

Phase II Environmental Site Assessment

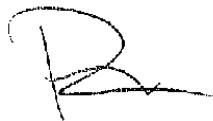
Conducted on:

Coulter Creek Hatchery
41 East Coulter Creek Road
Belfair, Washington 98528-9312

Prepared for:

Washington State Department of Fish and Wildlife
600 Capitol Way North
Olympia, Washington 98501-1091

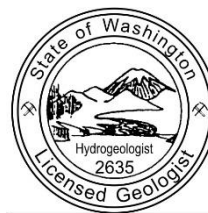
Prepared & Reviewed by:



Rebecca (Becky) Dilba
Staff Geologist



Scott Rose L.H.G.
Senior Hydrogeologist



SCOTT I ROSE

TABLE OF CONTENTS

1.0 INTRODUCTION.....	3
1.1 SITE AND VICINITY AREA BACKGROUND.....	3
1.2 PREVIOUS ENVIRONMENTAL ACTIVITIES	4
1.1.1 <i>Underground Storage Tank (UST) Removal and Site Remediation Report – AEG, June 2014.....</i>	<i>4</i>
1.3 SITE GEOLOGY AND HYDROGEOLOGY	5
2.0 OBJECTIVES AND SCOPE OF WORK.....	6
3.0 FIELD METHODOLOGY	7
3.1 SOIL BORINGS.....	7
3.2 GROUNDWATER SAMPLING PROCEDURES.....	7
3.3 LABORATORY ANALYSES.....	7
3.4 QUALITY CONTROLS	7
3.5 INVESTIGATION-DERIVED WASTE.....	8
4.0 ANALYTICAL RESULTS.....	9
4.1 GROUNDWATER ANALYTICAL RESULTS	9
5.0 CONCLUSIONS AND RECOMMENDATIONS	10
5.1 CONCLUSIONS.....	10
5.2 RECOMMENDATIONS	10
6.0 LIMITATIONS.....	11
7.0 REFERENCES.....	12

FIGURES

- Figure 1: *Vicinity Map*
Figure 2: *Site Map*

TABLES

- Table 1: *Summary of Groundwater Analytical Results*

APPENDICES

- Appendix A: *Site Photographs*
Appendix B: *Supporting Documents:*
 Boring Logs
 Laboratory Datasheets
 UST Closure Site Assessment Report

1.0 INTRODUCTION

Associated Environmental Group, LLC (AEG) has completed a Phase II Environmental Site Assessment (Phase II ESA) at Coulter Creek Hatchery, located at 41 East Coulter Creek Road in Belfair, Washington (Site). This Phase II was performed in general conformance with ASTM E1903-11, *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*. The objective of this Phase II ESA was to determine whether a potential release from an underground storage tank (UST) at the Site had impacted groundwater.

To detect potential contamination, AEG advanced three soil borings on the property. Groundwater samples were collected and laboratory analyzed for the presence of diesel-range total petroleum hydrocarbons (TPH), heavy oil-range TPH, and benzene, toluene, ethylbenzene, and xylene (BTEX) compounds.

1.1 Site and Vicinity Area Background

The Site is located along Coulter Creek at 41 East Coulter Creek Road in Belfair, Mason County, Washington. The hatchery is located in Section 9, Township 22 North, Range 1 West, near the north end of Case Inlet of Puget Sound and consists of:

- Two hatchery ponds;
- An office building;
- One dwelling;
- A diesel generator building;
- One canopy storage structure; and
- A dam/water diversion structure.

The hatchery occupies a 2.0-acre parcel, which is assigned Mason County Parcel No. 12209-33-60020. Figure 1, *Vicinity Map*, presents the general vicinity of the Site. The Site's area of investigation is detailed in Figure 2, *Site Map*.

1.2 Previous Environmental Activities

1.2.1 Underground Storage Tank (UST) Removal and Site Remediation Report – AEG, June 2014

In June 2014, one 1,000-gallon, single-wall steel UST was removed from the Site. The UST was used to store diesel fuel for an emergency power generator located in an adjacent building. Conclusions from the AEG June 2014 UST Removal and Site Remediation Report are as follows:

- *“One 1,000 gallon, single-wall UST was located 9.5 feet east of the diesel generator building.*
- *Washington State Department of Fish & Wildlife (WDFW) reached the UST at approximately four feet bgs [below ground surface]. The tank was fully exposed at eight feet bgs and upon inspection revealed no visible holes or corrosion.*
- *To reduce groundwater infiltration into the excavation pit, WDFW lowered the adjacent dammed pond on Coulter Creek located approximately 15 feet north of the excavation pit.*
- *Groundwater was initially observed at 4.6 feet bgs. With the adjacent pond fully drained, groundwater was observed at around seven feet bgs.*
- *All of the excavated soil was placed in a stockpile approximately 20 feet south of the UST. The final excavation pit dimensions were approximately 11 feet wide by 23 feet long and 8 feet deep.*
- *Field and laboratory sampling revealed elevated levels of petroleum hydrocarbons in the pit water above MTCA [Model Toxics Control Act] Method-A Cleanup Levels.*
- *It is believed that the diesel-range hydrocarbons found in the water samples was a result of the spillage that may have occurred when the tank was removed from the excavation or from residual fuel in the product distribution lines that were released when they were cut for cleaning.*
- *Soil samples were confirmed to have non-detect results for diesel-range hydrocarbons (NWTPH-Dx) and heavy oil-range TPH.*
- *Soil is described as consisting of brown sandy gravel. The soil is gray in color where saturated with water, reportedly typical of the entire hatchery site.”*

1.3 Site Geology and Hydrogeology

The Site is located within the Puget Sound basin in northwestern Washington. The Puget Sound basin is a north-south trending trough between the Olympic Mountains to the west and the Cascade Mountains to the east. The topography is dominated by north-south trending valleys and low, nearly flat-topped highlands cut by streams. The topographic surface of Mason County is largely the result of erosion and deposition during and since the last glaciation (during the last 15,000 years).

According to the Department of Agriculture, the Site is underlain by the Everett very gravelly sandy loam and riverwash deposits, which was consistent with the soil logged during the subsurface investigation.

Local water well logs indicate that static groundwater levels are approximately 5 feet bgs. The well logs indicate that soils from the surface to 6 inches bgs consist of top soil, from 6 inches to 10 feet bgs consist of brown sandy gravel. Groundwater was encountered at 5 feet bgs during this subsurface investigation.

2.0 OBJECTIVES AND SCOPE OF WORK

AEG performed this Phase II ESA to identify whether groundwater contamination is present at the Site. AEG advanced three soil borings depths of 10 feet bgs, and collected soil and groundwater samples for laboratory analysis to evaluate the subsurface for the presence of BTEX and TPH-based contaminants. The borings were advanced in the vicinity of the former 1,000-gallon UST (Figure 2, *Site Map*).

Specific tasks performed included:

- Conducting both public and private utility locates for the Site and vicinity. The public rights of way locates were performed by the Underground Utilities Locate Center; Utilities Plus, LLC provided private utility locates for the Site;
- Advancing three soil borings to 10 feet bgs at select locations on the Site, using a direct-push drilling rig;
- Continuously logging the subsurface media during the investigation, to observe and document soil lithology, color, moisture content, and sensory evidence of impairment;
- Collecting a groundwater sample from each boring;
- Containing investigation-derived-wastes, including soil cuttings and decontamination wash fluids, in a 16-gallon steel drum, and storing it on Site awaiting the results of laboratory analyses;
- Transporting and submitting soil and groundwater samples to Environmental Services Network NW, Inc. (ESN), a Washington State certified analytical laboratory, for analyses;
- Evaluating laboratory analytical results and comparing data to MTCA Method A cleanup levels for soil and groundwater; and
- Preparing this report presenting final documentation of the field activities and methodologies, and summarizing the analytical results, conclusions, and recommendations.

3.0 FIELD METHODOLOGY

3.1 Soil Borings

On June 30, 2016, AEG supervised the advancement of borings B-1, B-2, and B-3 at the Site. The borings were located north, east, and south of the former UST, respectively. The borings were each advanced to a maximum depth of 10 feet bgs using a direct-push drilling rig operated by ESN, a licensed driller in the State of Washington. The locations of the soil borings and Site features are illustrated in Figure 2, *Site Map*. Photographs from the investigation are presented in Appendix A, *Site Photographs*. Boring logs and laboratory analytical results are provided in Appendix B, *Supporting Documents, Boring Logs, Laboratory Datasheets*.

3.2 Groundwater Sampling Procedures

AEG sampled the groundwater from each of the borings. Immediately after reaching the total boring depth, a temporary polyvinyl chloride (PVC) well screen was installed in each boring to collect a sample. Each temporary well screen was placed at an interval from approximately 1 foot above the bottom of each soil boring. Dedicated polyethylene tubing was inserted into each screen, and groundwater was purged using a peristaltic pump and EPA-approved low-flow purge techniques until discharge was relatively free of sediment. A groundwater sample was then collected from each boring. Groundwater samples were collected in laboratory provided 40-ml vials and ½-liter amber bottles. Upon collection, the samples were placed in chilled coolers for transport to ESN's laboratory.

3.3 Laboratory Analyses

Selected groundwater samples were analyzed for diesel- and heavy oil-range total petroleum hydrocarbons (TPH) by Method NWTPH-Dx Extended, and benzene, toluene, ethylbenzene, and xylene (BTEX) compounds by EPA Method 8260.

3.4 Quality Controls

To ensure that quality information was obtained at the Site:

- All samples were collected in general accordance with industry protocols for the collection, documentation, and handling of environmental samples.
- Descriptions of groundwater sampling depths were carefully logged in the field. The driller and geologist confirmed sample depths as soil samples were collected.
- Nitrile gloves were worn when handling all sampling containers and sampling devices. Clean gloves were used at each soil boring to prevent cross contamination.

- Sampling equipment was scrubbed with Alconox detergent and rinsed with water prior to each sample extracted.
- Groundwater samples were collected using laboratory-provided dedicated sampling containers using zero headspace sampling techniques.
- Upon sampling, all groundwater samples were immediately placed into chilled ice chests, and transported for analysis under a chain-of-custody protocol to the ESN analytical laboratory in Olympia, Washington.

The analytical laboratory provided project quality assurance/quality control (QA/QC), including:

- Surrogate recoveries for each sample;
- Duplicate analysis;
- Method blank results; and
- Laboratory control samples.

All analytical laboratory QA/QC results were within required tolerances. Analytical Laboratory results are provided in Appendix B, *Supporting Documents, Laboratory Datasheets*.

3.5 Investigation-Derived Waste

Investigation-derived waste for this project consisted of soil cuttings from the subsurface exploration activities and decontamination water from decontamination of the drilling core barrel and associated equipment. These wastes were placed in one U.S. Department of Transportation-approved 16-gallon drum. The drum was appropriately labelled, and stored on Site for subsequent characterization and disposal.

4.0 ANALYTICAL RESULTS

Analytical results obtained from the groundwater samples were compared to MTCA Method A cleanup levels. Copies of the laboratory analytical results are provided in Appendix B, *Supporting Documents, Laboratory Datasheets*.

4.1 Groundwater Analytical Results

No constituents of concern were detected in any of the groundwater samples analyzed. Table 1, *Summary of Groundwater Analytical Results*, presents a summary of groundwater analytical results compared to MTCA Method A groundwater cleanup levels.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Conclusions and recommendations from the Phase II ESA include:

5.1 Conclusions

- At the time of drilling, groundwater was encountered at approximately 4.6 feet bgs.
- Constituents of concern were not detected in the groundwater at the Site.
- Confirmation grab groundwater samples from the borings show that former concentrations of constituents of concern in the pit water during excavation are no longer present and are not impacting the groundwater within the vicinity of the former excavation.

5.2 Recommendations

- Enrollment of the Site into the Washington State Department of Ecology's Voluntary Cleanup Program (VCP) with a request for a No Further Action (NFA) determination. It is AEG's professional opinion that Site conditions warrant an NFA.

6.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement with The Washington Department of Fish and Wildlife. It has been prepared using generally accepted professional practices, related to the nature of the work accomplished. This report was prepared for the exclusive use of the Washington Department of Fish and Wildlife and its designated representatives, for the specific application to the project purpose.

Recommendations, opinions, Site history, and proposed actions contained in this report apply to conditions and information available at the time this report was completed. Since conditions and regulations beyond our control can change at any time after completion of this report, or our proposed work, we are not responsible for any impacts of any changes in conditions, standards, practices, and/or regulations subsequent to our performance of services. We cannot warrant or validate the accuracy of information supplied by others, in whole or part.

7.0 REFERENCES

American Society for Testing and Materials (ASTM) Standard E 1903-11. *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*.

Associated Environmental Group, LLC. July 2014. *UST Closure and Site Assessment Report*.

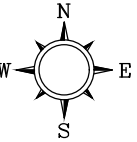
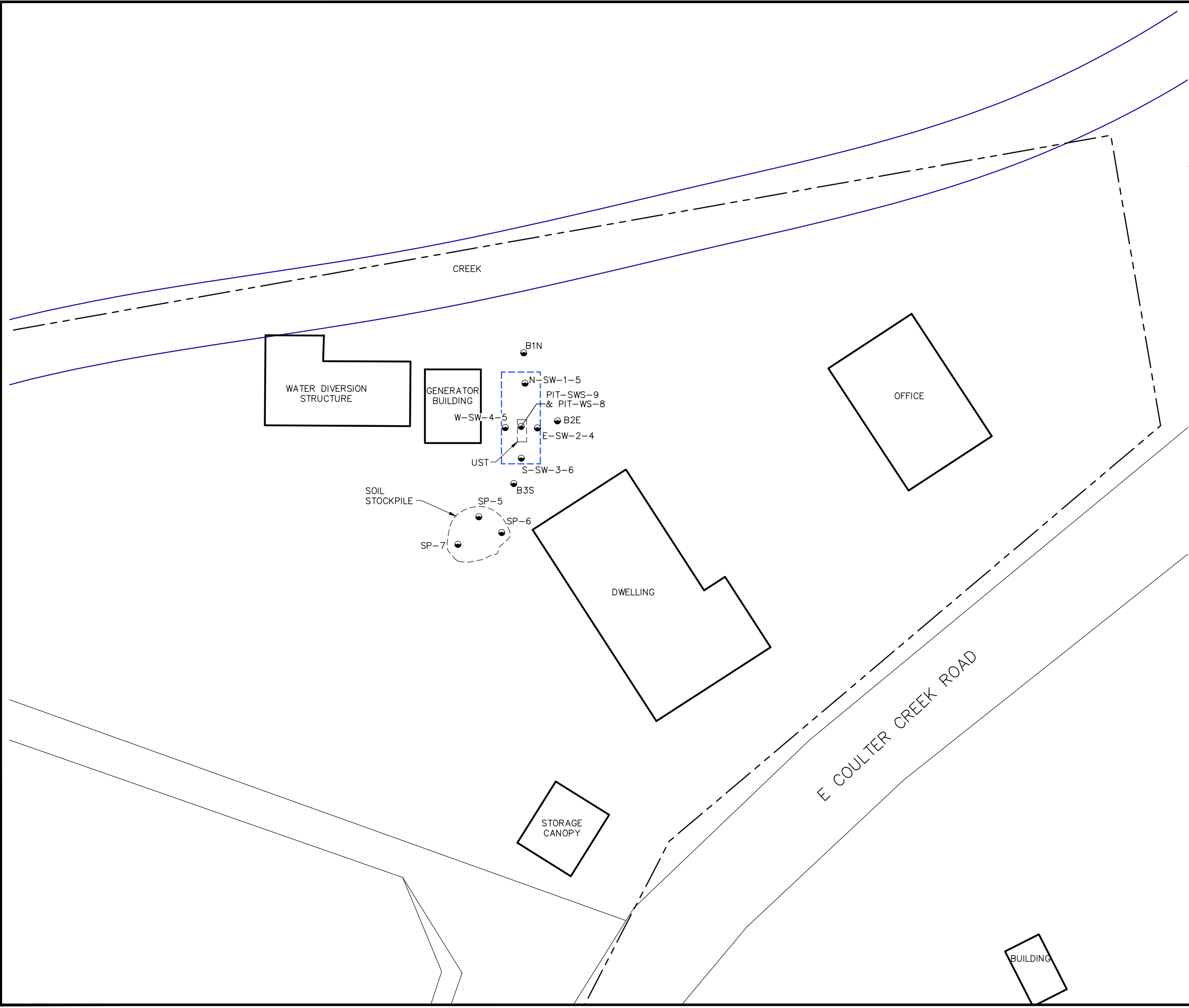
US EPA Method 5035A. *Closed-System Purge-and-Trap and Extraction for Volatile Organics in Soil and Waste Samples*.

USDA, *Web Soil Survey*, <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>, Accessed November 17, 2016.

Washington State Department of Ecology, 2013, *Model Toxic Control Act Statute and Regulation – Chapter 173-340 WAC*, Publication number 94-06 (Revised 2013).

FIGURES

COULTER CREEK HATCHERY
DEPARTMENT OF FISH & WILDLIFE
41 EAST COULTER CREEK ROAD
BELFAIR, WASHINGTON



LEGEND	
---	PROPERTY LINE
---	EXCAVATION AREA
N-SW-1-5 ●	SOIL SAMPLE LOCATION

- 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.

REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.

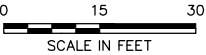


FIGURE 2
SITE MAP

COULTER CREEK HATCHERY
DEPARTMENT OF FISH & WILDLIFE
41 EAST COULTER CREEK ROAD
BELFAIR, WASHINGTON

TABLES

Table 1 - Summary of Groundwater Analytical Results

Coulter Creek
Belfair, Washington

Sample Number	Date Collected	Volatile Organic Compounds				Total Petroleum Hydrocarbons (TPH)	
		Benzene	Toluene	Ethylbenzene	Xylenes	Diesel	Heavy Oil
B-1NW	6/30/2016	<1.0	<1.0	<1.0	<3.0	<250	<500
B-2EW	6/30/2016	<1.0	<1.0	<1.0	<3.0	<250	<500
B-3SW	6/30/2016	<1.0	<1.0	<1.0	<3.0	<250	<500
PQL		1.0	1.0	1.0	3.0	250	500
MTCA Method A Cleanup Levels		5.0	1,000	700	1,000	500	500

Notes:

All values presented in micrograms per liter (µg/l)

< Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

APPENDIX A

Site Photographs

SITE PHOTOGRAPHIC RECORD

Coulter Creek Hatchery
13-162
06/30/16



Photo #1: Boring #1 Looking North. ESN 0-5 feet bgs



Photo #2: Boring #1 with former generator shed to the left of photo. ESN 5-10 feet bgs.

APPENDIX B


Supporting Documents

Boring Logs

Laboratory Datasheets

UST Closure Site Assessment Report

PROJECT:	Coulter Creek Fish Hatchery	JOB # 13-162	BORING # B1	PAGE 1 OF 1
Location:	41 East Coulter Creek Road, Belfair, Washington		Approximate Elevation: 17 feet above mean sea level	
Subcontractor / Driller:	ESN / Richard		Equipment / Drilling Method: Limited Access Rig / Direct Push	
Date:	June 30, 2016		Logged By: Shawn Lombardini	

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	6 inch topsoil surface underlain by; Brown, moist, medium dense, SANDY GRAVEL ; fine to coarse grained sand, fine to coarse grained gravel		1							
			2							
			3							
			4							
5			5							
	At 5 feet; Wet		6							
			7							
			8							
			9							
10			10							

	Total Depth = 10 feet
15	
20	
25	

Explanation



Sample Advance / Recovery



No Recovery




Contact located approximately



Groundwater level at time of drilling
or date of measurement

ATD

PROJECT:	Coulter Creek Fish Hatchery	JOB # 13-162	BORING # B2	PAGE 1 OF 1
Location:	41 East Coulter Creek Road, Belfair, Washington		Approximate Elevation: 17 feet above mean sea level	
Subcontractor / Driller:	ESN / Richard		Equipment / Drilling Method: Limited Access Rig / Direct Push	
Date:	June 30, 2016		Logged By: Shawn Lombardini	

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	6 inch topsoil surface underlain by; Brown, moist, medium dense, SANDY GRAVEL ; fine to coarse grained sand, fine to coarse grained gravel		1							
			2							
			3							
			4							
5			5							
	At 5 feet; Wet		6							
			7							
			8							
			9							
10			10							

	Total Depth = 10 feet
15	
20	
25	

Explanation



Sample Advance / Recovery



No Recovery




Contact located approximately



ATD

Groundwater level at time of drilling
or date of measurement

PROJECT:	Coulter Creek Fish Hatchery	JOB # 13-162	BORING # B3	PAGE 1 OF 1
Location:	41 East Coulter Creek Road, Belfair, Washington		Approximate Elevation: 17 feet above mean sea level	
Subcontractor / Driller:	ESN / Richard		Equipment / Drilling Method: Limited Access Rig / Direct Push	
Date:	June 30, 2016		Logged By: Shawn Lombardini	

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	6 inch topsoil surface underlain by; Brown, moist, medium dense, SANDY GRAVEL ; fine to coarse grained sand, fine to coarse grained gravel		1							
			2							
			3							
			4							
5			5							
	At 5 feet; Wet		6							
			7							
			8							
			9							
10			10							
	Total Depth = 10 feet									
15										
20										
25										

Explanation



Sample Advance / Recovery



No Recovery



Contact located approximately



Groundwater level at time of drilling
or date of measurement

ATD

July 11, 2016

Becky Dilba
Associated Environmental Group, Inc.
605 11th Ave. SE, Suite 201
Olympia, WA 98501



Dear Ms. Dilba:

Please find enclosed the analytical data report for the Coulter Creek in Belfair, Washington. Probe services were conducted on June 30, 2016. Water samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended and BTEX by Method 8260 on July 1 - 6, 2016.

The results of the analyses are summarized in the attached table. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Associated Environmental Group, Inc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

A handwritten signature in cursive script that reads "Michael A. Korosec".

Michael A. Korosec
President

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT COULTER CREEK
PROJECT #13-162
Bel Fair, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnsw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank	7/1/2016	7/1/2016	100	nd	nd
LCS	7/1/2016	7/1/2016	107	106%	---
B-1NW	7/1/2016	7/1/2016	90	nd	nd
B-3SW	7/1/2016	7/1/2016	81	nd	nd
Reporting Limits				250	500

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT COULTER CREEK
PROJECT #13-162
Bel Fair, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank	7/6/2016	7/6/2016	123	nd	nd
LCS	7/6/2016	7/6/2016	108	88%	---
B-2EW	7/6/2016	7/6/2016	107	nd	nd
Reporting Limits				250	500

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT COULTER CREEK
PROJECT #13-162
Bel Fair, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of BTEX in Water by Method 8260

Sample Number	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Surrogate Recovery (%)
Method Blank	7/1/2016	nd	nd	nd	nd	111
LCS	7/1/2016	112%	94%	95%	98%	109
LCSD	7/1/2016	110%	93%	115%	96%	115
B-1NW	7/1/2016	nd	nd	nd	nd	122
B-1NW Duplicate	7/1/2016	nd	nd	nd	nd	120
B-2EW	7/1/2016	nd	nd	nd	nd	125
B-3SW	7/1/2016	nd	nd	nd	nd	120
Trip Blank	7/1/2016	nd	nd	nd	nd	124
Reporting Limits		1.0	1.0	1.0	3.0	

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromofluorobenzene) & LCS: 65% TO 135%

CHAIN-OF-CUSTODY RECORD

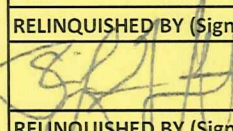
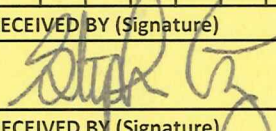
CLIENT: ABG DATE: 6.30.16 PAGE 1 OF 1

ADDRESS: 605 PROJECT NAME: CONTRACTOR

PHONE: 360 352 9835 FAX: _____ LOCATION: 41 E CONTRACTOR RD FISH HARBOR

CLIENT PROJECT #: 13162 PROJECT MANAGER: BECKY COLLECTOR: SHAWN DATE OF COLLECTION: 6.30/16

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																NOTES	Total Number of Containers	Laboratory Note Number
					TPH - HClD	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	W/O Suite		
1. B-1N W	-	1000	H ₂ O	1 LAMB	X	X																	
2. B-2E W	-	1020																					
3. B-3S W	-	1040																					
4.																							
5.																							
6.																							
7.																							
8.																							
9.																							
10.																							
11.																							
12.																							
13.																							
14.																							
15.																							
16.																							
17.																							
18.																							

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT		LABORATORY NOTES:
	7.1.16 1040		7.1.16 1045	TOTAL NUMBER OF CONTAINERS		
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	CHAIN OF CUSTODY SEALS Y/N/NA		
				SEALS INTACT? Y/N/NA		
				RECEIVED GOOD COND./COLD		Turn Around Time: 24 HR 48 HR 5 DAY
				NOTES:		



ASSOCIATED
ENVIRONMENTAL
GROUP, LLC

UNDERGROUND STORAGE TANK CLOSURE SITE ASSESSMENT REPORT

Washington State Department of Fish and Wildlife
Coulter Creek Hatchery
41 East Coulter Creek Road
Belfair, Washington 98528

Prepared for:

Washington State Department of Fish and Wildlife
600 Capitol Way North
Olympia, Washington 98501-1091

Conducted by:

Jeffrey E. Wilson, R.S.A.
*Environmental Scientist;
Certified Decommissioner/Site Assessor*

Prepared & Reviewed by:

David Polivka, L.G./L.H.G.
*Senior Project Hydrogeologist;
Certified Site Assessor*

Table of Contents

EXECUTIVE SUMMARY	1
1.0 INTRODUCTION.....	3
1.1 SITE LOCATION AND DESCRIPTION	3
2.0 SITE CONDITIONS.....	5
2.1 TOPOGRAPHY	5
2.2 GEOLOGY AND HYDROGEOLOGY	5
2.3 SOIL CLASSIFICATION	6
3.0 UST DECOMMISSIONING & SITE ASSESSMENT ACTIVITIES.....	7
3.1 UTILITY LOCATION IDENTIFICATION.....	7
3.2 PRODUCT REMOVAL AND TANK CLEANING.....	7
3.3 EXCAVATION AND UST REMOVAL	7
3.4 SITE ASSESSMENT.....	8
3.4.1 Sampling Methods	8
3.4.2 Analytical Results	9
3.5 PIT WATER REMOVAL.....	10
4.0 RECOMMENDATIONS.....	11
5.0 STANDARD LIMITATIONS	12
6.0 REFERENCES.....	13

TABLES (EMBEDDED IN REPORT)

Table 1 – *Summary of Soil Analytical Results*

Table 2 – *Summary of Pit Water Analytical Results*

FIGURES

Figure 1 – *Site and Vicinity Map*

Figure 2 – *Site Map*

APPENDICIES

Appendix A – *Ecology Underground Storage Tank Database Report*

Appendix B – *UST Site Assessment Checklist*

Appendix C – *Site Photographs*

Appendix D – *Supporting Documents*

Decommissioner/Site Assessor Certifications

Laboratory Datasheets

EXECUTIVE SUMMARY

Associated Environmental Group, LLC (AEG) conducted a Site Assessment with the decommissioning (by removal) of one underground storage tank at the Washington State Department of Fish and Wildlife's (WDFW) Coulter Creek Hatchery in Belfair, Washington. The site assessment is required by Washington Administrative Code (WAC) 173-360. This report was prepared consistent with WAC 173-360 and the Washington State Department of Ecology (Ecology) "Guidance for Site Checks and Site Assessments for Underground Storage Tanks" (Ecology, 2003).

The UST was located approximately 9.5 feet east of the diesel generator building located in the northern portion of the hatchery property. The tank is identified as Tank #1 in the Washington State Department of Ecology (Ecology, 2014) UST database). Ecology's Facility/Site database identification number for the Coulter Creek Hatchery Site is 19373, with a UST site identification number of 620116.

According to Ecology's UST database, there is only one tank complex at the Site. Tank #1 is listed in Ecology's database as having a status of "Unregistered 30 Day Notice" (Appendix A, *Ecology Underground Storage Tank Database Report*). The subject UST is constructed of steel, and is listed in the Ecology UST database as having a capacity of 1,000 gallons. Based on the size of the tank, AEG estimates that the tank capacity was actually approximately 1,200 gallons. The tank was used to store diesel fuel for an emergency power generator located in an adjacent building. The UST installation date was not provided in Ecology's UST database; however, based on the WDFW's records, the tank was installed around 1980.

In preparation for the decommissioning, the UST was pumped free of fuel by the WDFW. Prior to the decommissioning activities, utilities were located by WDFW and the private utility locating firm, Applied Professional Services, Inc. (APS).

Excavation activities exposed the top of the tank at approximately four feet below ground surface (bgs) and reached the bottom of the tank at approximately eight feet bgs. Once the tank was removed, one soil sample was collected from each sidewall of the excavation adjacent to the UST at a depth of four feet to six feet bgs using the bucket of a trackhoe. Three more soil samples were collected with a hand shovel from the stockpile. No soil samples were collected beneath the UST due to the presence of water ("pit water").

The pit water accumulated at a depth of approximately seven feet bgs. Two water samples were collected of the pit water which accumulated in the excavation during the decommissioning and removal activities. One sample was from the surface of the water and one was from approximately 6 inches below the water level. All soil and pit water samples were submitted for laboratory analysis of diesel- and oil-range total petroleum hydrocarbons (TPH) using Northwest Method NWTPH-Dx/Dx Extended.

Laboratory analytical results for the soil samples did not indicate the presence of petroleum hydrocarbons; however, laboratory analytical results for the pit water samples did indicate the presence of petroleum hydrocarbons above Ecology's cleanup levels. This contamination was a result of minor spillage of residual product during the tank removal. Prior to backfilling the excavation, the pit water was removed via vacuum truck, allowed to recharge, then removed a second time.

Based on site observations and the results of the soil sampling, **AEG recommends no further action** at this site.

1.0 INTRODUCTION

Associated Environmental Group, LLC (AEG) has prepared this underground storage tank (UST) site assessment and UST removal report to document activities that occurred during the decommissioning of a 1,000- to 1,200-gallon UST at the WSDFW Coulter Creek Hatchery, in Belfair, Washington (Figure 1, *Site and Vicinity Map*). The UST was used to store diesel fuel for an emergency power generator located in an adjacent building. This report was prepared for the Washington Department of Fish and Wildlife (WDFW) and a copy is being provided to the Washington State Department of Ecology (Ecology) to satisfy WAC 173-360.

The purpose of a site assessment is to investigate a UST site at the time of closure or change-of-service to determine if a release has occurred. Chapter 173-360 WAC requires that if a UST system is being closed, a site assessment must be conducted after the tank or tanks are emptied, cleaned of all liquid and accumulated sludge, and removed.

The UST decommissioning site assessment activities were completed in accordance with the Guidance for Site Checks, and Site Assessments for Underground Storage Tanks (Ecology, 2003) and The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC. In addition, the Ecology UST Site Assessment Checklist is presented in Appendix B, *UST Site Assessment Checklist*.

AEG's project scope was to provide oversight and site assessment services during the decommissioning (removal) of the UST. The scope also included collection of soil samples and pit water (if encountered) to document the presence or absence of petroleum contamination. All work was overseen by an International Code Council (ICC) certified Decommissioner and ICC certified Washington State Site Assessor. A copy of the certification is attached in Appendix D, *Supporting Documents, Decommissioner/Site Assessor Certifications*.

1.1 Site Location and Description

The Site is located along Coulter Creek at 41 East Coulter Creek Road in Belfair, Mason County, Washington. The hatchery is located in Section 9, Township 22 North, Range 1 West, near the north end of Case Inlet of the Puget Sound and consists of:

- Two hatchery ponds;
- An office building;
- One dwelling;
- A diesel generator building;
- One canopy storage structure; and
- A dam/water diversion structure.

According to Ecology's Underground Storage Tank Database Report, only one UST has been present at the Coulter Creek Hatchery (the subject UST that was removed). The UST has an Ecology status of "Unregistered 30 Day Notice". The UST is listed in the Ecology UST database as having a capacity of 1,000 gallons. However, based on the size of the tank, AEG estimates that the tank capacity was actually approximately 1,200 gallons.

The subject UST is located approximately 9.5 feet east of the diesel generator building, which is located on the northern portion of the Coulter Creek Hatchery property, approximately 30 feet northwest of the Site's only dwelling. Figure 1, *Site and Vicinity Map* and Figure 2, *Site Map*, show the locations of the subject UST, and the associated diesel generator building.

2.0 SITE CONDITIONS

According to Anthony Sanich of WDFW, the Coulter Creek Hatchery Site has been a hatchery facility since approximately 1980. Ecology's UST database report did not provide an installation date for the UST; however, according to Anthony Sanich, both the diesel generator building and associated tank were included on the facility's blue prints for planned construction dated 1978.

The following discussion of the physical, geologic and hydrogeologic settings of the Coulter Creek Hatchery is based on information obtained from AEG's observations during the decommissioning activities at the site, the *Geologic Map of Washington, Northwest Quadrant* (Dragovich, J.D., Logan, R.L., et al, 2002), local well logs (Ecology, 2014), and the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (formerly Soil Conservation Service) publication, "*Soil Survey of Mason County*" (USDA, 1960).

2.1 Topography

The Site is situated at an elevation of approximately 18 feet above mean sea level. The property in the area is generally flat, with a slight local slope to the southwest toward Case Inlet. The regional slope is also towards Case Inlet, located approximately 100 feet to the southwest of Coulter Creek Hatchery. Coulter Creek flows along the northern property line of the hatchery and at its closest point is approximately 15 feet north of the Site's UST.

2.2 Geology and Hydrogeology

The Subject Site is located within the Puget Sound basin in northwestern Washington. The Puget Sound basin is a north-south trending trough between the Olympic Mountains to the west and the Cascade Mountains to the east. The topography is dominated by north-south trending valleys and low, nearly flat-topped highlands cut by streams. The topographic surface of Mason County is largely the result of erosion and deposition during and since the last glaciation (during the last 15,000 years).

According to the *Geologic Map of Washington, Northwest Quadrant*, the Subject Site and vicinity area are underlain by Quaternary age undifferentiated glacial outwash deposits (Dragovich, J.D., Logan, R.L., et al, 2002). The undifferentiated outwash deposits typically consist of

"...recessional and pro-glacial stratified sand and gravel, locally contains silt and clay (a part of the Vashon Drift)..."

Local water well logs indicate that static groundwater levels are approximately 8 feet to 10 feet bgs. The well logs indicate that soils from the surface to 2 feet bgs consist of top soil, from 2 feet to 18 feet bgs consist of brown gravel, and from 18 feet to 35 feet bgs consist of sand and gravel. Field observations during excavation activities revealed that groundwater levels were at approximately 4.6 feet bgs within the excavation pit, with soils consisting of brown gravelly sand with cobbles.

2.3 Soil Classification

The following soil description is from the US Department of Agriculture (USDA) Natural Resources Conservation Service (formerly Soil Conservation Service) publication, *“Soil Survey of Mason County”*. The predominant soil type at the Subject Site and vicinity is mapped as Riverwash, 0 to 3 percent slopes and is described as follows:

Riverwash, 0 to 3 percent slopes

“This land type consists of poorly assorted sand, gravel, and cobbles bordering streams and rivers or recently abandoned river channels. This mapping unit is frequently overflowed and changed by erosion and deposition. The material is sparsely covered by vegetation and it has no agricultural value. It is in capability class VIII” (USDA, 1960).

Below the Riverwash and in the area to the northwest of the Subject Site, there appears to be soils of the McKenna Gravelly Loam 0 to 3 percent slopes. This soil is described as being:

“...friable and granular, dark-gray (nearly black when moist) gravelly loam that is high in organic matter...” (USDA, 1960).

3.0 UST DECOMMISSIONING AND SITE ASSESSMENT ACTIVITIES

All Site activities were completed by WDFW personnel under the supervision of an International Code Council (ICC) certified Decommissioner and ICC certified Washington State Site Assessor.

3.1 Utility Location Identification

Prior to implementing UST site assessment activities at the Site, the Utilities Locate Unit of WDFW and Applied Professional Services, Inc. (APS), a private utility locating service, were notified of the work to be performed. Upon arrival at the location, the Utilities Locate Unit of WDFW indicated that a water line and electrical line were in the project area. WDFW indicated that both the electric and water lines were for the domestic uses of the hatchery, and ran from the south end of the diesel generator building to the hatchery's office building. APS located the UST's product line, product recovery line, and vent pipe. Through the excavation activities, it was discovered that the domestic water line had an additional line connected to it, running in a perpendicular direction towards the Site's only dwelling. Excavation also revealed that the electrical line was made up of multiple separate lines bundled together (see Appendix C, *Site Photographs*).

3.2 Product Removal and Tank Cleaning

Prior to site activities, WDFW reportedly removed approximately 150 gallons of diesel fuel from the UST. WDFW transported the fuel to their Lacey Construction Shop located at 6420 Carpenter Road SE, in Lacey, Washington, for use in their diesel fueled fork lifts. WDFW indicated that after removal, the cleaning of the tank would take place at their Lacey Construction Site, followed by the recycling of the tank.

3.3 Excavation and UST Removal

On June 2, 2014, the WDFW began excavation activities associated with the removal of the Site's 1,200 gallon UST with oversight by AEG. WDFW began by carefully removing the soil around the fill box. At approximately four feet bgs, the top of the UST was reached.

Further excavation with the trackhoe and hand shoveling exposed two concrete slabs located on each side of the tank. The two concrete slabs were being used to anchor down the tank within the shallow groundwater and were connected by rebar which crossed over the tank at four separate locations. Along with the exposure of the UST anchor system, the product line, product recovery line, vent pipe, water line and electric lines were exposed.

Following removal of one of the concrete slabs, WDFW removed the product line, product recovery line, and vent pipe. To reduce groundwater infiltration into the excavation pit, WDFW lowered the adjacent dammed pond on Coulter Creek located approximately 15 feet north of the excavation pit. With the adjacent Coulter Creek pond fully drained, the groundwater which was

initially observed at a depth of approximately 4.6 feet bgs was observed at a depth of approximately seven feet bgs. After excavating soil adjacent to the tank to a depth of approximately eight feet bgs, the tank was fully exposed and removed from the pit for inspection. Inspection of the tank revealed no visible holes or corrosion. Following inspection, the tank was loaded onto a WDFW truck and transported to WDFW's Lacey Construction Shop to be cleaned and recycled.

All of the excavated soil was placed in a stockpile approximately 20 feet south of the UST, awaiting analytical results of samples obtained to determine if it could be used as backfill. The excavated soil and soil remaining in the excavation did not appear to have evidence of contamination. It was gray in color where saturated with water, reportedly typical of the entire hatchery site. No evidence of odor or sheen was observed in the soils excavated or remaining in the excavation. The final excavation pit dimensions were approximately 11 feet wide by 23 feet long and 8 feet deep.

3.4 Site Assessment

After the UST was removed from the excavation pit, AEG performed site assessment activities. In accordance with the Ecology guidance, one soil sample from each sidewall of the excavation and two pit water samples were collected. Following Ecology's guidance for sampling stockpiles containing less than 100 cubic yards of soil, three soil stockpile samples were also collected. All sample locations are shown in Figure 2, *Site Map*, and Appendix C, *Site Photographs*.

3.4.1 Sampling Methods

Soil sampling for this project was based on the current MTCA UST site assessment and soil sampling guidelines, and on the professional judgment of the Site Assessor. Sampling protocol was derived from the "*Guidance for Site Checks and Site Assessments for Underground Storage Tanks*" (Ecology, 2003).

Soil samples were collected from each sidewall of the excavation pit via trackhoe/shovel. Soils were observed to document soil lithology, color, moisture content, and sensory evidence of contamination. Sample locations are shown in Figure 2, *Site Map*.

Soil for the sidewall samples was collected at a depth of four feet to six feet bgs using a trackhoe to scoop the soil from the excavation. The samples were then collected from the middle of the trackhoe bucket. Three soil samples were also collected from below the surface of the stockpile (greater than six inches). One sample of the pit water from the surface was collected and one sample of the pit water from approximately six inches below the pit water surface was collected.

All soil and pit water samples were transferred to laboratory provided containers (40-milliliter (ml) vials, and/or 4-ounce jars for soil, and/or 250-ml amber bottles for water) placed in a chilled ice chest, and transported to ESN Northwest, Inc. (ESN), a Washington State certified analytical

laboratory in Olympia, Washington, for analysis following industry standard chain-of-custody procedures. Each sample was analyzed for diesel- and oil-range TPH by Northwest Method NWTPH-Dx/Dx Extended.

3.4.2 Analytical Results

Soil Sample Analytical Results

Laboratory analytical results for the soil samples collected during the UST site assessment did not reveal the presence of petroleum hydrocarbons in any of the samples collected. All of the concentrations for the contaminants of concern were below laboratory detection limits. Table 1, *Summary of Soil Analytical Results*, below, presents the laboratory results for the soil sampling. Appendix D, *Supporting Documents*, presents the laboratory data sheets.

Table 1 - Summary of Soil Analytical Results

Sample No.	Date Sampled	Diesel-range TPH (mg/kg)	Oil-range TPH (mg/kg)
N-SW-1-5	06/04/14	<50	<100
E-SW-2-4	06/04/14	<50	<100
S-SW-5-6	06/04/14	<50	<100
W-SW-5-6	06/04/14	<50	<100
MW5-S3-12.5	06/04/14	<50	<100
SP-5	06/04/14	<50	<100
SP-6	06/04/14	<50	<100
SP-7	06/04/14	<50	<100
PQL		50	100
MTCA Method A Cleanup Levels (mg/kg)		2,000	2,000

Notes:

< Indicates the constituent was not detected at, or above the concentration shown

mg/kg = milligrams per kilogram

PQL = Practical Quantitative Limits (laboratory detection limits)

Pit Water Analytical Results

Laboratory analytical results for the pit water samples collected during the UST site assessment revealed the presence of petroleum hydrocarbons at concentrations above MTCA's Method A Cleanup Levels. Diesel-range petroleum hydrocarbons were detected in the surface pit water

sample at a concentration of 10,000 micrograms per liter (ug/l) and in the subsurface pit water sample at a concentration of 2,700 ug/l. MTCA's Method A Cleanup Level for diesel-range TPH in groundwater is 500 ug/l.

Because the soil samples from the sidewalls did not detect diesel-range TPH, and because there was no odor or sheen in the soils, it is believed that the diesel-range hydrocarbons found in the water samples was a result of spillage that may have occurred when the tank was removed from the excavation or from residual fuel in the product distribution lines that was released when they were cut for cleaning. Table 2, *Summary of Pit Water Analytical Results*, below, presents the laboratory results for the pit water sampling. Appendix D, *Supporting Documents, Laboratory Datasheets*, presents the laboratory data sheets.

Table 2 - Summary of Pit Water Analytical Results

Sample No.	Date Sampled	Diesel-range TPH (µg/l)	Oil-range TPH (µg/l)
Pit-WS-8	6/5/2014	2,700	<500
Pit-SWS-9	6/5/2014	10,000	<500
PQL		250	500
MTCA Method A Cleanup Levels (µg/l)		500	500

Notes:

“<” indicates not detected at or above the laboratory reporting limits

µg/l = micrograms per liter

PQL = Practical Quantitative Limits (laboratory detection limits)

Bold font indicates the detected concentration is below MTCA Cleanup Level

Red font indicates the concentration shown exceeds the MTCA Cleanup Level

3.5 Pit Water Removal

Due to the concentration of diesel-range petroleum hydrocarbons detected in the excavation pit water, AEG contracted with Cowlitz Clean Sweep (CCS), a division of PNE Corporation, to remove the pit water. On June 9, 2014, CCS dewatered the excavation using a vacuum truck. The excavation was dewatered twice to remove the visually contaminated water. The water that entered the excavation between and after the final dewatering events did not have visual or olfactory evidence of contamination. A total of approximately 1,222 gallons of water was removed from the excavation. After the pit water had been dewatered, WDFW backfilled the pit. Because the analytical results from samples of the stockpile soils did not detect diesel-range TPH, those soils were used as backfill.

4.0 RECOMMENDATIONS

Based on site observations and the laboratory analytical results for the site assessment during UST decommissioning activities conducted at the Coulter Creek Hatchery, **AEG recommends no further action** at this site with regards to this underground storage tank.

5.0 STANDARD LIMITATIONS

This report has been prepared to document the activities that occurred during the decommissioning of one underground storage tank (tank #1) at the Washington State Department of Fish and Wildlife's Coulter Creek Hatchery Site in Belfair, Washington. The findings and conclusions documented in this report have been prepared for the specific application to this project and have been developed in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. No warranty, expressed or implied, is made. This report is for the exclusive use of Washington State Department of Fish and Wildlife and/or its representatives.

If new information is developed in future site work (which may include excavations, additional borings, or other studies), AEG should be contacted to re-evaluate the interpretations in this report, and to provide amendments as required.

6.0 REFERENCES

Ecology, 2003, *Guidance for Site Checks and Site Assessments for Underground Storage Tanks*, Washington State Department of Ecology, Revised April 2003, 46p.

Personal Communication, 2014a, *Mr. Anthony Sanich – Employee of the Washington Department of Fish and Wildlife, July 2, 2014.*

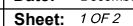
Washington State Department of Ecology, *Integrated Site Information System (ISIS) database*,
<https://fortress.wa.gov/ecy/tcpwebreporting/Default.aspx>

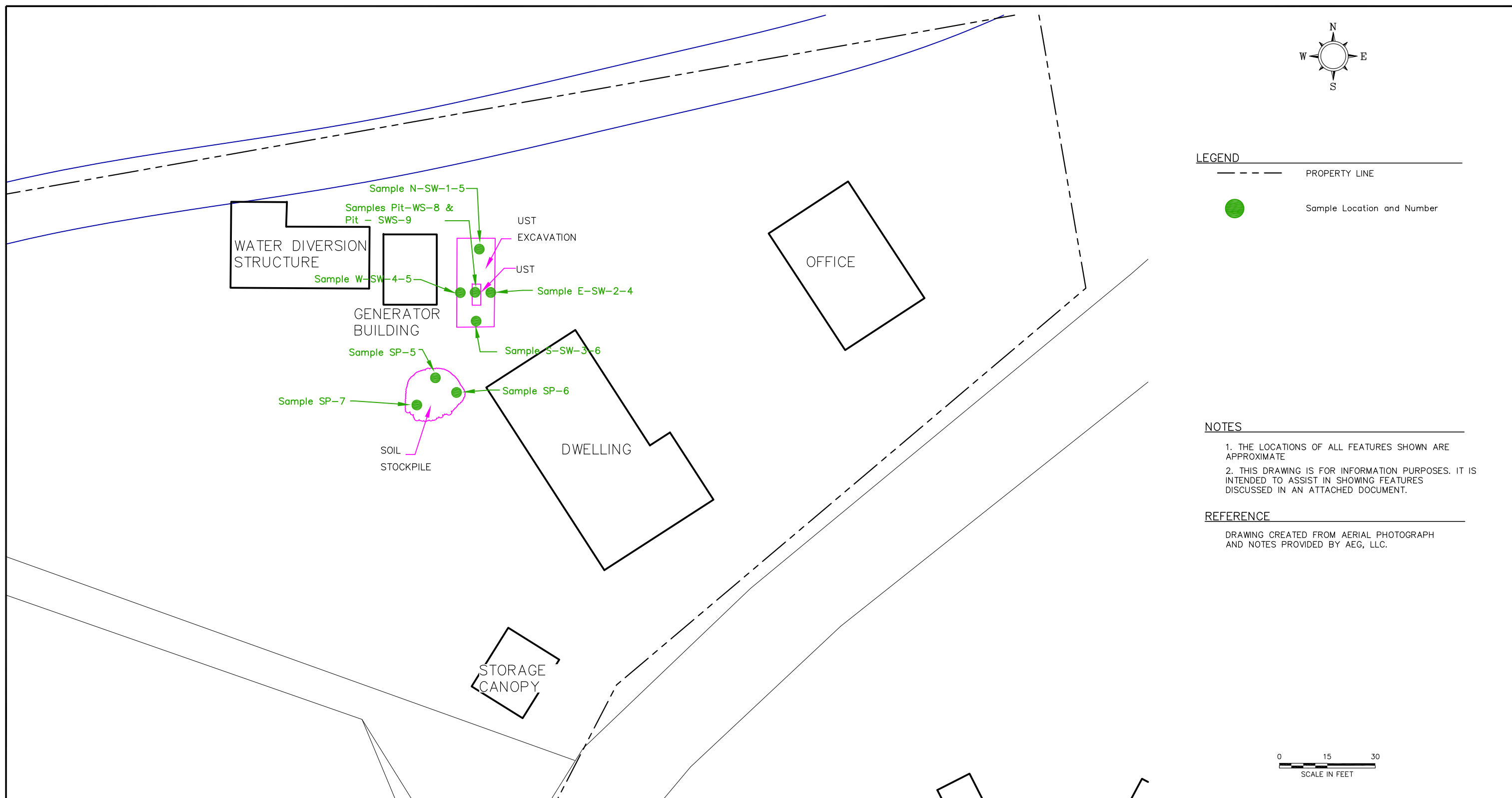
Washington State Department of Ecology, *Well Log Viewer*,
<https://fortress.wa.gov/ecy/waterresources/map/WCLSWebMap/default.aspx>

Washington State Department of Natural Resources, 2002, *Geologic Map of Washington Northwest Quadrangle, Geologic Map GM-50.*

U.S. Department of Agriculture, Soil Conservation Service, 1960. *Soil Survey of Mason County, Washington.*

FIGURES





ASSOCIATED ENVIRONMENTAL GROUP, LLC

605 11TH Avenue, SE, Suite 201

Olympia, WA 98501

(360) 352-9835 Fax (360) 352-8164

FIGURE 2

SITE MAP

**COULTER CREEK HATCHERY-
DEPARTMENT OF FISH & WILDLIFE
41 EAST COULTER CREEK ROAD
BELFAIR, WASHINGTON**

Project #: 13-162

Date: July 16, 2014

File: COULTER CAD.DWG

Sheet: 2 OF 2

APPENDIX A

ECOLOGY UNDERGROUND STORAGE TANK DATABASE REPORT

Facility Name: COULTER CREEK HATCHERY

Tag(s):

SITE INFORMATION

COULTER CREEK HATCHERY
E 41 COULTER CREEK RD
BELFAIR, WA 985289312

RESP UNIT: SOUTHWEST
UBI:
PHONE: (360) 902-2200

COUNTY: MASON
LAT: 47.4075
LONG: -122.818

SITE IDs:
UST: 620116
FS: 19373

TANK INFORMATION

TANK NAME: 1			
STATUS: Unregister 30 Day Notice		STATUS DT: 04/29/2014	PERMANENTLY CLOSED DT:
INSTALL DT:		UPGRADE DT:	PERMIT EXPIRATION DT:
TANK		PIPING	
MATERIAL:		MATERIAL:	
CONSTRUCTION:		CONSTRUCTION:	
CORROSION PROT:		CORROSION PROT:	
MANIFOLDED TANK:		SFC* at TANK:	
RELEASE DETECT:		SFC* at DISP/PUMP:	
TIGHTNESS TEST:		1ST REL DETECT:	
SPILL PREVENTION:		2ND REL DETECT:	
OVERFILL PREVENT:		PUMPING SYSTEM:	
ACTUAL CAPACITY:			
CAPACITY RANGE:			
* SFC = Steel Flex Connector			
COMPARTMENT #	SUBSTANCE STORED	SUBSTANCE USED	CAPACITY
1	D Diesel	C Emergency Power Generation	1000

UST_SiteTankDataSmry2014

APPENDIX B

UST SITE ASSESSMENT CHECKLIST



UNDERGROUND STORAGE TANK Site Check/Site Assessment Checklist

FOR OFFICE USE ONLY

Site #: _____

Facility Site ID #: _____

INSTRUCTIONS

When a release has not been confirmed and reported, this Site Check/Site Assessment Checklist must be completed and signed by a person certified by ICC or a Washington registered professional engineer who is competent, by means of examination, experience, or education, to perform site assessments. **The results of the site check or site assessment must be included with this checklist.** This form must be submitted to Ecology at the address shown below within 30 days after completion of the site check/site assessment.

SITE INFORMATION: Include the Ecology site ID number if the tanks are registered with Ecology. This number may be found on the tank owner's invoice or tank permit.

TANK INFORMATION: Please list all tanks for which the site check or site assessment is being conducted. Use the owner's tank ID numbers if available, and indicate tank capacity and substance stored.

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT: Please check the appropriate item.

CHECKLIST: Please initial each item in the appropriate box.

SITE ASSESSOR INFORMATION: This information must be signed by the registered site assessor who is responsible for conducting the site check/site assessment.

Underground Storage Tank Section
Department of Ecology
PO Box 47655
Olympia WA 98504-7655

SITE INFORMATION

Site ID Number (Available from Ecology if the tanks are registered): NOT REGISTERED
Site/Business Name: WASHINGTON STATE DEPT. OF FISH & WILDLIFE
Site Address: 600 CAPITAL WAY NORTH Telephone: (360) 902-2408
City: OLYMPIA State: WA Zip Code: 98501

TANK INFORMATION

Tank ID No.	Tank Capacity	Substance Stored
<u>1</u>	<u>1,000</u>	<u>DIESEL</u>

REASON FOR CONDUCTING SITE CHECK/SITE ASSESSMENT

Check one:

- ☐ Investigate suspected release due to on-site environmental contamination.
☐ Investigate suspected release due to off-site environmental contamination.
☐ Extend temporary closure of UST system for more than 12 months.
☐ UST system undergoing change-in-service.
☒ UST system permanently closed with tank removed.
☐ Abandoned tank containing product.
☐ Required by Ecology or delegated agency for UST system closed before 12/22/88.
☐ Other (describe): _____

CHECKLIST

Each item of the following checklist shall be initiated by the person registered with the Department of Ecology whose signature appears below.

	YES	NO
1. The location of the UST site is shown on a vicinity map.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. A brief summary of information obtained during the site inspection is provided. (see Section 3.2 in site assessment guidance)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. A summary of UST system data is provided. (see Section 3.1.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. The soils characteristics at the UST site are described. (see Section 5.2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5. Is there any apparent groundwater in the tank excavation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. A brief description of the surrounding land use is provided. (see Section 3.1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Information has been provided indicating the number and types of samples collected, methods used to collect and analyze the samples, and the name and address of the laboratory used to perform the analyses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8. A sketch or sketches showing the following items is provided:		
- location and ID number for all field samples collected	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- groundwater samples distinguished from soil samples (if applicable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- samples collected from stockpiled excavated soil	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- tank and piping locations and limits of excavation pit	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- adjacent structures and streets	<input checked="" type="checkbox"/>	<input type="checkbox"/>
- approximate locations of any on-site and nearby utilities	<input checked="" type="checkbox"/>	<input type="checkbox"/>
9. If sampling procedures different from those specified in the guidance were used, has justification for using these alternative sampling procedures been provided? (see Section 3.4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
10. A table is provided showing laboratory results for each sample collected including; sample ID number, constituents analyzed for and corresponding concentration, analytical method and detection limit for that method.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
11. Any factors that may have compromised the quality of the data or validity of the results are described.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12. The results of this site check/site assessment indicate that a confirmed release of a regulated substance has occurred.	<input type="checkbox"/>	<input checked="" type="checkbox"/>

SITE ASSESSOR INFORMATION

<u>JEFF WILSON</u> Person registered with Ecology	<u>ASSOCIATED ENVIRONMENTAL GROUP</u> Firm Affiliated with	
Business Address: <u>605 11th AVE SE</u> Street	Telephone: <u>(360) 362-9835</u>	
<u>OLYMPIA</u> City	<u>WA</u> State	<u>98501</u> Zip Code

I hereby certify that I have been in responsible charge of performing the site check/site assessment described above. Persons submitting false information are subject to penalties under Chapter 173.360 WAC.

6/9/14 _____
Date Signature of Person Registered with Ecology

If you need this publication in an alternate format, please contact Toxics Cleanup Program at (360) 407-7170. For persons with a speech or hearing impairment call 711 for relay service or 800-833-6388 for TTY.

APPENDIX C

SITE PHOTOGRAPHS



ASSOCIATED
ENVIRONMENTAL
GROUP, LLC

Project No.: 13-162

SITE PHOTOGRAPHIC RECORD

Underground Storage Tank
UST Closure Site Assessment Report
Coulter Creek Hatchery
41 Coulter Creek RD, Belfair, WA
July 16, 2014



Photo #1: *Underground storage tank project area located adjacent to the diesel generator building.*



Photo #2: *Location fill pipe and utility markings.*

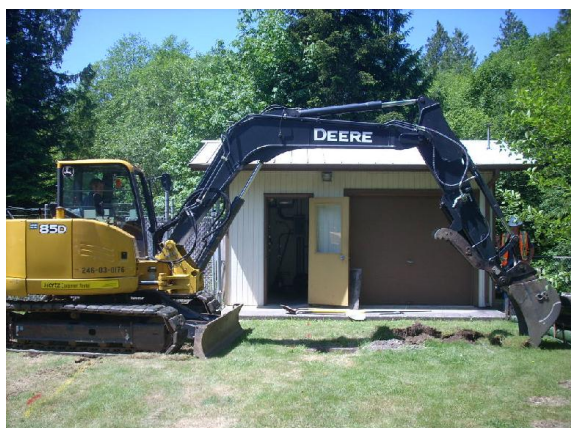


Photo #3: *Location of the underground storage tank.*



Photo #4: *Excavation and soil stockpile.*



Photo #5: *Partially exposed tank and utilities.*



Photo #6: *One of the UST's two concrete anchors.*



ASSOCIATED
ENVIRONMENTAL
GROUP, LLC

Project No.: 13-162

SITE PHOTOGRAPHIC RECORD

Underground Storage Tank
UST Closure Site Assessment Report
Coulter Creek Hatchery
41 Coulter Creek RD, Belfair, WA
July 16, 2014



Photo #7: *Underground storage tank.*



Photo #8: *Underground storage tank being loaded for transport.*



Photo #9: *Standing water in pit (level after the Coulter Creek water retention pond was lowered).*



Photo #10: *Vac Truck used to remove pit water.*



Photo #11: *Excavation pit water removal.*



Photo #12: *Backfilling.*

APPENDIX D

SUPPORTING DOCUMENTS

Decommissioner/ Site Assessor Certifications
Laboratory Datasheets

Congratulations! You have demonstrated a commitment to the code enforcement profession by successfully achieving ICC certification. Your certification information will be posted on the Certification Website as an Active Certification. www.iccsafe.org

CERTIFICATION RENEWAL - Certification is valid for a three year period. For Renewal Information see the Bulletin at www.iccsafe.org

AST/UST Certification Renewal - Certification is valid for a two year period. For Renewal Information see the Bulletin at www.iccsafe.org

NAFED Certification Renewal - **NAFED** must receive your application for recertification and documentation at least 60 days prior to the expiration date of the current certification. www.nafed.org/certification/

Renewal of certifications is the responsibility of the certified individual. Please make sure you keep track of your renewal date(s), and advise ICC of any CHANGE OF ADDRESS. www.iccsafe.org

If you have achieved a NAFED certification you must notify **NAFED** of any change of address. www.nafed.org

Best wishes for continued success in your career, and thank you for your interest in the Certification Programs of the International Code Council.

Jeffrey E Wilson - 8164165
UST Decommissioning - Exp. 06/27/2014

Jeffrey E Wilson - 8164165
Washington State Site Assessment - Exp. 06/27/2014

↑ Remove card at perforation and FOLD in center before placing in wallet ↑

See Reverse Side For Easy Opening Instructions



Certification & Testing
900 Montclair Road
Birmingham, AL 35213



no postage
needed
if mailed
in the
us

049J82044070

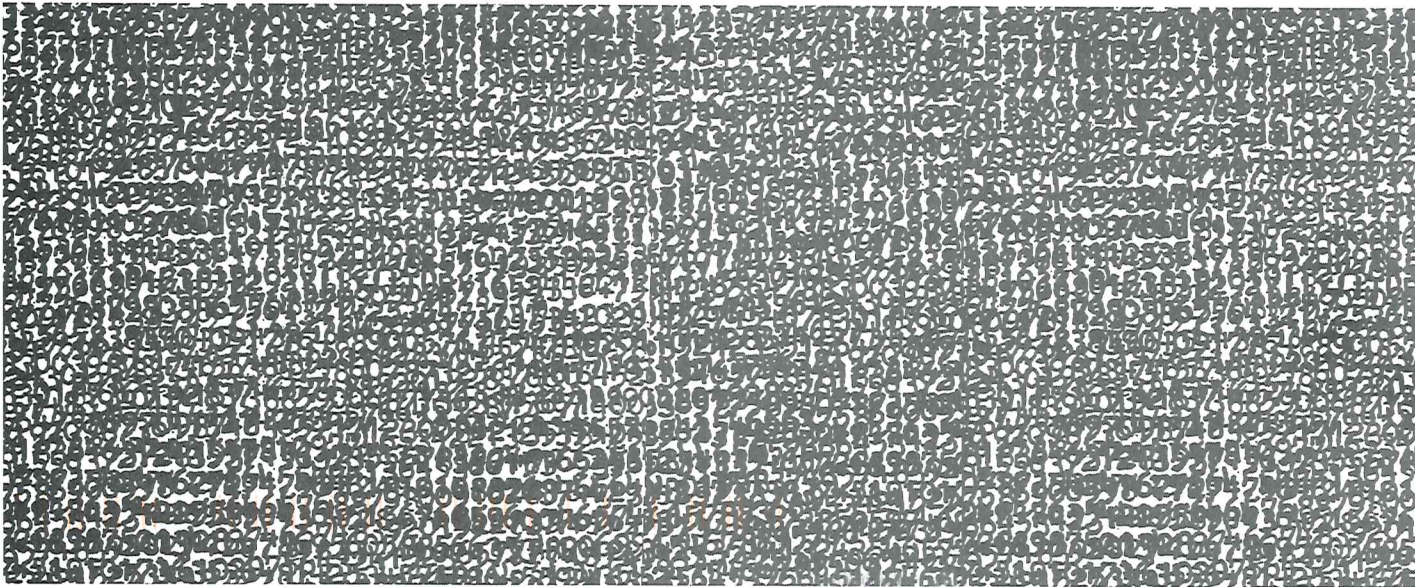
\$00.450

06/28/2012

Mailed From 35224
US POSTAGE

Jeffrey E Wilson
1018 Capital way S
Suite 201
Olympia, WA 98501

REMOVE STUBS AT BOTH ENDS FIRST
THEN FOLD, CREASE AND REMOVE THIS STUB AT PERFORATION



International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.


Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

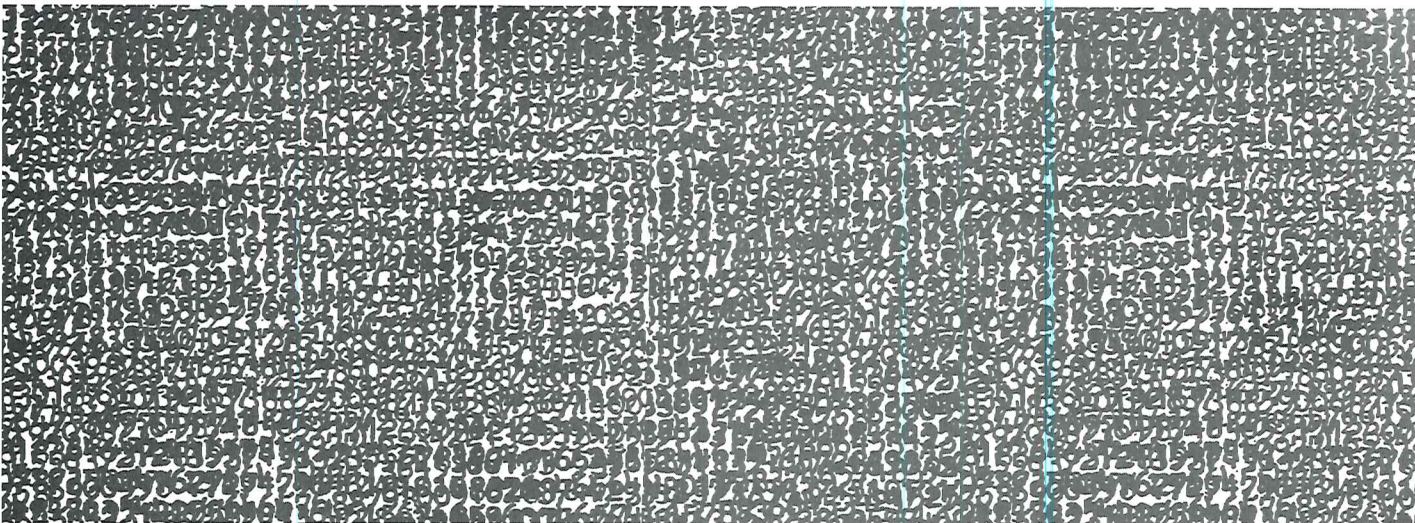


International Code Council
500 New Jersey Avenue, NW
Washington, DC 20001

The individual named hereon is CERTIFIED in the categories shown, having been so certified pursuant to successful completion of the prescribed written examinations.


Not valid unless signed by certificate holder.
ICC Certification attests to competent knowledge of codes and standards.

↑ Remove card at perforation and FOLD in center before placing in wallet ↑





Washington State Site Assessment



Candidate ID: ICC00219652

Name: David Polivka

Date: 5/31/2013

Address: 9241 A Quinault Dr NE

Lacey WA 98516

EXAMINATION RESULT: **PASS**

Congratulations! You have passed the above named examination. Your wallet card will be forwarded to you by ICC within six weeks from the last day of the month in which you tested. This certificate is current for two years.

You may request a wall certificate from ICC as well. This certificate will be provided at no cost to you, if you request it within 90 days of your exam. Only one wall certificate per exam passed will be provided to you at no charge. For more information on requesting a wall certificate, go to www.iccsafe.org/inspector.

It is extremely important that you notify Pearson VUE and ICC of any changes in name and/or address to avoid the possibility of your wallet card and/or certificate not being received. Please contact Pearson VUE at 800-275-8301 and ICC at certexam@iccsafe.org with changes to your name and address (name changes may require additional documentation). There may be an additional fee if a certification is re-issued due to a misspelled name or incorrect address.

June 9, 2014

Michael Chun
Associated Environmental Group, Inc.
605 11th Ave. SE, Suite 201
Olympia, WA 98501



Dear Mr. Chun:

Please find enclosed the analytical data report for the Coulter Creek Hatchery Project in Belfair, Washington. Soil and water samples were analyzed for the Diesel and Oil by NWTPH-Dx/Dx Extended on June 5, 2014.

The results of the analyses are summarized in the attached tables. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Associated Environmental Group, Inc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

A handwritten signature in cursive script that reads "Michael A. Korosec".

Michael A. Korosec
President

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
COULTER CREEK HATCHERY PROJECT
Project # 13-162
Belfair, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Soil by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (mg/kg)	Lube Oil Range Organics (mg/kg)
Method Blank	6/4/2014	6/5/2014	98	nd	nd
LCS	6/4/2014	6/5/2014	99	90%	---
N-SW-1-5	6/4/2014	6/5/2014	101	nd	nd
E-SW-2-4	6/4/2014	6/5/2014	102	nd	nd
S-SW-3-6	6/4/2014	6/5/2014	86	nd	nd
S-SW-3-6 Duplicate	6/4/2014	6/5/2014	84	nd	nd
W-SW-4	6/4/2014	6/5/2014	91	nd	nd
SP-5	6/4/2014	6/5/2014	122	nd	nd
SP-6	6/4/2014	6/5/2014	108	nd	nd
SP-7	6/4/2014	6/5/2014	110	nd	nd
Reporting Limits				50	100

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
COULTER CREEK HATCHERY PROJECT
Project # 13-162
Belfair, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank	6/5/2014	6/5/2014	106	nd	nd
LCS	6/5/2014	6/5/2014	90	81%	---
PIT-WS-8	6/5/2014	6/5/2014	132	2700	nd
PIT-SWS-9	6/5/2014	6/5/2014	133	10,000	nd
Reporting Limits				250	500

"nd" Indicates not detected at the listed detection limits.

"int" Indicates that interference prevents determination.


ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG
 ADDRESS: 605 114th AVE SE, Suite 201
 PHONE: (360) 352-9835 FAX: _____
 CLIENT PROJECT #: 13-162 PROJECT MANAGER: Mike Chun

DATE: 6/3/14 PAGE 1 OF 1
 PROJECT NAME: Coulter Creek Hatching
 LOCATION: 41 East Coulter Creek Road, Belfair, WA
 COLLECTOR: Jeff Wilson DATE OF COLLECTION: 6/3/14

Sample Number	Depth	Time	Sample Type	Container Type	ANALYSES																NOTES	Total Number of Containers	Laboratory Note Number
					TPH - HClD	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite		
1. N-SW-1-5	5'	2:00	SOIL	VCA-402	✓	✓													✓				
2. E-SW-2-4	4'	2:10			✓	✓													✓				
3. S-SW-3-6	6'	2:15			✓	✓													✓				
4. W-SW-4-	5'	2:25			✓	✓													✓				
5. SP-5	6"	2:35			✓	✓													✓				
6. SP-6	6"	2:45			✓	✓													✓				
7. SP-7	6"	2:50			✓	✓													✓				
8. PIT-WS-8	—	2:55			✓	✓													✓				
9. PIT-SWS-9	—	3:00			✓	✓													✓				
10.																							
11.																							
12.																							
13.																							
14.																							
15.																							
16.																							
17.																							
18.																							

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME	SAMPLE RECEIPT		LABORATORY NOTES:
	6/4/14	A. Harnden	6/4/14 4:58pm	TOTAL NUMBER OF CONTAINERS		
				CHAIN OF CUSTODY SEALS Y/N/NA		
				SEALS INTACT? Y/N/NA		
				RECEIVED GOOD COND./COLD		
				NOTES:		Turn Around Time: 24 HR 48 HR 5 DAY