dnaENVIRONMENTAL, LLC
111 West 9th Avenue | Anchorage, AK 99501
(907) 350-4897 phone | (866) 350-3569 fax
dnaenviro.com

July 18, 2016

Jason Goodwin, P.G.
Alaska HSE Area Manager
Baker Hughes Oilfield Operations, Inc.
795 East 94th Avenue
Anchorage, Alaska 99515
Via Email: jason.goodwin@bakerhughes.com

Subject: Quarterly Groundwater Monitoring Report; Nikiski Completions Facility (Baker Oil Tools – Deloris Drive), Nikiski, Alaska; ADEC File No. 2323.38.055, Hazard ID 25935

Dear Mr. Goodwin:

DNA Environmental Consultants, LLC (DNA) herein provides a summary of groundwater monitoring and sampling activities conducted at the Nikiski Completions Facility (Figure 1, Attachment 1) in May 2016. This is the fourth of four monitoring events scheduled for completion, on a quarterly basis, in August and November 2015, and February and May 2016.

Additionally, this report documents primary lines of evidence indicating no additional effort should be required at this site as characterization activities are complete in compliance with Title 18, Chapter 75, section 335 (18 AAC 75.335). Regulatory closure of this site under 18 AAC 75.380 is appropriate.

FIELD ACTIVITIES

Field activities were conducted at the Nikiski Completions Facility on May 18 and 19, 2016. All procedures were performed in accordance with the Alaska Department of Environmental Conservation (ADEC) approved work plan, dated May 6, 2015 (DNA 2015). Field work was conducted by Qualified Environmental Professionals, as defined in Title 18, Chapters 75 and 78 of the Alaska Administrative Code (18 AAC 75 and 78). Field notes and field-completed forms are provided in Attachment 2.

One deviation from the work plan is noted. There was not sufficient water or recharge at groundwater monitoring well MW-02 to collect a sample with the dedicated bladder pump. A groundwater sample was instead collected using a Proactive® stainless steel pump with a low-flow controller.

All 10 groundwater monitoring wells (MW-01 through MW-10) at the site were gauged for depth to groundwater (DTW) then purged following a low-flow (minimal drawdown) sample collection technique, and then sampled. Sample collection time, date, and location are summarized in Table 1, Attachment 3.

FIELD OBSERVATIONS

Groundwater Elevation and Gradient

Manual Measurements

The groundwater level measurements recorded, and the calculated elevations of the static water levels (SWLs) of groundwater at each groundwater well are presented in Table 2, Attachment 2. Figure 3 depicts groundwater elevation isocontours based on calculated elevations for the May event. In addition to measuring groundwater elevation at the on-site wells, DNA measured and calculated the groundwater elevation at two off-site wells: ADEC's MW-01; and, the "Old McGahan Well." Overall, the groundwater gradient across the site is very flat, with a maximum difference of 0.17 feet (~2 inches) over a 1,200-foot distance. When including elevations from the two off-site wells, a gradient or inferred groundwater flow direction is evident from the southwest, where ADEC MW-01 is located, to northeast and towards the site. Considering only on-site wells, water flow direction may be from the east towards the west, with MW-09 having a lower elevation than surrounding wells.

Table 3 presents historical groundwater elevation data. When compared to the February 2016 monitoring event, the average groundwater SWL elevation is approximately 0.39 feet lower in May 2016. When compared to May 2015, groundwater is approximately 0.56 feet higher than in May 2016.

Pressure Transducer Data

In 2015, DNA installed Solinst® Levelogger® pressure transducer/data loggers at MW-03, MW-06, and MW-08. The pressure transducers were removed on June 17, 2016 and the data from each of transducers was downloaded for processing. The transducer data from June 8, 2015 to June 17, 2016 are plotted on Graph 1, Attachment 4, for all three wells. Precipitation gauge data from Kenai airport is also plotted on Graph 1.

The graphed data indicates a seasonal variation of approximately 3 feet, with the highest groundwater elevation found during winter months, and the lowest during summer months.

Water Quality

Water quality data parameters recorded during low-flow well purging included temperature, conductivity, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity. A YSI® Model 556 water quality meter with a flow-through cell was used to collect temperature, conductivity, DO, and ORP data. A Hach® 2100P turbidity meter was used to measure turbidity. Final water quality parameter values, recorded on low-flow sampling field forms at the end of purging and prior to sample collection, are presented on Table 4, Attachment 3.

Water quality observed in May 2016 appeared to be similar to past water quality observations. All purge water appeared clear, except at MW-02, where discoloration was noted and insufficient purge volume resulted in no water quality data collection.

No odor was noted during purging. Turbidity ranged from a low of 2.97 Nephelometric Turbidity Units (NTU) recorded at MW-08, to a high of 32.0 NTUs at MW-09. Temperature and pH values were within

expected ranges, with the average temperature at 6.48 degrees Celsius. All conductivity values indicated a low level of dissolved constituents. DO values averaged 7.40 milligrams per liter (mg/L), indicating aerobic conditions. All ORP values were positive, averaging 274.51 millivolts across the site, indicate aerobic conditions.

ANALYTICAL RESULTS

All groundwater samples were submitted to ESC Lab Science, Inc. (ESC) for the following analysis:

- 1,1,1-trichloroethane (1,1,1-TCA), tetrachloroethene (PCE), and trichloroethene (TCE) by EPA Method SW8260C.

Laboratory analytical results are presented in Table 5, with historical values presented in Table 6. The laboratory report and ADEC Checklist are included as Attachment 4 to this letter.

Analytical results reported for May 2016 samples are comparable to values reported in all past sampling events. Similar to all past sampling events, the only detection of a contaminant reported at a concentration greater than an ADEC Table C groundwater cleanup level (GCL) was for TCE at MW-01. Also similar to past sampling events, TCE was detected at MW-02, MW-03, MW-04, MW-05, and MW-08 at concentrations less than the ADEC GCL. TCE was not detected at MW-06, MW-07, MW-09, or MW-10.

Detections of 1,1,1-TCA were reported, similar to past sampling events, at MW-01, MW-04, MW-05, MW-08, and MW-10. All detections 1,1,1-TCA were reported at concentrations less than the ADEC GCL.

PCE was not detected at any location.

Figure 5 presents the inferred TCE plume boundary contour at the 0.005 mg/L cleanup level. Isocontours for 1,1,1-TCA are presented on Figure 6. Isocontours and plume boundaries were generating using Surfer® Version 13 software. For locations where the laboratory reported no detection, a value of one half of the detection limit was entered instead of zero.

TREND ANALYSIS

DNA conducted a trend analysis of TCE detections found overtime in MW-01, MW-02, and MW-03 using the Mann-Kendall trend test. The trend test was conducted using ProUCL 5.1 software. Trend results are provide in Table 7. At MW-01 and MW-02, the test indicates a statistically significant decreasing trend. At MW-03, the data does not indicate a trend.

The data for TCE in MW-01 are visually depicted on Graph 2, and for MW-02 and MW-03 on Graph 3.

QUALITY ASSURANCE AND QUALITY CONTROL

This data quality assessment of analytical data was conducted to evaluate for laboratory analysis precision, accuracy, sensitivity, representativeness, comparability, and completeness by reviewing laboratory-supplied quality assurance/quality control (QA/QC) information as well as to perform independent QA/QC checks on the data.

All data were reviewed in accordance with appropriate EPA procedural guidance documents and ADEC regulatory guidance documents, including:

- EPA Functional Guidelines for Organic Data Review (EPA 2008), and
- ADEC Environmental Laboratory Data and Quality Assurance Requirements, Technical Memorandum (ADEC 2009).

An ADEC Laboratory Data Review Checklist (ADEC 2010) has been completed for the SDG listed below and is provided in Attachment 5. In the absence of project-specific control limits, laboratory QC sample recoveries and relative percent differences (RPDs) were compared to laboratory control-charted limits. Field-duplicate RPDs were compared to ADEC-recommended data quality objectives (DQOs).

All samples were collected and delivered to the project laboratory in accordance with the ADEC-approved work plan. The project laboratory, ESC, performed all analysis for water samples collected during the May 2016 field event. Samples were analyzed in accordance with applicable specifications in EPA Test Methods for Evaluating Solid Waste, SW-846, Third Edition, as updated (EPA 2015) by ESC. ESC is an ADEC-approved laboratory for the methods requested. ESC reported analytical data in one sample delivery group (SDG), identified as follows and provided in Attachment 5:

- L837110.

Relevant data qualifiers, resulting from this data quality assessment, were applied to data summarized in Table 5 for water data. The following provides a summary of findings for each QA/QC element reviewed. Anomalies that had no impact to data quality are discussed in the ADEC data review checklist (Attachment 5), and are not further described herein.

Sample Preservation, Handling, Custody, and Holding Times

All samples were delivered via Federal Express to ESC. CoC forms, laboratory sample receipt forms, and case narratives were reviewed to determine if any sample handling activities might have affected the integrity of the samples and the quality of the associated data.

The laboratory reported that all sample containers within the sample coolers were received at the laboratory intact and within the specified temperature range of 4 °C +/- 2°C. Data flags were not assigned due to the cooler temperatures.

Dates and times of sample collection, preparation, and analysis were compared to check that method holding times were not exceeded. There were no other sample preservation, handling, custody, or holding-time anomalies that affected data quality for this project.

Field QA/QC

Field QA/QC protocols are designed to monitor for possible contamination during collection and transport of samples collected in the field. Collection and analysis of field duplicates also facilitated an evaluation of precision that takes into account potential variables associated with sampling procedures and laboratory analyses. For this project, trip blanks and field duplicates were submitted for analysis.

Trip Blanks

ESC prepared one water that accompanied sample containers from the laboratory to the site. The water trip blank was returned to the laboratory with groundwater samples, to check for cross-contamination of samples during sampling, shipment, or storage. No analytes were detected in the trip blanks.

Field Duplicates

Field duplicate samples were collected for groundwater from groundwater monitoring well MW-01, and included samples:

- 16-BNT-209-GW and 16-BNT-210-GW.

The field-duplicate collection frequency met the 10% requirement in the work plan. RPDs between field-duplicate results were calculated where at least one of the results was quantitatively detected (above the practical quantification limit [PQL]). In cases where one result was above the PQL but the other result was not detected, an RPD was calculated using the PQL for the non-detect result. Calculated RPD values were within the method required criteria of 30% for the groundwater field-duplicate pairs.

Laboratory QA/QC

Laboratory Method Blanks

The laboratory analyzed and reported a method blank (MB) for each preparatory batch to check for laboratory-based sample contamination. No target analytes were detected in the method blank associated with project samples.

Laboratory Control Samples (Internal Standard Recovery)

The laboratory monitors internal precision and accuracy for each analytical batch with a set of Laboratory Control Samples/Laboratory Control Sample Duplicates (LCS/LCSDs). A known quantity of target analytes are added to blank laboratory control samples prior to extraction and analysis and recoveries are calculated. Acceptable recovery criteria vary with each analytical method and matrix. Analyses of LCS/LCSD for target analytes met laboratory and project QC goals for target analytes in all work orders. The RPD and percent recovery values between the LCS and LCSD pairs met method required precision and accuracy requirements.

Sample Matrix Effects

The laboratory analyzed and reported matrix spike (MS) and MS duplicate (MSD) samples to check for potential matrix interference. MS/MSD recovery and RPDs were evaluated only if the parent sample (the sample spiked for the MS/MSD) was in the project-sample set. Sample 16-BNT-206-GW was spiked for MS/MSD analysis of VOCs by EPA Method 8260B. There were no MS/MSD recovery or RPD failures affecting project-sample data quality.

System Monitoring Compounds

System monitoring compounds (Surrogates) are specified for organic chromatographic analytical procedures. Samples submitted for analysis of organic compounds were spiked with analyte surrogates to evaluate extraction efficiency and to check for matrix interference. Surrogate recoveries were reviewed for each project sample and analysis. There were no surrogate recovery failures affecting project-sample data quality.

Summary of Data Quality Indicators

Precision

Precision is a measure of the reproducibility of repetitive measurements. Precision was evaluated based on laboratory QC-sample and field-duplicate sample RPDs. There were no RPD failures affecting project-sample data quality. Precision is deemed acceptable for purposes of this project.

Accuracy

Accuracy is a measure of the correctness, or the closeness, between the true value and the quantity detected. Accuracy was evaluated based on analyte recoveries for laboratory QC samples and recovery of surrogate spikes for project samples. There were no recovery failures affecting project-sample data quality. Accuracy is deemed acceptable for purposes of this project.

Sensitivity

Sensitivity describes the ability of the sampling and analytical methodology to meet detection and/or quantitation limit objectives. Sensitivity was evaluated by comparing MRLs to relevant cleanup levels. Sensitivity was adequate for all target analytes reported for the groundwater samples.

Completeness

Completeness describes the amount of valid data obtained from the sampling event(s). Completeness is calculated as the percentage of valid measurements compared to the total number of measurements. Given issues with analytical sensitivity for the soil-sample data set, separate completeness calculations were made for groundwater and soil sample data. Groundwater sample data were 100% complete, with no data rejected in the course of our review.

Representativeness

Representativeness describes the degree to which data accurately and precisely represent site characteristics. Representativeness is affected by factors such as sample frequency and matrix or contaminant heterogeneity, as well as analytical performance (including sensitivity, accuracy, and precision) sample cross-contamination. Samples were collected in accordance with an approved work plan, and RPDs for field-duplicate samples were within DQOs. No results were affected by laboratory-based sample contamination or sample cross-contamination. Representativeness was deemed acceptable for purposes of this project.

Comparability

Comparability describes whether two data sets can be considered equivalent with respect to project goals. Comparability is affected by factors such as sampling methodology and analytical performance (including sensitivity, accuracy, and precision). Comparability was evaluated by checking that standard analytical methods were employed and analytical performance was acceptable. Project-sample results are deemed generally comparable.

Data Quality Conclusions and Limitations

Precision, accuracy, representativeness, comparability, and completeness were deemed acceptable, and the data are usable for the purposes of this project.

This review was based solely on information provided by the analytical laboratory in the laboratory reports for the SDG reviewed. Instrument-level QC elements, such as calibration verification or internal standard response were not reviewed, except to the extent that the laboratory identified instrument-level anomalies in the case narrative. A validation of the data (e.g. recalculating results based on instrument responses) or review any raw chemical data (e.g. chromatograms) was not performed.

CONCLUSIONS

Groundwater monitoring and sampling continues to indicate that one contaminant of concern, TCE, regularly exceeds the ADEC GCL, but at only one of the ten groundwater monitoring wells at the site (MW-01). TCE, when detected at any of the other groundwater monitoring wells at the site, continues to be reported at a concentration less than the ADEC GCL, and in general all reported detections were lower in May 2016 when compared to past analytical results. The boundary of the dissolved-phase TCE plume in groundwater has been fully defined, with no indication that impacts are migrating in any direction. Although 1,1,1-TCA is present at groundwater monitoring wells located on the northeast side of the site, no detections have currently or historically been reported at concentrations near or greater than the ADEC Table C GCLs.

Historical laboratory analytical results for samples collected from groundwater wells surrounding the dissolved-phase TCE plume centered at MW-01 indicted the plume is not migrating. The lack of a readily discernable groundwater flow direction at the site may be a contributing factor of the plume's stability.

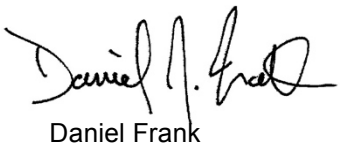
TCE also appears to be naturally attenuating at MW-01 as indicated by visual analysis (Graph2), linear regression (R^2 >0.8), and a Mann-Kendall trend test indicating a decreasing trend.

RECOMMENDATIONS

The Nikiski Completions Facility (Baker Oil Tools, Deloris Drive) site has been fully characterized in compliance with 18 AAC 75.335. Further, a removal action completed in 2014 has removed potential source areas at the site, which included a sump, and two different shallow injection well systems. Based on the conclusions of this report, DNA recommends no additional remediation or characterization work at this site, and that this site appears eligible for a "C*leanup Complete"* status designation by ADEC under 18 AAC 75.380.

Thank you for the opportunity to provide Baker Hughes with environmental consulting services on this project. If you have any questions or comments, please do not hesitate to contact me at 907-350-4898.

Sincerely,
DNA Environmental Consultants, LLC



Daniel Frank
Senior Project Manager

cc:

Mr. Chris Clodfelter, Baker Hughes, Houston, TX

Attachments:

1. Figures
2. Field Notes and Forms
3. Tables
4. Graphs
5. Laboratory Analytical Results, ADEC Data Review Checklists

REFERENCES

Alaska Department of Environmental Conservation (ADEC). 2010. ADEC Laboratory Data Review Checklist.

_____, 2009. Technical Memorandum: *Environmental Laboratory Data and Quality Assurance Requirements*. March.

DNA Environmental Consultants, LLC, 2016 (DNA). Additional Groundwater Delineation Wells, January 22.

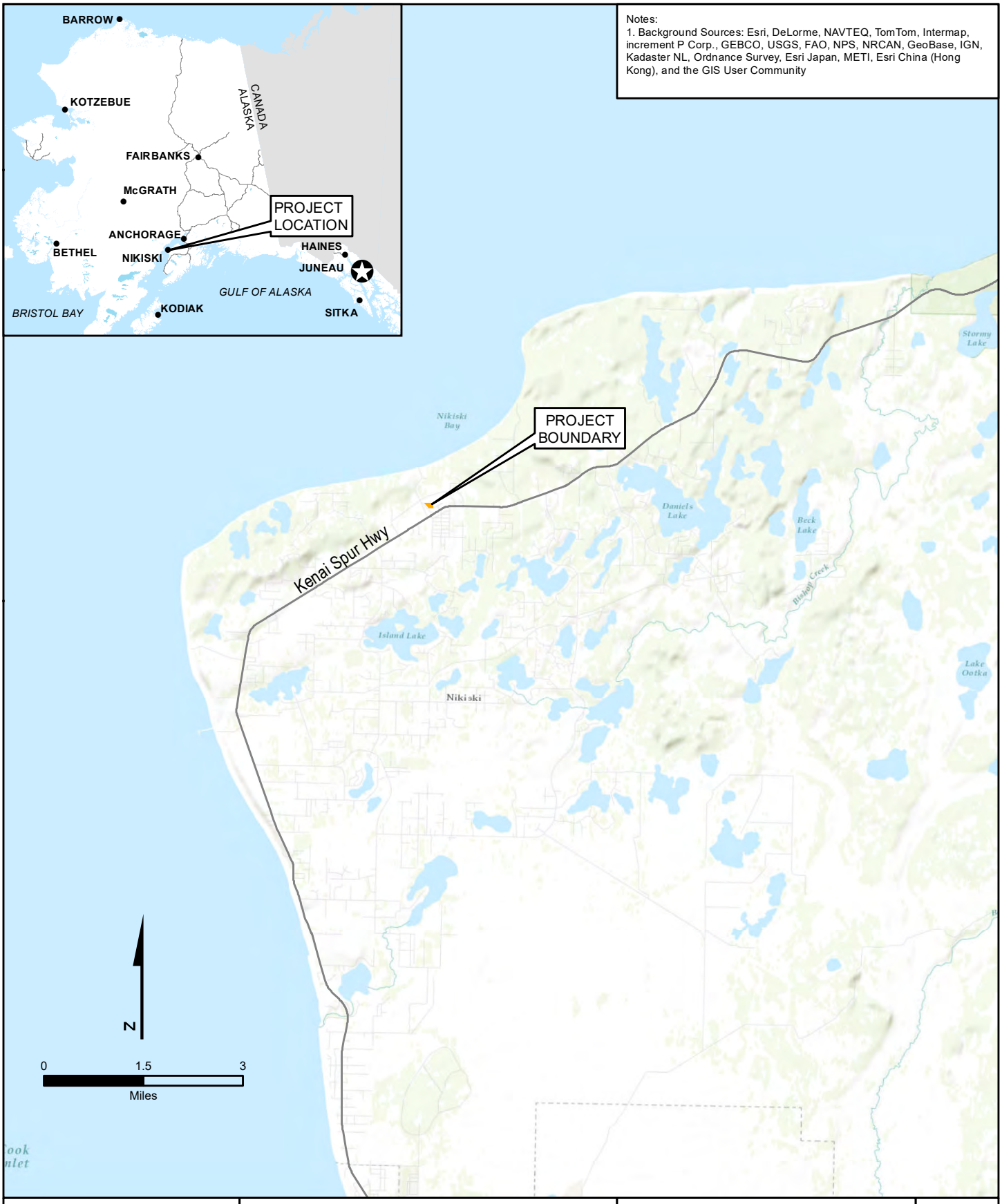
_____, 2015. Site Characterization Work Plan, Phase II, Baker Hughes Nikiski Completions Facility, ADEC File No. 2323.38.055, May 6.

United States Environmental Protection Agency (EPA). 2015. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, EPA publication SW-846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), and V (2015)

_____, EPA. 2008. Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review. EPA-540- R-08-01. June.

ATTACHMENT 1

Figures



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May 2016 Quarterly Monitoring Report
Baker Hughes Nikiski Completions Facility
Nikiski, Alaska

Site Vicinity Map

Figure **1**

July 12, 2016	16.BHI.01.02.02
DRAWN: TDSL	CHKD: DJF

1 inch equals 2 miles

C:\GIS\CLIENTS\DNA\Nikiski\Nikiski BHI\2016_July\Fig 1 Site Vicinity Map.mxd Jul 12, 2016 4:15:11 AM User: Tricia

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May 2016 Quarterly Monitoring Report
Baker Hughes Nikiski Completions Facility
Nikiski, Alaska

1 inch = 125 feet

Site Detail Map

Figure **2**

July 14, 2016 | 16.BHI.01.02.02

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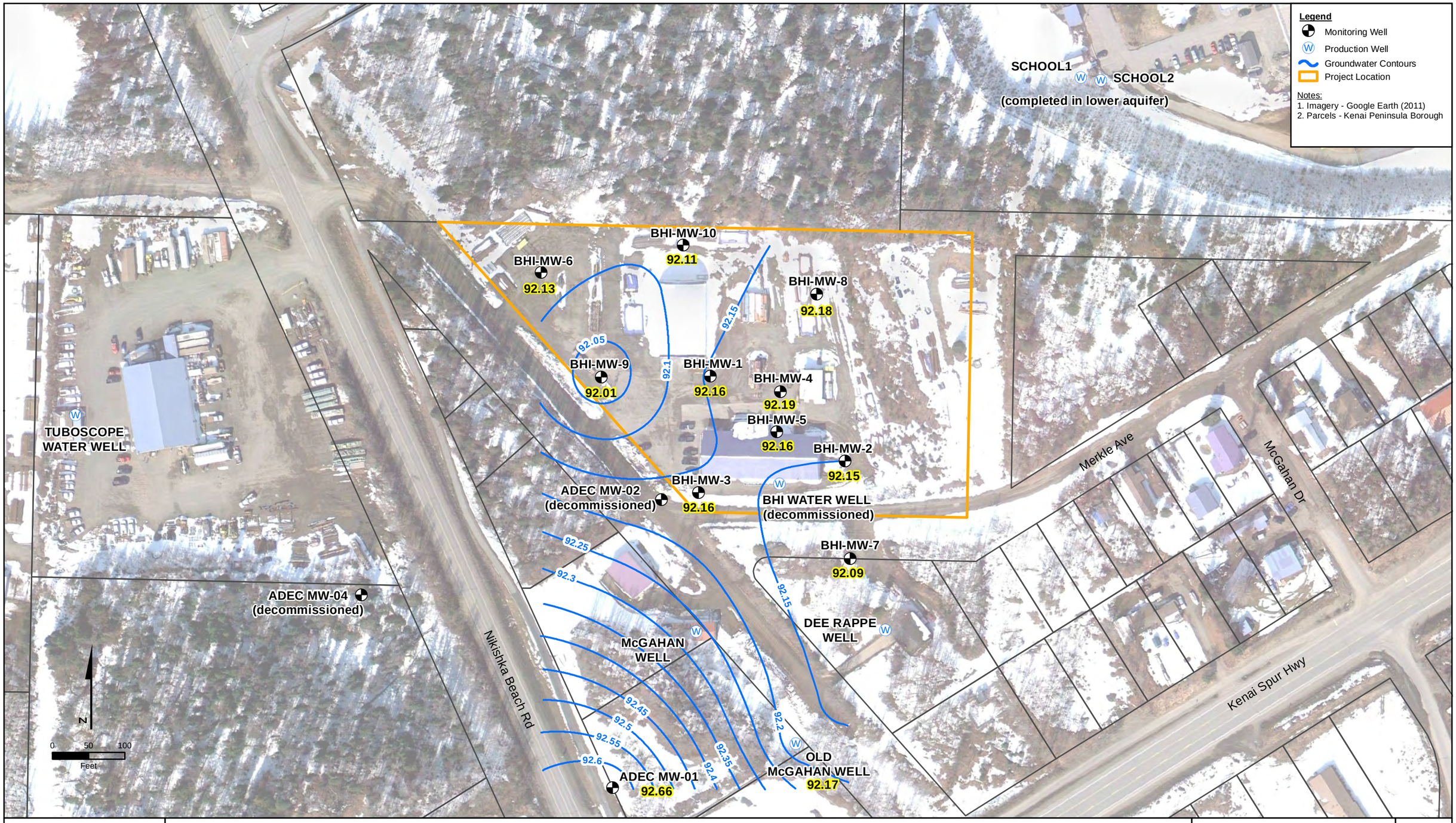
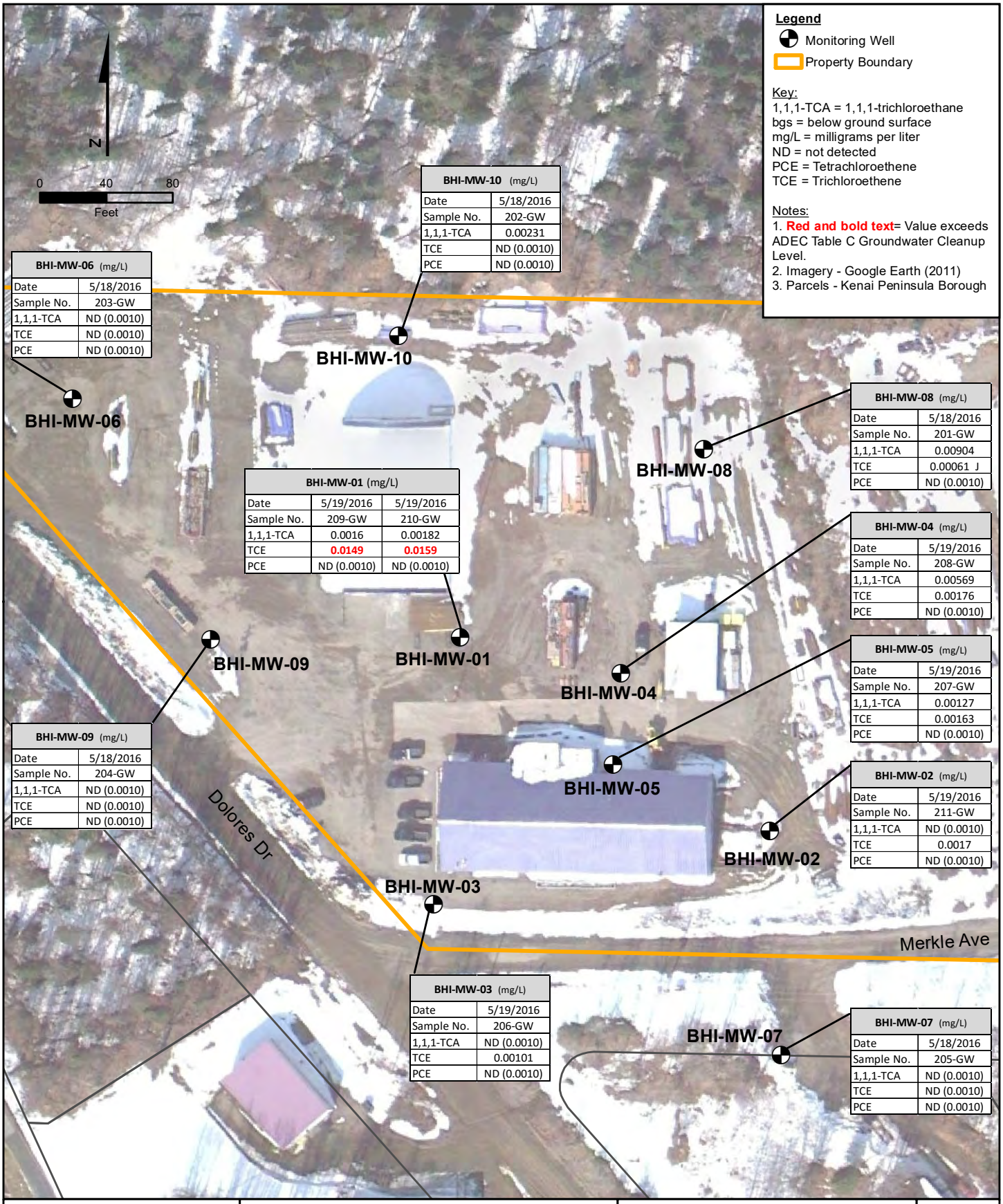
Fig 2 Site Detail Map.mxd Jul 14, 2016 7:51:02 AM User: Tricia



dna ENVIRONMENTAL	May 2016 Quarterly Monitoring Report Baker Hughes Nikiski Completions Facility Nikiski, Alaska	**Vicinity Groundwater Elevations and Inferred Contours**	Figure
	1 inch = 125 feet	July 14, 2016 / 16.BHI.01.02.02 DRAWN: TDSL / CHKD: DJF	**3**

Fig 3 GW Elevations and Contours.mxd Jul 14, 2016 7:28:12 AM User: Tricia



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May 2016 Quarterly Monitoring Report
Baker Hughes Nikiski Completions Facility
Nikiski, Alaska

1 inch equals 80 feet

Groundwater Results Summary

July 12, 2016 | 16.BHI.01.02.02

DRAWN: TDSL | CHKD: DJF

Figure **4**

C:\GIS\CLIENTS\DNA\Nikiski\Nikiski BHI\2016_July\Fig 4 Groundwater Results Summary.mxd Jul 12, 2016 5:35:20 PM User: Tricia

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May 2016 Quarterly Monitoring Report
Baker Hughes Nikiski Completions Facility
Nikiski, Alaska

1 inch = 125 feet

TCE Concentrations and Inferred 0.005 mg/L and 0.0028 mg/L Contours

July 14, 2016 | 16.BHI.01.02.02

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Figure **5**

Fig 5 TCE Concentrations.mxd Jul 14, 2016 7:48:17 AM User: Tricia

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May 2016 Quarterly Monitoring Report
Baker Hughes Nikiski Completions Facility
Nikiski, Alaska

1 inch = 125 feet

TCA Concentrations and Inferred Contours

Figure **6**

July 14, 2016 | 16.BHI.01.02.02

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Fig 6 TCA Concentrations.mxd Jul 14, 2016 7:22:39 AM User: Tricia

ATTACHMENT 2

Field Notes and Forms

BHI Nikiski Tool 5/18/16

1157 arrive from Anchorage, setup at MW-09, conduct safety meeting, check-in with Colin.

1315 Move from MW-08 to MW-10. MW-8 in good condition, no issues with purging or sampling.

1430 Moved from MW-10 to MW-06. MW-10 in good condition.

1530 Move from MW-06 to MW-09, MW-06 in good condition.

1645 Pump at MW-09 would not purge, used Hurrican pump, pulled bladder pump. moving to MW-07.

1900 completed sampling at MW-07, well is slow to purge but in good condition. Depart site for day.

5/18/16

Scale: 1 square = _____

BHI Nikiski Tool 5/19/16

0830 Arrive at site offsite getting sample ice. check in with Colin & Frank and Davis conduct safety meeting.

0845 Begin at MW-03.

0945 move to MW-05, MW-03 in good condition. collect MS/MSD at MW-3.

1045 Collected sample at MW-05, move to MW-04.

1200 move to ~~MW-03~~ MW-01 MW-04 in good condition. ~~DF~~ ~~MW-03~~ MW-01 surface is destroyed casing lid, wellhead remains accessible. Collect dup. sample at ~~MW-05~~ MW-01 DF.

1345 Purging MW-02 is not productive. Although 3' of water, neither the bladder pump nor the Hurrican pump can pull head. obtain sample with no w/q data.

1445 GW elevation/DTW at old Mapsco well: 46.39. can't get into new Mapsco well.

1515 DEC well DTW = 73.81. Had to cut Lock off.

1530 Depart for Anchorage.

5/19/16

Scale: 1 square = _____

Rite in the Rain

Groundwater Sampling Worksheet

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Project Name: BNT- Nikiski
Client: BAKER Hughes
Sampler:
Weather Conditions:

Sample Location (ie. MW1): MW-1
Date: 5/19/14
Purge Start Time:

Sample ID: 14-BNT-210-GW Time: 13:35 (primary) dup split ms/msd
Sample ID: 14-BNT-209-GW Time: 14:00 primary (dup) split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~ VOC	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) NO
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 43.80 (depth to bottom)
Depth to Water (ft BTOC): 39.72
Water Column (ft) 4.08
One Purge Volume (gal): 0.65
purge calculation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	13:03	0.1	6.90	5.74	0.209	50.7	5.92	274.6	clear	o	39.74	
2	13:07	0.2	6.83	5.73	0.201	26.3	5.82	275.3	clear	o	39.74	
3	13:13	0.5	6.90	5.73	0.199	15.1	5.75	277.6	clear	o	39.74	
4	13:17	0.8	6.88	5.73	0.199	10.8	5.72	280.2	clear	o	39.74	
5	13:22	1.0	6.91	5.73	0.198	7.32	5.73	282.3	clear	o	39.75	
6	13:26	1.5	6.89	5.73	0.197	5.74	5.60	271.4	clear	o	39.75	
7	13:30	1.7	6.92	5.72	0.196	6.05	5.60	279.3	clear	o	39.75	0.03
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 0.145 L/min
Total Volume Purged:
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):

Signed: Date: 5/19/14
Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		

Groundwater Sampling Worksheet

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Project Name: BNT- Nikiski
Client: Baker Hughes
Sampler:
Weather Conditions:

Sample Location (ie. MW1): MW-2
Date: 5/19/16
Purge Start Time:

Sample ID: 16-BNT-209-GW	Time: ~~12:20~~	primary	dup	split	ms/msd
Sample ID: 211	Time: 14:15	primary	dup	split	ms/msd
Sample ID:	Time:	primary	dup	split	ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~ VOC	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) N
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 43.90 (depth to bottom)
Depth to Water (ft BTOC): 41.33 <41.35>
Water Column (ft) 2.57
One Purge Volume (gal):
purge calculation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):
Changed out pumps / pump not working No Sample Taken

Signed: Lacy Davis Date: 5/19/16

Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		

Groundwater Sampling Worksheet

dna ENVIRONMENTAL

Project Name: BNT- Nikiski
Client: Baker Hughes
Sampler:
Weather Conditions:

Sample Location (ie. MW1): MW-3
Date: 5/19/16
Purge Start Time: 8:50

Sample ID: 16-BNT-206-GW Time: 9:30 (primary) dup split (ms/msd)
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~ VOC	~~5~~ 4	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) N
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 43.60 (depth to bottom)
Depth to Water (ft BTOC): 40.53
Water Column (ft) 3.07
One Purge Volume (gal): 0.49
purge calcluation formula on back

Sensory Observations

Color:	Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor:	None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity:	None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	9:05	0.01	6.95	5.89	0.238	25	8.54	279.2	Clear	none	40.53	
2	9:12	0.1	6.99	5.90	0.244	14.3	7.90	279.8	Clear	none	40.53	
3	9:16	0.2	6.84	5.90	0.242	8.61	7.91	279.2	Clear	none	40.53	
4	9:22	0.3	6.65	5.91	0.238	6.24	7.88	279.7	Clear	none	40.53	
5	9:27	0.5	6.58	5.91	0.236	3.96	7.90	281.2	Clear	none	40.53	
6												
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 0.105 L/min
Total Volume Purged:
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):
Samples pulled from Flow through Cell

Signed: Date: 5/19/16
Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		

Groundwater Sampling Worksheet

dna ENVIRONMENTAL

Project Name: BNT - Nikiski
Client: Baker Hughes
Sampler:
Weather Conditions:

Sample Location (ie. MW1): MW-4
Date: 5/19/16
Purge Start Time: 1050

Sample ID: 16-BNT-208-GW Time: 11:25 (primary) dup split ms/msd
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~ VOC	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) N
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 49.12 (depth to bottom)
Depth to Water (ft BTOC): 41.17
Water Column (ft) 7.95
One Purge Volume (gal): 1.0
purge calculation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	10:55	0.01	6.72	6.11	0.217	111	6.64	276.0	clear	o	41.17	0
2	10:59	0.01	6.40	6.11	0.204	81.0	6.45	271.3	clear	o	41.17	
3	11:03	0.1	6.28	6.12	0.198	41.0	6.40	276.9	clear	o	41.17	
4	11:08	0.2	6.29	6.11	0.194	26.8	6.35	272.9	clear	o	41.17	
5	11:12	0.3	6.26	6.10	0.192	21.1	6.36	271.3	clear	o	41.17	
6	11:17	0.5	6.25	6.10	0.189	13.6	6.34	269.7	clear	o	41.17	
7	11:21	@1.0	6.20	6.09	0.186	9.33	6.37	270.2	clear	o	41.17	2
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow) 0.200 L/min
Total Volume Purged:
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):

Signed: Date: 5/19/16
Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		

Groundwater Sampling Worksheet

dna ENVIRONMENTAL

Project Name: BNT - Nikiski
Client: Baker Hughes
Sampler:
Weather Conditions:

Sample Location (ie. MW1): MW-5
Date: 5/19/16
Purge Start Time: 9:52

Sample ID: 16-BNT-207-GW Time: 10:35 (primary) dup split ms/msd
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~ VOC	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) N
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 47.29 (depth to bottom)
Depth to Water (ft BTOC): 41.83
Water Column (ft) 5.46
One Purge Volume (gal): 0.87
purge calcluation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	10:02	0.01	8.23	6.17	0.299	31.2	9.51	269.2	clear	n	41.83	0
2	10:07	0.1	8.29	6.16	0.311	37.6	7.88	274.8	clear	n	41.84	
3	10:12	0.1	8.21	6.18	0.317	34.3	7.62	276.7	clear	n	41.84	
4	10:17	0.2	8.24	6.18	0.321	33.4	7.31	279.4	clear	n	41.84	
5	10:22	0.3	8.41	6.18	0.322	28.3	7.17	281.7	clear	n	41.84	
6	10:29	0.3	8.77	6.19	0.322	27.5	6.95	284.0	clear	n	41.84	
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 0.75 L/min
Total Volume Purged:
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):

Signed: Date: 5/19/16
Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		

Groundwater Sampling Worksheet

dna ENVIRONMENTAL

Project Name: BNT- Nikiski
Client: Bolez Hughes
Sampler:
Weather Conditions:

Sample Location (ie. MW1): MW-6
Date: 5/18/16
Purge Start Time: 14:40

Sample ID: 16-BNT-203-GW Time: 15:10 primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~/VOCs	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) N
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 46.0 (depth to bottom)
Depth to Water (ft BTOC): 35.65
Water Column (ft) 10.35
One Purge Volume (gal): ~~1.0~~ 1.65
purge calculation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	14:47	0.01	6.08	5.93	0.161	54.6	5.60	274.3	Clear	ø	34.39	—
2	14:51	0.03	5.90	5.91	0.155	35.9	5.88	276.1	Clear	ø	34.35	0.04
3	14:56	0.1	5.90	5.89	0.159	21.7	5.25	279.8	Clear	ø	34.35	
4	15:00	0.5	5.95	5.85	0.159	17.5	5.91	255.1	Clear	ø	34.35	
5	1508	1.0	6.05	5.88	0.156	17.5	5.39	273.2	Clear	ø	34.35	
6												
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 0.195 L/min
Total Volume Purged: 1.0
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):
Had Trouble getting greadings of water level depth *

Signed: Date:
Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity:	0-800 NTU		

dna ENVIRONMENTAL — Groundwater Sampling Worksheet

Project Name: BNT - Nikisk
Client: BAKER Hughes
Sampler:
Weather Conditions:

Sample Location (ie. MW1): MW - 7
Date: 5/18/16
Purge Start Time: ~~8:~~ 17:00

Sample ID: 16-BNT-205-GW Time: 17:55 (primary) dup split ms/msd
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
GRO/BTEX	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen): N
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): ~~56.80~~ 56.40 (depth to bottom) 56.40
Depth to Water (ft BTOC): 49.01
Water Column (ft) 7.39
One Purge Volume (gal): ~~1.19~~
purge calcluation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	17:21	0.1	6.71	6.09	0.194	1000 +	6.70	312.2	Turb	0	49.0	
2	17:25	0.3	5.90	6.07	0.186	~~49~~ 1428	6.71	309.6	Turb	0	49.1	0.1
3	17:32	0.5	5.61	6.07	0.183	150	6.83	304.1	Turb	0	49.0	
4	17:37	1.0	5.55	6.08	0.183	59.4	6.80	298.1	Clear	0	49.0	
5	17:42	1.5	5.51	6.09	0.184	31.9	6.65	294.3	Clear	0	49.0	
6	17:47	2.0	5.49	6.09	0.184	17.8	6.67	293.0	Clear	0	49.0	
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 0.140 L/min
Total Volume Purged: 2
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):

Signed: Date: 5/18/16
Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		

Groundwater Sampling Worksheet

dna ENVIRONMENTAL

Project Name: BHI - Nikiski Tank
Client: Baker Hughes
Sampler:
Weather Conditions: Wind, Cool 50°F

Sample Location (ie. MW1): MW-08
Date: 5/18/16
Purge Start Time: 12:30

Sample ID: 16-BNT-201-GW Time: 1:10 pm primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~ VOC	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2
Product Present? (y/n/sheen) No
Depth to Top of Product (ft BTOC): 0
Depth to Oil/Water Interface (ft BTOC): 39.64 = NA
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 47.46 (depth to bottom)
Depth to Water (ft BTOC): 39.64
Water Column (ft) 7.82
One Purge Volume (gal): 1.25
purge calculation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity (mS/cm)	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	12:36	1/2	5.4	5.92	.145 ms/cm	57.9	10.85	231.5	Clear	NONE	39.64	0
2	12:45	1.5	5.54	5.97	.138	18.2	10.37	244.9	Clear	NONE	39.65	0
3	12:50	1.7	5.41	6.02	.136	9.83	10.35	249.6	Clear	NONE	39.65	0.01
4	12:53	1.75	5.51	6.04	.136	10.2	10.17	251.6	Clear	NONE	39.66	0.01
5	12:57	2.0	5.92	6.00	0.136	5.18	10.04	251.1	Clear	NONE	39.66	0.02
6	1:01	2.5	5.87	6.14	0.135	4.24	10.20	250.4	Clear	NONE	39.65	0.01
7	1:04	3	5.72	6.15	0.135	3.37	10.17	250.9	Clear	NONE	39.65	0.01
8	1:07	3.5	5.68	6.16	0.136	2.97	10.14	252.2	Clear	NONE	39.65	0.01
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 0.420 L/min
Total Volume Purged:
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):

Signed: Date: 5/18/16
Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

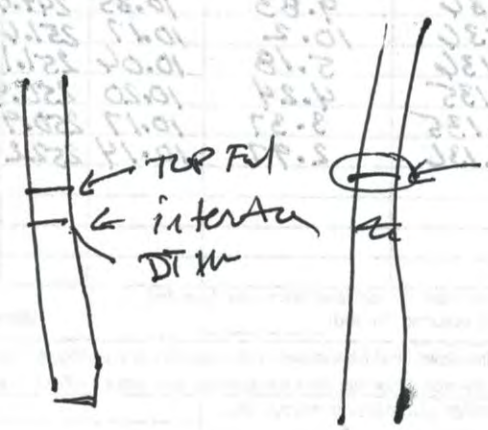
Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		



Groundwater Sampling Worksheet

dna ENVIRONMENTAL

Project Name: BNT- Nikiski
Client: Baker Hughes
Sampler:
Weather Conditions:

Sample Location (ie. MW1): MW-9
Date: 5/18/14
Purge Start Time:

Sample ID: 16-BNT-204-GW Time: 16:35 (primary) dup split ms/msd
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~/VOCs	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2"
Product Present? (y/n/sheen) N
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 43.84 (depth to bottom)
Depth to Water (ft BTOC): ~~36.87~~ 36.94
Water Column (ft) 6.97
One Purge Volume (gal): ~~2.65~~ 2.5
purge calculation formula on back

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	16:12	0.5	6.91	6.30	0.187	1000+	9.16	252.5	Dirty	ø	36.94	
2	16:16	1.0	6.99	6.30	0.191	639	8.77	258	Dirty	ø	36.94	
3	16:20	1.25	6.97	6.30	0.188	261	8.60	261.4	Turbid	ø	36.94	
4	16:23	1.5	7.20	6.30	0.189	160	8.80	262.9	Turb	ø	36.94	
5	16:27	2.0	7.09	6.30	0.191	46	8.75	264.9	Turb	ø	36.94	
6	16:30	2.5	7.03	6.29	0.189	32	8.71	266.4	clear	ø	36.94	
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 0.265 L/min
Total Volume Purged: 2.5
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):
Changed pump out

Signed: Date: 5/18/14
Signed/Reviewer: Date: 5/23/14

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		

Groundwater Sampling Worksheet

dna ENVIRONMENTAL

Project Name: BNT - Nikiski Tool
Client: Baker Hughes
Sampler:
Weather Conditions: Windy, Partly cloudy

Sample Location (ie. MW1): MW-10
Date: 5/18/16
Purge Start Time: 1:50

Sample ID: 16-BNT-202-GW Time: 14:20 (primary) dup split ms/msd
Sample ID: Time: primary dup split ms/msd
Sample ID: Time: primary dup split ms/msd

Analyses	Number/type of Bottles	Comments/ preservation:	Analyses	Number/type of Bottles	Comments/ preservation:
~~GRO/BTEX~~/VOCs	3	HCL	Nitrate/Nitrite		
DRO			Sulfate		
RRO			Total Metals (Fe & Mg)		
DRO w/silica			Dissolved Metals (Fe & Mg)		
RRO w/silica			Alkalinity		
PAHs			Methane		

Well Information / Purge Volume Calculation

Well Casing Diameter (in): 2
Product Present? (y/n/sheen) N
Depth to Top of Product (ft BTOC):
Depth to Oil/Water Interface (ft BTOC):
(BTOC = below top of casing)

Total Well Depth (ft BTOC): 43.20 (depth to bottom)
Depth to Water (ft BTOC): 38.05
Water Column (ft) 5.15
One Purge Volume (gal): 0.6
purge calculation formula on back

Sensory Observations

Color:	Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor:	None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity:	None, Low, Medium, High, Very Turbid, Heavy Silts

Instrument Observations

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
1	14:00	0.1	5.71	~~6.24~~	0.281	171 ~~105~~	~~9.62~~	254.5	cloudy	o	38.06	o
2	14:04	0.2	5.80	6.31	0.285	43.1	9.00	263.1	cloudy	o	38.06	
3	14:08	0.3	5.70	6.31	0.288	19.8	9.04	266.8	clear	o	38.06	
4	14:12	0.3	5.62	6.30	0.289	10.5	8.89	269.0	clear	o	38.06	
5	14:18	0.5	5.56	6.30	0.286	6.93	8.87	273.4	clear	o	38.06	o
6												
7												
8												
9												
10												
11												
12												

see back for additional entry lines if needed

Purge Rate (low flow): 0.260 L/min
Total Volume Purged:
Measured Drawdown (ft):

Notes: Drawdown should be less than 0.3 feet while sampling. Minimal drawdown shall be achieved and measured by pumping at a low rate (approximately 0.1 to 0.5 liter/minute) and continually measuring water levels in the well. Note that site's hyrogeology may make it difficult to achieve this specification.

Purge Method (disposable bailer, teflon bailer, submersible pump, etc.):
Sample Method (disposable bailer, teflon bailer, submersible pump, etc.):

Well Integrity (condition of casing, flush mount sealing properly, cement seal intact, etc.):

Remarks (well recovery, unusual conditions/observations):

Signed: Date: 5/18/16
Signed/Reviewer: Date: 5/23/16

Instrument Observations (continued)

Round	Time	Volume (gal)	Temp °C	pH	Conductivity ( )	Turbidity (NTUs)	DO (mg/L)	ORP (mV)	Color	Odor	Water Level (ft BTOC)	Draw-down (ft)
13												
14												
15												
16												
17												
18												
19												
20												
21												

Purge Rate (low flow): _____ L/min Total Volume Purged: _____ Measured Drawdown (ft): _____

Calculating Purge Volume

Well Casing Diameter:	Multiply c) by:
2	0.16
4	0.65
6	1.47

Sand Pack Diameter:	Multiply c) by:
8	0.71
10	1
12	1.28

Note: assuming sand pack has 29% porosity

Example 1- purging only well casing volume
You have 2-inch casing and 6-foot water column.
One Purge Volume= 0.16 X 6 = 0.96 gallons water

Example 2- purging well casing and sand pack volume
You have 2-inch casing, 8-inch sand pack, and 6-foot water column.
One Purge Volume= (0.16 X 6) + (0.71 X 6) = 5.22 gallons water

Criteria for Stable Parameters (three successive readings within stability critieria)

Parameter	Working Range	Stability Criteria	Notes
Temperature:	>0.00 °C	± 0.5 °C	
pH:	0-14	± 0.1	
Conductivity:	0-999 mS/m	± 5%	
ORP:	± 1999 mV		
Dissolved Oxygen:	0-19.99 mg/L	± 10%	DO in GW typically does not exceed 13 mg/L
Turbidity;	0-800 NTU		

ATTACHMENT 3

Tables

TABLE 1: SAMPLE COLLECTION SUMMARY
Quarterly Ground Water Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

Location	Sample No.	Duplicate	MS/MSD	Sample Date	Sample Time	Halogenated Volatiles[1] (EPA 8260B)
MW-01	16-BNT-209-GW			5/19/16	1400	✓
	16-BNT-210-GW	✓		5/19/16	1335	✓
MW-02	16-BNT-211-GW			5/19/16	1445	✓
MW-03	16-BNT-206-GW		✓	5/19/16	0930	✓
MW-04	16-BNT-208-GW			5/19/16	1125	✓
MW-05	16-BNT-207-GW			5/19/16	1035	✓
MW-06	16-BNT-203-GW			5/18/16	1510	✓
MW-07	16-BNT-205-GW			5/18/16	1755	✓
MW-08	16-BNT-201-GW			5/18/16	1310	✓
MW-09	16-BNT-204-GW			5/18/16	1635	✓
MW-10	16-BNT-202-GW			5/18/16	1420	✓
Lab Provided	Trip Blank			5/18/16	0700	✓

Notes:

[1] = Analysis for TCE, 1,1,1-TCA, and PCE only.

Key:
1,1,1-TCA = 1,1,1-Trichloroethane
BNT = Baker Nikiski Tool
EPA = United States Environmental Protection Agency
GW = Groundwater
MS/MSD = Matrix spike/matrix duplicate spike
MW = Monitoring Well
PCE = Tetrachloroethene
SIM - Selective Ion Monitoring
TCE = Trichloroethene

TABLE 2: GROUNDWATER ELEVATION DATA
Quarterly Ground Water Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

Well ID	Survey Data		Field Measurements		Water Elevation (feet AMSL)	Groundwater Interface within Screening Interval?
	Ground Elevation (feet AMSL)	Measuring Point/TOC Elevation (feet AMSL)	Depth to Water (BTOC)	TD (BTOC)		
ON-SITE WELLS						
BHI-MW-01	132.55	131.88	39.72	43.80	92.16	Yes
BHI-MW-02	134.14	133.50	41.35	43.90	92.15	Yes
BHI-MW-03(T)	133.37	132.69	40.53	43.60	92.16	Yes
BHI-MW-04	133.64	133.36	41.17	49.12	92.19	Yes
BHI-MW-05	134.56	133.99	41.83	47.29	92.16	Yes
BHI-MW-06(T)	127.00	126.52	34.39	46.00	92.13	No
BHI-MW-07	141.64	141.10	49.01	56.40	92.09	Yes
BHI-MW-08(T)	132.34	131.82	39.64	47.46	92.18	Yes
BHI-MW-09	129.30	128.95	36.94	43.84	92.01	Yes
BHI-MW-10	130.70	130.16	38.05	43.20	92.11	Yes
OFF-SITE WELLS						
OLD MCGAHAN WELL	140.20	138.56	46.39	--	92.17	NA
ADEC MW-1	165.48	166.47	73.81	--	92.66	NA

Notes:
All measurements are in units of feet.
(T) = Transducer present in well.

Key:
-- = Not present
AMSL = Above Mean Sea Level
BTOC = Below top of casing, a.k.a. below measuring point
LNAPL = Light non-aqueous phase liquid
NA = Not available
NR = not recorded
TD = Total Depth

TABLE 3: GROUNDWATER ELEVATION TREND
Quarterly Ground Water Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

Well ID	Survey Data		Field Measurements		Groundwater Elevation (feet AMSL)	TD (BTOC)
	Ground Elevation (feet AMSL)	Measuring Point/TOC Elevation (feet AMSL)	Gauge Date	Depth to Water (BTOC)		
On-Site Wells						
BHI-MW-01	133.70	133.14	5/16/14	37.90	95.24	43.92
			8/5/14	38.45	94.69	43.80
	132.55	131.88	5/21/15	40.29	91.59	43.89
			8/29/15	40.98	90.90	44.32
			12/11/15	39.09	92.79	43.89
			2/16/16	39.36	92.52	43.76
			5/19/16	39.72	92.16	43.80
BHI-MW-02	135.49	134.77	5/16/14	39.47	95.30	44.02
			8/5/14	40.11	94.66	43.90
	134.14	133.50	5/21/15	41.91	91.59	44.00
			8/29/15	42.58	90.92	43.92
			12/11/15	40.67	92.83	43.98
			2/16/16	40.98	92.52	44.00
			5/19/16	41.35	92.15	43.90
BHI-MW-03(T)	134.66	133.94	5/16/14	38.65	95.29	44.50
			8/5/14	39.26	94.68	43.90
	133.37	132.69	5/21/15	41.12	91.57	44.03
			6/8/15	41.12	91.57	--
			8/28/15	41.79	90.90	43.90
			12/11/15	39.89	92.80	43.89
			2/15/16	40.25	92.44	44.00
			5/19/16	40.53	92.16	43.60
BHI-MW-04	133.64	133.36	5/20/15	41.74	91.62	49.22
			8/28/15	42.45	90.91	49.38
			12/11/15	40.45	92.91	49.16
			2/15/16	40.81	92.55	49.33
			5/19/16	41.17	92.19	49.12
BHI-MW-05	134.56	133.99	5/20/15	42.39	91.60	47.35
			8/29/15	43.09	90.90	47.25
			12/10/15	41.19	92.80	47.30
			2/15/16	41.19	92.80	47.30
			5/19/16	41.83	92.16	47.29

TABLE 3: GROUNDWATER ELEVATION TREND
Quarterly Ground Water Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

Well ID	Survey Data		Field Measurements		Groundwater Elevation (feet AMSL)	TD (BTOC)
	Ground Elevation (feet AMSL)	Measuring Point/TOC Elevation (feet AMSL)	Gauge Date	Depth to Water (BTOC)		
BHI-MW-06(T)	127.00	126.52	5/21/15	34.87	91.65	46.52
			6/8/15	34.94	91.58	--
			8/29/15	35.55	90.97	46.00
			12/10/15	33.67	92.85	46.06
			2/16/16	33.99	92.53	46.06
			5/19/16	34.39	92.13	46.00
BHI-MW-07	141.64	141.10	5/21/15	49.56	91.54	56.19
			8/28/15	50.25	90.85	56.59
			12/11/15	48.32	92.78	56.18
			2/15/16	48.63	92.47	56.22
			5/19/16	49.01	92.09	56.40
BHI-MW-08(T)	132.34	131.82	5/21/15	40.20	91.62	47.54
			6/8/15	40.23	91.59	--
			8/29/15	40.90	90.92	47.50
			12/11/15	39.00	92.82	47.52
			2/15/16	39.34	92.48	47.56
			5/19/16	39.64	92.18	47.46
BHI-MW-09	129.30	128.95	2/15/16	36.51	92.44	43.87
			5/19/16	36.94	92.01	43.84
BHI-MW-10	130.70	130.16	2/16/16	37.71	92.45	43.26
			5/19/16	38.05	92.11	43.20
Off-Site Wells						
OLD MCGAHAN WELL	140.20	138.56	2/15/16	46.05	92.51	--
			5/19/16	46.39	92.17	--
ADEC MW-1	165.48	166.47	5/16/14	72.06	94.41	--
			8/5/14	72.41	94.06	--
			5/19/16	73.81	92.66	--
TUBOSCOPE WATER WELL	129.80	130.10	2/16/16	37.58	92.52	--

Notes:
All measurements are in units of feet.
(T) = Transducer present in well.

Key:
-- = Not measured
AMSL = Above Mean Sea Level
BTOC = Below top of casing, a.k.a. below measuring point
NA = Not available
NR = not recorded

TABLE 4: FIELD-COLLECTED GROUNDWATER QUALITY PARAMETERS
Quarterly Ground Water Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

Well ID	Purge/ Sample Date	Sample Method	Color	Odor	Temperature (°C)	pH	Conductivity (mS/cm)	Turbidity (NTU)	DO (mg/L)	ORP (mV)
BHI-MW-01	5/19/16	Dedicated SS Bladder Pump/ low flow	clear	none	6.92	5.72	0.196	6.05	5.60	279.3
BHI-MW-02	5/19/16	SS Mega-Monsoon XL pump / low flow	brown	none	--	--	--	--	--	--
BHI-MW-03	5/19/16	Dedicated SS Bladder Pump/ low flow	clear	none	6.58	5.91	0.236	3.96	7.90	281.2
BHI-MW-04	5/19/16		clear	none	6.20	6.09	0.186	9.33	6.37	270.2
BHI-MW-05	5/19/16		clear	none	8.77	6.18	0.322	27.50	6.95	284.0
BHI-MW-06	5/18/16		clear	none	6.05	5.88	0.156	17.5	5.39	273.2
BHI-MW-07	5/18/16		clear	none	5.49	6.09	0.184	17.8	6.67	293.0
BHI-MW-08	5/18/16		clear	none	5.68	6.16	0.136	2.97	10.14	250.9
BHI-MW-09	5/18/16		clear	none	7.03	6.29	0.189	32.0	8.71	265.4
BHI-MW-10	5/18/16		clear	none	5.56	6.30	0.286	6.93	8.87	273.4

Key:

-- = Not Recorded, see report text for explanation
°C = Degrees Celsius
DO = Dissolved oxygen
mg/L = Milligrams per liter
mS/cm = milli-siemens per centimeter
mV = Millivolts
MW = Monitoring well
NTU = Nephelometric Turbidity Units
ORP = Oxidation-reduction potential
SS = Stainless Steel

TABLE 5: GROUNDWATER ANALYTICAL RESULTS SUMMARY
Quarterly Ground Water Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

Well ID	Sample No.	Sample Date	Duplicate	Halogenated Volatiles (EPA 8260B; mg/L)		
				1,1,1-TCA	TCE	PCE
ADEC Groundwater Cleanup Level[1][2]:				***0.2 (8.010)***	***0.005 (0.00282)[3]***	***0.005 (0.0406)***
MW-01	16-BNT-209-GW	5/19/16		0.00160	**0.0149**	ND (0.0010)
	16-BNT-210-GW	5/19/16	✓	0.00182	**0.0159**	ND (0.0010)
MW-02	16-BNT-211-GW	5/19/16		ND (0.0010)	0.0017	ND (0.0010)
MW-03	16-BNT-206-GW	5/19/16		ND (0.0010)	0.00101	ND (0.0010)
MW-04	16-BNT-208-GW	5/19/16		0.00569	0.00176	ND (0.0010)
MW-05	16-BNT-207-GW	5/19/16		0.00127	0.00163	ND (0.0010)
MW-06	16-BNT-203-GW	5/18/16		ND (0.0010)	ND (0.0010)	ND (0.0010)
MW-07	16-BNT-205-GW	5/18/16		ND (0.0010)	ND (0.0010)	ND (0.0010)
MW-08	16-BNT-201-GW	5/18/16		0.00904	0.00061 J	ND (0.0010)
MW-09	16-BNT-204-GW	5/18/16		ND (0.0010)	ND (0.0010)	ND (0.0010)
MW-10	16-BNT-202-GW	5/18/16		0.00231	ND (0.0010)	ND (0.0010)
Lab Provided	Trip Blank	--		ND (0.0010)	ND (0.0010)	ND (0.0010)

Notes: Results above ADEC cleanup values are **underlined & bolded**. Results above proposed cleanup level **bold** only.
[1] 18 AAC 75.345, Table C
[2] Value in parentheses are ADEC proposed cleanup levels as of August 2015.
[3] EPA Recommended Target Level is 0.0025 mg/L.

Key:
1,1,1-TCA = 1,1,1-Trichloroethane
ADEC = Alaska Department of Environmental Conservation
BNT = Baker Nikiski Tool
EPA = United States Environmental Protection Agency
GW = Groundwater
mg/L = milligrams per liter
MW = Monitoring well
ND = non-detect, Reported Detection Limit (RDL) provided in parenthesis.
NS = not sampled
PCE = Tetrachloroethene
SIM = Selective ion monitoring
TCE = Trichloroethene

Data Flags
J = Estimated concentration; analyte was detected between the method detection limit and the practical quantitation limit.

TABLE 6: CLORINATED HYDROCARBONS CONCENTRATION TRENDS – GROUNDWATER
Quarterly Ground Water Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

Well ID	Sample No.	Sample Date	Duplicate	Halogenated Volatiles (EPA 8260C; mg/L)		
				1,1,1-TCA	TCE	PCE
ADEC Groundwater Cleanup Level[1][2]:				***0.2 (8.010)***	***0.005 (0.00282)[3]***	***0.005 (0.0406)***
BHI-MW-01	14-BHI-103-GW	5/16/14		0.0017	**0.043**	ND (0.00020)
	14-BHI-202-GW	8/5/14		0.0015	**0.031**	ND (0.00020)
	14-BHI-203-GW	8/5/14	✓	0.0017	**0.034**	ND (0.00020)
	15-BNT-103-GW	5/21/15		0.0023	**0.018**	ND (0.0002)
	15-BNT-FD101-GW	5/21/15	✓	0.0024	**0.019**	ND (0.0002)
	15-BNT-208-GW	8/29/15		0.006	**0.022**	ND (0.00020)
	15-BNT-209-GW	8/29/15	✓	0.0059	**0.023**	ND (0.00020)
	15-BNT-303-GW	12/11/15		ND (0.00020)	**0.016**	ND (0.00020)
	15-BNT-304-GW	12/11/15	✓	ND (0.00020)	**0.016**	ND (0.00020)
	16-BNT-107-GW	2/16/16		0.00150	**0.0216**	ND (0.0010)
	16-BNT-108-GW	2/16/16	✓	0.00147	**0.0211**	ND (0.0010)
	16-BNT-209-GW	5/19/16		0.00160	**0.0149**	ND (0.0010)
	16-BNT-210-GW	5/19/16	✓	0.00182	**0.0159**	ND (0.0010)
BHI-MW-02	14-BHI-106-GW	5/16/14		0.00033	0.0029	ND (0.00020)
	14-BHI-201-GW	8/5/14		0.0003	0.0025	ND (0.00020)
	15-BNT-104-GW	5/21/15		0.00026	0.0024	ND (0.0002)
	15-BNT-204-GW	8/28/15		0.00031	0.0025	ND (0.00020)
	15-BNT-306-GW	12/11/15		0.00027	0.0025	ND (0.00020)
	16-BNT-106-GW	2/16/16		ND (0.0010)	0.00226	ND (0.0010)
	16-BNT-211-GW	5/19/16		ND (0.0010)	0.0017	ND (0.0010)
BHI-MW-03[T]	14-BHI-101-GW	5/16/14		0.00029	0.00067	ND (0.00020)
	14-BHI-102-GW	5/16/14	✓	0.00029	0.00069	ND (0.00020)
	14-BHI-204-GW	8/6/14		0.00049	0.001	ND (0.00020)
	15-BNT-105-GW	5/21/15		0.00026	0.00088	ND (0.0002)
	15-BNT-201-GW	8/28/15		0.00025	0.0006	ND (0.00020)
	15-BNT-301-GW	12/10/15		ND (0.00020)	0.00075	ND (0.00020)
	16-BNT-103-GW	2/15/16		ND (0.0010)	0.00149 B	ND (0.0010)
	16-BNT-206-GW	5/19/16		ND (0.0010)	0.00101	ND (0.0010)
BHI-MW-04	15-BNT-101-GW	5/20/15		0.005	0.0018	0.00027
	15-BNT-207-GW	8/29/15		0.0075	0.0047	0.00059
	NS	12/10/15		*frozen pump lines, not sampled*		
	16-BNT-101-GW	2/15/16		0.00522	0.00295 B	ND (0.0010)
	16-BNT-208-GW	5/19/16		0.00569	0.00176	ND (0.0010)
BHI-MW-05	15-BNT-102-GW	5/20/15		0.0014	0.0019	ND (0.0002)
	15-BNT-206-GW	8/28/15		0.002	0.0021	ND (0.00020)
	15-BNT-302-GW	12/10/15		ND (0.00020)	0.0014	ND (0.00020)
	NS			*frozen surface access, not sampled*		
	16-BNT-207-GW	5/19/16		0.00127	0.00163	ND (0.0010)
BHI-MW-06[T]	15-BNT-107-GW	5/21/15		ND (0.0002)	ND (0.0002)	ND (0.0002)
	15-BNT-202-GW	8/28/15		ND (0.00020)	ND (0.00020)	ND (0.00020)
	15-BNT-308-GW	12/11/15		ND (0.00020)	ND (0.00020)	ND (0.00020)
	16-BNT-105-GW	2/16/16		ND (0.0010)	ND (0.0010)	ND (0.0010)
	16-BNT-203-GW	5/18/16		ND (0.0010)	ND (0.0010)	ND (0.0010)
BHI-MW-07	15-BNT-106-GW	5/21/15		0.00037	ND (0.0002)	ND (0.0002)
	15-BNT-205-GW	8/28/15		0.00043	ND (0.00020)	ND (0.00020)
	15-BNT-307-GW	12/11/15		ND (0.00020)	ND (0.00020)	ND (0.00020)
	16-BNT-104-GW	2/15/16		0.000361 J	0.000495 BJ	ND (0.0010)
	16-BNT-205-GW	5/18/16		ND (0.0010)	ND (0.0010)	ND (0.0010)
BHI-MW-08[T]	15-BNT-108-GW	5/21/15		0.0073	0.00065	ND (0.0002)
	15-BNT-203-GW	8/28/15		0.013	0.00091	ND (0.00020)
	15-BNT-305-GW	12/11/15		0.012	0.00065	ND (0.00020)
	16-BNT-102-GW	2/15/16		0.00947	0.001 BJ	ND (0.0010)
	16-BNT-201-GW	5/18/16		0.00904	0.00061 J	ND (0.0010)
BHI-MW-09	16-BNT-109-GW	2/16/16		ND (0.0010)	ND (0.0010)	ND (0.0010)
	16-BNT-204-GW	5/18/16		ND (0.0010)	ND (0.0010)	ND (0.0010)
BHI-MW-10	16-BNT-110-GW	2/16/16		0.00458	ND (0.0010)	ND (0.0010)
	16-BNT-202-GW	5/18/16		0.00231	ND (0.0010)	ND (0.0010)

Notes: Results above ADEC cleanup values are **underlined & bolded**.

[1] 18 AAC 75.345, Table C

[2] Value in parentheses are ADEC proposed cleanup levels as of August 2015.

[3] EPA Recommended Target Level is 0.0025 mg/L.

[T] Transducer present in well.

Key:

1,1,1-TCA = 1,1,1-Trichloroethane
ADEC = Alaska Department of Environmental Conservation
BNT = Baker Nikiski Tool
EPA = United States Environmental Protection Agency
GW = Groundwater
mg/L = milligrams per liter
MW = Monitoring well
ND = non-detect, Reported Detection Limit provided in parenthesis
NS = not sampled
PCE = Tetrachloroethene
SIM = Selective ion monitoring
TCE = Trichloroethene

Data Flags

B - Analyte was detected within 5 times of the detected concentration in a corresponding method blank sample.
J = Estimated concentration; analyte was detected between the method detection limit and the practical quantitation limit.

TABLE 7: MANN-KENDALL TREND TEST ANALYSIS – PROUCL 5.1 OUTPUT
Quarterly Groundwater Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

User Selected Options	
Date/Time of Computation	ProUCL 5.17/14/2016 9:29:51 AM
From File	Nikiski Trend for proucl.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

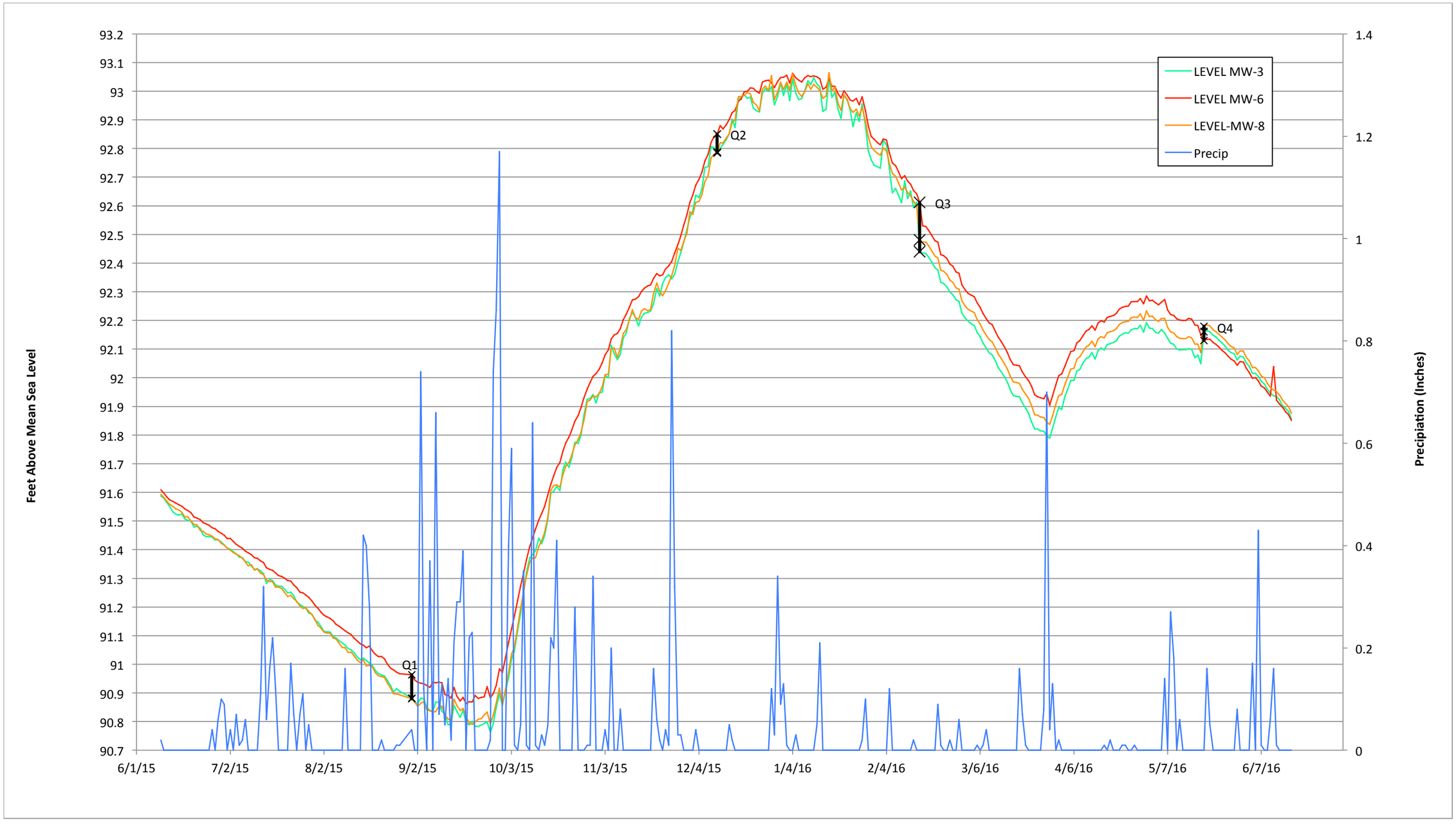
TCE-mw_01		TCE-mw_02		TCE-mw_03	
General Statistics		**General Statistics**		**General Statistics**	
Number of Events Reported (m)	7	Number of Events Reported (m)	7	Number of Events Reported (m)	7
Number of Missing Events	0	Number of Missing Events	0	Number of Missing Events	0
Number or Reported Events Used	7	Number or Reported Events Used	7	Number or Reported Events Used	7
Number Values Reported (n)	7	Number Values Reported (n)	7	Number Values Reported (n)	7
Minimum	0.0159	Minimum	0.0017	Minimum	6.0000E-4
Maximum	0.043	Maximum	0.0029	Maximum	0.00149
Mean	0.0246	Mean	0.00239	Mean	9.1714E-4
Geometric Mean	0.023	Geometric Mean	0.00237	Geometric Mean	8.8077E-4
Median	0.0211	Median	0.0025	Median	8.8000E-4
Standard Deviation	0.0102	Standard Deviation	3.6271E-4	Standard Deviation	2.9584E-4
Coefficient of Variation	0.415	Coefficient of Variation	0.151	Coefficient of Variation	0.323
Mann-Kendall Test		**Mann-Kendall Test**		**Mann-Kendall Test**	
M-K Test Value (S)	-15	M-K Test Value (S)	-14	M-K Test Value (S)	7
Tabulated p-value	0.015	Tabulated p-value	0.015	Tabulated p-value	0.191
Standard Deviation of S	6.658	Standard Deviation of S	6.377	Standard Deviation of S	6.658
Standardized Value of S	-2.103	Standardized Value of S	-2.039	Standardized Value of S	0.901
Approximate p-value	0.0177	Approximate p-value	0.0207	Approximate p-value	0.184
Statistically significant evidence of a decreasing trend at the specified level of significance.		Statistically significant evidence of a decreasing trend at the specified level of significance.		Insufficient evidence to identify a significant trend at the specified level of significance.	

ATTACHMENT 4

Graphs

GRAPH 1: TRANSDUCER TREND - June 2015 TO JUNE 2016

Quarterly Groundwater Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

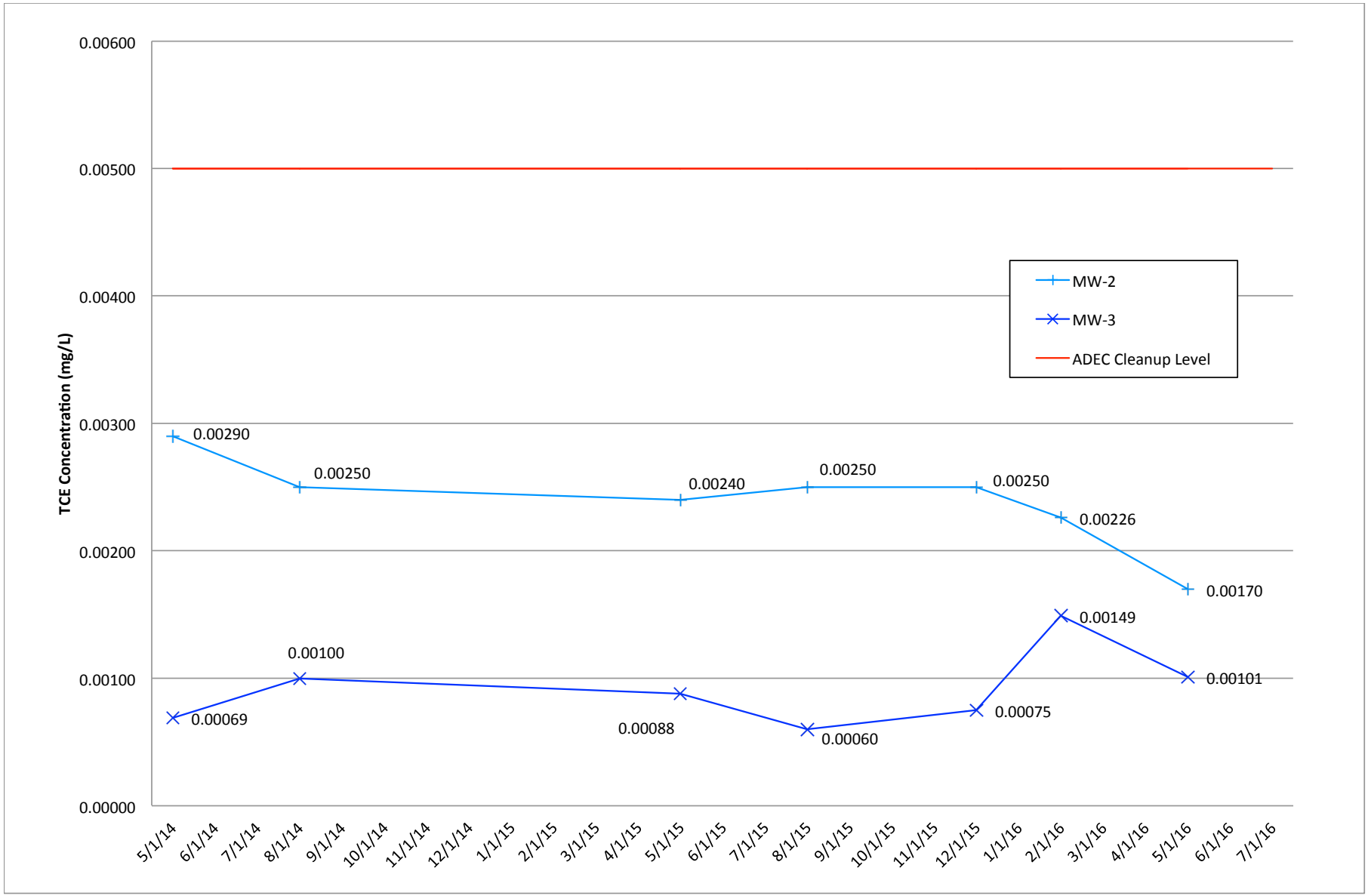


dnaENVIRONMENTAL

GRAPH 2: MW-1 TCE CONCENTRATION TREND
Quarterly Groundwater Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska

dnaENVIRONMENTAL

GRAPH 3: MW-2 MW-3 TCE CONCENTRATION TRENDS
Quarterly Groundwater Monitoring Report – May 2016
Nikiski Completions Facility
Baker Hughes Oil Field Services, Inc.
Nikiski, Alaska



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ATTACHMENT 5

Laboratory Analytical Results, ADEC Data Review Checklist

Laboratory Data Review Checklist

Completed by: Rodney Guritz

Title: Chemist Date: June 15, 2016

CS Report Name: Nikiski Tool Report Date: June 2016

Consultant Firm: DNA Environmental, LLC

Laboratory Name: ESC Lab Sciences Laboratory Report Number: L837110

ADEC File Number: N/A ADEC RecKey Number:

1. Laboratory
   a. Did an ADEC CS approved laboratory receive and perform all of the submitted sample analyses?
      □■Yes□ No □NA (Please explain.) Comments:

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses ADEC CS approved?
      □Yes □ No □■NA (Please explain.) Comments:

      No samples were transferred to another laboratory.

2. Chain of Custody (COC)
   a. COC information completed, signed, and dated (including released/received by)?
      □■Yes□ No □NA (Please explain.) Comments:

   b. Correct analyses requested?
      □■Yes□ No □NA (Please explain.) Comments:

3. Laboratory Sample Receipt Documentation
   a. Sample/cooler temperature documented and within range at receipt (4° ± 2° C)?
      □■Yes□No □NA (Please explain.) Comments:

   b. Sample preservation acceptable – acidified waters, Methanol preserved VOC soil (GRO, BTEX, Volatile Chlorinated Solvents, etc.)?
      □■Yes□ No □NA (Please explain.) Comments:

c. Sample condition documented – broken, leaking (Methanol), zero headspace (VOC vials)?
□■Yes□ No □NA (Please explain.) Comments:

Samples were received in good condition.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, etc.?
□ Yes □ No □■ NA (Please explain.) Comments:

There were no sample-receiving discrepancies.

e. Data quality or usability affected? (Please explain.)
Comments:

Data quality and usability were not affected.

4. Case Narrative
a. Present and understandable?
□■Yes□ No □NA (Please explain.) Comments:

b. Discrepancies, errors or QC failures identified by the lab?
□Yes □ No □■NA (Please explain.) Comments:

There were no discrepancies or anomalies identified.

c. Were all corrective actions documented?
□ Yes □ No □■ NA (Please explain.) Comments:

No corrective actions were required.

d. What is the effect on data quality/usability according to the case narrative?
Comments:

The case narrative notes no effect on sample data quality or usability.

5. Samples Results
a. Correct analyses performed/reported as requested on COC?
□■Yes□ No □NA (Please explain.) Comments:

b. All applicable holding times met?
□■Yes □ No □NA (Please explain.) Comments:

c. All soils reported on a dry weight basis?
□Yes □No □■NA (Please explain.) Comments:

No soil samples were reported in this work order.

d. Are the reported PQLs less than the Cleanup Level or the minimum required detection level for the project?
□■Yes □No □NA (Please explain.) Comments:

e. Data quality or usability affected?
Comments:

Data quality and usability were not affected.

6. QC Samples
a. Method Blank
i. One method blank reported per matrix, analysis and 20 samples?
□■Yes□ No □NA (Please explain.) Comments:

ii. All method blank results less than PQL?
□■Yes□ No □NA (Please explain.) Comments:

No analytes were detected in the method blank associated with project samples.

iii. If above PQL, what samples are affected?
Comments:

N/A

iv. Do the affected sample(s) have data flags and if so, are the data flags clearly defined?
□Yes □ No □ ■NA (Please explain.) Comments:

No sample results were affected.

v. Data quality or usability affected? (Please explain.)
Comments:

Data quality and usability were not affected.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – One LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)

□■Yes□ No □NA (Please explain.) Comments:

An LCS/LCSD and MS/MSD were reported for each batch. Recovery and RPD were evaluated for reported target analytes only.

ii. Metals/Inorganics – one LCS and one sample duplicate reported per matrix, analysis and 20 samples?

□ Yes □ No □■NA (Please explain.) Comments:

There were no metals/inorganics analyzed or reported in this work order.

iii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)

□■Yes□ No □NA (Please explain.) Comments:

iv. Precision – All relative percent differences (RPD) reported and less than method or laboratory limits? And project specified DQOs, if applicable. RPD reported from LCS/LCSD, MS/MSD, and or sample/sample duplicate. (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)

□■Yes□ No □NA (Please explain.) Comments:

v. If %R or RPD is outside of acceptable limits, what samples are affected?

Comments:

There were no recovery or RPD failures.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?

□ Yes □ No □■NA (Please explain.) Comments:

No results were affected.

vii. Data quality or usability affected? (Use comment box to explain.)

Comments:

Data quality and usability were not affected.

c. Surrogates – Organics Only

i. Are surrogate recoveries reported for organic analyses – field, QC and laboratory samples?
□■Yes□ No □NA (Please explain.) Comments:

ii. Accuracy – All percent recoveries (%R) reported and within method or laboratory limits? And project specified DQOs, if applicable. (AK Petroleum methods 50-150 %R; all other analyses see the laboratory report pages)
□■Yes□No □NA (Please explain.) Comments:

iii. Do the sample results with failed surrogate recoveries have data flags? If so, are the data flags clearly defined?
□ Yes □ No □■NA (Please explain.) Comments:

There were no surrogate recovery failures.

iv. Data quality or usability affected? (Use the comment box to explain.)
Comments:

Data quality and usability were not affected.

d. Trip blank – Volatile analyses only (GRO, BTEX, Volatile Chlorinated Solvents, etc.): Water and Soil

i. One trip blank reported per matrix, analysis and for each cooler containing volatile samples? (If not, enter explanation below.)
□■Yes□ No □NA (Please explain.) Comments:

Trip blanks were submitted with the groundwater samples, for VOC analysis.

ii. Is the cooler used to transport the trip blank and VOA samples clearly indicated on the COC? (If not, a comment explaining why must be entered below)
□ Yes □No □■NA (Please explain.) Comments:

Samples were submitted in a single cooler.

iii. All results less than PQL?
□■Yes□No □NA (Please explain.) Comments:

No analytes were detected in the trip blanks.

iv. If above PQL, what samples are affected?

Comments:

v. Data quality or usability affected? (Please explain.)

Comments:

Data quality and usability were not affected.

e. Field Duplicate

i. One field duplicate submitted per matrix, analysis and 10 project samples?

□■Yes□No □ NA (Please explain.) Comments:

Groundwater field duplicate was 16-BNT-209-GW/16-BNT-210-GW, collected from MW-01.

ii. Submitted blind to lab?

□■Yes□ No □NA (Please explain.) Comments:

iii. Precision – All relative percent differences (RPD) less than specified DQOs? (Recommended: 30% water, 50% soil)

$$\text{RPD (\%)} = \text{Absolute value of: } \frac{(R_1-R_2)}{((R_1+R_2)/2)} \times 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

□■Yes□ No □NA (Please explain.) Comments:

Water field duplicate RPDs were within the DQO of 30%.

iv. Data quality or usability affected? (Use the comment box to explain why or why not.)

Comments:

Data quality and usability were not affected.

f. Decontamination or Equipment Blank (If not used explain why).

□Yes □ No □■NA (Please explain.) Comments:

Groundwater samples were collected using disposable or dedicated sampling equipment; no equipment blanks were necessary.

i. All results less than PQL?

□Yes □No □ ■NA (Please explain.) Comments:

ii. If above PQL, what samples are affected?

Comments:

iii. Data quality or usability affected? (Please explain.)

Comments:

Not applicable (see above).

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)
   a. Defined and appropriate?
      □ Yes □ No □■NA (Please explain.) Comments:

No other data flags were used/reported.

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ANALYTICAL REPORT

May 31, 2016

Baker Hughes

Sample Delivery Group:	L837110
Samples Received:	05/21/2016
Project Number:	695700003
Description:	Nikiski Tool Project
Site:	ALASKA
Report To:	Dan Frank 111 W. 9th Avenue Anchorage, AK 99501

Entire Report Reviewed By:

Jarred Willis
Technical Service Representative

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16-BNT-203-GW L837110-03 8

16-BNT-204-GW L837110-04 9

16-BNT-205-GW L837110-05 10

16-BNT-206-GW L837110-06 11

16-BNT-207-GW L837110-07 12

16-BNT-208-GW L837110-08 13

16-BNT-209-GW L837110-09 14

16-BNT-210-GW L837110-10 15

16-BNT-211-GW L837110-11 16

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Volatile Organic Compounds (GC/MS) by Method 8260B 18

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[8]Al: Accreditations & Locations 20

[9]Sc: Chain of Custody 21

16-BNT-201-GW L837110-01 GW

Collected by: L. Davis | Collected date/time: 05/18/16 13:10 | Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 11:23	05/28/16 11:23	JHH

16-BNT-202-GW L837110-02 GW

Collected by: L. Davis | Collected date/time: 05/18/16 14:20 | Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 11:45	05/28/16 11:45	JHH

16-BNT-203-GW L837110-03 GW

Collected by: L. Davis | Collected date/time: 05/18/16 15:10 | Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 12:07	05/28/16 12:07	JHH

16-BNT-204-GW L837110-04 GW

Collected by: L. Davis | Collected date/time: 05/18/16 16:35 | Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 12:47	05/28/16 12:47	JHH

16-BNT-205-GW L837110-05 GW

Collected by: L. Davis | Collected date/time: 05/18/16 17:55 | Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 13:09	05/28/16 13:09	JHH

16-BNT-206-GW L837110-06 GW

Collected by: L. Davis | Collected date/time: 05/19/16 09:30 | Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 13:30	05/28/16 13:30	JHH

16-BNT-207-GW L837110-07 GW

Collected by: L. Davis | Collected date/time: 05/19/16 10:35 | Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 14:57	05/28/16 14:57	JHH

16-BNT-208-GW L837110-08 GW

Collected by: L. Davis | Collected date/time: 05/19/16 11:25 | Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 15:19	05/28/16 15:19	JHH

16-BNT-209-GW L837110-09 GW

Collected by: L. Davis
Collected date/time: 05/19/16 14:00
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 15:41	05/28/16 15:41	JHH

16-BNT-210-GW L837110-10 GW

Collected by: L. Davis
Collected date/time: 05/19/16 13:35
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 16:02	05/28/16 16:02	JHH

16-BNT-211-GW L837110-11 GW

Collected by: L. Davis
Collected date/time: 05/19/16 13:35
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 16:24	05/28/16 16:24	JHH

TRIP BLANK L837110-12 GW

Collected by: L. Davis
Collected date/time: 05/18/16 07:00
Received date/time: 05/21/16 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG874689	1	05/28/16 10:40	05/28/16 10:40	JHH

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. All MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Jarred Willis
Technical Service Representative

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 11:23	WG874689
1,1,1-Trichloroethane	9.04		0.319	1.00	1	05/28/2016 11:23	WG874689
Trichloroethene	0.610	J	0.398	1.00	1	05/28/2016 11:23	WG874689
(S) Toluene-d8	*102*			*90.0-115*		*05/28/2016 11:23*	WG874689
(S) Dibromofluoromethane	*104*			*79.0-121*		*05/28/2016 11:23*	WG874689
(S) 4-Bromofluorobenzene	*98.6*			*80.1-120*		*05/28/2016 11:23*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 11:45	WG874689
1,1,1-Trichloroethane	2.31		0.319	1.00	1	05/28/2016 11:45	WG874689
Trichloroethene	U		0.398	1.00	1	05/28/2016 11:45	WG874689
(S) Toluene-d8	*101*			*90.0-115*		*05/28/2016 11:45*	WG874689
(S) Dibromofluoromethane	*104*			*79.0-121*		*05/28/2016 11:45*	WG874689
(S) 4-Bromofluorobenzene	*97.0*			*80.1-120*		*05/28/2016 11:45*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 12:07	WG874689
1,1,1-Trichloroethane	U		0.319	1.00	1	05/28/2016 12:07	WG874689
Trichloroethene	U		0.398	1.00	1	05/28/2016 12:07	WG874689
(S) Toluene-d8	*102*			*90.0-115*		*05/28/2016 12:07*	WG874689
(S) Dibromofluoromethane	*104*			*79.0-121*		*05/28/2016 12:07*	WG874689
(S) 4-Bromofluorobenzene	*98.0*			*80.1-120*		*05/28/2016 12:07*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 12:47	WG874689
1,1,1-Trichloroethane	U		0.319	1.00	1	05/28/2016 12:47	WG874689
Trichloroethene	U		0.398	1.00	1	05/28/2016 12:47	WG874689
(S) Toluene-d8	*102*			*90.0-115*		*05/28/2016 12:47*	WG874689
(S) Dibromofluoromethane	*104*			*79.0-121*		*05/28/2016 12:47*	WG874689
(S) 4-Bromofluorobenzene	*98.0*			*80.1-120*		*05/28/2016 12:47*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 13:09	WG874689
1,1,1-Trichloroethane	U		0.319	1.00	1	05/28/2016 13:09	WG874689
Trichloroethene	U		0.398	1.00	1	05/28/2016 13:09	WG874689
(S) Toluene-d8	*101*			*90.0-115*		*05/28/2016 13:09*	WG874689
(S) Dibromofluoromethane	*106*			*79.0-121*		*05/28/2016 13:09*	WG874689
(S) 4-Bromofluorobenzene	*97.8*			*80.1-120*		*05/28/2016 13:09*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 13:30	WG874689
1,1,1-Trichloroethane	U		0.319	1.00	1	05/28/2016 13:30	WG874689
Trichloroethene	1.01		0.398	1.00	1	05/28/2016 13:30	WG874689
(S) Toluene-d8	*102*			*90.0-115*		*05/28/2016 13:30*	WG874689
(S) Dibromofluoromethane	*106*			*79.0-121*		*05/28/2016 13:30*	WG874689
(S) 4-Bromofluorobenzene	*98.4*			*80.1-120*		*05/28/2016 13:30*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 14:57	WG874689
1,1,1-Trichloroethane	1.27		0.319	1.00	1	05/28/2016 14:57	WG874689
Trichloroethene	1.63		0.398	1.00	1	05/28/2016 14:57	WG874689
(S) Toluene-d8	*101*			*90.0-115*		*05/28/2016 14:57*	WG874689
(S) Dibromofluoromethane	*106*			*79.0-121*		*05/28/2016 14:57*	WG874689
(S) 4-Bromofluorobenzene	*97.8*			*80.1-120*		*05/28/2016 14:57*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 15:19	WG874689
1,1,1-Trichloroethane	5.69		0.319	1.00	1	05/28/2016 15:19	WG874689
Trichloroethene	1.76		0.398	1.00	1	05/28/2016 15:19	WG874689
(S) Toluene-d8	*102*			*90.0-115*		*05/28/2016 15:19*	WG874689
(S) Dibromofluoromethane	*105*			*79.0-121*		*05/28/2016 15:19*	WG874689
(S) 4-Bromofluorobenzene	*98.0*			*80.1-120*		*05/28/2016 15:19*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 15:41	WG874689
1,1,1-Trichloroethane	1.60		0.319	1.00	1	05/28/2016 15:41	WG874689
Trichloroethene	14.9		0.398	1.00	1	05/28/2016 15:41	WG874689
(S) Toluene-d8	*102*			*90.0-115*		*05/28/2016 15:41*	WG874689
(S) Dibromofluoromethane	*107*			*79.0-121*		*05/28/2016 15:41*	WG874689
(S) 4-Bromofluorobenzene	*97.0*			*80.1-120*		*05/28/2016 15:41*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 16:02	WG874689
1,1,1-Trichloroethane	1.82		0.319	1.00	1	05/28/2016 16:02	WG874689
Trichloroethene	15.9		0.398	1.00	1	05/28/2016 16:02	WG874689
(S) Toluene-d8	*102*			*90.0-115*		*05/28/2016 16:02*	WG874689
(S) Dibromofluoromethane	*107*			*79.0-121*		*05/28/2016 16:02*	WG874689
(S) 4-Bromofluorobenzene	*98.2*			*80.1-120*		*05/28/2016 16:02*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 16:24	WG874689
1,1,1-Trichloroethane	U		0.319	1.00	1	05/28/2016 16:24	WG874689
Trichloroethene	1.70		0.398	1.00	1	05/28/2016 16:24	WG874689
(S) Toluene-d8	*102*			*90.0-115*		*05/28/2016 16:24*	WG874689
(S) Dibromofluoromethane	*105*			*79.0-121*		*05/28/2016 16:24*	WG874689
(S) 4-Bromofluorobenzene	*97.3*			*80.1-120*		*05/28/2016 16:24*	WG874689

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Tetrachloroethene	U		0.372	1.00	1	05/28/2016 10:40	WG874689
1,1,1-Trichloroethane	U		0.319	1.00	1	05/28/2016 10:40	WG874689
Trichloroethene	U		0.398	1.00	1	05/28/2016 10:40	WG874689
(S) Toluene-d8	*101*			*90.0-115*		*05/28/2016 10:40*	WG874689
(S) Dibromofluoromethane	*104*			*79.0-121*		*05/28/2016 10:40*	WG874689
(S) 4-Bromofluorobenzene	*99.3*			*80.1-120*		*05/28/2016 10:40*	WG874689

Method Blank (MB)

(MB) R3140504-3 05/28/16 09:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Tetrachloroethene	U		0.372	1.00
1,1,1-Trichloroethane	U		0.319	1.00
Trichloroethene	U		0.398	1.00
(S) Toluene-d8	*102*			*90.0-115*
(S) Dibromofluoromethane	*103*			*79.0-121*
(S) 4-Bromofluorobenzene	*98.4*			*80.1-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3140504-1 05/28/16 08:02 • (LCSD) R3140504-2 05/28/16 08:23

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
Tetrachloroethene	25.0	23.2	20.9	92.7	83.5	73.5-130			10.4	20
1,1,1-Trichloroethane	25.0	27.3	24.4	109	97.6	71.1-129			11.4	20
Trichloroethene	25.0	25.3	22.7	101	90.8	79.5-121			10.8	20
(S) Toluene-d8				*102*	*102*	*90.0-115*				
(S) Dibromofluoromethane				*104*	*104*	*79.0-121*				
(S) 4-Bromofluorobenzene				*96.6*	*97.6*	*80.1-120*				

L837110-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L837110-06 05/28/16 13:30 • (MS) R3140504-4 05/28/16 13:52 • (MSD) R3140504-5 05/28/16 14:14

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Tetrachloroethene	25.0	U	23.6	22.6	94.2	90.6	1	57.4-141			3.95	20
1,1,1-Trichloroethane	25.0	U	27.0	26.0	108	104	1	58.7-134			3.93	20
Trichloroethene	25.0	1.01	25.5	24.7	97.9	94.8	1	48.9-148			3.09	20
(S) Toluene-d8					*101*	*101*		*90.0-115*				
(S) Dibromofluoromethane					*104*	*104*		*79.0-121*				
(S) 4-Bromofluorobenzene					*96.8*	*97.4*		*80.1-120*				

Abbreviations and Definitions

SDG	Sample Delivery Group.
MDL	Method Detection Limit.
RDL	Reported Detection Limit.
U	Not detected at the Reporting Limit (or MDL where applicable).
RPD	Relative Percent Difference.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
Rec.	Recovery.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.

ESC Lab Sciences is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our "one location" design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be **YOUR LAB OF CHOICE.**
***** Not all certifications held by the laboratory are applicable to the results reported in the attached report.

State Accreditations

Alabama	40660	Nevada	TN-03-2002-34
Alaska	UST-080	New Hampshire	2975
Arizona	AZ0612	New Jersey–NELAP	TN002
Arkansas	88-0469	New Mexico	TN00003
California	01157CA	New York	11742
Colorado	TN00003	North Carolina	Env375
Conneticut	PH-0197	North Carolina [1]	DW21704
Florida	E87487	North Carolina [2]	41
Georgia	NELAP	North Dakota	R-140
Georgia [1]	923	Ohio–VAP	CL0069
Idaho	TN00003	Oklahoma	9915
Illinois	200008	Oregon	TN200002
Indiana	C-TN-01	Pennsylvania	68-02979
Iowa	364	Rhode Island	221
Kansas	E-10277	South Carolina	84004
Kentucky [1]	90010	South Dakota	n/a
Kentucky [2]	16	Tennessee [1 4]	2006
Louisiana	AI30792	Texas	T 104704245-07-TX
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	6157585858
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	109
Minnesota	047-999-395	Washington	C1915
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA
Nebraska	NE-OS-15-05		

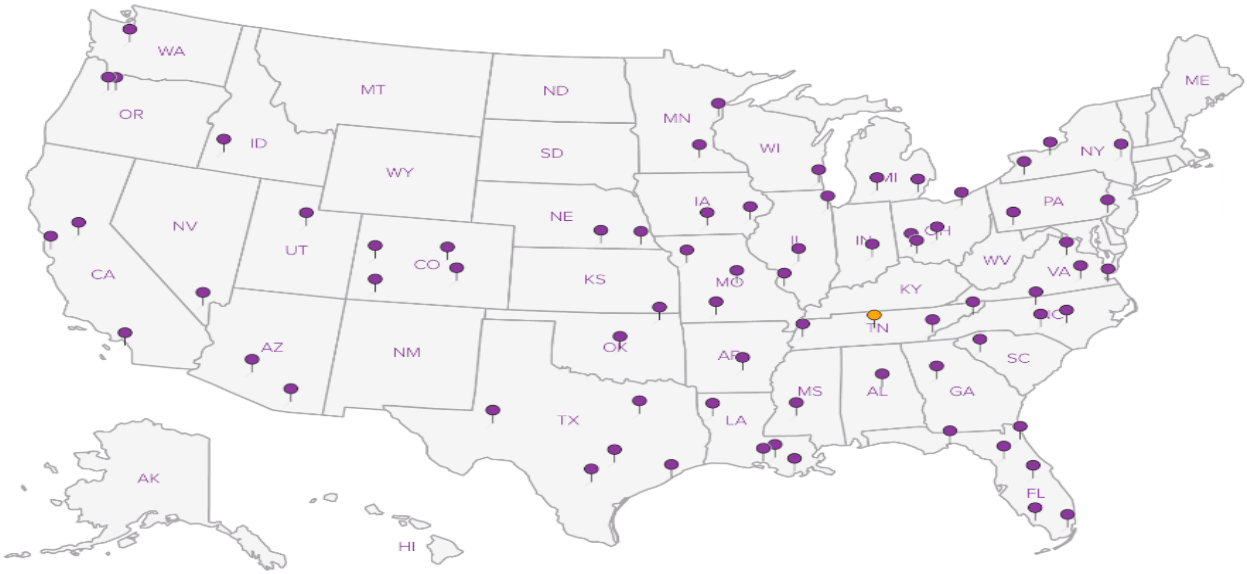
Third Party & Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	S-67674
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [n/a] Accreditation not applicable

Our Locations

ESC Lab Sciences has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. **ESC Lab Sciences performs all testing at our central laboratory.**



Baker Hughes

111 W. 9th Avenue
Anchorage, AK 99501

Billing Information:
Accounts Payable- Chris Clodfeilter
P.O. Box 3289
Portland, OR 97208

Report to: Dan Frank

Email To: daniel.frank@dnaenviro.com

Project Description: Nikiski Tool Project

City/State Collected: Nikiski, AK

Phone: 907-350-4897
Fax:

Client Project # 695700003

Lab Project # BAKHUGHTX-NIKISKI

Collected by (print): L. Davis / D. Frank

Site/Facility ID # ALASKA

P.O. # 695700003

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? X No ___Yes

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs 8260* 40mlAmb-HCl	VOCs 8260*- Trip Blk 40mlAmb-HCl-Blk	Rem./Contaminant	Sample # (lab only)
16-BNT-201-GW	G	GW	—	5/18/16	1310	3	X			-01
16-BNT-202-GW		GW			1420	3	X			-02
16-BNT-203-GW		GW			1510	3	X			-03
16-BNT-204-GW		GW			1635	3	X			-04
16-BNT-205-GW		GW			1755	3	X			-05
16-BNT-206-GW		GW		5/19/16	0930	3 6	X		MS/MSD	-06
16-BNT-207-GW		GW			1035	3	X			-07
16-BNT-208-GW		GW			1125	3	X			-08
16-BNT-209-GW		GW			1400	3	X			-09
16-BNT-210-GW		GW			1335	3	X			-10

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks: VOCs 8260= PCE, TCE, 1,1,1-TCA only

pH _____ Temp _____

Flow _____ Other _____

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.3 °C Bottles Received: 37 up

Date: 5/21/16 Time: 0900

Chain of Custody Page 1 of 2

ESC LABORATORY SCIENCES
YOUR LAB OF CHOICE

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L837110

L067

Acctnum: BAKHUGHTX
Template: T112332
Prelogin: P553190
TSR: 358 - Jarred Willis
PB: 5-12-16 KM
Shipped Via: FedEx 2nd Day

Hold #

Condition: CB12 (lab use only) on

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF:

Page 2 of 2

Baker Hughes

111 W. 9th Avenue
Anchorage, AK 99501

Billing Information:
Accounts Payable- Chris Clodfeilter
P.O. Box 3289
Portland, OR 97208

Report to: Dan Frank

Email To: daniel.frank@dnaenviro.com

Project Description: Nikiski Tool Projett

City/State Collected: Nikiski, AK

Phone: 907-350-4897
Fax:

Client Project # 695700003

Lab Project # BAKHUGHTX-NIKISKI

Collected by (print): L. Davis / D. Frank

Site/Facility ID # ALASKA

P.O. # 695700003

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day 100%
___ Two Day 50%
___ Three Day 25%

Date Results Needed

Email? ___No X__Yes
FAX? X No ___Yes

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs 8260* 40mlAmb-HCl	VOCs 8260*- Trip Blk 40mlAmb-HCl-Blk	Rem./Contaminant	Sample # (lab only)
16-BNT-211-GW	G	GW	—	5/19/16	1335	3	X			-11
		GW				3	X			
TRIP BLANK		GW		5/18/16	0700	1		X		-12

DF

5/20/16

* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other_____

Remarks:VOCs 8260= PCE, TCE, 1,1,1-TCA only

pH _____ Temp _____

Flow _____ Other _____

Analysis / Container / Preservative

Chain of Custody

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12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L837110

Table #

Acctnum: BAKHUGHTX
Template: T112332
Prelogin: P553190
TSR: 358 - Jarred Willis
PB: 5-12-KCM

Shipped Via: FedEx 2nd Day

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	5/20/16	1045	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☐ FedEx ☐ Courier ☐ _____

Temp: 2.3 °C Bottles Received: 37vp

Date: 5/21/16 Time: 0900

Hold #

Condition: CB/2 on (lab use only)

COC Seal Intact: ___Y ___N ___NA

pH Checked: NCF: