

Timeline of Activities at the Bremerton MGP

Year	Action	Description
2010	Time Critical Removal Action (TCRA)	<p>Cascade issued Administrative Order for Pollution Incident (Order) by US Coast Guard (USCG) to implement response action at the Site under the oversight of USCG. Cascade developed Incident Action and TCRA Work Plan. The removal action satisfied the following objectives of the Incident Action and TCRA Work Plan:</p> <ul style="list-style-type: none"> • The pipe was located and traced to the shoreline. • The pipe was plugged as close as practicable to the shoreline, at the location specified in the Incident Action and TCRA Work Plan. • All pipe sections downgradient of the new plug were removed together with all overburden sediments. • All excavations were filled to grade with clean beach material. • The organoclay mat was placed over the area of impacted sediments specified in the Incident Action and TCRA Work Plan. <p>More details of activities can be found at https://response.epa.gov/bremertongasworks</p>
2011	Inspections & EPA Requests/Meetings	<p>To ensure that control measures on the beach have not changed weekly inspections of the beach were conducted until April 2011, followed by ongoing quarterly inspections of the beach. Cascade gathered and sent documents requested by EPA for the Bremerton Gas Works. Cascade developed comments and edits to the Agree Oder on Consent with EPA. EPA prosed placing the site on Nation Priorities List (NPL). Cascade developed and submitted comments on the proposed listing to correct items within the Hazard Ranking System Document Record.</p>
2012	Inspections & EPA Requests/Meetings	<p>EPA place the Bremerton Gasworks Site on the National Priorities List (NPL) (https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=1002907) Cascade continued to work with the EPA on the Draft Settlement Agreement and Order of Consent (AOC) and the Statement of Work (SOW).</p>
2013	<p>Time Critical Removal Action (TCRA)</p> <p>CNG & EPA sign AOC</p>	<p>In May, Cascade and EPA signed an Administrative Order on Consent (“AOC”), in which Cascade Natural Gas agreed to perform a removal assessment remedial investigation and feasibility study and any early actions identified during the removal assessment.</p> <p>On June 27, Cascade submitted the Final Bremerton Gasworks Removal Evaluation Work Plan (RE WP) to the EPA, EPA approved the plan on July 2, 2013.</p> <p>July, Cascade, with EPA oversight, sampled the beach sediment for PAHs and investigated the existing manholes and pipes leading from the Site. Work was done in accordance with the approve RE WP.</p> <p>July 25, 2013, the Cascade team meet with EPA to discuss the result of the beach sampling. The areas of concern were discussed in great length and options that would be protective until the RI/FS was final. 2013 TCRA actions were agreed to based on sample results and other site conditions.</p> <p>October, TCRA actions completed included:</p> <ul style="list-style-type: none"> • Removing solid hydrocarbon material identified in the western beach area

		<ul style="list-style-type: none"> • Installing an organoclay mat and cover over the hydrocarbon sheen in subsurface sediments in the western beach area • Plugging Manhole A and the sump drain from the tank containment area • Completing monitoring inspection to confirm the effectiveness of actions • Installing required signage
2014	Scoping Memorandum	<ul style="list-style-type: none"> • Beach inspection were completed quarterly to monitor performance of the 2010 and 2013 TCRA. • January, draft documents were prepared and submitted to EPA as a first set of deliverables to support the Draft Scoping Memorandum. • March, site catch basin was replace and connected to City storm drain as part of the 2013 TCRA. • Draft portions of the upcoming Scoping Memorandum and a preliminary investigation approach were submitted to EPA on 4/16/2014. A meeting between EPA and Cascade to discuss these elements was held on 4/21/2014. A preliminary description and rationale for the Initial Study Area was submitted to EPA on 4/30/3014. EPA provided comments on 5/20/2014. • Excess soil from the site catch basin replacement (part of the 2013 TCRA) was hauled off to Cemex for disposal on 4/3/2014. • The draft Removal Action Report was submitted to EPA on 4/28/2014. EPA comments were received on 4/28/2014. The final Removal Action Report was submitted to EPA on 5/14/2014. EPA approved the report in a letter dated May 29, 2014. • Monthly status calls were conducted with EPA. • The draft Scoping Memorandum and site database were submitted for EPA review on 8/2/14. • A public meeting was conducted on 9/9/14. • The former containment area on the site was inspected on 9/25/14, following a significant rain event on 9/24/14 (defined in the Removal Action Report as greater than 0.5-inches of rain in a 24-hour period), to confirm the effectiveness of the Removal Action at preventing water accumulation in the containment area. No standing water was observed in the tank containment area on 9/25/14. • Cascade received EPA’s comments on the Draft Scoping Memorandum on 10/27/14. A call was conducted on 11/4/14 to discuss EPA’s comments on the Draft Scoping Memorandum. • Cascade submitted a response to comments and a redline Draft Final Scoping Memorandum to EPA for review on 11/20/14. • In a letter dated December 9, 2014 Cascade requested an extension of the due date for submittal of the final scoping memorandum until 21 days after Cascade Receives EPA’s comments on the Draft Final Scoping Memorandum. EPA approved the request in letter dated December 9, 2014.

		<ul style="list-style-type: none"> • Draft outlines for the Remedial Investigation/Feasibility Study (RI/FS) work Plan and Sampling and Analysis Plans for the marine and upland portions of the Site were submitted to EPA for review on 12/17/14.
2015	<p>Final Scoping Memorandum</p> <p>Draft Remedial Investigation and Feasibility Study (RI/FS)</p>	<ul style="list-style-type: none"> • Monthly status calls were conducted with EPA throughout the year. An additional call was conducted on 2/10/15 to discuss elements of the Draft RI/FS Work Plan. • Cascade met with EPA on 1/23/15 to discuss elements of the Draft RI/FS Work Plan related to the risk assessment, and had a follow-up discussion in a conference call on 2/24/15. • Inspection of the beach to monitor performance of the 2010 and 2013 Time Critical Removal Actions was conducted quarterly during the year. Based on the inspection, the TCRAs are performing as designed. No sheen was observed around the TCRA cap areas on the beach. • EPA provided Cascade with comments on the draft final Scoping Memorandum on 2/12/15. • The Final Scoping Memorandum was submitted to EPA on 3/5/15. • Cascade requested an extension on the due date for the Draft RI/FS Work Plan in a letter dated 2/23/15. EPA approved the request in a letter dated 2/24/2015. • EPA approved the Draft RI/FS Work Plan outline on 3/18/15. • The Draft RI/FS Work Plan was submitted to EPA on 4/17/2015. • A meeting with stakeholders to discuss the Draft RI/FS Work Plan was conducted on 6/2/15. • EPA and their consultant CH2MHill, met with Cascade and their consultants, Anchor QEA and Aspect Consulting, on 11/5/15 to provide CH2MHill with an overview of the project to date. The meeting included a site walk. • On 12/29/15, Cascade provided comments to the Washington Department of Health, with a copy to EPA, on its draft "Letter Health Consultation - Bremerton Gasworks Superfund Site: Time-Critical Removal Action of Sediments 2010 and 2013," dated April 27, 2015, which was received by Cascade on 12/2/2015.
2016	Draft RI/FS	<ul style="list-style-type: none"> • A regular monthly status call was conducted with EPA. • Inspection of the beach to monitor performance of the 2010 and 2013 Time Critical Removal Actions was conducted quarterly during the year. Based on the inspection, the TCRAs are performing as designed. No sheen was observed around the TCRA cap areas on the beach. • On 2/1/16, Cascade received comments from EPA on the Draft Remedial Investigation/Feasibility Study (RI/FS) Work Plan. • On 2/8/16 and 2/16/16, Cascade participated in conference calls with EPA and their consultant CH2MHill to discuss the EPA comments on the Draft RI/FS Work Plan and to coordinate the time and agenda for a meeting for further discussion. • On 2/22/16, EPA and their consultant CH2MHill met with Cascade and their consultants, Anchor QEA and Aspect Consulting, to discuss EPA's comments on the Draft RI/FS Work Plan. During that meeting, EPA

		<p>suggested evaluating incremental sampling methodology (ISM) as an approach for incorporation into the scope of work for the RI/FS.</p> <ul style="list-style-type: none"> • On 3/1/16, EPA and their consultant CH2MHill met with Cascade to discuss the potential for integrating an ISM approach into the scope of work for the RI/FS. • On 3/22/16, Cascade facilitated a conference call with EPA and their consultant CH2MHill to further discuss integration of ISM into the scope of work for the RI/FS and the schedule for a future meeting. • Cascade requested a schedule extension for completion of the Final RI/FS Work Plan in a 3/22/16 letter, which was approved by EPA in a 3/25/16 letter, to allow for development of an ISM proposal describing its approach and rationale. Under the approved schedule extension, the Final RI/FS Work Plan must be submitted to EPA within 30 calendar days after Cascade receives EPA’s written comments on the final ISM proposal. • On 5/11/2016, EPA and their consultant CH2MHill met with Cascade and their consultants, Anchor QEA and Aspect Consulting, and representatives of the Suquamish Tribe, to discuss revisions to the Draft RI/FS Work Plan and the approaches to be incorporated into the draft final version of the document. • Key portions of the draft final RI/FS Work Plan, including text, figures and tables with significant revisions, and responses to EPA’s comments were submitted to EPA on 6/17/2016. • EPA provided comments on the upland investigation portion of the revised draft RI/FS Work Plan on 8/12/2016. On 8/18/2016, EPA and its consultant CH2M met with Cascade and its consultants, Anchor QEA and Aspect Consulting, to discuss these comments. • Draft meeting notes documenting the 8/18/2016 meeting was submitted to EPA for review on 8/23/2016. EPA provided comments on 8/31/2016 and the meeting notes were finalized and sent to EPA on 9/28/2016. • EPA provided comments on the marine investigation portion of the revised draft RI/FS Work Plan on 9/15/2016. On 9/30/2016, EPA and its consultant CH2M met with Cascade and its consultants, Anchor QEA and Aspect Consulting, and representatives of the Suquamish Tribe to discuss these comments. • A meeting was held on 12/19/2016 with attendees consisting of Cascade Natural Gas and its consultants, Aspect Consulting and Anchor QEA, and EPA and its consultant CH2M. The purpose of the meeting was to facilitate introductions and brief the new EPA project manager on the project. • EPA provided final comments on the draft RI/FS Work Plan on 12/30/2016.
2017	Final RI/FS	<ul style="list-style-type: none"> • A regular monthly status call was conducted with EPA.

- Inspection of the beach to monitor performance of the 2010 and 2013 Time Critical Removal Actions was conducted quarterly during the year. Based on the inspection, the TCRA's are performing as designed. No sheen was observed around the TCRA cap areas on the beach.
- The final draft of the RI/FS Work Plan was submitted electronically to EPA on 2/28/2017.
- Documents providing responses to EPA's collective comments on the draft RI/FS Work Plan (dated 6/17/2016) were submitted to EPA on 3/13/2017.
- Field coordination, planning, and project status calls with EPA and its consultant CH2M were conducted weekly during active field work between 7/1/2017 and 9/30/2017.
- The completed field activities for RI/FS data collection during 2017 consist of the following:
 - The geophysical survey of the Upland Area was conducted the week of 7/17/2017. The draft geophysical survey report was provided to EPA on 8/4/2017.
 - Surface sediment sampling in the Marine Area was conducted during the week of 7/17/2017.
 - The acoustic doppler current profile survey in the Marine Area was conducted on 7/23/2017.
 - The subsurface sediment core sampling in the Marine Area was conducted during the week of 7/31/2017.
 - The Source Characterization, including exploratory trenching, test pits, and borings, was conducted during the weeks of 8/7/2017 and 8/14/2017.
 - The second surface water sampling event was conducted on 9/14/17
 - The Preliminary Deep Borings and Wells portion of the Outside Source Areas Investigation was conducted during the week of 8/14/2017.
 - Excess soil generated during Source Characterization drilling and trenching was transported off-site for disposal on 9/20/2017. Waste profile and disposal site information was provided to EPA, and EPA certified that the disposal facility was acceptable to receive CERCLA waste, on 9/18/2017.
 - Portions of the Source Areas Investigation, consisting of the advancement of deep borings along transects to determine groundwater monitoring well locations and construction details, was conducted during the weeks of 9/18/2017 and 9/25/2017.
 - Surface water sampling was conducted on 11/1/2017.

- A geotechnical field inspection to support drilling access to the shoreline was conducted on 11/16/2017.
- Installation and development of the Source Areas Investigation monitoring wells during the Weeks of 11/27/2017, 12/13/2017 and 12/25/2017
- Excess soil generated during Source Areas Investigation drilling and well installation was transported off-site for disposal on 12/13/2017.
- Cascade and its consultants, Aspect Consulting and Anchor QEA, met with EPA, its consultant CH2M, and representatives of the Suquamish Tribe on 11/7/2017 to discuss the RI/FS data collected to date and the scope of work for planned RI/FS data collection activities.
- Based on the 11/7/2017 meeting, Anchor QEA produced a technical memorandum (final dated 11/19-17) for the submittal of archived samples, which EPA approved on 11/20/17. Samples BGW-ISA-SS101, BGW-ISA-SS109, and BGW-ISA-115 were submitted for polychlorinated biphenyl congeners and dioxins/furans. In addition, BGW-ISA-SS10 and BGW-SS13 were submitted for dioxins/furans testing.
- The draft Memorandum regarding *Bremerton Gas Works – Remedial Investigation/Feasibility Study Sample Triggers* for the Marine Area was submitted to EPA on 11/16/2017. EPA provided conditional approval of the memo, with changes, on 11/17/2017. The final memo, which was retitled at EPA's request to *RI/FS Proposal for Dioxin/Furan and PCB Congener Analysis in Surface Sediment Archive Samples*, was submitted to EPA on 11/19/2017.
- The draft Memorandum regarding *Bremerton Gas Works – Proposed Source Investigation Monitoring Wells* was submitted to EPA on 11/16/2017. EPA granted conditional approval of the memo, with changes, on 11/17/2017 and the final memo was submitted to EPA on 11/22/2017.

- Note Cascade was often assisted with the above list of activities with the help of third parties.
- **EPA Fees**- all fees assessed to Cascade Natural Gas from the Environmental Protection Agency costs in accordance with the Agreed Order of Consent.
- **Interim Remediation** – all third-party costs for investigative and remedial work.
- **Legal** – all third party legal costs.

- **Insurance Proceeds** – insurance checks paid to Cascade Natural Gas from insurance carriers for reimbursement of deferred costs deemed defense costs by the insurance carriers.