

APPENDIX A

Field Forms



2300 Double Creek Dr. ■ Round Rock, TX 78664
 Phone (512) 388-8222 ■ FAX (512) 388-8229
 Web: www.dhlanalytical.com
 E-Mail: login@dhlanalytical.com



No 63340
CHAIN-OF-CUSTODY

CLIENT: URS Corp
 ADDRESS: 9400 Amberley Blvd
 PHONE: 512-454-4797 FAX/E-MAIL: 512-454-8807
 DATA REPORTED TO: Kevin.Poster@urs.com
 ADDITIONAL REPORT COPIES TO: _____

DATE: 8/26/2014 PAGE 1 OF 1
 PO #: _____ DHL WORK ORDER #: _____
 PROJECT LOCATION OR NAME: CRCP
 CLIENT PROJECT #: 41010113.102 COLLECTOR: K.P. Brock - L. Bivens

Authorize 5% surcharge for TRRP Report? <input type="checkbox"/> Yes <input type="checkbox"/> No	S=SOIL W=WATER A=AIR L=LIQUID P=PAINT SL=SLUDGE O=OTHER SO=SOLID		PRESERVATION					ANALYSES BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> [METHOD 8021] TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> HOLD 1006 <input type="checkbox"/> GRO [METHOD 8015] <input type="checkbox"/> VOC 624 <input type="checkbox"/> VOC 8260 [5035] <input type="checkbox"/> VOC 8260 <input type="checkbox"/> VOC 8270 <input type="checkbox"/> HOLD/PAH <input type="checkbox"/> SVOC [235] <input type="checkbox"/> 8081 PEST <input type="checkbox"/> 8082 PEST <input type="checkbox"/> 8082 PCB <input type="checkbox"/> 8270 PEST <input type="checkbox"/> 8270 G-P PEST <input type="checkbox"/> 8330 EXPL <input type="checkbox"/> METALS 2008 <input type="checkbox"/> PERCHLORATE <input type="checkbox"/> 8321 HERB <input type="checkbox"/> METALS 6020 <input type="checkbox"/> TX11 <input type="checkbox"/> RCRA <input type="checkbox"/> HEX CHROM <input type="checkbox"/> ALKALINITY <input type="checkbox"/> PH <input type="checkbox"/> CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> TCLP-METALS <input type="checkbox"/> VOC <input type="checkbox"/> PEST <input type="checkbox"/> HERB <input type="checkbox"/> TCLP-SVOC <input type="checkbox"/> RCRA 8 <input type="checkbox"/> TX11 <input type="checkbox"/> Pb <input type="checkbox"/> RCL <input type="checkbox"/> TOX <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> TDS <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> Pb <input type="checkbox"/> _____ <input type="checkbox"/> CYANIDE <input type="checkbox"/>			
	Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers		HCl	HNO ₃	H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/>

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO ₃	H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/>	ICE	UNPRESERVED	ANALYSES	FIELD NOTES
CRCP-58522-120		8/26/14	1355	W	VOAC	3	X			X			
CRCP-221049-120			1301			3							
CRCP-Hol. 1005-123			1215			1							MS/MSD
CRCP-5852344-120			1049			3							
CRCP-5852344-121			1049			3							
CRCP-ATF1-120			0945			3							
CRCP-NTNW2-120			1008			3							
CRCP-5852344-120													
CRCP-5852344-121													

TOTAL		
RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>8-26-14 1453</u>	RECEIVED BY: (Signature) <u>[Signature]</u>
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
<input type="checkbox"/> DHL DISPOSAL @ \$5.00 each <input type="checkbox"/> Return		TURN AROUND TIME RUSH <input type="checkbox"/> CALL FIRST 1 DAY <input type="checkbox"/> CALL FIRST 2 DAY <input type="checkbox"/> NORMAL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>
		LABORATORY USE ONLY: RECEIVING TEMP: <u>5.9</u> THERM #: <u>57</u> CUSTODY SEALS: <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED <input type="checkbox"/> CARRIER BILL #: _____ <input type="checkbox"/> APC DELIVERY <input type="checkbox"/> HAND DELIVERED



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No 63341
CHAIN-OF-CUSTODY

CLIENT: LARS Corp
 ADDRESS: 9400 Amberley Blvd, Austin, TX
 PHONE: 512-454-4797 FAX/E-MAIL: 512-454-8807
 DATA REPORTED TO: Kevin.Dusbrink@us.com
 ADDITIONAL REPORT COPIES TO:

DATE: 8/27/2014 PAGE 1 OF 1
 PO #: _____ DHL WORK ORDER #: _____
 PROJECT LOCATION OR NAME: CRCP
 CLIENT PROJECT #: 4101013.102 COLLECTOR: K. Dusbrink & L.R. Whit

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	PRESERVATION					ANALYSES	FIELD NOTES
							HCl	HNO ₃	H ₂ SO ₄	ICE	UNPRESERVED		
CRCP-Bu...		8/27/14	330	W	Vials	3	X				X		
CRCP-5852213-120			1020										
CRCP-W...			1243										
CRCP-W...			1155										
CRCP-W...			1205										
<i>[Handwritten signature and notes across the table]</i>													

TOTAL													
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	TURN AROUND TIME		LABORATORY USE ONLY:								
<u>[Signature]</u>	<u>8-27-14/1430</u>	<u>[Signature]</u>	RUSH <input type="checkbox"/> CALL FIRST	RECEIVING TEMP: <u>85</u>	THERM #: <u>57</u>								
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	1 DAY <input type="checkbox"/> CALL FIRST	CUSTODY SEALS: <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input type="checkbox"/> NOT USED									
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	2 DAY <input type="checkbox"/>	<input type="checkbox"/> CARRIER BILL #:									
			NORMAL <input checked="" type="checkbox"/>	<input type="checkbox"/> APC DELIVERY									
			OTHER <input type="checkbox"/>	<input checked="" type="checkbox"/> HAND DELIVERED									

DHL DISPOSAL @ \$5.00 each Return

August 26, 2014

Task: Quarterly groundwater monitoring event.

Personnel: Liz Rinchant (EAR) + Kevin Pasternak (KP)

0735 EAR arrives at the Texaco gas station + begins prepping equipment.

0755 Autocalibrate Horiba U-52.

	pre-Cal	post-Cal
pH	4.05	4.02
Cond	4.51 mS/cm	4.52
Turb	0.0 NTU	0.0
DO	7.24 mg/L	7.23

0820 KP arrives at the Texaco.

0840 Arrive at NTN + setup on NTN W2 for sampling.

*Pump on at NTN W2 when we arrived. E. Brown comes and turns off pump and we wait for recharge. Will go sample ATF1 while well recharges.

~~Pump on at NTN W2.~~~~Sampled [CRCP-NTN W2-120] for TPH.~~

0910 Setup on ATF1.

0927 Pump on at ATF1.

0945 Sampled [CRCP-ATF1-120] for TPH. Decon w/ meter.

0955 Setup on NTN W2 for sampling.

1003 Pump on at NTN W2.

1008 Sampled [CRCP-NTN W2-120] for TPH. Decon w/ meter.

1027 Setup on Mansville WSC well.

1037 Pump on at 5852314.

1049 Sampled [CRCP-5852314-120] + [CRCP-5852314-121] (dup) for TPH.

1105 Take lunch break.

1140 Gauge NTN W1, DTW = ~~31.5 ft BTOC~~ 30' 1.5", Decon w/ meter.

1150 Arrive at Holweger property + speak with Holwegers.

1158 Setup on Holweger well.

1203 Pump on at Holweger well.

1215 Sampled [CRCP-Holweger-123] (MS/MSD) for TPH. Decon w/ meter.

1226 Arrive at Sarah King's house to sample.

1240 Setup on King well.

1249 Pump on at King well.

1301 Sampled [CRCP-221049-120] for TPH. Decon w/ meter.

1320 Arrive at Edgar residence. No one answering door or phone. To Page No. _____

TITLE CRCP- August 2014 GW sampling

August 26, 2014

From Page No. _____

- 1323 Setup on 58522 (Edger Well) for sampling.
- 1344 Pump on at 58522.
- 1355 Sampled [CRCP-58522-120] for TPH. Decan w/ meter.
- 1415 Arrive ~~back~~ back at the Texaco drop off KP at his vehicle + pack up equipment.
- 1430 Leave to go deliver samples to DHL.

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[Handwritten signature]

To Page No. _____

Witnessed & Understood by me,

Date

Invented by:

Date

8/26/14

Recorded by:

[Handwritten signature]

August 27, 2014

Task: Quarterly groundwater monitoring event.

Personnel: Kevin Pasternak (KP) + Liz Rinehart (EAR)

0805 KP and EAR arrive at the Texaco near the Site. Prep equipment.

0835 Autocalibrate Hanna H52

	pre-Cal	post-Cal
pH	4.01	4.01
Cond	4.45 mS/cm	4.51
Turb	11.2 NTU	0.0
DO	8.68 mg/L	7.90

0850 Sign in at TXI webbarile, and signed site specific Haz awareness training, b/c will cross webbarile plant for access to well 5852213. Talked with S. England (TXI) at ~0830 and got ok from him and from Joe Porks on Aug 26, 2014 and got verbal ok to access well 5852213 from the webbarile plant.

0920 Setup on TXI well 5852213 for sampling.

0952 Pump on at 5852213.

1020 Sampled [CRCP-5852213-120] for TPH. Decan pump + water level meter.

1100 Sign out at TXI.

1117 Setup on Wisian Well 1 for sampling.

1134 Pump on at Wisian Well 1.

1155 Sampled [CRCP-Wisian W1-120] for TPH. Decan pump + water level meter.

1205 Sampled [CRCP-Wisian W1-125] (EB) for TPH.

1216 Setup on Wisian W2 for sampling.

1226 Pump on at Wisian W2.

1243 Sampled [CRCP-Wisian W2-120] for TPH. Decan pump + WL meter.

1305 Setup on Buchheit well for sampling.

1317 Pump on at Buchheit well.

1336 Sampled [CRCP-Buchheit-120] for TPH. Decan WL meter.

1345 Arrive back at the Texaco station and pack-up.

1405 EAR heads to DHL to deliver samples.



Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/26/2014
 Location: Austin, Texas Field Personnel: Kevin Paternak/Liz Rinehart
 Well Identification: 58522 (Edgar Well) Initial Water Level: 39.67 ft BTOC
 Well Diameter: 4 inches Well Depth: 58.36 ft BTOC - measured previously
 Screen Interval: Unknown Well Volume: 58.36 - 39.67 = 18.69 ft³ × 0.65 = 12.1 gal
 Pump/Purging Device: Private Pump Pump Intake Depth: Unknown
 Sample Time: 1355 Analyses/Notes: TPH (TX1005) and PAH (SW8270C)

1344

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
1344	39.67								
1348	NM	NM	23.49	1.11	2.70	6.70	225	0.0	Pump on
1350	↓	↓	23.29	1.11	2.64	6.67	226	0.0	water level can't be measured; probe stuck b/n pump + casing
1352	↓	↓	23.23	1.11	2.55	6.64	226	0.0	
1354	↓	↓	23.15	1.11	2.50	6.65	225	0.0	
1355	Sampled		CRCP - 58522-120						

5 gal / 2 min 25 sec

Well Diameter (in)	1	2	3	4	6	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.47	2.61	4.08
Volume (L/ft)	0.15	0.61	1.40	2.46	5.56	9.88	15.44

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/26/2014

Location: Austin, Texas Field Personnel: Kevin Paternak/Liz Rinehart

Well Identification: 221049 (Sarah King Well) Initial Water Level: 32.20 ft BTOC

Well Diameter: 5 inches Well Depth: 43.98 ft BTOC - measured previously

Screen Interval: Unknown Well Volume: $43.98 - 32.20 = 11.78 \text{ ft} \times 1.02 = 12 \text{ gal}$

Pump/Purging Device: Private pump Pump Intake Depth: Unknown

Sample Time: 1301 Analyses/Notes: TPH (TX1005) and PAH (SW8270C)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
1249	32.20								
1252	32.20	NM	25.63	0.727	6.43	6.54	288	0.0	Pump on DTW = 32.50 when pump on
1255	32.21	↓	24.55	0.728	6.05	6.55	278	0.0	
1257	32.21	↓	24.00	0.727	6.12	6.58	274	0.0	
1259	32.21	↓	23.61	0.724	5.97	6.59	269	0.0	
1301	Sampled CRCP-221049-120								

500 mL
3 sec.

Well Diameter (in)	1	2	3	4	5	6	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.02	1.47	2.61	4.08
Volume (L/ft)	0.15	0.61	1.40	2.45	3.86	5.56	9.88	15.44

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/27/2014

Location: Austin, Texas Field Personnel: Kevin Paternak/Liz Rinehart

Well Identification: 5852213 (TXI) Initial Water Level: 29.03 ft BTOC

Well Diameter: 5 inches Well Depth: 36.38 ft BTOC - measured previously

Screen Interval: Unknown Well Volume: $36.38 - 29.03 = 7.35 \text{ ft} \times 1.02 = 7.5 \text{ gal}$

Pump/Purging Device: Submersible pump Pump Intake Depth: ~

Sample Time: 1020 Analyses/Notes: TPH (TX1005) and PAH (GW0270C)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
0952	29.03								Pump on
0955	29.11	300	23.19	1.24	13.86	6.24	-159	0.0	
1000	29.12	300 290	22.95	1.23	3.18	6.26	-174	0.0	
1005	29.15	290	22.50	1.21	2.34	6.29	-186	0.0	
1008	29.19	500	22.19	1.18	2.30	6.28	-190	0.0	
1011	29.17	200	22.47	1.16	2.00	6.31	-196	0.0	
1014	29.17	200	22.64	1.16	1.92	6.31	-197	0.0	
1017	29.17	200	22.57	1.16	1.85	6.31	-200	0.0	
1020	Sampled CRCP - 5852213 - 120								

Well Diameter (in)	1	2	3	4	5	6	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.02	1.47	2.61	4.08
Volume (L/ft)	0.15	0.61	1.40	2.46	3.46	5.56	9.88	15.44

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/26/2014
 Location: Austin, Texas Field Personnel: Kevin Paternak/Liz Rinehart
 Well Identification: 5852314 (Mansville WSC) Initial Water Level: ~~36.40 ft BTOC~~ 36.26 ft BTOC - well was on when
 Well Diameter: 12 inches Well Depth: 60.00 ft BTOC - measured previously
 Screen Interval: Unknown Well Volume: 60 - 36.26 = 23.74 ft x 5.87 = 139 gal
 Pump/Purging Device: Private pump Pump Intake Depth: Unknown
 Sample Time: 1049 Analyses/Notes: TPH (TX1005) and PAH (SW8270C)

R. Brown arrived. Let recharge ~ 20 min

Time	Water Level (ft BTOC)	Purge Rate (ml/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
1037	36.26								Pump on
1041	45.52	575	22.99	0.792	4.35	6.99	182	0.0	
1043	45.94	↓	22.82	0.792	3.80	6.96	181	0.0	
1045	46.14	↓	22.88	0.792	3.48	6.94	182	0.0	
1047	46.21	↓	22.78	0.792	3.49	6.92	184	0.0	
1049	Sampled CRCP-5852314-120 + CRCP-5852314-121 (dup)								

Well Diameter (in)	1	2	3	4	6	8	10	12
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.47	2.61	4.08	5.87
Volume (L/ft)	0.15	0.61	1.40	2.46	5.56	9.88	15.44	

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/26/2014
 Location: Austin, Texas Field Personnel: Kevin Paternak/Liz Rinehart
 Well Identification: ATF Well 1 Initial Water Level: 29.25 ft BTOC
 Well Diameter: 16 inches Well Depth: 50.58 ft BTOC - measured previously
 Screen Interval: Unknown Well Volume: $50.58 - 29.25 = 21.33 \text{ ft} \times 10.44 = 222.7 \text{ gal}$
 Pump/Purging Device: Private Pump Pump Intake Depth: UNKNOWN
 Sample Time: 0945 Analyses/Notes: TPH (TX1005) and PAH (SW9270C) e

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
0927	29.25								Pump on; Purge rate NM b/c purging at multiple locs.
0930	42.50	NM	22.54	1.36	2.96	6.37	250	0.0	
0932	42.30		22.29	1.36	2.32	6.34	233	0.0	
0934	42.26		22.25	1.35	2.07	6.33	216	0.0	
0936	42.27		22.26	1.35	1.98	6.35	205	0.0	
0938	42.29		22.26	1.35	1.91	6.32	197	0.0	
0940	42.30		22.25	1.35	1.86	6.32	189	0.0	
0942	42.31		22.26	1.35	1.82	6.32	183	0.0	
0944	42.33	↓	22.25	1.35	1.80	6.33	179	0.0	
0945	Sampled								

Well Diameter (in)	1	2	3	4	5	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.47	2.61	4.08
Volume (L/ft)	0.15	0.61	1.40	2.46	5.56	9.88	15.44

16
10.44

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/27/2014
 Location: Austin, Texas Field Personnel: Kevin Paternak/Liz Rinehart
 Well Identification: Buchheit Initial Water Level: 26' 8" = 26.67 ft + BTOC
 Well Diameter: 4 inches Well Depth: 30.75 ft + BTOC - measured previously
 Screen Interval: Unknown Well Volume: 30.75 - 26.67 = 4.08 ft x 0.15 = 2.7 gal
 Pump/Purging Device: Private pump Pump Intake Depth: Unknown
 Sample Time: 1330 Analyses/Notes: TPH (TX1005) and PAH (SW8270G)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments	
1317	26.67	_____							_____	
1320	26.67	↓	26.20	0.941	5.03	6.82	150	0.0		
1322	26.83	↓	24.89	0.950	5.22	6.77	161	0.0		
1324	26.83	↓	23.79	0.948	4.96	6.73	166	0.0		
1326	26.83	↓	23.43	0.951	4.72	6.71	168	0.0		
1328	26.67	↓	23.72	0.951	4.58	6.70	169	0.0		
1330		Sampled	CRCP-Buchheit-120							

26' 8" pump off
 11
 26' 10" on
 11
 11
 26' 8"

Well Diameter (in)	1	2	3	4	5	6	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.47	2.61	4.08	
Volume (L/ft)	0.15	0.61	1.40	2.45	5.56	9.88	15.44	

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/26/2014
 Location: Austin, Texas Field Personnel: Kevin Patemak/Liz Rinehart
 Well Identification: Holweger Initial Water Level: 32.93 ft BTOC
 Well Diameter: 5 inches Well Depth: 39.75 ft BTOC - measured previously
 Screen Interval: Unknown Well Volume: $39.75 - 32.93 = 6.82 \text{ ft} \times 1.62 = 7 \text{ gal}$
 Pump/Purging Device: Private pump Pump Intake Depth: Unknown
 Sample Time: 1215 Analyses/Notes: TPH (TX1005) and PAH (GW02700)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
1203	32.93								Pump on
1205	32.94	NM	22.55	0.802	11.97	6.72	242	0.0	variation in DTW b/c of pump cycles
1207	33.10	↓	22.25	0.802	7.98	6.54	248	0.0	
1209	33.10	↓	22.33	0.802	7.48	6.53	248	0.0	
1211	33.10	↓	22.26	0.802	7.05	6.53	246	0.0	
1213	33.10	↓	22.37	0.802	6.79	6.51	244	0.0	
1215	Sampled		CRCP - Holweger - 123						

Well Diameter (in)	1	2	3	4	5	6	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.02	1.47	2.61	4.08
Volume (L/ft)	0.15	0.61	1.40	2.46	3.86	5.56	9.88	15.44

Monitoring Well Purging Form

Project: Travis County - CRCP

Date: 8/26/2014

Location: Austin, Texas

Field Personnel: Kevin Paternak/Liz Rinehart

Well Identification: NTNW2

Initial Water Level: 36.90 ft BTOC → pump was on upon arrival, 32.95 @ 0900 start

Well Diameter: 18 inches

Well Depth: 40.77 ft BTOC - measured previously

Screen Interval: Unknown

Well Volume: $40.77 - 32.43 = 8.34 \text{ ft} \times 13.21 = 110 \text{ gal}$

Pump/Purging Device: Private pump

Pump Intake Depth: Unknown

Sample Time: 1008

Analyses/Notes: TPH (TX1005) and PAH (SW8270C)

32.95 @
0900
start
32.43 @
1000

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
1003	32.43								Pump on
1004	36.82	NM	23.50	1.81	7.72	6.69	152	0.0	
1005	36.88	↓	23.00	1.81	7.37	6.68	154	0.0	
1006	36.90	↓	22.84	1.81	7.31	6.69	157	0.0	
1007	36.89	↓	22.71	1.80	7.15	6.68	162	0.0	
1008	Sampled 1'								

Well Diameter (in)	1	2	3	4	5	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.47	2.61	4.08
Volume (L/ft)	0.15	0.61	1.40	2.46	5.56	9.88	15.44

18
13.21

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/27/2014
 Location: Austin, Texas Field Personnel: Kevin Paternak/Liz Rinehart
 Well Identification: Wisian W1 Initial Water Level: 50.43 ft BTOC
 Well Diameter: 8 inches Well Depth: 65.10 ft BTOC - measured previously
 Screen Interval: Unknown Well Volume: $65.10 - 50.43 = 14.67 \times 2.61 = 38.3 \text{ gal}$
 Pump/Purging Device: Submersible pump Pump Intake Depth: ~ 57 ft BTOC
 Sample Time: 1155 Analyses/Notes: TPH (TX1005) and PAH (SW8270C)

1134

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
1154	50.43	350							Pump on
1139	50.45	350 ⁶⁵⁰	24.53	0.796	6.36	6.51	93	0.0	
1144	50.44	350 ⁴⁰⁰	24.76	0.795	5.58	6.51	102	0.0	
1149	50.44	500	24.72	0.795	5.61	6.51	108	0.0	
1154	50.44	500	24.39	0.796	5.47	6.52	112	0.0	
1155	Sampled CRCP - Wisian W1 - 120								

Well Diameter (in)	1	2	3	4	5	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.47	2.61	4.08
Volume (L/ft)	0.15	0.61	1.40	2.46	5.56	9.88	15.44

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 8/27/2014

Location: Austin, Texas Field Personnel: Kevin Paternak/Liz Rinehart

Well Identification: Wisian W2 Initial Water Level: 45.20 ft BTOC

Well Diameter: 6 inches Well Depth: 62.18 ft BTOC - measured previously

Screen Interval: Unknown Well Volume: 62.18 - 45.2 = 16.98 x 1.47 = 25 gal

Pump/Purging Device: Submersible pump Pump Intake Depth: ~ 55 ft BTOC

Sample Time: 1243 Analyses/Notes: TPH (TX1005) and PAH (SW6270C)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) +/- 10%	Comments
1226	45.20								Pump on
1231	45.22	390	24.99	0.979	2.30	6.49	66	0.0	
1234	45.23	500	24.94	0.976	2.13	6.48	71	0.0	
1237	45.23	500	25.17	0.974	2.09	6.49	72	0.0	
1240	45.23	475	24.94	0.975	2.02	6.49	73	0.0	
1243	Sampled CRCP - Wisian W2 - 120								

Well Diameter (in)	1	2	3	4	6	8	10
Volume (gal/ft)	0.04	0.16	0.37	0.65	1.47	2.61	4.08
Volume (L/ft)	0.15	0.61	1.40	2.46	5.56	9.88	15.44

TITLE CRCP - Nov. 2014 Synoptic gauging

Book No.

00835

From Page No. _____

November 13, 2014

Task: Perform a synoptic water level survey.

Personnel: Kevin Pasternak (KP) + Liz Rinehart (EAR)

- 0850 KP + EAR arrive at NTN to begin synoptic survey.
 0905 ~~0855~~ Head to ATF to gauge wells well.
 0930 Arrive at King residence to gauge well
 0950 Head to Holweyer residence to gauge well.
 1005 Head to Manville WSC to gauge well.
 1033 Head to TXI to sign in and get gauge wells + download transducer data. Transducer was reading 29.64; reset to 29.68.
 1135 Sign out at TXI + head to Edgar to gauge well.
 1200 Head to Wisian property to gauge wells. Put new combo lock on Wisian gate. Code# 6950.
 1225 Head to Buchheit well for gauging.
 1235 Synoptic gauging complete.

Time	ID	DTW (ft BTCL)	
0854	NTNW2	32.00	
0859	NTNW1	29' 11" = 29.92	
0910	ATF1	28.57	
0935	221049	32.46	T.D. = 38.7' BTCL
0955	Holweyer	32.70	
1030	5852314	34.80	
1059	5852213	29.68	
1147	58522	39.60	
1206	Wisian W1	50.37	
1218	Wisian W2	45.26	
1232	Buchheit	26.75	

To Page No. _____

Witnessed & Understood by me,

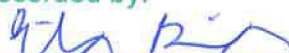
Date

Invented by:

Date

Recorded by:

11/13/14



February 17, 2015

Task: Perform a synoptic water level survey
Personnel: K. Pasternak & L. Rinehart

- 0918 Arrive at NTN to begin synoptic survey.
 0940 Can't get a hold of B. Heatherly w/ATF, so head to King residence.
 0948 Arrive at King residence for gauging.
 1010 Meet ~~at~~ Richard Brown at Mansville WSC (5852314) to gauge.
 1035 Sign-in at TXI.
 1100 Arrive at TXI well for gauging and data download. Unable to connect to transducer. May deploy a new transducer at a later date. Sign out.
 1150 Take lunch break.
 1215 Return from lunch and head to ATF. Wait for Blake to come open ~~gates~~ gate.
 1252 Arrive at Holwegers for gauging.
 1313 Arrive at Wisian property for gauging.
 1339 Arrive at Buchheit property for gauging.
 1355 Arrive at Edgar property for gauging.
 1412 Synoptic survey complete.

Time	ID	DTW (+ BTOL)
0921	NTNW2	30.57'
0930	NTNW1	28"6.5"
0952	221049 (King)	31.56
1018	5852314 (Mansville)	33.79
1103	5852213 (TXI)	28.67
1242	ATF1	27.40
1258	Holwegers	31.62 31.60
1317	Wisian W1	49.50
1325	Wisian W2	44.69
1344	Buchheit	25' 11" = 25.92'
1400	(Edgar) 58522	39.12

May 19, 2015

Task: Perform synoptic water level survey

Personnel: Kevin Pasternak + Liz Rinehart

- 0910 Arrive at NTN to begin synoptic survey. Call E. Brown to let her know we are here.
- 0926 Call B. Hetherly with ATF to come unlock gate. Begins raining.
- 0940 Arrive at S. King's to gauge. Must meet Mansville personnel at 10am, so not enough time to do ATF. S. King not available until 1245.
- 0955 Arrive at Mansville for gauging.
- 1018 Arrive at TXI to see if road to well is driveable. Sign-in. Enter off Dunlop Rd. + drive most of way to well.
- 1137 Sign out at TXI. Go to Edger's to try and gauge.
- 1148 Arrive at Edger's for gauging. Ring doorbell, nobody answers.
- 1205 Take lunch break.
- 1231 Arrive at S. King residence to meet her and gauge well. She will be there at ~1250, so go gauge Buchheit well.
- 1305 Arrive at ATF to gauge well.
- 1338 Arrive at Holmeger's to gauge well.
- 1402 Arrive at Wisian property to gauge wells.
- 1423 Synoptic complete.

Time	ID	DTW(AT+Btoc)
0912	NTNW2	29.66
0917	NTNW1	27' 4 2/3" = 27.36
1315	ATF1	26.06
1258	221049 (King)	29.38
1003	5852314 (Mansville)	33.96
1057	5852213 (TXI)	27.34
1152 1057 (R)	Edger (58522)	27.34 (R) 38.30
1246	Buchheit	24' 1/16" = 24.01 ft
1350	Holmeger	30.72
1408	Wisian W1	47.77
1415	Wisian W2	43.34



CLIENT: AECOM
 ADDRESS: 9400 Amberglen Blvd Austin TX 78729
 PHONE: 512-750-8746 FAX/E-MAIL: kevin.pasternak@aecom.com
 DATA REPORTED TO: Kevin Pasternak
 ADDITIONAL REPORT COPIES TO: _____

DATE: 10/7/2015 PAGE 1 OF 1
 PO #: _____ DHL WORK ORDER #: _____
 PROJECT LOCATION OR NAME: 60407509.41010113.101
 CLIENT PROJECT #: CRCR Travis COLLECTOR: K. Pasternak

Authorize 5% surcharge for TRRP Report? <input type="checkbox"/> Yes <input type="checkbox"/> No	S=SOIL W=WATER A=AIR L=LIQUID SE=SEDIMENT	P=PAINT SL=SLUDGE O=OTHER SO=SOLID					PRESERVATION					ANALYSES BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> [METHOD 8021] <input type="checkbox"/> TPH 1005 <input type="checkbox"/> TPH 1006 <input type="checkbox"/> HOLD 1006 <input type="checkbox"/> GRO [METHOD 8015] <input type="checkbox"/> DRO [METHOD 8105] <input type="checkbox"/> VOC 8260 <input type="checkbox"/> VOC 624 <input type="checkbox"/> HOLD PAK <input type="checkbox"/> SVOC 625 <input type="checkbox"/> SVOC 8270 JPAH 8270 <input type="checkbox"/> VOC 8260/5025 <input type="checkbox"/> 8270 PEST <input type="checkbox"/> 625 PEST/PCB <input type="checkbox"/> 608 PCB <input type="checkbox"/> 8270 CO-P PEST <input type="checkbox"/> 8082 PCB <input type="checkbox"/> 8270 PCB <input type="checkbox"/> 8321 HERB <input type="checkbox"/> T PHOS, AMMONIA <input type="checkbox"/> METALS 8020 <input type="checkbox"/> METALS 808 <input type="checkbox"/> PH <input type="checkbox"/> HEX CHROM <input type="checkbox"/> 2008 <input type="checkbox"/> CHLORIDE <input type="checkbox"/> ANIONS <input type="checkbox"/> ALKALINITY <input type="checkbox"/> TCLP-SVOC <input type="checkbox"/> VOC <input type="checkbox"/> COD <input type="checkbox"/> TCLP-METALS <input type="checkbox"/> RCRA 8 <input type="checkbox"/> PEST <input type="checkbox"/> HERB <input type="checkbox"/> RCI <input type="checkbox"/> FLASHPOINT <input type="checkbox"/> TX11 <input type="checkbox"/> Pb <input type="checkbox"/> TD5 <input type="checkbox"/> TSS <input type="checkbox"/> % MOISTURE <input type="checkbox"/> CYANIDE <input type="checkbox"/> MS/MSD TX 1005 / SM 2322B SM 4500NH3-APPCUS											
Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO ₃	H ₂ SO ₄ NaOH	ICE	UNPRESERVED												

Field Sample I.D.	DHL Lab #	Date	Time	Matrix	Container Type	# of Containers	HCl	HNO ₃	H ₂ SO ₄ NaOH	ICE	UNPRESERVED	FIELD NOTES															
CRCP-NTNW2-130		10/15	0930	W	VARIABLE	73	1	1	72																		
CRCP-5850314-130			1045			73	1	1	72																		
CRCP-5852213-133			1220			146	2	2	144																		MS/MSD
CRCP-WISIANW1-130			1425			73	1	1	72																		
CRCP-WISIANW1-135			1440			73	1	1	72																		
CRCP-WISIANW2-136			1520			73	1	1	72																		

RELINQUISHED BY: (Signature) <u>[Signature]</u>	DATE/TIME <u>10-7-15/1710</u>	RECEIVED BY: (Signature) <u>[Signature]</u>	TURN AROUND TIME RUSH <input type="checkbox"/> CALL FIRST 1 DAY <input type="checkbox"/> CALL FIRST 2 DAY <input type="checkbox"/> NORMAL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	LABORATORY USE ONLY: RECEIVING TEMP: <u>3.1</u> THERM #: <u>78</u> CUSTODY SEALS: <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input checked="" type="checkbox"/> NOT USED CARRIER: <input type="checkbox"/> LONE STAR <input type="checkbox"/> FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> OTHER <input type="checkbox"/> COURIER DELIVERY <input checked="" type="checkbox"/> HAND DELIVERED
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)		
RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)		
<input type="checkbox"/> DHL DISPOSAL @ \$5.00 each <input type="checkbox"/> Return				

2300 Double Creek Dr. ■ Round Rock, TX 78664

Phone (512) 388-8222 ■ FAX (512) 388-8229

Web: www.dhlanalytical.com

E-Mail: login@dhlanalytical.com



No 68633

CHAIN-OF-CUSTODY

3 Len Blvd
FAX/E-MAIL: Kevin.pasternak@acc.com

DATE: 10/8/15 PAGE 1 OF 1

PO #: _____ DHL WORK ORDER #: _____

PROJECT LOCATION OR NAME: CRCP Travis County

CLIENT PROJECT #: 60407569.4101013.10 COLLECTOR: E. Mc...
K. Pasternak

Time	Matrix	Container Type	# of Containers	PRESERVATION				UNPRESERVED	ANALYSES	FIELD NOTES
				HCl	HNO ₃	H ₂ SO ₄ NaOH	ICE			
0915	W	Vanes	73	1	1	72				
0915			73	1	1	72				
1005			73	1	1	72				
1100			73	1	1	72				
1143	↓	↓	73	1	1	72				

- ANALYSES**
- BITEX
 - TPH 1005
 - TPH 1006
 - GRO (METHOD 8015)
 - VOC 8260
 - SVOC 8270
 - PAH 8270
 - PEST 8270
 - P-PEST 8321
 - HERB
 - METALS 8020
 - TX11
 - HEX CHROMIUM
 - SVOC
 - METALS
 - ANIONS
 - VOC
 - FLASHPOINT
 - TSS
 - % MOISTURE
 - CYANIDE

DATE/TIME: 10/15/14.30	RECEIVED BY: (Signature)	TURN AROUND TIME RUSH <input type="checkbox"/> CALL FIRST 1 DAY <input type="checkbox"/> CALL FIRST 2 DAY <input type="checkbox"/> NORMAL <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>	LABORATORY USE ONLY: RECEIVING TEMP: 47 THERM #: 78 CUSTODY SEALS: <input type="checkbox"/> BROKEN <input type="checkbox"/> INTACT <input checked="" type="checkbox"/> NOT USED CARRIER: <input type="checkbox"/> LONE STAR <input type="checkbox"/> FEDEX <input type="checkbox"/> UPS <input type="checkbox"/> OTHER <input type="checkbox"/> COURIER DELIVERY <input checked="" type="checkbox"/> HAND DELIVERED
DATE/TIME:	RECEIVED BY: (Signature)		
DATE/TIME:	RECEIVED BY: (Signature)		

OSAL @ \$5.00 each Return

Oct 7, 2015

Task: Groundwater monitoring

Personnel: Kevin Pasternak; Elizabeth McCoy

0900 Arrive at NTN to begin sampling. Call E. Brown to let her know we are here. Begin setting up at NTNW2.

	Initial	Final
pH	5.20	4.01
Cond ms/cm	2.34	4.48
Turb NTU	0.0	0.1
DO mg/L	9.28	10.36

0914 pump on at NTNW2

0930 Collected CRCP-NTNW2-130 for E300.0, SW6020A, TX1005, SM2540D, and SM4500NH3. Decon w/ meter. Call to update E. Brown.

0945 Gauge NTNWI. DTW: 28.34 ft BTOC. Decon on-line. Call Richard Brown (Manville WSC) tell that we are on our way.

1010 Arrive at 5852314 (Manville WSC).

Robert Brown onsite. Set up to sample

1023 pump on at 5852314.

1045 Sampled CRCP-5852314-130 for E300.0, SW6020A, TX1005, SM2540D, and SM4500NH3. Decon w/ meter.

1105 Check in at TXI office

1120 Set up at 5852213 (TXI well) to sample. Download transducer data.

1151 pump on at 5852213.

1220 Sampled CRCP-5852213-133 ms/msD for E.300.0, SW6020A, TX1005, SM2540D, SM4500NH3.

Eun 1310 decon pump: w/ meter

1315 Break for lunch

1345 Return from lunch. Mob to Wisian property.

1355 Set up to sample at WisianWI.

1405 pump on at Wisian-WI

1425 Sampled CRCP-WisianWI-130 for E300.0, SW6020A, TX1005, SM2540D; SM4500NH3

To Page No. _____

From Page No. _____

Oct 7, 2015

Decon w/ meter & pump.

1440 Sample (CRCP-Wislan W1-135) EB for Wislan W1
for E300.0, SW6020A, TX1005, SM2540D, SM4500NH3.1453 Set up at ^{CRCP} Wislan W2 to sample.

1505 Pump on at Wislan W2

1520 Sampled (CRCP-Wislan W2-130) for E300.0,
SW6020A, TX1005, SM2540D, and SM4500NH3.

Decon w/ meter & pump

1540 Leave Wislan property. Lock gate.

1710 Drop samples off at DTL

To Page No. _____

Witnessed & Understood by me,

Date

Invented by:

Elizabeth McCoy

Date

10/7/15

Recorded by:

Oct 8, 2015

Task: Groundwater monitoring

Personnel: Kevin Pasternak; Elizabeth McCoy

0835 Arrive at King residence. Picked up ice on the way.

0845 Autocalibrate Horiba US2

	Initial	Final
pH	2.73	4.00
Cond (µS/cm)	8.88	4.49
Turb (NTU)	0.5	0.0
DO (mg/L)	9.76	9.07

0848 Set up at 221049 (King well) to sample.

0857 Pump on at 221049

0915 Sampled CRCP-221049-130 and CRCP-221049-131

E300.0/SM2320B, SW6020A, TX1005, SM2540D, SM4500NH3, Decon WL Meter.

0930 Call Blake Hetherly (ATF) to see when is best time to sample. Blake informs there was a fuse two days ago in fuse box to well. Pump is being looked at today. Maybe able to sample this afternoon.

0934 Check in at Holweger residence. Mob to well.

0950 Pump on at Holweger well.

1005 Sampled CRCP-Holweger-130 for E300.0, SM2320B, SW6020A, TX1005, SM2540D, SM4500NH3, Decon WL Meter.

1035 Arrive at Buchheit property, and set up at well.

1046 Pump on at Buchheit.

1100 Sampled CRCP-Buchheit-130 for E300.0, SM2320B, SW6020A, TX1005, SM2540D, SM4500NH3, Decon WL Meter.

1110 Arrive at Edgar property. Knock on door. No answer. Set up on well 58522.

1130 Pump on at 58522

1143 Sampled CRCP-58522-130 for E300.0/SM2320B, SW6020A, TX1005, SM2540D, SM4500NH3, Decon WL Meter.

1200 Call Blake Hetherly (ATF) to check on

To Page No. _____

From Page No. _____

OCT 18, 2015

Well status. No answer. Leave message.

Break for lunch.

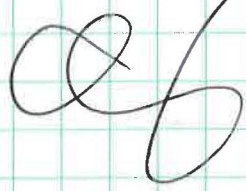
1230 Return from lunch. Mob to ATF am ATF. Call Blake Heatherly. No answer. Leave message.

1250 Blake onsite. Unlocks gate.

1255 Gauge ATF1. DTW 27.23 At broc. Decon w/ meter. Talk with Blake. He thinks the pump may be available tomorrow. He is still waiting to hear back from system designer. Even if pump not working will return tomorrow to try to grab a sample with a bauler.

1310 AECOM offsite. Lock ATF gate.

1430 Drop samples off at DHL Analytical.



To Page No. _____

Witnessed & Understood by me,

Date

Invented by:

Elizabeth McCoy

Date

10/8/15

Recorded by:

Oct 9~~th~~, 2015

Task: Continue groundwater monitoring

Personnel: Kevin Pasternak, Elizabeth McCoy

0830 Arrive at Texaco to meet Thomas ~~Weber~~ ^{Tom} Weber.
(Travis County). Get ice and prep equipment.

0850 Autocalibrate HANNA U52

	Initial	Final
pH	3.98	4.01
Cond (MS/cm)	4.61	4.5 4.49
Turb (NTU)	0.0	0.0
DO (mg/L)	9.85	8.83

0850 T. Weber onsite.

0855 Mob to Austin Tree Farm. Call Blake (ATF)
Pump is still not available for use. Will unlock gate.

0923 ATF unlocks gate.

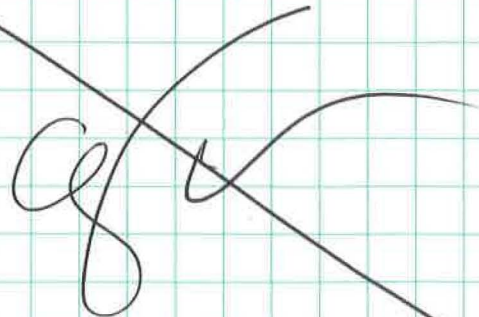
0925 Set up at ATF well 1

0935 Begin bailing with dedicated bailer.

0940 Collect round of parameter readings and
sample CRCP-ATF1-130.End bailing. Gauge water level. Decon
wl meter

1020 Drop Thomas off at Texaco.

1125 Drop off samples at DHR analytical



Monitoring Well Purging Form

Project: Travis County - CRCP Date: 10/8/15
 Location: Austin, TX Field Personnel: Kevin Pasternak/Elizabeth McCoy
 Well Identification: 221049 (King well) Initial Water Level (ft. BTOC): 27.12
 Well Diameter: 5 inches Well Depth (ft. BTOC): 43.98 - previously measured
 Screen Interval: unknown Well Volume: 43.98 - 27.12 = 16.86 x 1.02 = 17.2 gal
 Pump/Purging Device: private pump Pump Intake Depth: unknown

Sample Time: 0915 Analyses/Notes: Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
0857	-	-	-	-	-	-	-	-	Pump On
0900	27.34	~87.5	20.75	0.790	7.65	6.07	240	2.7	
0903	27.15	↓	20.70	0.781	6.84	6.27	224	0.5	
0906	27.18	↓	20.71	0.781	6.71	6.37	215	0.3	
0909	27.38	↓	20.72	0.780	6.76	6.42	209	0.3	
0912	27.40	↓	20.76	0.780	6.79	6.44	205	0.3	
0915	Sampled CRCP-221049-130 and CRCP-221049-131								
GW									

Monitoring Well Purging Form

Project: **Travis County - CRCP**

Date: **10/8/15**

Location: **Austin, TX**

Field Personnel: **Kevin Pasternak/Elizabeth McCoy**

Well Identification: **58522 (Edgar Well)**

Initial Water Level (ft. BTOC): **37.10**

Well Diameter: **4 inches**

Well Depth (ft. BTOC): **58.36 - measured previously**

Screen Interval: **unknown**

Well Volume: **58.36 - 37.10 = 21.26 x .65 = 13.8 gal**

Pump/Purging Device: **private pump**

Pump Intake Depth: **unknown**

Sample Time: **1143**

Analyses/Notes: **Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)**

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
1130									Pump On
1133	37.36	1.5	21.22	1.21	2.60	6.58	210	0.0	
1136	37.38	↓	21.02	1.21	2.56	6.50	205	0.0	
1139	37.39	↓	20.98	1.21	2.49	6.48	202	0.0	
1143	Sampled CRCP-58522-130								

Well Diameter (in)	2	3	4	5	6	8	10	30
Volume (gal/ft)	0.16	0.37	0.65	1.02	1.47	2.61	4.08	36.70
Volume (L/ft)	0.62	1.40	2.46	3.86	5.56	9.88	15.44	138.93

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 10/7/15
 Location: Austin, TX Field Personnel: Kevin Pasternak/Elizabeth McCoy
 Well Identification: 5852213 (TX1 well) Initial Water Level (ft, BTOC): 27.45
 Well Diameter: 5 inches Well Depth (ft, BTOC): 36.38 measured previously
 Screen Interval: unknown Well Volume: 36.38 - 27.45 = 8.93 x 1.02 = 9.12 gal
 Pump/Purging Device: submersible pump Pump Intake Depth: ~1 ft off bottom

Sample Time: 1220 Analyses/Notes: Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
1151									Pump On
1154	27.65	500	19.95	4.49	1.06	5.17	-106	1.8	
1157	27.79	500	20.00	4.49	0.74	5.18	-112	1.6	
1200	27.81	600	19.83	4.48	0.47	5.18	-115	1.3	
1203	27.78	100	20.12	4.45	0.26	5.20	-119	1.2	
1206	27.72	100	20.49	4.46	0.34	5.21	-120	1.4	
1209	27.66	150	20.82	4.46	0.36	5.22	-121	1.6	
1212	27.66	150	20.96	4.45	0.30	5.23	-122	1.5	
1217	27.62	220	20.92	4.48	0.36	5.23	-122	1.9	

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 10/7/15
 Location: Austin, TX Field Personnel: Kevin Pasternak/Elizabeth McCoy
 Well Identification: 5852314 (Mansville WSC) Initial Water Level (ft. BTOC): 33.94
 Well Diameter: 17 inches Well Depth (ft. BTOC): 60.00 previously measured
 Screen Interval: unknown Well Volume: 60 - 33.94 = 26.06 x 5.86 = 153 gal
 Pump/Purging Device: private pump Pump Intake Depth: Unknown

Sample Time: 1045 Analyses/Notes: Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
1023									Pump On
1026	41.44	NM	20.41	1.83	3.94	5.58	128	0.7	
1029	41.66		20.29	1.81	3.14	5.52	93	0.5	
1032	41.73		20.29	1.81	2.93	5.51	91	0.4	
1035	41.80		20.31	1.81	2.86	5.50	91	0.3	
1038	41.91		20.30	1.81	2.40	5.41	96	0.4	
1041	42.00		20.28	1.83	2.38	5.36	102	0.1	
1044	42.10		20.25	1.83	2.54	2.56	100	0.1	
1045	Sampled CRCP-5852314-130								

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Well Diameter (in)	2	3	4	5	6	8	10	30
Volume (gal/ft)	0.16	0.37	0.65	1.02	1.47	2.61	4.08	36.70
Volume (L/ft)	0.62	1.40	2.46	3.86	5.56	9.88	15.44	138.93

Monitoring Well Purging Form

Project: **Travis County - CRCP**

Date: **10/9/15**

Location: **Austin, TX**

Field Personnel: **Kevin Pasternak/Elizabeth McCoy**

Well Identification: **ATF Well 1**

Initial Water Level (ft. BTOC): **27.22**

Well Diameter: **16 inches**

Well Depth (ft. BTOC): **50.58 - previously measured**

Screen Interval: **Unknown**

Well Volume: **$50.58 - 27.22 = 23.36 \times 10.44 = 244 \text{ gal}$**

Pump/Purging Device: **bauler**

Pump Intake Depth: **unknown**

Sample Time: **0940**

Analyses/Notes: **Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)**

Time	Water Level (ft. BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
0935	27.22	-	-	-	-	-	-	-	Pump On - begin bauling
0939	—	—	21.49	1.30	9.76	5.98	230	1.5	
0940	Sampled CRCP-ATF1-130								
1005	27.23	—————							end bauling

Well Diameter (in)	2	3	4	5	6	8	10	30
Volume (gal/ft)	0.16	0.37	0.65	1.02	1.47	2.61	4.08	36.70
Volume (L/ft)	0.62	1.40	2.46	3.86	5.56	9.88	15.44	138.93

16 - 10.44 gal/ft

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 10/8/15
 Location: Austin, TX Field Personnel: Kevin Pasternak/Elizabeth McCoy
 Well Identification: Buccheit Initial Water Level (ft, BTOC): 21.53
 Well Diameter: 4 inches Well Depth (ft, BTOC): 30.75 - measured previously
 Screen Interval: unknown Well Volume: 30.75 - 21.53 = 9.22 x .65 = 6 gal
 Pump/Purging Device: private pump Pump Intake Depth: unknown

Sample Time: 1100 Analyses/Notes: Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
1046	-	-	-	-	-	-	-	-	Pump On
1049	21.61	3	21.57	0.993	5.41	6.36	204	6.0	
1052	21.53	↓	21.66	0.992	5.27	6.32	206	0.0	
1055	21.53	↓	21.68	0.991	5.29	6.31	208	0.0	
1100	CRCP - Buccheit - 130			Sampled					

Well Diameter (in)	2	3	4	5	6	8	10	30
Volume (gal/ft)	0.16	0.37	0.65	1.02	1.47	2.61	4.08	36.70
Volume (L/ft)	0.62	1.40	2.46	3.86	5.56	9.88	15.44	138.93

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 10/8/15

Location: Austin, TX Field Personnel: Kevin Pasternak/Elizabeth McCoy

Well Identification: Holweger Initial Water Level (ft. BTOC): 30.65

Well Diameter: 5 inches Well Depth (ft. BTOC): 39.75 - previously measured

Screen Interval: unknown Well Volume: 39.75 - 30.65 = 9.1 x 1.02 = 9.3 gal

Pump/Purging Device: private pump Pump Intake Depth: unknown

Sample Time: 1005 Analyses/Notes: Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)

Time	Water Level (ft BTOC)	Purge Rate (mL/min) or (GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
0950	-	-	-	-	-	-	-	-	Pump On
0953	30.66	7.50	20.31	0.882	7.46	6.33	198	0.3	
0956	30.65		20.23	0.881	6.98	6.29	199	0.1	
0959	30.78		20.23	0.881	6.84	6.28	200	0.0	
1002	30.80	↓	20.23	0.880	6.83	6.27	200	0.0	
1005	Sampled CRCP - Holweger - 130								

Well Diameter (in)	2	3	4	5	6	8	10	30
Volume (gal/ft)	0.16	0.37	0.65	1.02	1.47	2.61	4.08	36.70
Volume (L/ft)	0.62	1.40	2.46	3.86	5.56	9.88	15.44	138.93

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 10/7/15
 Location: Austin, TX Field Personnel: Kevin Pasternak/Elizabeth McCoy
 Well Identification: NTNW2 Initial Water Level (ft, BTOC): 30.83
 Well Diameter: 18 inches Well Depth (ft, BTOC): 40.77
 Screen Interval: unknown Well Volume: 40.77 - 30.83 = 9.94 x 13.21 = 131 gal
 Pump/Purging Device: private pump Pump Intake Depth: unknown

Sample Time: 0930 Analyses/Notes: Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)

Time	Water Level (ft BTOC)	Purge Rate (ml/min or GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
0914									Pump On
0919	36.85	NM	20.36	3.77	10.24	5.22	175	1.0	
0922	36.96	↓	20.34	3.73	10.24	5.26	173	1.5	
0925	36.86	↓	20.34	3.71	10.23	5.27	173	1.0	
0926	36.86	↓	20.35	3.71	10.21	5.27	172	1.5	
0930	Sampled [CRCP-NTNW2-130]								

Well Diameter (in) 2 3 4 5 6 8 10 30
 Volume (gal/ft) 0.16 0.37 0.65 1.02 1.47 2.61 4.08 36.70
 Volume (L/ft) 0.62 1.40 2.46 3.86 5.56 9.88 15.44 138.93

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 10/7/15
 Location: Austin, TX Field Personnel: Kevin Pasternak/Elizabeth McCoy
 Well Identification: Nisian # W1 Initial Water Level (ft, BTOC): 45.12
 Well Diameter: 8 inches Well Depth (ft, BTOC): 65.10 - previously measured
 Screen Interval: Submersible pump Well Volume: 65.10 - 45.12 = 19.98 x 2.61 = 52 gal
 Pump/Purging Device: unknown Pump Intake Depth: ~1 ft from bottom

Sample Time: 1425 Analyses/Notes: Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)

Time	Water Level (ft BTOC)	Purge Rate (mL/min or GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
1405									Pump On
1408	45.18	700	22.18	1.77	7.03	5.52	69	4.1	
1411	45.13	1000	21.86	1.73	6.75	5.50	79	2.6	
1416	45.13	2100	21.48	1.73	7.28	5.46	90	1.7	
1419	45.15	2000	21.38	1.72	7.3	5.46	92	1.2	DO: 7.29
1422	45.15	2000	21.38	1.72	7.38	5.45	95	0.9	
1425 Sampled CRCP - Nisian W1 - 130									

Monitoring Well Purging Form

Project: Travis County - CRCP Date: 10/7/15
 Location: Austin, TX Field Personnel: Kevin Pasternak/Elizabeth McCoy
 Well Identification: WISIAN W2 Initial Water Level (ft. BTOC): 40.67
 Well Diameter: 6 inches Well Depth (ft. BTOC): 62.18
 Screen Interval: unknown Well Volume: 62.18 - 40.67 = 21.51 x 1.47 = 31.6 gal
 Pump/Purging Device: submersible pump Pump Intake Depth: ~60 ft bTOC

Sample Time: 1520 Analyses/Notes: Ammonia (SM4500NH3), Cl/F/NO₃/SO₄ (EPA 300.0), metals (SW6020A), TPH (TX1005), TSS (SM 2540D)

Time	Water Level (ft BTOC)	Purge Rate (mL/min or GPM)	Temperature (°C) +/- 1°C	Specific Conductivity (mS/cm) +/- 5%	Dissolved Oxygen (mg/L or %) +/- 10%	pH (SU) +/- 0.1	Oxidation-Reduction Potential (mV) +/- 10 mV	Turbidity (NTU) <10 NTU or +/- 10%	Comments
1505									Pump On
1508	40.67	800	21.92	1.93	4.91	5.27	97	1.1	
1511	40.69	900	21.75	1.92	4.48	5.29	102	0.6	
1514	40.69	800	21.72	1.92	4.35	5.33	110	1.6	
1517	40.69	800	21.54	1.92	4.50	5.35	111	0.8	
1520	Sampled CRCP - WISIAN W2 - 130								

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Well Diameter (in)	2	3	4	5	6	8	10	30
Volume (gal/ft)	0.16	0.37	0.65	1.02	1.47	2.61	4.08	36.70
Volume (L/ft)	0.62	1.40	2.46	3.86	5.56	9.88	15.44	138.93