WELL INSTALLATION, WATER INJECTION TEST, AND CARBON BASED INJECTION REPORT

Lake Chelan Boat Company

Colony Insurance Claim #208188

1418 West Woodin Avenue

Chelan, Washington

Antea®Group Project No. STCG-422-2
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Well Installation, Water Injection Test, and Carbon Based Injection Report

Lake Chelan Boat Company

1418 West Woodin Avenue

Chelan, Washington

Antea Group has prepared this report to summarize remedial activities that have occurred at the referenced property in Chelan, Washington (Figure 1). The report presents a summary of injection well installation, water injection test results, PlumeStop® Liquid Activated Carbon™ (PlumeStop) injection activities, and subsequent groundwater sampling events.

1.0 EXECUTIVE SUMMARY

On April 25 and 26, 2016, Antea Group oversaw the installation of three injection wells (IW-1, IW-2, and IW-3) at the site. All three injection wells were completed to a terminal depth of 17 feet below ground surface (bgs). The injection wells were installed in proximity to monitoring wells MW-2 and MW-4, per the project specifications, utilizing a sonic drill rig. All of the injection wells were constructed out of 2-inch schedule 40 polyvinyl chloride (PVC) with a 0.020-inch slotted screen interval from 7 to 17 feet bgs.

Furthermore on April 26, 2016, Antea Group completed baseline groundwater sampling at monitoring wells MW-1, MW-2, and MW-4. Historically, wells MW-2 and MW-4 have exhibited concentrations above the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup levels. Injection wells were installed in proximity to these wells to remediate contamination localized therein. Monitoring well MW-1 was included in the baseline groundwater sampling event as a down gradient reference well. Well MW-1 consistently exhibits concentrations below MTCA Method A cleanup levels.

Additionally on April 26, 2016, Antea Group completed a water injection test at injection well IW-3. During the injection test, wells MW-1, MW-2 and MW-4 were monitored for depth to water fluctuations. In total, 210 gallons of clean tap water were injected into IW-3. Fluctuations in the depth to groundwater measurements were seen in all three groundwater monitoring wells observed. These fluctuations indicate positively that during the injection events, Plumestop would directly encounter monitoring wells with historical contamination and facilitate remediation.

On June 1 and 2, 2016, Antea Group oversaw the carbon based injection event conducted at the site. Under Antea Group's supervision, Regenesis Remediation Services (Regenesis) injected 4,000 pounds of Plumestop mixed with water into the subsurface via injection wells IW-1 through IW-3. Flow rates ranged from 2.01 gallons per minute (gpm) to 3.58 gpm. In total, 4,795 gallons of solution were injected evenly into all three injection wells.

On June 27, 2016 and September 25, 2016, Antea Group conducted post-injection performance and quarterly groundwater sampling events. During the June event, groundwater samples were collected from wells MW-1 through MW-6. Analytical results from this event indicate that concentrations above MTCA Method A cleanup levels were present in monitoring well MW-1 and MW-4. During the September event, groundwater samples were collected from wells MW-1, MW-2, and MW-4. Analytical results from the September event indicated no concentrations above MTCA Method A cleanup levels.

2.0 BACKGROUND

The Lake Chelan Boat Company (the Site) is an operating business located at 1418 West Woodin Avenue in Chelan, Washington (Figure 2). The Site consists of an office building, workshop, docks/dry dock, and gravel parking areas. One diesel above ground storage tank (AST) is present east of the office building and workshop.

On February 6, 2012, Antea Group was informed that a 10,000-gallon diesel underground storage tank (UST) was removed from the Site on November 7, 2011. Environmental Associates, Inc. oversaw the removal of the tank and noted that the tank was moderately rusted and pitted, but did not contain obvious holes. The site owner reported previous problems with the turbine at the north end of the tank. Environmental Associates, Inc. collected soil samples from the bottom and sidewalls of the excavation. Laboratory analytical results indicated that TPH-D concentrations exceeded MTCA Method A cleanup levels in the samples collected from the north and south bottom samples and from the north sidewall. Concentrations ranged from less than the laboratory method reporting limit (MRL) of 50 milligrams per kilograms (mg/kg) to 24,000 mg/kg. The volume of diesel released from the tank is not known.

On March 6 and 7, 2012, Antea Group personnel directed the advancement of four soil borings with the purpose of defining the limits of a proposed excavation to remove the impacted soil. Soil samples were collected during the advancement of each soil boring at approximate 5-foot intervals. Laboratory analytical results for soil indicated that petroleum hydrocarbons were not detected above MTCA Method A cleanup levels. All four soil borings were completed as 2-inch groundwater monitoring wells MW-1 through MW-4. Results of this investigation were presented to The Lake Chelan Boat Company and the Department of Ecology in a report titled, "Well Installation Report", dated April 27, 2012.

On March 26 and 27, 2012, Antea Group personnel oversaw the over-excavation of impacted soil from the area of the former diesel UST. Results from well installation activities on March 6 and 7, 2012 indicated that significantly expanding the excavation laterally was not necessary. The property owner secured licensed contractors to excavate and transport soil off-site for proper disposal. Approximately 372.06 tons of soil was disposed at the Greater Wenatchee Landfill in East Wenatchee Washington. Limits of the excavation were determined by field-screening and visual observations. Laboratory analytical results indicated that all of the confirmation soil samples collected were below MTCA Method A cleanup levels for TPH-D and BTEX compounds.

On August 3 and 4, 2015, Antea Group personnel directed the installation of two groundwater monitoring wells, MW-5 and MW-6. The monitoring well installation was designed to investigate up gradient soil and groundwater conditions to the east of the Site and to determine whether or not contamination was migrating from an unaffiliated off-site source. The two wells were installed to a total depth of 30 feet bgs. Laboratory analytical results for soil and groundwater indicated that no concentrations of TPH-Dx or BTEX compounds were detected above MTCA Method A Cleanup Levels in monitoring wells MW-5 or MW-6. In addition, none of the soil or groundwater samples exceeded the respective laboratory MRLs.

3.0 SELECTION OF A REMEDIAL APPROACH

Antea Group has established an engineering assurance (EA) process to review site conditions and remediation alternatives. Based on current site conditions and work performed to date, ISCO was selected to treat residual hydrocarbons above MTCA Method A cleanup levels in monitoring wells MW-2 and MW-4. Through the EA process, Antea Group determined that PlumeStop is the optimum chemical to inject, and has the best chance to reduce the residual concentrations to below MTCA Method A cleanup levels.

3.1 PlumeStop Details

PlumeStop is a liquid activated carbon matrix which consists of a very fine suspension of charged particles which resists clumping and has a water-like viscosity. As a result, PlumeStop is easily applied into the subsurface through gravity-feed or low-pressure injection. During this injection event, PlumeStop was injected into three injection wells screened across a focused interval of the saturated zone. Once injected, the PlumeStop migrates with groundwater flow and settles onto the aquifer solids over a period of weeks to months. PlumeStop then sorbs constituents from the groundwater and serves as a biomatrix. The overall treatment process is rapid sorption and simultaneous biodegradation utilizing electron acceptors present in the groundwater (DO, nitrate, iron, manganese, sulfate, and carbon dioxide). Once in place and with contaminants partitioned onto its surface, the PlumeStop treated zone is colonized by contaminant-degrading bacteria. The net result is a substantial increase in the rate and extent of contaminant destruction. Enhanced biodegradation of contaminants within this biomatrix regenerates or frees up sorption sites allowing contaminants to further partition out of the groundwater.

4.0 SCOPE OF WORK

The scope of work performed by Antea Group included the following tasks:

- Develop a site-specific Health and Safety Plan;
- Contact One-Call and a private underground utility locater to delineate the location and marking of underground utilities and other potential subsurface obstructions in the vicinity of the proposed injection well locations;
- Clear for utilities to a minimum depth of five feet bgs using an air knife/vacuum rig and hand auger prior to installation of injection points and soil borings;
- Install injection wells IW-1, IW-2, and IW-3;
- Conduct pre-injection groundwater monitoring and sampling event on wells MW-1, MW-2, and MW-4;
- Conduct a water injection test on IW-3;
- Obtain an Underground Injection Control (UIC) permit from Ecology;
- Conduct one round of injections of PlumeStop solution;
- Conduct two post-injection groundwater monitoring and sampling events;
- Perform profiling, removal, and proper disposal of investigative derived waste;
- Prepare a report summarizing the findings of the remediation.

5.0 PRE- CARBON BASED INJECTION EVENTS

5.1 Injection Well Installation

On April 25 through April 26, 2016, Antea Group personnel directed drilling of three borings (IW-1 through IW-3) (Figure 2). Prior to the drilling activities, Antea Group coordinated the location and marking of underground utilities in the vicinity of the proposed boring locations. The utilities survey included contacting the local utility locating service and contracting with a private locating service. No conflicts with the proposed boring locations were identified.

Cascade Drilling, Inc. (Cascade) of Federal Way, Washington was contracted by Antea Group to complete the soil boring installations and subsequent completion into injection wells. Prior to drilling, each boring location was cleared to a depth of 5 feet bgs utilizing an air-knife and vacuum truck. Following clearance activities, borings were advanced using a limited access sonic drill rig to a total depth of 17 feet bgs in wells IW-1 and IW-2, and 30 feet bgs in IW-3. Injection well IW-3 was drilled to 30 feet bgs to investigate lithology outside of the historical diesel UST excavation area. After extending the boring to 30 feet bgs, Cascade was instructed to backfill the boring to 19 feet

bgs with bentonite and complete the construction of IW-3 analogous to wells IW-1 and IW-2. Soils were field screened for the presence of volatile petroleum hydrocarbons using a photo-ionization detector (PID). Soil samples during this event did not exhibit noticeable odors, sheens, or elevated PID readings, therefore, samples were not submitted for quantitative chemical analysis.

Groundwater was encountered at each boring location at approximately 12 to 13 feet bgs. Injection wells IW-1 through IW-3 were constructed of 2-inch diameter schedule 40 PVC with 10 feet of 0.020-inch slotted screen set from 7 feet bgs to 17 feet bgs. Annular space within the wells consisted of #10/20 filter sand that extended above the screen 2 feet and was followed with a 3 foot seal of bentonite chips. The well was completed with concrete and a flush-mount surface monument was then cemented in place over the well casing.

Soils observed during the installation of IW-1, IW-2, and IW-3 were consistent with those observed during previous investigations at the site. Sand, sandy gravel, and gravelly sand were predominantly observed throughout the extent of the borings. Boring logs with lithology descriptions are included in Appendix A. A Site Map with injection well locations is included as Figure 2.

5.2 Pre-Injection Groundwater Monitoring and Sampling

Prior to the carbon based injection event, Antea Group conducted a baseline groundwater monitoring and sampling event on April 26, 2016. Before the monitoring event, Antea Group measured depth to water in monitoring wells MW-1 through MW-6. Groundwater elevations (GWE) were measured to an accuracy of 0.01 feet. Samples were withdrawn from wells MW-1, MW-2, and MW-4 using a low-flow/low-purge technique with a peristaltic pump. Field parameters of dissolved oxygen (DO), conductivity, ORP, total dissolved solids (TDS), pH, and temperature were collected during low-flow/low-purge procedures. The samples were placed in the appropriate laboratory-provided containers. Samples were labeled, placed into ice filled coolers, logged onto chain-of-custody (COC) forms and transported to the laboratory. No separate-phase hydrocarbons were observed in any of the wells.

Groundwater samples were submitted to ALS Laboratory Group (ALS) in Everett, Washington, and were analyzed for:

- Total petroleum hydrocarbons as diesel and oil (TPH-Dx) using Northwest Method NWTPH-Dx;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8021B;
- Total and dissolved iron ,total and dissolved manganenze, using EPA series methods;
- Sulfate by EPA Method 375.3 or 9056;
- Nitrate by EPA Method 353.1 or 9056;
- Total and or dissolved organic carbon (TOC) by EPA Method 415.1 or EPA 415.3; and
- Biological Oxygen Demand (BOD) by EPA Method 5210B.

Groundwater samples were collected under the chain of custody protocol and sent to ALS, a certified analytical laboratory for analysis. Groundwater analytical laboratory reports are included as Appendix B, and groundwater

elevations and analytical data are included as Tables 1 and 2. A Groundwater Analytical Data Map for this event is included as Figure 3.

5.3 Water Injection Test

On April 20, 2016, Antea Group performed a water injection test at well IW-3 to confirm that the subsurface had the capacity to easily accept ISCO products. Pre-test depth to water measurements were collected from monitoring wells MW-1, MW-2, and MW-4 and were observed at 11.46, 11.50, and 12.12 feet bgs, respectively. Injection well IW-3 was directly connected to the injection tote using clean dedicated hosing with a tightened rubber coupling attached to the well and a stainless steel cam lock fitting connected to the tote. During the test, it took approximately 25 minutes to gravity feed 210 gallons of water into well IW-3. The average flow rate during this event was 8.4 gpm. Depth to water measurements were collected after the termination of the test at monitoring wells MW-1, MW-2, and MW-4, with observed measurements of 11.41, 11.48, and 12.04 feet bgs, respectively. The greatest change occurred in MW-4 with a depth to water decrease of 0.08 feet. The water fluctuations exhibited that ISCO products would be able to theoretically impact the contaminated monitoring wells and also that the subsurface would be able to accept the ISCO products without surfacing. The findings from the water injection test are included in Table 3.

5.4 Permitting

Prior to the carbon based injection event, Antea Group completed the application process and received approval from the Underground Injection Control (UIC) Program to conduct up to two PlumeStop injection events at the site. The UIC permit from Ecology, dated April 21, 2016, is included as Appendix C.

6.0 CARBON BASED INJECTION EVENTS

On June 1 and June 2, 2016, Antea Group oversaw Regenesis mix and prepare PlumeStop for application. Under Antea Group's supervision, Regenesis injected 4,000 pounds of PlumeStop into the subsurface in the vicinity of monitoring wells MW-2 and MW-4 via injection wells IW-1 through IW-3. The PlumeStop was mixed with 4,316 gallons of water in batches. In total, 4,795 gallons of solution were injected evenly into the three injection wells. Antea Group personnel also collected pre and post injection groundwater parameters of temperature, conductivity, TDS, DO, pH, and ORP on groundwater monitoring wells MW-1 through MW-6.

Regenesis came prepared to the site with a support truck that included two 300 gallon poly mixing tanks, injection manifold, and injection pump system. Regenesis used temporary 2-inch compression fittings to connect to all three injection wells simultaneously during the injection event. Flow rates ranging from 2.01 gpm to 3.58 gpm, were observed during the application. No surfacing was observed during the entirety of the injection event. In Regenesis's Status Report, they indicated that due to low pressures and moderate flow rates they believe that a good distribution of PlumeStop occurred at the site. The Regenesis Status Report is included in Appendix D. This

report presents tabulated groundwater parameter measurement data that was collected throughout the injection event.

7.0 POST INJECTION PREFORMANCE MONITORING AND SAMPLING

7.1 June 27, 2016; Performance/Quarterly Monitoring Event

Standard groundwater samples were collected from wells MW-1 through MW-6 and were analyzed for:

- Total petroleum hydrocarbons as diesel and oil (TPH-Dx) using Northwest Method NWTPH-Dx;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8021B.

Additional groundwater samples were collected from wells MW-1, MW-2, and MW-4 and were analyzed for:

- Total and dissolved iron,total and dissolved manganese, using EPA series methods;
- Sulfate by EPA Method 375.3 or 9056;
- Nitrate by EPA Method 353.1 or 9056;
- Total and or dissolved organic carbon (TOC) by EPA Method 415.1 or EPA 415.3; and
- Biological Oxygen Demand (BOD) by EPA Method 5210B.

The first performance groundwater sampling and monitoring event was completed three weeks after the carbon based injection event on June 27, 2016. Concentrations of TPH-D in monitoring well MW-1 exceeded the MTCA Method A cleanup level, with a concentration of 520 ug/L. This was the first time concentrations exceeded cleanup levels in well MW-1. It is presumed that due to the large volume of ISCO products injected into the subsurface, the contamination plume was displaced and able to migrate from the historically contaminated wells (MW-2 and MW-4) and move down gradient to well MW-1. Concentrations of TPH-D were also detected above the MTCA Method A cleanup level in monitoring well MW-4 at 1,500 ug/L. Fortunately, additional monitoring of field parameters and geochemistry reflect an environment that is conducive for biodegradation to occur. The 42 mg/L of TOC detected at MW-4 is an order of magnitude higher than MW-1 and MW-2 and is indicative of PlumeStop still passing through the well and migrating toward wells MW-1 and MW-2. Concentrations of TPH-D in all other wells sampled during this event were either non-detect or below MTCA Method A cleanup levels. Further information regarding the findings of this sampling and monitoring event can be found in the Quarterly *Groundwater Monitoring Report* dated September 8, 2016.

7.2 September 25, 2016; Performance/Quarterly Monitoring Event

Groundwater samples were collected from monitoring wells MW-1, MW-2, and MW-4 and were analyzed for:

- Total petroleum hydrocarbons as diesel and oil (TPH-Dx) using Northwest Method NWTPH-Dx;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Method 8021B.
- Total and dissolved iron ,total and dissolved manganenze, using EPA series methods;
- Sulfate by EPA Method 375.3 or 9056;

- Nitrate by EPA Method 353.1 or 9056;
- Total and or dissolved organic carbon (TOC) by EPA Method 415.1 or EPA 415.3; and
- Biological Oxygen Demand (BOD) by EPA Method 5210B.

The second performance groundwater sampling and monitoring was completed three months after the first performance groundwater sampling event. Analytical results from this event indicated no concentrations above MTCA Method A cleanup levels for all wells monitored.

Performance groundwater samples for both events were collected under the chain of custody protocol and sent to ALS, a certified analytical laboratory for analysis. Groundwater analytical laboratory reports and groundwater analytical tables are presented in Appendix B and Tables 1 and 2, respectively. In addition, Groundwater Analytical Data Maps for these two sampling events are included as Figure 4 and 5.

8.0 WASTE MANAGEMENT AND DISPOSAL

Soil cuttings generated during drilling were temporarily stored in properly labeled 55-gallon DOT drums. Analytical data for soil samples were used for disposal profiling. The drums were removed by Stericycle Environmental Solutions on July 19, 2016 and properly disposed of by Burlington Environmental in Kent, Washington on August 2, 2016. Analytical laboratory reports of the waste temporarily housed on site is presented in Appendix B.
Waste manifest documentation is presented in Appendix E.

9.0 CONCLUSIONS

Based on the performance and quarterly sampling results obtained following the injection events, it is apparent that the injection events degraded the TPH-D at the site. The analytical results for TPH-D in groundwater monitoring wells MW-1, MW-2, and MW-4 now exhibit concentrations below the MTCA Method A cleanup levels. Remaining monitoring wells MW-3, MW-5 and MW-6 have four or more quarters of either non-detect or below MTCA Method A cleanup levels for all analytes and are no longer in the sampling program. Antea Group proposes to continue quarterly sampling of monitoring wells MW-1, MW-2, and MW-4 until four clean quarters are achieved. If contamination rebounds, Antea Group will consider performing additional carbon based injections on site to further reduce hydrocarbon concentrations.

10.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

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Tables

Table 1 Groundwater Analytical Results, Natural Attenuation Parameters
Table 2 Groundwater Analytical Results and Groundwater Elevation Measurements
Table 3 Water Injection Test Details

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
NATURAL ATTENUATION PARAMETERS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Sample I.D.	Date	Dissolved Oxygen (mg/L)	pH (0 to 14 units)	ORP (mV)	TDS (g/L)	Conductivity (mS/cm^3)	Temp. (Celsius)	BOD (mg/L)	Alkalinity CaCO3 (mg/L)	DOC (mg/L)	TOC (mg/L)	**Methane (mg/L)**	**Nitrate (mg/L)**	**Sulfate (mg/L)**	**Iron (µg/L)**	**Dissolved Iron (µg/L)**	**Manganese (µg/L)**	**Dissloved Manganese (µg/L)**	**Carbon Dioxide (µg/L)**
MW-1	03/04/13	1.25	6.89	60	0.8	1.18	14.1	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	06/05/13	2.31	8.95	246.3	0.510	0.617	14.30	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	09/09/13	3.10	10.78	175.1	0.516	0.656	16.04	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/09/13	2.74	6.83	413.2	0.762	0.914	13.44	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	03/05/14	1.07	6.78	248.8	0.725	0.825	11.38	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	06/19/14	3.70	6.69	109.8	0.560	0.672	13.47	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	09/20/14	1.91	6.91	16.0	0.666	0.898	18.47	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/15/14	0.08	6.44	-15.2	0.381	0.459	13.57	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	03/17/15	3.58	6.03	298	2.42	3.79	13.04	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	05/21/15	1.36	6.65	-10.9	0.801	0.963	13.55	--	--	--	--	<0.010	23	19	<50	--	<2.0	--	79,000
MW-1	06/22/15	0.77	6.77	258.0	0.582	0.733	15.54	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	09/15/15	0.62	6.74	17.0	0.603	0.803	18.00	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	12/30/15	1.92	6.57	42.0	1.727	2.099	13.99	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	03/25/16	1.40	6.73	24.0	1.486	1.804	13.97	--	--	--	--	--	--	--	--	--	--	--	--
MW-1	**04/26/16**	**1.20**	**7.29**	**94.5**	**0.817**	**0.974**	**13.22**	**<5.0**	**470**	**4.9**	**5.9**	**<0.010**	**48**	**30**	**470**	**<50**	**13**	**5.8**	**66000**
MW-1	**06/27/16**	**0.48**	**8.37**	**304.0**	**1.110**	**1.371**	**14.68**	**<5.0**	**430**	**--**	**7.2**	**<0.010**	**8.5**	**15**	**<50**	**<50**	**17**	**18**	**69000**
MW-1	**09/26/16**	**1.04**	**7.28**	**91.6**	**0.637**	**0.830**	**17.02**	**<5.0**	**430**	**--**	**4.3**	**<0.010**	**15.0**	**16**	**50.00**	**<50**	**11**	**10**	**84000**
MW-2	03/04/13	1.69	6.82	91	0.8	1.18	14.0	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	06/05/13	1.37	8.61	218.9	0.489	0.579	12.88	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	09/09/13	0.78	10.92	192.8	0.566	0.697	14.56	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	12/09/13	0.91	6.79	387.8	0.633	0.746	12.60	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	03/05/14	1.21	6.65	267.4	0.718	0.815	11.28	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	06/19/14	3.75	7.06	58.3	0.560	0.681	14.05	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	09/20/14	1.90	6.38	51.2	0.478	0.611	16.15	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	12/15/14	0.08	6.64	45.0	0.599	0.737	14.53	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	03/17/15	0.59	6.05	293	1.42	2.22	12.98	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	05/21/15	Not Sampled - Gauge Only						**--**	**--**	**--**	**--**	--	--	--	--	--	--	--	--
MW-2	06/22/15	0.91	6.69	240.6	0.351	0.425	13.84	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	09/15/15	0.26	6.74	21.1	0.493	0.628	16.01	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	12/30/15	0.30	6.65	41.7	1.315	1.597	13.97	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	03/25/16	0.43	6.80	18.7	0.990	1.214	14.34	--	--	--	--	--	--	--	--	--	--	--	--
MW-2	**04/26/16**	**1.65**	**7.28**	**95.2**	**0.837**	**1.069**	**16.11**	**<5.0**	**430**	**6.9**	**8.8**	**<0.010**	**23**	**16**	**<50**	**<50**	**660**	**520**	**81000**
MW-2	**06/27/16**	**1.09**	**8.23**	**326.3**	**0.744**	**0.899**	**13.86**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-2	**09/25/16**	**0.40**	**7.14**	**94.8**	**0.548**	**0.709**	**16.69**	**<5.0**	**370**	**--**	**5.5**	**<0.010**	**24**	**15**	**<50**	**<50**	**710**	**1300**	**69000**

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
NATURAL ATTENUATION PARAMETERS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Sample I.D.	Date	Dissolved Oxygen (mg/L)	pH (0 to 14 units)	ORP (mV)	TDS (g/L)	Conductivity (mS/cm^3)	Temp. (Celsius)	BOD (mg/L)	Alkalinity CaCO3 (mg/L)	DOC (mg/L)	TOC (mg/L)	**Methane (mg/L)**	**Nitrate (mg/L)**	**Sulfate (mg/L)**	**Iron (µg/L)**	**Dissolved Iron (µg/L)**	**Manganese (µg/L)**	**Dissloved Manganese (µg/L)**	**Carbon Dioxide (µg/L)**
MW-3	03/04/13	1.50	6.65	-88.0	0.8	1.250	13.5	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	06/05/13	1.42	8.61	186.3	0.496	0.582	12.58	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	09/09/13	1.40	10.30	257.1	0.405	0.499	14.58	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/09/13	1.39	6.80	367.7	0.633	0.744	12.65	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	03/05/14	0.60	6.53	-41.3	0.707	0.817	11.97	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	06/19/14	3.37	7.25	81.3	0.497	0.594	13.30	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	09/20/14	5.60	6.89	9.6	0.441	0.572	16.80	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/15/14	0.13	6.77	-43.0	0.641	0.765	13.30	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	03/17/15	2.44	6.48	291	1.71	2.68	12.03	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	05/21/15	2.39	6.80	-50.3	0.843	0.989	12.56	--	--	--	--	<0.010	38	19	1,200	--	280	--	71,000
MW-3	06/22/15	2.80	5.84	304.8	0.403	0.486	13.68	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	09/15/15	1.39	6.91	17.7	0.428	0.573	18.24	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	12/30/15	4.26	6.67	93.8	1.524	1.849	13.95	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	03/25/16	0.80	6.81	66.9	0.787	0.923	12.57	--	--	--	--	--	--	--	--	--	--	--	--
MW-3	**06/27/16**	**0.52**	**8.23**	**326.2**	**0.870**	**1.059**	**14.03**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-3	**09/25/16**	Not Sampled - Gauge Only						**--**	**--**	**--**	**--**	--	--	--	--	--	--	--	--
MW-4	03/04/13	1.66	6.8	38	0.9	1.34	14.8	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	06/05/13	3.27	--	310.0	0.746	0.914	14.30	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	09/09/13	0.56	10.66	222.4	0.596	0.765	16.47	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/09/13	1.32	6.71	426.4	0.747	0.912	14.15	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	03/05/14	1.33	6.64	266.8	0.755	0.881	12.24	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	06/19/14	4.80	6.27	146.9	0.846	1.052	14.96	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	09/20/14	1.10	6.87	122.8	0.830	1.119	18.52	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/15/14	0.02	6.55	-35.0	0.826	1.032	15.12	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	03/17/15	0.62	6.39	296	1.98	3.09	13.48	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	05/21/15	0.52	6.62	-23.4	1.054	1.281	14.03	--	--	--	--	<0.010	74	23	<50	--	290	--	97,000
MW-4	06/22/15	0.81	6.56	270.1	0.761	0.964	15.78	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	09/15/15	0.43	6.60	44.8	0.807	1.111	19.51	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	12/30/15	0.43	6.70	48.9	1.912	2.368	14.78	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	03/25/16	2.10	6.70	30.2	0.993	1.231	14.82	--	--	--	--	--	--	--	--	--	--	--	--
MW-4	**04/26/16**	**3.61**	**7.28**	**94.2**	**0.810**	**0.975**	**13.62**	**<5.0**	**510**	**13.0**	**13**	**<0.010**	**69**	**26**	**<50**	**<50**	**100**	**91**	**84000**
MW-4	**06/27/16**	**0.23**	**8.39**	**306.2**	**1.359**	**1.764**	**16.80**	**<5.0**	**470**	**--**	**140**	**<0.010**	**17**	**53**	**500**	**100**	**87**	**48**	**64000**
MW-4	**09/25/16**	**0.19**	**7.42**	**86.6**	**0.782**	**1.038**	**17.81**	**<5.0**	**520**	**--**	**42**	**<0.010**	**2.6**	**35**	**150**	**73**	**2800**	**2700**	**85000**

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
NATURAL ATTENUATION PARAMETERS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Sample I.D.	Date	Dissolved Oxygen (mg/L)	pH (0 to 14 units)	ORP (mV)	TDS (g/L)	Conductivity (mS/cm^3)	Temp. (Celsius)	BOD (mg/L)	Alkalinity CaCO3 (mg/L)	DOC (mg/L)	TOC (mg/L)	**Methane (mg/L)**	**Nitrate (mg/L)**	**Sulfate (mg/L)**	**Iron (µg/L)**	**Dissolved Iron (µg/L)**	**Manganese (µg/L)**	**Dissloved Manganese (µg/L)**	**Carbon Dioxide (µg/L)**
MW-5	09/15/15	0.80	6.97	-69.9	0.984	1.266	16.46	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	12/30/15	1.10	6.83	61.8	1.452	2.937	13.46	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	03/25/16	2.00	6.91	44.8	0.937	1.132	13.74	--	--	--	--	--	--	--	--	--	--	--	--
MW-5	**06/27/16**	**2.60**	**8.45**	**304.5**	**2.189**	**2.793**	**16.08**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-5	**09/25/16**	Not Sampled - Gauge Only						**--**	**--**	**--**	**--**	--	--	--	--	--	--	--	--
MW-6	09/15/15	0.68	7.22	-108.2	0.800	1.038	16.71	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	12/30/15	0.45	6.90	68.8	1.559	1.907	14.32	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	03/25/16	4.11	6.92	31.6	0.995	1.217	14.26	--	--	--	--	--	--	--	--	--	--	--	--
MW-6	**06/27/16**	**0.17**	**8.42**	**291.3**	**2.319**	**2.887**	**15.03**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-6	**09/25/16**	Not Sampled - Gauge Only						**--**	**--**	**--**	**--**	--	--	--	--	--	--	--	--

Notes:
ORP= oxygen reduction potential
TDS= total dissolved solids
Dissolved Oxygen, pH, ORP, TDS, Conductivity and Temperature measurements taken with a Y-SI 556 water quality field instrument
BOD= biochemical oxygen demand
BOD analysis by Method SM5210B
Alkalinity analysis by Method SM2320I
DOC= dissolved organic carbon
DOC analysis by Method EPA-415.1
TOC= total organic carbon
TOC analysis by Method SM5310C
Methane analysis by Method RSK-175
Nitrate and sulfate analysis by Method EPA-300.0
Iron, dissolved Iron, manganese, and dissolved manganese analysis by Method EPA-200.8
Carbon dioxide analysis by method RSK-175M

TABLE 2
GROUNDWATER ANALYTICAL RESULTS AND GROUNDWATER ELEVATION MEASUREMENTS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Sample ID	Date Sampled	TPH Diesel (µg/L)	TPH Oil (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TOC (feet)	DTW (feet)	SPH Thickness (feet)	GWE (feet)
MW-1	03/21/12	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	19.63	0.00	79.87
MW-1	06/21/12	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	9.75	0.00	89.75
MW-1	09/17/12	<130	<250	<1.0	<1.0	<1.0	<3.0	<3.0	99.50	7.86	0.00	91.64
MW-1	12/10/12	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	12.85	0.00	86.65
MW-1	03/04/13	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	19.89	0.00	79.61
MW-1	06/05/13	150	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	10.82	0.00	88.68
MW-1	09/09/13	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	6.99	0.00	92.51
MW-1	12/09/13	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	15.46	0.00	84.04
MW-1	03/05/14	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	20.00	0.00	79.50
MW-1	06/19/14	<130	<250		<1.0	<1.0	<3.0	--	99.50	8.75	0.00	90.75
MW-1	09/20/14	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	7.97	0.00	91.53
MW-1	12/15/14	150	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	12.00	0.00	87.50
MW-1	05/21/15	--	--	--	--	--	--	--	99.50	11.22	0.00	88.28
MW-1	06/22/15	230	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	6.60	0.00	92.90
MW-1	09/15/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	7.80	0.00	91.70
MW-1	12/30/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	12.95	0.00	86.55
MW-1	03/25/16	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.50	18.21	0.00	81.29
MW-1	**04/26/16**	**130**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**99.50**	**11.93**	**0.00**	**87.57**
MW-1	**06/27/16**	**520**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**99.50**	**6.65**	**0.00**	**92.85**
MW-1	**09/25/16**	**140**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**99.50**	**8.12**	**0.00**	**91.38**

TABLE 2
GROUNDWATER ANALYTICAL RESULTS AND GROUNDWATER ELEVATION MEASUREMENTS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Sample ID	Date Sampled	TPH Diesel (µg/L)	TPH Oil (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TOC (feet)	DTW (feet)	SPH Thickness (feet)	GWE (feet)
MW-2	03/21/12	260	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	19.38	0.00	79.84
MW-2	06/21/12	300	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	9.84	0.00	89.38
MW-2	09/17/12	270	<250	<1.0	<1.0	<1.0	<3.0	<3.0	99.22	8.54	0.00	90.68
MW-2	12/10/12	310	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	13.15	0.00	86.07
MW-2	03/04/13	<130	280	<1.0	<1.0	<1.0	<3.0	--	99.22	20.02	0.00	79.20
MW-2	06/05/13	280	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	10.90	0.00	88.32
MW-2	09/09/13	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	7.10	0.00	92.12
MW-2	12/09/13	140	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	15.62	0.00	83.60
MW-2	06/19/14	<130	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	8.83	0.00	90.39
MW-2	09/20/14	460	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	8.10	0.00	91.12
MW-2	12/15/14	420	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	12.12	0.00	87.10
MW-2	03/17/15	430	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	14.49	0.00	84.73
MW-2	05/21/15	--	--	--	--	--	--	--	99.22	11.26	0.00	87.96
MW-2	06/22/15	140	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	6.73	0.00	92.49
MW-2	09/15/15	290	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	7.91	0.00	91.31
MW-2	12/30/15	660	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	13.11	0.00	86.11
MW-2	03/25/16	740	<250	<1.0	<1.0	<1.0	<3.0	--	99.22	18.35	0.00	80.87
MW-2	**04/26/16**	**410**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**99.22**	**12.00**	**0.00**	**87.22**
MW-2	**06/27/16**	**210**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**99.22**	**6.77**	**0.00**	**92.45**
MW-2	**09/25/16**	**<130**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**99.22**	**8.25**	**0.00**	**90.97**

TABLE 2
GROUNDWATER ANALYTICAL RESULTS AND GROUNDWATER ELEVATION MEASUREMENTS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Sample ID	Date Sampled	TPH Diesel (µg/L)	TPH Oil (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TOC (feet)	DTW (feet)	SPH Thickness (feet)	GWE (feet)
MW-3	03/21/12	1,300	<250	<1.0	<1.0	9.3	44	--	100.00	20.10	0.00	79.90
MW-3	06/21/12	1,100	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	8.15	0.00	91.85
MW-3	09/17/12	340	<250	<1.0	<1.0	<1.0	3.3	<3.0	100.00	6.41	0.00	93.59
MW-3	12/10/12	140	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	11.30	0.00	88.70
MW-3	06/05/13	620	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	9.25	0.00	90.75
MW-3	09/09/13	<130	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	5.38	0.00	94.62
MW-3	12/09/13	190	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	13.92	0.00	86.08
MW-3	03/05/14	1,900	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	18.45	0.00	81.55
MW-3	06/19/14	180	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	7.20	0.00	92.80
MW-3	09/20/14	<130	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	6.41	0.00	93.59
MW-3	12/15/14	140	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	10.45	0.00	89.55
MW-3	03/17/15	250	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	12.81	0.00	87.19
MW-3	05/21/15	--	--	--	--	--	--	--	100.00	9.63	0.00	90.37
MW-3	06/22/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	5.04	0.00	94.96
MW-3	09/15/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	6.26	0.00	93.74
MW-3	12/30/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	11.41	0.00	88.59
MW-3	03/25/16	430	<250	<1.0	<1.0	<1.0	<3.0	--	100.00	16.65	0.00	83.35
MW-3	**04/26/16**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**100.00**	**10.35**	**0.00**	**89.65**
MW-3	**06/27/16**	**400**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**100.00**	**5.08**	**0.00**	**94.92**
MW-3	**09/25/16**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**100.00**	**6.56**	**0.00**	**93.44**

TABLE 2
GROUNDWATER ANALYTICAL RESULTS AND GROUNDWATER ELEVATION MEASUREMENTS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Sample ID	Date Sampled	TPH Diesel (µg/L)	TPH Oil (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TOC (feet)	DTW (feet)	SPH Thickness (feet)	GWE (feet)
MW-4	06/21/12	880	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	10.40	0.00	91.85
MW-4	09/17/12	1,800	<250	<1.0	<1.0	<1.0	<3.0	<3.0	102.25	8.00	0.00	94.25
MW-4	12/10/12	390	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	13.45	0.00	88.80
MW-4	03/04/13	160	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	23.72	0.00	78.53
MW-4	06/05/13	2,900	520	<1.0	<1.0	<1.0	<3.0	--	102.25	11.48	0.00	90.77
MW-4	09/09/13	1,300	260	<1.0	<1.0	<1.0	<3.0	--	102.25	7.62	0.00	94.63
MW-4	12/09/13	190	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	16.09	0.00	86.16
MW-4	03/05/14	<130	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	20.61	0.00	81.64
MW-4	06/19/14	580	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	10.42	0.00	91.83
MW-4	09/20/14	1,800	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	8.61	0.00	93.64
MW-4	12/15/14	2,000	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	12.64	0.00	89.61
MW-4	03/17/15	620	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	15.00	0.00	87.25
MW-4	05/21/15	--	--	--	--	--	--	--	102.25	11.89	0.00	90.36
MW-4	06/22/15	1,800	410	<1.0	<1.0	<1.0	<3.0	--	102.25	7.25	0.00	95.00
MW-4	09/15/15	2,300	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	8.45	0.00	93.80
MW-4	12/30/15	960	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	13.60	0.00	88.65
MW-4	03/25/16	250	<250	<1.0	<1.0	<1.0	<3.0	--	102.25	18.84	0.00	83.41
MW-4	**04/26/16**	**630**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**102.25**	**12.65**	**0.00**	**89.60**
MW-4	**06/27/16**	**1,500**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**102.25**	**7.30**	**0.00**	**94.95**
MW-4	**09/25/16**	**330**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**102.25**	**8.76**	**0.00**	**93.49**

TABLE 2
GROUNDWATER ANALYTICAL RESULTS AND GROUNDWATER ELEVATION MEASUREMENTS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Sample ID	Date Sampled	TPH Diesel (µg/L)	TPH Oil (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	TOC (feet)	DTW (feet)	SPH Thickness (feet)	GWE (feet)
MW-5	09/15/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	102.29	8.51	0.00	93.78
MW-5	12/30/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	102.29	13.64	0.00	88.65
MW-5	03/25/16	<130	<250	<1.0	<1.0	<1.0	<3.0	--	102.29	18.87	0.00	83.42
MW-5	**04/26/16**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**102.29**	**12.84**	**0.00**	**89.45**
MW-5	**06/27/16**	**<130**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**102.29**	**7.35**	**0.00**	**94.94**
MW-5	**09/25/16**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**102.29**	**8.82**	**0.00**	**93.47**
MW-6	09/15/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	106.73	12.89	0.00	93.84
MW-6	12/30/15	<130	<250	<1.0	<1.0	<1.0	<3.0	--	106.73	18.06	0.00	88.67
MW-6	03/25/16	<130	<250	<1.0	<1.0	<1.0	<3.0	--	106.73	23.32	0.00	83.41
MW-6	**04/26/16**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**106.73**	**17.30**	**0.00**	**89.43**
MW-6	**06/27/16**	**170**	**<250**	**<1.0**	**<1.0**	**<1.0**	**<3.0**	**--**	**106.73**	**11.80**	**0.00**	**94.93**
MW-6	**09/25/16**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**106.73**	**13.23**	**0.00**	**93.50**
MTCA Method A Cleanup Levels:		**500**	**500**	**5**	**1,000**	**700**	**1,000**	**20**	-	-	-	-

Notes:
µg/L= micrograms per liter
< = Less than reporting limit
TOC - Top of casing elevation (feet)
DTW - Depth to groundwater (feet)
SPH Thickness - Separate-phase hydrocarbon thickness (feet)
GWE - Groundwater table elevation (feet)
TPH = Total petroleum hydrocarbons
MTBE = Methyl t-butyl ether
TPH as diesel and oil by Method NWTPH-Dx
BTEX - Analysis by EPA Method 8021
MTBE - Analysis by EPA Method 8021

TABLE 3
WATER INJECTION TEST DETAILS
LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

SITE #:	**Lake Chelan; STCG-4222**
DATE:	**4/26/2016**
FIELD STAFF	**TR/LH**

Test Well ID:	IW-3
Test Well Depth to Bottom (feet):	17
Test Well Depth to Water (feet):	12.2
Time Injection Began:	1210
Initial Water Volume in Tank (gal):	210
Time Injection Ended:	1235
Total Amount Injected (gal):	210
Final Test Well Depth to Water:	10.24 @ 1239
Injection Flow Rate (gpm):	8.4 gpm

Notes:

The water injection test in injection well IW-3 impacted the depth to water measurements of all of the observation wells monitored. The fluctuation was small, but does indicate that the wells were influenced by the 210 gallons of injected water. It is believed that the Plumestop injections will be successful in impacting the contaminated wells.

The water injection test setup consisted of a 250 gallon plastic tote which was filled with 210 gallons of fresh water. The tote was directly attached to the mouth of the injection well to create a closed system. The 210 gallons of water was gravity drained through the closed circuit system at a rate of approximately 8.4 gpm.

	Depth to Water (feet)		
Time	Observation Well ID: MW-4	Observation Well ID: MW-1	Observation Well ID: MW-2
PRE-TEST 1210	12.12	11.46	11.50
1215	12.11	--	--
1220	12.10	--	--
1225	12.09	--	--
1230	12.06	--	--
1235	12.04	11.41	11.48

DTW Decrease During Injection Event (feet)		
Observation Well ID: MW-4	Observation Well ID: MW-1	Observation Well ID: MW-2
0.08	0.05	0.02

	Depth to Water (feet)		
Time	Observation Well ID: MW-4	Observation Well ID: MW-1	Observation Well ID: MW-2
POST-TEST 1310	12.08	11.41	11.46
1330	12.10	11.41	11.48

Distance from Test Well (feet) :		
Observation Well ID: MW-4	Observation Well ID: MW-1	Observation Well ID: MW-2
5	42.5	35

Figures

Figure 1 Site Location Map
Figure 2 Site Map with Injection Wells
Figure 3 Pre Injection Groundwater Analytical Data Map – 4/26/2016
Figure 4 Post Injection Groundwater Analytical Data Map – 6/27/2016
Figure 5 Post Injection Groundwater Analytical Data Map – 09/25/2016

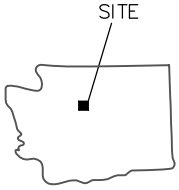
PROJECT NUMBER STCG–422

APPROVED BY

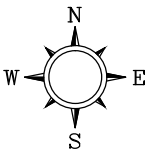
CHECKED BY

DRAWN BY ICD 04/24/2013

0 1000 2000 SCALE IN FEET



LATITUDE 47D 50M 09S NORTH
LONGITUDE 120D 02M 16S WEST
U.S. GEOLOGICAL SURVEY–2004
7.5 MINUTE QUADRANGLE MAP
CHELAN, WASHINGTON



anteagroup

LAKE CHELAN BOAT COMPANY

FIGURE 1

SITE LOCATION MAP

1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

PROJECT NUMBER	STCG-422
APPROVED BY	
CHECKED BY	
DRAWN BY	ICD 9/21/2016
FILENAME	STCG-422_1602_1.DWG

N
W E
S

DOCK
BUILDING
CONCRETE
LAKE CHELAN
OFFICES
CONCRETE
AST
DRY DOCK
PARKING LOT
PEDESTRIAN CROSSING SIGN
PEDESTRIAN CROSSING SIGN
SLOPE
SLOPE
BIKE LANE
HIGHWAY 97 (WEST WOODIN AVENUE)
MW-3
MW-2
IW-1
IW-2
IW-3
MW-4
MW-1
POOL ENGINEERING STAGING YARD
DRIVEWAY
MW-2
MW-6A
MW-1D
MW-4A
MW-1A
PARKING LOT
MW-5A
MW-3A
MW-9
MW-6
MW-5
MW-7
PARKING LOT

LEGEND

MW-1	GROUNDWATER MONITORING WELL (ANTEA GROUP)
MW-1A	UNOCAL GROUNDWATER MONITORING WELL
IW-1	NEW INJECTION LOCATION
	FENCE
	POWER/UTILITY POLE
	LIGHT POLE
	SANITARY SEWER MANHOLE
	ELECTRIC LINE
	SEWER
	COMMUNICATION LINE
	BURIED COMMUNICATION LINE
	UNDERGROUND WATER LINE

0 15 30
SCALE IN FEET

antea group

FIGURE 2

SITE MAP WITH INJECTION WELLS

LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

PROJECT NUMBER	STCG-422
APPROVED BY	
CHECKED BY	
DRAWN BY	ICD 9/21/2016
FILENAME	STCG-422_1602_1.DWG

N W E S

DOCK

BUILDING

CONCRETE

PARKING LOT

LAKE CHELAN

OFFICES

CONCRETE

AST

DRY DOCK

PEDESTRIAN CROSSING SIGN

PEDESTRIAN CROSSING SIGN

SLOPE

SLOPE

BIKE LANE

HIGHWAY 97 (WEST WOODIN AVENUE)

POOL ENGINEERING STAGING YARD

DRIVEWAY

PARKING LOT

PARKING LOT

MW-1

MW-1A

MW-1D

MW-2

MW-3

MW-3A

MW-4

MW-4A

MW-5

MW-5A

MW-6

MW-6A

MW-7

MW—9

IW-1

IW-2

IW-3

MW-3	
06/27/16	
D=	400
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

MW-2	
06/27/16	
D=	210
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

MW-1	
06/27/16	
D=	**520**
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

MW-4	
06/27/16	
D=	**1,500**
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

MW-5	
06/27/16	
D=	<130
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

MW-6	
06/27/16	
D=	170
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

LEGEND

MW-1	GROUNDWATER MONITORING WELL (ANTEA GROUP)
MW-1A	UNOCAL GROUNDWATER MONITORING WELL
IW-1	NEW INJECTION LOCATION
—x—x—x—	FENCE
D	TPH-d - TOTAL PETROLEUM HYDROCARBONS AS DIESEL (µg/L)
O	TPH-o - TOTAL PETROLEUM HYDROCARBONS AS OIL (µg/L)
B	BENZENE (µg/L)
T	TOLUENE (µg/L)
E	ETHYLBENZENE (µg/L)
X	TOTAL XYLENES (µg/L)
µg/L	MICROGRAMS PER LITER
<	NOT DETECTED ABOVE LIMIT NOTED

BOLD VALUES INDICATE EXCEEDANCE OF MTCA METHOD A CLEANUP LEVELS

0 15 30

SCALE IN FEET

antea group

FIGURE 4

POST INJECTION ANALYTICAL DATA MAP
06/27/2016

LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

PROJECT NUMBER STCG-422

APPROVED BY

CHECKED BY

DRAWN BY ICD 10/19/2016

FILENAME STCG-422_1603.DWG

N

W E

S

DOCK

BUILDING

CONCRETE

PARKING LOT

LAKE CHELAN

OFFICES

CONCRETE

AST

DRY DOCK

MW-3 NS

PEDESTRIAN CROSSING SIGN

PEDESTRIAN CROSSING SIGN

SLOPE

SLOPE

BIKE LANE

HIGHWAY 97 (WEST WOODIN AVENUE)

MW-2

MW-6A

MW-1D

MW-4A

MW-1A

PARKING LOT

MW-5A

MW-3A

MW-9

MW-6 NS

MW-5 NS

MW-7

PARKING LOT

MW-2	
09/25/16	
D=	<130
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

MW-2 IW-1 IW-2 IW-3 MW-4 MW-1

POOL ENGINEERING STAGING YARD

DRIVEWAY

MW-1	
09/25/16	
D=	140
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

MW-4	
09/25/16	
D=	330
O=	<250
B=	<1.0
T=	<1.0
E=	<1.0
X=	<3.0

LEGEND

MW-1	GROUNDWATER MONITORING WELL (ANTEA GROUP)
MW-1A	UNOCAL GROUNDWATER MONITORING WELL
IW-1	NEW INJECTION LOCATION
—x—x—x—	FENCE
D	TPH-d - TOTAL PETROLEUM HYDROCARBONS AS DIESEL (µg/L)
O	TPH-o - TOTAL PETROLEUM HYDROCARBONS AS OIL (µg/L)
B	BENZENE (µg/L)
T	TOLUENE (µg/L)
E	ETHYLBENZENE (µg/L)
X	TOTAL XYLENES (µg/L)
µg/L	MICROGRAMS PER LITER
<	NOT DETECTED ABOVE LIMIT NOTED
NS	NOT SAMPLED
	BOLD VALUES INDICATE EXCEEDANCE OF MTCA METHOD A CLEANUP LEVELS

0 15 30

SCALE IN FEET

antea group

FIGURE 5
POST INJECTION GROUNDWATER ANALYTICAL DATA MAP
09/25/2016

LAKE CHELAN BOAT COMPANY
1418 WEST WOODIN AVENUE
CHELAN, WASHINGTON

Appendix A

Boring Logs

	WELL/BORING: IW-1	Unique Ecology Well ID: BJF 912
	INSTALLATION DATE: 4/25/2016	DRILLING METHOD: Sonic
	PROJECT: STCG-4222	SAMPLING METHOD: Core
	CLIENT: Lake Chelan Boat Company	BORING DIAMETER: 6"
	LOCATION: 1418 West Woodin Avenue	BORING DEPTH: 20'
	CITY: Chelan	WELL CASING: SCH 40 PVC 2"
	STATE: WA	WELL SCREEN: 7-17' (0.020)
	DRILLER: Cascade Drilling, Inc.	SAND PACK: 5-20 (10X20)

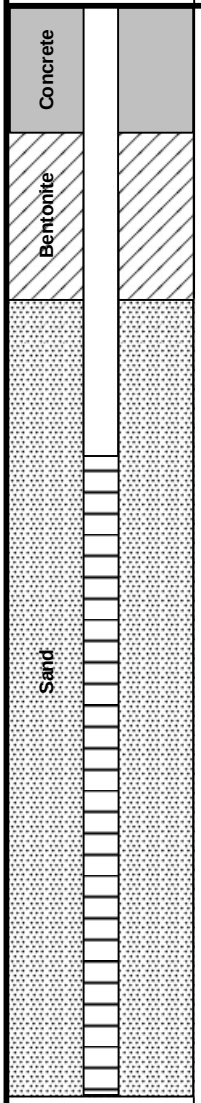
CASING ELEVATION	-
SURVEY DATE:	-
DTW:	-

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION/LOGGED BY: Taylor Roberts
Concrete / Bentonite / Sand						1–22					
			DRY	-	-	5			GW		Sandy GRAVEL: brown; large boulders.
			DMP	4.5	-	10			SW		Gravelly SAND: gray; 80% fine to coarse sand; 20% subrounded gravel.
	▽										
			DMP	15.1	-	14					Same as Above.
						15					SAND: brown; 90% coarse sand; trace gravel.
			WET	0.5	-	16			SP		
			WET	2.4	-	18			SW		Grades to higher fine sand content.

	WELL/BORING: IW-2	Unique Ecology Well ID: BJF 913
	INSTALLATION DATE: 4/25/2016	DRILLING METHOD: Sonic
	PROJECT: STCG-4222	SAMPLING METHOD: Core
	CLIENT: Lake Chelan Boat Company	BORING DIAMETER: 6"
	LOCATION: 1418 West Woodin Avenue	BORING DEPTH: 17'
	CITY: Chelan	WELL CASING: SCH 40 PVC 2"
	STATE: WA	WELL SCREEN: 7-17' (0.020)
	DRILLER: Cascade Drilling, Inc.	SAND PACK: 5-17 (10X20)

CASING ELEVATION	-
SURVEY DATE:	-
DTW:	-

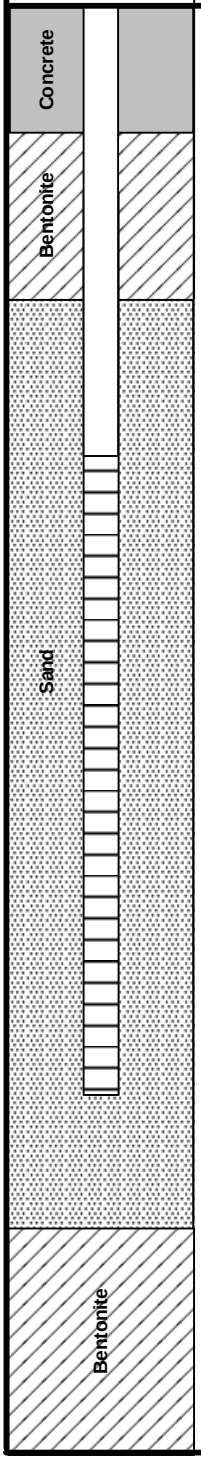
DESCRIPTION/LOGGED BY: Taylor Roberts



DEPTH (FEET)	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION
1										Surface = 10" of concrete.
2										
3										
4										
5			DRY	0.7	-			GW		Sandy GRAVEL: brown; 40% fine to coarse sand; 60% gravel.
6										
7										
8										
9										
10			DRY	0.5	-			SW		Gravelly SAND: 80% fine to coarse sand; 20% gravel.
11										
12										
13	▽									
14			WET	0.8	-			SW		Gravelly SAND: brown; 80% fine to coarse sand; 20% gravel.
15										
16			WET	0.4	-			GW		Sandy GRAVEL: 20% fine to coarse sand; 80% gravel.
17										
18										
19										
20										
21										
22										

antea group	WELL/BORING: IW-3	Unique Ecology Well ID: BJF 914
	INSTALLATION DATE: 4/25/2016	DRILLING METHOD: Sonic
	PROJECT: STCG-4222	SAMPLING METHOD: Core
	CLIENT: Lake Chelan Boat Company	BORING DIAMETER: 6"
	LOCATION: 1418 West Woodin Avenue	BORING DEPTH: 30'
	CITY: Chelan	WELL CASING: SCH 40 PVC 2"
	STATE: WA	WELL SCREEN: 7-17' (0.020)
	DRILLER: Cascade Drilling, Inc.	SAND PACK: 5-19' (10X20)

CASING ELEVATION	-
SURVEY DATE:	-
DTW:	-



WELL/BORING COMPLETION	FIRST	STABILIZED	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	DESCRIPTION/LOGGED BY: Taylor Roberts
						1					Surface = 10" concrete
						2					
						3			SW		Gravelly SAND: brown;
						4					
			DRY	0.2	-	5			SW		SAND: brown; 100% fine to coarse sand; dense.
						6					
						7					
						8					
						9					
			DRY	1.0	-	10			SW		Gravelly SAND: brown; 80% fine to coarse sand; 20% subrounded gravel.
						11					
						12					Same as above: gray.
	▽		WET	0.1	-	13			SW		Same as above: brown.
						14					
						15					
			WET	0.0	-	16			SW		SAND: brown; 100% fine to coarse sand.
						17			SP		SAND: brown; 100% coarse to very coarse sand.
						18					
			WET	0.1	-	19			SP		Gravelly SAND: brown; 90% coarse sand; 10% gravel.
						20					
						21					
			WET	1.2	-	22			SP		

	WELL/BORING: IW-3	Unique Ecology Well ID: BJF 914
	INSTALLATION DATE: 8/4/2015	DRILLING METHOD: Sonic
	PROJECT: STCG-4222	SAMPLING METHOD: Core
	CLIENT: Lake Chelan Boat Company	BORING DIAMETER: 6"
	LOCATION: 1418 West Woodin Avenue	BORING DEPTH: 30'
	CITY: Chelan	WELL CASING: SCH 40 PVC 2"
	STATE: WA	WELL SCREEN: 5-30' (0.010)
	DRILLER: Holocene Drilling Inc.	SAND PACK: 3-30' (10X20)

CASING ELEVATION	-
SURVEY DATE:	-
DTW:	-

DESCRIPTION/LOGGED BY: Taylor Roberts

WELL/BORING COMPLETION	FIRST ▽	STABILIZED ▼	MOISTURE	PID (ppm)	DENSITY BLOWS / 6"	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	USCS SYMBOL	GRAPHIC	
Bentonite			WET	0.9	-	25			SP		SAND: brown; 95% coarse sand; 5% gravel.
				0.7		26					
						27					
						28					Grades to a 15% GRAVEL content.
						29					
			WET	0.7	-	30			SP		SAND: light brown; trace very fine sand; 90% coarse sand.
						31					
						32					
						33					
						34					
						35					
						36					
						37					
						38					
						39					
						40					
						41					
						42					
						43					
						44					

Appendix B

Laboratory Analytical Reports

May 11, 2016

Mr. Matt Miller
Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

Dear Mr. Miller,

On April 27th, 4 samples were received by our laboratory and assigned our laboratory project number EV16040167. The project was identified as your STCG-422. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	5/11/2016
		ALS JOB#:	EV16040167
		ALS SAMPLE#:	EV16040167-01
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	04/27/2016
CLIENT PROJECT:	STCG-422	COLLECTION DATE:	4/26/2016 9:35:00 AM
CLIENT SAMPLE ID	MW-1-11.93	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	04/27/2016	PAB
TPH-Diesel Range	NWTPH-DX	**130**	130	1	UG/L	04/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	04/30/2016	EBS
Methane	RSK-175	U	0.010	1	MG/L	05/06/2016	CCN
Biochemical Oxygen Demand (BOD)	SM5210B	U	5.0	1	MG/L	04/27/2016	DNT
Nitrate	EPA-300.0	**48**	1.5	10	MG/L	04/27/2016	DNT
Sulfate	EPA-300.0	**30**	2.6	10	MG/L	04/27/2016	DNT
Iron	EPA-200.8	**470**	50	1	UG/L	04/27/2016	RAL
Manganese	EPA-200.8	**13**	2.0	1	UG/L	04/27/2016	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	04/27/2016	RAL
Manganese (Dissolved)	EPA-200.8	**5.8**	2.0	1	UG/L	04/27/2016	RAL
Alkalinity as CaCO3, Total	SM2320B	**470**	15	1	MG/L	05/04/2016	CAS
Dissolved Organic Carbon (DOC)	EPA-415.1	**4.9**	0.50	1	MG/L	05/04/2016	CAS
Total Organic Carbon (TOC)	SM5310C	**5.9**	0.50	1	MG/L	04/29/2016	CAS
Carbon Dioxide	RSK-175M	**66000**	1000	1	UG/L	05/03/2016	ALSS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**89.1**	04/27/2016	PAB
C25	NWTPH-DX	**110**	04/30/2016	EBS

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Chromatogram indicates that it is likely that sample contains highly weathered diesel.

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	5/11/2016
		ALS JOB#:	EV16040167
		ALS SAMPLE#:	EV16040167-02
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	04/27/2016
CLIENT PROJECT:	STCG-422	COLLECTION DATE:	4/26/2016 10:10:00 AM
CLIENT SAMPLE ID	MW-2-12.00	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	04/27/2016	PAB
TPH-Diesel Range	NWTPH-DX	**410**	130	1	UG/L	04/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	04/30/2016	EBS
Methane	RSK-175	U	0.010	1	MG/L	05/06/2016	CCN
Biochemical Oxygen Demand (BOD)	SM5210B	U	5.0	1	MG/L	04/27/2016	DNT
Nitrate	EPA-300.0	**23**	1.5	10	MG/L	04/27/2016	DNT
Sulfate	EPA-300.0	**16**	2.6	10	MG/L	04/27/2016	DNT
Iron	EPA-200.8	U	50	1	UG/L	04/27/2016	RAL
Manganese	EPA-200.8	**660**	2.0	1	UG/L	04/27/2016	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	04/27/2016	RAL
Manganese (Dissolved)	EPA-200.8	**520**	2.0	1	UG/L	04/27/2016	RAL
Alkalinity as CaCO3, Total	SM2320B	**430**	15	1	MG/L	05/04/2016	CAS
Dissolved Organic Carbon (DOC)	EPA-415.1	**6.9**	2.5	5	MG/L	05/04/2016	CAS
Total Organic Carbon (TOC)	SM5310C	**8.8**	2.5	5	MG/L	04/29/2016	CAS
Carbon Dioxide	RSK-175M	**81000**	1000	1	UG/L	05/03/2016	ALSS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**88.4**	04/27/2016	PAB
C25	NWTPH-DX	**96.1**	04/30/2016	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	5/11/2016
		ALS JOB#:	EV16040167
		ALS SAMPLE#:	EV16040167-03
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	04/27/2016
CLIENT PROJECT:	STCG-422	COLLECTION DATE:	4/26/2016 10:45:00 AM
CLIENT SAMPLE ID	MW-4-12.65	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	04/27/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	04/27/2016	PAB
TPH-Diesel Range	NWTPH-DX	**630**	130	1	UG/L	04/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	04/30/2016	EBS
Methane	RSK-175	U	0.010	1	MG/L	05/06/2016	CCN
Biochemical Oxygen Demand (BOD)	SM5210B	U	5.0	1	MG/L	04/27/2016	DNT
Nitrate	EPA-300.0	**69**	1.5	10	MG/L	04/27/2016	DNT
Sulfate	EPA-300.0	**26**	2.6	10	MG/L	04/27/2016	DNT
Iron	EPA-200.8	U	50	1	UG/L	04/27/2016	RAL
Manganese	EPA-200.8	**100**	2.0	1	UG/L	04/27/2016	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	04/27/2016	RAL
Manganese (Dissolved)	EPA-200.8	**91**	2.0	1	UG/L	04/27/2016	RAL
Alkalinity as CaCO3, Total	SM2320B	**510**	15	1	MG/L	05/04/2016	CAS
Dissolved Organic Carbon (DOC)	EPA-415.1	**13**	2.5	5	MG/L	05/04/2016	CAS
Total Organic Carbon (TOC)	SM5310C	**13**	2.5	5	MG/L	04/29/2016	CAS
Carbon Dioxide	RSK-175M	**84000**	1000	1	UG/L	05/03/2016	ALSS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**91.8**	04/27/2016	PAB
C25	NWTPH-DX	**101**	04/30/2016	EBS

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	5/11/2016
		ALS JOB#:	EV16040167
		ALS SAMPLE#:	EV16040167-04
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	04/27/2016
CLIENT PROJECT:	STCG-422	COLLECTION DATE:	4/26/2016 11:00:00 AM
CLIENT SAMPLE ID	Soil-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	0.030	1	MG/KG	04/27/2016	PAB
Toluene	EPA-8021	U	0.050	1	MG/KG	04/27/2016	PAB
Ethylbenzene	EPA-8021	U	0.050	1	MG/KG	04/27/2016	PAB
Xylenes	EPA-8021	U	0.20	1	MG/KG	04/27/2016	PAB
Mercury	EPA-7471	U	0.020	1	MG/KG	04/29/2016	RAL
Arsenic	EPA-6020	**1.2**	1.0	5	MG/KG	04/29/2016	RAL
Barium	EPA-6020	**43**	0.50	5	MG/KG	04/29/2016	RAL
Cadmium	EPA-6020	U	0.50	5	MG/KG	04/29/2016	RAL
Chromium	EPA-6020	**13**	0.50	5	MG/KG	04/29/2016	RAL
Lead	EPA-6020	**5.6**	0.50	5	MG/KG	04/29/2016	RAL
Selenium	EPA-6020	U	5.0	5	MG/KG	04/29/2016	RAL
Silver	EPA-6020	U	0.50	5	MG/KG	04/29/2016	RAL

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**140**	04/27/2016	PAB

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CERTIFICATE OF ANALYSIS

CLIENT: Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

CLIENT CONTACT: Matt Miller
CLIENT PROJECT: STCG-422

DATE: 5/11/2016
ALS SDG#: EV16040167
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-042716S - Batch 103753 - Soil by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	MG/KG	0.030	04/27/2016	PAB
Toluene	EPA-8021	U	MG/KG	0.050	04/27/2016	PAB
Ethylbenzene	EPA-8021	U	MG/KG	0.050	04/27/2016	PAB
Xylenes	EPA-8021	U	MG/KG	0.20	04/27/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

MB-042016W - Batch 103503 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	04/20/2016	PAB
Toluene	EPA-8021	U	UG/L	1.0	04/20/2016	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	04/20/2016	PAB
Xylenes	EPA-8021	U	UG/L	3.0	04/20/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

MB-042916W - Batch 103824 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	04/29/2016	EBS
TPH-Oil Range	NWTPH-DX	U	UG/L	250	04/29/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-562016 - Batch R274077 - Water by RSK-175

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Methane	RSK-175	U	MG/L	0.010	05/06/2016	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-4272016 - Batch R274135 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Nitrate	EPA-300.0	U	MG/L	0.15	04/27/2016	DNT
Sulfate	EPA-300.0	U	MG/L	0.26	04/27/2016	DNT

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

CLIENT CONTACT: Matt Miller
CLIENT PROJECT: STCG-422

DATE: 5/11/2016
ALS SDG#: EV16040167
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MBLK-4292016 - Batch R273559 - Soil by EPA-7471

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Mercury	EPA-7471	U	MG/KG	0.020	04/29/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-042916S - Batch 103814 - Soil by EPA-6020

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6020	U	MG/KG	0.20	04/29/2016	RAL
Barium	EPA-6020	U	MG/KG	0.10	04/29/2016	RAL
Cadmium	EPA-6020	U	MG/KG	0.10	04/29/2016	RAL
Chromium	EPA-6020	U	MG/KG	0.10	04/29/2016	RAL
Lead	EPA-6020	U	MG/KG	0.10	04/29/2016	RAL
Selenium	EPA-6020	U	MG/KG	1.0	04/29/2016	RAL
Silver	EPA-6020	U	MG/KG	0.10	04/29/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-042716W - Batch 103724 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Iron	EPA-200.8	U	UG/L	50	04/27/2016	RAL
Manganese	EPA-200.8	U	UG/L	2.0	04/27/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-042716W - Batch 103725 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Iron (Dissolved)	EPA-200.8	U	UG/L	50	04/27/2016	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	04/27/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB1-05/04/2016 - Batch R274140 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total	SM2320B	U	MG/L	15	05/04/2016	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	5/11/2016
		ALS SDG#:	EV16040167
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Matt Miller		
CLIENT PROJECT:	STCG-422		

LABORATORY BLANK RESULTS

MB2-05/04/2016 - Batch R274141 - Water by EPA-415.1

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Dissolved Organic Carbon (DOC)	EPA-415.1	U	MG/L	0.50	05/04/2016	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MB1-04/29/2016 - Batch R274143 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	04/29/2016	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-532016 - Batch R274068 - Water by RSK-175M

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Carbon Dioxide	RSK-175M	U	UG/L	1000	05/03/2016	ALSS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT: Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

CLIENT CONTACT: Matt Miller
CLIENT PROJECT: STCG-422

DATE: 5/11/2016
ALS SDG#: EV16040167
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 103753 - Soil by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**83.0**			67.7	124	04/27/2016	PAB
Benzene - BSD	EPA-8021	**83.0**	**0**		67.7	124	04/27/2016	PAB
Toluene - BS	EPA-8021	**88.9**			71	123	04/27/2016	PAB
Toluene - BSD	EPA-8021	**89.2**	**0**		71	123	04/27/2016	PAB
Ethylbenzene - BS	EPA-8021	**89.2**			69.8	117	04/27/2016	PAB
Ethylbenzene - BSD	EPA-8021	**89.4**	**0**		69.8	117	04/27/2016	PAB
Xylenes - BS	EPA-8021	**87.1**			70	119	04/27/2016	PAB
Xylenes - BSD	EPA-8021	**87.9**	**1**		70	119	04/27/2016	PAB

ALS Test Batch ID: 103503 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**88.9**			83	120	04/20/2016	PAB
Benzene - BSD	EPA-8021	**89.2**	**0**		83	120	04/20/2016	PAB
Toluene - BS	EPA-8021	**88.3**			85	115	04/20/2016	PAB
Toluene - BSD	EPA-8021	**89.7**	**2**		85	115	04/20/2016	PAB
Ethylbenzene - BS	EPA-8021	**92.0**			85	113	04/20/2016	PAB
Ethylbenzene - BSD	EPA-8021	**93.2**	**1**		85	113	04/20/2016	PAB
Xylenes - BS	EPA-8021	**93.8**			85	116	04/20/2016	PAB
Xylenes - BSD	EPA-8021	**95.6**	**2**		85	116	04/20/2016	PAB

ALS Test Batch ID: 103824 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**69.2**			67	125.2	04/29/2016	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**72.6**	**5**		67	125.2	04/29/2016	EBS

ALS Test Batch ID: R274077 - Water by RSK-175

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Methane - BS	RSK-175	**90.2**			80	120	05/06/2016	CCN
Methane - BSD	RSK-175	**97.1**	**7**		80	120	05/06/2016	CCN

ALS Test Batch ID: R274135 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Nitrate - BS	EPA-300.0	**96.0**			80	120	04/27/2016	DNT
Nitrate - BSD	EPA-300.0	**102**	**6**		80	120	04/27/2016	DNT
Sulfate - BS	EPA-300.0	**102**			80	120	04/27/2016	DNT

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CERTIFICATE OF ANALYSIS

CLIENT: Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

CLIENT CONTACT: Matt Miller
CLIENT PROJECT: STCG-422

DATE: 5/11/2016
ALS SDG#: EV16040167
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Sulfate - BSD	EPA-300.0	**108**	**6**		80	120	04/27/2016	DNT

ALS Test Batch ID: R273559 - Soil by EPA-7471

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Mercury - BS	EPA-7471	**91.0**			81.8	117	04/29/2016	RAL
Mercury - BSD	EPA-7471	**99.0**	**8**		81.8	117	04/29/2016	RAL

ALS Test Batch ID: 103814 - Soil by EPA-6020

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Arsenic - BS	EPA-6020	**103**			80	120	04/29/2016	RAL
Arsenic - BSD	EPA-6020	**106**	**2**		80	120	04/29/2016	RAL
Barium - BS	EPA-6020	**102**			80	120	04/29/2016	RAL
Barium - BSD	EPA-6020	**107**	**5**		80	120	04/29/2016	RAL
Cadmium - BS	EPA-6020	**104**			80	120	04/29/2016	RAL
Cadmium - BSD	EPA-6020	**107**	**3**		80	120	04/29/2016	RAL
Chromium - BS	EPA-6020	**104**			80	120	04/29/2016	RAL
Chromium - BSD	EPA-6020	**106**	**3**		80	120	04/29/2016	RAL
Lead - BS	EPA-6020	**101**			80	120	04/29/2016	RAL
Lead - BSD	EPA-6020	**103**	**3**		80	120	04/29/2016	RAL
Selenium - BS	EPA-6020	**103**			80	120	04/29/2016	RAL
Selenium - BSD	EPA-6020	**107**	**4**		80	120	04/29/2016	RAL
Silver - BS	EPA-6020	**105**			80	120	04/29/2016	RAL
Silver - BSD	EPA-6020	**109**	**3**		80	120	04/29/2016	RAL

ALS Test Batch ID: 103724 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Iron - BS	EPA-200.8	**98.7**			80	120	04/27/2016	RAL
Iron - BSD	EPA-200.8	**98.1**	**1**		80	120	04/27/2016	RAL
Manganese - BS	EPA-200.8	**98.8**			82.2	110	04/27/2016	RAL
Manganese - BSD	EPA-200.8	**98.5**	**0**		82.2	110	04/27/2016	RAL

ALS Test Batch ID: 103725 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Iron (Dissolved) - BS	EPA-200.8	**98.7**			80	120	04/27/2016	RAL
Iron (Dissolved) - BSD	EPA-200.8	**98.1**	**1**		80	120	04/27/2016	RAL
Manganese (Dissolved) - BS	EPA-200.8	**98.8**			82.2	110	04/27/2016	RAL

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CERTIFICATE OF ANALYSIS

CLIENT: Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

CLIENT CONTACT: Matt Miller
CLIENT PROJECT: STCG-422

DATE: 5/11/2016
ALS SDG#: EV16040167
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Manganese (Dissolved) - BSD	EPA-200.8	**98.5**	**0**		82.2	110	04/27/2016	RAL

ALS Test Batch ID: R274140 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity as CaCO3, Total - BS	SM2320B	**99.4**			90	110	05/04/2016	CAS
Alkalinity as CaCO3, Total - BS	SM2320B	**98.8**			90	110	05/04/2016	CAS

ALS Test Batch ID: R274141 - Water by EPA-415.1

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Dissolved Organic Carbon (DOC) - BS	EPA-415.1	**102**			83	117	05/04/2016	CAS

ALS Test Batch ID: R274143 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**101**			83	117	04/29/2016	CAS

ALS Test Batch ID: R274068 - Water by RSK-175M

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Carbon Dioxide - BS	RSK-175M	**72.1**			50	150	05/03/2016	ALSS
Carbon Dioxide - BSD	RSK-175M	**77.3**	**7**		50	150	05/03/2016	ALSS

APPROVED BY

Laboratory Director

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Everett, WA 98208
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http://www.alsglobal.com

Chain Of Custody/ Laboratory Analysis Request

ALS Job# (Laboratory Use Only): EV1604 0167

Date 4.27.16 Page 1 Of 1

PROJECT ID: STCG-422
REPORT TO COMPANY: ANTEA GROUP
PROJECT MANAGER: MATT MILLER
ADDRESS: 4026 148TH AVE NE
REDMOND WA
PHONE: FAX:
P.O. #: STCG-4222-MM E-MAIL: MATT.MILLER@ANTEAGROUP.COM
INVOICE TO COMPANY: COLONY INSURANCE
ATTENTION: ALEXIS NEALIS
~~ADDRESS:~~ CLAIM # 208188

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA 8021 ☒ / BTEX by EPA 8260 ☐	MTBE by EPA 8021 ☐ / MTBE by EPA 8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA 8270 SIM	PCB by EPA 8082 ☐ Pesticides by EPA 8081 ☐	Metals-MTCA-5 ☐ RCRA-8 ~~☒~~ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): TETRA-IRON / MANGANESE	DISSOLVED IRON MANGANESE	SULFATE / NITRATE	TOTAL / DISSOLVED TOC	BOD	ALKALINITY	METHANE / CO2	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW-1-1193	4 26 16	0935	W	1		X		X												X	X	X	X	X	X	X	11	
2. MW-2-12 CO	4-26-16	1010	W	2		X		X												X	X	X	X	X	X	X	11	
3. MW-4-12 65	4-26-16	1045	W	3		X		X												X	X	X	X	X	X	X	11	
4. SOIL-1	4 26 16	1100	S	4				X									X										3	
5.																												
6.																												
7.																												
8.																												
9.																												
10.																												

SPECIAL INSTRUCTIONS

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Robert / ANTEA / 4-27-16 / 0820
   Received By: ALS 4/27/16 8:20
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify:

*Turnaround request less than standard may incur Rush Charges

July 25, 2016

Mr. Matt Miller
Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

Dear Mr. Miller,

On June 28th, 6 samples were received by our laboratory and assigned our laboratory project number EV16060191. The project was identified as your STCG-4222_0100 Chelan. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Rick Bagan
Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	7/25/2016 EV16060191 EV16060191-01
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	06/28/2016
CLIENT PROJECT:	STCG-4222_0100 Chelan	COLLECTION DATE:	6/27/2016 11:10:00 AM
CLIENT SAMPLE ID	MW-1-6.65	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/29/2016	PAB
TPH-Diesel Range	NWTPH-DX	**520**	130	1	UG/L	06/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	06/30/2016	EBS
Methane	RSK-175	U	0.010	1	MG/L	07/08/2016	CCN
Biochemical Oxygen Demand (BOD)	SM5210B	U	5.0	1	MG/L	06/29/2016	DNT
Nitrate	EPA-300.0	**8.5**	1.5	10	MG/L	06/28/2016	GAP
Sulfate	EPA-300.0	**15**	2.6	10	MG/L	06/28/2016	GAP
Iron	EPA-200.8	U	50	1	UG/L	06/30/2016	RAL
Manganese	EPA-200.8	**17**	2.0	1	UG/L	06/30/2016	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	06/30/2016	RAL
Manganese (Dissolved)	EPA-200.8	**18**	2.0	1	UG/L	06/30/2016	RAL
Alkalinity	SM2320B	**430**	0	1	MG/L	07/01/2016	ARI
Total Organic Carbon (TOC)	SM5310C	**7.2**	0.50	1	MG/L	07/22/2016	ARI
Chemical Oxygen Demand (COD)	SM5220D	**24**	5.0	1	MG/L	07/13/2016	ARI
Carbon Dioxide	RSK-175M	**69000**	1000	1	UG/L	07/05/2016	ALSS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**88.6**	06/29/2016	PAB
C25	NWTPH-DX	**94.6**	06/30/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains highly weathered diesel.

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	7/25/2016 EV16060191 EV16060191-02
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	06/28/2016
CLIENT PROJECT:	STCG-4222_0100 Chelan	COLLECTION DATE:	6/27/2016 10:25:00 AM
CLIENT SAMPLE ID	MW-2-6.77	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/29/2016	PAB
TPH-Diesel Range	NWTPH-DX	**210**	130	1	UG/L	06/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	06/30/2016	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**3.85 GS1**	06/29/2016	PAB
C25	NWTPH-DX	**97.6**	06/30/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
GS1 - Surrogate outside of control limits due to matrix effect.
Chromatogram indicates that it is likely that sample contains highly weathered diesel.

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	7/25/2016 EV16060191 EV16060191-03
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	06/28/2016
CLIENT PROJECT:	STCG-4222_0100 Chelan	COLLECTION DATE:	6/27/2016 10:10:00 AM
CLIENT SAMPLE ID	MW-3-5.08	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/29/2016	PAB
TPH-Diesel Range	NWTPH-DX	**400**	130	1	UG/L	06/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	06/30/2016	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**90.9**	06/29/2016	PAB
C25	NWTPH-DX	**97.1**	06/30/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains highly weathered diesel.

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	7/25/2016 EV16060191 EV16060191-04
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	06/28/2016
CLIENT PROJECT:	STCG-4222_0100 Chelan	COLLECTION DATE:	6/27/2016 10:35:00 AM
CLIENT SAMPLE ID	MW-4-7.30	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/29/2016	PAB
TPH-Diesel Range	NWTPH-DX	**1500**	130	1	UG/L	06/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	06/30/2016	EBS
Methane	RSK-175	U	0.010	1	MG/L	07/08/2016	CCN
Biochemical Oxygen Demand (BOD)	SM5210B	U	5.0	1	MG/L	06/29/2016	DNT
Nitrate	EPA-300.0	**17**	1.5	10	MG/L	06/28/2016	GAP
Sulfate	EPA-300.0	**53**	2.6	10	MG/L	06/28/2016	GAP
Iron	EPA-200.8	**500**	50	1	UG/L	06/30/2016	RAL
Manganese	EPA-200.8	**87**	2.0	1	UG/L	06/30/2016	RAL
Iron (Dissolved)	EPA-200.8	**100**	50	1	UG/L	06/30/2016	RAL
Manganese (Dissolved)	EPA-200.8	**48**	2.0	1	UG/L	06/30/2016	RAL
Alkalinity	SM2320B	**470**	0	1	MG/L	07/01/2016	ARI
Total Organic Carbon (TOC)	SM5310C	**140**	0.50	1	MG/L	07/22/2016	ARI
Chemical Oxygen Demand (COD)	SM5220D	**700**	5.0	1	MG/L	07/13/2016	ARI
Carbon Dioxide	RSK-175M	**64000**	1000	1	UG/L	07/05/2016	ALSS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**3.00 GS1**	06/29/2016	PAB
C25	NWTPH-DX	**73.8**	06/30/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
GS1 - Surrogate outside of control limits due to matrix effect.
Chromatogram indicates that it is likely that sample contains highly weathered diesel.

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	7/25/2016 EV16060191 EV16060191-05
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	06/28/2016
CLIENT PROJECT:	STCG-4222_0100 Chelan	COLLECTION DATE:	6/27/2016 11:40:00 AM
CLIENT SAMPLE ID	MW-5-7.35	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/29/2016	PAB
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	06/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	06/30/2016	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**89.8**	06/29/2016	PAB
C25	NWTPH-DX	**91.2**	06/30/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	7/25/2016 EV16060191 EV16060191-06
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	06/28/2016
CLIENT PROJECT:	STCG-4222_0100 Chelan	COLLECTION DATE:	6/27/2016 11:55:00 AM
CLIENT SAMPLE ID	MW-6-11.80	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	06/29/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	06/29/2016	PAB
TPH-Diesel Range	NWTPH-DX	**170**	130	1	UG/L	06/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	06/30/2016	EBS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**90.3**	06/29/2016	PAB
C25	NWTPH-DX	**103**	06/30/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains highly weathered diesel.

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ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	7/25/2016
		ALS SDG#:	EV16060191
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Matt Miller		
CLIENT PROJECT:	STCG-4222_0100 Chelan		

LABORATORY BLANK RESULTS

MB-062816W - Batch 105830 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	06/28/2016	PAB
Toluene	EPA-8021	U	UG/L	1.0	06/28/2016	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	06/28/2016	PAB
Xylenes	EPA-8021	U	UG/L	3.0	06/28/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

MB-062816W - Batch 105827 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	06/30/2016	EBS
TPH-Oil Range	NWTPH-DX	U	UG/L	250	06/30/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-277753 - Batch R277753 - Water by RSK-175

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Methane	RSK-175	U	MG/L	0.010	07/08/2016	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-277807 - Batch R277807 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Nitrate	EPA-300.0	U	MG/L	0.15	06/28/2016	GAP
Sulfate	EPA-300.0	U	MG/L	0.26	06/28/2016	GAP

U - Analyte analyzed for but not detected at level above reporting limit.

MB-062916W - Batch 105870 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Iron	EPA-200.8	U	UG/L	50	06/30/2016	RAL
Manganese	EPA-200.8	U	UG/L	2.0	06/30/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-062916W - Batch 105871 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Iron (Dissolved)	EPA-200.8	U	UG/L	50	06/30/2016	RAL
Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	06/30/2016	RAL

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	7/25/2016
		ALS SDG#:	EV16060191
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Matt Miller		
CLIENT PROJECT:	STCG-4222_0100 Chelan		

LABORATORY BLANK RESULTS

MB-062916W - Batch 105871 - Water by EPA-200.8

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-278637 - Batch R278637 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity	SM2320B	U	MG/L	9.0	07/01/2016	ARI

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-278638 - Batch R278638 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	07/22/2016	ARI

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-278639 - Batch R278639 - Water by SM5220D

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chemical Oxygen Demand (COD)	SM5220D	U	MG/L	5.0	07/13/2016	ARI

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-277921 - Batch R277921 - Water by RSK-175M

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Carbon Dioxide	RSK-175M	U	UG/L	1000	07/05/2016	ALSS

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Antea Group
4006 - 148th Ave NE
Redmond, WA 98052
CLIENT CONTACT: Matt Miller
CLIENT PROJECT: STCG-4222_0100 Chelan

DATE: 7/25/2016
ALS SDG#: EV16060191
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 105830 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**92.4**			83	120	06/28/2016	PAB
Benzene - BSD	EPA-8021	**92.1**	**0**		83	120	06/28/2016	PAB
Toluene - BS	EPA-8021	**92.2**			85	115	06/28/2016	PAB
Toluene - BSD	EPA-8021	**93.2**	**1**		85	115	06/28/2016	PAB
Ethylbenzene - BS	EPA-8021	**96.1**			85	113	06/28/2016	PAB
Ethylbenzene - BSD	EPA-8021	**96.2**	**0**		85	113	06/28/2016	PAB
Xylenes - BS	EPA-8021	**99.6**			85	116	06/28/2016	PAB
Xylenes - BSD	EPA-8021	**100**	**1**		85	116	06/28/2016	PAB

ALS Test Batch ID: 105827 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**87.3**			67	125.2	06/30/2016	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**82.5**	**6**		67	125.2	06/30/2016	EBS

ALS Test Batch ID: R277753 - Water by RSK-175

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Methane - BS	RSK-175	**92.7**			80	120	07/08/2016	CCN
Methane - BSD	RSK-175	**95.3**	**3**		80	120	07/08/2016	CCN

ALS Test Batch ID: R277807 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Nitrate - BS	EPA-300.0	**98.0**			80	120	06/28/2016	GAP
Nitrate - BSD	EPA-300.0	**101**	**3**		80	120	06/28/2016	GAP
Sulfate - BS	EPA-300.0	**102**			80	120	06/28/2016	GAP
Sulfate - BSD	EPA-300.0	**113**	**10**		80	120	06/28/2016	GAP

ALS Test Batch ID: 105870 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Iron - BS	EPA-200.8	**102**			80	120	06/30/2016	RAL
Iron - BSD	EPA-200.8	**101**	**1**		80	120	06/30/2016	RAL
Manganese - BS	EPA-200.8	**102**			82.2	110	06/30/2016	RAL
Manganese - BSD	EPA-200.8	**102**	**1**		82.2	110	06/30/2016	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	7/25/2016
		ALS SDG#:	EV16060191
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Matt Miller		
CLIENT PROJECT:	STCG-4222_0100 Chelan		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 105871 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Iron (Dissolved) - BS	EPA-200.8	**102**			80	120	06/30/2016	RAL
Iron (Dissolved) - BSD	EPA-200.8	**101**	**1**		80	120	06/30/2016	RAL
Manganese (Dissolved) - BS	EPA-200.8	**102**			82.2	110	06/30/2016	RAL
Manganese (Dissolved) - BSD	EPA-200.8	**102**	**1**		82.2	110	06/30/2016	RAL

ALS Test Batch ID: R278637 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity - BS	SM2320B	**102**			1	200	07/01/2016	ARI

ALS Test Batch ID: R278639 - Water by SM5220D

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chemical Oxygen Demand (COD) - BS	SM5220D	**97.3**			83	117	07/13/2016	ARI

ALS Test Batch ID: R277921 - Water by RSK-175M

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Carbon Dioxide - BS	RSK-175M	**80.8**			50	150	07/05/2016	ALSS
Carbon Dioxide - BSD	RSK-175M	**84.3**	**4**		50	150	07/05/2016	ALSS

APPROVED BY

Laboratory Director

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 98208 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

EV1606019|

COLONY CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

anteagroup

Inogen Environmental Alliance

Required Lab Information:	Required Project Information:	Required Invoice Information:	
Lab Name: ALS-Everett	**Site ID #:** STCG-4222 **Task:** WG_Q_2016	**Send Invoice to:** Colony Insurance	**Claim #:** 208188
Address: 8620 Holly Drive, Suite 100	**Antea project #:** STCG-4222_0100; Chelan	**Attention :** Alexys Nealis	**Phone #:**
Everett, WA 98208	**Site Address:** 1418 West Woodin Ave	**Email Address:** alexys.nealis@colonyspeciality.com	
Lab PM: Rick Bagan	**City:** Chelan **State:** WA	**Address:**	
Phone/Fax: 425-356-2600	**Name of Antea PM:** Matthew Miller	**Send EDD to:**	
Lab PM Email: rick.bagan@alsglobal.com	**Phone/Fax:** P: 425-498-7722 F:	**CC Hardcopy report to:** Matt.Miller@anteagroup.com	
Applicable Lab Quote #:	**PM Email:** Matt.Miller@anteagroup.com	**CC Hardcopy report to:**	

Turn around time (Business days):	Standard
TAT Organic, Metals & Inorganic Analysis:	10 Days
TAT Fuels & Hydrocarbon Analysis:	5 Days
Other:	
Lab Project ID (lab use):	

Valid Matrix Codes

MATRIX		MATRIX	
DRINKING WATER	WP	WATER	W
GROUND WATER	WG	SURFACE WATER	WS
WASTE WATER	WW	WATER QC	WQ
FREE PRODUCT	LF	SLUDGE	SL
SOIL	SO	RINSEATE	WH
OIL	OIL	OTHER	OT
WIPE	SW	ANIMAL TISSUE	TA
AMBIENT AIR	AA		
SVE AIR	AE		
SOIL GAS	GS		

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs Must Be Unique (ex:MW-1_DTW))	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED?	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analyses: NWTPH-DX	BTEX 8021B	T/Diss Iron	Sulfate/Nitrate	T/Diss Mn	Methane/CO2	COD/BOD	Alkalinity	TOC	Comments/Lab Sample I.D.	Received in Good Condition?
1	MW-1 -6.65	WG	G	6.27.16	1110	12	N	6	1	1	4					X	X	X	X	X	X	X	X	X		
2	MW-2 -6.77	WG	G	6.27.16	1025	3	N	1			2					X	X									
3	MW-3 -5.09	WG	G	6.27.16	1010	3	N	1			2					X	X									
4	MW-4 -7.30	WG	G	6.27.16	1035	12	N	6	1	1	4					X	X	X	X	X	X	X	X	X		
5	MW-5 -7.35	WG	G	6.27.16	1140	3	N	1			2					X	X									
6	MW-6 - 11.80	WG	G	6.27.16	1155	3	N	1			2					X	X									
7																										
8																										
9																										
10																										
11																										
12																										

Additional Comments/Special Instructions:

~~MTBE-Detections confirmed by 8260.~~

RELINQUISHED BY (Name, Company, Date, Time)	ACCEPTED BY (Name, Company, Date, Time)
TAYLOR ROBERTS / ANTEA / 6.28.16 / 0800	6.28.16 8:00

SHIPPING METHOD (Circle One)

UPS COURIER FEDEX US MAIL DROP OFF

October 10, 2016

Mr. Matt Miller
Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

Dear Mr. Miller,

On September 26th, 4 samples were received by our laboratory and assigned our laboratory project number EV16090165. The project was identified as your STCG-4222_0100; Chelan. The sample identification and requested analyses are outlined on the attached chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely,

ALS Laboratory Group

Carl Nott
Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	10/10/2016
		ALS JOB#:	EV16090165
		ALS SAMPLE#:	EV16090165-01
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	09/26/2016
CLIENT PROJECT:	STCG-4222_0100; Chelan	COLLECTION DATE:	9/25/2016 8:55:00 AM
CLIENT SAMPLE ID	MW-1_8.12	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	09/26/2016	PAB
TPH-Diesel Range	NWTPH-DX	**140**	130	1	UG/L	09/27/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	09/27/2016	EBS
Methane	RSK-175	U	0.010	1	MG/L	10/07/2016	CCN
Biochemical Oxygen Demand (BOD)	SM5210B	U	5.0	1	MG/L	09/26/2016	DNT
Nitrate	EPA-300.0	**15**	1.5	10	MG/L	09/26/2016	DNT
Sulfate	EPA-300.0	**16**	2.6	10	MG/L	09/26/2016	DNT
Iron	EPA-200.8	U	50	1	UG/L	09/30/2016	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	09/30/2016	RAL
Manganese	EPA-200.8	**11**	2.0	1	UG/L	09/30/2016	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	09/30/2016	RAL
Manganese (Dissolved)	EPA-200.8	**10**	2.0	1	UG/L	09/30/2016	RAL
Alkalinity	SM2320B	**430**	15	1	MG/L	10/01/2016	CAS
Total Organic Carbon (TOC)	SM5310C	**4.3**	0.50	1	MG/L	09/29/2016	CAS
Chemical Oxygen Demand (COD)	SM5220D	**6.3**	5.0	1	MG/L	10/04/2016	CAS
Carbon Dioxide	RSK-175M	**84000**	1000	1	UG/L	09/29/2016	ALSS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**96.8**	09/26/2016	PAB
C25	NWTPH-DX	**96.0**	09/27/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
Chromatogram indicates that it is likely that sample contains weathered diesel.

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	10/10/2016 EV16090165 EV16090165-02
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	09/26/2016
CLIENT PROJECT:	STCG-4222_0100; Chelan	COLLECTION DATE:	9/25/2016 8:30:00 AM
CLIENT SAMPLE ID	MW-2_8.25	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	09/26/2016	PAB
TPH-Diesel Range	NWTPH-DX	U	130	1	UG/L	09/27/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	09/27/2016	EBS
Methane	RSK-175	U	0.010	1	MG/L	10/07/2016	CCN
Biochemical Oxygen Demand (BOD)	SM5210B	U	5.0	1	MG/L	09/26/2016	DNT
Nitrate	EPA-300.0	**24**	1.5	10	MG/L	09/26/2016	DNT
Sulfate	EPA-300.0	**15**	2.6	10	MG/L	09/26/2016	DNT
Iron	EPA-200.8	U	50	1	UG/L	09/30/2016	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	09/30/2016	RAL
Manganese	EPA-200.8	**710**	2.0	1	UG/L	09/30/2016	RAL
Iron (Dissolved)	EPA-200.8	U	50	1	UG/L	09/30/2016	RAL
Manganese (Dissolved)	EPA-200.8	**1300**	2.0	1	UG/L	09/30/2016	RAL
Alkalinity	SM2320B	**370**	15	1	MG/L	10/01/2016	CAS
Total Organic Carbon (TOC)	SM5310C	**5.5**	0.50	1	MG/L	09/29/2016	CAS
Chemical Oxygen Demand (COD)	SM5220D	**8.3**	5.0	1	MG/L	10/04/2016	CAS
Carbon Dioxide	RSK-175M	**69000**	1000	1	UG/L	09/29/2016	ALSS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**96.6**	09/26/2016	PAB
C25	NWTPH-DX	**95.7**	09/27/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp dba ALS Environmental

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CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	10/10/2016 EV16090165 EV16090165-03
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	09/26/2016
CLIENT PROJECT:	STCG-4222_0100; Chelan	COLLECTION DATE:	9/25/2016 9:25:00 AM
CLIENT SAMPLE ID	MW-4_8.76	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	09/26/2016	PAB
TPH-Diesel Range	NWTPH-DX	**330**	130	1	UG/L	09/29/2016	EBS
TPH-Oil Range	NWTPH-DX	U	250	1	UG/L	09/29/2016	EBS
Methane	RSK-175	U	0.010	1	MG/L	10/07/2016	CCN
Biochemical Oxygen Demand (BOD)	SM5210B	U	5.0	1	MG/L	09/26/2016	DNT
Nitrate	EPA-300.0	**2.6**	1.5	10	MG/L	09/26/2016	DNT
Sulfate	EPA-300.0	**35**	2.6	10	MG/L	09/26/2016	DNT
Iron	EPA-200.8	**150**	50	1	UG/L	09/30/2016	RAL
Lead	EPA-200.8	U	1.0	1	UG/L	09/30/2016	RAL
Manganese	EPA-200.8	**2800**	2.0	1	UG/L	09/30/2016	RAL
Iron (Dissolved)	EPA-200.8	**73**	50	1	UG/L	09/30/2016	RAL
Manganese (Dissolved)	EPA-200.8	**2700**	2.0	1	UG/L	09/30/2016	RAL
Alkalinity	SM2320B	**520**	15	1	MG/L	10/01/2016	CAS
Total Organic Carbon (TOC)	SM5310C	**42**	10	20	MG/L	09/29/2016	CAS
Chemical Oxygen Demand (COD)	SM5220D	**220**	5.0	1	MG/L	10/04/2016	CAS
Carbon Dioxide	RSK-175M	**85000**	1000	1	UG/L	09/29/2016	ALSS

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**41.1 GS1**	09/26/2016	PAB
C25	NWTPH-DX	**95.1**	09/29/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.
GS1 - Surrogate outside of control limits due to matrix effect.
Chromatogram indicates that it is likely that sample contains weathered diesel.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE: ALS JOB#: ALS SAMPLE#:	10/10/2016 EV16090165 EV16090165-04
CLIENT CONTACT:	Matt Miller	DATE RECEIVED:	09/26/2016
CLIENT PROJECT:	STCG-4222_0100; Chelan	COLLECTION DATE:	9/25/2016
CLIENT SAMPLE ID	Trip Blank-1	WDOE ACCREDITATION:	C601

SAMPLE DATA RESULTS

ANALYTE	METHOD	RESULTS	REPORTING LIMITS	DILUTION FACTOR	UNITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Toluene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Ethylbenzene	EPA-8021	U	1.0	1	UG/L	09/26/2016	PAB
Xylenes	EPA-8021	U	3.0	1	UG/L	09/26/2016	PAB

SURROGATE	METHOD	%REC	ANALYSIS DATE	ANALYSIS BY
TFT	EPA-8021	**94.2**	09/26/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

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ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

CLIENT CONTACT: Matt Miller
CLIENT PROJECT: STCG-4222_0100; Chelan

DATE: 10/10/2016
ALS SDG#: EV16090165
WDOE ACCREDITATION: C601

LABORATORY BLANK RESULTS

MB-092616W2 - Batch 108335 - Water by EPA-8021

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Benzene	EPA-8021	U	UG/L	1.0	09/26/2016	PAB
Toluene	EPA-8021	U	UG/L	1.0	09/26/2016	PAB
Ethylbenzene	EPA-8021	U	UG/L	1.0	09/26/2016	PAB
Xylenes	EPA-8021	U	UG/L	3.0	09/26/2016	PAB

U - Analyte analyzed for but not detected at level above reporting limit.

MB-092616W - Batch 108436 - Water by NWTPH-DX

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	U	UG/L	130	09/26/2016	EBS
TPH-Oil Range	NWTPH-DX	U	UG/L	250	09/26/2016	EBS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-R282737 - Batch R282737 - Water by RSK-175

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Methane	RSK-175	U	MG/L	0.010	10/07/2016	CCN

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-282384 - Batch R282384 - Water by EPA-300.0

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Nitrate	EPA-300.0	U	MG/L	0.15	09/26/2016	DNT
Sulfate	EPA-300.0	U	MG/L	0.26	09/26/2016	DNT

U - Analyte analyzed for but not detected at level above reporting limit.

MB-092916W - Batch 108483 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Iron	EPA-200.8	U	UG/L	50	09/29/2016	RAL
Lead	EPA-200.8	U	UG/L	1.0	09/29/2016	RAL
Manganese	EPA-200.8	U	UG/L	2.0	09/29/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MB-092916W - Batch 108482 - Water by EPA-200.8

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Iron (Dissolved)	EPA-200.8	U	UG/L	50	09/29/2016	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	10/10/2016
		ALS SDG#:	EV16090165
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Matt Miller		
CLIENT PROJECT:	STCG-4222_0100; Chelan		

LABORATORY BLANK RESULTS

MB-092916W - Batch 108482 - Water by EPA-200.8

Manganese (Dissolved)	EPA-200.8	U	UG/L	2.0	09/29/2016	RAL

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-282746 - Batch R282746 - Water by SM2320B

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Alkalinity	SM2320B	U	MG/L	15	10/01/2016	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-282749 - Batch R282749 - Water by SM5310C

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC)	SM5310C	U	MG/L	0.50	09/29/2016	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-282748 - Batch R282748 - Water by SM5220D

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Chemical Oxygen Demand (COD)	SM5220D	U	MG/L	5.0	10/04/2016	CAS

U - Analyte analyzed for but not detected at level above reporting limit.

MBLK-282745 - Batch R282745 - Water by RSK-175M

ANALYTE	METHOD	RESULTS	UNITS	REPORTING LIMITS	ANALYSIS DATE	ANALYSIS BY
Carbon Dioxide	RSK-175M	U	UG/L	1000	09/29/2016	ALSS

U - Analyte analyzed for but not detected at level above reporting limit.

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT:	Antea Group 4006 - 148th Ave NE Redmond, WA 98052	DATE:	10/10/2016
		ALS SDG#:	EV16090165
		WDOE ACCREDITATION:	C601
CLIENT CONTACT:	Matt Miller		
CLIENT PROJECT:	STCG-4222_0100; Chelan		

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 108335 - Water by EPA-8021

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Benzene - BS	EPA-8021	**93.0**			83	120	09/26/2016	PAB
Benzene - BSD	EPA-8021	**89.8**	**4**		83	120	09/26/2016	PAB
Toluene - BS	EPA-8021	**95.9**			85	115	09/26/2016	PAB
Toluene - BSD	EPA-8021	**93.2**	**3**		85	115	09/26/2016	PAB
Ethylbenzene - BS	EPA-8021	**103**			85	113	09/26/2016	PAB
Ethylbenzene - BSD	EPA-8021	**100**	**3**		85	113	09/26/2016	PAB
Xylenes - BS	EPA-8021	**101**			85	116	09/26/2016	PAB
Xylenes - BSD	EPA-8021	**98.3**	**3**		85	116	09/26/2016	PAB

ALS Test Batch ID: 108436 - Water by NWTPH-DX

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range - BS	NWTPH-DX	**86.4**			67	125.2	09/26/2016	EBS
TPH-Diesel Range - BSD	NWTPH-DX	**88.8**	**3**		67	125.2	09/26/2016	EBS

ALS Test Batch ID: R282737 - Water by RSK-175

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Methane - BS	RSK-175	**109**			80	120	10/07/2016	CCN
Methane - BSD	RSK-175	**109**	**0**		80	120	10/07/2016	CCN

ALS Test Batch ID: R282384 - Water by EPA-300.0

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Nitrate - BS	EPA-300.0	**99.0**			80	120	09/26/2016	DNT
Nitrate - BSD	EPA-300.0	**102**	**3**		80	120	09/26/2016	DNT
Sulfate - BS	EPA-300.0	**100**			80	120	09/26/2016	DNT
Sulfate - BSD	EPA-300.0	**95.0**	**5**		80	120	09/26/2016	DNT

ALS Test Batch ID: 108483 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Iron - BS	EPA-200.8	**101**			80	120	09/29/2016	RAL
Iron - BSD	EPA-200.8	**102**	**1**		80	120	09/29/2016	RAL
Lead - BS	EPA-200.8	**96.6**			87.5	107	09/29/2016	RAL
Lead - BSD	EPA-200.8	**95.4**	**1**		87.5	107	09/29/2016	RAL
Manganese - BS	EPA-200.8	**101**			82.2	110	09/29/2016	RAL
Manganese - BSD	EPA-200.8	**102**	**1**		82.2	110	09/29/2016	RAL

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

ALS Environmental

CERTIFICATE OF ANALYSIS

CLIENT: Antea Group
4006 - 148th Ave NE
Redmond, WA 98052

CLIENT CONTACT: Matt Miller
CLIENT PROJECT: STCG-4222_0100; Chelan

DATE: 10/10/2016
ALS SDG#: EV16090165
WDOE ACCREDITATION: C601

LABORATORY CONTROL SAMPLE RESULTS

ALS Test Batch ID: 108482 - Water by EPA-200.8

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Iron (Dissolved) - BS	EPA-200.8	**101**			80	120	09/29/2016	RAL
Iron (Dissolved) - BSD	EPA-200.8	**102**	**1**		80	120	09/29/2016	RAL
Manganese (Dissolved) - BS	EPA-200.8	**101**			82.2	110	09/29/2016	RAL
Manganese (Dissolved) - BSD	EPA-200.8	**102**	**1**		82.2	110	09/29/2016	RAL

ALS Test Batch ID: R282746 - Water by SM2320B

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Alkalinity - BS	SM2320B	**100**			1	200	10/01/2016	CAS

ALS Test Batch ID: R282749 - Water by SM5310C

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Total Organic Carbon (TOC) - BS	SM5310C	**97.0**			80	120	09/29/2016	CAS

ALS Test Batch ID: R282748 - Water by SM5220D

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Chemical Oxygen Demand (COD) - BS	SM5220D	**100**			83	117	10/04/2016	CAS

ALS Test Batch ID: R282745 - Water by RSK-175M

SPIKED COMPOUND	METHOD	%REC	RPD	QUAL	LIMITS MIN	LIMITS MAX	ANALYSIS DATE	ANALYSIS BY
Carbon Dioxide - BS	RSK-175M	**110**			50	150	09/29/2016	ALSS
Carbon Dioxide - BSD	RSK-175M	**111**	**1**		50	150	09/29/2016	ALSS

APPROVED BY

Operations Manager

ADDRESS 8620 Holly Drive, Suite 100, Everett, WA 9820 | PHONE 425-356-2600 | FAX 425-356-2626
ALS Group USA, Corp dba ALS Environmental

EV16090165

antea group

COLONY CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed and accurate.

Inogen Environmental Alliance

Required Lab Information:	Required Project Information:	Required Invoice Information:	
Lab Name: ALS-Everett	Site ID #: STCG-4222 Task: WG_Q_2016	Send Invoice to: Colony Insurance	Claim #: 208188
Address: 8620 Holly Drive, Suite 100	Antea project #: STCG-4222_0100; Chelan	Attention: Ryan Kashin	Phone #:
Everett, WA 98208	Site Address: 1418 West Woodin Ave	Email Address: ryan.kashin@agrogroupus.com	
Lab PM: Rick Bagan	City: Chelan State: WA	Address:	
Phone/Fax: 425-356-2600	Name of Antea PM: Matthew Miller	Send EDD to:	
Lab PM Email: rick.bagan@alsglobal.com	Phone/Fax: P: 425-498-7722 F:	CC Hardcopy report to: Matt.Miller@anteagroup.com	
Applicable Lab Quote #:	PM Email: Matt.Miller@anteagroup.com	CC Hardcopy report to:	

Turn around time (Business days):	Standard
TAT Organic, Metals & Inorganic Analysis:	10 Days
TAT Fuels & Hydrocarbon Analysis:	5 Days
Other:	
Lab Project ID (lab use):	

Valid Matrix Codes

MATRIX		MATRIX	
DRINKING WATER	WP	WATER	W
GROUND WATER	WG	SURFACE WATER	WS
WASTE WATER	WW	WATER QC	WQ
FREE PRODUCT	LF	SLUDGE	SL
SOIL	SO	RINSEATE	WH
OIL	OL	OTHER	OT
WIPE	SW	ANIMAL TISSUE	TA
AMBIENT AIR	AA		
SVE AIR	AE		
SOIL GAS	SG		

ITEM #	SAMPLE ID (One Character per box. (A-Z, 0-9 / ,-) Samples IDs Must Be Unique (ex:MW-1_DTW))	MATRIX CODE	SAMPLE TYPE G=GRAB C=COMP	SAMPLE DATE	SAMPLE TIME	#OF CONTAINERS	FIELD FILTERED?	Preservatives: Unpreserved	H_2SO_4	HNO3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analyses: NWTPH-DX	BTEX 8021B	T/Diss Iron	Sulfate/Nitrate	T/Diss Mn	Methane/CO2	COD/BOD	Alkalinity	TOC	Total Lead	Comments/Lab Sample I.D.	Received in Good Condition?
1	MW-1 -8.12	WG	G	9.25.16	0855	12	N	6	1	1	4					X	X	X	X	X	X	X	X	X	X	
2	MW-2 -8.25	WG	G	9.25.16	0830	12	N	6	1	1	4					X	X	X	X	X	X	X	X	X	X	
3	MW-4 -8.76	WG	G	9.25.16	0925	12	N	6	1	1	4					X	X	X	X	X	X	X	X	X	X	
4	Trip Blank-1_	W	G	9.25.16	0000	2	N				2						X									
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

Additional Comments/Special Instructions:

~~MTBE Detections confirmed by 8260.~~

RELINQUISHED BY: (Name, Company, Date, Time)	ACCEPTED BY: (Name, Company, Date, Time)
T. ROBERTS, ANTEA, 9.26.16, 0805	Shawn Robertson ALS 9/26/16 0805

SHIPPING METHOD (Circle One)

UPS COURIER FEDEX US MAIL (DROP OFF)

Appendix C

UIC Permit

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341

April 21, 2016

Mr. Jack Raines
Lake Chelan Boat Company
1418 W. Woodin Avenue
Chelan, WA 98816

RE: Registration with the Underground Injection Control (UIC) Program, Lake Chelan Boat Co., 1418 W. Woodin Ave., Chelan, WA

Dear Mr. Raines:

This letter is to acknowledge receipt of your registration form received April 4, 2016 to register the above-mentioned site with the UIC Program. The project will include:

- Two injections of PlumeStop mixed with tap water into three UIC wells; IW1, IW2, and IW3. 4000 pounds of PlumeStop mixed with 4316 gallons of water will be used in the first injection. The second injection timing is dependent on the results of the first. 2000 pounds of PlumeStop mixed with 2158 gallons of water is considered for the second event.

- A start date in May 2016 and can continue through December 2016 if needed.

Clean up actions/sites that are not approved by WA State Department of Ecology under the Model Toxics Control Act (MTCA), chapter 70.105D RCW or approved by the United States Environmental Protection Agency under the Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. 9601 et seq are required to meet the Water Quality Standards for Ground Waters of the State of Washington, Chapter 173-200 WAC (GWQS). The injected compounds are intended to improve groundwater quality. There are inherent environmental risks associated with injecting compounds into groundwater. Carefully characterize, manage, and monitor the site to minimize risk and prevent unforeseen degradation of groundwater quality. Mobilized metals or other substances, injected chemicals or hazardous bi-products, are not allowed to migrate beyond the site property boundary or into the lake.

The two UIC Program requirements for rule authorization are, registration of UIC wells (prior to use) and the discharge from the well must meet the nonendangerment standard, of WAC 173-218-080. The UIC site is number 33066. Listed below are the minimum requirements to meet the nonendangerment standard. Your site is conditionally rule authorized when the following have been met:

- Meet the groundwater quality standards, chapter 173-200-WAC;
- Complete a thorough site characterization including: geologic investigation, concentration and extent of contaminant plume, aquifer characteristics, and location of preferential migration pathways (natural and manmade);

A groundwater monitoring program that includes: well location and sampling sufficient to characterize the background groundwater quality, the water quality at the point of compliance, and identify any changes in groundwater quality resulting from the injected compounds;

- Develop a conceptual site model that balances the injection rate, concentration, and total mass of injected compound with that of the subsurface contamination. The model should predict the expected changes in groundwater chemistry over time, final groundwater quality at the point of compliance, and predicted restoration timeframe;
- Hydrologically contain within the site property boundaries, the injected compounds and any regulated substances mobilized by the injected products;
- Prepare a written contingency plan that describes, in detail, the actions to be taken in case of spills, failures, equipment breakdowns and/or unforeseen environmental degradation caused by the cleanup activities; and,
- Retain all plans, modeling, monitoring results, interim and final reports. Upon request, provide these documents to the Department of Ecology.

If groundwater quality does not meet the Ground Water Quality Standards at the point of compliance, you must notify the Department of Ecology within 24 hours of discovery.

At any time, the Department of Ecology may require you to apply for and obtain a Waste Discharge Permit for the continued use of these compounds.

A formal approval for this project may be obtained through the departments' State Waste Discharge Permit Program or the MTCA Program.

Please call me at (360) 407-6143 if you have any questions. Additional information on the UIC Program can also be found at our website http://www.ecy.wa.gov/programs/wq/grndwtr/uic/index.html

Sincerely,

Mary S Hansen

Mary Shaleen-Hansen
UIC Coordinator
Water Quality Program

Cc: Jaime Sasse, Antea Group

Appendix D

Regenesis Status Report

June 16, 2016

Matt Miller
Antea Group
4006 148th Ave NE
Redmond, WA 98052

RE: Application Summary Report for PlumeStop® at the Lake Chelan Boat Company Site in Chelan, WA

REGENESIS Proposal No. DoD54272

Matt,

REGENESIS Remediation Services (RRS) recently completed an *in-situ* injection application using PlumeStop® Liquid Activated Carbon (PlumeStop) application under the direction of Antea Group at the Lake Chelan Boat Company Site at 1418 West Woodin Avenue in Chelan, WA. The scope of work for this application was designed to use strategically placed injection well locations to rapidly reduce contaminant concentrations of petroleum hydrocarbons.

A detailed injection summary log recording actual application quantities, pressures, and other noteworthy observations from the application is provided in Table 1. Please reference REGENESIS Proposal No. DoD54272, dated March 9, 2016 for more details on the remediation design scope of work.

On-Site Work Summary

PlumeStop Application

Antea Group completed a design verification test prior to mobilization of RRS personnel. After reviewing the results of the DVT, no changes were made to original design and scope of work since groundwater levels appeared to be as anticipated. On-site work began on the morning of Wednesday, June 1st, 2016, and was completed on Thursday June 2nd, 2016. PlumeStop remediation chemistry application employed a total of three (3) injections wells in the treatment area.

Low pressures (0-5 psi) and moderate flow rates, ranging from 2.01 gallons per minute (gpm) to 3.58 gpm, were observed during the application. Since low pressures were observed, RRS employed temporary 2" compression fittings to connect to the 2 in. diameter injection wells.

After product injection was completed, RRS injected clear water to flush out the injection wells and sand filter packs. Additionally, RRS flushed nearby monitoring wells with clear water to

assure they were free of any product accumulation. Flushing with clear water assures that the product solution will not clog the well screen after the injection is completed.

Injection Well ID	Size	Screen Interval	Slot Size	Injection Interval	Total Feet	Notes
1	2"	7 – 17'	0.020"	7 – 17'	10'	Compression fitting
2	2"	7 – 17'	0.020"	7 – 17'	10'	Compression fitting
3	2"	7 – 17'	0.020"	7 – 17'	10'	Compression fitting

Conclusion

The full volume of PlumeStop was applied within the targeted treatment areas. A total of 4,000 lbs. (4,795 gal) of PlumeStop was applied in three injection wells in the treatment area. Low pressures and moderate flow rates observed indicate good distribution of the remediation chemistry is likely.

RRS appreciates the opportunity to work with Antea Group at this site, and will be available to interpret the field data as it is collected in the upcoming weeks. If you need additional information regarding the application event or have any questions, feel free to contact Doug Davis at 614-447-0492 or Laura Moore-Shay at 574-303-9463.

REGENESIS

Laura Moore-Shay
West Region Project Manager

Andrea Maben
Project Supervisor for RRS

Attachments: Table 1 – PlumeStop Summary Log
Table 2 – Groundwater Parameters Log
Figure 1 – Injection Point Locations Map

PLUME STOP® Liquid Activated Carbon

Antea- Lake Chelan Boat Company Site

Plumestop Injection Summary Log

REGENESIS®

Table 1

Injection Point	Date	Time	Injection Depth (feet)	Avg. Injection Pressure (psi)	Avg. Flow Rate (gpm)	Volume of PlumeStop Injected			Total gallons Per Location	Comments
						Beginning Flow Meter (gal)	Ending Flow Meter (gal)	Gallons Injected Per Interval		
IW-1	6/1/2016	10:44	7-17	0.0	2.7	0	108	108	1601	
	6/1/2016	11:35		0.0	3.0	108	272	164		
	6/1/2016	13:07		0.0	3.0	272	430	158		
	6/1/2016	14:44		0.0	2.5	430	611	181		
	6/1/2016	16:50		0.0	2.9	611	765	154		
	6/2/2016	8:15		0.0	2.9	0	260	260		
	6/2/2016	10:10		1.0	2.8	260	405	145		
	6/2/2016	11:44		1.0	3.6	405	565	160		
	6/2/2016	12:51		1.0	3.3	565	836	271		
IW-2	6/1/2016	10:53	7-17	0.0	2.4	0	100	100	1597	
	6/1/2016	11:36		4.0	3.0	100	273	173		
	6/1/2016	13:07		4.0	2.6	273	410	137		
	6/1/2016	14:45		4.0	2.2	410	660	250		
	6/1/2016	16:49		0.0	2.1	660	817	157		
	6/2/2016	8:15		4.0	2.7	0	278	278		
	6/2/2016	10:09		4.0	3.3	278	415	137		
	6/2/2016	11:43		6.0	2.8	415	560	145		
	6/2/2016	12:50		6.0	3.3	560	780	220		
IW-3	6/1/2016	10:56	7-17	0.0	2.4	0	94	94	1597	
	6/1/2016	11:36		0.0	3.0	94	270	176		
	6/1/2016	13:08		0.0	2.6	270	405	135		
	6/1/2016	14:45		0.0	2.1	405	650	245		
	6/1/2016	16:49		0.0	2.0	650	818	168		
	6/2/2016	8:16		0.0	2.9	0	240	240		
	6/2/2016	10:08		0.0	2.9	240	355	115		
	6/2/2016	11:43		0.0	3.4	355	510	155		
	6/2/2016	12:49		4.0	3.3	510	779	269		
								Total:	**4795**	

PLUME STOP Liquid Activated Carbon

Antea-Lake Chelan Boat Company Site

Groundwater Parameter Log

REGENESIS®

Table 2

Date	Time	Location	Water Depth (feet)	Temperature (Celsius)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP	Comments
6/1/16	8:46	MW-1	-	14.16	1.45	4.91	7.93	227.30	
	8:47		-	14.29	1.45	4.88	7.67	241.50	
	8:48		-	14.82	1.47	4.48	7.75	236.80	
6/2/16	7:24		-	14.50	1.44	2.09	7.75	238.20	clear water observed
	7:25		-	14.54	1.44	2.07	7.75	238.30	
	16:05		-	15.40	1.50	3.92	7.97	221.90	clear water observed
	16:06		-	15.66	1.50	3.06	7.92	225.80	
	7:36		8.00	-	-	2.26	-	-	black water observed
	15:30		7.85	-	-	-	-	-	
6/1/16	8:38	MW-2	-	13.42	1.20	7.11	7.92	239.10	
	8:39		-	13.60	1.21	6.56	7.91	231.30	
	8:41		-	14.25	1.23	6.78	7.99	224.10	
6/2/16	7:35		-	13.26	1.18	2.37	7.79	232.60	black water observed
	7:36		-	13.31	1.18	2.26	7.76	234.90	black water observed
	7:29		8.10	-	-	3.54	-	-	black water observed
	15:30		8.00	-	-	-	-	-	
6/1/16	8:28	MW-3	-	14.08	1.08	4.06	7.91	226.00	
	8:29		-	14.36	1.09	3.55	7.88	230.10	
6/2/16	7:17		-	14.46	1.15	3.00	7.67	242.90	clear water observed
	7:18		-	14.65	1.16	2.85	7.65	245.00	
	15:57		-	15.46	1.35	2.00	8.06	218.50	clear water observed
	15:58		-	15.21	1.35	1.20	8.01	222.20	
	7:17		6.42	-	-	2.85	-	-	clear water observed
	15:30		8.32	-	-	-	-	-	

PLUME STOP® Liquid Activated Carbon

Antea-Lake Chelan Boat Company Site

Groundwater Parameter Log

REGENESIS®

Table 2

Date	Time	Location	Water Depth (feet)	Temperature (Celsius)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP	Comments
6/1/16	8:53	MW-4	-	15.05	2.12	4.87	7.90	223.50	
	8:54		-	15.27	2.12	5.02	7.92	222.40	
	8:57		-	16.25	2.18	4.85	8.08	218.40	
6/2/16	7:29		-	15.83	1.37	3.58	8.19	218.40	
	7:30		-	15.82	1.37	3.54	8.19	218.00	
	7:24		8.64	-	-	2.07	-	-	clear water observed
	15:30		8.51	-	-	-	-	-	
6/1/16	9:01	MW-5	-	15.09	2.85	4.19	8.08	222.00	
	9:02		-	15.19	2.85	4.09	8.08	221.10	
	9:03		-	15.31	2.86	4.04	8.09	220.20	
	9:05		-	16.61	2.95	3.04	8.16	213.30	
6/2/16	15:41		-	15.02	2.84	5.42	7.93	230.40	clear water observed
	15:42		-	15.13	2.86	4.56	7.83	235.50	
	15:30		8.68	-	-	-	-	-	
6/1/16	9:09	MW-6	-	14.83	2.75	2.49	8.03	217.80	
	9:10		-	14.95	2.76	2.38	8.05	217.10	
	9:11		-	15.09	2.77	2.31	8.05	216.70	
6/2/16	15:32		-	17.50	2.82	2.87	7.82	236.60	clearwater observed
	15:33		-	17.64	2.84	2.74	7.82	235.50	
	15:30		13.10	-	-	-	-	-	

PLUME STOP® Liquid Activated Carbon

Antea-Lake Chelan Boat Company Site

Groundwater Parameter Log

REGENESIS®

Table 2

Date	Time	Location	Water Depth (feet)	Temperature (Celsius)	Conductivity (uS/cm)	Dissolved Oxygen (mg/L)	pH	ORP	Comments
6/2/16	15:30	IW-1	7.70	-	-	-	-	-	post-injection water level
6/2/16	15:30	IW-2	8.15	-	-	-	-	-	post-injection water level
6/2/16	15:30	IW-3	8.50	-	-	-	-	-	post-injection water level

PROJECT NUMBER	STCG-422
APPROVED BY	
CHECKED BY	
DRAWN BY	ICD
	6/14/2016
FILENAME	STCG-422_16Q1_2_1.DWG

N
W E
S

DOCK
BUILDING
CONCRETE
LAKE CHELAN
OFFICES
CONCRETE
AST
DRY DOCK
PARKING LOT
PEDESTRIAN CROSSING SIGN
PEDESTRIAN CROSSING SIGN
SLOPE
SLOPE
BIKE LANE
HIGHWAY 97 (WEST WOODIN AVENUE)
POOL ENGINEERING STAGING YARD
DRIVEWAY
PARKING LOT
PARKING LOT

MW-1
MW-1A
MW-2
MW-3
MW-4
MW-5
MW-6
MW-6A
MW-7
MW-1D
MW-4A
MW-1A
MW-5A
MW-3A
MW–9
IW-1
IW-2
IW-3

LEGEND

- MW-1 — GROUNDWATER MONITORING WELL (ANTEA GROUP)
- MW-1A — UNOCAL GROUNDWATER MONITORING WELL
- IW-1 — NEW INJECTION LOCATION
- FENCE
- POWER/UTILITY POLE
- LIGHT POLE
- SANITARY SEWER MANHOLE
- ELECTRIC LINE
- SEWER
- COMMUNICATION LINE
- BURIED COMMUNICATION LINE
- UNDERGROUND WATER LINE

0 15 30
SCALE IN FEET

antea group

FIGURE 2

SITE MAP

COUPEVILLE COUNTRY STORE
1 SOUTH MAIN STREET
COUPEVILLE, WASHINGTON

Appendix E

Waste Manifest

***24 HOUR EMERGENCY RESPONSE, CALL (877) 577-2669 ***

Stericycle®
Environmental Solutions

SHIPPING PAPER

Lading Manifest: 994349-16

	DELIVERY DATE: 7-19-16 / JOB #: 2422298
SHIPPER / CUSTOMER: Lady of the Lake	POINT OF CONTACT:
ADDRESS: 1418 W Woodin Ave	PHONE #: (949)460-5200
CITY, STATE, ZIP: Chelan WA 98816	
CARRIER / TRANSPORTER: BURLINGTON ENVIRONMENTAL, LLC	PHONE #: (253)383-3044
CONSIGNEE / FACILITY: BURLINGTON ENVIRONMENTAL, LLC.	POINT OF CONTACT:
ADDRESS: 20245 77TH AVENUE SOUTH	PHONE #: (253)872-8030
CITY, STATE, ZIP: KENT, WA 98032	

HM	US DOT Description (*Including Proper Shipping Name, Hazard Class, and ID Number*)	Containers No.	Containers Type	Total Quantity	UOM
A	HATERIAL NOT REGULATED BY DOT	6	DM	3100 ~~0~~	P
B	D5581				
C					
D					

Special Handling Instruction and Additional Information:

a) 269285OIL.05-00 - IDW SOIL - STAB01 (4) FSO 269024

Placards Provided YES_____ NO ✓

SHIPPER'S CERTIFICATION: "I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations." I also certify that all times listed above are true and correct.

		MONTH	DAY	YEAR
(SHIPPER) PRINT OR TYPE NAME: X TAYLOR ROBERTS	SIGNATURE: X	6	20	16
(CARRIER/TRANSPORTER) PRINT OR TYPE NAME: X David Gunlock	SIGNATURE: X	7 ~~6~~	19	16
(CONSIGNEE/FACILITY) PRINT OR TYPE NAME: X Tiffany Hosmer	SIGNATURE: X Tiffany L Hosmer	8	2	16

CONSIGNEE

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