors operated an MGP on Columbia Street in the City of 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 was not identified in these studies.

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.

The property owner recently notified PSE of plans to construct a multi-story condominium structure on the Property. PSE continues to work with the property owner to ensure that the NFA status of the site is not impacted and to help control construction costs associated with the contamination that remains onsite.

K. Verbeek Autowrecking

PSE was notified that fill from the Gas Works Park MGP site was deposited on the Verbeek Autowrecking site and contamination was present. 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 by PSE's predecessors. PSE researched the merit of this claim and 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 costs associated with the removal of DNAPL and groundwater sampling.

M. Wenatchee (Worthern MGP) NEW

PSE received a PLP notice letter from Ecology in March 2019 regarding a former MGP facility in Wenatchee. PSE has begun discussions with the property owners on developing a path forward to address the site.

FORMER PUGET POWER SITES

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

White River Hydroelectric project was formerly owned and operated by PSE. During a flume maintenance project in 1988, construction debris was stockpiled on-site. An investigation of this stockpile discovered that wood treatment chemicals that were originally used to treat the timbers had migrated from the debris into the underlying soil and groundwater. Removal of the debris and impacted soil was completed in 2006, however, arsenic concentrations in groundwater continue to exceed the MTCA cleanup level. Monitoring of the groundwater shows that the lateral extent of the groundwater 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. Since that time PSE has conducted research and submitted documents about historical operations to the neutral allocator, including an expert report and rebuttal expert report. PSE is currently preparing a position paper that argues for a preferred allocation methodology and proposes a specific cost allocation for PSE. After an associated rebuttal process, the allocator will consider the position papers submitted by all parties to develop a preliminary allocation.

In regard to natural resource damage at the site, 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.

In 2019 PSE and several other parties involved with the site proposed allocated shares for the various parties, including PSE.

C. Lower Baker Power Plant

In 1965 a landslide destroyed PSE's Lower Baker Hydroelectric project 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 and continues to operate a water treatment system which eliminated 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 redevelopment of the Snoqualmie Falls Hydroelectric 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 identified (likely from historic maintenance and storage practices) and 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 (Boulevard Park MGP)

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 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 remedial investigation (RI) was led by the City and the feasibility study (FS) was led by PSE. The draft RI/FS has been accepted by WDOE and it is currently progressing through the public comment process. The RI/FS report will likely be finalized during the first quarter of 2019 after all public comments have been addressed. Subsequent actions in 2019 will likely involve preparation of a cleanup action plan and negotiation of an administrative agreement for future permitting, remedial design and implementation.

PSE and the City of Bellingham finalized the RI/FS in 2019 under the Agreed Order. Preparation of a dCAP and Pre-Remedial Design Investigation (PRDI) began in the fourth quarter of 2019 and will continue into 2020.

F. Electron Flume

PSE formerly owned the Electron Hydroelectric project which includes a wooden flume 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. If the current owner of the Electron plant is able to remove remnant wood debris in the future, PSE would be responsible for its disposal as well as other contamination considered to be “pre-existing” based on an agreement with the owner.

G. Puyallup Garage

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

PSE completed remedial activities to address the remaining contaminated soil beneath the former garage in 2019. Compliance groundwater monitoring will likely be required in 2020.

H. Crystal Mountain Generator Station

PSE operates a remote electric generating facility near Crystal Mountain Ski Resort at which a release of diesel fuel occurred in 2006. PSE conducted an emergency response and cleanup overseen by EPA and WDOE. 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.

J. Buckley Headworks

PSE’s past operation of a wood treatment facility located at the Buckley Headworks was found to have contaminated soil and groundwater. Remediation of this site was completed in 2002 in accordance with MTCA. WDOE provided a No Further Action Letter in 2003. PSE is conducting monitoring and maintenance of the remedy to ensure its effectiveness.

Electric Operations Remediation

K. Talbot Hill Substation and Switchyard

During the investigation and remediation of a 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, but there is some limited contamination adjacent to energized control cables that will need to be addressed sometime in the future when it becomes accessible.

M. Shuffleton Facility

During PSE's environmental assessment of the Shuffleton property, vinyl chloride was detected in groundwater at concentrations greater than the cleanup level near the northwestern property boundary. An in-situ treatment system has been installed to address the vinyl chloride and monitoring is in progress to evaluate its effectiveness.

N. Central Waterfront

On August 15, 2017 PSE received a notice from WDOE indicating that they believed PSE is a Potentially Responsible Party for the Central Waterfront Site located in Bellingham. The Central Waterfront site includes a former landfill operated by other PRPs prior to PSE purchasing the property in the 1970's for the location of a substation. WDOE has suggested that the landfill operation caused contamination of the area. PSE's initial evaluation of the available data suggests that the substation site is not a contributor to the Central Waterfront Site. PSE continues to monitor development at the site.

O. Poulsbo Service Center USTs

Two 6,000 gallon underground storage tanks (USTs) are located at the Poulsbo Service Center. PSE completed site assessment activities in May 2019 by performing subsurface soil and groundwater samples between and around the sites USTs. The USTs were successfully removed in June 2019. No further action is needed at this time.

P. Factoria Service Center USTs (NEW)

Two 10,000 gallon underground storage tanks (USTs) are located at the Factoria Service Center. PSE completed site assessment activities in September 2019 by performing subsurface soil and groundwater samples between and around the sites USTs. Soil and groundwater impacts from the tanks were identified. The USTs were successfully removed in November 2019 and contaminated soil was successfully removed. Post groundwater samples were obtained in November 2019 and will determine if further groundwater monitoring will be required..

Q. West Olympia Substation (NEW)

PSE performed cleanup activities in October 2019 at the West Olympia Substation following a vandalism incident that resulted in the release of approximately 1,000 gallons of mineral oil at the site. Removal of contaminated soil was completed and no further action is needed at this time.

R. 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).

The following 2 tabs reflect the balances in each of the deferred Environmental Remediation Accounts for the period January 1, 2019 through December 31, 2019 consistent with reporting requirements outlined in the Settlement (paragraph 55 subpart D--Monthly & Year end deferred balance for the reporting year)

The following worksheets represent the deferral activity by month in each Environmental Remediation Account for January 2019 through December 31, 2019.

The Activity Summary pages provide overviews of activity within each Electric/Gas subaccount and the 'Activity' tabs reflect the monthly entries to each account. The 'activity' pages also include the amount of 3rd party and insurance recoveries received during the reporting period by month and associated with the project for which they were received.

PUGET SOUND ENERGY
DEFERRED ACTUAL ENVIRONMENTAL REMEDIATION COST SUMMARY FOR ELECTRIC
JANUARY - DECEMBER 2019

SAP Account	Order in Docket # (a)	Site Description	Cummulative Ending Bal. Dec-18	Jan - Dec 2019 ACTUAL COST			
				Jan - Dec 19 Activity	Insurance/3rd Party Recoveries	Bal. authorized to transfer for amortization	Cummulative Ending Bal. Dec-19
18231241, 18231251	UE-991796, UE-170033	White River/Buckley Phase I Headworks Site	61,259.91	-	-	-	61,259.91
18232221, 18232251	UE-991796, UE-170033	White River/Buckley Phase II Burn Pile and Wood Debris	25,495.09	1,581.40	-	-	27,076.49
18232261, 18232271	UE-021537, UE-170033	Lower Duwamish Waterway	(87,291.95)	5,742.36	-	-	(81,549.59)
18230131, 18239201	UE-070724, UE-170033	Poulsbo Service Center UST (New March 2019)	-	99,931.95	-	-	99,931.95
18608011, 18608001	UE-070724, UE-170033	Lower Baker Power Plant	40,199.76	50,666.17	-	-	90,865.93
18608031, 18608021	UE-072060, UE-170033	Snoqualmie Hydro Generation	-	-	-	-	-
18608051, 18608041	UE-081016, UE-170033	Bellingham South State Street MGP	686,475.96	117,243.69	(8,507.12)	-	795,212.53
18608111, 18608081	UE-070724, UE-170033	Electron Flume	10,000.12	-	-	-	10,000.12
18608151, 18608141	UE-070724, UE-072060, UE-081016, UE-170033	Talbot Hill Substation and Switchyard	1,543.50	-	-	-	1,543.50
18608181, 18608191	UE-070724, UE-072060, UE-081016, UE-170033	Sammamish Substation	-	-	-	-	-
18608221, 18608231	UE-070724, UE-072060, UE-081016, UE-170033	City of Olympia v PSE Plum Street Station	(138,357.00)	(1,723,970.68)	1,862,327.68	-	-
18608291, 18608281	UE-070724, UE-072060, UE-081016	Shuffleton	212,724.66	52,226.92	-	-	264,951.58
18608451, 18608441	UE-070724, UE-072060, UE-081016	Central Waterfront	-	-	-	-	-
18614405, 18610031	UE-070724, UE-072060, UE-081016	W. Olympia Substation Breakin (New Nov 2019)	-	125,479.60	-	-	125,479.60
18614404, 18610001	UE-070724, UE-072060, UE-081016	Wenatchee (New June 2019)	-	57,225.96	-	-	57,225.96
18608241, 18608251	UE-911476, UE-170033	Whitehorn UST	98,638.91	-	-	-	98,638.91
18608171	UE-070724, UE-072060, UE-081016, UE-170033	Everett Asarco	-	-	-	-	-
18608211	UE-070724, UE-072060, UE-081016, UE-170033	Pt. Robinson Cable Station	-	-	-	-	-
22841001	Multiple Dockets	Unallocated Def Elec Env Rem Recoveries	(2,428,589.72)	(186,707.08)	-	-	(2,615,296.80)
		Grand Total	(1,517,900.76)	(1,400,579.71)	1,853,820.56	-	(1,064,659.91)
						check	-

(a) The deferred accounting would include only those amounts paid to outside vendors, contractors, or to reimburse others for such costs and would not include legal costs or the costs related to Company personnel. Any recovery of insurance proceeds, net of outside legal costs incurred in pursuing such recovery.

UE-170033 - PSE's 2017 general rate case filed under UE-170033 did not authorize deferral of specific sites but allowed for amortization of the September 2016 balances over five years for the sites noted.

PUGET SOUND ENERGY
DEFERRED ENVIRONMENTAL REMEDIATION COST DEFERRED ACTIVITY FOR ELECTRIC
January - December 2019

SAP Order	SAP Account	Site Description	Order in Docket #	Year Established	Amortization Period	YTD	Q1 2019			Q2 2019			Q3 2019			Q4 2019			YTD
						Cummulative Bal. Dec-16	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Cummulative Bal. Dec-19
18230010	18231251 18231251	White River/Buckley Phase I Headworks (Remediation Cost) 2017 GRC transfer for amortization based on 9/30/2016 balances	UE-991796 UE-170033			67,166.16 (5,906.25)													67,166.16 (5,906.25)
		Subtotal White River/Buckley Phase I Headworks Site				61,259.91													61,259.91
18230009	18232251 18232251	White River/Buckley Phase II Burn Pile and Wood Debris (Remediation Cost) 2017 GRC transfer for amortization based on 9/30/2016 balances	UE-991796 UE-170033			2,173,054.20 (2,147,559.11)	874.65											706.75	2,174,635.60 (2,147,559.11)
		Subtotal White River/Buckley Phase II Burn Pile and Wood Debris Site				25,495.09	874.65											706.75	27,076.49
18230021	18232271 18232271 18232271 18232271	Lower Duwamish Waterway (Remediation Cost) 2017 GRC transfer for amortization based on 9/30/2016 balances Lower Duwamish Waterway (Insurance Recoveries/3rd parties) One time correcting Env Entry in March 2018 ordered by WUTC 2017 GRC transfer for amortization based on 9/30/2016 balances	UE-021537 UE-170033 UE-170033 UE-170033			972,337.90 (628,034.49) (37,720.86) (393,874.50)	(27,101.04)	16,708.38	18,339.73	(1,116.94)	14,415.65	12,825.53	14,458.53	4,576.21	(39,600.18)	(16,457.70)	3,512.99	5,181.20	978,080.26 (628,034.49) (37,720.86) (393,874.50)
		Subtotal Lower Duwamish Waterway Site				(87,291.95)	(27,101.04)	16,708.38	18,339.73	(1,116.94)	14,415.65	12,825.53	14,458.53	4,576.21	(39,600.18)	(16,457.70)	3,512.99	5,181.20	(81,549.59)
18230131	18239201	Poulsbo Service Center UST (Remediation Cost) NEW Subtotal Poulsbo Service Center UST			Mar-19	-	-	-	-	-	14,407.52	52,505.00	25,071.64	-	4,299.04	3,648.75	-	-	99,931.95 99,931.95
18601120	18608001 18608001	Lower Baker Power Plant (Remediation Cost) 2017 GRC transfer for amortization; based on 9/30/2016 balances	UE-070724 UE-170033		Dec-17	491,196.65 (440,956.89)		928.00		928.00	2,160.99		432.50		7,081.10		30,670.65	8,464.93	531,862.82 (440,956.89)
		Subtotal Lower Baker Power Plant Site				40,199.76		928.00		928.00	2,160.99		432.50		7,081.10		30,670.65	8,464.93	90,865.93
18601121	18608021 18608021	Snoqualmie Hydro Generation (Remediation Cost) 2017 GRC transfer for amortization; based on 9/30/2016 balances	UE-072060 UE-170033		Dec-17	2,254,508.17 (2,254,508.17)													2,254,508.17 (2,254,508.17)
		Subtotal Snoqualmie Hydro Generation Site																	
18601122	18608041 18601119	Bellingham South State Street MGP (former Blvd Park) (Remediation Cost) Bellingham South State Street MGP (Insurance Recovery/3rd parties) One time correcting Env Entry in March 2018 ordered by WUTC 2017 GRC transfer for amortization; based on 9/30/2016 balances	UE-081016 UE-170033 UE-170033 UE-170033			3,332,774.73 (715,288.03) (351,153.55) (1,579,857.19)	100.69	3,683.75	12,812.92		1,228.50	8,647.83	1,725.00	20,591.25	19,920.83	12,416.00	18,912.68	17,204.24	3,450,018.42 (723,795.15) (351,153.55) (1,579,857.19)
		Subtotal Bellingham South State Street MGP (former Blvd Park) Site				686,475.96	100.69	3,428.44	12,812.92		1,228.50	8,647.83	1,725.00	20,591.25	19,920.83	7,268.19	15,808.68	17,204.24	795,212.53
18601125	18608081 18608081	Election Flume (Remediation Cost) 2017 GRC transfer for amortization; based on 9/30/2016 balances	UE-070724 UE-170033		Dec-17	669,654.71 (659,654.59)													669,654.71 (659,654.59)
		Subtotal Electron Flume Site				10,000.12													10,000.12
18601128	18608141 18608141	Talbot Hill Substation and Switchyard (Remediation Cost) 2017 GRC transfer for amortization; based on 9/30/2016 balances	Blanket orders: UE-170033		Dec-17	226,423.26 (224,879.76)													226,423.26 (224,879.76)
		Subtotal Talbot Hill Substation & Switchyard Site				1,543.50													1,543.50
18601130	18608191 18608191	Sammamish Substation (Remediation Cost) 2017 GRC transfer for amortization; based on 9/30/2016 balances	Blanket orders: UE-170033		Dec-17	400,495.47 (400,495.47)													400,495.47 (400,495.47)
		Subtotal Sammamish Substation Site																	
18601161	18608231	City of Olympia v PSE Plum Street Station (Remediation Cost)	Blanket orders:			2,004,927.06			(2,004,927.06)										
18601162	18608271	City of Olympia v PSE Plum Street Station (Insurance Recovery)	UE-070724, UE-170033			(105,008.20)			105,008.20										
	18600911	City of Olympia v PSE Plum Street Station - Reimbursement		Sep-18		(1,757,319.48)			1,757,319.48										
	18608231	One time correcting Env Entry in March 2018 ordered by WUTC				(49,258.14)			49,258.14										
	18608231	2017 GRC transfer for amortization; based on 9/30/2016 balances	UE-170033		Dec-17	(231,698.24)			231,698.24										
		Subtotal City of Olympia v PSE Plum Street Station				(138,357.00)			138,357.00										
18601163	18608281	Shuffleton (Remediation Cost)	Blanket orders:			212,724.66	18,596.46	3,192.15			18,273.25					8,538.06	2,214.75	1,412.25	264,951.58
		Subtotal Shuffleton Site				212,724.66	18,596.46	3,192.15			18,273.25					8,538.06	2,214.75	1,412.25	264,951.58
18601152	18608441	Central Waterfront (Remediation Cost)	Blanket orders:																
		Subtotal Central Waterfront																	
18614405	18610031	W. Olympia Substation Breakin (Remediation Cost) NEW			Nov-19													121,019.67	4,459.93
		Subtotal W. Olympia Substation Breakin																121,019.67	4,459.93
18614404	18610001	Wenatchee (Remediation Cost) NEW			Jun-19								15,478.05	9,031.03	3,328.75	11,425.59	4,382.00	13,580.54	57,225.96
		Subtotal Wenatchee Site											15,478.05	9,031.03	3,328.75	11,425.59	4,382.00	13,580.54	57,225.96
18601171	18608251 18608251	Whitehorn UST (Remediation Cost) 2017 GRC transfer for amortization; based on 9/30/2016 balances	UE-911476 UE-170033		Dec-17	99,638.91 (96,638.91)													99,638.91 (96,638.91)
		Subtotal Whitehorn UST				98,638.91													98,638.91
18601129	18608171 18608171	Everett Asarco (Remediation Cost) 2017 GRC transfer for amortization; based on 9/30/2016 balances	Blanket orders: UE-170033		2011 Dec-17	212,588.68 (212,588.68)													212,588.68 (212,588.68)
		Subtotal Everett Asarco Site																	
18601151	18608211 18608211	Pt. Robinson Cable Station (Remediation Cost) 2017 GRC transfer for amortization; based on 9/30/2016 balances	Blanket orders: UE-170033		2011 Dec-17	111,880.23 (111,880.23)													111,880.23 (111,880.23)
		Subtotal Pt. Robinson Cable Station																	
22841001	22841001 22841001	Accum Misc Oper Prov - Unallocated Def Elec Env Rem Recoveries One time correcting Env Entry in March 2018 ordered by WUTC 2017 GRC transfer for amortization; based on 9/30/2016 balances	Multiple Dockets UE-170033			(4,610,484.08) (438,132.55) (1,743,761.81)			(166,272.10)			(9,986.23)						(10,448.75)	(4,797,191.16) (438,132.55) (1,743,761.81)
		Subtotal Unallocated Def Elec Env Rem Recoveries				(2,428,589.72)			(166,272.10)			(9,986.23)						(10,448.75)	(2,615,296.80)
	Grand Total					(1,517,900.76)	(7,529.24)	24,256.97	3,237.55	(188.94)	50,485.91	63,992.13	57,165.72	34,198.49	(4,970.46)	14,422.89	177,608.74	40,561.09	(1,064,659.91)

PUGET SOUND ENERGY
DEFERRED ACTUAL ENVIRONMENTAL REMEDIATION COST SUMMARY FOR GAS
JANUARY - DECEMBER 2019

SAP Account	Order in Docket # (a)	Site Description	Cumulative Ending Bal. Dec-18	Jan - Dec 2019 ACTUAL COST			Cumulative Ending Bal. Dec-19	
				Jan thru Dec-19 Activity	Insurance/3rd Party Recoveries	Bal. authorized to transfer for amortization		
18609572, 18608612	UG-920840, UG-170034	Tacoma Gas Company	76,257.68	29,648.79	-	-	105,906.47	
18609582, 18608712	UG-920840, UG-170034	Thea Foss Waterway	8,409.15	8,688.36	-	-	17,097.51	
18609592, 18608212	UG-920781, UG-170034	Everett MGP	25,491.68	10,974.81	-	-	36,466.49	
18609602, 18608312	UG-920840, UG-170034	Chehalis MGP	16,333.92	9,585.19	-	-	25,919.11	
18609422, 18609432	UG-920840, UG-170034	Gas Works Park	3,932,788.87	1,916,545.71	(416,990.34)	-	5,432,344.24	
18609622, 18609512	UG-920840, UG-170034	Quendall Terminal	66,428.64	53,862.00	-	-	120,290.64	
18609642, 18608112	UG-920781, UG-170034	Tacoma Tar Pits	803,658.59	274,816.36	-	-	1,078,474.95	
18609652, 18609532	UG-920840, UG-170034	Bay Station	1,364,254.66	138,777.78	-	-	1,503,032.44	
18609662, 18609542	UG-920840, UG-170034	Olympia Columbia Street MGP	98,393.21	11,818.89	-	-	110,212.10	
18609672, 18608752	UG-920840, UG-170034	Verbeek Autowrecking	-	-	-	-	-	
18608012, 18608002	UG-920840, UG-170034	Downtowner Property	296,497.46	50,322.60	-	-	346,820.06	
18609682, 18237112	UG-920840, UG-170034	Swarr Station	5,107.65	-	-	-	5,107.65	
18230210, 18237112	UG-920840	North Operating Base	-	-	-	-	-	
18237122	UG-920840, UG-170034	South Seattle Gate Station	-	-	-	-	-	
18237132	UG-920840, UG-170034	North Tacoma Gate Station	-	-	-	-	-	
18237142	UG-920840, UG-170034	North Seattle Gate Station	-	-	-	-	-	
18237152	UG-920840, UG-170034	Covington Gate Station	-	-	-	-	-	
18608062	Multiple Dockets	Unallocated Insurance and Third Parties Recoveries	(21,316,268.92)	(14,557.15)	-	-	(21,330,826.07)	
Grand Total			(14,622,647.41)	2,490,483.34	(416,990.34)	-	(12,549,154.41)	
							check	-

(a) The deferred accounting would include only those amounts paid to outside vendors, contractors, or to reimburse others for such costs and would not include legal costs or the costs related to Company personnel. Any recovery of insurance proceeds, net of outside legal costs incurred in pursuing such recovery. UG-170034 - PSE's 2017 general rate case filed under UG-170034 did not authorize deferral of specific sites but allowed for amortization of the September 2016 balances over five years for the sites noted.

PUGET SOUND ENERGY
 DEFERRED ENVIRONMENTAL REMEDIATION COST DEFERRED ACTIVITY FOR GAS
 January - December 2019

SAP Order	SAP Account	Site Description	Order in Docket #	Year Established	Amotization Period	YTD	Q1 2019			Q2 2019			Q3 2019			Q4 2019			YTD
						Cummulative Bal. Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Cummulative Bal. Dec-19
18608062		Write-off internal costs per 2017 GRC settlement	UG-170034	Dec-17		29,176,116.00	-	-	-	-	-	-	-	-	-	-	-	-	29,176,116.00
18608062		2017 GRC transfer for amortization, based on 9/30/2016 balances	UG-170034	Dec-17	5 years	(21,316,268.92)	-	(14,567.15)	-	-	-	-	-	-	-	-	-	-	(21,330,826.07)
Subtotal Unallocated Gas Recoveries						(21,316,268.92)	-	(14,567.15)	-	-	-	-	-	-	-	-	-	-	(21,330,826.07)
Grand Total						(14,622,647.41)	107,258.40	231,847.98	248,636.30	98,320.89	187,710.91	187,587.07	173,526.73	87,403.26	130,028.37	218,278.39	235,583.82	167,310.88	(12,549,154.41)

The following worksheets represent the amounts transferred to accounts for amortization consistent with Settlement Agreement paragraph 55 g

PUGET SOUND ENERGY
 TRANSFERS AND AMORTIZATION FOR ELECTRIC
 January - December 2019

SAP Account	Site Description	Amortization Period	Cummulative Bal. Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Cummulative Bal. Dec-19
18239171	Env Rem Costs - Elec UE - 170033 (Transfer)	12/19/2017 -	9,689,352.00	-	-	-	-	-	-	-	-	-	-	-	-	9,689,352.00
40730022	Env Rem Costs - Elec UE - 170033 (Amortization Jan - Dec 2019)	12/18/2022	(2,005,591.00)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(3,943,461.00)
	Subtotal Env Rem Costs - Elec		7,683,761.00	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	(161,489.20)	5,745,891.00
18230431	Env Rem Recovery - Elec UE 170033 (Transfer)	12/19/2017 -	(2,570,427.19)	-	-	-	-	-	-	-	-	-	-	-	-	(2,570,427.19)
40730023	Env Rem Recovery - Elec UE 170033 (Amortization Jan - Dec 2019)	12/18/2022	532,050.75	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	1,046,136.00
	Subtotal Amortization Accounts		(2,038,376.44)	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	42,840.45	(1,524,291.00)
	Grand Total		5,645,384.56	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	(118,648.75)	4,221,600.00

PUGET SOUND ENERGY
TRANSFERS AND AMORTIZATION FOR GAS
January - December 2019

SAP Account	Site Description	Cummulative Bal. Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Cummulative Bal. Dec-19
18239042	Env Rem Costs - Gas UG - 170034 (Transfer)	72,192,483.00	-	-	-	-	-	-	-	-	-	-	-	-	72,192,483.00
40730302	Env Rem Costs - Gas UG - 170034 (Amortization Jan - Dec 2019)	(14,943,067.72)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(29,381,564.44)
	Subtotal Env Rem Costs - Gas	57,249,415.28	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	(1,203,208.06)	42,810,918.56
18230312	Env Rem Recovery - Gas UE 170034 (Transfer)	(29,176,116.00)	-	-	-	-	-	-	-	-	-	-	-	-	(29,176,116.00)
40730303	Env Rem Recovery - Gas UG - 170034 (Amortization Jan - Dec 2019)	6,039,142.29	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(486,268.60)	(11,974,365.49)
	Subtotal Env Rem Recovery - Gas	(23,136,973.71)	486,268.60	486,268.60	486,268.60	486,268.60	486,268.60	486,268.60	486,268.60	486,268.60	486,268.60	486,268.60	486,268.60	486,268.60	(17,301,750.51)
	Grand Total	34,112,441.57	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	(716,939.46)	25,509,168.05

The following page represents the most current future costs estimates for PSE's Environmental Remediation Sites

A	B	C	D	E
1	MID-RANGE Q4 2019 FUTURE COST ESTIMATE			
2				
3				Mid Range Q4 2019 Future Cost Estimate
4	22nd and A street MGP			
5	Tacoma Gas Site			
6		Gas Plant site		
7		3 tank area		
8		Total	GAS	\$ 1,893,675
9				
10	Everett MGP		GAS	\$ 3,112,500
11				
12				
13	Thea Foss Waterway		GAS	\$ 705,500
14				
15	Olympia Columbia MGP		GAS	\$ 1,249,725
16				
17	Bellingham SSS MGP		ELEC	\$ 7,706,250
18				
19	The following sites are PSE only costs			
20				
21	Tacoma Tar Pits MGP		GAS	\$ 8,465,000
22				
23	Gas Works Park MGP *		GAS	\$ 30,000,000
24				
25	Quendall Terminals		GAS	\$ 1,270,000
26				
27	Bay Station MGP			
28	Adjacent Property		GAS	
29				\$ 4,750,000
30	Verbeek		GAS	\$ 220,000
31				
32	Downtowner		GAS	\$ 170,000
33				
34	Chehalis MGP		GAS	\$ 191,000
35				
36	Swarr Station		GAS	\$ 186,500
37				
38	Talbot		ELEC	\$ 186,500
39				
40	Puyallup		ELEC	\$ 100,000
41				
42	Crystal Mountain		ELEC	\$ 1,089,500
43				
44	Sammamish		ELEC	\$ 66,500
45				
46	Lower Baker		ELEC	\$ 3,550,000
47				
48	Snoqualmie		ELEC	\$ 160,000
49				
50	Whidbey		ELEC	\$ 40,000
51				
52	North Operating		GAS	\$ 133,500
53				
54	Electron		ELEC	\$ 533,500
55				
56	Whitehorn		ELEC	\$ 128,000
57				
58	Central Waterfront		ELEC	\$ 70,000
59				
60	White River (Buckley Debris)		ELEC	\$ 775,000
61				
62	Duwamish		ELEC	\$ 1,525,000
63				
64	Shuffleton Facility		ELEC	\$ 317,500
65	Wenatchee (Worthern)		ELEC	\$ 175,000
66	West Olympia Substation		ELEC	\$ 150,000
67	Factoria Service Center		ELEC	\$ 200,000
68	Total			\$ 69,120,150
69				
70	* Gas Works Park estimate by GeoEngineers accounts for the allocation			