

WPX BWQ Groundwater Monitoring Field Form

Project Information			
Project:	Juhan 14-26H BWQ	Sample Purpose:	Rule 609 Baseline
Site Name (Well Pad):	Juhan 14-26H	Site API:	05-045-06803
Station Name:	Porcupine #1 Industrial Well	Sample Date:	0830 12-18-14
COGCC Facility ID:	708012	Start Time:	0830
Field Sample ID:	Porcupine Well No. 1	End Time:	1100
Landowner Name:	Jean Savage	Sample Time:	1010
Landowner Address:	PO Box 1926, Rifle, CO 81650	Sample Team:	SLK, NWS
Water Right/Well Owner:	Jean Savage	Observer:	SLK
Water Right/Well Permit:	61433-#	Lead Signature/Date:	<i>[Signature]</i> 12-19-14
Receipt Number:	0524810B		

Station Information			
Station Description: Hose bib constructed @ well discharge point			
Approximate Distance to Well Pad: 2,100 FT			
Station Type:	Well / Spring / Seep / Other:		Water Use: Domestic / Irrigation / <u>Industrial</u>
Sampling Location: Kitchen Tap / Pipe / Well House / Hose bib / Other:			
GPS Location:	Zone	x -107.86707	y 39.49247 z 5303
Total Depth (ft):	137	Static Depth to Water (ft):	54.31 Well diameter (in): 12"
Purge Volume (gal)	1483.9	Total Volume Purged (gal)	5200

Weather Conditions	
Sky:	Clear / Scattered / Cloudy / <u>Overcast</u> Estimated Air Temp (deg F): 35
Precipitation:	None / <u>Light</u> / Moderate / Heavy Precip Type: None / Rain / Sleet / Hail / <u>Snow</u>
Wind:	<u>Calm</u> / Light / Mod / Strong Wind Speed/Direction: <u>NM</u>

Field Measurements							
Parameter	Units	Reading	Time	Flag Code	Instrument	In-situ or Container	Comments
Water Temp	deg C	12.90	1040		YSI 556	container	
pH	s.u.	7.22					
Sp. Conductivity	uS/cm	1205					
Conductivity	uS/cm	928					
DO Saturation	%	32.1					
DO	mg/L	3.02					
Baro Press	mmHg	625.8					
ORP	RmV	131.8					
Turbidity	NTU	0.2		AV	microTPW		0.17, 0.124, 0.19
Discharge	gpm	N/A 95	913		Flow meter		
H2S	mg/L	NA					
Color: <u>Clear</u> / White / Yellow / Brown / Green / Blue / Other Light / Med / Dark							
Odor: None / Mild / Mod / Strong							
Effervescence: <u>None</u> / Mild / Mod / Strong				Bubbles: None / <u>Low</u> / Mod / High			
Sediment: <u>None</u> / Light / Mod / Heavy				VOA Headspace: None / <u>≤ Pea Size</u> / ≥ Pea Size			
Lab Analysis: <u>Rule 609 / COA 9 / COA 22 / Other</u>							
Field Filtered: Yes / <u>No</u>		Filter Size: <u>NA</u>		No. Filters used: <u>NA</u>			

Flag Codes: NM (not measured), E (estimated), N/A (not applicable), I (insufficient sample), Q (uncertain value), Y (calculated value), AV (averaged value), EC (exceeds calibration range), OT (other flag to be defined later), NS (not stabilized), VAR (variable)

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Landowner Comments on water quality:

None. No treatment system or storage tank Present.

Additional information:

* 0913: discharge ~95 gpm, WL BTOC 54.31'

Water came out rust colored @ first, cleared up quickly

931: WL BTOC 63.69'

1008: WL BTOC 64.09'

1040: ~~WL BTOC~~

can smell a produced water condensate

1050: WL BTOC 56.35'

Sample tubing had small bubbles coming out of it. Sample was collected before the black flux tubing using a manifold constructed by WWL, see field pictures.

No landowner present for sampling

* discharge according to flow meter gpm readout

Calibration Information			Date: 12-18-14		Location: field			
Instrument	Parameter	Units	Time	Calibration Standard Value	Calibration Standard Temp (°C)	Instrument Reading of Standard	Adjusted Reading	Comments
↓	pH	s.u.	0818	7.0	14.50	7.12	7.00	
	pH	s.u.	0820	10.01	15.36	10.00	10.01	
	pH	s.u.	0822	4.01	13.73	3.98	4.01	
	SpC	uS/cm	0815	2070	11.93	2045	2069	
	SpC	uS/cm						
	DO	%	0830	22.16 mmHg	4.11	77.2	82.1	
	DO	%						
	ORP	RmV						
micro TPW	Turbidity	NTU	0624					



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Well Purging Information		
Date: 12.18.14	Purge Method: 3 casing volumes + parameter stabilization	
Total Depth, ft (d _t): 129	Static Depth to Water, ft (d _w): 54.31	Sample/Set Depth (ft):
Casing Radius (in): 6.375		
Total Volume (gal or ft ³): 494.6	Total Volume x 3 (gal or ft ³): 1483.9	
1 ft ³ = 7.48 gal Casing Volume = $\pi r^2(d_t - d_w)$ $\pi \left(\frac{6.375}{12}\right)^2 (74.69) = 66.127 \cdot 7.48 = 494.6 \times 3 = 1483.9$		

Purge #	Time	Temp (deg C)	pH (s.u.)	SpC (uS/cm)	Cond (uS/cm)	DO (%)	DO (mg/L)	ORP (RmV)	Water Clarity (Poor/Mod/Good) or NTUs	Effervescence (None/Slight/Mod/Heavy)	Volume Purged (gal)	Cum Vol Purged (gal)
* 0	0918		Initial flow meter reading								265817	
1	0915	12.95	5.83	1164	894	24.3	2.33	252.1	1.37	Slight		
2	0920	13.19	7.29	1199	922	14.2	1.36	267.6	0.54	Slight		ETZ
3	0925	13.20	7.35	1207	925	11.5	1.56	180.3	0.35	Slight		
4	0930	13.24	7.33	1199	926	14.8	1.42	154.6	0.87	Slight		
5	0935	13.22	7.33	1204	930	8.4	0.88	130.4	0.39	Slight		
6	0940	13.30	7.32	1195	927	12.4	1.21	125.8	0.38	Slight	265850	
7	0945	13.31	7.33	1205	925	17.6	1.34	120.1	0.38	Slight		
8	0958	13.22	7.30	1197	925	12.0	1.16	109.3	0.18	Slight		
9	0955	13.24	7.31	1201	928	10.6	1.00	106.8	0.27	Slight		
10	1000	13.23	7.30	1203	930	11.5	1.12	104.4	0.35	Slight	265869	
	1010	SAMPLE TIME										
										ending:	265908	

* Flow meter reading is totalizing; reading times 100 equals gallons pumped