



Second Periodic Review

Town Pump Station
521 East Jewett Boulevard
White Salmon Washington 98672

Facility/Site ID #: 403
Cleanup Site ID #: 4905

Completed by:
Washington State Department of Ecology
Central Regional Office
Toxics Cleanup Program

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1.0 INTRODUCTION

This document is a review by the Washington State Department of Ecology (Ecology) of post-cleanup site conditions and monitoring data to assure human health and the environment are being protected at the Town Pump Station site (Site). Cleanup at this Site was implemented under the Model Toxics Control Act (MTCA) regulations, Chapter 173-340 Washington Administrative Code (WAC).

Cleanup activities at this Site were completed under Enforcement Order number DE 94TC-C161 that was issued on March 16, 1994. The cleanup actions resulted in residual concentrations of total petroleum hydrocarbons (TPH) exceeding MTCA Method A cleanup levels for soil that exceed MTCA Method A cleanup levels established under WAC 173-340-740(2). WAC 173-340-420(2) requires Ecology conduct a periodic review of a site every five years under the following conditions:

1. Whenever Ecology conducts a cleanup action.
2. Whenever Ecology approves a cleanup action under an order, agreed order or consent decree.
3. Or, as resources permit, whenever Ecology issues a no further action opinion
4. And one of the following conditions exists:
 - (a) Institutional controls or financial assurance are required as part of the cleanup.
 - (b) Where the cleanup level is based on a practical quantitation limit.
 - (c) Where, in Ecology's judgment, modifications to the default equations or assumptions using site-specific information would significantly increase the concentration of hazardous substances remaining at the site after cleanup or the uncertainty in the ecological evaluation or the reliability of the cleanup action is such that additional review is necessary to assure long-term protection of human health and the environment.

When evaluating whether human health and the environment are being protected, the factors Ecology shall consider include [WAC 173-340-420(4)]:

- (a) The effectiveness of ongoing or completed cleanup actions.
- (b) New scientific information for individual hazardous substances of mixtures present at the Site.
- (c) New applicable state and federal laws for hazardous substances present at the Site.
- (d) Current and projected Site use.
- (e) Availability and practicability of higher preference technologies.
- (f) The availability of improved analytical techniques to evaluate compliance with cleanup levels.

Ecology shall publish a notice of all periodic reviews in the Site Register and provide an opportunity for public comment.

2.0 SUMMARY OF SITE CONDITIONS

2.1 Site History

The Town Pump Station facility is located in the City of White Salmon in Klickitat County, Washington. The Site is located on the south side of Jewett Avenue and is bordered on all sides by residential properties. The surrounding topography is steeply sloping to the south, and the buildings are constructed on a flat pad which is supported from the south by a concrete retaining wall.

The Site served as an operating automotive service station until 1992. A single underground storage tank (UST) was located at the west end of the building and was decommissioned by removal in 1992. Four other USTs were located on the north side of East Jewett Avenue and supplied gasoline to the site by gravity feed lines.

A vicinity map is available as Appendix 6.1 and a Site plan is available as Appendix 6.2.

2.2 Cleanup Levels and Point of Compliance

Enforcement Order No. DE 94TC-C161 stated that all activities shall be conducted in accordance with Washington Administrative Code 173-340. WAC 173-340-704 states that MTCA Method A may be used to establish cleanup levels at sites that have few hazardous substances, are undergoing a routine cleanup action, and where numerical standards are available for all indicator hazardous substances in the media for which the Method A cleanup level is being used.

MTCA Method A cleanup levels for unrestricted land use were determined to be appropriate for contaminants at this Site. The cleanup actions conducted at the Site were determined to be 'routine', few hazardous substances were found at the Site, and numerical standards were available in the MTCA Method A table for each hazardous substance.

Method A cleanup levels were modified when MTCA was modified in 2001. Because cleanup actions have not been completed at the Site, current cleanup levels are applicable. The table below indicates the changes between 1991 and 2001 MTCA Method A cleanup levels relative to the Site:

Analyte	1991 MTCA Soil Cleanup Level (ppm)	2001 MTCA Method A Soil Cleanup Level (ppm)	1991 MTCA Method A Groundwater Cleanup level (ppb)	2001 MTCA Method A Groundwater Cleanup Level (ppb)
TPH	NL	NL	1000	NL
TPH-Gas	100	100/30	NL	1000/800
TPH-Diesel	200	2000	NL	500
TPH-Oil	200	2000	NL	500
NL = None listed				

The extent of the Site includes the area containing soil and/or groundwater that have been impacted by the release of petroleum hydrocarbons from the Town Pump Station Site. The point of compliance for soil is defined as the area affected by petroleum hydrocarbons released from the Site into soil at concentrations above MTCA Method A cleanup levels, regardless of depth, to protect groundwater.

2.3 Site Investigations and Remedial Activities

Petroleum hydrocarbon contaminated soils (PCS) have been documented at the Site since 1989, when gasoline contaminated water was observed seeping into the trailer park located directly south and downgradient of the Site. In 1992, the single UST on the property was removed and evidence of petroleum hydrocarbon (TPH) contamination was observed in soils surrounding the UST excavation. As a result of these observations, Ecology negotiated an Agreed Order in 1992 requiring the cleanup of PCS and a Site Characterization to be performed at the Site. The property owners did not implement the actions required by the Agreed Order and an Enforcement Order was issued in 1994.

In May through June of 1994, the Enforcement Order was implemented and PCS was removed by Williams and Taylor Construction. Contaminated soil was encountered north, east, and south of the Town Pump Station building. The excavated PCS came from several distinct plumes including waste oil from a broken drain line coming from the garage below the hydraulic lift; gasoline contamination from the fill pipes which entered the property from the tanks on the north side of East Jewett Avenue; gasoline and diesel contamination between the station and the residence to the west; and gasoline contamination extending around the south side of the station toward the trailer park and retaining wall.

After excavation, PCS with concentrations exceeding MTCA Method A cleanup levels remained at the following locations:

- Beneath the former Town Pump Station an estimated 60-70 cubic yards of soil primarily impacted by gasoline remain. This area also includes an unexcavated zone of 6-8 feet around the building. These impacted soils remain in place in order to maintain the structural integrity of the facility.
- Approximately 20-25 cubic yards of soil primarily impacted by gasoline remain in a strip on the downslope side of the base of the retaining wall separating the station from the trailer park. This soil was left in place in order to maintain the structural integrity of the retaining wall.
- An undetermined amount of soil impacted by both gasoline and diesel remain in the front yard of the residence to the west of the station. It appears that this contaminant plume originates on a property other than the Town Pump site and most likely north of E. Jewett Avenue.

Confirmation samples from the limits of these excavations detected a maximum of 2400 parts per million (ppm) of gasoline-range petroleum hydrocarbons (TPH-G) at 8.5 feet bgs, 5500 ppm of diesel-range petroleum hydrocarbons (TPH-D) at 7.5 feet bgs, and 1800 ppm of heavy oil-range petroleum hydrocarbons (TPH-O) at 4 feet bgs. TPH-G was detected in three samples

from the limits of the trailer park property excavation at concentrations up to 7600 ppm. These test pits were immediately adjacent to the retaining wall at the south side of the Town Pump Site and north side of the trailer park. Samples collected from the south side of the excavation in the trailer park did not contain contamination at concentrations exceeding MTCA Method A cleanup levels.

Groundwater was not observed during the excavation of PCS. Excavation was conducted to a maximum depth of approximately 11 feet below ground surface (bgs).

In 1996, the four USTs located on the north side of East Jewett Avenue were decommissioned by removal. The tanks consisted of four 4,000-gallon USTs. Confirmation soil samples were collected from the sidewalls and base of the UST excavation. Sample analysis did not detect TPH at concentrations exceeding MTCA Method A cleanup levels in any of the samples.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

3.1.1 Direct Soil Contact

Cleanup actions at the site were intended to eliminate human exposure to contaminated soils and groundwater at the Site. The exposure pathway to contaminated soils (ingestion, direct contact) has been reduced by the presence of asphalt surface and buildings on the Site, as well as the tank removals and excavation conducted during the initial cleanup.

Soils with TPH concentrations higher than MTCA Method A cleanup levels are still present at the Site. Structures and asphalt surface prevent human exposure to soil contamination by ingestion and direct contact, but no restrictions exist to prevent excavation or activities that may expose these soils. The remedy implemented for this site does not effectively prevent potential human exposure.

During the Site visit conducted on February 11, 2014, it was observed that property to the south of the former Town Pump Station remains under development, as it was in 2008 during the previous periodic review. A new street was graded and paved, underground utilities were in place, and lots were marked for new single family residential housing. If homes are constructed on the lots immediately adjacent to the Town Pump Station Site, law requires that the purchasers be notified of residual contamination remaining in soil. Purchasers would become jointly liable for any contamination remaining on those parcels.

3.1.2 Groundwater

No groundwater was encountered during this project. The excavation was completed to basalt bedrock. No well-defined confining layers were observed above the basalt bedrock. The top of the basalt bedrock was weathered and highly fractured, therefore the geologic components necessary to create a perched water table are not evidenced at the Site.

Domestic water production in this area is primarily from brecciated zones located between lava flows which are at a minimum of 50 feet below ground level. Domestic water service on the Site and in new development south of the Site is provided by the City of White Salmon.

Impacted soils remain at the Site at concentrations that are not protective of groundwater; however, they are not in direct contact with known water bearing zones. Contamination remaining at the Site is not likely to pose a threat to groundwater quality.

3.1.3 Institutional Controls

Institutional controls have **not** been recorded for the Site, and they are not required by the enforcement order; however, the nature of the contamination remaining at the Site suggests that institutional controls might be an appropriate part of the final remedy for the Site. Soil contamination remains beneath site structures and the adjacent roadway, but it does not pose a threat to human health and the environment if it remains capped beneath impermeable surfaces.

An Environmental Covenant for the Site should include the following restrictions, at a minimum:

1. Any activity that would threaten the containment of hazardous materials is prohibited.
2. If the structures at the Site are removed or altered, contamination remaining at the Site must be remediated.
3. The owner must give written notice to Ecology if the owner intends to convey interest in the property.
4. The owner must obtain Ecology's approval for any use of the property that is not consistent with the Environmental Covenant.
5. The owner shall let Ecology access the property as necessary.
6. The owner may rescind the Environmental Covenant with Ecology's consent.

3.2 New scientific information for individual hazardous substances for mixtures present at the Site

There is no new scientific information for the petroleum contaminants related to the Site.

3.3 New applicable state and federal laws for hazardous substances present at the Site

Cleanup levels changed for gasoline, diesel, and volatile organic compounds as a result of modifications to MTCA in 2001; however, contamination remains at the site above MTCA Method A cleanup levels and the cleanup action still fails to be protective of human health and the environment.

3.4 Current and projected Site use

The Site currently operates as a wholesale bakery. It does not serve the public as a retail storefront. The former trailer park to the south of the Site is being developed as residential housing.

3.5 Availability and practicability of higher preference technologies

The remedy implemented at the Site could be considered protective of human health and the environment if institutional controls were implemented to restrict activities at the Site that may expose contaminated soils; however it is up to the property owners to demonstrate why additional remedial activities and a permanent remedy are not feasible at the Site.

3.6 Availability of improved analytical techniques to evaluate compliance with cleanup levels

The analytical methods used at the time of the remedial action were capable of detection below MTCA Method A cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

- Soil cleanup levels have not been met at the Site, and the cleanup actions completed at the Site fail to be protective of human health and the environment.
- The cleanup actions could be considered complete if institutional controls are implemented at the Site to prevent activities that may expose residual contamination. Before institutional controls can be implemented, the property owners must demonstrate why additional remedial actions are not feasible at the Site.
- If the buildings or slab at the Site are removed, modified or replaced, the use of institutional controls is no longer a viable option and contaminated soils must be remediated.

The property owner is required to notify potential purchasers that the property is contaminated and additional remedial actions are required by Ecology.

4.1 Next Review

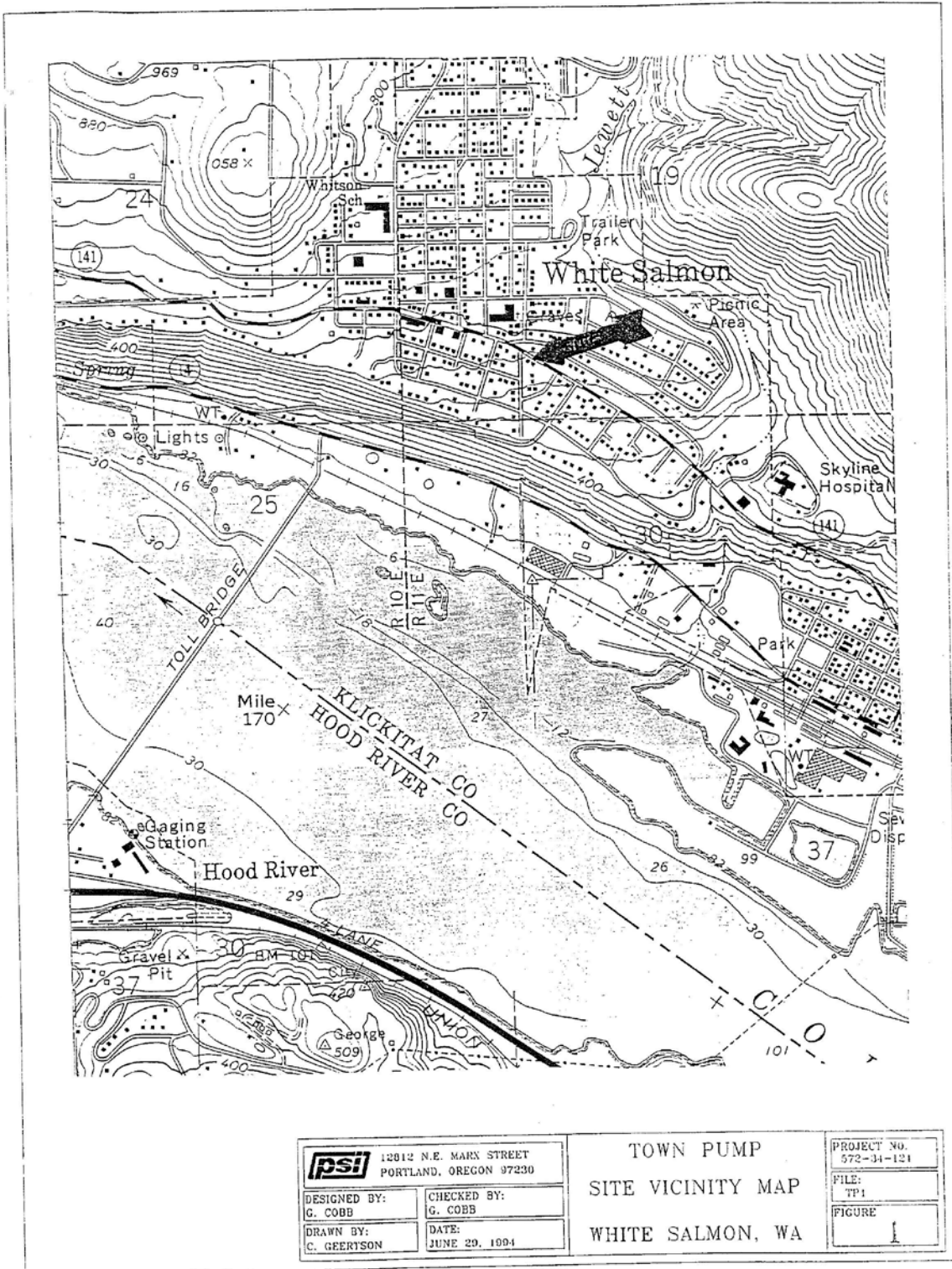
The next review for the Site will be scheduled five years from the date of this periodic review. In the event that additional cleanup actions or institutional controls are required, the next periodic review will be scheduled five years from the completion of those activities.

5.0 REFERENCES

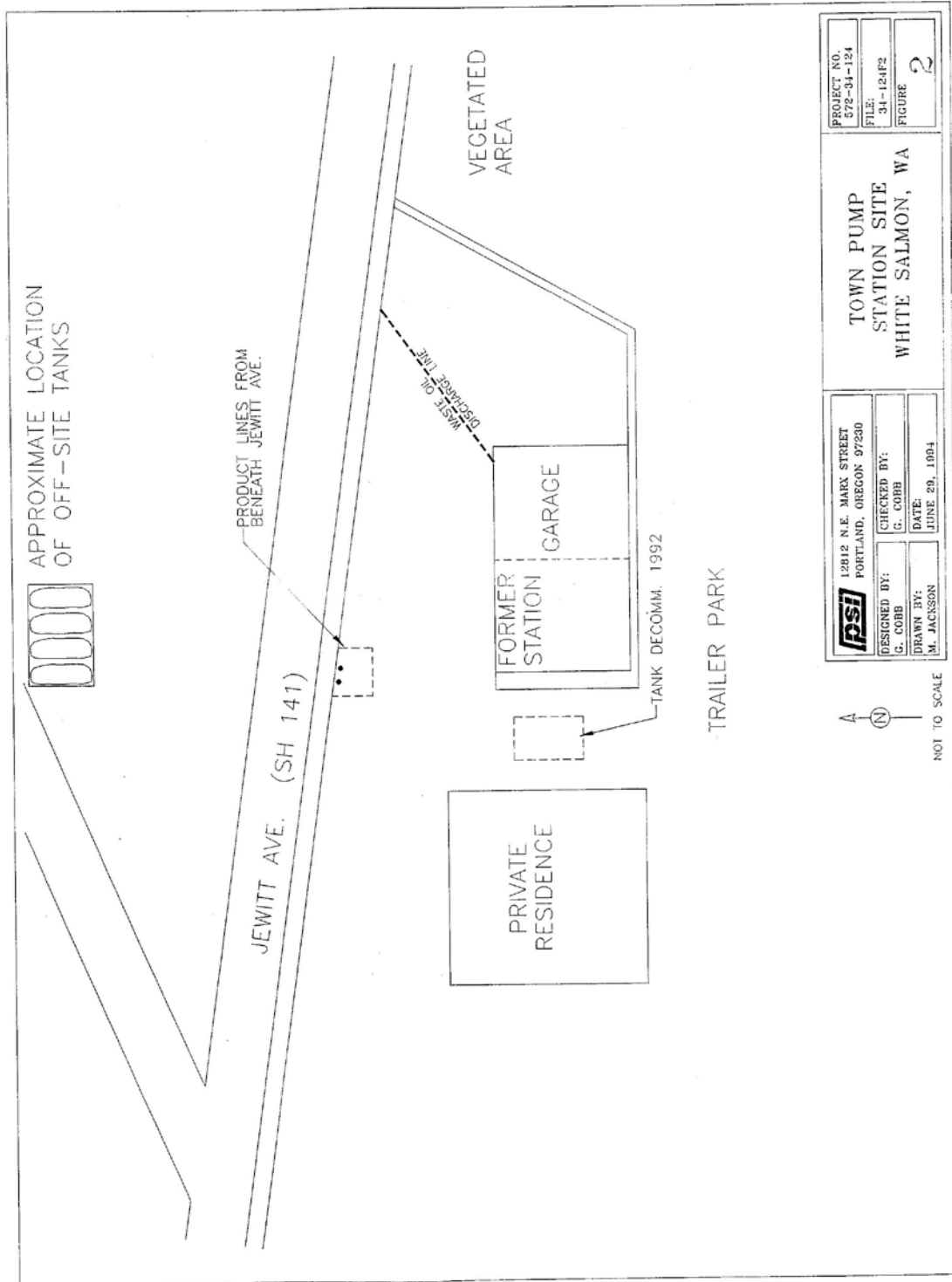
- Northwest Construction. *UST Decommissioning Summary/ Site Assessment*. April 1992.
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- ESU, Inc. *Decommissioning Report for Four Underground Storage Tanks*. February 1997.
- Ecology. *Enforcement Order No. DE94TC-C161*. March 1994.
- Ecology. *Periodic Review*. September 2008.
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6.0 APPENDICES

6.1 Vicinity Map



6.2 Site Plan



6.3 Photo Log

Photo 1: Town Pump Station Site - from the northwest



Photo 2: Downgradient Side of Town Pump Station Site - from the southwest



Photo 3: West Side of Town Pump Station Site - from the north



Photo 4: East Downgradient Side of Town Pump Station Site – from the east

