TECHNICAL MEMORANDUM

To: Mr. Aaron Wilcox
From: David Borys
Date: September 8, 2016
Subject: **Handy Mart – August 2016 Groundwater Monitoring Results**

INTRODUCTION

HydroCon Environmental, LLC (HydroCon) is submitting this technical memorandum to Wilcox & Flegel to document the work completed at 1410 Ocean Beach Highway in Longview, Washington (the site) in August 2016. The work was conducted according to our Master Services Agreement (MSA), dated July 11, 2014.

FIELD ACTIVITIES

On August 10, 2016, HydroCon personnel mobilized to the site to perform the groundwater monitoring. Upon arrival at the site, the well cap on each well was removed and the water level was allowed to equilibrate prior to measuring the depth to water (DTW). The depth to water in each well was measured using a clean electronic water level indicator. Water levels were measured at the scribed reference mark (north end of the top of the PVC casing) at each well. A table detailing the groundwater levels and elevations and a figure indicating the groundwater flow direction are included in the attachments. Depth to water in the wells ranged from 8.02 to 10.45 feet below top of casing. Groundwater elevations were calculated based on an arbitrary measuring point. Based on the measured groundwater elevations, the groundwater flows towards the north-northeast at an approximate gradient of 0.015 feet/foot. This flow direction is changed from the previous sampling event when groundwater was measured to flow in a northwest direction at a gradient of .001 feet/foot. However, the change in groundwater flow direction is likely the result of seasonal variations as the flow directions have appeared to be to the southwest during the wet season and to the north during the dry season.

HydroCon purged monitoring wells MW-1 through MW-3 with a low flow peristaltic pump equipped with new length of LDPE tubing attached to a new length of silicone tubing. Field parameters (pH, temperature, turbidity, and specific conductivity) were measured and recorded on a Groundwater Sample Collection field form along with the depth to water measurements (included in the attachment). Purging was completed when the field parameters had stabilized.

Samples were collected immediately after purging and placed in labeled laboratory-prepared sample bottles. The samples were shipped in an iced cooler along with chain-of-custody documentation to the project laboratory for analysis.

A total of three groundwater samples were collected for laboratory analysis. Each sample was analyzed for the following set of parameters:

- Gasoline Range Petroleum Hydrocarbons (GRPH) by Northwest Method NWTPH-Gx; and
- Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8021B.

SAMPLING RESULTS

GRPH was detected at a concentration of 326 micrograms per liter (µg/L) in the sample collected from MW-3. Benzene was detected at a concentration of 2.2 µg/L in the sample from MW-1. The detected concentrations of GRPH and benzene are below the MTCA Method A Cleanup Levels of 800 µg/L and 5 µg/L respectively. GRPH and BTEX constituents were not detected at concentrations above the laboratory Method Reporting Limits (MRLs) in the sample collected from MW-1. A summary data table and the laboratory report are included in the attachments.

DISCUSSION

Based on the analytical results, HydroCon recommends the following:

- Based on the exceedance of benzene during the quarterly sampling event in February 2016, groundwater monitoring should continue until four consecutive quarters with no detected concentrations exceeding MTCA Method A Cleanup Levels have been achieved.

QUALIFICATIONS

HydroCon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. HydroCon makes no warranties, either express or implied, regarding the findings, conclusions or recommendations. Please note that HydroCon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report.

Findings and conclusions resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this monitoring. Subsurface conditions may vary from those encountered at specific sampling locations or during other surveys, tests, assessments, investigations, or exploratory services; the data, interpretations and findings are based solely upon data obtained at the time and within the scope of these services.

surveys, tests, assessments, investigations, or exploratory services; the data, interpretations and findings are based solely upon data obtained at the time and within the scope of these services.

This report is intended for the sole use of **Wilcox & Flegel**. This report may not be used or relied upon by any other party without the written consent of HydroCon. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

The conclusions presented in this report are, in part, based upon subsurface sampling performed at selected locations and depths. There may be conditions between borings or samples that differ significantly from those presented in this report and which cannot be predicted by this study.

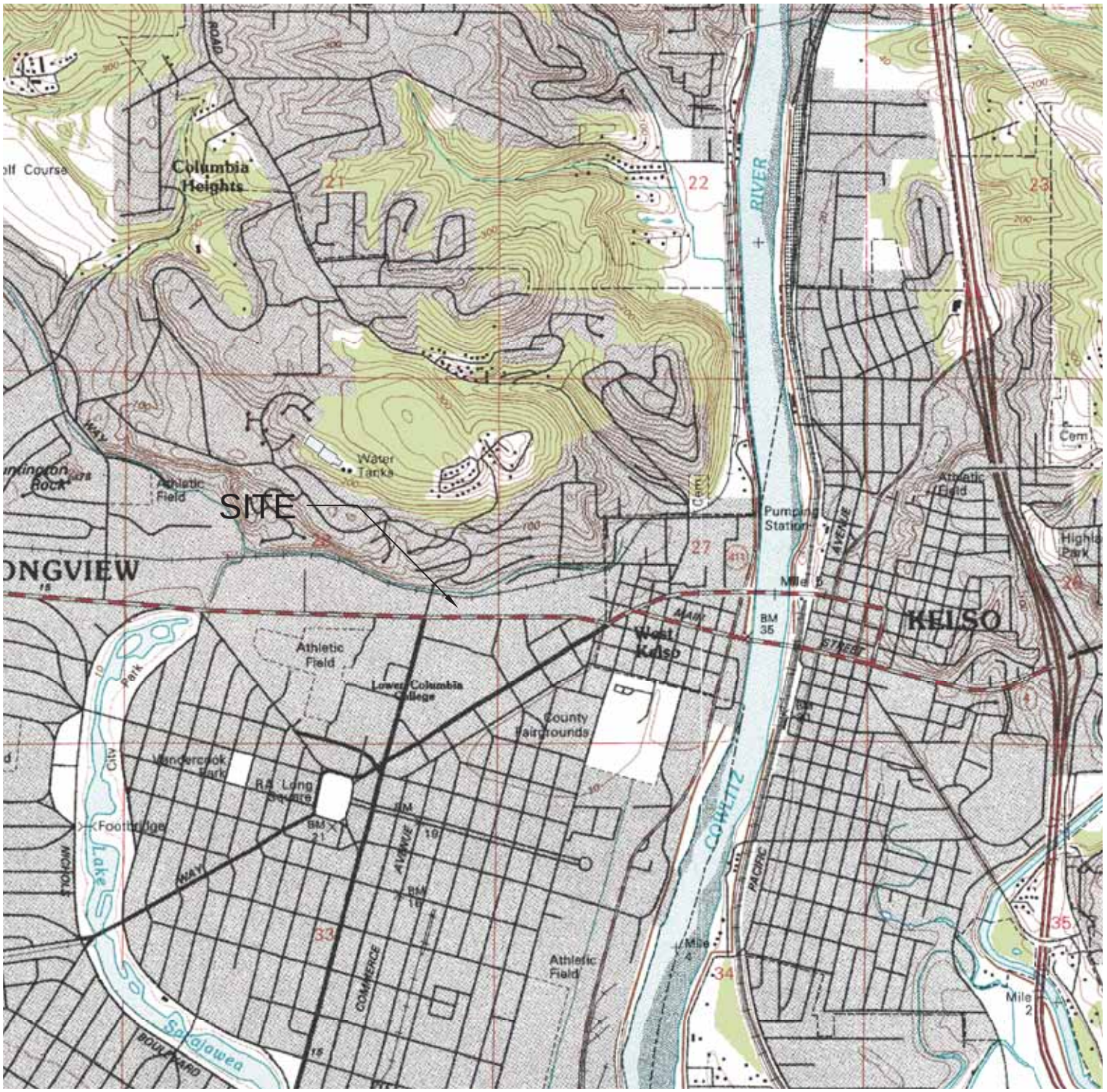
CLOSING

We appreciate the opportunity to perform these services for Wilcox & Flagel. Please contact the undersigned at (360) 703-6079 if you have any questions regarding the information provided in this letter report.

Sincerely,

Jonathan Horowitz, PE
Project Engineer

Figures
Figure 1 – Site Location Map
Figure 2 – Site Features Map
Figure 3 – Groundwater Analytical Results
Figure 4 – Groundwater Elevations and Contour Map
Tables
Table 1 – Summary of Groundwater Elevations
Table 2 – Summary of Groundwater Analytical Results
Table 3 – Summary of Historical Groundwater Analytical Results
Attachments
Attachment A - Groundwater Sample Collection Field Forms
Attachment B - Laboratory Report and Chain-of-Custody Documentation



NOTE(S):

1. USGS, KELSO QUADRANGLE
   WASHINGTON
   7.5 MINUTE SERIES (TOPOGRAPHIC)

N
W E
S

0 2000 4000
SCALE IN FEET
1" = 2000'

HydroCon
501 Allen St Suite B, Kelso WA Ph: (360) 706-6079

DATE: 09-08-16
DWN: JH
CHK: JH
APPROVED:
PRJ. MGR: DB
PROJECT NO: 2015-007-01

FIGURE 1
SITE LOCATION
HANDY MART
WILCOX & FLEGEL
1410 OCEAN BEACH HWY
LONGVIEW, WA

LEGEND

- PROPERTY BOUNDARY
- BUILDING
- MW-01 MONITORING WELL

N
W E
S

0 30 60
SCALE IN FEET
1" = 30'

Hydro Con
510 Allen St. Suite B Kelso, WA 98626, Ph (360) 703-6079

DATE: 09-08-16
DWN: JH
CHK: JH
APPROVED:
PRJ. MGR: DB
PROJECT NO: 2015-007-01

FIGURE 2
SITE FEATURES
HANDY MART
WILCOX & FLEGEL
1410 OCEAN BEACH HWY
LONGVIEW, WA

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Sample ID				MW01		MW02		MW03	
Lab Sample ID				A6H0360-02		A6H0360-03		A6H0360-01	
Collection Date				8/10/16		8/10/16		8/10/16	
Parameter	Method	Unit	Ecology MTCA Level A	Value	Q	Value	Q	Value	Q
Total Petroleum Hydrocarbons (TPH)									
TPH Gasoline Range (GRO)	NWTPH-Gx	µg/L	800	<100		<100		326	
Select Volatile Organic Compounds (VOCs)									
Benzene	8021B	µg/L	5	2.2		<0.2		<0.2	
Toluene	8021B	µg/L	1,000	<1		<1		<1	
Ethylbenzene	8021B	µg/L	700	<0.5		<0.5		<0.5	
Total Xylenes	8021B	µg/L	1,000	<1.5		<1.5		<1.5	

CONVENIENCE STORE

CAR WASH

MW-1

UST PIT

DISPENSER ISLAND

MW-3

MW-2

LEGEND

PROPERTY BOUNDARY

BUILDING

MW-01 MONITORING WELL

N W E S

0 30 60

SCALE IN FEET

1" = 30'

Hydro Con

510 Allen St. Suite B Kelso, WA 98626, Ph (360) 703-6079

DATE: 09-08-16
DWN: JH
CHK: JH
APPROVED:
PRJ. MGR: DB
PROJECT NO: 2015-007-01

FIGURE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
HANDY MART
WILCOX & FLEGEL
1410 OCEAN BEACH HWY
LONGVIEW, WA

C:\Users\jonathanh\Drafting Temp\2015-007.01\2015-007.1.dwg 2.17.2014

CONVENIENCE STORE

CAR WASH

MW-1
(10.67)

11.2

10.8

UST PIT

DISPENSER ISLAND

MW-3
(11.61)

MW-2
(11.57)

11.6

© 2015 Google

LEGEND

- PROPERTY BOUNDARY
- BUILDING
- MW-01 (XX.XX) — MONITORING WELL (GROUNDWATER ELEV.)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- GROUNDWATER ELEVATION CONTOUR

N W E S

0 30 60

SCALE IN FEET
1" = 30'

HydroCon
510 Allen St. Suite B Kelso, WA 98626, Ph(360) 703-6079

DATE: 05-21-17
DWN: JH
CHK: CD
APPROVED: BP
PRJ. MGR: DB
PROJECT NO: 2015-007-01

FIGURE **4.0**
GROUNDWATER ELEVATION & CONTOUR MAP (AUGUST 2016)
HANDY MART
WILCOX & FLEGEL
1410 OCEAN BEACH HWY
LONGVIEW, WA

C:\Users\jonathanh\Drafting Temp\2015-007.01\2015-007.1.dwg 2.17.2014

Table 1
Summary of Groundwater Elevations
Handy Mart
Longview, Washington
HydroCon Project Number 2015-007.1

Monitoring Well ID	Date	TOC Elevation*	Depth to Water	Groundwater Elevation
MW-1	08/10/16	21.12	10.45	10.67
MW-2	08/10/16	19.98	8.41	11.57
MW-3	08/10/16	19.63	8.02	11.61

Notes:
TOC = Top of well casing
* = TOC Elevation measured relative to arbitrary onsite benchmark (assumed to be 100).

Table 2
Summary of Groundwater Monitoring Wells Analytical Results
Handy Mart
Longview, Washington
HydroCon Project Number 2015-007.1

Sample ID				MW01		MW02		MW03	
Lab Sample ID				A6H0360-02		A6H0360-03		A6H0360-01	
Collection Date			**Ecology MTCA Level A**	8/10/16		8/10/16		8/10/16	
Parameter	**Method**	**Unit**		**Value**	**Q**	**Value**	**Q**	**Value**	**Q**
Total Petroleum Hydrocarbons (TPH)									
TPH Gasoline Range (GRO)	NWTPH-Gx	µg/L	800	<100		<100		326	
Select Volatile Organic Compounds (VOCs)									
Benzene	8021B	µg/L	5	2		<0.2		<0.2	
Toluene	8021B	µg/L	1,000	<1		<1		<1	
Ethylbenzene	8021B	µg/L	700	<0.5		<0.5		<0.5	
Total Xylenes	8021B	µg/L	1,000	<1.5		<1.5		<1.5	

Notes and Qualifiers: (Q; only shown in Table if reported by laboratory)
< = Compound not detected above the laboratory Method Reporting Limits (MRLs).
µg/L = micrograms per liter (parts per billion)
Color highlighted cells indicate reported concentration exceeds corresponding MTCA Level A Cleanup Value.

Table 3
Summary of Groundwater Analytical Results
Handy Mart, Longview, Washington
HydroCon Project Number 2014-007.01

Parameter		GRPH [1]	Benzene [2]	Toluene [2]	Ethylbenzene [2]	Total Xylenes [2]
Cleanup Level*		**800**	**5**	**1,000**	**700**	**1,000**
Monitoring Well ID	Date Sampled					
MW-1	9/24/15	<100	6.1	<1	<1	<3
	2/2/16	<100	6.6	<1	<1	<3
	4/14/16	<100	3.7	<1	<0.5	<1.5
	8/10/16	<100	2.2	<1	<0.5	<1.5
MW-2	9/24/15	460	<1	4.4	<1	3.5
	2/2/16	<100	2.7	<1	<1	<3
	4/14/16	<100	1.41	<1	<0.5	<1.5
	8/10/16	<100	<0.2	<1	<0.5	<1.5
MW-3	9/24/15	<100	<1	<1	<1	<3
	2/2/16	210	<1	3.7	<1	<3
	4/14/16	310	<0.2	<1	<0.5	<1.5
	8/10/16	326	<0.2	<1	<0.5	<1.5

Notes:
* = Washington State Model Toxics Control Act (MTCA) Method A Cleanup Level for Groundwater (rev. October 12, 2007)
[1] = Gasoline Range Petroleum Hydrocarbons (GRPH) by Northwest Method NWTPH-Gx
[2] = Volatile Organic Compounds (VOCs) by EPA Methods 8021B
< = Indicates compound not detected above the laboratory Method Reporting Limit (MRL) shown.
All values shown are in micrograms per liter (µg/L) (parts per billion).
Highlighted cell indicates compound detected above cited MTCA Method A Cleanup Level.

ATTACHMENT A
GROUNDWATER SAMPLE COLLECTION FIELD FORMS

DAILY FIELD REPORT

HydroCon

360.703.6079 / Fax 360.703.6086
510 Allen Street, Suite B; Kelso, WA 98626

Hydrocon Job Number:

Project: Hanky Plant
Site Number: 2015-007-01

Date: 10 August 2016

Client: Wilcox and Flegel

Page: 1 Of 1

Prepared By: Larry Mamba

Location: 1410 Ocean Beach Hwy Longview, WA 98632

Arrival: 1045

Departure:

Purpose: 3rd Quarter Groundwater Sampling

Weather: Overcast, 60-70's °F, winds 0-5 knots BP = 30.11

Permit: None

1045 Arrive on site. Notify employees I was on site. No purge water drum on site.
1110 Wells open.
1140 Collect water levels
MW01 - 8.41/19.06 (S) MW02 - 8.02/19.50 (S) MW03 - 10.45/19.15 (S)
1215 Begin purging MW03. Talked to store owner - gave him a card with David's name
1241 Collect groundwater sample from MW03. Sample number (MW03) 3x40ml (G, BTEX)
1256 Begin purging MW02.
1318 Collected gw sample from MW02. Sample number (MW02)
1330 Begin purging MW01
1350 Collect gw sample from MW01. Sample number (MW01)

Hydro Con

GROUNDWATER PURGE AND SAMPLE COLLECTION

Well I.D. Number: MW01

Project Name (Number): Handy Mart
Hydrocon Project Number: 2015-007-01
Date: 10 August 2016

Sample I.D.: MW01 Time: 1350
Field Duplicate I.D.: Time:
Personnel: Larry Nanka

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: 1"
Comments

PURGING INFORMATION

Total well depth: 19.66 ft Bottom: ☐ Hard ☑ Soft ☐ Not measured Screen Interval(s): Unknown
Depth to product: NM ft
Depth to water: 8.91 ft Intake Depth (BTOC): Begin Purging Well: 1330
Casing volume: ft (H_2O) X 0.04 gal/ft = gal. X 3 = 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)
1332	—		21.53	0.641	2.01	6.82	175	150
1335	—	0.060	21.24	0.644	1.10	6.69	174	152
1338	—		20.57	0.649	0.56	6.63	169	127
1341	—		20.13	0.655	0.46	6.64	167	104
1344	—		19.86	0.653	0.38	6.64	163	68.4
1347	—		19.77	0.657	0.36	6.63	161	60.8

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: No water levels. Probe does not fit down well with tubing

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 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

Hydro Con

Well I.D. Number: MW02

Project Name (Number): Handy Mart
Hydrocon Project Number: 2015-007-01
Date: 10 August 2016

Sample I.D.: MW02 Time: 1315
Field Duplicate I.D.: Time:
Personnel: Larry Nambu

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: 1"
Comments

PURGING INFORMATION

Total well depth: 19.50 ft Bottom: ☐ Hard ☑ Soft ☐ Not measured Screen Interval(s): Unknown
Depth to product: NM ft
Depth to water: 8.02 ft Intake Depth (BTOC): 14 Begin Purging Well: 1256
Casing volume: 11.48 ft (H_2O) X 0.04 gal/ft = 0.46 gal. X 3 = 1.38 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: Paint odor - H_2S(?)

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)
1258	–		20.31	0.203	1.73	6.56	186	250
1301	–	0.070	20.51	0.203	0.98	6.54	185	240
1303	–		20.37	0.210	0.54	6.55	187	173
1306	–		19.94	0.216	0.42	6.57	180	116
1309	–		19.63	0.220	0.39	6.58	176	68.8
1312	–		19.22	0.224	0.38	6.59	174	54.2
1315	–		19.14	0.226	0.37	6.59	173	52.3

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: No water levels during purging. Probe will not fit down well with tubing

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 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): Handy Mart
Hydrocon Project Number: 2015-007-01
Date: 10 August 2016

Sample I.D.: MW03 Time: 1241
Field Duplicate I.D.: Time:
Personnel: Larry Naniba

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: 1"
Comments

PURGING INFORMATION

Total well depth: 19.15 ft Bottom: ☐ Hard ☑ Soft ☐ Not measured Screen Interval(s): Unknown
Depth to product: Nm ft
Depth to water: 10.45 ft Intake Depth (BTOC): 13 Begin Purging Well: 1215
Casing volume: 8.70 ft (H_2O) X 0.04 gal/ft = 0.35 gal. X 3 = 1.05 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)
1217	–		20.97	0.557	1.17	6.32	221	336
1220	–	0.100	19.79	0.663	0.72	6.42	218	236
1223	–		19.48	0.714	0.56	6.49	211	138
1226	–		19.87	0.790	0.80	6.53	208	114
1229	–		20.15	0.815	0.55	6.58	199	99.0
1232	–		20.03	0.830	0.33	6.60	193	94.9
1235	–		20.00	0.834	0.33	6.59	191	96.7
1238			20.12	8.36	0.52	6.59	188	96.5

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: No water levels - probe will not go down well with tubing

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 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

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

Wednesday, August 17, 2016

Dave Borys
HydroCon LLC
510 Allen St. Suite B
Kelso, WA 98626

RE: Handy Mart / 2015-007-01

Enclosed are the results of analyses for work order A6H0360, which was received by the laboratory on 8/11/2016 at 4:17:00PM.

Thank you for using Apex Labs. We appreciate your business and strive to provide the highest quality services to the environmental industry.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: ldomenighini@apex-labs.com, or by phone at 503-718-2323.

Apex Laboratories

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

HydroCon LLC	Project: **Handy Mart**	
510 Allen St. Suite B	Project Number: 2015-007-01	**Reported:**
Kelso, WA 98626	Project Manager: Dave Borys	08/17/16 08:44

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Sample ID	PDF Amended	Laboratory ID	Matrix	Date Sampled	Date Received
MW01	=MW02	A6H0360-01	Water	08/10/16 13:50	08/11/16 16:17
MW02	=MW03	A6H0360-02	Water	08/10/16 13:18	08/11/16 16:17
MW03	=MW01	A6H0360-03	Water	08/10/16 12:41	08/11/16 16:17

Apex Laboratories

Lisa A Domenighini

Lisa Domenighini, Client Services Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

HydroCon LLC	Project: **Handy Mart**	
510 Allen St. Suite B	Project Number: 2015-007-01	**Reported:**
Kelso, WA 98626	Project Manager: Dave Borys	08/17/16 08:44

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW01 (A6H0360-01)			**Matrix: Water**		**Batch: 6080423**			
Gasoline Range Organics	ND	---	100	ug/L	1	08/12/16 12:31	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 88 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*101 %*	*Limits: 50-150 %*	"	"	"	
MW02 (A6H0360-02)			**Matrix: Water**		**Batch: 6080423**			
Gasoline Range Organics	**326**	---	100	ug/L	1	08/12/16 12:06	NWTPH-Gx (MS)	F-13
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 88 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*101 %*	*Limits: 50-150 %*	"	"	"	
MW03 (A6H0360-03)			**Matrix: Water**		**Batch: 6080423**			
Gasoline Range Organics	ND	---	100	ug/L	1	08/12/16 13:22	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)			*Recovery: 87 %*	*Limits: 50-150 %*	"	"	"	
1,4-Difluorobenzene (Sur)			*101 %*	*Limits: 50-150 %*	"	"	"	

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Lisa Domenighini, Client Services Manager

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Apex Labs

12232 S.W. Garden Place
Tigard, OR 97223
503-718-2323 Phone
503-718-0333 Fax

HydroCon LLC	Project: **Handy Mart**	
510 Allen St. Suite B	Project Number: 2015-007-01	**Reported:**
Kelso, WA 98626	Project Manager: Dave Borys	08/17/16 08:44

ANALYTICAL SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Date Analyzed	Method	Notes
MW01 (A6H0360-01)			**Matrix: Water**		**Batch: 6080423**			
Benzene	ND	---	0.200	ug/L	1	08/12/16 12:31	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
MW02 (A6H0360-02)			**Matrix: Water**		**Batch: 6080423**			
Benzene	ND	---	0.200	ug/L	1	08/12/16 12:06	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*103 %*	*Limits: 80-120 %*	"	"	"	
MW03 (A6H0360-03)			**Matrix: Water**		**Batch: 6080423**			
Benzene	**2.20**	---	0.200	ug/L	1	08/12/16 13:22	EPA 8260B	
Toluene	ND	---	1.00	"	"	"	"	
Ethylbenzene	ND	---	0.500	"	"	"	"	
Xylenes, total	ND	---	1.50	"	"	"	"	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*	"	"	"	
Toluene-d8 (Surr)			*102 %*	*Limits: 80-120 %*	"	"	"	
4-Bromofluorobenzene (Surr)			*101 %*	*Limits: 80-120 %*	"	"	"	

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Lisa Domenighini, Client Services Manager

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12232 S.W. Garden Place
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HydroCon LLC	Project: **Handy Mart**	
510 Allen St. Suite B	Project Number: 2015-007-01	**Reported:**
Kelso, WA 98626	Project Manager: Dave Borys	08/17/16 08:44

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6080423 - EPA 5030B									**Water**			
Blank (6080423-BLK1)					Prepared: 08/12/16 09:00 Analyzed: 08/12/16 11:41							
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 87 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*102 %*	*50-150 %*			*"*					
LCS (6080423-BS2)					Prepared: 08/12/16 09:00 Analyzed: 08/12/16 11:16							
NWTPH-Gx (MS)												
Gasoline Range Organics	418	---	100	ug/L	1	500	---	84	70-130%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 89 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*100 %*	*50-150 %*			*"*					
Duplicate (6080423-DUP1)					Prepared: 08/12/16 11:03 Analyzed: 08/12/16 12:57							
QC Source Sample: MW01 (A6H0360-01)												
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	100	ug/L	1	---	ND	---	---	---	30%	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 90 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*101 %*	*50-150 %*			*"*					

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HydroCon LLC	Project: **Handy Mart**	
510 Allen St. Suite B	Project Number: 2015-007-01	**Reported:**
Kelso, WA 98626	Project Manager: Dave Borys	08/17/16 08:44

QUALITY CONTROL (QC) SAMPLE RESULTS

BTEX Compounds by EPA 8260B

Analyte	Result	MDL	Reporting Limit	Units	Dil.	Spike Amount	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 6080423 - EPA 5030B									**Water**			
Blank (6080423-BLK1)					Prepared: 08/12/16 09:00 Analyzed: 08/12/16 11:41							
EPA 8260B												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	"	"	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	"	"	---	---	---	---	---	---	
Xylenes, total	ND	---	1.50	"	"	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 102 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*102 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*				*"*			
LCS (6080423-BS1)					Prepared: 08/12/16 09:00 Analyzed: 08/12/16 10:51							
EPA 8260B												
Benzene	20.4	---	0.200	ug/L	1	20.0	---	102	70-130%	---	---	
Toluene	19.8	---	1.00	"	"	"	---	99	"	---	---	
Ethylbenzene	18.1	---	0.500	"	"	"	---	91	"	---	---	
Xylenes, total	54.9	---	1.50	"	"	60.0	---	91	"	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*102 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*				*"*			
Duplicate (6080423-DUP1)					Prepared: 08/12/16 11:03 Analyzed: 08/12/16 12:57							
QC Source Sample: MW01 (A6H0360-01)												
EPA 8260B												
Benzene	ND	---	0.200	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	"	"	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.500	"	"	---	ND	---	---	---	30%	
Xylenes, total	ND	---	1.50	"	"	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 102 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*102 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*103 %*		*80-120 %*				*"*			

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HydroCon LLC	Project: **Handy Mart**	
510 Allen St. Suite B	Project Number: 2015-007-01	**Reported:**
Kelso, WA 98626	Project Manager: Dave Borys	08/17/16 08:44

SAMPLE PREPARATION INFORMATION

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6080423							
A6H0360-01	Water	NWTPH-Gx (MS)	08/10/16 13:50	08/12/16 11:03	5mL/5mL	5mL/5mL	1.00
A6H0360-02	Water	NWTPH-Gx (MS)	08/10/16 13:18	08/12/16 11:03	5mL/5mL	5mL/5mL	1.00
A6H0360-03	Water	NWTPH-Gx (MS)	08/10/16 12:41	08/12/16 11:03	5mL/5mL	5mL/5mL	1.00

BTEX Compounds by EPA 8260B

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 6080423							
A6H0360-01	Water	EPA 8260B	08/10/16 13:50	08/12/16 11:03	5mL/5mL	5mL/5mL	1.00
A6H0360-02	Water	EPA 8260B	08/10/16 13:18	08/12/16 11:03	5mL/5mL	5mL/5mL	1.00
A6H0360-03	Water	EPA 8260B	08/10/16 12:41	08/12/16 11:03	5mL/5mL	5mL/5mL	1.00

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HydroCon LLC	Project: **Handy Mart**	
510 Allen St. Suite B	Project Number: 2015-007-01	**Reported:**
Kelso, WA 98626	Project Manager: Dave Borys	08/17/16 08:44

Notes and Definitions

Qualifiers:

F-13	The chromatographic pattern does not resemble the fuel standard used for quantitation

Notes and Conventions:

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis. Results listed as 'wet' or without 'dry'designation are not dry weight corrected.
RPD	Relative Percent Difference
MDL	If MDL is not listed, data has been evaluated to the Method Reporting Limit only.
WMSC	Water Miscible Solvent Correction has been applied to Results and MRLs for volatiles soil samples per EPA 8000C.
Batch QC	Unless specifically requested, this report contains only results for Batch QC derived from client samples included in this report. All analyses were performed with the appropriate Batch QC (including Sample Duplicates, Matrix Spikes and/or Matrix Spike Duplicates) in order to meet or exceed method and regulatory requirements. Any exceptions to this will be qualified in this report. Complete Batch QC results are available upon request. In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) is analyzed to demonstrate accuracy and precision of the extraction and analysis.
Blank Policy	Apex assesses blank data for potential high bias down to a level equal to ½ the method reporting limit (MRL), except for conventional chemistry and HCID analyses which are assessed only to the MRL. Sample results flagged with a B or B-02 qualifier are potentially biased high if they are less than ten times the level found in the blank for inorganic analyses or less than five times the level found in the blank for organic analyses. For accurate comparison of volatile results to the level found in the blank; water sample results should be divided by the dilution factor, and soil sample results should be divided by 1/50 of the sample dilution to account for the sample prep factor. Results qualified as reported below the MRL may include a potential high bias if associated with a B or B-02 qualified blank. B and B-02 qualifications are not applied to J qualified results reported below the MRL.
---	QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
***	Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

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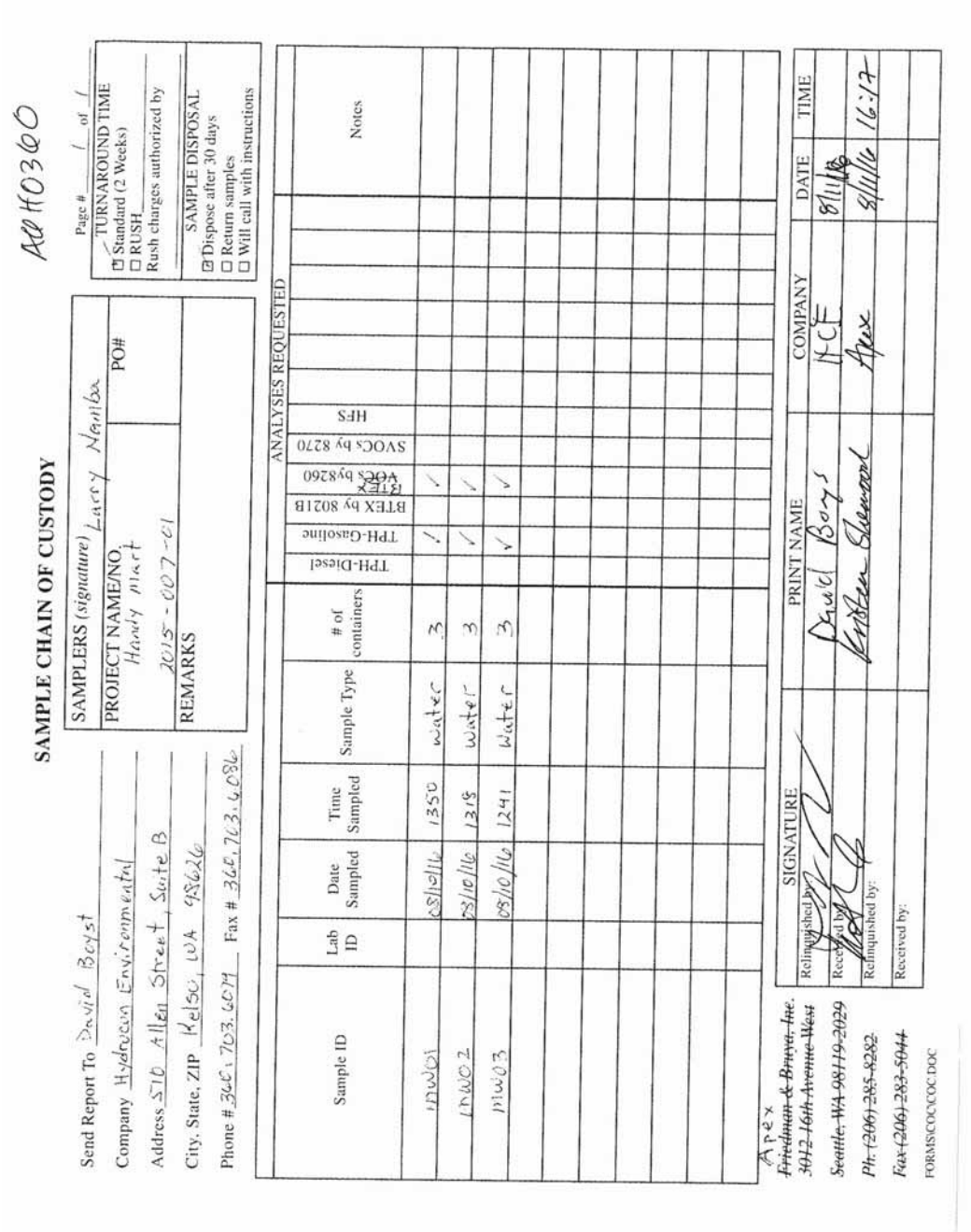
510 Allen St. Suite B	Project Number: 2015-007-01	**Reported:**
Kelso, WA 98626	Project Manager: Dave Borys	08/17/16 08:44



SAMPLE CHAIN OF CUSTODY

Page # 1 of 1

Send Report To David Borys
Company Hydrocon Environmental
Address 510 Allen Street, Suite B
City, State, ZIP Kelso, WA 98626
Phone # 360.703.6094 Fax # 360.703.6086

SAMPLERS (signature) Larry Hamlin
PROJECT NAME/NO. Handy Mart 2015-007-01
REMARKS
PO#

TURNAROUND TIME
☑ Standard (2 Weeks)
☐ RUSH
Rush charges authorized by

SAMPLE DISPOSAL
☑ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Ad #03600

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260 (BTEX)	SVOCs by 8270	HFS	Notes
DW01		08/10/16	1350	water	3		✓	✓				
DW02		08/10/16	1315	water	3		✓	✓				
DW03		08/10/16	1241	water	3		✓	✓				

Apex
~~Friedman & Bruya, Inc.~~
~~3012 16th Avenue West~~
~~Seattle, WA 98119-2029~~
~~Ph. (206) 285-8282~~
~~Fax (206) 283-5044~~

FORMSICOCOC.DOC

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		David Borys	HCE	8/11/16	
Received by:					
Relinquished by:		Kristen Stewart	Apex	8/11/16	16:17
Received by:					

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Lisa A Domenighini

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