Appendix A

Field Data Sheets

WELL GAGING DATA SHEET

APEX

		Job Number:	1935-11/12/13
Client:	Gunderson	Date:	12-14-15
Project:	GWM	Sampler:	CO/CL/KK
Weather:		Time In/Out:	1000/1445

WATER LEVEL DATA

Well I.D.	Time	Depth to Free Product (feet)	Depth to Water (feet)	Depth to Well Bottom (feet)	Product Thickness (feet)	Water Column Height (feet)	Notes/Other Remarks
MW-24	1000	—	13.30				
MW-40	1007	—	26.79				
MW-42	1015	—	25.22				
MW-22	1019	—	24.50				
MW-41	1031	—	23.43				
MW-36	1045	—	23.57				
MW-70	1050		22.65				
MW-21	1100		~~22.80~~				
MW-27	1105		22.55				
MW-71	1108		23.28				
MW-49	1110		22.68				
MW-39	1112		23.90				
MW-52	1115		22.56				
MW-53	1117		21.85				
MW-19	1121		25.70				
SMW-12	1127		20.06				
MW-66	1130		23.04				
SMW-11	1135		24.25				
MW-17	1142		22.70				
CO 12-14 MW-81	~~MW-87~~ 1145		29.77				
MW-74	~~MW-81~~ 1148		20.43				
MW-14	~~MW-74~~ 1150		21.38				
MW-76	~~MW-78~~ 1155		25.04				
MW-77	~~MW-77~~ 1200		21.73				
MW-10	~~MW-10~~ 1203		7.41				
MW-79	1210		22.63				
MW-72	1215		21.90				
MW-73	1218		17.35				
MW-11	1223		5.00				
MW-80	1230		11.60				
MW-43	1410		7.30				
MW-50	1420		27.05				
MW-44	1425		24.85				
MW-51	1430		21.02				
MW-23	1440		22.52				

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-52	Job Number:	1935-01
Client:	Bundersou	Date:	12/15/15
Project:	4Q 2015 GWM	Sampler:	[illegible] / [illegible]
Weather:	Cloudy	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	22.06	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:		Comments	
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0835	—	—	22.06	0.3	6.15	13.65	1995	1.11	-62.4	—	C
0838	0.9	0.9	22.62	0.3	6.36	14.03	1980	0.91	-95.2	—	C
0841	0.9	1.8	22.63	0.3	6.48	14.24	1976	0.55	-114.7	—	C
0844	0.9	2.7	22.64	0.3	6.51	14.39	1971	0.38	-124.7	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-52	Sampling Flow Rate	0.9	Analytical Laboratory:	Apex
Sample Time:	0845	Final Depth to Water:	22.49	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 x 40mL VOA	HCl	—	yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-53	Job Number:	1935-01
Client:	Gunderson	Date:	12/15/15
Project:	4Q 2015 GWM	Sampler:	G / EK
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	21.04	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
906	—	—	22.70	0.3	7.33	14.34	1103	2.42	-135.6	—	C
909	0.9	0.9	23.40	0.3	7.29	14.06	1092	0.59	-143.7	—	C
912	0.9	1.8	23.80	0.3	7.24	14.18	1086	0.45	-145.9	—	C
915	0.9	2.7	24.61	0.3	7.19	14.22	1074	0.47	-145.6	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-53	Sampling Flow Rate	0.9	Analytical Laboratory:	Apex
Sample Time:	920	Final Depth to Water:	25.58	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL VOA	HCl	—	yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-49	Job Number:	1935-01
Client:	Burnideson	Date:	12/15/15
Project:	4Q 2015 Gauge	Sampler:	C
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	22.70	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:			Comments
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0940	~~0.2~~	—	22.7	0.2	6.72	13.98	647	1.40	213.9	—	C
0943	0.6	0.6	22.69	0.2	6.51	14.0	647	0.83	172.5	—	C
0946	0.6	1.2	22.7	0.2	6.35	14.22	637	0.53	130.0	—	C
0949	0.6	1.8	22.7	0.2	6.34	14.16	636	0.49	118.7	—	C
0952	0.6	2.4	22.7	0.2	6.28	14.14	626	0.39	76.0	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-49	Sampling Flow Rate	0.2/m	Analytical Laboratory:	Apex
Sample Time:	10955	Final Depth to Water:	22.7	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40 mL	HCl		yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-39	Job Number:	1935.01
Client:	Gunderson	Date:	12/15/15
Project:	4Q 2015 GWM	Sampler:	CL/KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	24.14	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:		Comments
Sampling Method:		Tubing Type:		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1010	—	—	24.14	0.3	6.45	13.43	591	2.55	-83.8	—	C
1013	0.9	0.9	24.15	0.3	6.36	13.44	557	1.74	-97.7	—	C
1016	0.9	1.8	24.15	0.3	6.29	13.48	526	1.45	-94.0	—	C
1019	0.9	2.7	24.16	0.3	6.26	13.60	502	1.25	-93.1	—	C
1022	0.9	3.6	24.16	0.3	6.23	13.70	496	1.23	-104.3	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-39	Sampling Flow Rate	0.3/m	Analytical Laboratory:	Apex
Sample Time:	1025	Final Depth to Water:	24.17	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x 40 ml	HCl	—	yes (no)	—	—	—
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-71	Job Number:	1935-01
Client:	Gunderson	Date:	4/12/15/15
Project:	4Q 2015 GWM.	Sampler:	G
Weather:	.	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	23.56	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1040	—	—	23.56	0.20	6.37	13.84	667	1.04	-6.2	—	C
1043	0.6	0.6	23.54	0.20	6.32	14.04	685	0.50	7.8	—	C
1046	0.6	1.2	23.55	0.20	6.31	14.23	696	0.34	-61.4	—	C
1049	0.6	1.8	23.55	0.20	6.29	14.41	702	0.27	-36.5	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-71	Sampling Flow Rate		Analytical Laboratory:	
Sample Time:	1050	Final Depth to Water:		Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 x 40mL VOA	HCl		yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-21	Job Number:	1935-01
Client:	GUNDERSON	Date:	12/15/15
Project:	4Q 2015 GWM	Sampler:	L / KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:		Water Height	
Depth to Water:	22.93	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1108	—	—	22.97	0.15	6.63	14.48	814	1.23	53.0	—	C
1111	0.45	0.45	22.97	0.15	6.56	14.46	821	0.45	46.1	—	C
1114	0.45	0.90	22.98	0.15	6.55	14.56	825	0.31	13.0	—	C
1117	0.45	1.35	22.98	0.15	6.54	14.58	826	0.29	25.0	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-21	Sampling Flow Rate		Analytical Laboratory:	
Sample Time:	1120	Final Depth to Water:		Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3X 40mL VOA	HCl	—	yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-27	Job Number:	1935-01
Client:	Gunderson	Date:	12/15/15
Project:	4Q 2015 GWM	Sampler:	CL/KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	22.98	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:		Comments	
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1156	—	—	22.82	0.2	6.42	13.83	724	1.51	70.4	—	C
1159	0.6	0.6	22.80	0.2	6.29	13.63	727	0.67	-1.2	—	C
1202	0.6	1.2	22.80	0.2	6.25	13.70	728	0.44	-16.2	—	C
1205	0.6	1.8	22.80	0.2	6.22	13.83	738	0.38	-11.9	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-27	Sampling Flow Rate		Analytical Laboratory:	Apex
Sample Time:	1210	Final Depth to Water:	22.80	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x 40mL VOA	HCl		yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Well I.D.	MW-19	Job Number: 1935-01
	Client:	SUNDERSON	Date: 12/15/15
	Project:	4Q 2015 GWM	Sampler: G / KK
	Weather:	CLIMAT	Time In/Out:

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	25.60	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:		Comments	
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1225	—	—	25.6	0.15	6.81	12.49	566	3.20	-126.5	—	C
1228	0.45	0.45		0.15	6.66	12.22	557	0.25	-144.0	—	C
1231	0.45	0.90		0.15	6.65	12.21	556	0.23	-151	—	C
1234	0.45	1.35		0.15	6.64	12.19	553	0.21	-157.6	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-19	Sampling Flow Rate	0.15 L/min	Analytical Laboratory:	Apex
Sample Time:	1235	Final Depth to Water:	25.65	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40 mL VOA	HCl	—	yes — no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-22	Job Number:	1935-01
Client:	Gunderson	Date:	12/15/15
Project:	4Q 2015 GWM	Sampler:	CL/KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	24.70	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1255	—	—	24.70	0.2	7.21	12.73	90	6.81	14.3	—	C
1258	0.6	0.6	24.75	0.2	7.03	12.64	90	6.16	29.8	—	C
1301	0.6	1.2	24.75	0.2	6.91	12.70	87	6.14	12.3	—	C
1304	0.6	1.8	24.75	0.2	6.86	12.72	86	6.12	14.6	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-22	Sampling Flow Rate		Analytical Laboratory:	Apex
Sample Time:	1305	Final Depth to Water:	24.8	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3X 40mL VOA	HCl		yes no			
1 X 250mL Poly	HNO_3		yes no			
1 X 250mL Poly	no HNO_3		yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-42	Job Number:	1935-01
Client:	Gunderson	Date:	12/15/15
Project:	4Q 2015 GWM	Sampler:	[illegible]
Weather:	—	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	25.50	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1321	—	—	25.50	0.2	6.72	13.03	443	2.52	2.7	—	C
1324	0.6	0.6	25.53	0.2	6.54	12.77	445	0.83	-52.2	—	C
1327	0.6	1.2	25.55	0.2	6.47	12.91	446	0.62	-47.8	—	C
1330	0.6	1.8	25.55	0.2	6.41	13.02	448	0.59	-58.4	—	C
1333	0.6	2.4	25.55	0.2	6.38	13.06	450	0.70	-59.3	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-42	Sampling Flow Rate		Analytical Laboratory:	Apex
Sample Time:	1335	Final Depth to Water:	25.55	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 x 40mL VOA	HCl	VOC,	yes no			
1x 250mL Poly	—	DISS MET.	yes no			
1x 250mL	HNO_3	TOTAL MET	yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-50	Job Number:	1935-01
Client:	Gunderson	Date:	12/16/15
Project:	2Q 2015 GWM	Sampler:	C. Zuk
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	27.54	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:		Comments	
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0848	—	—	27.54	0.1	6.98	12.45	396	4.02	-156.2	—	C
0851	0.3	0.3	27.54	0.1	6.58	12.47	403	2.41	-164.5	—	C
0854	0.3	0.6	27.55	0.1	6.46	12.56	406	2.05	-164.5	—	C
0857	0.3	0.9	27.55	0.1	6.38	12.70	407	1.97	-167.3	—	C
0900	0.3	1.2	27.55	0.1	6.34	12.83	409	1.90	-164.6	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-50	Sampling Flow Rate	0.1/m	Analytical Laboratory:	Apex
Sample Time:	0905	Final Depth to Water:	27.55	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL VOA	HCl		yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-43	Job Number:	1935
Client:	GUNDERSON	Date:	12/16/15
Project:	4Q 2015 GWM	Sampler:	CL/KK
Weather:	CLWM	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	27.70	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0914	—	—	27.70	0.15	6.35	13.37	379	2.31	-129.1	—	C
0917	0.45	0.45	27.70	0.15	6.25	13.29	394	1.56	-145.1	—	C
0920	0.45	0.90	27.70	0.15	6.21	13.29	406	1.44	-140.1	—	C
0923	0.45	1.35	27.70	0.15	6.19	13.24	408	1.32	-133.9	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-43	Sampling Flow Rate	0.15/m	Analytical Laboratory:	
Sample Time:	0925	Final Depth to Water:	27.70	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3X 40ML VOA	HCl		yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-44	Job Number:	1935-01
Client:	GUNDERSON	Date:	12/16/15
Project:	4Q 2015 GWM	Sampler:	CA/KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	22.76	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0940	—	—	22.76	0.15	6.60	13.39	1022	6.03	-101.9	—	C
0943	0.45	0.45	22.90	0.15	6.83	13.22	1049	1.02	-170.8	—	C
0946	0.45	0.90	22.90	0.15	6.97	13.23	1064	0.74	-178.2	—	C
0949	0.45	1.35	22.85	0.15	7.10	13.23	1068	0.76	-181.0	—	C
0952	0.45	1.80	22.88	0.15	7.17	13.37	1071	0.96	-186.2	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-44	Sampling Flow Rate		Analytical Laboratory:	
Sample Time:	0955	Final Depth to Water:		Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40mL VOA	HCl		yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW ~~-51~~ -51	Job Number:	1935-01
Client:	Gundersen	Date:	12/11/15
Project:	4Q 2015 GWM	Sampler:	KK, CL
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	21.60	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:		Comments	
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1012	—	—	21.60	0.1	7.74	13.63	178	5.38	-107.7	—	C
1015	0.3	0.3	21.60	0.1	7.42	13.53	173	4.27	-130.2	—	C
1018	0.3	0.6	21.60	0.1	7.35	13.36	170	4.23	-136.3	—	C
1021	0.3	0.9	21.60	0.1	7.27	13.25	154	4.3	-142.3	—	C
1024	0.3	1.2	21.60	0.1	7.25	13.23	150	4.39	-121.2	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-51	Sampling Flow Rate		Analytical Laboratory:	
Sample Time:	1025	Final Depth to Water:		Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 x 40mL VOA	HCl	—	yes no			
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-74	Job Number:	1935-01
Client:	Gunderson	Date:	12/16/15
Project:	4Q2015 GWM	Sampler:	KK/CL
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	24.67	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<- Stabilization Criteria
1214	—	—	24.67	0.15	6.03	13.71	2376	1.36	-116.4	—	C
1217	0.45	0.45	25.36	0.15	6.07	13.54	2374	0.57	-139.6	—	C
1220	0.45	0.90	25.45	0.15	6.08	13.51	2373	0.38	-140.9	—	C
1223	0.45	1.35	25.35	0.15	6.08	13.48	2370	0.28	-146.0	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-74	Sampling Flow Rate		Analytical Laboratory:	Apex
Sample Time:	1230	Final Depth to Water:	25.32	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1L	HCl	—	yes (no)	—	—	—
1L	—	—	yes no	—	—	—
1x250	HNO_3	—	yes no	—	—	—
1x250	—	—	yes no	—	—	—
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-11	Job Number:	1935-07
Client:	Gunderson	Date:	12/16/15
Project:	4Q 2015 GWM	Sampler:	A/KK
Weather:	Rain	Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	5.40	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:			Comments
Sampling Method:		Tubing Type:			

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1301	—	—	5.40	0.15	6.58	12.49	305	1.07	-122.1	—	C
1304	0.45	0.45	5.40	0.15	6.37	12.51	300	0.41	-126.8	—	C
1307	0.45	0.90	5.39	0.15	6.29	12.66	299	0.27	-131.1	—	C
1310	0.45	1.35	5.38	0.15	6.24	12.71	298	0.21	-133.2	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-11	Sampling Flow Rate		Analytical Laboratory:	
Sample Time:	1315	Final Depth to Water:		Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1L ~~[illegible]~~ Amber	HCl	TPH-d	yes no			
1x250mL	HNO_3	T. Metals	yes no			
1x250mL	—	D. Metals	yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW -72	Job Number:	1935-01
Client:	Gundersen	Date:	12/16/15
Project:	4Q 2015 GWM	Sampler:	CL/K
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:		Water Height	
Depth to Water:	22.14	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1338	—	—	22.14	0.15	6.13	13.19	1632	1.07	-125.0	—	C
1341	0.45	0.45	22.2	0.15	6.22	13.16	1669	0.66	-125.0	—	C
1344	0.45	0.90	22.75	0.15	6.23	13.16	1678	0.46	-160.4		
1347	0.45	1.35	22.15	0.15	6.24	13.17	1682	0.39	-161.3		

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-72	Sampling Flow Rate		Analytical Laboratory:	
Sample Time:	1350	Final Depth to Water:		Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
2 x 1L	HCl	TPHd	yes no			DUP MW-72
2 x 1L	—	PAHs	yes no			DUP
2x 250ml	HNO_3	T. Metals	yes no			DUP
2 x 250 ml	—	D. Metals	yes no			DUP
			yes no			—
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-23	Job Number:	1935-01
Client:	Gunderson	Date:	12/17/15
Project:	4Q 2015 GWM	Sampler:	KR/JM
Weather:		Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	22.52	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
827	—	—	22.52	0.15	6.04	12.45	278	3.30	-89.8	—	C
830	0.45	0.45	22.53	0.15	5.79	12.37	264	2.96	-72.2	—	C
833	0.45	0.90	22.53	0.15	5.76	12.27	251	2.86	-48.6	—	C
836	0.45	1.35	22.53	0.15	5.76	12.24	241	2.76	-52.1	—	C
839	0.45	1.80	22.53	0.15	5.70	12.20	240	2.64	-59.1	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-23	Sampling Flow Rate	0.15	Analytical Laboratory:	Apex
Sample Time:	0848	Final Depth to Water:	22.50	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
[illegible]			yes no			
1x 250 ml	—	—	yes no	—	—	—
1x 250 ml	HNO_3		yes no	—	—	—
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-41	Job Number:	
Client:	Guardison	Date:	12/17/15
Project:		Sampler:	LK
Weather:	Rain	Time In/Out:	0920

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	24.07	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE	—	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0930	—	—	24.10	0.15	6.19	12.99	372	2.50	-121.0	—	C
0933	—	—	24.10	0.15	6.10	13.20	391	2.38	-119.5	—	C
0936	—	—	24.12	0.15	6.07	13.34	398	2.17	-115.2	—	C
0939	—	—	24.13	0.15	6.03	13.58	389	0.13	-110.6	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-41	Sampling Flow Rate	0.15	Analytical Laboratory:	Apex
Sample Time:	0942	Final Depth to Water:	24.10	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x 40 ml	HCl	—	yes (no)		—	—
1x 250 ml	—	—	yes (no)	—	—	—
1x 250 ml	HNO_3	—	yes (no)	—	—	—
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-36	Job Number:	1935-
Client:	Gunderson	Date:	12/17/15
Project:	4Q2015 GWM	Sampler:	KK
Weather:	Rain	Time In/Out:	1020

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	24.33	Screened Interval:	—	x Multiplier	—
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1029	—	—	24.62	0.20	6.95	13.02	27	5.28	-125.7	—	C
1032	—	—	24.65	0.20	6.93	13.22	27	5.14	-125.1	—	C
1035	—	—	24.65	0.20	6.90	13.46	30	5.08	-125.3	—	C
1038	—	—	24.65	0.20	6.86	13.42	36	5.15	-121.7	—	C
1041	—	—	24.65	0.20	6.82	13.37	37	5.15	-118.3	—	C
1043	—	—	24.65	0.20	6.76	13.32	38	5.26	-114.8	—	C
1046	—	—	24.65	0.20	6.75	13.36	38	5.25	-112.3	—	C.

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-36	Sampling Flow Rate	0.20	Analytical Laboratory:	Apex
Sample Time:	1050	Final Depth to Water:	24.65	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x 40mL VOA	HCl	—	yes (no)	—	—	—
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-70	Job Number:	
Client:	Gunderson	Date:	12/17/15
Project:	GWM	Sampler:	KS
Weather:	Rain & overcast	Time In/Out:	10:25/

WELL DATA

Well Depth:	—	Well Diameter:	2 in.	Water Height	—
Depth to Water:	23.25 ft.	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS.	Comments	
Sampling Method:	LF	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
10:33			23.30	0.15	6.02	14.19	220	8.9	40.0		C
10:36			23.35		6.07	14.30	218	8.31	34.7		C
10:39			23.33		6.16	14.34	218	8.46	31.2		C
10:42			23.35		6.22	14.31	218	8.41	28.3		C
10:45			23.35		6.25	14.37	218	8.24	26.6		C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-70	Sampling Flow Rate	0.15	Analytical Laboratory:	Apex
Sample Time:	10:50	Final Depth to Water:	23.31	Did Well Dewater?	—

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3x40ml	HCl		yes (no)	—	—	—
			yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	SMW-12	Job Number:	1935-01
Client:	Gunderson	Date:	12/17/15
Project:	4Q2015 GWM	Sampler:	KK
Weather:	Rain	Time In/Out:	1220

WELL DATA

Well Depth:	—	Well Diameter:	—	Water Height	—
Depth to Water:	20.58	Screened Interval:	—	x Multiplier	
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1229	—	—	20.62	0.15	6.28	11.80	573	2.59	-130.8	—	C
1232	—	—	20.62	0.15	6.28	11.75	575	1.33	-138.6	—	C
1235	—	—	20.61	0.15	6.28	11.97	580	0.64	-143.7	—	C
1238	—	—	20.61	0.15	6.29	11.99	582	0.51	-144.6	—	C
1241	—	—	20.60	0.15	6.31	12.00	584	0.42	-153.1	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	SMW-12	Sampling Flow Rate	0.15	Analytical Laboratory:	
Sample Time:	1248	Final Depth to Water:	20.60	Did Well Dewater?	

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3X 40ml VOA	HCl		yes (no)			
1X 1L	—		yes (no)			
1X 250ml	—		yes (no)			
1X 250ml	HNO_3		yes (no)			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-106	Job Number:	—
Client:	Gunderson	Date:	12/17/15
Project:	GWM	Sampler:	KS
Weather:	Rain	Time In/Out:	12:35p

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	23.10	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P.Pump	Pump Intake Depth:	MS
Sampling Method:	LF	Tubing Type:	LDPE

Comments

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
12:37	—	—	23.10	.15	6.39	13.32	932	.79	-136.8	—	C
12:40	—	—	23.10		6.42	13.27	927	.57	-144.2	—	C
12:43	—	—	23.10		6.43	13.26	923	.45	-145.5	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-66	Sampling Flow Rate	0.15	Analytical Laboratory:	Apex
Sample Time:	12:45	Final Depth to Water:	23.13	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1x 1L	—	—	yes (no)	—	—	—
1x 250	HNO3	—	yes (no)	—	—	—
1x 250	—	—	yes (no)	—	—	—
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	SMW-11	Job Number:	
Client:	Sunderson	Date:	12/17/15
Project:		Sampler:	KS
Weather:	Rain	Time In/Out:	1:39p

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	24.05	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE	—	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1:41p	—	—	24.11	.10	6.42	12.21	520	.59	-121.8	—	C
1:44p	—	—	24.11		6.48	12.17	516	.50	-137.6	—	C
1:47p	—	—	24.14		6.61	12.30	512	.34	-145.9	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	SMW-11	Sampling Flow Rate	0.10	Analytical Laboratory:	Apex
Sample Time:	1400	Final Depth to Water:	24.17	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1x250	HNO_3	—	yes (no)	—	—	—
1x250	—	—	yes (no)	—	—	—
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-17	Job Number:	1935-01
Client:	Gunderson	Date:	12/17/15
Project:	4Q2015 GWM	Sampler:	KK
Weather:	Rain	Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	—	Water Height	—
Depth to Water:	23.24	Screened Interval:	—	x Multiplier	—
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	DL	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1345	—	—	23.45	0.15	6.45	13.56	551	1.98	-130.5	—	C
1348	—	—	23.50	0.15	6.42	13.84	556	0.54	-141.3	—	C
1351	—	—	23.53	0.15	6.41	14.22	561	0.40	-146.4	—	C
1354	—	—	23.55	0.15	6.40	14.22	563	0.34	-152.3	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-17	Sampling Flow Rate	0.16	Analytical Laboratory:	Apex
Sample Time:	1357	Final Depth to Water:	23.70	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3X 40mL VOA	HCl		yes (no)	—		X
1X 1L	—		yes (no)	—		X
1X 250mL	—		yes (no)	—		X
1X 250mL	HNO_3		yes (no)	—		X
			yes no			
			yes no			

COMMENTS

MW-17 Dup Same as sample time

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-81	Job Number:	
Client:	Gunderson	Date:	12/17/15
Project:	GWM	Sampler:	KS
Weather:	Rain	Time In/Out:	2:00p

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	
Depth to Water:	20.510	Screened Interval:		x Multiplier	
Water Column Length:		Depth to Free Product:		x Casing Volumes	
Purge Volume:		Free Product Thickness:		= Purge Volume	
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments
Sampling Method:	LF	Tubing Type:	LDPE	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1422			20.53	.15	6.35	14.06	1017	1.45	-93.7		C
1425			20.55	(	6.41	14.31	1035	1.27	-103.4		C
1428			20.55	)	6.43	14.5	1054	1.15	-127.8		C
1431			20.55	)	6.42	14.4	1062	0.63	-134.7		C
1434			20.55		6.42	14.54	1058	0.49	-139.2		C
1437			20.55		6.43	14.52	1053	0.41	-141.6		C

Clarity: VC = very cloudy, CI = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-81	Sampling Flow Rate	.150	Analytical Laboratory:	Apex
Sample Time:	1438	Final Depth to Water:	20.49	Did Well Dewater?	No

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 x 1 L	N/A		yes (no)			
1 x 250 mL	HNO_3		yes (no)			
1 x 250 mL	N/A		yes (no)			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX	Well I.D.	MW-24	Job Number:	1935-01	
	Client:	Gunderson	Date:	12/17/15	
	Project:	4Q2015 GWM	Sampler:	KK	
	Weather:	Rain	Time In/Out:		

WELL DATA

Well Depth:	—	Well Diameter:	—	Water Height	—
Depth to Water:	12.62	Screened Interval:	—	x Multiplier	—
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	DL	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1458	—	—	13.35	0.15	6.58	14.49	601	1.45	-136.1	—	C
1501	—	—	13.40	0.15	6.56	14.54	601	0.58	137.5	—	C
1504	—	—	13.40	0.15	6.54	14.48	602	0.42	-140.7	—	C
1507	—	—	13.40	0.15	6.53	14.46	602	0.36	-140.2	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-24	Sampling Flow Rate	0.15	Analytical Laboratory:	Apex
Sample Time:	1510	Final Depth to Water:	13.33	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1X 250 ML	—		yes (no)			
1X 250 ML	HNO3		yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-77	Job Number:	1935-01
Client:	Gunderson	Date:	12/18/15
Project:	4Q 2015 GWM	Sampler:	JM/KK
Weather:	Slight Rain	Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	23.00	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0815	—	—	23.00	0.20	6.91	13.62	1379	1.20	-66.0	—	C
0818	—	—	23.22	0.20	6.68	13.67	1380	0.54	-71.1	—	C
0821	—	—	23.38	0.20	6.52	13.83	1380	0.40	-76.1	—	C
0824	—	—	23.49	0.20	6.43	13.84	1379	0.31	-79.7	—	C
0827	—	—	23.69	0.20	6.42	13.78	1381	0.26	-83.6	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-77	Sampling Flow Rate	0.2	Analytical Laboratory:	Apex
Sample Time:	0829	Final Depth to Water:	23.85	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1 x 250 mL	—		yes (no)	—		
1 x 250 mL	HNO_3		yes (no)	—		
1 x 1L	HCl		yes (no)	—		
[illegible]	[illegible]		yes (no)	—		
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-79	Job Number:	1935-01
Client:	Gunderson	Date:	12/18/15
Project:	4Q 2015 GWM	Sampler:	KK
Weather:	Rain	Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	2.10	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:	—	Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0905	—	—	2.10	0.20	7.81	12.90	618	1.23	-101.3	—	C
0908	—	—	2.08	0.20	7.53	12.68	621	0.36	-115.0	—	C
0911	—	—	2.08	0.20	7.49	12.56	620	0.24	-122.8	—	C
0914	—	—	2.08	0.20	7.48	12.48	617	0.22	-128.2	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-79	Sampling Flow Rate	0.20	Analytical Laboratory:	Apex
Sample Time:	0918	Final Depth to Water:	2.02	Did Well Dewater?	no

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1 x 250 ML	—		yes (no)			
1 x 250 ML	HNO3		yes (no)			
1 x 1L	HCL		yes (no)			
1 x 1L	—		yes (no)			
1 x 1L	—		yes (no)			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-10	Job Number:	1935-01
Client:	Gunderson	Date:	12/18/15
Project:	4Q 2015 GWM	Sampler:	KK/JM
Weather:	Rain	Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	7.03	Screened Interval:	—	x Multiplier	—
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
0952	—	—	7.03	0.20	6.89	15.07	863	0.53	-87.7	—	C
0955	—	—	7.70	0.20	6.86	15.31	870	0.33	-137.4	—	C
0958	—	—	8.05	0.20	6.62	15.45	869	0.25	-149.3	—	C
1001	—	—	8.23	0.20	6.49	15.35	870	0.21	-152.9	—	C
1004	—	—	8.41	0.20	6.52	15.40	870	0.20	-154.9	—	C
1007	—	—	8.64	0.20	6.54	15.51	871	0.15	-157.9	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-10	Sampling Flow Rate	0.20	Analytical Laboratory:	Apex
Sample Time:	1009	Final Depth to Water:	9.00	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1 X 250mL	—		yes (no)			
1 X 250mL	HNO3		yes (no)			
1 X 1L	HCl		yes (no)			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-73	Job Number:	1935-01
Client:	Gunderson	Date:	12/18/15
Project:	4Q 2015 GWM	Sampler:	JM/KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	17.60	Screened Interval:	—	x Multiplier	—
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS
Sampling Method:	LF	Tubing Type:	LDPE

Comments

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1025	—	—	17.60	0.15	6.98	13.19	1744	1.07	-42.2	—	C
1028	—	—	17.76	0.15	6.87	13.40	1786	0.62	-78.9	—	C
1031	—	—	17.81	0.15	6.88	13.54	1806	0.43	-108.8	—	C
1034	—	—	17.92	0.15	6.84	13.64	1812	0.25	-121.2	—	C
1037	—	—	18.02	0.15	6.90	13.78	1803	0.19	-129.6	—	C
1040	—	—	18.12	0.15	6.94	1386	17.95	0.17	-135.1	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-73	Sampling Flow Rate	0.15	Analytical Laboratory:	Apex
Sample Time:	1042	Final Depth to Water:	18.65	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1 X 250 mL	—		yes (no)			
1 X 250 mL	HNO_3		yes (no)			
1 X 1L	HCl		yes (no)			
1 X 1L	—		yes (no)			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-80	Job Number:	1935-01
Client:	Gunderson	Date:	12/18/15
Project:	4Q2015 GWM	Sampler:	KK/JM
Weather:		Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	10.43	Screened Interval:	—	x Multiplier	—
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	LDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1127	—	—	10.43	0.20	7.33	12.12	386	0.50	-97.7	—	C
1130	—	—	10.98	0.20	7.36	11.99	377	0.33	-103.8	—	C
1133	—	—	11.21	0.20	7.32	12.07	376	0.22	-110.6	—	C
1136	—	—	11.52	0.20	7.30	12.01	377	0.18	-113.9	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-80	Sampling Flow Rate	0.20	Analytical Laboratory:	Apex
Sample Time:	1137	Final Depth to Water:	11.60	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1 X 250 ML	HNO_3		yes (no)			
1 X 250 ML	—		yes (no)			
1 X 1L	—		yes (no)			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-6d	Job Number:	
Client:	Gunderson	Date:	12/23/15
Project:	4Q 2015 GWMM	Sampler:	KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	—
Depth to Water:	22.20	Screened Interval:	—	x Multiplier	—
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	P.P	Pump Intake Depth:	MS
Sampling Method:	LF	Tubing Type:	

Comments:

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1435	—	—	22.28	0.20	5.61	13.71	393	5.05	-182.0	—	C
1438	—	—	22.30	0.20	6.73	13.95	360	4.88	-207.6	—	C
1441	—	—	22.30	0.20	7.04	14.04	345	4.84	-209.7	—	C
1444	—	—	22.30	0.20	7.04	14.04	338	4.85	-207.6	—	C
1447	—	—	22.30	0.20	7.10	14.06	332	4.95	-207.9	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-6d	Sampling Flow Rate	0.20	Analytical Laboratory:	Apex
Sample Time:	1449	Final Depth to Water:	22.30	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 x 40ml VOA	HCl		yes (no)			
1 x 1L	HCl		yes (no)			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

2' 8/10 added

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-76	Job Number:	
Client:	Gundersen	Date:	12/23/15
Project:	4Q2015 GWM	Sampler:	KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:		Well Diameter:	2"	Water Height	—
Depth to Water:	24.35	Screened Interval:	—	x Multiplier	—
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	—
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:		Pump Intake Depth:	Comments
Sampling Method:		Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1555	—	—	24.35	0.15	4.66	13.12	2313	3.06	-185.1	—	C
1558	—	—	24.39	0.15	6.26	13.05	2310	1.06	-215.6	—	C
1601	—	—	24.42	0.15	6.23	13.10	2317	0.71	-235.1	—	C
1604	—	—	24.50	0.15	6.20	13.14	2318	0.50	-253.2	—	C
1607	—	—	24.53	0.15	6.18	13.12	2316	0.45	-228.1	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-76	Sampling Flow Rate	0.15	Analytical Laboratory:	Apex	
Sample Time:	1610	Final Depth to Water:	24.63	Did Well Dewater?	NO	
# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
1X 250	—		yes (no)			
1X 250	HNO3		yes (no)			
1X 1L			yes (no)			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	WFX - 60	Job Number:	
Client:	Gunderson	Date:	12/23/15
Project:	4Q2015 GWM	Sampler:	KK
Weather:		Time In/Out:	

WELL DATA

Well Depth:	—	Well Diameter:	2"	Water Height	
Depth to Water:	17.61	Screened Interval:	—	x Multiplier	
Water Column Length:		Depth to Free Product:	—	x Casing Volumes	
Purge Volume:		Free Product Thickness:	—	= Purge Volume	—
Water Height Multipliers (gal)	1-inch = 0.041	2-Inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	—

PURGING DATA

Purge Method:	P.P	Pump Intake Depth:	MS
Sampling Method:	LF	Tubing Type:	

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1632	—	—	17.61	0.20	6.65	6.63	150	8.76	191.8	—	C
1635	—	—	17.58	0.20	10.80	6.53	132	7.28	-170.1	—	C
1638	—	—	17.55	0.20	10.45	6.49	115	7.47	177.2	—	C
1641	—	—	17.55	0.20	10.51	6.39	113	7.37	-178.4	—	C
1644	—	—	17.55	0.20	10.47	6.35	112	7.41	-171.4	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	WFX-60	Sampling Flow Rate	0.20	Analytical Laboratory:	Apex
Sample Time:	1640	Final Depth to Water:	17.50	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 x 40mL VOA	HCl		yes (no)			X
1 x 1L	HCl		yes (no)			X
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	WEX-60	Job Number:	1935-01
Client:	Gunderson	Date:	1/20/16
Project:	4Q2015 GWM	Sampler:	Kyle Kline
Weather:	Part cloudy	Time In/Out:	1107

WELL DATA

Well Depth:	24.65	Well Diameter:	2"	Water Height	1.29
Depth to Water:	23.36	Screened Interval:	—	x Multiplier	0.162
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	3
Purge Volume:		Free Product Thickness:	—	= Purge Volume	0.626
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS	Comments	
Sampling Method:	LF	Tubing Type:	HDPE		

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1157	—	—	23.48	0.15	6.23	8.93	222	10.3	74.5	—	clear
1200	—	—	23.48	0.15	6.06	8.92	186	9.15	75.8	—	clear
1203	—	—	23.48	0.15	6.06	8.91	161	8.90	75.1	—	clear
1206	—	—	23.49	0.15	6.10	8.88	158	8.71	71.9	—	clear
1209	—	—	23.49	0.15	6.13	8.84	156	8.58	68.4	—	clear

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	WEX-60	Sampling Flow Rate	0.15	Analytical Laboratory:	Apex
Sample Time:	1211	Final Depth to Water:	23.45	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3X 40mL VOA	HCl		yes no			
1X 1L	HCl		yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS

WELL MONITORING DATA SHEET

APEX

Well I.D.	MW-6d	Job Number:	1935-01
Client:	Gunderson	Date:	1/20/16
Project:	HQ 2015 GWM	Sampler:	Kyle Kline
Weather:	Part-Cloudy	Time In/Out:	

WELL DATA

Well Depth:	42.00	Well Diameter:	2"	Water Height	18.4
Depth to Water:	23.60	Screened Interval:	—	x Multiplier	0.162
Water Column Length:	—	Depth to Free Product:	—	x Casing Volumes	3
Purge Volume:		Free Product Thickness:	—	= Purge Volume	8.94
Water Height Multipliers (gal)	1-inch = 0.041	2-inch = 0.162	4-inch = 0.653	1 gallon = 3.785 liters	

PURGING DATA

Purge Method:	P. Pump	Pump Intake Depth:	MS
Sampling Method:	LF	Tubing Type:	HDPE

Comments

Time	Volume Purged (liters)	Cumulative Volume Purged (liters)	DTW (btc)	Purge Rate (L/min)	pH	Temp (°C)	Cond (µS/cm)	DO (ppm)	ORP (mV)	Turbidity (NTUs)	Clarity/Color Other Remarks
					+/-0.1	+/-0.5° C	+/-5%	+/- 0.5 ppm	+/-20mV	+/-10%	<-- Stabilization Criteria
1710	—	—	24.28	0.20	7.86	14.58	359	1.60	30.0	—	Clear
1713	—	—	24.24	0.20	7.79	14.62	353	0.76	34.1	—	clear
1716	—	—	24.18	0.20	7.73	14.62	346	0.69	36.2	—	C
1719	—	—	24.13	0.20	7.71	14.64	338	0.62	38.2	—	C

Clarity: VC = very cloudy, Cl = Cloudy, SC = slightly cloudy, AC = almost clear, C = clear

SAMPLING DATA

Sample ID:	MW-6d	Sampling Flow Rate	0.20	Analytical Laboratory:	Apex
Sample Time:	1721	Final Depth to Water:	23.78	Did Well Dewater?	NO

# Containers/Type	Preservative	Analysis/Method	Field Filtered	Filter Size	MS/MSD	Duplicate ID
3 X 40mL VOA	HCl		yes no			
1 X 1L	HCl		yes no			
			yes no			
			yes no			
			yes no			
			yes no			

COMMENTS