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February 11, 2015

Project No. 146714

Department of Ecology
Heather Vick (TCP)
3190 160th Ave. SE
Bellevue, WA 98008-5452

Re: Draft Annual Groundwater Monitoring Report and First Three Quarters of Groundwater Pumping, Treatment, and SPH Monitoring – 2014
AT&T Data Center - 20307 North Creek Parkway, Bothell, Washington
Department of Ecology TCP# NW2011, ID# 3706871

Dear Ms. Vick:

CB&I Environmental & Infrastructure, Inc. (CB&I) is pleased to present the results of the 2014 groundwater monitoring activities conducted at the AT&T Bothell Facility (Site) located at 20307 North Creek Parkway, Bothell, Washington (Figure 1). Two semi-annual groundwater monitoring events were performed in 2014 to assess the progress of remedial actions at the Site. The following sections summarize:

- the historical activities conducted at the Site,
- the site geology and hydrogeology,
- the two 2014 semi-annual groundwater monitoring events to assess progress of remedial actions at the Site and associated laboratory results,
- the first three quarters of 2014 groundwater pumping and treatment through the oil water separator (OWS), and site groundwater depth measurements compared to the impermeable liner and separate phase hydrocarbon (SPH) measurement and removal, and;
- OWS system laboratory results, pumping volumes, conclusions, and recommendations for the Site.

Please note, the fourth quarter evaluation of the system (including the groundwater depth measurements, SPH measurement and removal) will be reported as the first quarter of the 2015 annual report.

SITE HISTORY

The AT&T Data Center is located in the northwest corner of the Schnitzer North Creek development in Bothell, Washington. North Creek Parkway borders the east side of the Site and Interstate 405 borders the west side. The property is largely paved and contains three office buildings and a generator building. The property is approximately 8.13 acres and is situated within N1/2, NE1/4, Section 5, T26N, R5E, King County, Washington. The facility, currently owned by AT&T, is zoned for commercial/industrial use.

In August 2008, approximately 15,000 gallons of diesel fuel was released from the aboveground storage tanks located adjacent to the west wall of the generator building. The initial response and subsequent remedial activities were successful in containing subsurface diesel impacts within AT&T property boundaries. The results are detailed in a Shaw Environmental & Infrastructure, report entitled *Emergency Response and Remedial Activities Report* (ERRAR), dated January 2010.

A total of eight groundwater monitoring wells were installed during and after the emergency response activities to determine the magnitude and extent of groundwater impact. An impermeable liner was installed in the remedial excavation to prevent diesel-contaminated water from entering the backfill of the stormwater line and/or the line itself. Ten extraction wells were installed upgradient of the impermeable liner to provide access for the recovery of contaminated water. The ERRAR report includes details about the spill cleanup, monitoring well and extraction well installation, the initial round of groundwater sampling conducted on October 2, 2008, and four quarters of groundwater sampling conducted during 2009.

Groundwater analytical results from the 2009 through the 2013 sampling events indicate no detections above laboratory method reporting limits or MTCA Method A Groundwater Cleanup Levels for total petroleum hydrocarbons (TPH) as diesel (TPH-D), TPH as oil (TPH-O), or benzene, toluene, ethyl benzene, and xylenes (BTEX) in groundwater from perimeter wells MW-1 through MW-7.

Groundwater analytical results from 2009 through the 2013 sampling events for well MW-8 (installed January 5, 2009 near the spill area) had TPH-D results ranging from 1,030 to 2,900 micrograms per liter (µg/L), above the MTCA Method A Groundwater Cleanup level of 500 µg/L. TPH-O concentrations were reported as non-detect with one result of 570 ug/L, above the MTCA Method A Groundwater Cleanup Level of 500ug/L. Benzene concentrations ranged from non-detect to 86.3 µg/L (benzene was above the MTCA Method A Groundwater Cleanup Level of 5 µg/L in seven of the twelve sampling events). Total xylenes were reported as 1,000 µg/L in January 2009 with the MTCA Method A Groundwater Cleanup Level for total xylenes as 1,000 µg/L. Concentrations of total xylenes have remained below the MTCA Method A Groundwater Cleanup or non-detect since January 2009. The groundwater flow direction during all previous sampling events was to the south or southeast.

A new continuous operation groundwater remediation system began operation July 29, 2013. The groundwater recovery and treatment system consists of pneumatic diaphragm groundwater recovery pumps powered by a 5 horsepower air compressor. The extracted groundwater is pumped to an OWS that removes SPH from the groundwater. The OWS can handle up to 20 gallons per minute (gpm). Any SPH that collects in the OWS gravity flows into a 120-gallon product holding tank located on the OWS skid, within secondary containment. The groundwater effluent is discharged to the sanitary sewer.

Additional pneumatic pumps were added over the course of the year. There are between two and four pumps running (pumps are installed in EW-3, EW-5, EW-6, and EW-10) to assist in keeping the groundwater levels below the liner and/or recovering SPH.

A Discharge Authorization to allow discharge of pumped groundwater into the sanitary sewer was acquired from King County and the City of Bothell. As part of the sewer permit, a report is prepared semi-annually that includes monthly discharge volumes and semi-annual grab samples which are

analyzed for BTEX and NWTPH-Dx with silica gel cleanup. The Discharge Authorization allows a discharge of up to 25,000 gallons per day.

SITE GEOLOGY AND HYDROGEOLOGY

The Site is located in the North Creek basin, which is typically underlain by floodplain and alluvial deposits consisting of inter-bedded organic silt, peat, and sand. Above these deposits is medium dense to dense sand fill imported during site development. The organic silt and peat at the subject site is typically encountered at a depth of 2 to 10 feet below ground surface (bgs) and extends to depths ranging from 20 to 65 feet bgs.

Shallow groundwater is present beneath the site and ranges in depth from approximately 2 to 8 feet bgs. The groundwater is generally present in the fill material and is perched atop the peat layer. The groundwater fluctuates considerably with precipitation, seasons, and the level of nearby North Creek. The maximum thickness of the saturated zone is expected to occur during the winter months of December, January, and February. Groundwater elevation data indicates the general direction of flow of the shallow groundwater is to the south-southeast.

SEMI-ANNUAL GROUNDWATER MONITORING 2014

Semi-annual groundwater monitoring was conducted during the months of March and September, 2014. The location of the eight groundwater monitoring wells sampled, MW-1 through MW-8, are shown on Figure 2.

March 2014 Groundwater Monitoring Event

The first 2014 semi-annual groundwater monitoring event was performed on March 17 and 18, 2014. The groundwater flow direction during the monitoring event (as measured on March 17, 2014) was to the south-southeast, as shown on Figure 3. This gradient remains consistent with previous monitoring events. Monitoring wells MW-4 and MW-7 were not used in the gradient evaluation due to high water levels which appeared to be an anomaly. Groundwater sampling was performed using low-flow sampling techniques. The depth to water was measured and recorded; the wells were then purged and sampled with a portable peristaltic pump system fitted with dedicated polyethylene and silicon tubing. During well purging, field water quality parameters (temperature, pH, specific conductance, dissolved oxygen [DO], oxidation reduction potential [ORP], and turbidity) were measured approximately every five minutes and recorded on field sampling data sheets (FSDSs). The wells were purged until the field water quality parameters stabilized to within 10 percent for field conductivity, DO, ORP, and temperature for three consecutive measurements. Groundwater samples were then collected directly into laboratory-supplied containers from the pump discharge tubing, labeled, and placed in a chilled cooler. BTEX samples are not allowed to run through the peristaltic pump.

The monitoring well samples were submitted under chain-of-custody documentation to Pace Analytical of Minneapolis, Minnesota for analysis of TPH-D and TPH-O by Ecology Method NWTPH-Dx with silica gel cleanup and BTEX by EPA Method 8260B.

Groundwater analytical results from the March 17 and 18, 2014 sampling event indicated that concentrations of benzene, toluene, ethylbenzene, and total xylene were below the respective MTCA Method A Groundwater Cleanup Levels in all monitoring wells (MW-1 through MW-8).

The concentrations of TPH-O in MW-2 (590 ug/L), MW-4 (760 ug/L), and MW-8 (1,300 ug/L) were above the MTCA Method A Groundwater Cleanup Level of 500 µg/L, which is inconsistent with previous sampling events for these three wells. Detection of TPH-O was not expected in these wells at these levels based on sampling results from previous sampling events. TPH-O concentrations in MW-2, MW-4, and MW-8 have been below the MTCA Method A Groundwater Cleanup Level in previous sampling events. No apparent reason for the exceedances was discovered. The TPH-D concentration in MW-8 (2,900 ug/L) was above the MTCA Method A Groundwater Cleanup Level of 500 µg/L. This result is consistent with previous sampling results for MW-8.

The groundwater elevation summary and analytical results are presented in Table 1. The March 17 and 18, 2014 laboratory analytical report is provided in Attachment 1 and the FSDSs are provided in Attachment 2.

September 2014 Groundwater Monitoring Event

The second 2014 semi-annual groundwater monitoring event was performed on September 24 and 25, 2014. The groundwater flow direction, as measured on September 24, 2014, was to the south, as shown on Figure 4. This gradient remains consistent with previous monitoring events. Groundwater sampling was performed using low-flow sampling techniques. The depth to water was measured and recorded. The wells were then purged and sampled with a portable peristaltic pump system. New dedicated polyethylene and silicon tubing were used in each of the monitoring wells due to the high TPH-O results during the March 2014 sampling event. During well purging, field water quality parameters (temperature, pH, specific conductance, DO, ORP, and turbidity) were measured approximately every 5 minutes and recorded on FSDSs. The wells were purged until the field water quality parameters stabilized to within 10 percent for field conductivity, DO, ORP, and temperature for three consecutive measurements. Groundwater samples were then collected directly from the pump discharge tubing, into pre-preserved laboratory-supplied containers, labeled, and placed in a chilled cooler. BTEX samples are not allowed to run through the peristaltic pump.

The monitoring well samples were submitted under chain-of-custody documentation to Pace Analytical in Minneapolis, Minnesota, for analysis of TPH-D and TPH-O by Ecology Method NWTPH-Dx with silica gel cleanup and BTEX by EPA Method 8260B.

Groundwater analytical results for the September 2014 groundwater sampling event indicated that TPH-D, TPH-O, and BTEX concentrations were below the laboratory method reporting limits in groundwater samples collected from wells MW-1 through MW-7. The concentration of TPH-D collected from well MW-8 (970 ug/L) was above the MTCA Method A Groundwater Cleanup Level of 500 µg/L. All other constituents analyzed from MW-1 through MW-8 were reported as non-detect results that are consistent with previous sampling results. Groundwater elevation summaries and analytical results are presented in Table 1. The September 24 and 25, 2014 laboratory analytical report is provided in Attachment 3 and the FSDSs are provided in Attachment 4.

SUMMARY OF DEPTH TO GROUNDWATER AND SPH MEASUREMENT EFFORTS IN THE FIRST THREE QUARTERS OF 2014

CB&I monitored groundwater and SPH levels in 10 extraction wells (EW-1 through EW-10), during the first three quarters of 2014 (Figure 2). Based upon those measurements and in an attempt to keep groundwater levels below the impermeable liner and remediate contamination, groundwater and SPH was pumped from the specified wells.

CB&I also monitored interior observation wells and piezometers (OW-1 through OW-3 and B-19 through B-28), throughout the first three quarters of 2014. SPH was pumped from observation wells and piezometers inside the generator building. The purged SPH was placed in the 120-gallon SPH holding tank on the OWS skid for future disposal.

For ease of presentation, the groundwater/ SPH monitoring and pumping is divided into three quarters. The results of each quarter are summarized below.

First Quarter 2014 Groundwater/SPH Monitoring and Pumping Results

CB&I monitored groundwater and SPH levels during the first quarter (January 1, 2014 through March 31, 2014) in a select number of the extraction and observation wells and piezometers at the Site. SPH and groundwater were recovered from the wells or piezometers if SPH was present greater than 0.03 feet thick. A peristaltic pump and tubing were used to pump the SPH/groundwater into a graduated bucket; the totals of each liquid were recorded once a recoverable amount of SPH was no longer achievable. Readings were recorded and the SPH/groundwater mixture was transferred to the 120-gallon SPH holding tank on the OWS skid for future disposal.

SPH was recorded in extraction well EW-4 on one occasion, January 20, 2014, with a SPH thickness of 0.01 feet. SPH was recovered from the generator building observation wells/piezometers OW-2, B-20 and B-26 on five occasions. During the first quarter, approximately 0.35 gallons of SPH was transferred to the 120-gallon SPH holding tank on the OWS skid for future disposal.

The total volume of groundwater extracted from the extraction wells and treated in the OWS at the Site during the first quarter was 584,583 gallons.

The extraction well depth to water and SPH thickness data is included in Table 2. The total volume of groundwater pumped during the first quarter is included in Table 5. The volumes of SPH and groundwater recovered from each of the observation wells/piezometers in the generator building for the first quarter is included in Table 6A.

Second Quarter 2014 Groundwater/SPH Monitoring and Pumping Results

CB&I monitored groundwater and SPH levels during the second quarter (April 1, 2014 through June 30, 2014) in a select number of extraction and observation wells and piezometers at the Site. The results of the second quarter 2014 monitoring showed that no measurable SPH (greater than 0.005 feet) had accumulated in any of the extraction wells. However, SPH was recovered from observation wells/piezometers OW-2, B-19, B-20, and B-26 on eight occasions. During the second quarter,

approximately 0.21 gallons of SPH transferred to the 120-gallon SPH holding tank on the OWS skid for future disposal.

The total volume of groundwater extracted and treated in the OWS at the Site during the second quarter was 747,155 gallons.

The extraction well depth to water and SPH thickness data is included in Table 3. The total volume of groundwater pumped during the second quarter is included in Table 5. The volumes of SPH and groundwater recovered from each of the observation wells/piezometers in the generator building for the second quarter is included in Table 6B.

Third Quarter 2014 Groundwater/SPH Monitoring and Pumping Results

CB&I monitored groundwater and SPH levels during the third quarter (July 1, 2014 through September 30, 2014) in a select number of the extraction and observation wells and piezometers at the Site. The results of the third quarter 2014 monitoring, recorded SPH present in extraction wells EW-1 (August 6, 2014), EW-4 (July 24, 2014), and EW-5 (September 3 and 11, 2014) with a SPH thickness each of 0.01 feet. SPH was also recovered from observation wells/piezometers B-19, B-20, B-25, and B-26 on seven occasions. During the third quarter, approximately 0.32 gallons of SPH transferred to the 120-gallon SPH holding tank on the OWS skid for future disposal.

The total volume of groundwater extracted and treated in the OWS during the third quarter was 547,293 gallons.

The extraction well depth to water and SPH thickness data are included in Table 4. The total volume of groundwater pumped during the third quarter is included in Table 5. The volumes of SPH and groundwater recovered from each of the observation wells/piezometers in the generator building for the third quarter is included in Table 6C.

CONCLUSIONS

The following results are based on the analytical data collected during the 2014 semi-annual groundwater monitoring events:

The March 2014 groundwater analytical results indicated:

- TPH-D and BTEX concentrations were non-detect in groundwater samples collected from wells MW-1 through MW-7.
- TPH-O concentrations in MW-2 (590 ug/L), MW-4 (760 ug/L), and MW-8 (1,300 ug/L) were above the MTCA Method A Groundwater Cleanup Level of 500 ug/L. The elevated concentration of TPH-O in these results is not explainable and may possibly be attributed to a breakthrough in the laboratory's silica gel cleanup for the NWTPH-Dx .
- The TPH-D concentration in MW-8 (2,900 ug/L) was above the MTCA Method A Groundwater Cleanup Level of 500 ug/L.

The September 2014 groundwater analytical results indicated:

- TPH-D, TPH-O, and BTEX concentrations were non-detect in groundwater samples collected from wells MW-1 through MW-7.
- The TPH-D concentration in MW-8 (970 ug/L) was above the MTCA Method A Groundwater Cleanup Level of 500 ug/L.

Groundwater analytical results in MW-8 (installed near the spill area) indicate that groundwater continues to be impacted with TPH-D above the MTCA Method A Groundwater Cleanup Level of 500 µg/L.

A total of 1,879,031 gallons of groundwater was removed and treated by the onsite OWS system during the first, second, and third quarters of 2014. The water was then discharged to the sanitary sewer under the King County Discharge Authorization.

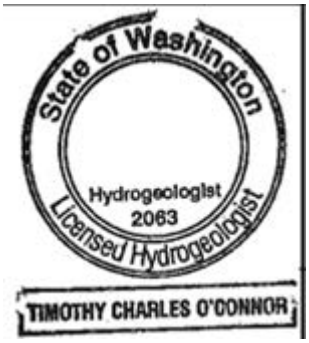
A total of 0.77 gallons of SPH was removed from the observation wells and piezometers in the generator building during 2014.

RECOMMENDED ACTIONS

Based on the findings of the semi-annual groundwater monitoring events and the pumping and treatment of the impacted groundwater, CB&I recommends continued semi-annual groundwater monitoring. Analytical parameters will include NWTPH-Dx for diesel- and oil-range petroleum hydrocarbons with silica gel cleanup and EPA Method 8260B for BTEX; together with pH, DO, ORP, turbidity, and depth-to-water measurements. Semi-annual groundwater monitoring, groundwater extraction, and treatment will continue. During the upcoming monitoring and extraction activities, the site will be evaluated for potential optimization measures both for SPH removal/treatment and for the on-site system. At the completion of the monitoring events, an annual groundwater monitoring report (with the first quarter to be from October through December 2014) will be completed and submitted to the Department of Ecology.

If you have any questions or require additional information, please do not hesitate to contact me at 425.402.3252.

Sincerely,



Tim O'Connor, LG, LHG
Senior Project Geologist
CB&I Environmental & Infrastructure, Inc.

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2 Groundwater Depth/SPH Thickness (Extraction Wells), First Quarter 2014
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4 Groundwater Depth/SPH Thickness (Extraction Wells), Third Quarter 2014
5 Groundwater/SPH Pumping (First, Second, Third, and Fourth Quarters, 2014)
6A Volume of SPH Removed from Extraction Wells, First Quarter 2014
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6C Volume of SPH Removed from Extraction Wells, Third Quarter 2014

Figures: 1 Area Location Map
2 Groundwater Monitoring, Extraction, and Observation Well Location Map
3 Groundwater Contour Map – March 17, 2014
4 Groundwater Contour Map – September 24, 2014

Appendix: A March 17 and 18, 2014, Analytical Report
B March 17 and 18, 2014, Field Sampling Data Sheet
C September 24 and 25, 2014 Field Sampling Analytical Reports
D September 24 and 25, 2014, Field Sampling Data Sheets

Tables

Table 1
Groundwater Elevation Summary and Analytical Results 2009-2014
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

Monitoring Well Number	Date	Depth to Water (feet)[a]	Depth to SPH (feet)	SPH Thickness (feet)	Top of Casing Elevation (feet)	Groundwater Elevation (feet)	Contaminant					
							TPH-D[b]	TPH-O[b]	Benzene[c]	Toluene[c]	Ethyl benzene[c]	Total Xylene[c]
GCLs							500	500	5	1,000	700	1,000
MW-1	1/12/2009	2.89	ND	—	36.12	33.23	ND	ND	ND	ND	ND	ND
	4/8/2009	3.72	ND	—	36.12	32.4	ND	ND	ND	ND	ND	ND
	7/8/2009	4.41	ND	—	36.12	31.71	ND	ND	ND	ND	ND	ND
	10/28/2009	3.34	ND	—	36.12	32.78	ND	ND	ND	ND	ND	ND
	4/6/2010	4.07	ND	—	36.12	32.05	ND	ND	ND	ND	ND	ND
	10/6/2010	4.59	ND	—	36.12	31.53	ND	ND	ND	1.6	ND	ND
	3/10/2011	1.68	ND	—	36.12	34.44	ND	ND	ND	ND	ND	ND
	9/15/2011	4.87	ND	—	36.12	31.25	ND	ND	ND	ND	ND	ND
	3/15/2012	0.99	ND	—	36.12	35.13	ND	ND	ND	ND	ND	ND
	10/5/2012	4.88	ND	—	36.12	31.24	170Y[e]	360Y[e]	ND	ND	ND	ND
	3/1/2013	2.71	ND	—	36.12	33.41	ND	ND	ND	ND	ND	ND
	10/8/2013	3.45	ND	—	36.12	32.67	ND	ND	ND	ND	ND	ND
	3/17/2014	1.70	ND	—	36.12	34.42	ND	ND	ND	ND	ND	ND
	9/24/2014	1.73	ND	—	36.12	34.39	ND	ND	ND	ND	ND	ND
MW-2	1/12/2009	4.37	ND	—	35.55	31.18	ND	ND	ND	ND	ND	ND
	4/8/2009	5.05	ND	—	35.55	30.5	ND	ND	ND	ND	ND	ND
	7/8/2009	5.91	ND	—	35.55	29.64	ND	ND	ND	ND	ND	ND
	10/28/2009	4.65	ND	—	35.55	30.9	ND	ND	ND	ND	ND	ND
	4/6/2010	5.24	ND	—	35.55	30.31	ND	ND	ND	ND	ND	ND
	10/6/2010	5.94	ND	—	35.55	29.61	ND	ND	ND	ND	ND	ND
	3/10/2011	4.32	ND	—	35.55	31.23	ND	ND	ND	ND	ND	ND
	9/15/2011	5.99	ND	—	35.55	29.56	ND	ND	ND	ND	ND	ND
	3/15/2012	4.32	ND	—	35.55	31.23	ND	ND	ND	ND	ND	ND
	10/5/2012	6.05	ND	—	35.55	29.5	120Y[e]	ND	ND	ND	ND	ND
	3/1/2013	5.20	ND	—	35.55	30.35	ND	ND	ND	ND	ND	ND
	10/8/2013	5.88	ND	—	35.55	29.67	ND	ND	ND	1.8	ND	ND
	3/17/2014	4.66	ND	—	35.55	30.89	ND	590	ND	ND	ND	ND
	9/24/2014	4.84	ND	—	35.55	30.71	ND	ND	ND	ND	ND	ND

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							TPH-D[b]	TPH-O[b]	Benzene[c]	Toluene[c]	Ethyl benzene[c]	Total Xylene[c]
GCLs							500	500	5	1,000	700	1,000
MW-3	1/12/2009	2.99	ND	—	34.75	31.76	ND	ND	ND	ND	ND	ND
	4/8/2009	3.41	ND	—	34.75	31.34	ND	ND	ND	ND	ND	ND
	7/8/2009	4.37	ND	—	34.75	30.38	ND	ND	ND	ND	ND	ND
	10/28/2009	3.26	ND	—	34.75	31.49	ND	ND	ND	ND	ND	ND
	4/6/2010	3.56	ND	—	34.75	31.19	ND	ND	ND	ND	ND	ND
	10/6/2010	4.25	ND	—	34.75	30.5	ND	ND	ND	ND	ND	ND
	3/10/2011	2.58	ND	—	34.75	32.17	ND	ND	ND	ND	ND	ND
	9/15/2011	4.28	ND	—	34.75	30.47	ND	ND	ND	ND	ND	ND
	3/15/2012	2.49	ND	—	34.75	32.26	ND	ND	ND	ND	ND	ND
	10/5/2012	3.84	ND	—	34.75	30.91	ND	ND	ND	ND	ND	ND
	3/4/2013	3.34	ND	—	34.75	31.41	ND	ND	ND	ND	ND	ND
	10/8/2013	4.00	ND	—	34.75	30.75	ND	ND	ND	ND	ND	ND
	3/17/2014	2.58	ND	—	34.75	32.17	ND	ND	ND	ND	ND	ND
	9/24/2014	3.23	ND	—	34.75	31.52	ND	ND	ND	ND	ND	ND
MW-4	1/12/2009	1.56	ND	—	35.26	33.7	ND	ND	ND	ND	ND	ND
	4/8/2009	1.63	ND	—	35.26	33.63	ND	ND	ND	ND	ND	ND
	7/8/2009	2.12	ND	—	35.26	33.14	ND	ND	ND	ND	ND	ND
	10/28/2009	1.79	ND	—	35.26	33.47	ND	ND	ND	ND	ND	ND
	4/6/2010	2.89	ND	—	35.26	34.37	ND	ND	ND	ND	ND	ND
	10/6/2010	1.9	ND	—	35.26	33.36	ND	ND	ND	ND	ND	ND
	3/10/2011	1.23	ND	—	35.26	34.03	ND	ND	ND	ND	ND	ND
	9/15/2011	2.12	ND	—	35.26	33.14	ND	ND	ND	ND	ND	ND
	3/15/2012	1.29	ND	—	35.26	33.97	ND	ND	ND	ND	ND	ND
	10/5/2012	1.75	ND	—	35.26	33.51	ND	ND	ND	ND	ND	ND
	3/4/2013	1.78	ND	—	35.26	33.48	ND	ND	ND	ND	ND	ND
	10/9/2013	1.93	ND	—	35.26	33.33	ND	ND	ND	ND	ND	ND
	3/17/2014	1.15	ND	—	35.26	34.11	ND	760	ND	ND	ND	ND
	9/24/2014	1.84	ND	—	35.26	33.42	ND	ND	ND	ND	ND	ND

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AT&T Data Center
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Monitoring Well Number	Date	Depth to Water (feet)[a]	Depth to SPH (feet)	SPH Thickness (feet)	Top of Casing Elevation (feet)	Groundwater Elevation (feet)	Contaminant					
							TPH-D[b]	TPH-O[b]	Benzene[c]	Toluene[c]	Ethyl benzene[c]	Total Xylene[c]
GCLs							500	500	5	1,000	700	1,000
MW-5	1/12/2009	4.22	ND	—	38.23	34.01	ND	ND	ND	ND	ND	ND
	4/8/2009	4.39	ND	—	38.23	33.84	ND	ND	ND	ND	ND	ND
	7/8/2009	4.98	ND	—	38.23	33.25	ND	ND	ND	ND	ND	ND
	10/28/2009	4.28	ND	—	38.23	33.95	ND	ND	ND	ND	ND	ND
	4/6/2010	5.62	ND	—	38.23	32.61	ND	ND	ND	ND	ND	ND
	10/6/2010	4.5	ND	—	38.23	33.73	ND	ND	ND	ND	ND	ND
	3/11/2011	4.19	ND	—	38.23	34.04	ND	ND	ND	ND	ND	ND
	9/15/2011	4.99	ND	—	38.23	33.24	ND	ND	ND	ND	ND	ND
	3/15/2012	4.19	ND	—	38.23	34.04	ND	ND	ND	ND	ND	ND
	10/5/2012	5.01	ND	—	38.23	33.22	390Y[e]	420Y[e]	ND	ND	ND	ND
	3/4/2013	4.41	ND	—	38.23	33.82	ND	ND	ND	ND	ND	ND
	10/9/2013	4.68	ND	—	38.23	33.55	ND	ND	ND	ND	ND	ND
	3/18/2014	4.22	ND	—	38.23	34.01	ND	470	ND	ND	ND	ND
	9/25/2014	5.01	ND	—	38.23	33.22	ND	ND	ND	ND	ND	ND
MW-6	1/12/2009	4.42	ND	—	36.7	32.28	ND	ND	ND	ND	ND	ND
	4/8/2009	4.38	ND	—	36.7	32.32	ND	ND	ND	ND	ND	ND
	7/8/2009	4.7	ND	—	36.7	32	ND	ND	ND	ND	ND	ND
	10/28/2009	4.18	ND	—	36.7	32.52	ND	ND	ND	ND	ND	ND
	4/6/2010	3.95	ND	—	36.7	32.75	ND	ND	ND	ND	ND	ND
	10/6/2010	4.31	ND	—	36.7	32.39	ND	ND	ND	ND	ND	ND
	3/10/2011	3.57	ND	—	36.7	33.13	ND	ND	ND	ND	ND	ND
	9/15/2011	4.73	ND	—	36.7	31.97	ND	ND	ND	ND	ND	ND
	3/15/2012	3.4	ND	—	36.7	33.3	ND	ND	ND	ND	ND	ND
	10/5/2012	4.73	ND	—	36.7	31.97	ND	ND	ND	ND	ND	ND
	3/4/2013	3.68	ND	—	36.7	33.02	ND	ND	ND	ND	ND	ND
	10/9/2013	4.01	ND	—	36.7	32.69	ND	ND	ND	ND	ND	ND
	3/18/2014	3.52	ND	—	36.7	33.18	ND	ND	ND	ND	ND	ND
	9/25/2014	4.68	ND	—	36.7	32.02	ND	ND	ND	ND	ND	ND

Table 1
Groundwater Elevation Summary and Analytical Results 2009-2014
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

Monitoring Well Number	Date	Depth to Water (feet)[a]	Depth to SPH (feet)	SPH Thickness (feet)	Top of Casing Elevation (feet)	Groundwater Elevation (feet)	Contaminant					
							TPH-D[b]	TPH-O[b]	Benzene[c]	Toluene[c]	Ethyl benzene[c]	Total Xylene[c]
GCLs							500	500	5	1,000	700	1,000
MW-7	1/12/2009	2.22	ND	—	35.8	33.58	ND	ND	ND	ND	ND	ND
	4/8/2009	2.32	ND	—	35.8	33.48	ND	ND	ND	ND	ND	ND
	7/8/2009	3.16	ND	—	35.8	32.64	ND	ND	ND	ND	ND	ND
	10/28/2009	2.48	ND	—	35.8	33.32	ND	ND	ND	ND	ND	ND
	4/6/2010	2.82	ND	—	35.8	32.98	ND	ND	ND	ND	ND	ND
	10/6/2010	3.16	ND	—	35.8	32.64	ND	ND	ND	ND	ND	ND
	3/11/2011	1.71	ND	—	35.8	34.09	ND	ND	ND	ND	ND	ND
	9/15/2011	3.38	ND	—	35.8	32.42	ND	ND	ND	ND	ND	ND
	3/15/2012	1.38	ND	—	35.8	34.42	ND	ND	ND	ND	ND	ND
	10/5/2012	3.58	ND	—	35.8	32.22	ND	ND	ND	ND	ND	ND
	3/4/2013	2.74	ND	—	35.8	33.06	ND	ND	ND	ND	ND	ND
	10/9/2013	3.25	ND	—	35.8	32.55	ND	ND	ND	ND	ND	ND
	3/18/2014	1.96	ND	—	35.8	33.84	ND	490	ND	ND	ND	ND
	9/24/2014	3.53	ND	—	35.8	32.27	ND	ND	ND	ND	ND	ND
MW-8[d]	1/12/2009	4.69	ND	—	38.53	33.84	1,030	ND	86.3	11.7	125	1,000
	4/8/2009	4.88	ND	—	38.53	33.65	2,120	ND	18.4	1.2	54.6	245
	7/8/2009	5.85	ND	—	38.53	32.68	2,290	ND	12	ND	14	59
	10/28/2009	4.78	ND	—	38.53	33.75	1,700	ND	41	1.6	61	157
	4/6/2010	5.24	ND	—	38.53	33.29	2,700	ND	34	1.2	47	139
	10/6/2010	5.26	ND	—	38.53	33.27	2,100	ND	3.7	ND	ND	ND
	3/11/2011	4.65	ND	—	38.53	33.88	1,500	ND	18	ND	43	129
	9/15/2011	5.89	ND	—	38.53	32.64	1,600	ND	ND	21	ND	ND
	3/15/2012	4.61	ND	—	38.53	33.92	2,900Y	ND	11	ND	11	51.3
	10/5/2012	7.39	ND	—	38.53	31.14	2,100Y	570Y[e]	ND	ND	ND	5
	3/1/2013	4.93	ND	—	38.53	33.60	1,800Y	ND	1.1	ND	7	30
	10/9/2013	5.27	ND	—	38.53	33.26	2,200	ND	ND	ND	1.1	ND
	3/18/2014	4.62	ND	—	38.53	33.91	2,900	1300	ND	ND	5.3	3.1
	9/25/2014	5.98	ND	—	38.53	32.55	970	ND	ND	ND	ND	ND

Table 1
Groundwater Elevation Summary and Analytical Results 2009-2014
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

Monitoring Well Number	Date	Depth to Water (feet)[a]	Depth to SPH (feet)	SPH Thickness (feet)	Top of Casing Elevation (feet)	Groundwater Elevation (feet)	Contaminant					
							TPH-D[b]	TPH-O[b]	Benzene[c]	Toluene[c]	Ethyl benzene[c]	Total Xylene[c]
GCLs							500	500	5	1,000	700	1,000

Note:

All results are in micrograms per liter (µg/L).

SPH = Separate phase hydrocarbon.
GCL = MTCA Method A groundwater cleanup level.

TPH-D = total petroleum hydrocarbons - diesel range.

TPH-O = total petroleum hydrocarbons - oil range.
ND = not detected at concentrations exceeding the laboratory method reporting limit.

Bold, shaded values indicate concentrations exceed MTCA Method A GCL.

B Compound was found in the blank and sample.

J Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Y The chromatographic response resembles a typical fuel pattern.

— = not recorded

a Because water levels were collected before groundwater sampling, levels in table may vary slightly from those on field sampling data sheets.

b Analyzed by Northwest Method NWTPH-Dx.

c BTEX samples were analyzed by EPA Method 8021B in January and April 2009; by EPA Method 8260B in July and October 2009, April and October 2010, March and October 2012, and March 2013; by SW8260 October 2013.

d Monitoring well was installed January 5, 2009.

e Results likely due to biological interference as a results of silica gel cleanup not being performed.

Table 2
Groundwater Depth/SPH Thickness (Extraction Wells)
First Quarter, 2014
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

Well	1/2/2014		1/8/2014		1/15/2014		1/20/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	NM	NM	NM	NM	NM	NM
EW-2	3.60	ND	5.03	ND	4.95	ND	5.09	ND
EW-3	3.19	ND	4.62	ND	4.54	ND	4.66	ND
EW-4	3.06	ND	4.37	ND	4.28	ND	4.54	0.01
EW-5	3.07	ND	3.93	ND	3.88	ND	4.43	ND
EW-6	NM	NM	4.64	ND	4.41	ND	6.03	ND
EW-7	NM	NM	NM	NM	NM	NM	NM	NM
EW-8	NM	NM	NM	NM	NM	NM	NM	NM
EW-9	NM	NM	NM	NM	NM	NM	NM	NM
EW-10	NM	NM	NM	NM	NM	NM	NM	NM

Well	1/29/2014		2/3/2014		2/11/2014		2/20/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	NM	NM	NM	NM	NM	NM
EW-2	5.03	ND	5.03	ND	3.61	ND	5.04	ND
EW-3	4.62	ND	4.77	ND	3.30	ND	4.64	ND
EW-4	4.35	ND	4.36	ND	3.06	ND	4.49	ND
EW-5	4.03	ND	4.01	ND	3.07	ND	4.31	ND
EW-6	4.63	ND	4.66	ND	3.82	ND	6.24	ND
EW-7	NM	NM	NM	NM	NM	NM	NM	NM
EW-8	NM	NM	NM	NM	NM	NM	NM	NM
EW-9	NM	NM	NM	NM	NM	NM	NM	NM
EW-10	NM	NM	NM	NM	NM	NM	NM	NM

Well	2/27/2014		3/5/2014		3/13/2014		3/19/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	NM	NM	NM	NM	NM	NM
EW-2	5.07	ND	4.07	ND	NM	NM	4.90	ND
EW-3	4.78	ND	3.70	ND	4.04	ND	4.51	ND
EW-4	4.52	ND	3.59	ND	4.44	ND	4.31	ND
EW-5	4.38	ND	3.64	ND	4.17	ND	4.06	ND
EW-6	NM	NM	NM	NM	4.80	ND	NM	NM
EW-7	NM	NM	NM	NM	NM	NM	NM	NM
EW-8	NM	NM	NM	NM	NM	NM	NM	NM
EW-9	NM	NM	NM	NM	NM	NM	NM	NM
EW-10	NM	NM	NM	NM	NM	NM	NM	NM

Well	3/28/2014	
	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM
EW-2	5.03	ND
EW-3	4.60	ND
EW-4	4.36	ND
EW-5	3.96	ND
EW-6	4.56	ND
EW-7	NM	NM
EW-8	NM	NM
EW-9	NM	NM
EW-10	NM	NM

Notes:
* Negative value indicates groundwater table is lower than liner.
NA= Measurements not available.
ND= No product detected.
NM=Not Measured
Bio=biological type material floating on the watertable (non-petroleum)

Table 3
Groundwater Depth/SPH Thickness (Extraction Wells)
Second Quarter, 2014
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

Well	4/3/2014		4/10/2014		4/17/2014		4/24/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	NM	NM	NM	NM	5.10	ND
EW-2	5.03	ND	5.05	ND	5.05	ND	4.99	ND
EW-3	4.75	ND	4.64	ND	4.64	ND	4.61	ND
EW-4	4.36	ND	4.43	ND	4.43	ND	4.35	ND
EW-5	3.99	ND	4.03	ND	4.06	ND	3.99	ND
EW-6	4.57	ND	4.62	ND	4.69	ND	4.62	ND
EW-7	NM	NM	NM	NM	NM	NM	4.31	ND
EW-8	NM	NM	NM	NM	NM	NM	4.69	ND
EW-9	NM	NM	NM	NM	NM	NM	4.69	ND
EW-10	NM	NM	NM	NM	NM	NM	2.22	ND

Well	5/1/2014		5/8/2014		5/15&16/2014		5/22/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	NM	NM	NM	NM	NM	NM
EW-2	5.06	ND	NM	NM	5.07	ND	5.07	ND
EW-3	4.63	ND	4.65	ND	4.67	ND	4.65	ND
EW-4	4.45	ND	4.47	ND	4.56	ND	4.51	ND
EW-5	4.14	ND	4.13	ND	4.30	ND	4.33	ND
EW-6	4.80	ND	4.92	ND	5.10	ND	5.27	ND
EW-7	NM	NM	NM	NM	NM	NM	NM	NM
EW-8	NM	NM	NM	NM	NM	NM	NM	NM
EW-9	NM	NM	NM	NM	NM	NM	NM	NM
EW-10	NM	NM	NM	NM	NM	NM	NM	NM

Well	5/29/2014		6/6/2014		6/13/2014		6/19/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	NM	NM	NM	NM	NM	NM
EW-2	NM	NM	NM	NM	NM	NM	NM	NM
EW-3	4.83	ND	4.78	ND	4.29	ND	4.52	ND
EW-4	4.52	ND	4.55	ND	4.18	ND	4.35	ND
EW-5	4.28	ND	4.50	ND	4.20	ND	4.33	ND
EW-6	5.09	ND	6.37	ND	5.07	ND	6.32	ND
EW-7	NM	NM	NM	NM	NM	NM	NM	NM
EW-8	NM	NM	6.10	ND	5.23	ND	NM	NM
EW-9	NM	NM	NM	NM	NM	NM	NM	NM
EW-10	NM	NM	NM	NM	NM	NM	NM	NM

Well	6/27/2014	
	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM
EW-2	5.11[A]	ND
EW-3	4.71[A]	ND
EW-4	4.59[A]	ND
EW-5	4.54[A]	ND
EW-6	6.30[A]	ND
EW-7	NM	NM
EW-8	NM	NM
EW-9	NM	NM
EW-10	2.93[A]	ND

Notes:
[A] **- on 27 June 2014, ORS probe tone was NOT distinguishing between oil and water contact. Therefore, depth to water or depth to product could not be identified.**
* Negative value indicates groundwater table is lower than liner.
NA= Measurements not available.
ND= No product detected.
NM=Not Measured
Bio=biological type material floating on the watertable (non-petroleum)

Table 4
Groundwater Depth/SPH Thickness (Extraction Wells)
Third Quarter, 2014
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

Well	7/3/2014		7/9/2014		7/17/2014		7/24/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	NM	NM	NM	NM	5.23	ND
EW-2	5.12	ND	5.12	ND	5.12	ND	5.12	ND
EW-3	4.69	ND	4.71	ND	4.70	ND	4.71	ND
EW-4	4.60	ND	4.60	ND	NM	NM	4.58	0.01
EW-5	4.59	ND	4.58	ND	4.59	ND	4.58	ND
EW-6	6.35	ND	6.35	ND	NM	NM	5.88	ND
EW-7	4.42	ND	NM	NM	NM	NM	NM	NM
EW-8	NM	NM	5.43	ND	5.46	ND	5.40	ND
EW-9	6.01	ND	6.07	ND	6.07	ND	5.98	ND
EW-10	3.34	ND	3.07	ND	3.20	ND	2.83	ND

Well	8/1/2014		8/6/2014		8/14/2014		8/21/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	5.30	0.01	5.02	ND	NM	NM
EW-2	NM	NM	5.19	ND	4.93	ND	NM	NM
EW-3	4.78	ND	4.76	ND	4.55	ND	4.86	ND
EW-4	4.64	ND	4.68	ND	4.41	ND	4.67	ND
EW-5	4.59	ND	4.60	ND	4.39	ND	4.58	ND
EW-6	6.40	ND	6.41	ND	6.06	ND	6.39	ND
EW-7	NM	NM	NM	NM	NM	NM	NM	NM
EW-8	NM	NM	5.42	ND	5.38	ND	NM	NM
EW-9	NM	NM	5.96	ND	5.95	ND	NM	NM
EW-10	NM	NM	3.18	ND	2.65	ND	2.42	ND

Well	8/29/2014		9/3/2014		9/11/2014		9/18/2014	
	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness	Depth to Water/SPH	SPH Thickness
EW-1	NM	NM	NM	NM	5.28	ND	NM	NM
EW-2	NM	NM	NM	NM	5.18	ND	NM	NM
EW-3	4.75	ND	5.87	ND	4.76	ND	4.86	ND
EW-4	4.63	ND	4.63	ND	4.64	ND	4.63	ND
EW-5	4.60	ND	4.59	ND	4.60	0.01	4.59	ND
EW-6	6.40	ND	6.42	ND	6.38	ND	6.39	ND
EW-7	NM	NM	NM	NM	NM	NM	NM	NM
EW-8	NM	NM	NM	NM	5.33	ND	NM	NM
EW-9	NM	NM	NM	NM	5.90	ND	NM	NM
EW-10	3.58	ND	3.39	ND	2.45	ND	2.59	ND

Well	9/24/2014	
	Depth to Water/SPH	SPH Thickness
EW-1	5.27	ND
EW-2	5.15	ND
EW-3	4.74	ND
EW-4	4.62	ND
EW-5	4.58	ND
EW-6	6.39	ND
EW-7	4.43	ND
EW-8	5.37	ND
EW-9	5.95	ND
EW-10	3.03	ND

Notes:
Approximately 0.75 inches of rainfall on 23 July 2014.
* Negative value indicates groundwater table is lower than liner.
NA= Measurements not available.
ND= No product detected.
NM=Not Measured
Bio=biological type material floating on the watertable (non-petroleum)

Table 5
Groundwater Pumping
First, Second, and Third Quarters 2014
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

	1st Quarter			2nd Quarter		
Month	January	February	March	April	May	June
Gallons Removed	158,509	159,295	266,779	211,312	230,586	305,257
Quarter Total	584,583			747,155		
Cumulative Total	584,583			1,331,738		

	3rd Quarter		
Month	July	August	September
Gallons Removed	275,447	168,912	102,934
Quarter Total	547,293		
Cumulative Total	1,879,031		

Table 6A
Volume of SPH Removed From Observation Wells/Piezometers
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

First Quarter 2014			
Well	Date	Estimated SPH Pumped (mL)	Total Amount of Water/SPH Removed (mL)
OW-2	2/11/2014	500.00	700.00
	2/20/2014	100.00	3,900.00
B-20	3/5/2014	100.00	3,600.00
	3/19/2014	88.72	3,551.00
B-26	3/19/2014	29.57	1,598.00
	3/28/2014	100.00	2,550.00
Total mL		918.29	15,899.00
Total gallons		0.35	8.21

Table 6B
Volume of SPH Removed From Observation Wells/Piezometers
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

Second Quarter 2014			
Well	Date	Estimated SPH Pumped (mL)	Total Amount of Water/SPH Removed (mL)
OW-2	5/29/2014	25.00	500.00
	6/13/2014	25.00	500.00
B-19	6/13/2014	25.00	700.00
	6/27/2014	50.00	2,625.00
B-20	4/10/2014	100.00	1,600.00
	5/8/2014	50.00	2,650.00
	5/15/2014	120.00	2,700.00
	5/22/2014	50.00	1,850.00
	5/29/2014	25.00	1,600.00
	6/13/2014	25.00	500.00
	6/27/2014	0.00	400.00
B-26	4/10/2014	150.00	900.00
	4/24/2014	100.00	3,950.00
	5/15/2014	50.00	1,800.00
Total		795.00	22,275.00
Total gallons		0.21	5.88

Table 6C
Volume of SPH Removed From Observation Wells/Piezometers
AT&T Data Center
20307 North Creek Pkwy, Bothell, WA

Third Quarter 2014			
Well	Date	Estimated SPH Pumped (mL)	Total Amount of Water/SPH Removed (mL)
EW-5	9/3/2014	25.00	1,000.00
	9/11/2014	50.00	6,600.00
B-19	7/9/2014	10.00	800.00
	8/6/2014	75.00	1,000.00
	8/14/2014	25.00	1,150.00
	8/24/2014	25.00	1,000.00
	9/3/2014	25.00	1,000.00
	9/11/2014	100.00	1,300.00
	9/24/2014	25.00	500.00
B-20	7/9/2014	5.00	1,050.00
	7/24/2014	40.00	550.00
	8/6/2014	25.00	1,250.00
	8/14/2014	75.00	1,025.00
	8/24/2014	25.00	1,000.00
	9/3/2014	25.00	1,000.00
	9/11/2014	15.00	1,475.00
	9/24/2014	25.00	500.00
B-25	7/9/2014	50.00	900.00
	7/24/2014	60.00	500.00
	8/6/2014	100.00	1,850.00
	8/14/2014	15.00	465.00
	8/21/2014	25.00	1,000.00
	9/3/2014	25.00	1,000.00
	9/11/2014	25.00	800.00
	9/24/2014	25.00	500.00
B-26	7/9/2014	50.00	1,200.00
	7/24/2014	50.00	1,225.00
	8/6/2014	25.00	1,325.00
	8/14/2014	10.00	965.00
	8/21/2014	25.00	1,000.00
	9/3/2014	25.00	1,000.00
	9/11/2014	75.00	1,900.00
	9/24/2014	25.00	500.00
Total		1,205.00	38,330.00
Total gallons		0.32	10.12

Total First, Second, and Third Quarter 2014	2,918.29	76,504.00
Total gallons	0.77	20.20

Figures



OFFICE	DRAWN BY		CHECKED BY		APPROVED BY		DRAWING NUMBER
BOTHELL	TWentz	1/2014	TVW	1/14	TCO	1/14	BT-146714-A1

XREF Files: IMAGE Files: Bothell_site.jpg
File: B:\Project\draft\AT&T\2013\Annual Report 2013\Figures\BT-146714-A1.dwg Layout: FIGURE 1 User: tyson.wentz Jan 13, 2014 - 9:36am



WASHINGTON

APPROX. SCALE

0 1000 2000 FEET

N

SOURCE: Aerial Image Acquired from Google Map 2011.

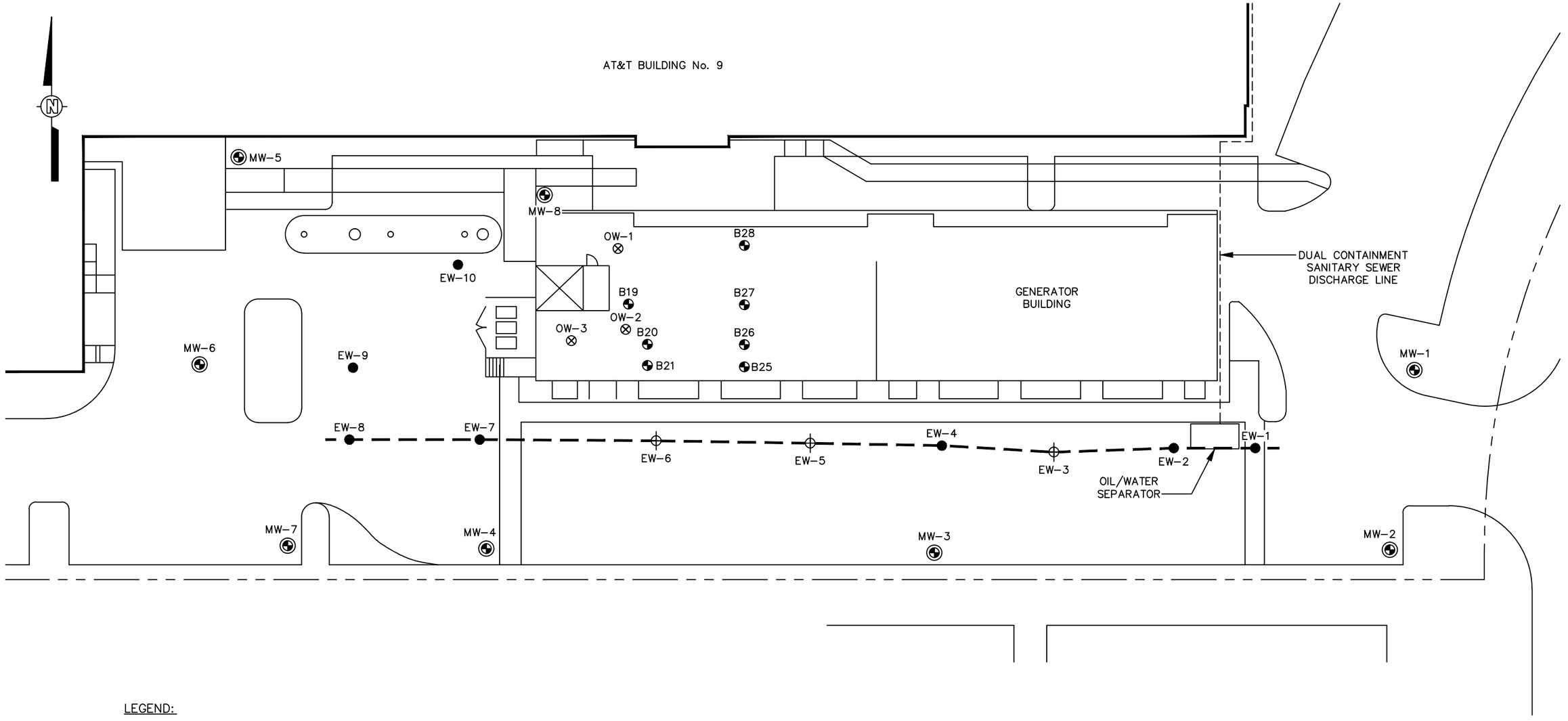
12100 NE 195th Street, Suite 150
Bothell, Washington 98011
Phone (425) 486-5000
Fax. (425) 486-9766

CB&I Environmental & Infrastructure, Inc.

FIGURE 1

SITE LOCATION MAP

AT&T DATA CENTER
20307 NORTH CREEK PARKWAY
BOTHELL, WASHINGTON



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- OBSERVATION WELL LOCATION
- PSC WELL LOCATION
- EXTRACTION WELL WITH PUMP
- PROPERTY LINE
- IMPERMEABLE LINER

SCALE (FEET)

0 30 60

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.
18323 BOTHELL EVERETT HIGHWAY
BOTHELL, WASHINGTON 98012
(425) 485-5000 OFFICE
(425) 486-9766 FAX

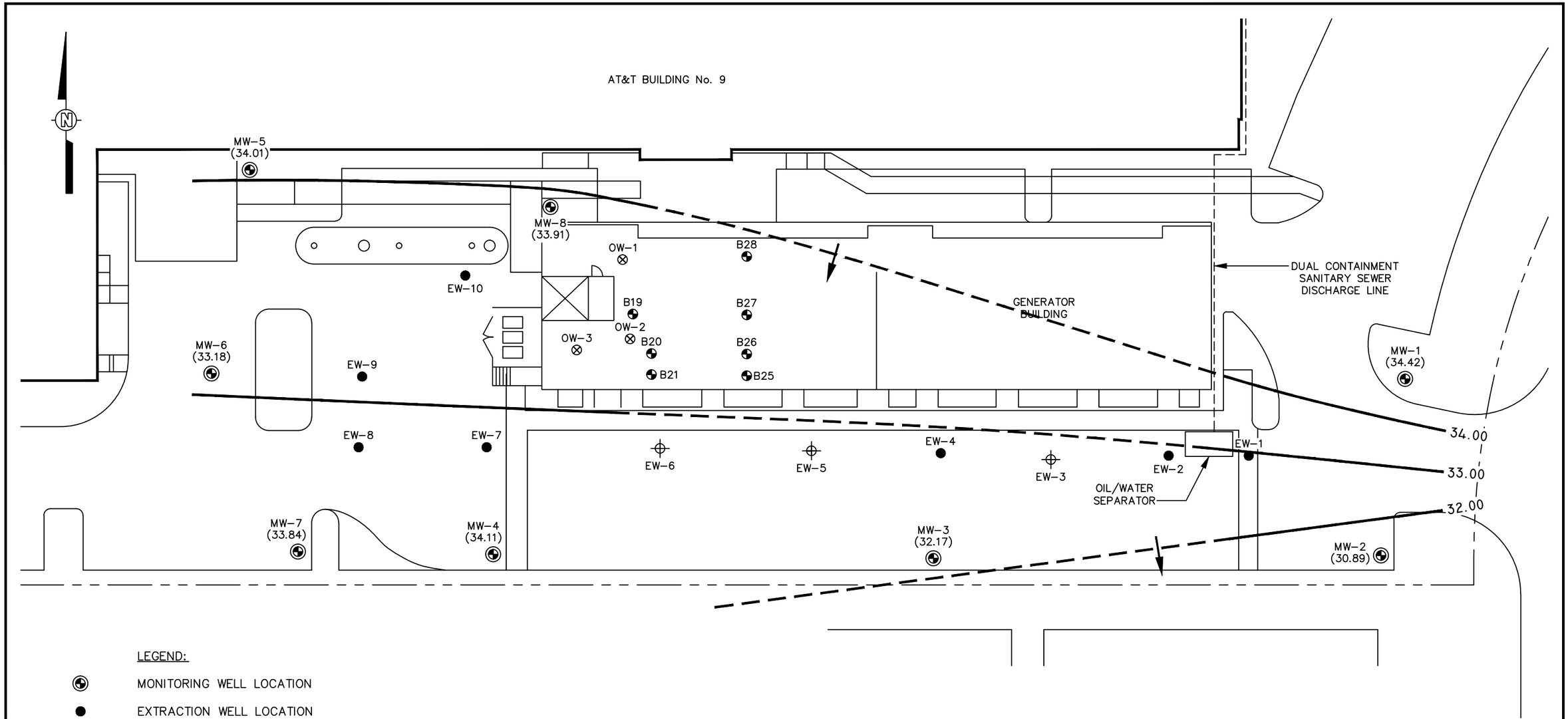
OFFICE:	DATE:	ACAD FILE:
BOTHELL	12-18-14	6714B3

GROUNDWATER MONITORING, EXTRACTION AND OBSERVATION WELL LOCATION MAP

CLIENT:	PM:
AT&T	TO

LOCATION: 20307 NORTH CREEK PARKWAY
BOTHELL, WASHINGTON

DESIGNED:	DRAWN:	PROJECT NO.:	FIGURE:
JH	SDJF	146714	2



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- OBSERVATION WELL LOCATION
- PSC WELL LOCATION
- EXTRACTION WELL WITH PUMP
- (30.71) GROUNDWATER ELEVATION (FEET)
- 34.00 GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- PROPERTY LINE

SCALE (FEET)

0 30 60

CB&I ENVIRONMENTAL & INFRASTRUCTURE, INC.
18323 BOTHELL EVERETT HIGHWAY
BOTHELL, WASHINGTON 98012
(425) 485-5000 OFFICE
(425) 486-9766 FAX

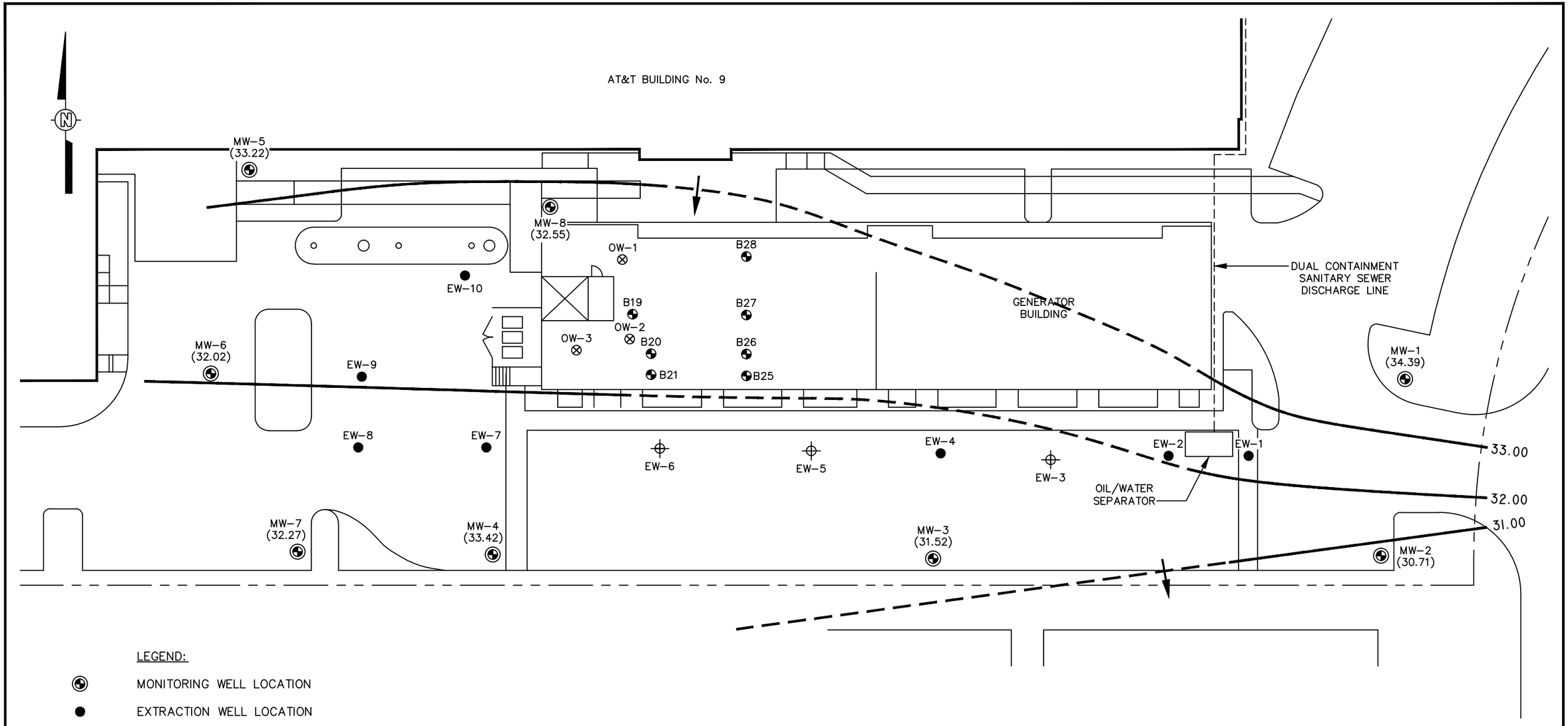
OFFICE:	DATE:	ACAD FILE:
BOTHELL	12-18-14	6714B1

GROUNDWATER ELEVATION CONTOUR MAP MARCH 17, 2014

CLIENT:	PM:
AT&T	TO

LOCATION: 20307 NORTH CREEK PARKWAY BOTHELL, WASHINGTON

DESIGNED:	DRAWN:	PROJECT NO.:	FIGURE:
JH	SDJF	146714	3



LEGEND:

- MONITORING WELL LOCATION
- EXTRACTION WELL LOCATION
- OBSERVATION WELL LOCATION
- PSC WELL LOCATION
- EXTRACTION WELL WITH PUMP
- (31.52) GROUNDWATER ELEVATION (FEET)
- 32.00 GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- PROPERTY LINE

SCALE (FEET)

0 30 60

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BOTHELL, WASHINGTON 98012
(425) 485-5000 OFFICE
(425) 486-9766 FAX

OFFICE:	DATE:	ACAD FILE:
BOTHELL	12-18-14	6714B2

GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 24, 2014

CLIENT:	PM:
AT&T	TO

LOCATION: 20307 NORTH CREEK PARKWAY BOTHELL, WASHINGTON

DESIGNED:	DRAWN:	PROJECT NO.:	FIGURE:
JH	SDJF	146714	4

Appendix A
March 17 and 18, 2014, Analytical Reports

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

April 01, 2014

Tim O'Conner
CB&I
12100 NE 195th St.
Bothell, WA 98011

RE: Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Dear Tim O'Conner:
Enclosed are the analytical results for sample(s) received by the laboratory on March 19, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alabama Certification #40770
Alabama Certification #40770
Alaska Certification #: UST-078
Alaska Certification #MN00064
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #: Pace
Georgia Certification #: 959
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nebraska Certification #: Pace
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
Wisconsin Certification #: 999407970
West Virginia Certification #: 382
West Virginia TO-15 Approval
West Virginia DHHR #:9952C

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SAMPLE SUMMARY

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10261028001	**MW1**	Water	03/17/14 14:15	03/19/14 16:20
10261028002	**MW2**	Water	03/17/14 15:15	03/19/14 16:20
10261028003	**MW3**	Water	03/17/14 16:05	03/19/14 16:20
10261028004	**MW4**	Water	03/17/14 17:20	03/19/14 16:20
10261028005	**MW7**	Water	03/18/14 10:40	03/19/14 16:20
10261028006	**MW6**	Water	03/18/14 11:37	03/19/14 16:20
10261028007	**MW5**	Water	03/18/14 12:30	03/19/14 16:20
10261028008	**MW8**	Water	03/18/14 13:35	03/19/14 16:20
10261028009	**MW8-QC**	Water	03/18/14 13:35	03/19/14 16:20
10261028010	**MW13**	Water	03/17/14 16:07	03/19/14 16:20
10261028011	**Trip Blank**	Water	03/17/14 14:15	03/19/14 16:20

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SAMPLE ANALYTE COUNT

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10261028001	**MW1**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7
10261028002	**MW2**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7
10261028003	**MW3**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7
10261028004	**MW4**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7
10261028005	**MW7**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7
10261028006	**MW6**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7
10261028007	**MW5**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7
10261028008	**MW8**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7
10261028010	**MW13**	NWTPH-Dx	JRH	4
		EPA 8260	SH2	7

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ANALYTICAL RESULTS

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Sample: MW1 **Lab ID: 10261028001** Collected: 03/17/14 14:15 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx		Preparation Method: EPA 3510					
Diesel Fuel Range SG	ND	mg/L	0.50	1	03/25/14 13:22	03/28/14 14:47	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.50	1	03/25/14 13:22	03/28/14 14:47	64742-65-0	
Surrogates								
o-Terphenyl (S)	67	%.	30-125	1	03/25/14 13:22	03/28/14 14:47	84-15-1	
n-Triacontane (S)	73	%.	30-125	1	03/25/14 13:22	03/28/14 14:47	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 00:37	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/28/14 00:37	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 00:37	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/28/14 00:37	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%.	75-125	1		03/28/14 00:37	17060-07-0	
Toluene-d8 (S)	100	%.	75-125	1		03/28/14 00:37	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125	1		03/28/14 00:37	460-00-4	

Sample: MW2 **Lab ID: 10261028002** Collected: 03/17/14 15:15 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx		Preparation Method: EPA 3510					
Diesel Fuel Range SG	ND	mg/L	0.45	1	03/25/14 13:22	03/28/14 15:30	68334-30-5	
Motor Oil Range SG	**0.59**	mg/L	0.45	1	03/25/14 13:22	03/28/14 15:30	64742-65-0	
Surrogates								
o-Terphenyl (S)	77	%.	30-125	1	03/25/14 13:22	03/28/14 15:30	84-15-1	
n-Triacontane (S)	84	%.	30-125	1	03/25/14 13:22	03/28/14 15:30	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 00:54	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/28/14 00:54	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 00:54	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/28/14 00:54	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%.	75-125	1		03/28/14 00:54	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		03/28/14 00:54	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125	1		03/28/14 00:54	460-00-4	

Sample: MW3 **Lab ID: 10261028003** Collected: 03/17/14 16:05 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx		Preparation Method: EPA 3510					
Diesel Fuel Range SG	ND	mg/L	0.47	1	03/25/14 13:22	03/28/14 15:51	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.47	1	03/25/14 13:22	03/28/14 15:51	64742-65-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Sample: MW3 **Lab ID: 10261028003** Collected: 03/17/14 16:05 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Surrogates								
o-Terphenyl (S)	81	%.	30-125	1	03/25/14 13:22	03/28/14 15:51	84-15-1	
n-Triacontane (S)	85	%.	30-125	1	03/25/14 13:22	03/28/14 15:51	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 01:12	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/28/14 01:12	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 01:12	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/28/14 01:12	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%.	75-125	1		03/28/14 01:12	17060-07-0	
Toluene-d8 (S)	100	%.	75-125	1		03/28/14 01:12	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125	1		03/28/14 01:12	460-00-4	

Sample: MW4 **Lab ID: 10261028004** Collected: 03/17/14 17:20 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.47	1	03/25/14 13:22	03/28/14 16:13	68334-30-5	
Motor Oil Range SG	**0.76**	mg/L	0.47	1	03/25/14 13:22	03/28/14 16:13	64742-65-0	
Surrogates								
o-Terphenyl (S)	84	%.	30-125	1	03/25/14 13:22	03/28/14 16:13	84-15-1	
n-Triacontane (S)	89	%.	30-125	1	03/25/14 13:22	03/28/14 16:13	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 01:30	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/28/14 01:30	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 01:30	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/28/14 01:30	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%.	75-125	1		03/28/14 01:30	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		03/28/14 01:30	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125	1		03/28/14 01:30	460-00-4	

Sample: MW7 **Lab ID: 10261028005** Collected: 03/18/14 10:40 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.48	1	03/25/14 13:22	03/28/14 16:34	68334-30-5	
Motor Oil Range SG	**0.49**	mg/L	0.48	1	03/25/14 13:22	03/28/14 16:34	64742-65-0	
Surrogates								
o-Terphenyl (S)	79	%.	30-125	1	03/25/14 13:22	03/28/14 16:34	84-15-1	
n-Triacontane (S)	88	%.	30-125	1	03/25/14 13:22	03/28/14 16:34	638-68-6	

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ANALYTICAL RESULTS

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Sample: MW7 **Lab ID: 10261028005** Collected: 03/18/14 10:40 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 02:22	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/28/14 02:22	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 02:22	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/28/14 02:22	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%.	75-125	1		03/28/14 02:22	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		03/28/14 02:22	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125	1		03/28/14 02:22	460-00-4	

Sample: MW6 **Lab ID: 10261028006** Collected: 03/18/14 11:37 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.45	1	03/25/14 13:22	03/28/14 16:56	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.45	1	03/25/14 13:22	03/28/14 16:56	64742-65-0	
Surrogates								
o-Terphenyl (S)	45	%.	30-125	1	03/25/14 13:22	03/28/14 16:56	84-15-1	
n-Triacontane (S)	48	%.	30-125	1	03/25/14 13:22	03/28/14 16:56	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 02:40	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/28/14 02:40	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 02:40	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/28/14 02:40	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%.	75-125	1		03/28/14 02:40	17060-07-0	
Toluene-d8 (S)	100	%.	75-125	1		03/28/14 02:40	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125	1		03/28/14 02:40	460-00-4	

Sample: MW5 **Lab ID: 10261028007** Collected: 03/18/14 12:30 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.45	1	03/25/14 13:22	03/28/14 17:17	68334-30-5	
Motor Oil Range SG	**0.47**	mg/L	0.45	1	03/25/14 13:22	03/28/14 17:17	64742-65-0	
Surrogates								
o-Terphenyl (S)	68	%.	30-125	1	03/25/14 13:22	03/28/14 17:17	84-15-1	
n-Triacontane (S)	74	%.	30-125	1	03/25/14 13:22	03/28/14 17:17	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 02:58	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/28/14 02:58	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 02:58	108-88-3	

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ANALYTICAL RESULTS

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Sample: MW5 **Lab ID: 10261028007** Collected: 03/18/14 12:30 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Xylene (Total)	ND	ug/L	3.0	1		03/28/14 02:58	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	102	%.	75-125	1		03/28/14 02:58	17060-07-0	
Toluene-d8 (S)	100	%.	75-125	1		03/28/14 02:58	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125	1		03/28/14 02:58	460-00-4	

Sample: MW8 **Lab ID: 10261028008** Collected: 03/18/14 13:35 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	**2.9**	mg/L	0.45	1	03/25/14 13:22	03/28/14 17:38	68334-30-5	M1
Motor Oil Range SG	**1.3**	mg/L	0.45	1	03/25/14 13:22	03/28/14 17:38	64742-65-0	M1
Surrogates								
o-Terphenyl (S)	81	%.	30-125	1	03/25/14 13:22	03/28/14 17:38	84-15-1	
n-Triacontane (S)	85	%.	30-125	1	03/25/14 13:22	03/28/14 17:38	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 00:19	71-43-2	
Ethylbenzene	**5.3**	ug/L	1.0	1		03/28/14 00:19	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 00:19	108-88-3	
Xylene (Total)	**3.1**	ug/L	3.0	1		03/28/14 00:19	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	101	%.	75-125	1		03/28/14 00:19	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		03/28/14 00:19	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125	1		03/28/14 00:19	460-00-4	

Sample: MW13 **Lab ID: 10261028010** Collected: 03/17/14 16:07 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.43	1	03/25/14 13:22	03/28/14 18:43	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.43	1	03/25/14 13:22	03/28/14 18:43	64742-65-0	
Surrogates								
o-Terphenyl (S)	76	%.	30-125	1	03/25/14 13:22	03/28/14 18:43	84-15-1	
n-Triacontane (S)	85	%.	30-125	1	03/25/14 13:22	03/28/14 18:43	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		03/28/14 02:05	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		03/28/14 02:05	100-41-4	
Toluene	ND	ug/L	1.0	1		03/28/14 02:05	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		03/28/14 02:05	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	103	%.	75-125	1		03/28/14 02:05	17060-07-0	

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Sample: MW13 **Lab ID: 10261028010** Collected: 03/17/14 16:07 Received: 03/19/14 16:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Surrogates								
Toluene-d8 (S)	99	%.	75-125	1		03/28/14 02:05	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125	1		03/28/14 02:05	460-00-4	

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QUALITY CONTROL DATA

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

QC Batch: MSV/26647 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10261028001, 10261028002, 10261028003, 10261028004, 10261028005, 10261028006, 10261028007, 10261028008, 10261028010

METHOD BLANK: 1645627 Matrix: Water
Associated Lab Samples: 10261028001, 10261028002, 10261028003, 10261028004, 10261028005, 10261028006, 10261028007, 10261028008, 10261028010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	03/27/14 21:57	
Ethylbenzene	ug/L	ND	1.0	03/27/14 21:57	
Toluene	ug/L	ND	1.0	03/27/14 21:57	
Xylene (Total)	ug/L	ND	3.0	03/27/14 21:57	
1,2-Dichloroethane-d4 (S)	%.	101	75-125	03/27/14 21:57	
4-Bromofluorobenzene (S)	%.	103	75-125	03/27/14 21:57	
Toluene-d8 (S)	%.	100	75-125	03/27/14 21:57	

LABORATORY CONTROL SAMPLE: 1645628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	23.7	119	75-125	
Ethylbenzene	ug/L	20	22.4	112	75-125	
Toluene	ug/L	20	22.2	111	75-125	
Xylene (Total)	ug/L	60	64.6	108	75-125	
1,2-Dichloroethane-d4 (S)	%.			104	75-125	
4-Bromofluorobenzene (S)	%.			102	75-125	
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1645629 1645630

Parameter	Units	10261028008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	20	20	24.6	24.7	121	122	75-129	.1	30	
Ethylbenzene	ug/L	5.3	20	20	25.7	25.6	102	101	75-128	.6	30	
Toluene	ug/L	ND	20	20	22.2	22.3	111	111	75-129	.4	30	
Xylene (Total)	ug/L	3.1	60	60	67.2	66.9	107	106	75-129	.5	30	
1,2-Dichloroethane-d4 (S)	%.						105	104	75-125			
4-Bromofluorobenzene (S)	%.						103	103	75-125			
Toluene-d8 (S)	%.						99	99	75-125			

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

QC Batch: OEXT/24656 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS LV SG
Associated Lab Samples: 10261028001, 10261028002, 10261028003, 10261028004, 10261028005, 10261028006, 10261028007, 10261028008, 10261028010

METHOD BLANK: 1644449 Matrix: Water
Associated Lab Samples: 10261028001, 10261028002, 10261028003, 10261028004, 10261028005, 10261028006, 10261028007, 10261028008, 10261028010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel Range SG	mg/L	ND	0.40	03/28/14 14:04	
Motor Oil Range SG	mg/L	ND	0.40	03/28/14 14:04	
n-Triacontane (S)	%.	78	30-125	03/28/14 14:04	
o-Terphenyl (S)	%.	72	30-125	03/28/14 14:04	

LABORATORY CONTROL SAMPLE: 1644450

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Fuel Range SG	mg/L	2	1.6	79	50-150	
Motor Oil Range SG	mg/L	2	1.7	85	50-150	
n-Triacontane (S)	%.			81	30-125	
o-Terphenyl (S)	%.			80	30-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1644454 1644455

Parameter	Units	10261028008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diesel Fuel Range SG	mg/L	2.9	2	2.1	2.9	3.6	2	34	50-150	21	30	M1
Motor Oil Range SG	mg/L	1.3	2	2.1	2.2	2.0	41	31	50-150	9	30	M1
n-Triacontane (S)	%.						84	79	30-125			
o-Terphenyl (S)	%.						84	80	30-125			

SAMPLE DUPLICATE: 1644452

Parameter	Units	10261028001 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range SG	mg/L	ND	.33J		30	
Motor Oil Range SG	mg/L	ND	0.98		30	
n-Triacontane (S)	%.	73	88	13		
o-Terphenyl (S)	%.	67	81	14		

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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METHOD CROSS REFERENCE TABLE

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Parameter	Matrix	Analytical Method	Preparation Method
8260 MSV UST	Water	SW-846 8260B/5030B	N/A

REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CB&I Monitoring Wells
Pace Project No.: 10261028

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10261028001	**MW1**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028002	**MW2**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028003	**MW3**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028004	**MW4**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028005	**MW7**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028006	**MW6**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028007	**MW5**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028008	**MW8**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028010	**MW13**	EPA 3510	OEXT/24656	NWTPH-Dx	GCSV/13006
10261028001	**MW1**	EPA 8260	MSV/26647		
10261028002	**MW2**	EPA 8260	MSV/26647		
10261028003	**MW3**	EPA 8260	MSV/26647		
10261028004	**MW4**	EPA 8260	MSV/26647		
10261028005	**MW7**	EPA 8260	MSV/26647		
10261028006	**MW6**	EPA 8260	MSV/26647		
10261028007	**MW5**	EPA 8260	MSV/26647		
10261028008	**MW8**	EPA 8260	MSV/26647		
10261028010	**MW13**	EPA 8260	MSV/26647		

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04/02/14

CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical® www.pacelabs.com

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

1026 1028

Page: 1 of 1

1309865

1134

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: CB&I	Report To: Tim O'Connor	Attention: Mark Smith
Address: Bothell, WA 98011	Copy To:	Company Name: Titan
Email To: tim.oconnor@cbi.com	Purchase Order No.:	Address:
Phone: (425) 402-3252 Fax:	Project Name:	Pace Quote Reference: AT&T Bothell
Requested Due Date/TAT: Standard	Project Number:	Pace Project Manager: Jenn Gross
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information: SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: BTEX 8260	Ni+TPH DX w/SGC	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW1			G	3/17/14	1415	3/17/14	1415	9.5	5				+					Y	3	2		10261028 001
2	MW2			G			3/17/14	1515	8.9	5				+					Y	3	2		002
3	MW3			G			3/17/14	1605	9.0	5				+					Y	3	2		003
4	MW4			G			3/17/14	1720	12.3	5				+					Y	3	2		004
5	MW7			G			3/18/14	1040	10.9	5				+					Y	3	2		005
6	MW6			G			3/18/14	1137	11.4	5				+					Y	3	2		006
7	MW5			G			3/18/14	1230	12.3	5				+					Y	3	2		007
8	MW8			G			3/18/14	1320	10.7	5				+					Y	3	2		008 → 009
9	MW8-QC			G			3/18/14	1335	10.7	8				+					Y	6	2		008 009
10																							
11																							
12	MW13			G			3/17/14	1607	9.0	5				+					Y	3	2		010

8 3/31/14

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Bruce Ross / CB&I	3/19/14	1620	Jenn Gross / Pace AA/Pace	3/19/14	16:20	*	Y	N	Y
					3/20/14	09:19	3.0 3.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

* 3.2, 3.5

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Feb2014 Page 1 of 1
	Document No.: F-MN-L-213-rev.09	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CB&I

Project #: WO#: 10261028

10261028

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client

☐ Commercial ☐ Pace ☐ SpeeDee ☐ Other:

Tracking Number: 5779 5331 4041, 5779 5331 4052

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☑ Other: Zip Lc Temp Blank? ☑ Yes ☐ No

Thermom. Used: ☐ B88A9130516413 ☑ B88A912167504 ☑ B88A9132521491 Type of Ice: ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 2.1, 2.5 Cooler Temp Corrected (°C): 3.0, 3.4 Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C Correction Factor: +0.9 Date and Initials of Person Examining Contents: 3/20/14 AA

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐	3.
Sampler Name and/or Signature on COC?	☐ Yes	☑ No	☐	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐	7.
Sufficient Volume?	☑ Yes	☐ No	☐	8.
Correct Containers Used?	☑ Yes	☐ No	☐	9.
-Pace Containers Used?	☑ Yes	☐ No	☐	
Containers Intact?	☑ Yes	☐ No	☐	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☑ No	☐	11.
Sample Labels Match COC? AA 3/20/14	☑ Yes	☑ No	☐ N/A	12. Trip blank present but not on COC.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☐ Yes	☐ No	☑ N/A	Sample #
	☑ Yes	☐ No		Initial when completed: AA Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☑ No	☐ N/A	14.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): No Lot Number				

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☐ No

Person Contacted: Jim O'Conner @ CB&I Date/Time: 3/24/14 11:00

Comments/Resolution: Hold Trip blank, additional QC vials received for MW-8. QC 3/24/14

Project Manager Review: JENN GROSS Date: 3/24/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix B
March 17 and 18, 2014, Field Sampling Data Sheets

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center Remediation WELL ID: MW1
SITE ADDRESS: BLIND ID: —
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE:	°F . °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW [Product Thickness]	DTB-DTW [Water Column]		[Water Column x Gal/ft] Volume (gal)
03/17/14	13:45	.	.	1.71	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = TUBING

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount	Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	03/17/14	14:30	G	3	40 ml	(HCl)	(YES)	(NO)		
Amber Glass	03/17/14	14:15		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: ✓13:45 EBK 3/17 Pump/Bailer Inlet Depth: ✓ 2.71

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	7.61	27.5	259	10.06	~~1.71~~	8.80	colorless
1	B	0.5	7.00	-31.6	284	9.91	1.71	6.68	"
2	B	1.0	6.78	-56.7	303	9.71	.	3.99	"
3	B	1.5	6.67	-73.0	348	9.60	.	3.00	"
4	B	2.5	6.67	-79.2	357	9.51	.	2.61	"
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

turb

Water level in MW1 drops quickly ∴ constantly lowering pump inlet ~1" at a time.

SAMPLER: Brea Kvam (PRINTED NAME) Brea Kvam (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center Remediation WELL ID: MW2
SITE ADDRESS: BLIND ID: —
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		(CLOUDY)		RAIN			?	TEMPERATURE:	°F . °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
03/17/14	14:50	.	.	4.69	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tubing

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	03/17/14	15:17	G	3	40 ml	(HCl)	(YES)	(NO)		
Amber Glass	03/17/14	15:15		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 14:55 EBK 3/17 Pump/Bailer Inlet Depth: 5.69

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	7.05	43.4	252	9.28	~~5.69~~	12.80	Colorless
1	B	1.0	6.64	54.0	242	8.99	4.69	2.35	"
2	B	2.0	6.57	55.5	240	8.95	.	1.77	"
3	B	2.5	6.56	55.7	240	8.94	.	1.72	colorless
4		.	.			.	.	.	
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

SAMPLER: Bruce Kram (PRINTED NAME) Bruce Kram (SIGNATURE)

FIELD SAMPLING DATA SHEET

CB&I
12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center Remediation WELL ID: ~~MW~~ MW3
SITE ADDRESS: BLIND ID: EBK 3/18/14
DUP ID: MW~~8~~13 NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE:	°F . °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
03/17/14	15:45	.	.	2.61	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tubing

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	03/17/14	16:15	G	3	40 ml	(HCl)	(YES)	(NO)		
Amber Glass	03/17/14	16:05		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 15:46 EBK 3/17 Pump/Bailer Inlet Depth: 3.61

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	6.65	-45.3	307	8.96	~~3.61~~	5.27	colorless
1	B	1.0	6.60	-74.2	294	9.02	2.61	1.43	"
2	B	1.5	6.57	-79.7	287	8.96	.	1.12	colorless
3	B	2.5	6.59	-87.7	283	8.98	.	0.85	"
4		.	.			.	.	.	
5		.	.			.	.	.	
6		.	.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Duplicate samples taken from MW3 (labelled "MW 13"). Samples collected at 1407 (NWTPH Dx) and 1425 (BTEX)

SAMPLER: Bruce Kram (PRINTED NAME) Bruce Kram (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center Remediation WELL ID: MW4

SITE ADDRESS: BLIND ID: —

DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		(CLOUDY)		RAIN		?		TEMPERATURE:	° F . ° C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
03/17/14	17:00	.	.	1.20	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tubing

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: J [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	03/17/14	17:30	G	3	40 ml	(HCl)	(YES)	(NO)		
Amber Glass	03/17/14	17:20		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: : Pump/Bailer Inlet Depth: 2.20

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	6.96	13.7	274	10.57	1.20	5.09	colorless
1	B	0.5	6.92	2.5	276	11.50	.	4.09	colorless
2	B	1.0	6.86	-8.0	277	12.09	.	1.83	"
3	B	1.5	6.83	-16.9	277	12.31	.	0.89	"
4	B	2.0	6.82	-19.9	278	12.33	.	0.79	"
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Water level in MW4 drops quickly ∴ constantly lowering pump inlet

SAMPLER: Bruce Kvam (PRINTED NAME) Bruce Kvam (SIGNATURE)

15:18 EW-6 = 4.37 SLIGHT SHEEN

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center Remediation WELL ID: MW5

SITE ADDRESS: BLIND ID: —

DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE:	°F . °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

[Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
03/18/14	11 :58	.	.	4.25	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tubing

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth: 0 [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	03/18/14	12:35	G	3	40 ml	(HCl)	(YES)	(NO)		
Amber Glass	03/18/14	12:30		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 12:00 Pump/Bailer Inlet Depth: 5.25

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	6.99	-47.4	481	11.90	4.25	4.22	colorless
1	B	0.5	6.87	-75.0	507	12.07	.	1.39	"
2	B	1.0	6.76	-83.4	549	12.20	.	1.73	"
3	B	1.5	6.73	-81.8	569	12.27	.	1.64	"
4	B	2.0	6.72	-79.6	577	12.34	.	2.43	"
5	B	2.5	6.70	-78.9	581	12.37	.	2.20	"
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

SAMPLER: Bruce Kraus (PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center Remediation WELL ID: MW 6
SITE ADDRESS: BLIND ID: —
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE:	°F . °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft)

Date	Time	DT-Bottom	DT-Product	DT-Water	[Product Thickness] DTP-DTW	[Water Column] DTB-DTW		[Water Column x Gal/ft] Volume (gal)
03/18/14	11:13	.	.	3.62	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tubing

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample)

Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	03/18/14	11:40	G	3	40 ml	(HCl)	(YES)	(NO)		
Amber Glass	03/18/14	11:37		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA

Purge Start Time: 11:14 Pump/Bailer Inlet Depth: 4.62

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	7.08	16.3	127	11.07	3.62	8.25	light grey turbidity
1	B	0.5	6.83	-20.3	167	11.21	.	1.12	" " "
2	B	1.0	6.68	-33.4	213	11.29	.	1.86	" " "
3	B	1.75	6.58	-37.0	262	11.39	.	2.44	" " "
4	B	2.0	6.52	-40.4	291	11.42	.	1.92	" " "
5	B	2.5	6.50	-42.8	305	11.41	.	1.69	
6	B	3.0	6.49	-43.5	318	11.43	.	2.13	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

SAMPLER: Bruce Kram (PRINTED NAME) Bruce Kram (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data under Remediation WELL ID: MW7
SITE ADDRESS: BLIND ID: —
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		(CLOUDY)		RAIN		?		TEMPERATURE:	°F . °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
03/18/14	10:12	.	.	2.11	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tubing

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	03/18/14	10:45	G	3	40 ml	(HCl)	(YES)	(NO)		
Amber Glass	03/18/14	10:40		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(GOD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 10:13 Pump/Bailer Inlet Depth: 3.11

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	7.62	83.1	184	9.92	2.11	8.35	slightly turbid
1	B	0.5	7.11	85.5	174	9.90	.	3.20	" "
2	B	1.0	7.01	81.6	172	9.83	.	2.68	clearing
3	B	1.5	6.98	59.3	175	9.91	.	3.24	
4	B	2.0	6.97	43.5	174	9.96	.	3.17	
5		.	.			.	.	.	
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

SAMPLER: Bruce Kram (PRINTED NAME) Bruce Kram (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center Remediation WELL ID: MW8

SITE ADDRESS: BLIND ID:

DUP ID: MW8-QC NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		(CLOUDY)		RAIN			?	TEMPERATURE:	° F .	° C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
03/18/14	12:50	.	.	4.70	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tubing

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: ~

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	03/18/14	13:26	G	3	40 ml	(HCl)	(YES)	(NO)		
Amber Glass	03/18/14	13:20		2	250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count):

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 12:55 Pump/Bailer Inlet Depth: 5.70

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	7.01	3.8	848	10.64	4.70	2.75	Colorless w/some sheen &
1	B	0.75	7.03	-60.5	898	10.72	.	2.26	light flocculent
2	B	1.0	7.04	-69.8	924	10.71	.	2.07	clearing
3	B	1.5	7.03	-75.1	960	10.72	.	1.89	clearing w/less
4	B	1.75	7.03	-75.4	971	10.68	.	1.71	colorless, less sheen,
5		.	.			.	.	.	no flocculent
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

QC samples for laboratory taken from MW8 ("MW8-QC") were 2 NWTPH/Dx & 6 BTEX taken at 1335 and 1338, respectively.

SAMPLER: Bruce Kraus (PRINTED NAME) Bruce Kraus (SIGNATURE)

Appendix C
September 24 and 25, 2014, Analytical Reports

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 21, 2014

Tim O'Conner
CB&I
12100 NE 195th St.
Bothell, WA 98011

RE: Project: AT&T Bothel #148859
Pace Project No.: 10283222

Dear Tim O'Conner:
Enclosed are the analytical results for sample(s) received by the laboratory on September 27, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

cc: Leigh Grover, CB&I
Janna Hall, CB&I

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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CERTIFICATIONS

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Montana Certification IDs

150 N. 9th Street, Billings, MT 59101
Colorado Asbestos #: 17119
A2LA Certification #: 3590.01
EPA Region 8 Certification #: 8TMS-L
Idaho Certification #: MT00012
Minnesota Dept of Health Certification #: 030-999-442
Montana Certification #: MT CERT0040
North Dakota Dept. Of Health #: R-209
NVLAP Certification #: 101292-0
Washington Department of Ecology #: C993

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SAMPLE SUMMARY

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10283222001	**MW1**	Water	09/24/14 13:45	09/27/14 09:05
10283222002	**MW2**	Water	09/24/14 15:00	09/27/14 09:05
10283222003	**MW3**	Water	09/24/14 16:00	09/27/14 09:05
10283222004	**MW4**	Water	09/24/14 17:45	09/27/14 09:05
10283222005	**MW7**	Water	09/24/14 19:00	09/27/14 09:05
10283222006	**MW8**	Water	09/25/14 11:30	09/27/14 09:05
10283222007	**MW18**	Water	09/25/14 11:45	09/27/14 09:05
10283222009	**MW5**	Water	09/25/14 13:35	09/27/14 09:05
10283222010	**MW6**	Water	09/25/14 15:15	09/27/14 09:05
10283222012	**Effluent**	Water	09/26/14 08:30	09/27/14 09:05

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SAMPLE ANALYTE COUNT

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10283222001	**MW1**	NWTPH-Dx	JRH	4
		EPA 8260	AJC	7
10283222002	**MW2**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
10283222003	**MW3**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
10283222004	**MW4**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
10283222005	**MW7**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
10283222006	**MW8**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
10283222007	**MW18**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
10283222009	**MW5**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
10283222010	**MW6**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
10283222012	**Effluent**	NWTPH-Dx	MT	4
		EPA 8260	AJC	7
		SM 4500-H+B	SC1	1

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ANALYTICAL RESULTS

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Sample: MW1 **Lab ID: 10283222001** Collected: 09/24/14 13:45 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/10/14 11:43	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/10/14 11:43	64742-65-0	
Surrogates								
o-Terphenyl (S)	23	%.	30-125	1	10/08/14 12:07	10/10/14 11:43	84-15-1	1M,2M
n-Triacontane (S)	25	%.	30-125	1	10/08/14 12:07	10/10/14 11:43	638-68-6	1M,2M
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/03/14 09:55	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 09:55	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 09:55	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 09:55	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	89	%.	75-125	1		10/03/14 09:55	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		10/03/14 09:55	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1		10/03/14 09:55	460-00-4	

Sample: MW2 **Lab ID: 10283222002** Collected: 09/24/14 15:00 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.42	1	10/08/14 12:07	10/09/14 21:37	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.42	1	10/08/14 12:07	10/09/14 21:37	64742-65-0	
Surrogates								
o-Terphenyl (S)	81	%.	30-125	1	10/08/14 12:07	10/09/14 21:37	84-15-1	
n-Triacontane (S)	88	%.	30-125	1	10/08/14 12:07	10/09/14 21:37	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/03/14 10:11	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 10:11	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 10:11	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 10:11	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%.	75-125	1		10/03/14 10:11	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		10/03/14 10:11	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1		10/03/14 10:11	460-00-4	

Sample: MW3 **Lab ID: 10283222003** Collected: 09/24/14 16:00 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/09/14 21:59	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/09/14 21:59	64742-65-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Sample: MW3 **Lab ID: 10283222003** Collected: 09/24/14 16:00 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Surrogates								
o-Terphenyl (S)	78	%.	30-125	1	10/08/14 12:07	10/09/14 21:59	84-15-1	
n-Triacontane (S)	84	%.	30-125	1	10/08/14 12:07	10/09/14 21:59	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/03/14 10:28	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 10:28	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 10:28	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 10:28	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	92	%.	75-125	1		10/03/14 10:28	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		10/03/14 10:28	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1		10/03/14 10:28	460-00-4	

Sample: MW4 **Lab ID: 10283222004** Collected: 09/24/14 17:45 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/09/14 22:20	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/09/14 22:20	64742-65-0	
Surrogates								
o-Terphenyl (S)	82	%.	30-125	1	10/08/14 12:07	10/09/14 22:20	84-15-1	
n-Triacontane (S)	88	%.	30-125	1	10/08/14 12:07	10/09/14 22:20	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/03/14 10:44	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 10:44	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 10:44	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 10:44	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	93	%.	75-125	1		10/03/14 10:44	17060-07-0	
Toluene-d8 (S)	100	%.	75-125	1		10/03/14 10:44	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1		10/03/14 10:44	460-00-4	

Sample: MW7 **Lab ID: 10283222005** Collected: 09/24/14 19:00 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/09/14 22:42	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/09/14 22:42	64742-65-0	
Surrogates								
o-Terphenyl (S)	88	%.	30-125	1	10/08/14 12:07	10/09/14 22:42	84-15-1	
n-Triacontane (S)	92	%.	30-125	1	10/08/14 12:07	10/09/14 22:42	638-68-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Sample: MW7 **Lab ID: 10283222005** Collected: 09/24/14 19:00 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/05/14 20:44	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/05/14 20:44	100-41-4	
Toluene	ND	ug/L	1.0	1		10/05/14 20:44	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/05/14 20:44	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%.	75-125	1		10/05/14 20:44	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		10/05/14 20:44	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125	1		10/05/14 20:44	460-00-4	

Sample: MW8 **Lab ID: 10283222006** Collected: 09/25/14 11:30 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	**0.97**	mg/L	0.40	1	10/08/14 12:07	10/09/14 23:04	68334-30-5	M1
Motor Oil Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/09/14 23:04	64742-65-0	
Surrogates								
o-Terphenyl (S)	77	%.	30-125	1	10/08/14 12:07	10/09/14 23:04	84-15-1	
n-Triacontane (S)	82	%.	30-125	1	10/08/14 12:07	10/09/14 23:04	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/03/14 09:06	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 09:06	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 09:06	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 09:06	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	88	%.	75-125	1		10/03/14 09:06	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		10/03/14 09:06	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1		10/03/14 09:06	460-00-4	

Sample: MW18 **Lab ID: 10283222007** Collected: 09/25/14 11:45 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	**0.81**	mg/L	0.42	1	10/08/14 12:07	10/10/14 00:08	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.42	1	10/08/14 12:07	10/10/14 00:08	64742-65-0	
Surrogates								
o-Terphenyl (S)	75	%.	30-125	1	10/08/14 12:07	10/10/14 00:08	84-15-1	
n-Triacontane (S)	82	%.	30-125	1	10/08/14 12:07	10/10/14 00:08	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/05/14 20:27	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/05/14 20:27	100-41-4	
Toluene	ND	ug/L	1.0	1		10/05/14 20:27	108-88-3	

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ANALYTICAL RESULTS

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Sample: MW18 **Lab ID: 10283222007** Collected: 09/25/14 11:45 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Xylene (Total)	ND	ug/L	3.0	1		10/05/14 20:27	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%.	75-125	1		10/05/14 20:27	17060-07-0	
Toluene-d8 (S)	97	%.	75-125	1		10/05/14 20:27	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125	1		10/05/14 20:27	460-00-4	

Sample: MW5 **Lab ID: 10283222009** Collected: 09/25/14 13:35 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/10/14 00:30	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/10/14 00:30	64742-65-0	
Surrogates								
o-Terphenyl (S)	72	%.	30-125	1	10/08/14 12:07	10/10/14 00:30	84-15-1	
n-Triacontane (S)	83	%.	30-125	1	10/08/14 12:07	10/10/14 00:30	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/03/14 08:33	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 08:33	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 08:33	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 08:33	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	91	%.	75-125	1		10/03/14 08:33	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		10/03/14 08:33	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125	1		10/03/14 08:33	460-00-4	

Sample: MW6 **Lab ID: 10283222010** Collected: 09/25/14 15:15 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/10/14 00:52	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/10/14 00:52	64742-65-0	
Surrogates								
o-Terphenyl (S)	77	%.	30-125	1	10/08/14 12:07	10/10/14 00:52	84-15-1	
n-Triacontane (S)	87	%.	30-125	1	10/08/14 12:07	10/10/14 00:52	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/03/14 08:49	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 08:49	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 08:49	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 08:49	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	90	%.	75-125	1		10/03/14 08:49	17060-07-0	

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ANALYTICAL RESULTS

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Sample: MW6 **Lab ID: 10283222010** Collected: 09/25/14 15:15 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Surrogates								
Toluene-d8 (S)	99	%.	75-125	1		10/03/14 08:49	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1		10/03/14 08:49	460-00-4	

Sample: Effluent **Lab ID: 10283222012** Collected: 09/26/14 08:30 Received: 09/27/14 09:05 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Dx GCS Silica Gel LV	Analytical Method: NWTPH-Dx Preparation Method: EPA 3510							
Diesel Fuel Range SG	**1.0**	mg/L	0.40	1	10/08/14 12:07	10/10/14 01:13	68334-30-5	
Motor Oil Range SG	ND	mg/L	0.40	1	10/08/14 12:07	10/10/14 01:13	64742-65-0	
Surrogates								
o-Terphenyl (S)	80	%.	30-125	1	10/08/14 12:07	10/10/14 01:13	84-15-1	
n-Triacontane (S)	87	%.	30-125	1	10/08/14 12:07	10/10/14 01:13	638-68-6	
8260 MSV UST	Analytical Method: EPA 8260							
Benzene	ND	ug/L	1.0	1		10/03/14 11:33	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/03/14 11:33	100-41-4	
Toluene	ND	ug/L	1.0	1		10/03/14 11:33	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/03/14 11:33	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	89	%.	75-125	1		10/03/14 11:33	17060-07-0	
Toluene-d8 (S)	100	%.	75-125	1		10/03/14 11:33	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1		10/03/14 11:33	460-00-4	
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**6.6**	Std. Units	0.10	1		10/01/14 14:58		H6

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QUALITY CONTROL DATA

Project: AT&T Bothel #148859
Pace Project No.: 10283222

QC Batch: MSV/28762 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10283222001, 10283222002, 10283222003, 10283222004, 10283222006, 10283222009, 10283222010, 10283222012

METHOD BLANK: 1805347 Matrix: Water
Associated Lab Samples: 10283222001, 10283222002, 10283222003, 10283222004, 10283222006, 10283222009, 10283222010, 10283222012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/03/14 06:55	
Ethylbenzene	ug/L	ND	1.0	10/03/14 06:55	
Toluene	ug/L	ND	1.0	10/03/14 06:55	
Xylene (Total)	ug/L	ND	3.0	10/03/14 06:55	
1,2-Dichloroethane-d4 (S)	%.	91	75-125	10/03/14 06:55	
4-Bromofluorobenzene (S)	%.	99	75-125	10/03/14 06:55	
Toluene-d8 (S)	%.	99	75-125	10/03/14 06:55	

LABORATORY CONTROL SAMPLE: 1805348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.0	95	75-125	
Ethylbenzene	ug/L	20	18.7	93	75-125	
Toluene	ug/L	20	19.3	96	75-125	
Xylene (Total)	ug/L	60	56.7	94	75-125	
1,2-Dichloroethane-d4 (S)	%.			93	75-125	
4-Bromofluorobenzene (S)	%.			100	75-125	
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1805349 1805350

Parameter	Units	10283222006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	20	20	19.8	19.4	99	97	75-129	2	30	
Ethylbenzene	ug/L	ND	20	20	20.1	18.7	100	93	75-128	7	30	
Toluene	ug/L	ND	20	20	20.0	18.6	99	93	75-129	7	30	
Xylene (Total)	ug/L	ND	60	60	62.7	58.0	104	97	75-129	8	30	
1,2-Dichloroethane-d4 (S)	%.						97	99	75-125			
4-Bromofluorobenzene (S)	%.						100	100	75-125			
Toluene-d8 (S)	%.						100	100	75-125			

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QUALITY CONTROL DATA

Project: AT&T Bothel #148859
Pace Project No.: 10283222

QC Batch: MSV/28805 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10283222005, 10283222007

METHOD BLANK: 1808443 Matrix: Water
Associated Lab Samples: 10283222005, 10283222007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	10/05/14 16:08	
Ethylbenzene	ug/L	ND	1.0	10/05/14 16:08	
Toluene	ug/L	ND	1.0	10/05/14 16:08	
Xylene (Total)	ug/L	ND	3.0	10/05/14 16:08	
1,2-Dichloroethane-d4 (S)	%.	88	75-125	10/05/14 16:08	
4-Bromofluorobenzene (S)	%.	98	75-125	10/05/14 16:08	
Toluene-d8 (S)	%.	97	75-125	10/05/14 16:08	

LABORATORY CONTROL SAMPLE: 1808444

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.0	95	75-125	
Ethylbenzene	ug/L	20	18.9	95	75-125	
Toluene	ug/L	20	18.9	94	75-125	
Xylene (Total)	ug/L	60	60.6	101	75-125	
1,2-Dichloroethane-d4 (S)	%.			95	75-125	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1808445 1808446

Parameter	Units	10282702001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	20	20	34.2	28.7	171	143	75-129	18	30	M1
Ethylbenzene	ug/L	ND	20	20	30.1	26.7	151	134	75-128	12	30	M1
Toluene	ug/L	ND	20	20	31.7	27.4	159	137	75-129	15	30	M1
Xylene (Total)	ug/L	ND	60	60	95.6	82.6	159	138	75-129	15	30	MS
1,2-Dichloroethane-d4 (S)	%.						100	99	75-125			
4-Bromofluorobenzene (S)	%.						98	97	75-125			
Toluene-d8 (S)	%.						100	99	75-125			

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QUALITY CONTROL DATA

Project: AT&T Bothel #148859
Pace Project No.: 10283222

QC Batch: MT/17007
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 10283222012

LABORATORY CONTROL SAMPLE: 1804576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
pH at 25 Degrees C	Std. Units	7	7.0	101	98-102	H6

SAMPLE DUPLICATE: 1804577

Parameter	Units	10283222012 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.6	6.7	1	3	H6

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QUALITY CONTROL DATA

Project: AT&T Bothel #148859
Pace Project No.: 10283222

QC Batch: OEXT/26801 Analysis Method: NWTPH-Dx
QC Batch Method: EPA 3510 Analysis Description: NWTPH-Dx GCS LV SG
Associated Lab Samples: 10283222001, 10283222002, 10283222003, 10283222004, 10283222005, 10283222006, 10283222007, 10283222009, 10283222010, 10283222012

METHOD BLANK: 1811039 Matrix: Water
Associated Lab Samples: 10283222001, 10283222002, 10283222003, 10283222004, 10283222005, 10283222006, 10283222007, 10283222009, 10283222010, 10283222012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Fuel Range SG	mg/L	ND	0.40	10/09/14 18:44	
Motor Oil Range SG	mg/L	ND	0.40	10/09/14 18:44	
n-Triacontane (S)	%.	85	30-125	10/09/14 18:44	
o-Terphenyl (S)	%.	77	30-125	10/09/14 18:44	

LABORATORY CONTROL SAMPLE: 1811040

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Diesel Fuel Range SG	mg/L	2	1.7	87	50-150	
Motor Oil Range SG	mg/L	2	1.8	90	50-150	
n-Triacontane (S)	%.			80	30-125	
o-Terphenyl (S)	%.			93	30-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1811042 1811043

Parameter	Units	10283222006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Diesel Fuel Range SG	mg/L	0.97	2	2	1.9	2.4	45	72	50-150	25	30	M1
Motor Oil Range SG	mg/L	ND	2	2	1.2	1.6	61	80	50-150	26	30	
n-Triacontane (S)	%.						61	76	30-125			
o-Terphenyl (S)	%.						61	76	30-125			

SAMPLE DUPLICATE: 1811041

Parameter	Units	10283218002 Result	Dup Result	RPD	Max RPD	Qualifiers
Diesel Fuel Range SG	mg/L	3.6	4.9	30	30	
Motor Oil Range SG	mg/L	2.0	3.4	52	30	D6
n-Triacontane (S)	%.	85	88	3		
o-Terphenyl (S)	%.	78	81	4		

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QUALIFIERS

Project: AT&T Bothel #148859
Pace Project No.: 10283222

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1M	Re-extracted out of hold, 10/13/2014, confirms surrogate failure due to emulsion.
2M	Surrogate recovery outside laboratory control limits, possibly due to emulsion.
D6	The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

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METHOD CROSS REFERENCE TABLE

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Parameter	Matrix	Analytical Method	Preparation Method
8260 MSV UST	Water	SW-846 8260B/5030B	N/A

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AT&T Bothel #148859
Pace Project No.: 10283222

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10283222001	**MW1**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222002	**MW2**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222003	**MW3**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222004	**MW4**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222005	**MW7**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222006	**MW8**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222007	**MW18**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222009	**MW5**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222010	**MW6**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222012	**Effluent**	EPA 3510	OEXT/26801	NWTPH-Dx	GCSV/14234
10283222001	**MW1**	EPA 8260	MSV/28762		
10283222002	**MW2**	EPA 8260	MSV/28762		
10283222003	**MW3**	EPA 8260	MSV/28762		
10283222004	**MW4**	EPA 8260	MSV/28762		
10283222005	**MW7**	EPA 8260	MSV/28805		
10283222006	**MW8**	EPA 8260	MSV/28762		
10283222007	**MW18**	EPA 8260	MSV/28805		
10283222009	**MW5**	EPA 8260	MSV/28762		
10283222010	**MW6**	EPA 8260	MSV/28762		
10283222012	**Effluent**	EPA 8260	MSV/28762		
10283222012	**Effluent**	SM 4500-H+B	MT/17007		

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1120 1133
10283222

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Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: CB&I	Report To: Tim O'Connor	Attention:
Address: 18323 Bothell Everett Hwy Suite 310	Copy To:	Company Name:
Email To: tim.oconnor@cbi.com	Purchase Order No.:	Address:
Phone: (206) 290-3194 Fax:	Project Name:	Pace Quote Reference: AT&T Bothell
Requested Due Date/TAT:	Project Number:	Pace Project Manager: Jenn Cross
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information: SAMPLE ID (A-Z, 0-9 / , -) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION (°C)	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: 8260 MTBE-Xylenes	8260 Full List	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW1		WT	G			9/24/14	1345	20	6				X					Y	23		001
2	MW2		WT	G			9/24/14	1500	18	5				X					Y	23		002
3	MW3		WT	G			9/24/14	1600	18	5				X					Y	23		003
4	MW4		WT	G			9/24/14	1745	14	5				X					Y	23		004
5	MW7		WT	G			9/24/14	1900	16	5				X					Y	23		005
6	MW8		WT	G			9/25/14	1130	18	5				X					Y	23		006
7	MW18		WT	G			9/25/14	1145	17	5				X					Y	23		007
8	MW9C		WT	G			9/25/14	1215	18	5				X					Y	26		008
9	MW5		WT	G			9/25/14	1335	20	5				X					Y	23		009
10	MW6		WT	G			9/25/14	1515	22	5				X					Y	23		010
11	Influent		WT	G			9/26/14	0820		5				X					Y	23		011
12	Effluent		WT	G			9/26/14	0830		6				X					Y	23		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Bruce Kam / CB&I	9/26/14	1437	PACE	9/26/14	1530	2.2 Y Y Y
				PACE	9/27/14	905	9.0 Y Y Y
							9.2 Y Y
							3.4

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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1742812

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: CBRI	Report To: Tim O'Connor	Attention:
Address: 18323 Bothell-Everett Hwy Suite 310	Copy To:	Company Name:
Email To: tim.oconnor@cbi.com	Purchase Order No.:	Address:
Phone: (206) 290-3094 Fax:	Project Name:	Pace Quote Reference: AT&T Bothell
Requested Due Date/TAT:	Project Number:	Pace Project Manager: Jenn Cross
		Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Requested Analysis Filtered (Y/N)

ITEM #	Section D Required Client Information: SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE	Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED: COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test ↓	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	Trip Blank									2			X								HOLD 013TB
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Brian Rau / CBRI	9/26/14	1537	PACE	9/27/14	1537	2.1/2.9	Y	Y	Y
				JT / PACE	9-27-14	905	3.4	Y	Y	Y
							3.4			

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Feb2014 Page 1 of 1
	Document No.: F-MN-L-213-rev.09	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: CB&I **Project #:** WO# : 10283222

10283222

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client

☐ Commercial ☐ Pace ☐ SpeeDee ☐ Other:

Tracking Number: 5779 5332 2510 2500

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No Seals Intact? ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: Temp Blank? ☑ Yes ☐ No

Thermom. Used: ☐ B88A9130516413 ☐ B88A912167504 ☑ B88A9132521491 Type of Ice: ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 3.1, 2.9 Cooler Temp Corrected (°C): 3.6, 3.4 Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C Correction Factor: +0.5 Date and Initials of Person Examining Contents: 9-27-14/AG

				Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☑ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☑ Yes	☐ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☑ No	☐ N/A	14.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): CB0714-3AXR				92714

CLIENT NOTIFICATION/RESOLUTION Field Data Required? ☐ Yes ☑ No

Person Contacted: Tim O'Connor @ CB&I Date/Time: 9/30/14 10:56 via email

Comments/Resolution:

MWQC belongs to MW-8 for lab QC. / Influent to be reported separately for billing purposes.

Project Manager Review: Jen Gross Date: 9/30/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical	Document Name: MN to MT Sample Transfer Form	Revised Date: 14Jul2014
	Document Number: F-MN-C-043-rev.11	Page: 1 of 1
		Issuing Authority: Pace Minnesota Quality Office

Shipping (circle):	UPS (Fed Ex)
Tracking #:	6114 1784 2378
Client:	CB&I
Due Date:	13-Oct-2014
Pace WO:	10283222
Project Manager:	Jenni Gross

MN to MT Sample Transfer Condition Upon Receipt Form

ANALYSIS REQUESTED

Method Number & Description	Container Type	# of Bottles	Lab ID's	Preservative Yes or No	Verify Arrival Date & Initials
Tests					
pH 4500H+B	BP3U	1	10283222-012	No	10/1 MN

REPORTING REQUIREMENTS/ADDITIONAL COMMENTS

MONTANA SAMPLE RECEIPT INFORMATION

IR Gun: B08A0140728348, Correction Factor: 0		Sample Matrix:	H2O
Cooler Temp Read (°C): 4.0	Cooler Temp Corrected (°C): 4.0	Filtred volume rec'd for dissolved tests:	Yes __ No__ NA X
Arrived on Ice:	Yes X No__	Samples pH have been checked:	Yes __ No__ NA X
Custody Seal Present:	Yes X No__	Trip Blank Present:	Yes __ No__ NA X
Short Hold Time Requested < 72 Hours:	Yes __ No X	Trip Blank Custody Seals Present:	Yes __ No__ NA X
Rush TAT Requested:	Yes __ No X	Pace Trip Blank Lot #:	NA
Sufficient Sample Volume:	Yes X No__	Sample Composites Required:	Yes __ No X NA __
Samples Arrived within Hold Time:	Yes X No__	Report Samples:	Wet Wt. __ Dry Wt.__
Containers Intact:	Yes X No__	Reporting Units:	

CUSTODY TRANSFER

Relinquished by/Affiliation	Date	Time	Accepted By Affiliation	Date	Time
Fed Ex	9/30/14		Mattson / Pace	10/1/14	1400

CLIENT NOTIFICATION/RESOLUTION

Person Contacted: _____ Date: _____

Comments/Resolution: _____

Project Manager Review: Jenni Gross Date: 10-1-14

Appendix D
September 24 and 25, 2014, Field Sampling Data Sheets

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center - Bothell WELL ID: MW 1
SITE ADDRESS: BLIND ID:
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		TEMPERATURE: (°F) 59.0 °C		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
09/24/14	12:05	.	.	1.73	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = tubing 3.70 EBF 9/24/14

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: ~~3.45~~ [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√
VOA Glass	09/24/14	13:45	G	3	(40 ml)	HCl	(YES)	(NO)		
Amber Glass	09/24/14	13:45	B	2	(250, 500, 1L)	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260) (8011) OR [ ] WA [ ]
	AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
	YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 12:55 Pump/Bailer Inlet Depth: 3.70

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	5.86	77.2	649	19.83	1.66	7.00	grey, turbid
1	B	0.75	5.82	13.0	592	20.00	2.53	1.50	" "
2	B	1.50	5.80	7.3	560	19.97	2.69	1.38	" "
3	B	2.25	5.80	6.2	524	20.09	2.80	1.41	" "
4	B	2.50	5.79	3.5	488	20.02	2.90	1.35	" "
5	B	2.75	5.79	4.3	475	20.05	2.95	1.33	" "
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Well in lawn. Samples collected w/ new well tubing

SAMPLER: Bruce Kram Bruce Kram
(PRINTED NAME) (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Centers - Bothell WELL ID: MW2

SITE ADDRESS: BLIND ID: —

DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: (°F) 59.0 °C		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

09 Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
9/24/14	12:17	.	.	4.84	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tube

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: 6.95 [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	09/24/14	15:00	~~B~~ G	3	40 ml	HCl	YES	NO		
Amber Glass	09/24/14	15:00	~~B~~ G	2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR[ ] WA[ ]
AMBER - Glass	(8080) (8150) (TOX) OR[ ] WA[ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 14:25 Pump/Bailer Inlet Depth: 6.95

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	6.62	83.2	278	18:30	4.95	33.8	colorless
1	B	0.50	5.74	84.1	258	18.18	5.02	12.65	"
2	B	0.75	5.71	89.4	258	18.19	5.05	4.42	"
3	B	1.25	5.74	86.7	258	18.25	5.07	2.58	"
4		.	.			.	.	.	
5		.	.			.	.	.	
6		.	.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Bailed well cavity. Samples collected of new well tubing.

SAMPLER: Bruce Kvam (PRINTED NAME) Bruce Kvam (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center - Bothell WELL ID: MW3
SITE ADDRESS: BLIND ID: —
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		(CLOUDY)		RAIN		?		TEMPERATURE:	(°F) 66.0 °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
09/24/14	12:21	.	.	3.23	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tube

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: 5.34

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used] √
VOA Glass	09/24/14	16:00	G	3 (40 ml)	(HCl)	(YES)	(NO)		
Amber Glass	09/24/14	16:00	B	2 (250, 500, 1L)	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500 HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L HNO_3	YES	YES		
	/ /	:			250, 500, 1L	YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR[ ] WA[ ]
AMBER - Glass	(8080) (8150) (TOX) OR[ ] WA[ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 15:35 Pump/Bailer Inlet Depth: 5.34

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	Temp °C	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	6.20	-6.6	434	18.49	3.34	59.65	colorless
1	B	0.50	5.86	-11.1	443	18.13	3.41	43.40	"
2	B	1.00	5.89	0.7	446	18.05	3.42	20.41	"
3	B	1.50	5.92	-3.2	445	17.96	3.44	12.52	"
4	B	2.00	5.93	-4.0	444	17.98	3.45	10.92	"
5		.	.			.	.	.	
6		.	.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Bailed well cavity. Samples collected w/ new well tubing.

SAMPLER: Bruce Kvam (PRINTED NAME) Bruce Kvam (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center - Bothell WELL ID: MW4
SITE ADDRESS: BLIND ID: —
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE:	(°F) 66 °C	

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
9/24/14	12:30	.	.	1.84	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tube

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: 4.06

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	09/24/14	17:45	G	3	40 ml	HCl	YES	NO		
Amber Glass	09/24/14	17:45	B	2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type	BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
	VOA - Glass	(8260) (8011) OR [ ] WA [ ]
	AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
	WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
	YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
	GREEN - Poly	(Cyanide)
	RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
	RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 16:55 Pump/Bailer Inlet Depth: 4.06

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)*	Water Quality
0	B	0.00	6.37	21.1	355	16.41	2.06	8.91	colorless
1	B	0.5	6.05	33.5	346	15.24	2.81	2.62	"
2	B	1.0	6.05	33.6	344	14.82	2.89	1.95	"
3	B	1.5	6.07	33.9	342	14.37	2.92	1.55	"
4	B	2.0	6.08	33.6	341	14.32	2.93	1.47	"
5	B	2.5	6.09	33.0	342	14.31	2.94	1.38	"
6			.						

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Bailed cavity of MW4. Samples collected w/ new well tubing.
* While removing YSI from flow-thru cell after MW3, DO membrane was knocked off. Replaced for WQ measurements @ MW4

SAMPLER: Bruce Kram (PRINTED NAME) Bruce Kram (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center - Bothell
WELL ID: MW5 (by window)
SITE ADDRESS:
BLIND ID: —
DUP ID: —
NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		(CLOUDY)		RAIN		?		TEMPERATURE: (°F) 64 . °C		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
9/24/14	12:55	.	.	5.01	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tube

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: 6.61

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	09/25/14	13:35	G	3	(40 ml)	(HCl)	(YES)	(NO)		
Amber Glass	09/25/14	13:35	B	2	(250, 500, 1L	(None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3

Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 13:05 Pump/Bailer Inlet Depth: 6.61

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	6.31	38.6	682	20.16	4.61	3.89	dull yellow/orange color
1	B	0.50	6.08	8.7	668	20.24	5.19	1.90	" " " "
2	B	1.00	6.01	-5.8	737	20.33	5.52	1.58	clearing
3	B	1.50	6.00	-18.5	807	20.39	5.89	1.31	colorless
4	B	2.00	5.97	-24.9	829	20.20	6.12	1.32	"
5	B	2.50	5.96	-24.4	839	20.12	6.29	1.32	"
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

MW5 samples collected w/ new well tubing

SAMPLER: Bruce Kvam (PRINTED NAME) Bruce Kvam (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center - Bothell WELL ID: MW6
SITE ADDRESS: BLIND ID: —
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	(SUNNY)		CLOUDY		RAIN		?		TEMPERATURE:	(°F) 68 .	°C

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
9/24/14	12:50	.	.	4.68	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163	1" = 0.041	2" = 0.163	3" = 0.367	4" = 0.653	6" = 1.469	10" = 4.080	12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tube 4

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: 7.23

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	[√ if used]
VOA Glass	09/25/14	15:15	G	3	(40) ml (HCl)	(YES)	(NO)		
Amber Glass	09/25/14	15:15	B	2	(250) 500, 1L (None) (HCl) (H_2SO_4)	(YES)	(NO)		
White Poly	/ /	:			250, 500, 1L None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500 HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L HNO_3	YES	YES		
	/ /	:			250, 500, 1L	YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR[ ] WA[ ]
AMBER - Glass	(8080) (8150) (TOX) OR[ ] WA[ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 14:37 Pump/Bailer Inlet Depth: 6.48

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	6.31	-8.6	459	23.32	4.48	2.84	colorless
1	B	0.50	5.93	8.2	451	23.64	5.02	1.16	"
2	B	1.00	5.91	8.7	457	23.96	5.86	0.96	"
3	B	1.50	5.90	6.9	460	23.40	6.31	0.91	"
4	B	2.00	5.86	8.3	466	22.90	.	0.89	"
5	B	2.50	5.86	6.7	460	22.14	7.03	0.83	"
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Bailed well cavity. Samples collected w/new well tubing.

SAMPLER: Bruce Kram (PRINTED NAME) Bruce Kram (SIGNATURE)

FIELD SAMPLING DATA SHEET

12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center-Bothell WELL ID: MW7
SITE ADDRESS: BLIND ID: —
DUP ID: — NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		RAIN		?		TEMPERATURE: (°F) 64. °C		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
9/24/14	12:31	.	.	3.53	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tube

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: ~~6.18~~ 6.13 [√ if used]

Bottle Type	Date	Time	Method §	Amount & Volume mL		Preservative [circle]	Ice	Filter	pH	√
VOA Glass	09/24/14	19:00	G	3	40 ml	HCl	YES	NO		
Amber Glass	09/24/14	19:00	B	2	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 — Total Bottles (include duplicate count): 5

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 18:25 Pump/Bailer Inlet Depth: 5.58

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)	Water Quality
0	B	0.00	6.30	-19.7	403	17.01	3.58	10.37	colorless
1	B	0.50	6.24	-11.3	402	16.91	4.20	2.84	"
2	B	1.00	6.25	-18.4	404	16.87	4.51	1.83	"
3	B	1.50	6.25	-24.0	410	16.61	5.19	1.71	"
4	B	2.00	6.27	-27.2	412	16.40	5.49	1.46	"
5	B	2.50	6.28	-25.7	412	16.35	5.73	3.32	"
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

Bailed MW7 cavity. Samples collected w/ new well tubing.

SAMPLER: Bruce Kram (PRINTED NAME) Bruce Kram (SIGNATURE)

FIELD SAMPLING DATA SHEET

CBI
12100 NE 195th Street, Suite 150
Bothell, WA 98011
Office: (425) 485-5000 Fax: (425) 486-9766

PROJECT NAME: AT&T Data Center - Bothell WELL ID: MW8
SITE ADDRESS: BLIND ID: MW18
DUP ID: —— NA

WIND FROM:	N	NE	E	SE	S	SW	W	NW	LIGHT	MEDIUM	HEAVY
WEATHER:	SUNNY		CLOUDY		(RAIN)		?		TEMPERATURE: (°F) 61. °C		

[Circle appropriate units]

HYDROLOGY/LEVEL MEASUREMENTS (Nearest 0.01 ft) [Product Thickness] [Water Column] [Water Column x Gal/ft]

Date	Time	DT-Bottom	DT-Product	DT-Water	DTP-DTW	DTB-DTW		Volume (gal)
9/24/14	13:10	.	.	5.98	.	.	X 1	.
/ /	:	.	.	.	.		X 3	.

Gal/ft = (dia./2)² x 0.163 | 1" = 0.041 | 2" = 0.163 | 3" = 0.367 | 4" = 0.653 | 6" = 1.469 | 10" = 4.080 | 12" = 5.875

§ METHODS: (A) Submersible Pump (B) Peristaltic Pump (C) Disposable Bailer (D) PVC/Teflon Bailer (E) Dedicated Bailer (F) Dedicated Pump (G) Other = Tubing

GROUNDWATER SAMPLING DATA (if product is detected, do NOT sample) Sample Depth: 8.29

Bottle Type	Date	Time	Method §	Amount & Volume mL	Preservative [circle]	Ice	Filter	pH	√ if used
VOA Glass	09/25/14	11:30	G	3|2	40 ml	HCl	YES	NO		
Amber Glass	09/25/14	11:30	B	6	250, 500, 1L	(None) (HCl) (H_2SO_4)	YES	NO		
White Poly	/ /	:			250, 500, 1L	None	YES	NO	NA	
Yellow Poly	/ /	:			250, 500, 1L	H_2SO_4	YES	NO		
Green Poly	/ /	:			250, 500, 1L	NaOH	YES	NO		
Red Total Poly	/ /	:			125, 250, 500	HNO_3	YES	NO		
Red Diss. Poly	/ /	:			250, 500, 1L	HNO_3	YES	YES		
	/ /	:			250, 500, 1L		YES			

White no acid, Yellow H2SO4, Red HNO3 Total Bottles (include duplicate count): 18

Analysis Allowed per Bottle Type

BOTTLE TYPE	TYPICAL ANALYSIS ALLOWED PER BOTTLE TYPE (Circle applicable or write non-standard analysis below)
VOA - Glass	(8260) (8011) OR [ ] WA [ ]
AMBER - Glass	(8080) (8150) (TOX) OR [ ] WA [ ]
WHITE - Poly	(pH) (Conductivity) (TDS) (TSS) (Alkalinity) (HCO_3/CO_3) (Cl) (SO_4) (Silica, T.) (NO3)
YELLOW - Poly	(COD) (TOC) (NH_3) (NO_3/NO_2) (Tannin/Lignin)
GREEN - Poly	(Cyanide)
RED TOTAL - Poly	(As) (Sb) (Ba) (Be) (Cd) (Co) (Cr) (Cu) (Fe) (Pb) (Mn) (Ni) (Ag) (Se) (Tl) (V) (Zn) (Hardness)
RED DISSOLVED - Poly	(Ca) (Fe) (Mg) (Mn) (K) (Na)

WATER QUALITY DATA Purge Start Time: 10:40 Pump/Bailer Inlet Depth: 7.65

Meas.	Method §	Purged (gal)	pH	ORP	E Cond (µS)	°F Temp (°C)	DTW	Diss O_2 (mg/l)*	Water Quality
0	B	0.00	6.15	-13.0	711	18.12	5.65	3.11	colorless, sheen
1	B	0.50	6.14	-32.0	697	18.68	6.38	1.32	"
2	B	1.00	6.09	-30.5	713	18.66	6.91	1.00	"
3	B	1.50	6.12	-32.0	696	18.54	7.28	0.94	"
4	B	2.00	6.13	-36.1	680	18.60	7.83	0.64	"
5	B	2.50+	6.14	-36.4	679	18.49	8.09	0.82	" "
6			.			.	.	.	

[Casing] [Select A-G] [Cumulative Totals] [Circle units] [Clarity, Color]

MW8 samples collected w/ new well tubing.
MW18 samples collected @ 1145, 09/25/2014

* MW8 sampled w/ YSI after new DO membrane installed & calibrated. Small bubble in membrane

SAMPLER: Bruce Kvam (PRINTED NAME) MWQC samples collected at 1215 09/25/2014 (SIGNATURE) Bruce Kvam

All samples from MW1-MW8 held overnight in refrigerator @ ~ 5°C.