Periodic Review

Shell Oil Tank Farm
14th Street and Q Avenue
Anacortes, Washington 98221

Facility Site ID#: 4781157
Cleanup Site ID#: 4846

Prepared by:
Headquarters Region 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 Shell Oil Tank Farm (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 Ecology Agreed Order DE-08TCPHQ-5474. The cleanup actions resulted in concentrations of petroleum hydrocarbons, cadmium, benzene, and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) remaining at the Site that exceed MTCA cleanup levels. The MTCA cleanup levels for soil are established under WAC 173-340-740. The MTCA cleanup levels for groundwater are established under WAC 173-340-720. WAC 173-340-420(2) requires Ecology to conduct a periodic review of a Site every five years under the following conditions:

1. Whenever the department conducts a cleanup action.
2. Whenever the department approves a cleanup action under an order, agreed order or consent decree.
3. Or, as resources permit, whenever the department issues a no further action opinion,
4. and one of the following conditions exists at the site:

    (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; or
    (c) Where, in the department'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, including the effectiveness of engineered controls and institutional controls in limiting exposure to hazardous substances remaining at the Site.
(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; and.
(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 Tank Farm area was originally a portion of the Fidalgo Bay tide flats, which were filled to the current grade (up to the former bulkhead just east of Q Avenue shown in Figure 2) between 1925 and 1929. The property was acquired by the Port in 1929 and leased to Shell Oil Company in 1930 for use as a bulk fuel storage and distribution facility that primarily handled gasoline and diesel-range fuels. The approximate locations of the historical pump house, fill stand, UST, ASTs and associated product supply lines are shown in Figure 2. The Site operated as a bulk fuel storage facility under Shell and various bulk product distributors until 1987. Operations on the property ended in 1987 and the bulk terminal was reportedly decommissioned, including removal of all tanks, associated piping, and site structures.

According to the Shell engineering drawing, the original facility layout included three 25,000-gallon aboveground storage tanks (ASTs) in the south portion of the Site, and one 2,000-gallon underground storage tank (UST) located north of the ASTs. Two of the ASTs stored gasoline and the third contained diesel fuel. The contents of the UST are not well documented. Historic fuel supply lines connected the ASTs and pump house to a historical pier/fuel float located east of the Tank Farm across Q Avenue. Historically, gasoline and diesel were pumped from the pier via the fuel supply lines to the bulk fuel facility for storage and distribution. Two 12,500-gallon ASTs and apparently one 4,000-gallon UST were installed in the early 1950s. It is possible that the 4,000-gallon UST was installed as a replacement for the 2,000-gallon UST. The precise locations of the two newer ASTs are unknown; however, a total of four ASTs are visible in the 1966 and 1979 aerial photographs in the same area as the three ASTs shown on the 1930 site layout drawing. Gasoline, diesel and stove oil were reportedly stored in the ASTs. Dry cleaning solvent, and subsequently diesel, were reportedly stored in the 4,000-gallon UST. Dry cleaning solvents and petroleum products were distributed from the Site based on interviews of several distributors who had historically operated at the Site. Prior to 1947, the area east of Q Avenue (east of the former Tank Farm) consisted of tide flats. From 1930 to approximately 1947, the historic fuel supply lines were hanging from joists, as shown in Shell's 1930 layout plan. In the late 1940s to early 1950s, the area east of Q Avenue was filled with dredged material from the adjacent federal waterway, and a second bulkhead was constructed farther to the east near the current shore of Fidalgo Bay. It appears that the fuel supply lines east of Q Avenue were re-configured as underground lines during the filling activities in the late 1940s and early 1950s. The former Shell Oil Tank Farm operated as a bulk fuel storage facility under Shell and various bulk product distributors until 1987. Bulk fuel storage and distribution operations ended in 1987 and the facility was reportedly decommissioned, including removal of all tanks, and associated piping and structures.

2.2 Site Investigations

In April of 1987, two groundwater monitoring wells were installed on site. One soil sample was collected from each well and analyzed for diesel and lead. One soil sample was analyzed for oil. Lead was not detected in either sample. Diesel was detected in one sample, at a concentration

exceeding the MTCA Method A standard. Oil was not detected in the one sample analyzed. One groundwater sample was collected from each monitoring well and analyzed for benzene, toluene, xylene, and total lead. Lead was detected in both groundwater samples, with both concentrations exceeding the MTCA Method A standard. Benzene, toluene, and xylene were detected in one groundwater sample (all three in the same groundwater sample), with all three concentrations below their respective MTCA Method A standards.

In August of 2005, five soil borings were installed on site. One to three soil samples were collected from each soil boring and analyzed for gasoline, diesel, oil, benzene, ethylbenzene, toluene, and xylene. Benzene, ethylbenzene, toluene, and xylene were not detected or estimated in all nine soil samples, with concentrations below their respective MTCA Method A standards. Oil was detected in five of nine soil samples, with all concentrations below the MTCA Method A standard. Diesel was detected in all nine soil samples, with two of nine concentrations exceeding the MTCA Method A standard. Gasoline was estimated in six of nine soil samples, with four of six estimated concentrations exceeding the MTCA Method A standard. Groundwater grab samples were collected from each of the five soil borings and from two additional soil borings and analyzed for gasoline, diesel, oil, benzene, ethylbenzene, toluene, and xylene. Ethylbenzene and toluene were not detected in any of the seven groundwater grab samples. Benzene and xylene were detected in one of seven groundwater grab samples, not the same groundwater sample, with both concentrations below their respective MTCA Method A standards. Oil was not detected in any of the seven groundwater grab samples. Gasoline was detected in three of seven groundwater grab samples, with all three concentrations below the MTCA Method A standard. Diesel was detected in two of seven groundwater grab samples, with both concentrations exceeding the MTCA Method A standard.

In May of 2007, as part of a remedial investigation of an adjoining site, three additional soil borings were installed on this site. Three soil samples were collected from each soil boring and analyzed for gasoline, diesel, oil, lead, benzene, ethylbenzene, toluene, xylene, and carcinogenic and non-carcinogenic polycyclic aromatic hydrocarbons. Gasoline was detected in two of nine soil samples, with one of two concentrations exceeding the MTCA Method A standard. Diesel was detected in six of nine soil samples, with all concentrations below the MTCA Method A standard. Oil was detected in eight of nine soil samples, with all concentrations below the MTCA Method A standard. Benzene, ethylbenzene, and toluene were not detected in any of the soil samples. Xylene was detected in one of nine soil samples, with a concentration below the MTCA Method A standard. While one soil sample from each of the three locations had no detections of polycyclic aromatic hydrocarbons, the other two samples from each location had detections of various polycyclic aromatic hydrocarbons. All concentrations were below their respective MTCA Method A or Method B standards, where such standards have been established. Similarly, one soil sample from each of three locations had no detections of carcinogenic polycyclic aromatic hydrocarbons, the other two samples from each location had detections of various carcinogenic polycyclic aromatic hydrocarbons. Two of the six concentrations, in terms of toxicity equivalents, exceeded the MTCA Method A standard.

In November of 2007, as part of an interim remedial action, four test pits were excavated on site. Five soil samples were collected from the four test pits, with four soil samples being analyzed for gasoline, diesel, oil, benzene, ethylbenzene, toluene, xylene, arsenic, cadmium, chromium III, lead, mercury, polychlorinated biphenyls, and carcinogenic and non-carcinogenic polycyclic aromatic hydrocarbons. The fifth soil sample was analyzed only for cadmium. No cadmium was detected in the sample. Gasoline, diesel, benzene, ethylbenzene, toluene, xylene, and polychlorinated biphenyls were not detected in any of the four soil samples. Diesel was detected in one of four soil samples, at a concentration below the MTCA Method A standard. Chromium III was detected in all four soil samples, lead was detected in three of four soil samples, and arsenic and mercury were detected in two of four soil samples. All concentrations of these four metals were below their respective MTCA Method A standards. Cadmium was detected in one of five soil samples, with a concentration exceeding the MTCA Method A standard. Three of four soil samples had no detections of carcinogenic or non-carcinogenic polycyclic aromatic hydrocarbons. The fourth soil sample had detections of three of nine (fluoranthene, pyrene, and benzo(g,h,i)perylene) but the concentrations did not exceed the respective MTCA Method B standards, where such standards have been established. The same sample had detections of six of seven carcinogenic polycyclic aromatic hydrocarbons but the toxicity equivalent of the concentrations did not exceed the MTCA Method A standard.

In August of 2011, a geophysical survey was conducted to determine in a historic underground storage tank had been removed. No underground storage tank was detected but a tank-sized excavation was detected, suggesting that the tank was removed in the past.

In November of 2011, 35 soil borings were installed on site, followed in February of 2012 by seven groundwater monitoring wells. Eighty-five soil samples were analyzed for gasoline, diesel, oil, cadmium, lead, benzene, ethylbenzene, toluene, xylene, other volatile organic compounds, naphthalenes, seven carcinogenic polycyclic aromatic hydrocarbons, and polychlorinated biphenyls. Not all of the samples were analyzed for all of the analytes. Gasoline was detected in three of seventy-nine samples, with both determined and estimated concentrations exceeding the MTCA Method A standard. Diesel was detected in thirty-one of seventy-six soil samples, with six of thirty-one concentrations exceeding the MTCA Method A standard. Oil was detected in twenty-one of seventy-four soil samples, with one of twenty-one concentrations exceeding the MTCA Method A standard. Benzene, ethylbenzene, toluene, and xylene were analyzed in seventy-four soil samples, with the following results: benzene (seven detections, one concentration exceeding the MTCA Method A standard), ethylbenzene (no detections), toluene (six detections, all concentrations below the MTCA Method A standard), and xylene (seven detections, all concentrations below the MTCA Method A standard). Seventeen soil samples were analyzed for methyl tertiary butyl ether, 1,2-dibromoethane, and 1,2-dichloroethane. There were no detections of any of the three analytes in any of the samples. Seven soil samples were analyzed for tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, vinyl chloride, 111-trichloroethane, trichlorofluoromenthane, and carbon tetrachloride. There were no detections of any of the analytes in any of the seven soil samples. Thirty-seven soil samples were analyzed for 1-methylnaphthalene, 2-methylnaphthalene, and naphthalene. One or more of the three analytes were detected in eighteen of thirty-seven samples analyzed but all detections were below their respective MTCA Method A or Method B standards.

Thirty-six soil samples were analyzed for seven carcinogenic polycyclic aromatic hydrocarbons (benzo(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno 1,2,3-cd pyrene, and dibenzo(a,h)anthracene). One or more of the seven carcinogenic polycyclic aromatic hydrocarbons were detected in eight of thirty-six soil samples, with four of the eight concentrations exceeding the MTCA Method A standard in total equivalent toxicity. Forty-eight soil samples were analyzed for lead, with lead detected in ten of forty-eight samples. All concentrations were below the MTCA Model A standard. Eleven soil samples were analyzed for cadmium. Cadmium was detected in three of eleven soil samples, with all concentrations below the MTCA Method A standard. Five soil samples were analyzed for polychlorinated biphenyls. There were no detections of polychlorinated biphenyls in any of the five samples.

One groundwater sample was collected from each of seven groundwater monitoring wells and analyzed for the same analytes as the soil samples, except polychlorinated biphenyls were not analyzed for. Gasoline was detected in two of seven groundwater samples, with both concentrations below the MTCA Method A standard. Diesel and oil were not detected in any of the samples. Benzene, ethylbenzene, and toluene were not detected in any of the samples. Xylene was detected in one of seven groundwater samples, with a concentration below the MTCA Method A standard. One groundwater sample was analyzed for methyl tertiary butyl ether, 1,2-dibromoethane, 1,2-dichloroethane, tetrachloroethene, trichloroethene, cis 1,2-dichloroethene, 1,1,1-trichloroethane, vinyl chloride, trichlorofluoromethane, and carbon tetrachloride. There were no detections of any of the ten analytes in the sample. Seven groundwater samples were analyzed for 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, and seven carcinogenic polycyclic aromatic hydrocarbons. Five of the seven groundwater samples had no detections of any of the ten analytes. Of the remaining two groundwater samples, 1-methylnaphthalene, naphthalene, and one carcinogenic polycyclic aromatic hydrocarbon were detected in one sample and naphthalene and two carcinogenic polycyclic aromatic hydrocarbons were detected in the other sample. All concentrations and for polycyclic aromatic hydrocarbons, their toxicity equivalent, were below their respective MTCA Method A standards. Lead was detected in one of seven groundwater samples, with the concentration below the MTCA Method A standard. One groundwater sample was analyzed for cadmium. Cadmium was not detected in the sample.

2.3 Cleanup Levels and Points of Compliance

Site-Specific Cleanup Levels for Hazardous Substances[1]
Former Shell Oil Tank Farm Site
Anacortes, Washington

Hazardous Substance	Soil Cleanup Level (mg/kg)	Groundwater Cleanup Level (µg/L)
Petroleum Hydrocarbons		
Gasoline-Range	30/100[2]	800/1,000[3]
Diesel-Range	2,000	500
Heavy Oil-Range	2,000	500
Volatile Organic Compound (VOC)		
Benzene	0.13	23
Carcinogenic Polycyclic Aromatic Hydrocarbons (cPAHs)		
Benzo(a)anthracene	0.13	0.018
Chrysene	0.14	0.018
Benzo(b)fluoranthene	0.43	0.018
Benzo(k)fluoranthene	0.43	0.018
Benzo(a)pyrene	0.137	0.018
Indeno(1,2,3-cd)pyrene	1.3	0.018
Dibenz(a,h)anthracene	0.65	0.018
Total cPAHs (TEQ)	0.137	0.10
Metals		
Cadmium	1.2	8.8

Notes:

[1]Site-specific cleanup levels established by the Cleanup Action Plan (Ecology, 2014).

[2]Cleanup level is 30 mg/kg when benzene is present.

[3]Cleanup level is 800 µg/L when benzene is present.

mg/kg = milligrams per kilogram

µg/L = microgram per liter

TEQ = toxicity equivalency

The standard point of compliance for the human health-based direct contact soil cleanup levels presented in the above table is throughout the soil column from the ground surface to fifteen feet below ground surface.

Because the groundwater cleanup levels shown in the above table are based on protection of marine surface water, and not protection of groundwater as drinking water, the conditional point of compliance for groundwater cleanup levels is where groundwater discharges to Fidalgo Bay.

2.4 Remedial Actions

In 1987, all tanks, piping, and structures on site were removed. The site was paved with asphalt. (no report available).

In November of 2014, four thousand and three hundred cubic yards of contaminated soil was excavated and taken off-site to a permitted facility. Fifty-two conformational soil samples were collected from the excavation and analyzed for gasoline, diesel, oil, cadmium, benzene, and seven carcinogenic polycyclic aromatic hydrocarbons. Forty-seven soil samples had no exceedances of the site cleanup levels for any analyte. One soil sample had exceedances of the cleanup levels for three carcinogenic polycyclic aromatic hydrocarbons and a second soil sample had an exceedance of the cleanup level for cadmium. The area represented by these two samples was over-excavated. One soil sample had an exceedance of the cleanup level for diesel, one soil sample had an exceedance of the cleanup levels for diesel, oil, and cadmium, and a third soil sample had exceedance of the cleanup levels for diesel, gasoline, and benzene. As these three soil samples were adjacent to a utility line, they could not be over-excavated. An institutional control will be used.

In August and December of 2015 and March and June of 2016, confirmational groundwater samples were collected from four on-site groundwater wells and analyzed for gasoline, diesel, oil, and benzene with samples from one well was also analyzed for total and dissolved cadmium. Total and dissolved cadmium was not detected in the sample. Gasoline and benzene were not detected in any sample in any of the four rounds of sampling. Oil was detected in one well in the first round and in a different well in the fourth round of sampling, with both concentrations below the MTCA Method A standard. Diesel was detected in one well in the second round and in a different well in three of the four rounds, with all concentrations below the MTCA Method A standard. In June of 2017 and June of 2018, only two groundwater wells were sampled in each round (the same two wells) with the samples analyzed for gasoline, diesel, and oil. Gasoline and oil were not detected in either well in either round. Diesel was detected in both rounds in one well and in one of two rounds in the second well, with all concentrations below the MTCA Method A standard.

2.5 Environmental Covenant

Based on the Site use, surface cover and cleanup levels, it was determined that the Site was eligible for a ‘No Further Action’ determination if an environmental covenant (Covenant) was recorded for the property. A Covenant was recorded for the Site in 2017 that imposed the following limitations:

1. The following additional specific restrictions and requirements shall apply to a portion of the Property where contaminated soil is contained under a cap consisting of two to three feet of overburden which does not exceed soil cleanup levels and roadway and sidewalks located as illustrated in Exhibit B. As such, the following restrictions shall apply within the area illustrated in Exhibit B as the “Restrictive Covenant Area.”

a. **Containment of Soil** – the remedial action for the Property includes installation of a protective barrier of oxygen releasing material (ORM) injected on the site adjacent to the contaminated material left in place to stimulate naturally occurring microbes for enhancing biological degradation of residual organic contaminants. The contaminated soil at the Property is covered by the cap, described above. The primary purpose of this cap is to contain contamination and mitigate risk of direct human/terrestrial wildlife contact with contaminated soils.

(i) Any activity on the Property that will compromise the integrity of the cap including: drilling, digging, piercing the cap with a sampling device, post, stake, or similar device, grading, excavation, installation of underground utilities, removal of the cap, or application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology. Upon receiving the Grantor's written request, to conduct such activity, Ecology shall endeavor to respond within five (5) business days.

(ii) The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap, including but not limited to any damage caused by a third party. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

(b) **Monitoring** – Several groundwater well are located on the property to monitor the performance of the remedial action. The Grantor shall maintain clear access to these devices and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

The Covenant is available as Appendix 6.4.

3.0 PERIODIC REVIEW

3.1 Effectiveness of completed cleanup actions

The Covenant for the Site was recorded and is in place. This Covenant prohibits activities that will result in the release of contaminants at the Site without Ecology's approval, and prohibits any use of the property that is inconsistent with the Covenant. This Covenant serves to ensure the long term integrity of the remedy.

Although a site visit would normally be part of the five-year review, no site visit was performed due to the coronavirus pandemic restrictions. The Site is still operating as a parking area.

Soils with petroleum hydrocarbons, cadmium, benzene, and carcinogenic polycyclic aromatic hydrocarbons with concentrations higher than MTCA cleanup levels are still present at the Site. However, the remedy prevents human exposure to this contamination by ingestion and direct contact with soils. The Covenant for the property will ensure that the contamination remaining is contained and controlled.

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

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

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

The cleanup at the Site was governed by WAC 173-340-702(12) (c) [2001 ed.] and provides that,

"A release cleaned up under the cleanup levels determined in (a) or (b) of this subsection shall not be subject to further cleanup action due solely to subsequent amendments to the provision in this chapter on cleanup levels, unless the department determines, on a case-by-case basis, that the previous cleanup action is no longer sufficiently protective of human health and the environment."

Although cleanup levels changed for petroleum hydrocarbon compounds as a result of modifications to MTCA in 2001, contamination remains at the Site above the new MTCA Method A and B cleanup levels. Even so, the cleanup action is still protective of human health and the environment. A table comparing MTCA cleanup levels from 2015 to 2020 is available below.

Cleanup Level Comparison Table

Analyte	2015 MTCA Method A Soil Cleanup Level (ppm)	2020 MTCA Method A Soil Cleanup Level (ppm)	2015 MTCA Method A Groundwater Cleanup level (ppb)	2020 MTCA Method A Groundwater Cleanup Level (ppb)
Gasoline	30/100	30/100	800/1,000	800/1,000
Diesel	2,000	2,000	500	500
Oil	2,000	2,000	500	500
Cadmium	1.2	2	8.8	5
Benzene	0.13	0.03	23	5
Benzo(a)anthracene	0.13	0.1	0.018	0.1
Chrysene	0.14	0.1	0.018	0.1
Benzo(b)fluoranthene	0.43	0.1	0.018	0.1
Benzo(k)fluoranthene	0.43	0.1	0.018	0.1
Benzo(a)pyrene	0.137	0.1	0.018	0.1
Indeno(1,2,3-cd)pyrene	1.3	0.1	0.018	0.1
Dibenzo(a,h)anthracene	0.65	0.1	0.018	0.1
Total carcinogenic PAHs - TEQ	0.137	0.1	0.1	0.1

MTCA = Model Toxics Control Act
NL = None listed
ppb = parts per billion
ppm = parts per million
TPH = total petroleum hydrocarbons

3.4 Current and projected Site use

The Site is currently used for commercial and industrial purposes. There have been no changes in current or projected future Site or resource uses.

3.5 Availability and practicability of higher preference technologies

The remedy implemented included containment of hazardous substances, and it continues to be protective of human health and the environment. While higher preference cleanup technologies may be available, they are still not practicable at this 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 selected Site cleanup levels. The presence of improved analytical techniques would not affect decisions or recommendations made for the Site.

4.0 CONCLUSIONS

- The cleanup actions completed at the Site appear to be protective of human health and the environment.

- Soils cleanup levels have not been met at the standard point of compliance for the Site; however, the cleanup action has been determined to comply with cleanup standards since the long-term integrity of the containment system is ensured, and the requirements for containment technologies are being met.

- Institutional controls in the form of a covenant are in place at the Site and will be effective in protecting public health and the environment from exposure to hazardous substances and protecting the integrity of the cleanup action.

Based on this periodic review, Ecology has determined that the requirements of the Covenant are being followed. No additional cleanup actions are required by the property owner. It is the property owner's responsibility to continue to inspect the Site to assure that the integrity of the remedy is maintained.

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

1) Work Plan – Remedial Investigation/Feasibility Study – Former Shell Oil Tank Farm by GeoEngineers and dated September 1, 2009
2) Draft Cleanup Action Plan – Former Shell Oil Tank Farm Site – Anacortes, Washington by Department of Ecology and dated April 19, 2013
3) Remedial Investigation/Feasibility Study – Former Shell Oil Tank Farm – Anacortes, Washington by GeoEngineers and dated February 3, 2014
4) Cleanup Action Plan – Former Shell Oil Tank Farm Site – Anacortes, Washington by Department of Ecology and dated February 3, 2014
5) Construction Completion (as-built) Report – Former Shell Oil Tank Farm Site – Anacortes, Washington by GeoEngineers and dated June 26, 2015

Port of Anacortes - *Environmental Covenant*. (May 18, 2017)

Ecology. *Site Visit*. Because of restrictions due to the coronavirus pandemic, no site visit was performed.

Note: the above documents, and other site documents, may be found on Ecology's webpage for this site at: https://apps.ecology.wa.gov/gsp/Sitepage.aspx?csid=4846.

6.0 APPENDICES

6.1 Vicinity Map

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. can not guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.

Data Sources: ESRI Data & Maps

Projection: NAD 1983 UTM Zone 10N

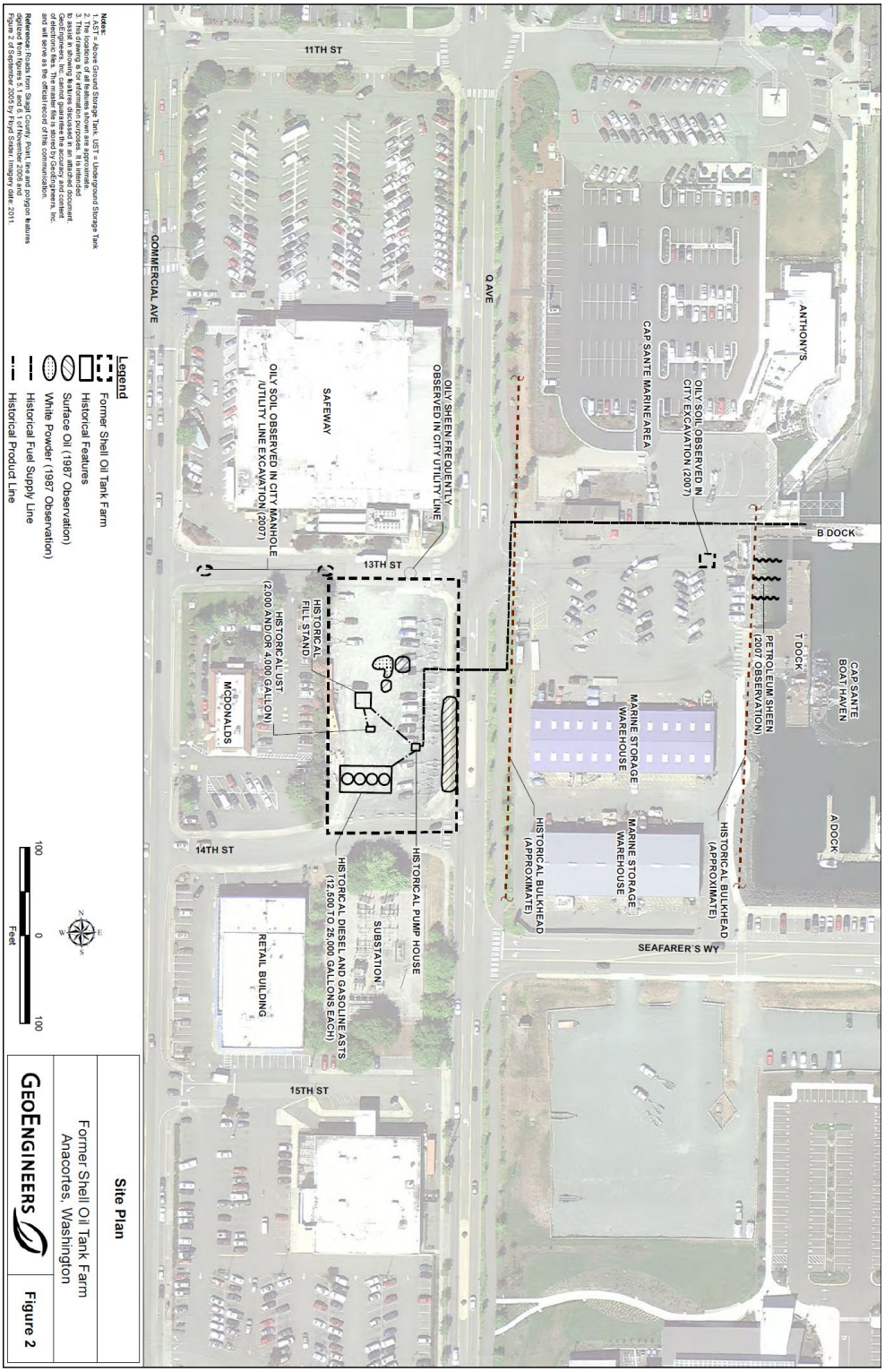
Vicinity Map

Former Shell Oil Tank Farm
Anacortes, Washington

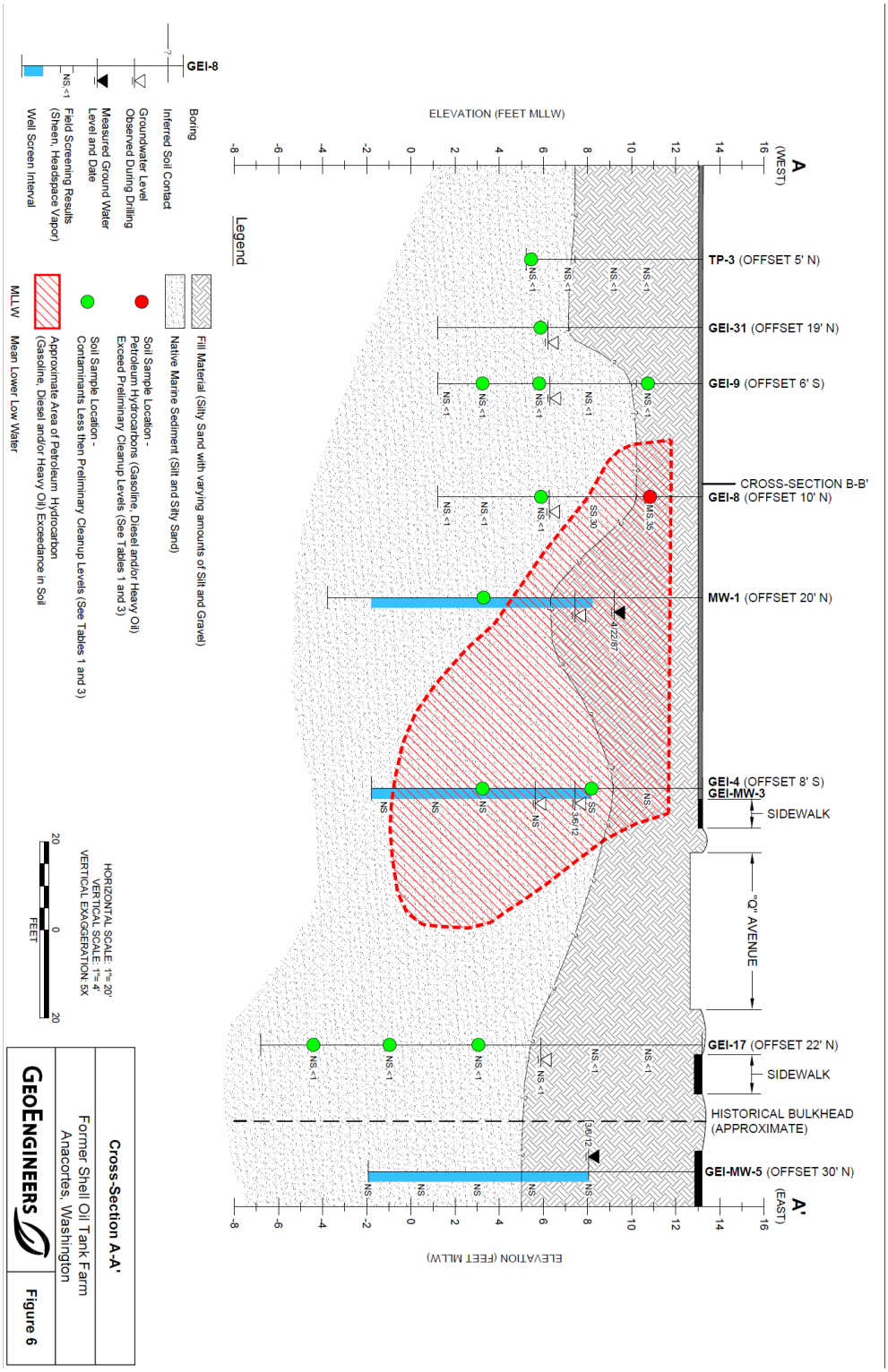
GeoEngineers

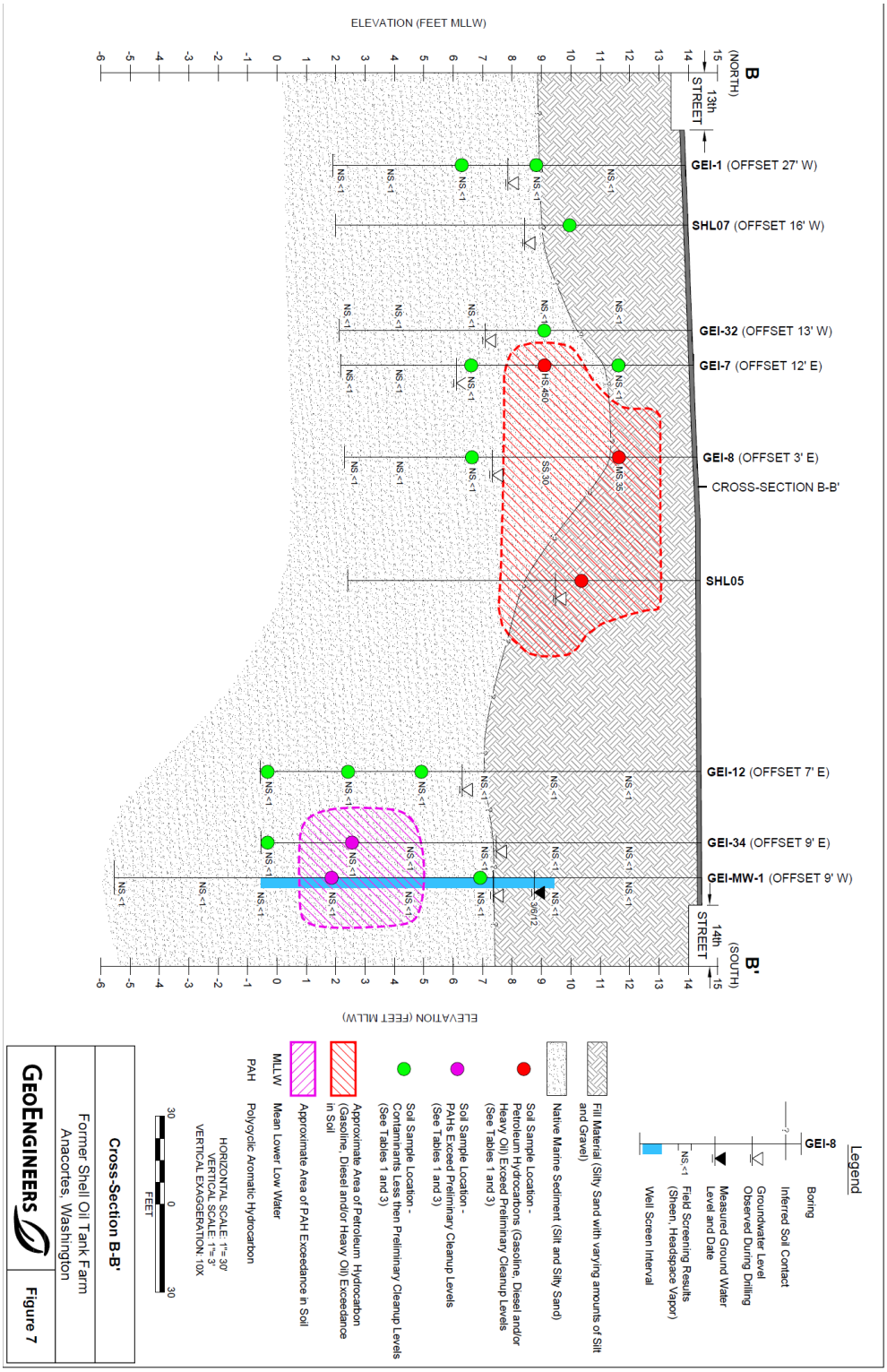
Figure 1

6.2 **Site Plan**


11TH ST
COMMERCIAL AVE
Q AVE
ANTHONY'S
CAP SANTE MARINE AREA
OILY SOIL OBSERVED IN CITY EXCAVATION (2007)
B DOCK
T DOCK
CAP SANTE BOAT HAVEN
PETROLEUM SHEEN (2007 OBSERVATION)
A DOCK
SAFEWAY
OILY SHEEN FREQUENTLY OBSERVED IN CITY UTILITY LINE
OILY SOIL OBSERVED IN CITY MANHOLE /UTILITY LINE EXCAVATION (2007)
13TH ST
MARINE STORAGE WAREHOUSE
MARINE STORAGE WAREHOUSE
HISTORICAL BULKHEAD (APPROXIMATE)
HISTORICAL BULKHEAD (APPROXIMATE)
HISTORICAL FILL STAND
HISTORICAL UST (2,000 AND OR 4,000 GALLON)
MCDONALDS
14TH ST
SEAFARER'S WY
HISTORICAL PUMP HOUSE
HISTORICAL DIESEL AND GASOLINE ASTS (12,500 TO 25,000 GALLONS EACH)
SUBSTATION
RETAIL BUILDING
15TH ST
Legend
Former Shell Oil Tank Farm
Historical Features
Surface Oil (1987 Observation)
White Powder (1987 Observation)
Historical Fuel Supply Line
Historical Product Line
100
0
100
Feet
Site Plan
Former Shell Oil Tank Farm
Anacortes, Washington
GeoEngineers
Figure 2

6.3 Concentration Map




ELEVATION (FEET MLLW)
B
(NORTH)
13th STREET
B'
(SOUTH)
14th STREET
GEI-1 (OFFSET 27' W)
SHL07 (OFFSET 16' W)
GEI-32 (OFFSET 13' W)
GEI-7 (OFFSET 12' E)
GEI-8 (OFFSET 3' E)
CROSS-SECTION B-B'
SHL05
GEI-12 (OFFSET 7' E)
GEI-34 (OFFSET 9' E)
GEI-MW-1 (OFFSET 9' W)
NS <1
MS 460
MS 35
SS 30
SS/12
ELEVATION (FEET MLLW)
Legend
GEI-8
Boring
Inferred Soil Contact
Groundwater Level Observed During Drilling
Measured Ground Water Level and Date
NS <1
Field Screening Results (Sheen, Headspace Vapor)
Well Screen Interval
Fill Material (Silty Sand with varying amounts of Silt and Gravel)
Native Marine Sediment (Silt and Silty Sand)
Soil Sample Location - Petroleum Hydrocarbons (Gasoline, Diesel and/or Heavy Oil) Exceed Preliminary Cleanup Levels (See Tables 1 and 3)
Soil Sample Location - PAHs Exceed Preliminary Cleanup Levels (See Tables 1 and 3)
Soil Sample Location - Contaminants Less then Preliminary Cleanup Levels (See Tables 1 and 3)
Approximate Area of Petroleum Hydrocarbon (Gasoline, Diesel and/or Heavy Oil) Exceedance in Soil
Approximate Area of PAH Exceedance in Soil
MLLW Mean Lower Low Water
PAH Polycyclic Aromatic Hydrocarbon
HORIZONTAL SCALE: 1"= 30'
VERTICAL SCALE: 1"= 3'
VERTICAL EXAGGERATION: 10X
30 0 30
FEET
Cross-Section B-B'
Former Shell Oil Tank Farm
Anacortes, Washington
GeoEngineers
Figure 7

6.4 Environmental Covenant

201705160070
Skagit County Auditor $81.00
5/16/2017 Page 1 of 9 10:37AM

After Recording Return
Original Signed Covenant to:
Arianne Fernandez
Toxics Cleanup Program
Department of Ecology
P.O. Box 47600
Olympia, WA 98504-7600

Environmental Covenant

Grantor: Port of Anacortes
Grantee: State of Washington, Department of Ecology (hereafter "Ecology")
Brief Legal Description: PTN. TR 13, PL 10, ANACORTES TIDE LANDS, in Skagit County, Washington
Tax Parcel Nos.: P32956
Cross Reference: None

RECITALS

a. This document is an environmental (restrictive) covenant (hereafter "Covenant") executed pursuant to the Model Toxics Control Act (MTCA), chapter 70.105D RCW, and Uniform Environmental Covenants Act (UECA), chapter 64.70 RCW.

b. The Property that is the subject of this Covenant is part or all of a site commonly known as the Former Shell Oil Tank Farm, facility ID 4781157. The Property is legally described in Exhibit A, which is attached hereto, and referred to herein as the "Property."

c. The Property is the subject of remedial action conducted under MTCA. This Covenant is required because residual contamination remains on the Property after completion of remedial actions. Specifically, the following principal contaminants remain on the Property:

Medium	Principal Contaminants Present
Soil	Gasoline-, diesel- and heavy oil-range petroleum hydrocarbons, benzene and carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and cadmium

d. It is the purpose of this Covenant to restrict certain activities and uses of the Property to protect human health and the environment and the integrity of remedial actions conducted at the site. Records describing the extent of residual contamination and remedial actions conducted are available through Ecology. This includes the following documents: Remedial Investigation and Feasibility Study (RI/FS) Report, Cleanup Action Plan, and Construction Completion (As-Built) Report.

e. This Covenant grants Ecology certain rights under UECA and as specified in this Covenant. As a Holder of this Covenant under UECA, Ecology has an interest in real property, however, this is not an ownership interest which equates to liability under MTCA or the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. § 9601 *et seq.* The rights of Ecology as an "agency" under UECA, other than its right as a holder, are not an interest in real property.

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COVENANT

The Port of Anacortes, as Grantor and fee simple owner of the Property hereby grants to the Washington State Department of Ecology, and its successors and assignees, the following covenants. Furthermore, it is the intent of the Grantor that such covenants shall supersede any prior interests the Grantor has in the property,[1] and that such covenants shall run with the land and be binding on all current and future owners of any portion of, or interest in, the Property.

Section 1. General Restrictions and Requirements.

The following general restrictions and requirements shall apply to the Property:

a. **Interference with Remedial Action.** The Grantor shall not engage in any activity on the Property that may impact or interfere with the remedial action and any operation, maintenance, inspection or monitoring of that remedial action without prior written approval from Ecology.

b. **Protection of Human Health and the Environment.** The Grantor shall not engage in any activity on the Property that may threaten continued protection of human health or the environment without prior written approval from Ecology. This includes, but is not limited to, any activity that results in the release of residual contamination that was contained as a part of the remedial action or that exacerbates or creates a new exposure to residual contamination remaining on the Property.

c. **Continued Compliance Required.** Grantor shall not convey any interest in any portion of the Property without providing for the continued adequate and complete operation, maintenance and monitoring of remedial actions and continued compliance with this Covenant.

d. **Leases.** Grantor shall restrict any lease for any portion of the Property to uses and activities consistent with this Covenant and notify all lessees of the restrictions on the use of the Property.

Section 2. Specific Prohibitions and Requirements.

In addition to the general restrictions in Section 1 of this Covenant, the following additional specific restrictions and requirements shall apply to a portion of the Property where contaminated soil is contained under a cap consisting of two to three feet of overburden which does not exceed soil cleanup levels and roadway and sidewalks located as illustrated in Exhibit B. As such, the following restrictions shall apply within the area illustrated in Exhibit B as the "Restrictive Covenant Area."

a. **Containment of Soil.** The remedial action for the Property includes installation of a protective barrier of oxygen releasing material (ORM) injected on the site adjacent to the contaminated material left in place to stimulate naturally occurring microbes for enhancing biological degradation of residual organic contaminants. The contaminated soil at the Property is covered by the cap, described above. The primary purpose of this cap is to contain contamination and mitigate risk of direct human/terrestrial wildlife contact with contaminated soils.

(i) Any activity on the Property that will compromise the integrity of the cap including: drilling; digging; piercing the cap with a sampling device, post, stake, or similar device; grading; excavation; installation of underground utilities; removal of the cap; or application of loads in excess of the cap load bearing capacity, is prohibited without prior written approval by Ecology.

[1] As is the case for all environmental covenants recorded pursuant to MTCA in which Ecology is the Grantee, it is Ecology's understanding and intent that such covenants shall not supersede the Grantor's fee simple ownership interest in the Property.

Upon receiving the Grantor's written request to conduct such activity, Ecology shall endeavour to respond within five (5) business days.

(ii) The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to the cap, including but not limited to any damage caused by a third party. Unless an alternative plan has been approved by Ecology in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

b. **Monitoring.** Several groundwater monitoring wells are located on the Property to monitor the performance of the remedial action. The Grantor shall maintain clear access to these devices and protect them from damage. The Grantor shall report to Ecology within forty-eight (48) hours of the discovery of any damage to any monitoring device. Unless Ecology approves of an alternative plan in writing, the Grantor shall promptly repair the damage and submit a report documenting this work to Ecology within thirty (30) days of completing the repairs.

Section 3. Access.

a. The Grantor shall maintain clear access to all remedial action components necessary to construct, operate, inspect, monitor and maintain the remedial action.

b. The Grantor freely and voluntarily grants Ecology and its authorized representatives, upon reasonable notice, the right to enter the Property at reasonable times to evaluate the effectiveness of this Covenant and associated remedial actions, and enforce compliance with this Covenant and those actions, including the right to take samples, inspect any remedial actions conducted on the Property, and to inspect related records.

c. No right of access or use by a third party to any portion of the Property is conveyed by this instrument.

Section 4. Notice Requirements.

a. **Conveyance of Any Interest.** The Grantor, when conveying any interest within the area of the Property described and illustrated in Exhibit B, including but not limited to title, easement, leases, and security or other interests, must:

i. Provide written notice to Ecology of the intended conveyance at least thirty (30) days in advance of the conveyance.

ii. Include in the conveying document a notice in substantially the following form, as well as a complete copy of this Covenant:

NOTICE: THIS PROPERTY IS SUBJECT TO AN ENVIRONMENTAL COVENANT GRANTED TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY ON [DATE] AND RECORDED WITH THE SKAGIT COUNTY AUDITOR UNDER RECORDING NUMBER [RECORDING NUMBER]. USES AND ACTIVITIES ON THIS PROPERTY MUST COMPLY WITH THAT COVENANT, A COMPLETE COPY OF WHICH IS ATTACHED TO THIS DOCUMENT.

iii. Unless otherwise agreed to in writing by Ecology, provide Ecology with a complete copy of the executed document within thirty (30) days of the date of execution of such document.

b. **Reporting Violations.** Should the Grantor become aware of any violation of this Covenant, Grantor shall promptly report such violation in writing to Ecology.

c. **Emergencies.** For any emergency or significant change in site conditions due to Acts of Nature (for example, flood or fire) resulting in a violation of this Covenant, the Grantor is authorized to respond to such an event in accordance with state and federal law. The Grantor must notify Ecology in writing of the event and response actions planned or taken as soon as practical but no later than within twenty-four (24) hours of the discovery of the event.

d. **Notification procedure.** Any required written notice, approval, reporting or other communication shall be personally delivered or sent by first class mail to the following persons. Any change in this contact information shall be submitted in writing to all parties to this Covenant. Upon mutual agreement of the parties to this Covenant, an alternative to personal delivery or first class mail, such as e-mail or other electronic means, may be used for these communications.

Director of Planning, Properties & Environmental Port of Anacortes 100 Commercial Avenue Anacortes, WA 98221 (360) 293-3134	Environmental Covenants Coordinator Washington State Department of Ecology Toxics Cleanup Program P.O. Box 47600 Olympia, WA 98504-7600 (360) 407-6000 ToxicsCleanupProgramHQ@ecy.wa.gov

Section 5. Modification or Termination.

a. Grantor must provide written notice and obtain approval from Ecology at least sixty (60) days in advance of any proposed activity or use of the Property in a manner that is inconsistent with this Covenant. For any proposal that is inconsistent with this Covenant and permanently modifies an activity or use restriction at the site:

i. Ecology must issue a public notice and provide an opportunity for the public to comment on the proposal; and

ii. If Ecology approves of the proposal, the Covenant must be amended to reflect the change before the activity or use can proceed.

b. If the conditions at the Property requiring a Covenant have changed or no longer exist, then the Grantor may submit a request to Ecology that this Covenant be amended or terminated. Any amendment or termination of this Covenant must follow the procedures in MTCA and UECA and any rules promulgated under these chapters.

Section 6. Enforcement and Construction.

a. This Covenant is being freely and voluntarily granted by the Grantor.

b. Within ten (10) days of execution of this Covenant, Grantor shall provide Ecology with an original signed Covenant and proof of recording and a copy of the Covenant and proof of recording to others required by RCW 64.70.070.

c. Ecology shall be entitled to enforce the terms of this Covenant by resort to specific performance or legal process. All remedies available in this Covenant shall be in addition to any and all remedies at law or in equity, including MTCA and UECA. Enforcement of the terms of this Covenant shall be at the discretion of Ecology, and any forbearance, delay or omission to exercise its rights under this Covenant in the event of a breach of any term of this Covenant is not a waiver by Ecology of that term or of any subsequent breach of that term, or any other term in this Covenant, or of any rights of Ecology under this Covenant.

d. Grantor, upon request by Ecology, shall be obligated to pay for Ecology's costs to process a request for any modification or termination of this Covenant and any approval required by this Covenant. The Grantor shall also be responsible for the costs associated with this Covenant of monitoring the integrity of the cap, repairing the cap, notification of cap damage, and recording this Covenant.

e. This Covenant shall be liberally construed to meet the intent of MTCA and UECA.

f. The provisions of this Covenant shall be severable. If any provision in this Covenant or its application to any person or circumstance is held invalid, the remainder of this Covenant or its application to any person or circumstance is not affected and shall continue in full force and effect as though such void provision had not been contained herein.

g. A heading used at the beginning of any section or paragraph or exhibit of this Covenant may be used to aid in the interpretation of that section or paragraph or exhibit but does not override the specific requirements in that section or paragraph.

The undersigned representative of Grantor warrants that the Port of Anacortes holds the title to the Property and has authority to execute this Covenant.

EXECUTED this 4 day of MAY, 2017.

by: Daniel C. Worra
Title: Executive Director

STATE OF WASHINGTON
COUNTY OF SKAGIT

On this 4th day of MAY, 2017 I certify that Daniel Worra personally appeared before me, acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument, and acknowledged it as the Executive Director of the Port of Anacortes to be the free and voluntary act and deed of such party for the uses and purposes mentioned in the instrument.

FRANK J CHMELIK NOTARY PUBLIC STATE OF WASHINGTON COMMISSION EXPIRES

Notary Public in and for the State of Washington
Residing at BELLINGHAM, WA
My appointment expires _____

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The Department of Ecology, hereby accepts the status as GRANTEE and HOLDER of the above Environmental Covenant.

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

by: Jim Pendowski
Title: Program Manager, Toxics Cleanup Program

Dated: 3/24/17

STATE OF Washington
COUNTY OF Thurston

On this 24 day of March, 2017, I certify that Jim Pendowski personally appeared before me, acknowledged that he is the Program Manager of the Toxics Cleanup Program of the state agency that executed the within and foregoing instrument, and signed said instrument by free and voluntary act and deed, for the uses and purposes therein mentioned, and on oath stated that he was authorized to execute said instrument for said state agency.

VALERIE L PEARSON
NOTARY PUBLIC
COMMISSION EXPIRES
3-28-20
STATE OF WASHINGTON

Notary Public in and for the State of Washington
Residing at Lacey, Washington
My appointment expires 3-28-2020

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Exhibit A

LEGAL DESCRIPTION

TRACT 13, PLATE 10, ANACORTES TIDE AND SHORELANDS, LOCATED IN SECTION 19, TOWNSHIP 35 NORTH, RANGE 2 EAST OF W.M., EXCEPT THAT PORTION OF TRACT 13, PLATE 10 DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SAID TRACT 13, SAID POINT BEING THE INTERSECTION OF THE SOUTHERLY MARGIN OF 13TH STREET AND THE EASTERLY MARGIN OF COMMERCIAL AVE; THENCE NORTH 89° 57' 30" EAST ALONG SAID SOUTH MARGIN OF 13TH STREET 160.00 FEET; THENCE SOUTH PARALLEL WITH SAID EAST MARGIN OF COMMERCIAL AVE 216.00 FEET TO THE NORTH MARGIN OF 14TH STREET; THENCE SOUTH 89° 57' 30" WEST ALONG SAID NORTH MARGIN 160.00 FEET TO SAID EAST MARGIN OF COMMERCIAL AVENUE; THENCE NORTH ALONG SAID EAST MARGIN 216.00 FEET TO THE POINT OF BEGINNING.

SITUATE IN SKAGIT COUNTY, STATE OF WASHINGTON.

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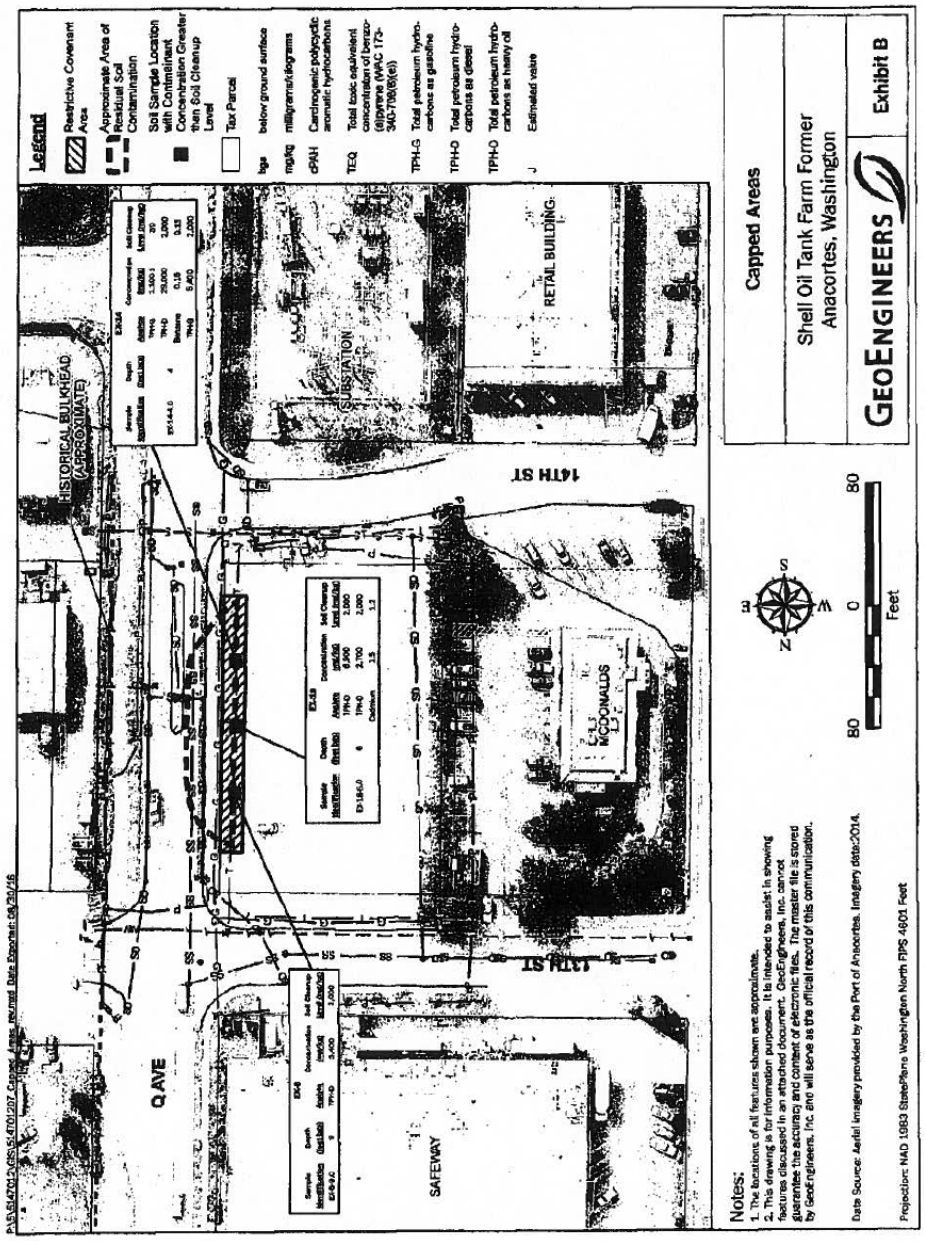
Exhibit B

CAPPED AREA


Legend
Restrictive Covenant Area
Approximate Area of Residual Soil Contamination
Soil Sample Location with Contaminant Concentration Greater than Soil Cleanup Level
Tax Parcel
bgs below ground surface
mg/kg milligrams/kilograms
cPAH Carcinogenic polycyclic aromatic hydrocarbons
TEQ Total toxic equivalent concentration of benzo-(a)pyrene (WAC 173-340-708(8)(e))
TPH-G Total petroleum hydrocarbons as gasoline
TPH-D Total petroleum hydrocarbons as diesel
TPH-O Total petroleum hydrocarbons as heavy oil
J Estimated value
HISTORICAL BULKHEAD (APPROXIMATE)
Q AVE
SAFEWAY
12TH ST
14TH ST
SUBSTATION
RETAIL BUILDING
McDONALDS
Capped Areas
Shell Oil Tank Farm Former
Anacortes, Washington
GeoEngineers
Exhibit B
Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
Data Source: Aerial imagery provided by the Port of Anacortes. Imagery date: 2014.
Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet
80 0 80
Feet