

March 20, 2017

2015-01-323

Mr. Mark Chandler
Vice President of Environmental Services
TOC Holdings Company
2737 W. Commodore Way
Seattle, WA 98199

Subject: **Groundwater Monitoring Report**
Second Quarter, 2016
TOC Holdings Co. Facility No. 01-323
301 North Central Ave., Kent, WA

Dear Mr. Chandler:

This report summarizes the results of the Second Quarter 2016 groundwater sampling events conducted by HydroCon Environmental, LLC (HydroCon) at the TOC Holdings Co. Facility No. 01-323 property located at 301 North Central Ave., Kent, WA (the Property). The Property location is shown on Figure 1. This report presents a summary of the site background, field activities, and results of the quarterly monitoring event.

Site Background

The current land use of the Property consists of a restaurant with drive-through and parking. Figure 2 illustrates the current site plan as well as the location of the former historical fuel storage and distribution facilities. A gasoline service station that previously occupied the Property operated six underground storage tanks (USTs) and associated product piping and pumps. An interim remedial action to permanently close five of the USTs by removal and offsite disposal, and one of the USTs by closure-in-place was completed in June 2014. Sampling conducted during the interim remedial action confirmed the presence of gasoline-range petroleum hydrocarbon compounds in soil, the extent of which was not fully delineated during the remedial action.

HydroCon conducted an initial site assessment (SI¹) in June and July 2015 and an additional subsurface investigation (ASI²) in late December 2015. Based on the results of field screening and laboratory analysis, diesel-range petroleum hydrocarbons [(DRPH) flagged as potentially representing degraded gasoline-range petroleum hydrocarbons (GRPH)], GRPH, and/or benzene, toluene, ethylbenzene, and total xylene (BTEX)

¹ HydroCon 2015. *Subsurface Investigation Report. TOC Holdings Co. Site 01-323 301 Central Avenue North, Kent, Washington. Prepared for TOC Holdings Co. November 5.*

² HydroCon 2016a. *Additional Subsurface Investigation Report. TOC Holding CO. Site 01-323. 301 Central Avenue North, Kent, Washington. Prepared for TOC Holding Co. February 11.*

constituents were observed above MTCA Method A cleanup levels in soil and groundwater samples in the southwest corner of the Site..

Six groundwater monitoring wells were installed and sampled during these investigations. The results of groundwater sampling summarized herein indicate that the southeast portion of the Site is impacted with GRPH, DRPH, oil-range petroleum hydrocarbons (ORPH), benzene and lead as indicated by results from MW02, MW03, HC02, HC04, and HC10 through HC13. The elevated lead concentrations in the groundwater samples collected from the temporary borings appear to be an artifact from sediment rich samples produced using the direct push method. Elevated lead concentrations are not observed in samples from developed wells (MW01 and MW02).

A Remedial Investigation/Feasibility Study (RI/FS³) completed in March 2016 recommends the installation of a dual-phase extraction system to remediate the site.

Scope Of Work

Groundwater samples were collected on June 2, 2016 to evaluate the groundwater quality beneath the Site and to eventually demonstrate compliance with MTCA cleanup regulations. The monitoring event included the following activities:

- Measurement of depth to groundwater in monitoring wells MW01 through MW06.
- Collection of groundwater samples from monitoring wells MW01 through MW06.
- Collection and analysis of a field duplicate sample from monitoring wells MW03 for quality assurance/quality control (QA/QC) purposes.
- Summarizing the groundwater sampling activities, analytical results, and upcoming work (this report).

Groundwater Sampling Procedures

HydroCon collected groundwater samples June 2, 2016 from monitoring wells MW01 through MW06. A field duplicate was collected from MW03 for QA/QC purposes. Monitoring wells were purged and sampled in accordance with U.S. Environmental Protection Agency (EPA) guidance for low-flow sampling⁴.

Depth to groundwater was measured in monitoring wells MW01 through MW06 on June 2, 2016. Prior to well purging and sample collection, the well cap on each well was removed and the water level was allowed to equilibrate prior to measuring the depth to water. The depth to water in each well was measured using a

³ HydroCon 2016b. Remedial Investigation/Feasibility Study. TOC Holding CO. Site 01-323. 301 Central Avenue North, Kent, Washington. Prepared for TOC Holding Co. March 5.

⁴ Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures (April 1996). EPA/540/S-95/504

clean electronic water level indicator. Water levels were measured at the scribed reference mark (north side of the top of the polyvinyl chloride casing) at each well.

Prior to groundwater sampling, the wells were purged with a low-flow peristaltic pump equipped with a new length of low-density polyethylene tubing attached to a new length of silicone tubing. The tubing intake was placed approximately 2 to 3 feet below the surface of the groundwater or mid-screen in each well. During purging, water quality was monitored using a Quanta multi-parameter water quality meter equipped with a flow-through cell. The water quality parameters monitored and recorded included temperature, pH, specific conductance, dissolved oxygen, turbidity, and oxidation-reduction potential. Each well was purged until all six water quality parameters stabilized or the minimum parameter subset of pH, specific conductance, temperature, and turbidity and/or dissolved oxygen stabilized. Groundwater sample collection forms are provided in Attachment A.

Following purging, groundwater samples were collected from the pump outlet tubing located upstream of the flow-through cell and placed directly into clean, laboratory-prepared sample containers. Each container was labeled with a unique sample identification number, placed on ice in a cooler, and transported under chain-of-custody to Friedman & Bruya, Inc., of Seattle, Washington, for laboratory analysis.

Purge water generated during the monitoring event was placed in an appropriately labeled 55-gallon steel drum and temporarily stored on the Property pending receipt of analytical data for proper disposal.

Laboratory Analysis

The analytical protocols followed for samples collected at the Property include the required testing for petroleum releases for gasoline (Table 830-1 in the MTCA Cleanup Regulations Chapter 173-340 WAC). The analytical methods used include:

- DRPH and ORPH using Northwest Method NWTPH-Dx
- GRPH using Northwest Method NWTPH-Gx
- Volatile organic compounds including BTEX, ethyl tertiary-butyl ether (MTBE), 1,2-dibromoethane (EDB), 1,2-dichloroethylene (EDC), and naphthalene using EPA Method 8260C
- cPAHs (semi volatile organic compounds) by analyzed by EPA Method 8270D SIM
- Total and dissolved lead using EPA Method 200.8.

All samples were analyzed for DRPH, ORPH, GRPH, BTEX, VOCs, and lead. The sample from MW02 was analyzed for cPAHs.

Groundwater Conditions

Groundwater levels measured on June 2, 2016 ranged from 5.73 feet below the top of monitoring well casing (ft below TOC) in monitoring well MW04 to 7.02 ft below TOC in monitoring well MW01.

Groundwater elevations ranged from 35.76 feet above mean sea level (ft amsl) in MW06 to 35.85 ft amsl in MW03. The groundwater gradient is very shallow across the site. Groundwater flow across the site was generally to the west at an approximate gradient of 0.0009 feet per foot between MW03 and MW06.

Groundwater elevations are shown on Figure 3 and the depth to groundwater and groundwater elevations are summarized in Table 1.

Groundwater Sampling Results

Laboratory analytical results from the monitoring events were compared to applicable MTCA Method A cleanup levels for groundwater and are summarized on Figure 4 and Tables 1 and 2 and summarized below:

- DRPH exceeded MTCA Method A cleanup levels at wells MW02 and MW03. All DRPH detections were flagged by the laboratory as having chromatographic patterns not resembling the fuel standard used for quantification.
- GRPH exceeded MTCA Method A cleanup levels at wells MW02 and MW03.
- BTEX, MTBE, EDB, EDC, naphthalene, and lead concentrations did not exceed MCTA Method A cleanup levels.
- cPAH concentrations did not exceed MCTA Method A cleanup levels.

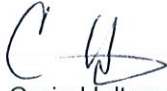
Data Quality Review

HydroCon performed a QA/QC review of the analytical results, which included a review of accuracy and precision of the data supplied by the laboratory. In addition, the relative percent difference (RPD) calculation was attempted for a blind field duplicate (identified as MW99), collected by HydroCon from monitoring well MW03. The RPD for analytes present above the laboratory reporting limit were within acceptable limits. The RPD cannot be calculated if the results are below the laboratory reporting limit.

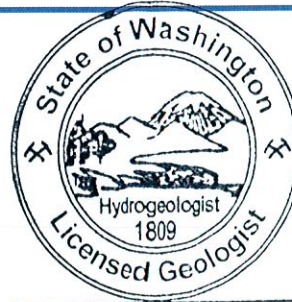
All DRPH detections were flagged by the laboratory as having chromatographic patterns not resembling the fuel standard used for quantification.

All other quality control criteria are acceptable for the groundwater samples; therefore, no action is required and analytical results are usable to meet the project objectives. A copy of the laboratory analytical report is provided in Attachment B.

Sincerely,



Craig Hultgren, LHG
Senior Geologist/Project Manager



CRAIG HULTGREN

cc: Michael R. Warfel, Washington State Department of Ecology, Northwest Region

Figures

- Figure 1 – Site Location Map
- Figure 2 – Site Features and Utilities
- Figure 3 – Groundwater Elevation Contours for June 2016
- Figure 4 – Groundwater Analytical Results for June 2016

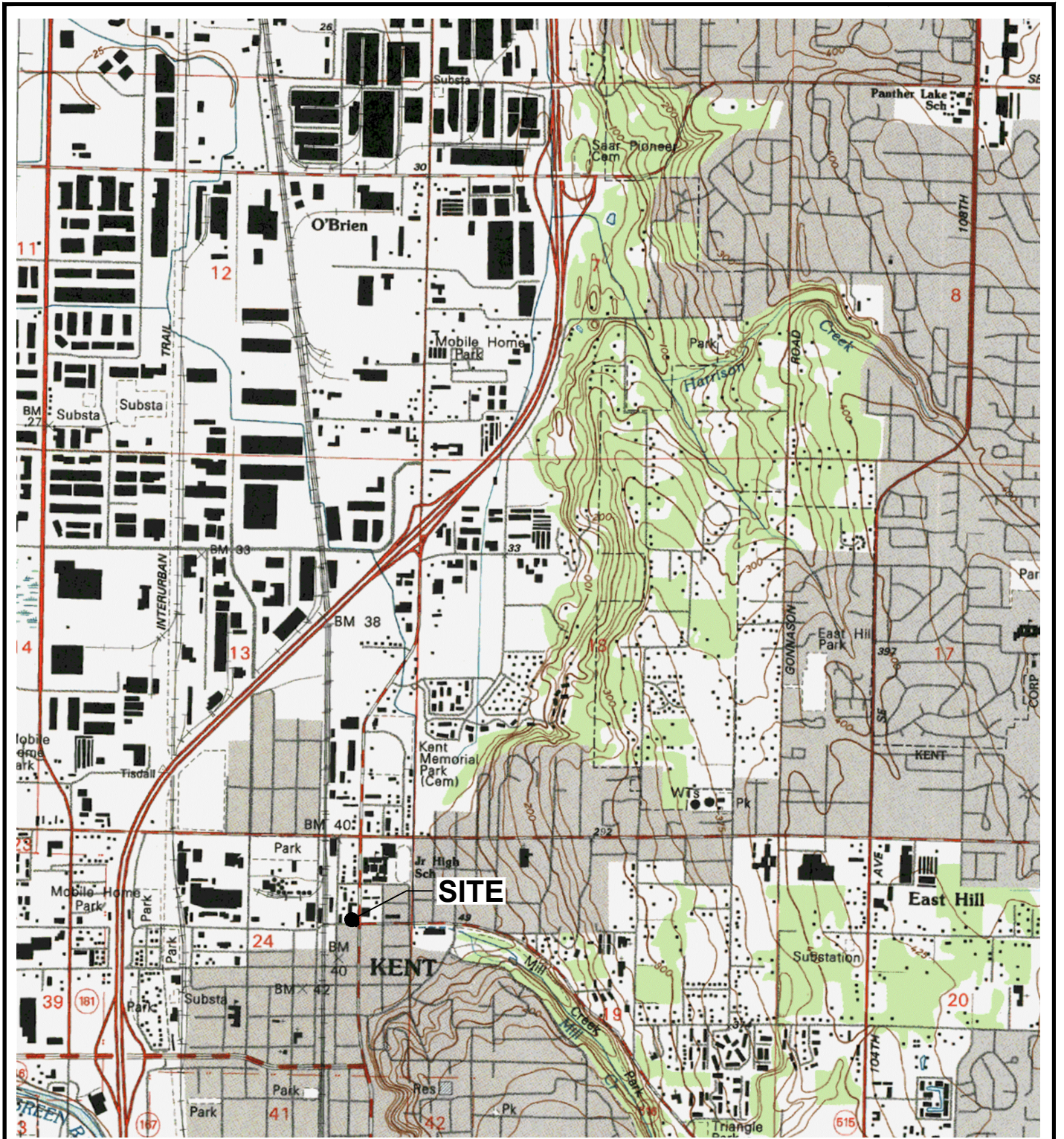
Tables

- Table 1 – Groundwater Analytical Results
- Table 2 – Groundwater Semi Volatile Analytical Results

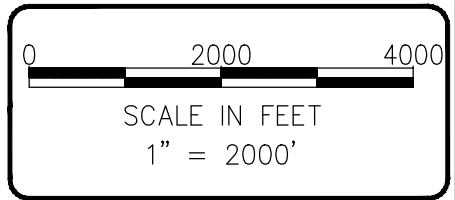
Attachments

- Attachment A – Groundwater Sample Collection Forms
- Attachment B – Laboratory Report and Chain-of-Custody Documentation

FIGURES




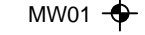

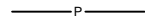
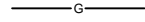
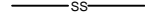
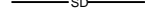



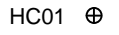
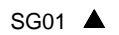
NOTE(S):
 USGS, RENTON QUADRANGLE
 WASHINGTON-KING CO.
 7.5 MINUTE SERIES (TOPOGRAPHIC)

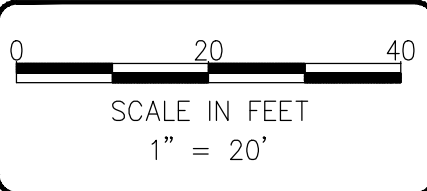
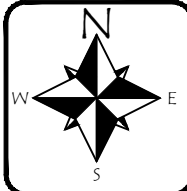
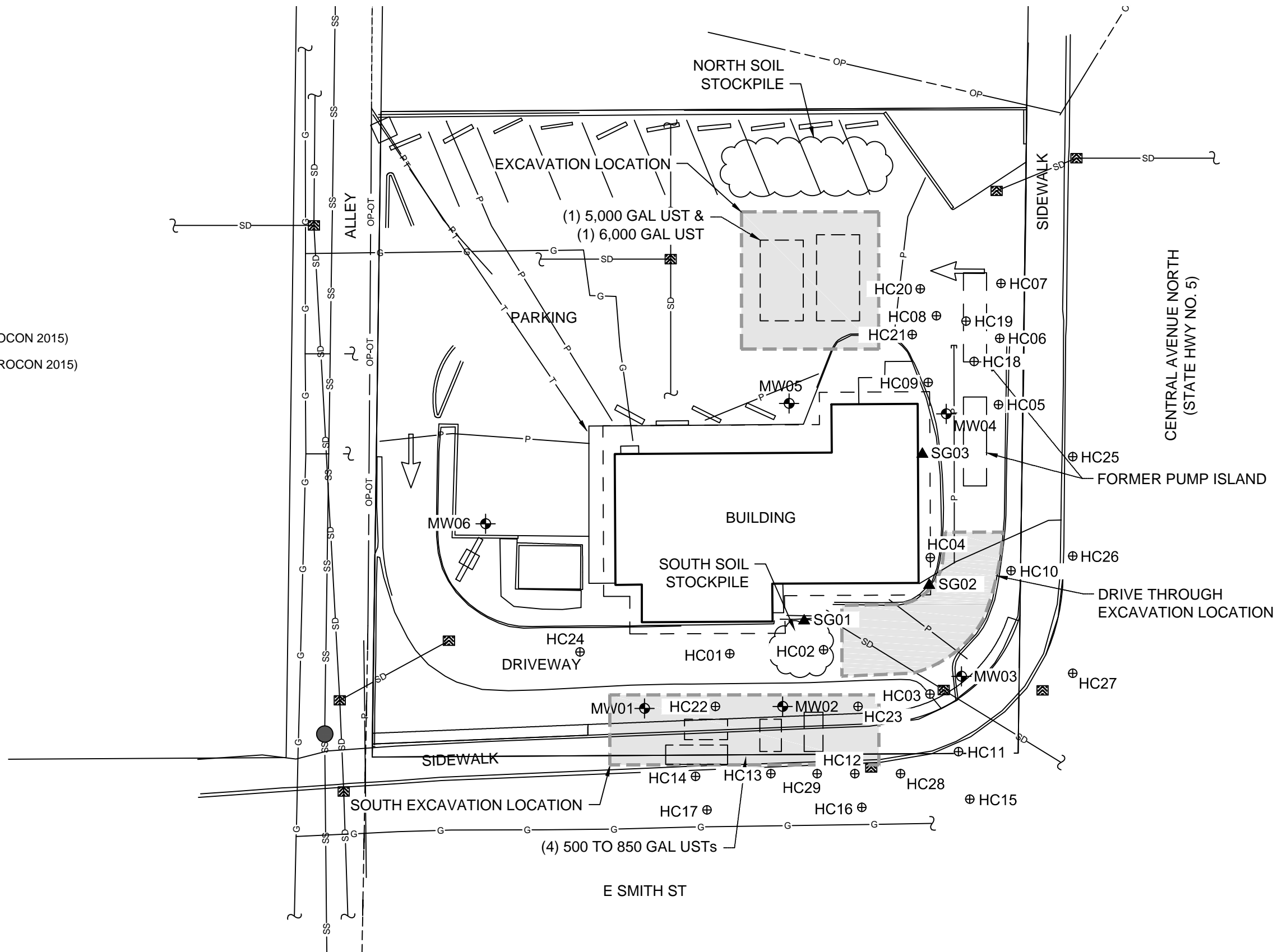


DATE: 6-30-16
 DWN: JJT
 CHK: NV
 APPROVED: CH
 PRJ. MGR: RH
 PROJECT NO:
 01-323

FIGURE 1
 SITE LOCATION MAP
 TOC HOLDING CO. FACILITY NO. 01-323
 301 N CENTRAL AVE
 KENT, WA.

LEGEND

-  BUILDING
-  MONITORING WELL
-  CATCH BASIN
-  POWER
-  GAS
-  SANITARY SEWER
-  STORM
-  TELEPHONE
-  OVERHEAD POWER
-  EXCAVATION LOCATIONS
-  BORING LOCATIONS (HYDROCON 2015)
-  SOIL GAS LOCATIONS (HYDROCON 2015)




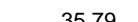




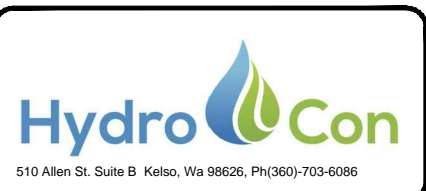
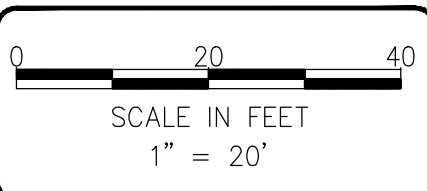
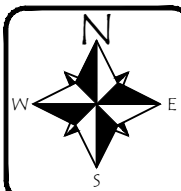
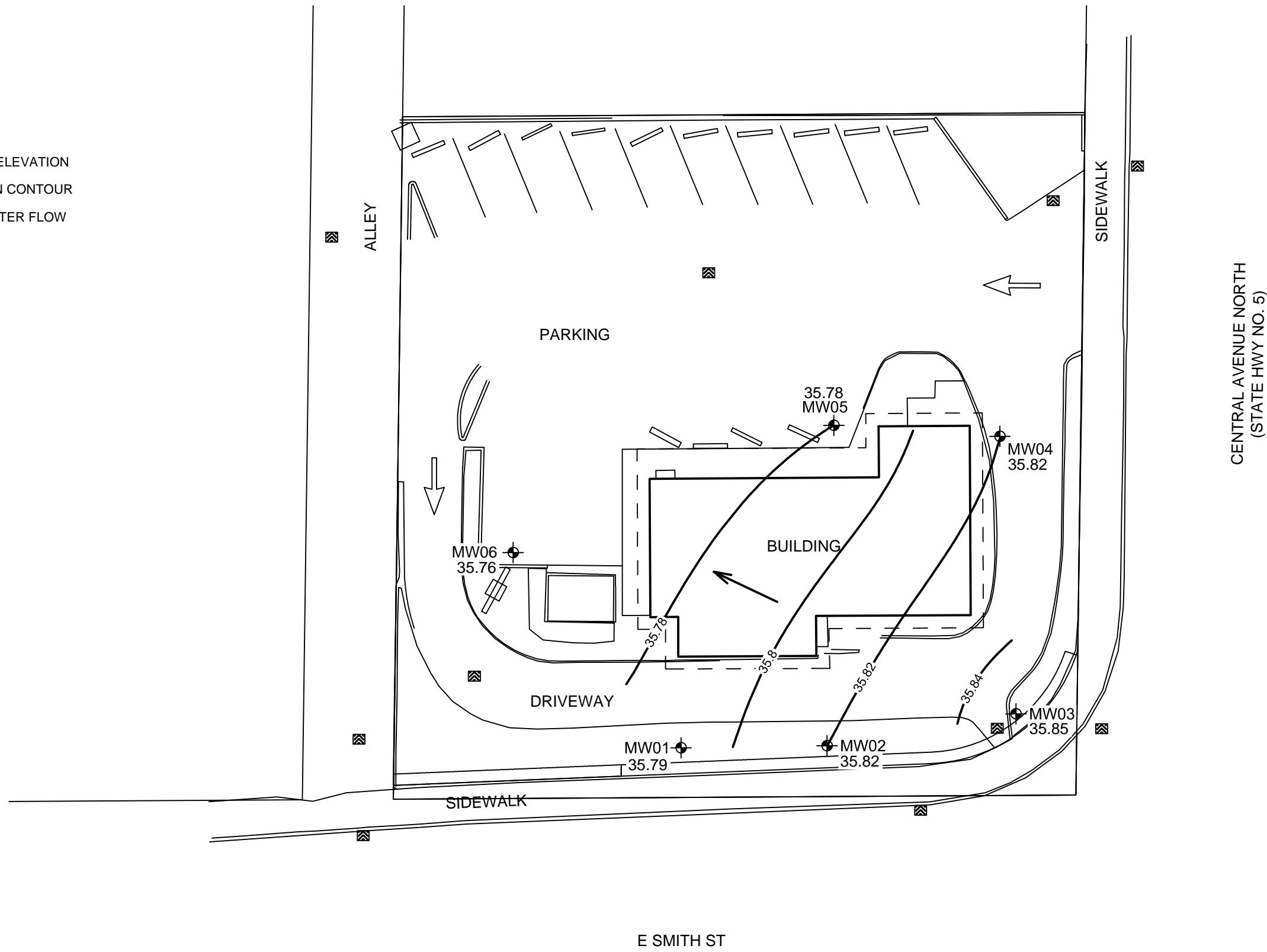
DATE: 6-30-16
 DWN: JJT
 CHK: NV
 APPROVED: CH
 PRJ. MGR: CH
 PROJECT NO:
 01-323

FIGURE 2
 SITE FEATURES AND UTILITIES
 TOC HOLDING CO. FACILITY NO. 01-323
 301 N CENTRAL AVE
 KENT, WA.

C:\Users\Josh\Desktop\Autocad Files\Hydrocon-Autocad\01-323 Kent\2016\2016QTR0201-323_BM-062916.dwg 2.17.2014

LEGEND

-  BUILDING
-  MONITORING WELL
-  CATCH BASIN
-  GROUNDWATER SURFACE ELEVATION
-  GROUNDWATER ELEVATION CONTOUR
-  APPROXIMATE GROUNDWATER FLOW DIRECTION



DATE: 6-30-16
 DWN: JJT
 CHK: NV
 APPROVED: CH
 PRJ. MGR: CH
 PROJECT NO:
 01-323

FIGURE 3
 GROUNDWATER ELEVATION CONTOURS
 FOR JUNE 2016
 TOC HOLDING CO. FACILITY NO. 01-323
 301 N CENTRAL AVE
 KENT, WA.

Well ID	Analytical Results (ug/L)								
	DRPH	ORPH	GRPH	Benzene	Toluene	Ethylbenzene	Xylene Total	Naphthalene	Lead (filtered)
MTCA A	500	500	1,000/800	5	1,000	700	1,000	160	15
MW01	<50	<250	<100	<0.35	<1	<1	<3	<1	<1
MW02	1,300 x	<500	1,700	2	1.2	22	3.7	30	1.13
MW03	2,100 x	<250	4,300	0.92	1.3	32	4.8	18	1.21
MW04	<50	<250	<100	<0.35	<1	<1	<3	<1	<1
MW05	55 x	<250	<100	<0.35	<1	<1	<3	<1	<1
MW06	<50	<250	<100	<0.35	<1	<1	<3	<1	<1

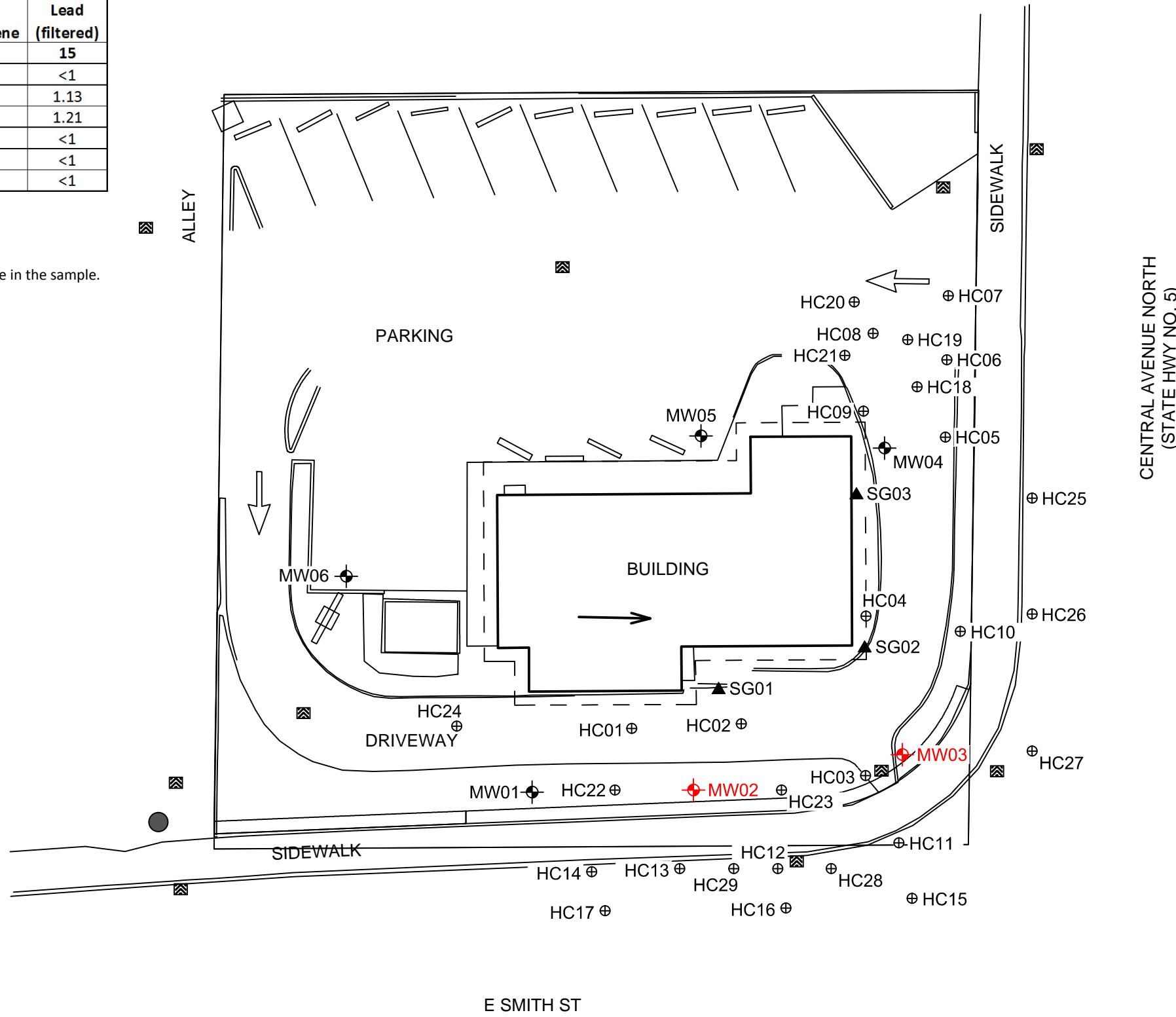
Notes:

Red denotes concentration exceeds MTCA Cleanup Level for Groundwater.

Lab Qualifiers:

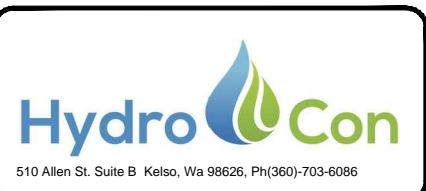
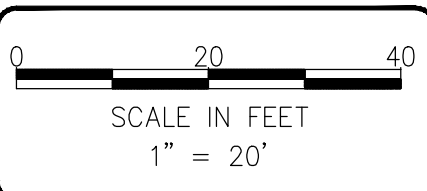
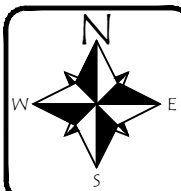
x - The sample chromatographic pattern does not resemble the fuel standard used for quantification.

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.



LEGEND

- BUILDING
- MW01 MONITORING WELL
- HC01 BORING LOCATIONS (HYDROCON 2015)
- CATCH BASIN
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- *RED INDICATES IMPACTED GROUNDWATER



DATE: 6-30-16
DWN: JJT
CHK: NV
APPROVED: CH
PRJ. MGR: CH
PROJECT NO:
01-323

FIGURE 4
GROUNDWATER ANALYTICAL RESULTS
FOR JUNE 2016
TOC HOLDING CO. FACILITY NO. 01-323
301 N CENTRAL AVE
KENT, WA.

TABLES



Table 1
Groundwater Analytical Results
TOC Holding Co. Facility No. 01-323
301 North Central Avenue
Kent, Washington

	Measurement			Fuels		Volatiles								Metal		
	Top of Casing	Depth to Groundwater	Groundwater Elevation	DRPH	ORPH	GRPH	Benzene	Toluene	Ethylbenzene	Xylene Total	EDB	EDC	MTBE	Naphthalene	Lead	Lead (filtered)
	feet	feet	feet	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
WA MTCA A Cleanup for Groundwater				500	500	1000/800	5	1,000	700	1,000	0.01	5	20	160	15	15
Benzene (Non Detect)						1,000										
Benzene (Detect)						800										

Field ID	Date	Top of Casing	Depth to Groundwater	Groundwater Elevation	DRPH	ORPH	GRPH	Benzene	Toluene	Ethylbenzene	Xylene Total	EDB	EDC	MTBE	Naphthalene	Lead	Lead (filtered)
MW01	7/9/2015	42.81	7.25	35.56	67 x	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	-	<1
	10/21/2015	42.81	8.36	34.45	110 x	<280	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
	3/2/2016	42.81	4.64	38.17	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
	6/1/2016	42.81	7.02	35.79	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
MW02	7/9/2015	42.31	6.73	35.58	4,600 x	<250	4,100	8.1	4.8	36	9.7	<1 ec	<1	<1	46	-	1.68
	10/21/2015	42.31	7.86	34.45	4,300 x	<280	4,300 J	4	4.6	32	9.6	<1 ec	<1	<1	41	1.27	<1
	3/2/2016	42.31	4.15	38.16	490 x	<300	760	<0.35	<1	8.3	<3	<1 ec	<1	<1	7.7	1.13	<1
	6/1/2016	42.31	6.49	35.82	1,300 x	<500	1,700	2	1.2	22	3.7	<1 ec	<1	<1	30	1.93	1.13
MW03	7/9/2015	41.93	6.33	35.6	4,400 x	<250	3,900	0.76	1.4	26	4.6	<1 ec	<1	<1	29	-	<1
	10/21/2015	41.93	7.45	34.48	2,400 x	<280	3,300	0.59	1.3	19	3.9	<1 ec	<1	<1	24	<1	<1
	3/2/2016	41.93	3.78	38.15	1,300 x	<250	2,900	0.39	<1	19	4.1	<1 ec	<1	<1	6	2.76	1.52
	6/2/2016	41.93	6.08	35.85	2,100 x	<250	4,300	0.92	1.3	32	4.8	<1 ec	<1	<1	18	1.51	1.21
MW04	7/9/2015	41.55	5.96	35.59	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	-	<1
	10/22/2015	41.55	7.07	34.48	<55	<280	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<10	<1
	3/2/2016	41.55	3.39	38.16	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
	6/2/2016	41.55	5.73	35.82	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
MW05	7/9/2015	41.79	6.23	35.56	100 x	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	-	<1
	10/21/2015	41.79	7.33	34.46	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
	3/2/2016	41.79	3.63	38.16	110 x	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	1.58	<1
	6/2/2016	41.79	6.01	35.78	55 x	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
MW06	7/10/2015	42.13	6.6	35.53	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	-	<1
	10/21/2015	42.13	7.68	34.45	<55	<280	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
	3/3/2016	42.13	3.95	38.18	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1
	6/2/2016	42.13	6.37	35.76	<50	<250	<100	<0.35	<1	<1	<3	<1 ec	<1	<1	<1	<1	<1

Notes

Red denotes concentration in excess of MTCA Method Cleanup Level for Groundwater.
 Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.
 GRPH analyzed by Method NWTPH-Gx.
 Volatiles analyzed by EPA Method 8021B, 8260B, or 8260C; see text for method used for current reporting period.
 DRPH and ORPH analyzed by Method NWTPH-Dx.
 Metals analyzed by EPA Method 200.8 or 6020.
 MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007

- = not analyzed/not measured; SPH not detected
 < = not detected at a concentration exceeding the laboratory reporting limit
 µg/L = micrograms per liter
 DRPH = Diesel Range Petroleum Hydrocarbon
 EDB = 1,2-dibromoethane (ethylene dibromide)
 EDC = 1,2-dichloroethylene (ethylene dichloride)
 EPA = U.S. Environmental Protection Agency
 GRPH = Gasoline Range Petroleum Hydrocarbon
 MTBE = methyl tertiary-butyl ether
 MTCA = Washington State Model Toxics Control Act
 NWTPH = Northwest Total Petroleum Hydrocarbon
 ORPH = Oil Range Petroleum Hydrocarbon
 WAC = Washington Administrative Code

ec - Method reporting limit exceeds Clean Up Level shown.
 J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.
 x - The sample chromatographic pattern does not resemble the fuel standard used for quantification.



Table 2
 Groundwater Semi Volatile Analytical Results
 TOC Holding Co. Facility No. 01-400
 804 Market Street
 Kirkland, Washington

Organic									
	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Indeno(1,2,3-c,d)pyrene		
	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L		
WA MTCA A Cleanup for Groundwater		0.1							
Field ID	Date								
MW03	11/25/2015	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
	3/29/2016	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06
	6/10/2016	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06

Notes

Samples analyzed by Friedman & Bruya, Inc. of Seattle, Washington.

Organics analyzed by method 8270D.

MTCA Method A Cleanup Levels, WAC 173-340-720 through 173-340-760, revised Nov., 2007.

< = not detected at a concentration exceeding the laboratory reporting limit

µg/L = micrograms per liter

MTCA = Washington State Model Toxics Control Act

WAC = Washington Administrative Code

ATTACHMENT A

Groundwater Sample Collection Forms



GROUNDWATER PURGE AND SAMPLE COLLECTION

Well I.D. Number: MW01

Project Name (Number): TOC Kent (01-323) Sample I.D.: MW01 Time: 1306
 Hydrocon Project Number: _____ Field Duplicate I.D.: _____ Time: _____
 Date: 01 June 2016 Personnel: L. Namba

WELL INFORMATION

Monument condition: Good Needs repair: _____ Water in Monument
 Well cap condition: Good Replaced Needs Replacement Surface Water Well Infiltration
 Headspace reading: Not measured PID Reading _____ ppm Odor: _____
 Well diameter: 2-inch 4-inch 6-inch Other: _____
 Comments: _____

PURGING INFORMATION

Total well depth: 14.18 ft Bottom: Hard Soft Not measured Screen Interval(s): 4.5-14.5
 Depth to product: NM ft
 Depth to water: 6.98 ft Intake Depth (BTOC): 10 Begin Purging Well: 1246
 Casing volume: 7.20 ft (H₂O) X 0.16 gal/ft = 1.15 gal. X 3 = 3.45 gal.
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type Peristaltic Centrifugal Dedicated Bladder Non-Dedicated Bladder Other _____
 Bailer type: _____ Water Disposal: Drummed Remediation System Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min) (0.100-0.500)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1248	6.98		18.16	0.273	2.23	6.13	203	52.2
1251	6.98	0.140	17.87	0.273	1.33	6.11	202	42.1
1254	6.98		17.66	0.274	1.10	6.11	202	38.5
1257	6.98		17.45	0.274	0.99	6.11	203	37.0
1300	6.98		17.39	0.280	0.92	6.12	202	35.4
1303	6.98		17.22	0.281	0.89	6.12	202	35.0

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis Requested
40 ml VOA	3 (4) 6	HCl	No 0.45 0.10	NWTPH-GX, BTEX, <u>Oxy</u>
500 ml AGB	1	None	No 0.45 0.10	NWTPH-Dx
500 ml Poly	1	HNO ₃	No (0.45) 0.10	Dissolved Pb
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____



GROUNDWATER PURGE AND SAMPLE COLLECTION

Well I.D. Number: mwo2

Project Name (Number): TOC Kent (01-323) Sample I.D.: mwo2 Time: 1354
 Hydrocon Project Number: _____ Field Duplicate I.D.: _____ Time: _____
 Date: 01 June 2016 Personnel: Larry Namben

WELL INFORMATION

Monument condition: Good Needs repair: _____ Water in Monument
 Well cap condition: Good Replaced Needs Replacement Surface Water Well Infiltration
 Headspace reading: Not measured PID Reading _____ ppm Odor: _____
 Well diameter: 2-inch 4-inch 6-inch Other: _____
 Comments: _____

PURGING INFORMATION

Total well depth: 13.99 ft Bottom: Hard Soft Not measured Screen Interval(s): 4.5-14.5
 Depth to product: NM ft
 Depth to water: 6.46 ft Intake Depth (BTOC): 9 Begin Purging Well: 1334
 Casing volume: 7.53 ft (H₂O) X 0.16 gal/ft = 1.20 gal. X 3 = 3.60 gal.
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type Peristaltic Centrifugal Dedicated Bladder Non-Dedicated Bladder Other _____
 Bailer type: _____ Water Disposal: Drummed Remediation System Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min) (0.100-0.500)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (±10% or ≤10)
1336	6.47		21.16	0.456	1.39	6.20	150	110
1339	6.48	0.110	18.75	0.453	0.85	6.22	164	104
1342	6.48		18.44	0.457	0.65	6.23	169	93.8
1345	6.49		18.14	0.455	0.57	6.23	172	93.0
1348	6.50		18.00	0.456	0.54	6.23	173	85.4
1351	6.50		17.93	0.457	0.53	6.23	173	86.6

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
 Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis Requested
40 ml VOA	3/4 (6)	HCl	No 0.45 0.10	NWTPH-GX, BTEX, <u>Oxy</u>
500 ml AGB	1	None	No 0.45 0.10	NWTPH-Dx
500 ml Poly	1	HNO ₃	No 0.45 0.10	Dissolved Pb
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____



GROUNDWATER PURGE AND SAMPLE COLLECTION

Well I.D. Number: mw03

Project Name (Number): ROC Kent (01-323) Sample I.D.: mw03 Time: 1421
 Hydrocon Project Number: _____ Field Duplicate I.D.: mw99 Time: 1436
 Date: 02 June 2016 Personnel: Larry Namba

WELL INFORMATION

Monument condition: Good Needs repair: _____ Water in Monument
 Well cap condition: Good Replaced Needs Replacement Surface Water Well Infiltration
 Headspace reading: Not measured PID Reading _____ ppm Odor: _____
 Well diameter: 2-inch 4-inch 6-inch Other: _____
 Comments _____

PURGING INFORMATION

Total well depth: 14.12 ft Bottom: Hard Soft Not measured Screen Interval(s): 4.5-14.5
 Depth to product: NM ft
 Depth to water: 6.08 ft Intake Depth (BTOC): 9 Begin Purging Well: 1402
 Casing volume: 8.04 ft (H₂O) X 0.16 gal/ft = 1.29 gal. X 3 = 3.87 gal.
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type Peristaltic Centrifugal Dedicated Bladder Non-Dedicated Bladder Other _____
 Bailer type: _____ Water Disposal: Drummed Remediation System Other _____

FIELD PARAMETERS

Odor and/or Sheen: Hydrocarbon odor
No Sheen

Time	Water Level (BTOC)	Purge Rate (L/min) (0.100-0.500)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1403	6.11		18.16	0.339	1.35	6.10	111	38.9
1406	6.11		17.83	0.354	0.71	6.12	100	34.5
1409	6.11	0.070	17.48	0.354	0.58	6.12	96	31.1
1412	6.12		17.42	0.350	0.54	6.12	95	30.8
1415	6.12		17.28	0.353	0.46	6.12	93	29.5
1418	6.12		17.32	0.352	0.43	6.13	92	28.0

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.
 Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis Requested
40 ml VOA	3 (4) 6	HCl	No 0.45 0.10	NWTPH-GX, BTEX
500 ml AGB	1	None	No 0.45 0.10	NWTPH-Dx
500 500 ml Poly	1	HNO ₃	No 0.45 0.10	Dissolved Pb
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____



GROUNDWATER PURGE AND SAMPLE COLLECTION

Well I.D. Number: mw04

Project Name (Number): TOC Kent (01-323) Sample I.D.: mw04 Time: 1100
 Hydrocon Project Number: _____ Field Duplicate I.D.: _____ Time: _____
 Date: 02 June 2016 Personnel: _____

WELL INFORMATION

Monument condition: Good Needs repair: _____ Water in Monument
 Well cap condition: Good Replaced Needs Replacement Surface Water Well Infiltration
 Headspace reading: Not measured PID Reading _____ ppm Odor: _____
 Well diameter: 2-inch 4-inch 6-inch Other: _____
 Comments _____

PURGING INFORMATION

Total well depth: 14.11 ft Bottom: Hard Soft Not measured Screen Interval(s): 4.5 - 14.5
 Depth to product: NM ft
 Depth to water: 5.74 ft Intake Depth (BTOC): 9 Begin Purging Well: 10.41
 Casing volume: 8.37 ft (H₂O) X 0.16 gal/ft = 1.34 gal. X 3 = 4.02 gal.
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type Peristaltic Centrifugal Dedicated Bladder Non-Dedicated Bladder Other _____
 Bailer type: _____ Water Disposal: Drummed Remediation System Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min) (0.100-0.500)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1042	5.76		17.99	0.567	1.55	6.27	207	44.4
1043	5.76	0.130	17.48	0.565	0.81	6.29	199	35.9
1048	5.76		17.30	0.565	0.69	6.30	191	33.0
1051	5.76		17.16	0.563	0.57	6.31	190	31.6
1054	5.76		17.00	0.562	0.54	6.32	191	30.8
1057	5.76		16.98	0.558	0.52	6.32	191	30.2

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis Requested
40 ml VOA	3 (4) 6	HCl	No 0.45 0.10	NWTPH-GX, BTEX, <u>oxy</u>
500 ml AGB	1	None	No 0.45 0.10	NWTPH-Dx
500 ml Poly	1	HNO ₃	No (0.45) 0.10	Dissolved Pb
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____



GROUNDWATER PURGE AND SAMPLE COLLECTION

Well I.D. Number: MW05

Project Name (Number): TOC Kent (01-323) Sample I.D.: MW05 Time: 11:17
 Hydrocon Project Number: _____ Field Duplicate I.D.: _____ Time: _____
 Date: 02 June 2016 Personnel: Larry Namba

WELL INFORMATION

Monument condition: Good Needs repair: _____ Water in Monument
 Well cap condition: Good Replaced Needs Replacement Surface Water Well Infiltration
 Headspace reading: Not measured PID Reading _____ ppm Odor: _____
 Well diameter: 2-inch 4-inch 6-inch Other: _____
 Comments: _____

PURGING INFORMATION

Total well depth: 14.11 ft Bottom: Hard Soft Not measured Screen Interval(s): 4.5-14.5
 Depth to product: NM ft
 Depth to water: 6.01 ft Intake Depth (BTOC): 9 Begin Purging Well: 1127
 Casing volume: 8.10 ft (H₂O) X 0.16 gal/ft = 1.30 gal. X 3 = 3.90 gal.
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type Peristaltic Centrifugal Dedicated Bladder Non-Dedicated Bladder Other _____
 Bailer type: _____ Water Disposal: Drummed Remediation System Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min) (0.100-0.500)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1129	6.05		16.99	0.405	1.77	6.75	191	41.9
1132	6.05	0.130	16.58	0.392	0.70	6.70	190	35.5
1135	6.05		16.40	0.366	0.49	6.67	188	33.3
1138	6.05		16.36	0.361	0.41	6.67	188	31.4
1141	6.05		16.40	0.360	0.37	6.65	187	30.2
1144	6.05		16.31	0.353	0.33	6.65	186	29.5

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis Requested
40 ml VOA	3 (4) 6	HCl	No 0.45 0.10	NWTPH-GX, BTEX, Oxy
500 ml AGB	1	None	No 0.45 0.10	NWTPH-Dx
500 ml Poly	1	HNO ₃	No (0.45) 0.10	Dissolved Pb
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____



GROUNDWATER PURGE AND SAMPLE COLLECTION

Well I.D. Number: MW06

Project Name (Number): TOC Kent (01-323) Sample I.D.: MW06 Time: 1247
 Hydrocon Project Number: _____ Field Duplicate I.D.: _____ Time: _____
 Date: 02 June 2016 Personnel: _____

WELL INFORMATION

Monument condition: Good Needs repair: _____ Water in Monument
 Well cap condition: Good Replaced Needs Replacement Surface Water Well Infiltration
 Headspace reading: Not measured PID Reading _____ ppm Odor: _____
 Well diameter: 2-inch 4-inch 6-inch Other: _____
 Comments: _____

PURGING INFORMATION

Total well depth: 13.51 ft Bottom: Hard Soft Not measured Screen Interval(s): 4.5-14.5
 Depth to product: NM ft
 Depth to water: 6.36 ft Intake Depth (BTOC): 9 Begin Purging Well: 1227
 Casing volume: 7.15 ft (H₂O) X 0.16 gal/ft = 1.14 gal. X 3 = 3.42 gal.
 Volume Conversion Factors: 3/4"=0.02 gal/ft 1"=0.04 gal/ft 2"=0.16 gal/ft 4"=0.65 gal/ft 6"= 1.47 gal/ft

PURGING/DISPOSAL METHOD

Pump type Peristaltic Centrifugal Dedicated Bladder Non-Dedicated Bladder Other _____
 Bailer type: _____ Water Disposal: Drummed Remediation System Other _____

FIELD PARAMETERS

Odor and/or Sheen: None

Time	Water Level (BTOC)	Purge Rate (L/min) (0.100-0.500)	Temp. (°C)	Sp. Cond. (mS/cm) (±3%)	Dissolved Oxygen (±10% or ≤1.00 ±0.2)	pH (SU) (±0.1)	ORP (mV)	Turbidity (NTU) (± 10% or ≤10)
1229	6.37		15.66	0.496	1.56	6.39	195	35.1
1232	6.38	0.110	15.11	0.495	0.90	6.35	195	29.2
1235	6.38		15.04	0.494	0.77	6.36	196	26.8
1238	6.38		14.98	0.491	0.74	6.33	196	27.1
1241	6.38		14.89	0.492	0.70	6.33	196	27.2
1244	6.38		14.80	0.494	0.64	6.33	196	27.7

Stabilization achieved if three successive measurements for pH, Conductivity and Turbidity and/or Dissolved Oxygen are recorded within their respective stabilization criteria. A minimum of six measurements should be recorded.

Purging Comments: _____

SAMPLE INFORMATION

Container Type	Bottle Count	Preservative	Field Filtered?	Analysis Requested
40 ml VOA	3 (4) 6	HCl	No 0.45 0.10	NWTPH-GX, BTEX, Oxy
500 ml AGB	1	None	No 0.45 0.10	NWTPH-Dx
500 ml Poly	1	HNO ₃	No 0.45 0.10	Dissolved Pb
			No 0.45 0.10	
			No 0.45 0.10	

Sampling Comments: _____

ATTACHMENT B

Laboratory Report and Chain-of-Custody Documentation

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

June 17, 2016

Craig Hultgren, Project Manager
HydroCon
510 Allen St, Suite B
Kelso, WA 98626

Dear Mr. Hultgren:

Included are the results from the testing of material submitted on June 3, 2016 from the TOC_01-323, WORFDB8 F&BI 606057 project. There are 36 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl
Project Manager

Enclosures

c: Rob Honsberger, Allison Greiner
HDC0617R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on June 3, 2016 by Friedman & Bruya, Inc. from the HydroCon TOC_01-323, WORFDB8 F&BI 606057 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>HydroCon</u>
606057 -01	MW01
606057 -02	MW02
606057 -03	MW03
606057 -04	MW04
606057 -05	MW05
606057 -06	MW06
606057 -07	MW99

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/17/16
Date Received: 06/03/16
Project: TOC_01-323, WORFDB8 F&BI 606057
Date Extracted: 06/06/16
Date Analyzed: 06/06/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
USING METHOD NWTPH-Gx**

Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Gasoline Range</u>	Surrogate (% Recovery) (Limit 51-134)
MW01 606057-01	<100	90
MW02 606057-02	1,700	96
MW03 606057-03	4,300	107
MW04 606057-04	<100	94
MW05 606057-05	<100	87
MW06 606057-06	<100	92
MW99 606057-07	4,400	105
Method Blank 06-1125 MB	<100	95

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/17/16
 Date Received: 06/03/16
 Project: TOC_01-323, WORFDB8 F&BI 606057
 Date Extracted: 06/06/16
 Date Analyzed: 06/06/16

**RESULTS FROM THE ANALYSIS OF WATER SAMPLES
 FOR TOTAL PETROLEUM HYDROCARBONS AS
 DIESEL AND MOTOR OIL
 USING METHOD NWTPH-Dx**
 Results Reported as ug/L (ppb)

<u>Sample ID</u> Laboratory ID	<u>Diesel Range</u> (C ₁₀ -C ₂₅)	<u>Motor Oil Range</u> (C ₂₅ -C ₃₆)	<u>Surrogate</u> <u>(% Recovery)</u> (Limit 47-140)
MW01 606057-01	<50	<250	95
MW02 606057-02 1/2	1,300 x	<500	80
MW03 606057-03	2,100 x	<250	97
MW04 606057-04	<50	<250	90
MW05 606057-05	55 x	<250	87
MW06 606057-06	<50	<250	102
MW99 606057-07	2,200 x	<250	92
Method Blank 06-1149 MB	<50	<250	90

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW01	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-01
Date Analyzed:	06/14/16	Data File:	606057-01.112
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW02	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-02
Date Analyzed:	06/14/16	Data File:	606057-02.113
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	1.13

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW03	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-03
Date Analyzed:	06/14/16	Data File:	606057-03.114
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	1.21

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW04	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-04
Date Analyzed:	06/14/16	Data File:	606057-04.115
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW05	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-05
Date Analyzed:	06/14/16	Data File:	606057-05.116
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW06	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-06
Date Analyzed:	06/14/16	Data File:	606057-06.117
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	MW99	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-07
Date Analyzed:	06/14/16	Data File:	606057-07.118
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	1.31

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Dissolved Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	HydroCon
Date Received:	NA	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	I6-370 mb
Date Analyzed:	06/10/16	Data File:	I6-370 mb.019
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
----------	-----------------------------

Lead	<1
------	----

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW01	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-01
Date Analyzed:	06/14/16	Data File:	606057-01.104
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW02	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-02
Date Analyzed:	06/14/16	Data File:	606057-02.105
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	1.93

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW03	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-03
Date Analyzed:	06/14/16	Data File:	606057-03.106
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	1.51

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW04	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-04
Date Analyzed:	06/14/16	Data File:	606057-04.107
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW05	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-05
Date Analyzed:	06/14/16	Data File:	606057-05.108
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW06	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-06
Date Analyzed:	06/14/16	Data File:	606057-06.109
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	MW99	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	606057-07
Date Analyzed:	06/14/16	Data File:	606057-07.110
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	1.85

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	HydroCon
Date Received:	NA	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/10/16	Lab ID:	I6-368 mb
Date Analyzed:	06/10/16	Data File:	I6-368 mb.033
Matrix:	Water	Instrument:	ICPMS1
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Lead	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	MW02	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/08/16	Lab ID:	606057-02 1/2
Date Analyzed:	06/10/16	Data File:	060922.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	89	31	160
Benzo(a)anthracene-d12	106	25	165

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.06
Chrysene	<0.06
Benzo(a)pyrene	<0.06
Benzo(b)fluoranthene	<0.06
Benzo(k)fluoranthene	<0.06
Indeno(1,2,3-cd)pyrene	<0.06
Dibenz(a,h)anthracene	<0.06

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	HydroCon
Date Received:	Not Applicable	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/08/16	Lab ID:	06-1158 mb2
Date Analyzed:	06/09/16	Data File:	060909.D
Matrix:	Water	Instrument:	GCMS6
Units:	ug/L (ppb)	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	76	31	160
Benzo(a)anthracene-d12	91	25	165

Compounds:	Concentration ug/L (ppb)
Benz(a)anthracene	<0.03
Chrysene	<0.03
Benzo(a)pyrene	<0.03
Benzo(b)fluoranthene	<0.03
Benzo(k)fluoranthene	<0.03
Indeno(1,2,3-cd)pyrene	<0.03
Dibenz(a,h)anthracene	<0.03

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW01	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/03/16	Lab ID:	606057-01
Date Analyzed:	06/03/16	Data File:	060315.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	109	63	127
4-Bromofluorobenzene	105	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW02	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/03/16	Lab ID:	606057-02
Date Analyzed:	06/03/16	Data File:	060316.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	108	63	127
4-Bromofluorobenzene	108	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	2.0
Toluene	1.2
Ethylbenzene	22
m,p-Xylene	2.7
o-Xylene	<1
Naphthalene	30

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW03	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/03/16	Lab ID:	606057-03
Date Analyzed:	06/03/16	Data File:	060329.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	110	63	127
4-Bromofluorobenzene	115	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	0.92
Toluene	1.3
Ethylbenzene	32
m,p-Xylene	3.8
o-Xylene	<1
Naphthalene	18

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW04	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/03/16	Lab ID:	606057-04
Date Analyzed:	06/03/16	Data File:	060330.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	57	121
Toluene-d8	109	63	127
4-Bromofluorobenzene	104	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW05	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/03/16	Lab ID:	606057-05
Date Analyzed:	06/03/16	Data File:	060331.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	107	63	127
4-Bromofluorobenzene	106	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW06	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/03/16	Lab ID:	606057-06
Date Analyzed:	06/03/16	Data File:	060332.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	109	63	127
4-Bromofluorobenzene	106	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW99	Client:	HydroCon
Date Received:	06/03/16	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/03/16	Lab ID:	606057-07
Date Analyzed:	06/03/16	Data File:	060333.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	111	63	127
4-Bromofluorobenzene	115	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	0.93
Toluene	1.3
Ethylbenzene	31
m,p-Xylene	3.8
o-Xylene	<1
Naphthalene	18

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	HydroCon
Date Received:	Not Applicable	Project:	TOC_01-323, WORFDB8 F&BI 606057
Date Extracted:	06/03/16	Lab ID:	06-1087 mb
Date Analyzed:	06/03/16	Data File:	060310.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	57	121
Toluene-d8	108	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)
Methyl t-butyl ether (MTBE)	<1
1,2-Dibromoethane (EDB)	<1
1,2-Dichloroethane (EDC)	<1
Benzene	<0.35
Toluene	<1
Ethylbenzene	<1
m,p-Xylene	<2
o-Xylene	<1
Naphthalene	<1

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/17/16

Date Received: 06/03/16

Project: TOC_01-323, WORFDB8 F&BI 606057

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TPH AS GASOLINE
USING METHOD NWTPH-Gx**

Laboratory Code: 606057-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	94	69-134

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/17/16

Date Received: 06/03/16

Project: TOC_01-323, WORFDB8 F&BI 606057

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS
DIESEL EXTENDED USING METHOD NWTPH-Dx**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	106	115	61-133	8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/17/16

Date Received: 06/03/16

Project: TOC_01-323, WORFDB8 F&BI 606057

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR DISSOLVED METALS USING EPA METHOD 200.8**

Laboratory Code: 606159-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	<1	85	86	70-130	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	101	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/17/16

Date Received: 06/03/16

Project: TOC_01-323, WORFDB8 F&BI 606057

**QUALITY ASSURANCE RESULTS
FOR THE ANALYSIS OF WATER SAMPLES
FOR TOTAL METALS USING EPA METHOD 200.8**

Laboratory Code: 606107-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	ug/L (ppb)	10	1.41	84	90	70-130	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	ug/L (ppb)	10	105	85-115

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/17/16

Date Received: 06/03/16

Project: TOC_01-323, WORFDB8 F&BI 606057

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR PAHS BY EPA METHOD 8270D SIM**

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Benz(a)anthracene	ug/L (ppb)	1	94	102	60-118	8
Chrysene	ug/L (ppb)	1	90	97	66-125	7
Benzo(b)fluoranthene	ug/L (ppb)	1	87	93	55-135	7
Benzo(k)fluoranthene	ug/L (ppb)	1	90	96	62-125	6
Benzo(a)pyrene	ug/L (ppb)	1	87	90	58-127	3
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	1	89	97	36-142	9
Dibenz(a,h)anthracene	ug/L (ppb)	1	88	96	37-133	9

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 06/17/16

Date Received: 06/03/16

Project: TOC_01-323, WORFDB8 F&BI 606057

**QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER
SAMPLES FOR VOLATILES BY EPA METHOD 8260C**

Laboratory Code: 606057-07 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	102	74-127
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	96	69-133
Benzene	ug/L (ppb)	50	0.93	103	76-125
Toluene	ug/L (ppb)	50	1.3	92	76-122
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	98	69-134
Ethylbenzene	ug/L (ppb)	50	31	96 b	69-135
m,p-Xylene	ug/L (ppb)	100	3.8	94	69-135
o-Xylene	ug/L (ppb)	50	<1	91	60-140
Naphthalene	ug/L (ppb)	50	18	99 b	44-164

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	105	102	64-147	3
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	98	96	73-132	2
Benzene	ug/L (ppb)	50	107	105	69-134	2
Toluene	ug/L (ppb)	50	96	94	72-122	2
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	102	100	82-125	2
Ethylbenzene	ug/L (ppb)	50	99	96	77-124	3
m,p-Xylene	ug/L (ppb)	100	98	95	83-125	3
o-Xylene	ug/L (ppb)	50	96	93	81-121	3
Naphthalene	ug/L (ppb)	50	99	96	64-133	3

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

606057



Hydrocon Environmental, LLC
 Report to: Craig Hultgren
 cc: Allison Greiner
 510 Allen Street
 Kelso, Washington 98626
 (360) 703-6079
 CraigH@hydroconic.net
 allisongreiner@eurekaprojectsolutions.net

Samplers Name: L Namba
 Project Name: TOC Holdings Company
 Facility Number: 01-323 GW
 Facility Address: Kent, WA
 PO Number:
 EDD Requested: EIM + DataConcourse

Requested Turn Around Time
 Rush
 Standard 10 business days
 Rush Charges Authorized by: _____
 Sample Disposal: 30 days Return Will Call

Additional Comments:
 Dissolved lead samples field filtered and preserved.

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of containers	ANALYSES REQUESTED							Notes		
						TPH-Dx	TPH-Gx	8260C BTEX	8260C MTBE EDC EDB N	200.8 Pb, Total	200.8 Pb, Diss. FF	Carcinogenic PAHs 8270			
1 MW01	01 A-F	06/02/16	1306	W	6	X	X	X	X	X	X				
2 MW02	02 A-F	06/02/16	1354	W	6	X	X	X	X	X	X				
3 MW03	03	06/02/16	1421	W	6	X	X	X	X	X	X				
4 MW04	04	06/02/16	1100	W	6	X	X	X	X	X	X				
5 MW05	05	06/02/16	1147	W	6	X	X	X	X	X	X				
6 MW06	06	06/02/16	1247	W	6	X	X	X	X	X	X				
7 MW99	07	06/02/16	1436	W	6	X	X	X	X	X	X				
8															
9															
10															

Friedman & Bruya, Inc.
 3012 16th Avenue West
 Seattle, WA 98119-2029
 Ph. (206) 285-8282

Relinquished by:
 Received by:
 Relinquished by:
 Received by:

Signature	Print Name	Time	Date
	Larry Namba	1033	03 June 2016
	Allison Greiner	10:35	

Sample received at 3 30