KJ Environmental

LOCATION: OWL BOBCAT/REDHILLS PIPELINE RELEASE SPILL AREA 2

DATE	Sample Pt.	DEPTH	SOIL	WATER	CF	AgNO ₃	CL-	SOIL LITHOLOGY	FIELD SCREENING HORIBA D-73	LAB RESULTS CL-	BLENDED Y/N
	•				•	TE	ST STOCKP	ILES		•	
27-Apr	TSS1	1'	-	-	-	-	-	sandy sand damp	10.3	-	N
	TSS1	2'	-	-	-	-	-	sandy sand damp	12.4	-	N
	TSS1	3'	-	-	-	-	-	sandy sand damp	19.3	-	N
	TSS1	4'	19	44	2.32	0.05	116	sandy sand damp	-	12.7	N
	TSS2	1'	-	-	-	-	-	sandy sand damp	19.6	-	N
	TSS2	2'	-	-	-	-	-	sandy sand damp	21.4	-	N
	TSS2	3'	-	-	-	-	-	sandy sand damp	18.3	-	N
	TSS2	4'	18	45	2.50	0.05	125	sandy sand damp	-	21.9	N
	TSS3	1'	-	-	-	-	-	sandy sand damp	17.7	-	N
	TSS3	2'	-	-	-	-	-	sandy sand damp	19.8	-	N
	TSS3	3'	-	-	-	-	-	sandy sand damp	22.1	-	N
	TSS3	4'	15	48	3.20	0.03	96	sandy sand damp	-	11	N
	TSS4	1'	-	-	-	-	-	sandy sand damp	14.4	-	N
	TSS4	2'	-	-	-	-	-	sandy sand damp	14.8	-	N
	TSS4	3'	-	-	-	-	-	sandy sand damp	13.6	-	N
	TSS4	4'	24	47	1.96	0.03	59	sandy sand damp	-	9.03	N
	TSS5	1'	-	-	-	-	-	sandy sand damp	13.9	-	N
	TSS5	2'	-	-	-	-	-	sandy sand damp	15.1	-	N
	TSS5	3'	-	-	-	-	-	sandy sand damp	15.3	-	N
	TSS5	4'	20	45	2.25	0.03	67	sandy sand damp	-	4.9	N
	TSS6	1'	-	-	-	-	-	sandy sand damp	11.2	-	N
	TSS6	2'	-	-	-	-	-	sandy sand damp	11.6	-	N
	TSS6	3'	-	-	-	-	-	sandy sand damp	9.7	-	N
	TSS6	4'	21	49	2.33	0.03	70	sandy sand damp	-	5	N
						A	STOCKPIL	ES			
26-Apr	ASP1	1'	18	45	2.50	0.16	400	sandy sand damp	-	=.	N
	ASP2	1'	21	43	2.05	0.20	409	sandy sand damp	-	-	N

	ASP3	1'	22	44	2.00	0.19	380	sandy sand damp	-	-	N
	ASP4	1'	22	49	2.23	0.31	690	sandy sand damp	-	-	N
	ASP5	1'	19	45	2.37	0.24	568	sandy sand damp	-	-	N
	ASP6	1'	21	45	2.14	0.17	364	sandy sand damp	-	-	N
	ASP7	1'	20	48	2.40	0.16	384	sandy sand damp	-	-	N
	ASP8	1'	21	45	2.14	0.27	578	sandy sand damp	-	-	N
	ASP9	1'	21	45	2.14	0.34	728	sandy sand damp	-	-	N
	ASP10	1'	23	48	2.09	0.26	542	sandy sand damp	-	548	N
31-May	ASP11	1'	-	-	-	-	-	sandy sand damp	400.0	-	N
	ASP12	1'	-	-	-	-	-	sandy sand damp	292.8	-	N
	ASP13	1'	-	-	-	-	-	sandy sand damp	432.0	-	N
	ASP14	1'	-	-	-	-	-	sandy sand damp	370.4	-	N
	ASP15	1'	-	-	-	-	-	sandy sand damp	334.4	-	N
	ASP16	1'	-	-	-	-	-	sandy sand damp	332	-	N
	ASP17	1'	-	-	-	-	-	sandy sand damp	393.2	-	N
	ASP18	1'	-	-	-	-	-	sandy sand damp	338.8	-	N
	ASP19	1'	-	-	-	-	-	sandy sand damp	644	-	N
1-Jun	ASP20	1'	-	-	-	-	-	sandy sand damp	334	316	N
	ASP21	1'	-	-	-	-	-	sandy sand damp	412	-	N
	ASP22	1'	-	-	-	-	-	sandy sand damp	321.6	-	N
	ASP23	1'	-	-	-	-	-	sandy sand damp	548	-	N
	ASP24	1'	-	-	-	-	-	sandy sand damp	389.2	-	N
	ASP25	1'	-	-	-	-	-	sandy sand damp	96	-	N
	ASP26	1'	-	-	-	-	-	sandy sand damp	279.6	-	N
	ASP27	1'	-	-	-	-	-	sandy sand damp	424	-	N
	ASP28	1'	-	-	-	-	-	sandy sand damp	484	-	N
	ASP29	1'	-	-	-	-	-	sandy sand damp	372.8	-	N
	ASP30	1'	-	-	-	-	-	sandy sand damp	572	607	N
	ASP31	1'	-	-	-	-	-	sandy sand damp	195.2	-	N
	ASP32	1'	-	-	-	-	-	sandy sand damp	440	-	N
	ASP33	1'	-	-	-	-	-	sandy sand damp	393.6	-	N
	ASP34	1'	-	-	-	-	-	sandy sand damp	356.8	-	N
	ASP35	1'	-	-	-	-	-	sandy sand damp	314.8	-	N
	ASP36	1'	-	-	-	-	-	sandy sand damp	412	-	N

	ASP37	1'	-	-	-	-	-	sandy sand damp	387.2	-	N
	ASP38	1'	-	-	-	-	-	sandy sand damp	294	-	N
	ASP39	1'	-	-	-	-	-	sandy sand damp	397.6	-	N
	ASP40	1'	-	-	-	-	-	sandy sand damp	223.6	200	N
	ASP41	1'	-	-	-	-	-	sandy sand damp	118	180	N
	ASP42	1'	-	-	-	-	-	sandy sand damp	131.6	183	N
	ASP43	1'	-	-	-	-	-	sandy sand damp	266	380	N
	ASP44	1'	-	-	-	-	-	sandy sand damp	106.4	176	N
	ASP45	1'	-	-	-	-	-	sandy sand damp	293.2	388	N
	ASP46	1'	-	-	-	-	-	sandy sand damp	142	202	N
	ASP47	1'	-	-	-	-	-	sandy sand damp	98	163	N
	ASP48	1'	-	-	-	-	-	sandy sand damp	229.2	322	N
	ASP49	1'	-	-	-	-	-	sandy sand damp	180.8	195	N
	ASP50	1'	-	-	-	-	-	sandy sand damp	130.8	192	N
	ASP51	1'	-	-	-	-	-	sandy sand damp	113.6	-	N
	ASP52	1'	-	-	-	-	-	sandy sand damp	250.4	-	N
	ASP53	1'	-	-	-	-	-	sandy sand damp	280.4	-	N
	ASP54	1'	-	-	-	-	-	sandy sand damp	201.6	-	N
	ASP55	1'	-		-	-	-	sandy sand damp	209.2	-	N
	ASP56	1'	-		-	-	-	sandy sand damp	124.4	-	N
	ASP57	1'	-	-	-	-	-	sandy sand damp	117.6	-	N
	ASP58	1'	-	•	-	-	-	sandy sand damp	169.2	-	N
	ASP59	1'	-		-	-	-	sandy sand damp	197.6	-	N
26-Jun	ASP60	1'	-		-	-	-	sandy sand damp	160	-	N
	ASP61	1'	-	•	-	-	-	sandy sand damp	448	-	N
	ASP62	1'	-	1	-	-	-	sandy sand damp	143.2	-	N
							B STOCKPILES	S			
6-Jun	B1	1'	-	ı	-	-	-	sandy sand damp	260	-	N
	B2	1'	-		-	-	-	sandy sand damp	329.6	-	N
	В3	1'	-	1	-	-	-	sandy sand damp	254	-	N
	B4	1'	-	1	-	-	-	sandy sand damp	260	-	N
	B5	1'	-	1	-	-	-	sandy sand damp	329.6	-	N
	В6	1'	-	1	-	-	-	sandy sand damp	254	-	N
	B7	1'	-	-	-	-	-	sandy sand damp	138	-	N

	B8	1'	-	-	-	-	-	sandy sand damp	249.6	-	N
	B9	1'	-	•	-	1	1	sandy sand damp	137.6	-	N
	B10	1'	-		-	ı	1	sandy sand damp	291.2	296	N
	B11	1'	-	-	-			sandy sand damp	580	-	N
	B12	1'	-	-	-	-	-	sandy sand damp	428	-	N
	B13	1'	-	-	-	-	-	sandy sand damp	260.4	-	N
	B14	1'	-	-	-	-	-	sandy sand damp	104.8	-	N
	B15	1'	-	-	-			sandy sand damp	296.8	-	N
	B16	1'	-	-	-	-	-	sandy sand damp	277.6	-	N
	B17	1'	-	-	-	-	-	sandy sand damp	283.2	-	N
	B18	1'	-	-	-	-	-	sandy sand damp	452	-	N
	B19	1'	-	-	-			sandy sand damp	208.4	-	N
	B20	1'	-	-	-		-	sandy sand damp	354.8	127	N
	B21	1'	-		-	ı	1	sandy sand damp	243.6	-	N
	B22	1'	-		-	ı	1	sandy sand damp	334	-	N
	B23	1'	-	-	-			sandy sand damp	456	-	N
	B24	1'	-	-	-		-	sandy sand damp	386.4	-	N
	B25	1'	-		-	ı	1	sandy sand damp	1376	-	Υ
	B26	1'	-	-	-			sandy sand damp	524	-	N
	B27	1'	-	-	-	-	-	sandy sand damp	1016	-	Υ
	B28	1'	-	-	-		-	sandy sand damp	296	-	N
	B29	1'	-	-	-	-	-	sandy sand damp	584	-	N
	B30	1'	-	-	-	-	-	sandy sand damp	257.6	266	N
	B31	1'	-	-	-	-	-	sandy sand damp	276.8	-	N
26-Apr	BSP1	1'	19	49	2.58	0.07	180	sandy sand damp	-	-	N
	BSP2	1'	15	49	3.27	0.28	914	sandy sand damp	-	-	Υ
	BSP3	1'	15	46	3.07	0.17	521	sandy sand damp	-	-	N
	BSP4	1'	16	42	2.63	0.19	499	sandy sand damp	-	-	N
	BSP5	1'	15	51	3.40	0.27	918	sandy sand damp	-	-	Υ
	BSP6	1'	18	51	2.83	0.53	1501	sandy sand damp	-	-	Υ
	BSP7	1'	16	50	3.13	0.38	1187	sandy sand damp	-	-	Υ
	BSP8	1'	15	50	3.33	0.26	866	sandy sand damp	-	-	Υ
	BSP9	1'	20	54	2.70	0.29	783	sandy sand damp	-	-	Υ
	BSP10	1'	19	49	2.58	0.27	696	sandy sand damp	-	-	N

	BSP11	1'	16	50	3.13	0.31	968	sandy sand damp	-	-	Υ
	BSP12	1'	23	44	1.91	0.43	822	sandy sand damp	-	-	Υ
	BSP13	1'	22	44	2.00	0.77	1540	sandy sand damp	-	-	Υ
	BSP14	1'	18	44	2.44	0.62	1515	sandy sand damp	-	-	Υ
	BSP15	1'	18	42	2.33	0.51	1190	sandy sand damp	-	-	Υ
	BSP16	1'	19	43	2.26	0.57	1290	sandy sand damp	-	-	Υ
	BSP17	1'	19	50	2.63	0.34	894	sandy sand damp	-	-	Υ
	BSP18	1'	25	37	1.48	0.17	252	sandy sand damp	-	-	N
	BSP19	1'	17	43	2.53	0.48	1214	sandy sand damp	-	-	Υ
	BSP20	1'	18	47	2.61	0.2	522	sandy sand damp	-	-	N
	BSP21	1'	15	45	3.00	0.15	450	sandy sand damp	-	-	N
	BSP22	1'	17	51	3.00	0.15	450	sandy sand damp	-	-	N
	BSP23	1'	19	45	2.37	0.09	213	sandy sand damp	-	-	N
	BSP24	1'	21	43	2.05	0.1	205	sandy sand damp	-	-	N
	BSP25	1'	23	42	1.83	0.18	329	sandy sand damp	-	-	N
	BSP26	1'	24	47	1.96	0.28	548	sandy sand damp	-	-	N
	BSP27	1'	24	46	1.92	0.51	977	sandy sand damp	-	-	Υ
	BSP28	1'	18	47	2.61	0.18	470	sandy sand damp	-	-	N
	BSP29	1'	21	45	2.14	0.19	407	sandy sand damp	-	-	N
	BSP30	1'	19	44	2.32	0.4	926	sandy sand damp	-	-	Υ
	BSP31	1'	18	45	2.50	0.46	1150	sandy sand damp	-	-	Υ
	BSP32	1'	19	48	2.53	0.65	1642	sandy sand damp	-	-	Υ
	BSP33	1'	19	46	2.42	0.36	871	sandy sand damp	-	-	Υ
	BSP34	1'	19	48	2.53	0.34	859	sandy sand damp	-	-	Υ
	BSP35	1'	22	46	2.09	0.75	1568	sandy sand damp	-	-	Υ
	BSP36	1'	22	47	2.14	0.5	1068	sandy sand damp	-	-	Υ
	BSP37	1'	19	43	2.26	0.84	1900	sandy sand damp	-	-	Υ
	BSP38	1'	22	42	1.91	0.81	1546	sandy sand damp	-	-	Υ
	BSP39	1'	18	41	2.28	0.28	638	sandy sand damp	-	-	N
	BSP40	1'	24	44	1.83	0.75	1375	sandy sand damp	-	-	Υ
	*Stockpile	s in secti	on B w	ere reblende	d with sec	tions C an	d F.				
						C	STOCKPIL	ES			
27-Apr	CSP1	1'	19	46	2.42	0.16	387	sandy sand damp	-	-	N
							ı				

CSP2

17

46

2.71

0.15

406

sandy sand damp

Ν

	CSP3	1'	15	44	2.93	0.12	352	sandy sand damp	-	-	N
	CSP4	1'	12	48	4.00	0.2	800	sandy sand damp	-	-	N
	CSP5	1'	19	45	2.37	0.17	403	sandy sand damp	-	-	N
	CSP6	1'	14	43	3.07	0.3	921	sandy sand damp	-	-	N
	CSP7	1'	18	49	2.72	0.52	1415	sandy sand damp	-	-	Υ
	CSP8	1'	17	48	2.82	0.3	847	sandy sand damp	-	-	N
	CSP9	1'	19	44	2.32	0.24	556	sandy sand damp	-	-	N
	CSP10	1'	22	47	2.14	0.46	982	sandy sand damp	-	*	N
	CSP11	1'	22	43	1.95	0.64	1251	sandy sand damp	-	-	Υ
	CSP12	1'	17	43	2.53	0.39	986	sandy sand damp	-	-	N
	CSP13	1'	15	46	3.07	0.56	1717	sandy sand damp	-	-	Υ
	CSP14	1'	19	46	2.42	0.27	653	sandy sand damp	-	-	N
	CSP15	1'	21	46	2.19	0.43	942	sandy sand damp	-	-	N
	CSP16	1'	24	41	1.71	0.44	751	sandy sand damp	-	-	N
	CSP17	1'	19	47	2.47	0.26	643	sandy sand damp	-	-	N
	CSP18	1'	18	46	2.56	0.3	766	sandy sand damp	-	-	N
	CSP19	1'	28	40	1.43	0.59	843	sandy sand damp	-	-	N
	CSP20	1'	17	43	2.53	0.3	759	sandy sand damp	-	*	N
	CSP21	1'	14	41	2.93	0.18	527	sandy sand damp	-	-	N
	CSP22	1'	16	40	2.50	0.38	950	sandy sand damp	-	-	N
	CSP23	1'	15	46	3.07	0.15	460	sandy sand damp	-	-	N
	CSP24	1'	15	41	2.73	0.23	628	sandy sand damp	-	-	N
	CSP25	1'	16	41	2.56	0.28	717	sandy sand damp	-	-	N
	CSP26	1'	15	47	3.13	0.32	1002	sandy sand damp	-	-	Υ
lay	CSP27	1'	-	-	-	-	-	sandy sand damp	469.0	-	N
	CSP28	1'	-	-	-	-	-	sandy sand damp	516.0	-	N
	CSP29	1'	-	-	-	-	-	sandy sand damp	664.0	-	N
	CSP30	1'	-	-	-	-	-	sandy sand damp	320.8	*	N
	CSP31	1'	-	-	-	-	-	sandy sand damp	456	-	N
	CSP32	1'	-	-	-	-	-	sandy sand damp	548	-	N
	CSP33	1'	-	-	-	-	-	sandy sand damp	391.2	-	N
	CSP34	1'	-	-	-	-	-	sandy sand damp	512	-	N
	CSP35	1'	-	-	-	-	-	sandy sand damp	576	-	N
	CSP36	1'	-	-	-	-	-	sandy sand damp	307.6	-	N

17-May

CSP37	1'	-	-	-	-	-	sandy sand damp	159.2	-	N
CSP38	1'	-	-	-	-	-	sandy sand damp	129.2	-	N
CSP39	1'	-	-	-	-	-	sandy sand damp	266.4	-	N
CSP40	1'	-	-	-	-	-	sandy sand damp	236	*	N
CSP41	1'	-	-	-	-	-	sandy sand damp	147.2	-	N
CSP42	1'	-	-	-	-	-	sandy sand damp	226.8	-	N
CSP43	1'	-	-	-	-	-	sandy sand damp	179.6	-	N
CSP44	1'	-	-	-	-	-	sandy sand damp	242.8	-	N
CSP45	1'	-	-	-	-	-	sandy sand damp	396.4	-	N
CSP46	1'	-	-	-	-	-	sandy sand damp	272.8	-	N
CSP47	1'	-	-	-	-	-	sandy sand damp	780	-	Υ
CSP48	1'	-	-	-	-	-	sandy sand damp	354.8	-	N
CSP49	1'	-	-	-	-	-	sandy sand damp	696	-	N
CSP50	1'	-	-	-	-	-	sandy sand damp	500	*	N
CSP51	1'	-	-	-	-	-	sandy sand damp	432	-	N
CSP52	1'	-	-	-	-	-	sandy sand damp	500	-	N
CSP53	1'	-	-	-	-	-	sandy sand damp	904	-	Υ
CSP54	1'	-	-	-	-	-	sandy sand damp	984	-	Υ
CSP55	1'	-	-	-	-	-	sandy sand damp	828	-	Υ
CSP56	1'	-	-	-	-	-	sandy sand damp	792	-	Υ
CSP57	1'	-	-	-	-	-	sandy sand damp	592	-	N
CSP58	1'	-	-	-	-	-	sandy sand damp	472	-	N
CSP59	1'	-	-	-	-	-	sandy sand damp	600	-	N
CSP60	1'	-	-	-	-	-	sandy sand damp	916	*	Υ
CSP61	1'	-	-	-	-	-	sandy sand damp	816	-	Υ
CSP62	1'	-	-	-	-	-	sandy sand damp	1044	-	Υ
*O+==!:!-		0		والمراجع المراجع المراجع	-4: D	. F				·

^{*}Stockpiles in section C were reblended with sections B and F.

							D STOCKPILE	S			
27-Apr	DSP1	1'	20	45	2.25	0.45	1012	sandy sand damp	-	-	Υ
	DSP2	1'	19	49	2.58	0.37	954	sandy sand damp	-	-	Υ
	DSP3	1'	17	48	2.82	0.52	1468	sandy sand damp	-	-	Υ
	DSP4	1'	20	46	2.30	0.5	1150	sandy sand damp	-	-	Υ
	DSP5	1'	17	46	2.71	0.52	1407	sandy sand damp	-	-	Υ
	DSP6	1'	18	55	3.06	0.32	977	sandy sand damp	-	-	Υ

	DSP7	1'	16	49	3.06	0.53	1623	sandy sand damp	-	-	Υ
	DSP8	1'	19	49	2.58	0.17	438	sandy sand damp	-	-	N
	DSP9	1'	22	48	2.18	0.26	567	sandy sand damp	-	-	N
	DSP10	1'	16	50	3.13	0.24	750	sandy sand damp	-	163	Υ
	DSP11	1'	17	49	2.88	0.25	720	sandy sand damp	-	-	N
	DSP12	1'	16	49	3.06	0.1	306	sandy sand damp	-	-	N
	DSP13	1'	16	44	2.75	0.13	357	sandy sand damp	-	-	N
	DSP14	1'	16	49	3.06	0.11	337	sandy sand damp	-	-	N
	DSP15	1'	19	45	2.37	0.4	947	sandy sand damp	-	-	Υ
	DSP16	1'	16	48	3.00	0.18	540	sandy sand damp	-	-	N
28-Apr	DSP17	1'	17	52	3.06	0.07	214	sandy sand damp	-	-	N
	DSP18	1'	15	50	3.33	0.08	267	sandy sand damp	-	-	N
	DSP19	1'	16	48	3.00	0.17	510	sandy sand damp	-	-	N
	DSP20	1'	16	48	3.00	0.12	360	sandy sand damp	-	169	N
	DSP21	1'	22	48	2.18	0.12	262	sandy sand damp	-	-	N
	DSP22	1'	14	49	3.50	0.07	245	sandy sand damp	-	-	N
	DSP23	1'	19	47	2.47	0.1	247	sandy sand damp	-	-	N
	DSP24	1'	19	44	2.32	0.07	162	sandy sand damp	-	-	N
	DSP25	1'	22	45	2.05	0.13	266	sandy sand damp	-	-	N
	DSP26	1'	17	49	2.88	0.17	490	sandy sand damp	-	-	N
	DSP27	1'	16	48	3.00	0.34	1020	sandy sand damp	-	-	Υ
	DSP28	1'	18	48	2.67	0.36	960	sandy sand damp	-	-	Υ
	DSP29	1'	19	46	2.42	0.14	339	sandy sand damp	-	-	N
	DSP30	1'	19	50	2.63	0.16	421	sandy sand damp	-	346	N
	DSP31	1'	26	42	1.62	0.57	920	sandy sand damp	-	-	Υ
	DSP32	1'	15	54	3.60	0.38	1368	sandy sand damp	-	-	Υ
	DSP33	1'	15	45	3.00	0.16	480	sandy sand damp	-	-	N
	DSP34	1'	15	47	3.13	0.11	345	sandy sand damp	-	-	N
	DSP35	1'	15	54	3.60	0.18	648	sandy sand damp	-	-	N
	DSP36	1'	14	47	3.36	0.46	1544	sandy sand damp	-	-	Υ
	DSP37	1'	22	49	2.23	0.21	468	sandy sand damp	-	-	N
	DSP38	1'	23	47	2.04	0.13	266	sandy sand damp	-	-	N
	DSP39	1'	16	47	2.94	0.15	440	sandy sand damp	-	-	N
	DSP40	1'	14	49	3.50	0.11	385	sandy sand damp	-	284	N

	DSP41	1'	16	46	2.88	0.11	316	sandy sand damp		_	N
	DSP42	1'	16	51	3.19	0.1	319	sandy sand damp	-	-	N
	DSP43	1'	15	48	3.20	0.07	224	sandy sand damp	-	-	N
	DSP44	1'	19	43	2.26	0.12	271	sandy sand damp	-	-	N
	DSP45	1'	21	48	2.29	0.08	183	sandy sand damp	-	-	N
	DSP46	1'	17	45	2.65	0.11	291	sandy sand damp	-	-	N
	DSP47	1'	20	47	2.35	0.1	235	sandy sand damp	-	-	N
	DSP48	1'	21	39	1.86	0.26	483	sandy sand damp	-	-	N
	DSP49	1'	23	42	1.83	0.15	274	sandy sand damp	-	-	N
	DSP50	1'	17	46	2.71	0.16	433	sandy sand damp	-	232	N
	DSP51	1'	17	49	2.88	0.13	375	sandy sand damp	-	-	N
	DSP52	1'	17	45	2.65	0.1	265	sandy sand damp	-	-	N
	DSP53	1'	14	46	3.29	0.08	263	sandy sand damp	-	-	N
	DSP54	1'	19	42	2.21	0.07	155	sandy sand damp	-	-	N
	DSP55	1'	16	45	2.81	0.07	197	sandy sand damp	-	381	N
	DSP56	1'	15	50	3.33	0.06	200	sandy sand damp	-	154	N
	DSP57	1'	13	48	3.69	0.07	258	sandy sand damp	-	155	N
	DSP58	1'	16	45	2.81	0.09	253	sandy sand damp	-	178	N
	DSP59	1'	14	47	3.36	0.09	302	sandy sand damp	-	145	N
	DSP60	1'	15	49	3.27	0.07	229	sandy sand damp	-	151	N
	DSP61	1'	19	47	2.47	0.03	74	sandy sand damp	-	156	N
	DSP62	1'	16	48	3.00	0.1	300	sandy sand damp	-	157	N
	DSP63	1'	17	47	2.76	0.08	221	sandy sand damp	-	139	N
	DSP64	1'	17	49	2.88	0.1	288	sandy sand damp	-	99.5	N
							E STOCKPILE	s			
16-May	ESP1	1'	-	-	-	-	-	sandy sand damp	-	-	N
	ESP2	1'	-	-	-	-	-	sandy sand damp	-	-	N
	ESP3	1'	-	-	-	-	-	sandy sand damp	-	-	N
	ESP4	1'	-	-	-	-	-	sandy sand damp	-	-	N
	ESP5	1'	-	-	-	-	-	sandy sand damp	-	-	N
	ESP6	1'	-	-	-	-	-	sandy sand damp	-	-	N
	ESP7	1'	-	-	-	-	-	sandy sand damp	-	-	N
	ESP8	1'	-	-	-	-	-	sandy sand damp	-	-	N
	ESP9	1'	-	-	-	-	-	sandy sand damp	-	-	N

	ESP10	1'	-	-	-	-	-	sandy sand damp	-	1400	Υ
							F STOCKPILES	S			
3-May	FSP1	1'	19	43	2.26	0.18	407	sandy sand damp	-	-	N
	FSP2	1'	15	45	3.00	0.23	690	sandy sand damp	-	-	N
	FSP3	1'	18	50	2.78	0.26	722	sandy sand damp	-	-	N
	FSP4	1'	17	48	2.82	0.33	931	sandy sand damp	-	-	N
	FSP5	1'	18	45	2.50	0.38	950	sandy sand damp	-	-	N
	FSP6	1'	18	44	2.44	0.38	929	sandy sand damp	-	-	Υ
	FSP7	1'	18	49	2.72	0.3	816	sandy sand damp	-	-	Υ
	FSP8	1'	16	44	2.75	0.21	577	sandy sand damp	-	-	N
	FSP9	1'	15	46	3.07	0.16	491	sandy sand damp	-	-	N
	FSP10	1'	24	42	1.75	0.22	385	sandy sand damp	-	*	N
	FSP11	1'	20	45	2.25	0.18	405	sandy sand damp	-	-	N
	FSP12	1'	21	46	2.19	0.38	832	sandy sand damp	-	-	Υ
	FSP13	1'	17	46	2.71	0.35	947	sandy sand damp	-	-	Υ
	FSP14	1'	19	45	2.37	0.17	403	sandy sand damp	-	-	N
	FSP15	1'	21	43	2.05	0.47	962	sandy sand damp	-	-	Υ
	FSP16	1'	23	43	1.87	0.11	206	sandy sand damp	-	-	N
	FSP17	1'	20	44	2.20	0.15	330	sandy sand damp	-	-	N
	FSP18	1'	17	47	2.76	0.25	691	sandy sand damp	-	-	N
	FSP19	1'	19	46	2.42	0.09	218	sandy sand damp	-	-	N
	FSP20	1'	16	48	3.00	0.19	570	sandy sand damp	-	*	N
	FSP21	1'	19	41	2.16	0.18	388	sandy sand damp	-	-	N
	FSP22	1'	16	49	3.06	0.25	765	sandy sand damp	-	-	Υ
	FSP23	1'	17	48	2.82	0.33	931	sandy sand damp	-	-	Υ
	FSP24	1'	15	45	3.00	0.22	660	sandy sand damp	-	-	N
	FSP25	1'	21	51	2.43	0.08	194	sandy sand damp	-		N
	FSP26	1'	19	46	2.42	0.21	508	sandy sand damp	-	-	N
	FSP27	1'	15	47	3.13	0.12	376	sandy sand damp	-	-	N
	FSP28	1'	20	43	2.15	0.2	430	sandy sand damp	-	-	N
	FSP29	1'	15	49	3.27	0.25	816	sandy sand damp	-	-	Υ
	FSP30	1'	14	50	3.57	0.23	821	sandy sand damp	-	*	Υ
	FSP31	1'	19	47	2.47	0.39	964	sandy sand damp	-	-	Υ
	FSP32	1'	22	49	2.23	0.15	334	sandy sand damp	-	-	N

	FSP33	1'	21	48	2.29	0.21	480	sandy sand damp	-	-	N
4-May	FSP34	1'	15	47	3.13	0.24	752	sandy sand damp	-	-	Y
	FSP35	1'	15	47	3.13	0.37	1159	sandy sand damp	-	-	Υ
	FSP36	1'	17	48	2.82	0.4	1129	sandy sand damp	-	-	Υ
	FSP37	1'	16	47	2.94	0.23	675	sandy sand damp	-	-	N
	FSP38	1'	18	45	2.50	0.08	200	sandy sand damp	-	-	N
	FSP39	1'	22	47	2.14	0.67	1431	sandy sand damp	-	-	Υ
	FSP40	1'	15	49	3.27	0.07	229	sandy sand damp	-	*	N
	FSP41	1'	19	48	2.53	0.28	707	sandy sand damp	-	-	N
	*Stockpile	s in secti	ion F w	ere reblende	ed with sec	ctions B and	H STOCKPILE	<u> </u>			
8-May	H1	1'	-	-	-	-	-	sandy sand damp	350	-	
•	H2	1'	-	-	-	-	-	sandy sand damp	372.8	-	
	H3	1'	-	-	-	-	-	sandy sand damp	480	-	
	H4	1'	-	-	-	-	-	sandy sand damp	560	-	
	H5	1'	-	-	-	-	-	sandy sand damp	460	-	
	H6	1'	-	-	-	-	-	sandy sand damp	424	-	
	H7	1'	-	-	-	-	-	sandy sand damp	492	-	
	H8	1'	-	-	-	-	-	sandy sand damp	424	-	
	H9	1'	-	-	-	-	-	sandy sand damp	656	-	
	H10	1'	-	-	-	-	-	sandy sand damp	404	411	
	H11	1'	-	-	-	-	-	sandy sand damp	480	-	
	H12	1'	-	-	-	-	-	sandy sand damp	436	-	
	H13	1'	-	-	-	-	-	sandy sand damp	484	-	
	H14	1'	-	-	-	-	-	sandy sand damp	520	-	
	H15	1'	-	-	-	-	-	sandy sand damp	321.6	-	
	H16	1'	-	-	-	-	-	sandy sand damp	348.4	-	
	H17	1'	-	-	-	-	-	sandy sand damp	305.2	-	
	H18	1'	-	-	-	-	-	sandy sand damp	369.6	-	
	H19	1'	-	-	-	-	-	sandy sand damp	404	-	
	H20	1'	-	-	-	-	-	sandy sand damp	544	367	
	H21	1'	-	-	-	-	-	sandy sand damp	416	-	
	H22	1'	-	-	-	-	-	sandy sand damp	640	-	

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	H23	1'	-	-	-	-	-	sandy sand damp	576	-	
	H24	1'	-	-	-	-	-	sandy sand damp	492	-	
	H25	1'	-	-	-	-	-	sandy sand damp	444	-	
	H26	1'	-	-	-	-	-	sandy sand damp	448	-	
	H27	1'	-	-	-	-	-	sandy sand damp	564	-	
	H28	1'	-	-	-	-	-	sandy sand damp	408	-	
	H29	1'	-	-	-	-	-	sandy sand damp	352.4	-	
	H30	1'	-	-	-	-	-	sandy sand damp	428	380	
	H31	1'	-	-	-	-	-	sandy sand damp	249.6	-	
	H32	1'	-	-	-	-	-	sandy sand damp	272.8	-	
	H33	1'	-	-	-	-	-	sandy sand damp	395.6	-	
	H34	1'	-	-	-	-	-	sandy sand damp	290.4	-	
	H35	1'	-	-	-	-	-	sandy sand damp	219.2	-	
	H36	1'	-	-	-	-	-	sandy sand damp	504	-	
	H37	1'	-	-	-	-	-	sandy sand damp	416	-	
	H38	1'	-	-	-	-	-	sandy sand damp	392.4	-	
	H39	1'	-	-	-	-	-	sandy sand damp	672	-	
	H40	1'	-	-	-	-	-	sandy sand damp	824	973	
	H41	1'	-	-	-	-	-	sandy sand damp	620	-	
	H42	1'	-	-	-	-	-	sandy sand damp	416	-	
	H43	1'	-	-	-	-	-	sandy sand damp	692	973	
	H44	1'	-	-	-	-	-	sandy sand damp	664	-	
	H45	1'	-	-	-	-	-	sandy sand damp	476	-	
	H46	1'	-	-	-	-	-	sandy sand damp	548	973	
					-	PO	NER LINE SAM	IPLES			
15-Jun	PLS1	1'	-	-	-	-	-	sandy sand damp	4.4	-	N
	PLS2	2'	-	-	-	-	-	sandy sand damp	5.6	-	N
	PLS3	3'	-	-	-	-	-	sandy sand damp	4.8	-	N
	PLS4	4'	-	-	-	-	-	sandy sand damp	12	<4.99	N
	PLS5	1'	-	-	-	-	-	sandy sand damp	9.6	-	N
	PLS6	2'	-	-	-	-	-	sandy sand damp	8.4	-	N
	PLS7	3'	-	-	-	-	-	sandy sand damp	7.6	-	N
	PLS8	4'	-	-	-	-	-	sandy sand damp	8	8.39	N
	PLS9	1'	-	-	-	-	-	sandy sand damp	6.4	-	N

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	PLS10	2'	-	-	-	-	-	sandy sand damp	7.2	-	N
	PLS11	3'	-	-	-	-	-	sandy sand damp	6.8	-	N
	PLS12	4'	-	-	-	-	-	sandy sand damp	9.6	5.83	N
	PLS13	1'	-	-	-	-	-	sandy sand damp	4	-	N
	PLS14	2'	-	-	-	-	-	sandy sand damp	5.6	-	N
	PLS15	3'	-	-	-	-	-	sandy sand damp	4.8	-	N
	PLS16	4'	-	-	-	-	-	sandy sand damp	4.8	6.98	N
	PLS17	1'	-	-	-	-	-	sandy sand damp	4.4	-	N
	PLS18	2'	-	-	-	-	-	sandy sand damp	6	-	N
	PLS19	3'	-	-	-	-	-	sandy sand damp	6.8	-	N
	PLS20	4'	-	-	-	-	-	sandy sand damp	5.6	<4.94	N
	PLS21	1'	-	-	-	-	-	sandy sand damp	7.2	-	N
	PLS22	2'	-	-	-	-	-	sandy sand damp	4.4	-	N
	PLS23	3'	-	-	-	-	-	sandy sand damp	6.8	-	N
	PLS24	4'	-	-	-	-	-	sandy sand damp	8.8	12.4	N
	PLS25	1'	-	-	-	-	-	sandy sand damp	7.2	-	N
	PLS26	2'	-	-	-	-	-	sandy sand damp	6.8	-	N
	PLS27	3'	-	-	-	-	-	sandy sand damp	7.2	-	N
	PLS28	4'	-	-	-	-	-	sandy sand damp	4.4	<4.98	N
	PLS29	1'	-	-	-	-	-	sandy sand damp	5.6	-	N
	PLS30	2'	-	-	-	-	-	sandy sand damp	5.2	-	N
	PLS31	3'	-	-	-	-	-	sandy sand damp	6	-	N
	PLS32	4'	-	-	-	-	-	sandy sand damp	4	10.8	N
	PLS33	1'	-	-	-	-	-	sandy sand damp	4.4	-	N
	PLS34	2'	-	-	-	-	-	sandy sand damp	6.8	-	N
	PLS35	3'	-	-	-	-	-	sandy sand damp	6	-	N
	PLS36	4'	-	-	-	-	-	sandy sand damp	4.8	<4.99	N
	PLS37	1'	-	-	-	-	-	sandy sand damp	5.6	-	N
	PLS38	2'	-	-	-	-	-	sandy sand damp	6.4	-	N
	PLS39	3'	-	-	-	-	-	sandy sand damp	4.8	-	N
	PLS40	4'	-	-	-	-	-	sandy sand damp	5.2	<4.95	N
						MIXED	& BLENDED S	AMPLES			
,	MB1	1'	18	44	2.44	0.04	98	sandy sand damp	-	-	N
	MB2	1'	23	44	1.91	0.07	134	sandy sand damp	-	-	N
-											

8-May

	MB3	1'	22	49	2.23	0.01	22	sandy sand damp	-	-	N
	MB4	1'	15	46	3.07	0.02	61	sandy sand damp	-	-	N
	MB5	1'	15	51	3.40	0.05	170	sandy sand damp	-	-	N
	MB6	1'	19	41	2.16	0.05	108	sandy sand damp	-	-	N
	MB7	1'	18	41	2.28	0.07	159	sandy sand damp	-	-	N
	MB8	1'	20	42	2.10	0.08	168	sandy sand damp	-	-	N
	MB9	1'	18	45	2.50	0.03	75	sandy sand damp	-	-	N
	MB10	1'	16	46	2.88	0.38	1092	sandy sand damp	-	64.7	Y
	MB11	1'	17	46	2.71	0.16	433	sandy sand damp	-	-	N
	MB12	1'	20	52	2.60	0.06	156	sandy sand damp	-	-	N
10-May	DMB2	1'	20	42	2.10	0.4	840	sandy sand damp	-	-	N
	DMB3	1'	21	42	2.00	0.28	560	sandy sand damp	-	-	N
	DMB4	1'	17	46	2.71	0.56	1515	sandy sand damp	-	-	Υ
	DMB5	1'	17	50	2.94	0.27	794	sandy sand damp	-	-	N

LOCATION: OWL BOBCAT/REDHILLS PIPELINE RELEASE SPILL AREA

DATE	Sample Pt.	DEPTH	SOIL	WATER	CF	AgNO ₃	CL-	SOIL LITHOLOGY	FIELD SCREENING HORIBA D-73	LAB RESULTS CL-	BLENDED Y/N
21-Jun	G1	1'	-	-	-	-	-	sandy sand damp	304.4	-	N
	G2	1'	-	-	-	-	-	sandy sand damp	68.8	-	N
	G3	1'	-	-	-	-	-	sandy sand damp	123.2	-	N
	G4	1'	-	-	-	-	-	sandy sand damp	104.4	-	N
	G5	1'	-	-	-	-	-	sandy sand damp	172.4	-	N
	G6	1'	-	-	-	-	-	sandy sand damp	145.6	-	N
	G7	1'	-	-	-	-	-	sandy sand damp	80.4	-	N
	G8	1'	-	-	-	-	-	sandy sand damp	75.6	-	N
	G9	1'	-	-	1	-	•	sandy sand damp	46.4	-	N
	G10	1'	-	-	1	-	•	sandy sand damp	56.4	54.5	N
	G11	1'	-	-	-	-	-	sandy sand damp	51.2	-	N
	G12	1'	-	-	-	-	-	sandy sand damp	79.6	-	N
	G13	1'	-	-	-	-	-	sandy sand damp	67.2	-	N
	G14	1'	-	-	1	-	-	sandy sand damp	58.4	-	N
	G15	1'	-	-	1	-	-	sandy sand damp	224.8	-	N

G16	1'	-	-	-	-	-	sandy sand damp	30.16	-	N
G17	1'	-	-	-	-	-	sandy sand damp	46.4	-	N
G18	1'	-	-	-	-	-	sandy sand damp	42	-	N
G19	1'	-	-	-	-	-	sandy sand damp	40.4	-	N
G20	1'	-	-	-	-	-	sandy sand damp	44.4	58.6	N
G21	1'	-	-	-	-	-	sandy sand damp	43.6	-	N
G22	1'	-	-	-	-	-	sandy sand damp	53.6	-	N
G23	1'	-	-	-	-	-	sandy sand damp	47.2	-	N
G24	1'	-	-	-	-	-	sandy sand damp	46	-	N
G25	1'	-	-	-	-	-	sandy sand damp	34.28	-	N
G26	1'	-	-	-	-	-	sandy sand damp	35	-	N
G27	1'	-	-	-	-	-	sandy sand damp	30	-	N
G28	1'	-	-	-	-	-	sandy sand damp	102.4	-	N
G29	1'	-	-	-	-	-	sandy sand damp	63.6	-	N
G30	1'	-	-	-	-	-	sandy sand damp	41.2	67.3	N
G31	1'	-	-	-	-	-	sandy sand damp	53.2	-	N
G32	1'	-	-	-	-	-	sandy sand damp	47.2	-	N
G33	1'	-	-	-	-	-	sandy sand damp	42	-	Ν
G34	1'	-	-	-	-	-	sandy sand damp	45.6	-	N
G35	1'	-	-	-	-	-	sandy sand damp	33.56	-	N
G36	1'	-	-	-	-	-	sandy sand damp	56.8	-	N
G37	1'	-	•	-	-	-	sandy sand damp	64.4	-	N
G38	1'	ī		-	-	-	sandy sand damp	72.4	-	N
G39	1'	-	-	-	-	-	sandy sand damp	59.2	-	N
G40	1'	-	-	-	-	-	sandy sand damp	6.84	14.9	N
G41	1'	-	-	-	-	-	sandy sand damp	63.2	-	N
G42	1'	-	1	-	-	-	sandy sand damp	126.4	-	N
G43	1'	-	-	-	-	-	sandy sand damp	58.8	-	N
G44	1'	-	-	-	-	-	sandy sand damp	149.6	-	N
G45	1'	-	-	-	-	-	sandy sand damp	120.4	-	N
G46	1'	-	-	-	-	-	sandy sand damp	83.2	-	N
G47	1'	-	-	-	-	-	sandy sand damp	48	-	N
G48	1'	-	-	-	-	-	sandy sand damp	93.2	-	N
G49	1'	-	-	-	-	-	sandy sand damp	50.8	50.6	N



Certificate of Analysis Summary 552683

KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

James Fox

Project Location: Jal, NM

Date Received in Lab: Mon May-08-17 03:00 pm

Report Date: 18-MAY-17

Project Manager: Holly Taylor

	Lab Id:	552683-0	01	552683-0	02	552683-0	03	552683-0	04	552683-0	05	552683-0	06
Analysis Requested	Field Id:	D64		D63		D62		D61		D60		D59	
Anaiysis Kequesieu	Depth:	1 N/A		1 N/A		1 N/A		1 N/A		1 N/A		1 N/A	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-04-17	13:00	May-04-17	3:05	May-04-17	13:10	May-04-17	13:15	May-04-17	13:20	May-04-17	13:25
Inorganic Anions by EPA 300/300.1	Extracted:	May-17-17	08:00	May-17-17 (08:00	May-17-17 (08:00	May-17-17 (08:00	May-17-17	08:00	May-17-17 (08:00
	Analyzed:	May-17-17	12:52	May-17-17 1	3:15	May-17-17	13:22	May-17-17	13:30	May-17-17	13:37	May-17-17	14:00
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		99.5	5.00	139	5.00	157	5.00	156	5.00	151	5.00	145	5.00

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Holly Taylor Project Manager



Certificate of Analysis Summary 552683

KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

James Fox

Project Location: Jal, NM

Date Received in Lab: Mon May-08-17 03:00 pm

Report Date: 18-MAY-17

Project Manager: Holly Taylor

	Lab Id:	552683-0	007	552683-0	08	552683-0	09	552683-0	010		
Analysis Requested	Field Id:	D58		D57		D56		D55			
Anaiysis Requesieu	Depth:	1 N/A		1 N/A		1 N/A		1 N/A			
	Matrix:	SOIL		SOIL		SOIL		SOIL			
	Sampled:	May-04-17	13:30	May-04-17	13:35	May-04-17	13:40	May-04-17	13:45		
Inorganic Anions by EPA 300/300.1	Extracted:	May-17-17	08:00	May-17-17 (08:00	May-17-17 (08:00	May-17-17	08:00		
	Analyzed:	May-17-17	14:08	May-17-17	14:15	May-17-17	14:23	May-17-17	14:31		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		178	5.00	155	5.00	154	5.00	381	5.00		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Version: 1.%

Holly Taylor Project Manager

Analytical Report 552683

for KJE Enviromental & Civil Engineering

Project Manager: James Fox Bobcat/Red Hills Pipeline Release

18-MAY-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





18-MAY-17

Project Manager: **James Fox KJE Environmental & Civil Engineering**500 Mosley Rd

Aubrey, TX 76227

Reference: XENCO Report No(s): 552683

Bobcat/Red Hills Pipeline Release

Project Address: Jal, NM

James Fox:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 552683. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 552683 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

thely Taylor

Holly Taylor

Project Manager

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Sample Cross Reference 552683



KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
D64	S	05-04-17 13:00	- 1 N/A	552683-001
D63	S	05-04-17 13:05	- 1 N/A	552683-002
D62	S	05-04-17 13:10	- 1 N/A	552683-003
D61	S	05-04-17 13:15	- 1 N/A	552683-004
D60	S	05-04-17 13:20	- 1 N/A	552683-005
D59	S	05-04-17 13:25	- 1 N/A	552683-006
D58	S	05-04-17 13:30	- 1 N/A	552683-007
D57	S	05-04-17 13:35	- 1 N/A	552683-008
D56	S	05-04-17 13:40	- 1 N/A	552683-009
D55	S	05-04-17 13:45	- 1 N/A	552683-010



CASE NARRATIVE

Client Name: KJE Environmental & Civil Engineering

Project Name: Bobcat/Red Hills Pipeline Release

Project ID: Report Date: 18-MAY-17 Work Order Number(s): 552683 Date Received: 05/08/2017

Sample receipt non conformances and comments:
Sample receipt non conformances and comments per sample:
None





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D64 Matrix: Soil Date Received:05.08.17 15.00

Lab Sample Id: 552683-001 Date Collected: 05.04.17 13.00 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	99.5	5.00	mg/kg	05.17.17 12.52		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D63 Matrix: Soil Date Received:05.08.17 15.00

Lab Sample Id: 552683-002 Date Collected: 05.04.17 13.05 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep M

Prep Method: E300P

% Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00 Basis: Wet Weight

Seq Number: 3017517

MGO

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	139	5.00	mg/kg	05.17.17 13.15		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

05.17.17 08.00

Sample Id: D62 Matrix: Soil Date Received:05.08.17 15.00

Date Prep:

Lab Sample Id: 552683-003 Date Collected: 05.04.17 13.10 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Wet Weight

Basis:

Tech: MGO % Moisture:

Seq Number: 3017517

Analyst:

MGO

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	157	5.00	mg/kg	05.17.17 13.22		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: Date Received:05.08.17 15.00

Lab Sample Id: 552683-004 Date Collected: 05.04.17 13.15 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	156	5.00	mg/kg	05.17.17 13.30		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D60 Matrix: Soil Date Received:05.08.17 15.00

Lab Sample Id: 552683-005 Date Collected: 05.04.17 13.20 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

MGO % Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00 Basis: Wet Weight

Seq Number: 3017517

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	151	5.00	mg/kg	05.17.17 13.37		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D59 Matrix: Soil Date Received:05.08.17 15.00

Lab Sample Id: 552683-006 Date Collected: 05.04.17 13.25 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

% Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00 Basis: Wet Weight

Seq Number: 3017517

MGO

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	145	5.00	mg/kg	05.17.17 14.00		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D58 Matrix: Soil Date Received:05.08.17 15.00

Lab Sample Id: 552683-007 Date Collected: 05.04.17 13.30 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	178	5.00	mg/kg	05.17.17 14.08		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D57 Matrix: Soil Date Received:05.08.17 15.00

Lab Sample Id: 552683-008 Date Collected: 05.04.17 13.35 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	155	5.00	mg/kg	05.17.17 14.15		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D56 Matrix: Soil Date Received:05.08.17 15.00

Lab Sample Id: 552683-009 Date Collected: 05.04.17 13.40 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	154	5.00	mg/kg	05.17.17 14.23		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D55 Matrix: Soil Date Received:05.08.17 15.00

Lab Sample Id: 552683-010 Date Collected: 05.04.17 13.45 Sample Depth: 1 N/A

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 05.17.17 08.00 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	381	5.00	mg/kg	05.17.17 14.31		1



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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QC Summary 552683

KJE Environmental & Civil Engineering

Bobcat/Red Hills Pipeline Release

Limits

%RPD

Analytical Method: Inorganic Anions by EPA 300/300.1

E300P Prep Method:

Seq Number: 3017517 Matrix: Solid Date Prep: 05.17.17

LCS

LCS Sample Id: 724743-1-BKS MB Sample Id: 724743-1-BLK

MB

LCSD Sample Id: 724743-1-BSD RPD Units Analysis

Flag

Spike LCSD LCSD **Parameter** Result Result Limit Date Amount %Rec %Rec Result

Chloride 250 249 100 90-110 20 05.17.17 12:37 < 5.00 267 107 mg/kg

LCS

Analytical Method: Inorganic Anions by EPA 300/300.1

E300P Prep Method:

Seq Number: 3017517 Matrix: Soil Date Prep: 05.17.17

MS Sample Id: MSD Sample Id: 552656-001 SD Parent Sample Id: 552656-001 552656-001 S

Parent Spike MS MS Limits %RPD RPD Units **MSD** MSD Analysis Flag **Parameter** Result Amount Result %Rec Limit Date Result %Rec Chloride 6.24 250 285 112 327 128 90-110 14 20 mg/kg 05.17.17 14:46 X

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Seq Number: 3017517 Matrix: Soil Date Prep: 05.17.17

MS Sample Id: 552683-001 S MSD Sample Id: 552683-001 SD Parent Sample Id: 552683-001

MS RPD %RPD Parent Spike MS MSD **MSD** Limits Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec Chloride 20 05.17.17 12:59 99.5 250 362 105 363 105 90-110 0 mg/kg



CHAIN OF CUSTODY

Dallas Texas (214-902-0300) Stafford, Texas (281-240-4200)

Midland, Texas (432-704-5251) San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

		www.xenco.com	Xenco	Quote #	Xenco Job # 552	2483
Client / Reporting Information	1577			Analytical Information	ation	Matrix Codes
company Name / Branch: KJE	Project Na	Project Name/Number: Robert / Post / 1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/1/	Di. 1' D. 1			W = Water
company Address: 500 Moscley Rd, COSS Roads, TX		Jal, NM	Therese Central			S = Soil/Sed/Solid GW =Ground Water DW = Drinking Water
James a Julian Kjenviron muntalicom	Invoid	oilwater logistics (owt)	()			P = Product SW = Surface water SL = Sludge
roject Contact: Jaws Fox - 940 - 387 - 0805	PO Numb					OW =Ocean/Sea Water WI = Wipe
Samplers's Name	TO Number:	67.	·d	~		0 = 01
	Collection		Number of preserved bottles			WW= Waste Water A = Air
INO. FISH ID / FUIL OF CORECTION	Sample Depth Date	Time Watrix bottles HCI	aOH aHSO4 EOH ONE			1
1 Db4	10	S	h			neid Comments
2 D63		1305	- "			
3 062		1310				
4 061		1315				
5 060		1320				
6 D 59		13 25				
7 058		1330				
8 057		1335				
9 056		13 40				
10 0 55	4	1345 4	-			
Turnaround Time (Business days)		Data Deliverable Information			Notes:	
Same Day TAT S 5 Day TAT		Level II Std QC	Level IV (Full Data Pkg /raw	data)		
Next Day EMERGENCY 7 Day TAT		Level III Std QC+ Forms	TRRP Level IV			
2 Day EMERGENCY Contract TAT		Level 3 (CLP Forms)	UST / RG -411			
3 Day EMERGENCY		TRRP Checklist				
TAT Starts Day received by Lab, if received by 5:00 pm	pm				FED-EX / UPS: Tracking #	
	MUST BE DOCUMEN	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY	POSSESSION, INCLUDING COURIER DEL			
James Fox	5/8 1500	Received By:	Relinquished By:	Date Time:	Received By:	5
5	Date Time:		Relinquished By:	Date Time:	Received By: Ter	Temp:
diameter of	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice	Corrected Temp: 11 4



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: KJE Environmental & Civil Engineering

Date/ Time Received: 05/08/2017 03:00:00 PM

Work Order #: 552683

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		11.4	
#2 *Shipping container in good condition	?	Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seal present on shipping co	ntainer/ cooler?	N/A	
#5 *Custody Seals intact on shipping cor	ntainer/ cooler?	N/A	
#6 Custody Seals intact on sample bottle	es?	N/A	
#7 *Custody Seals Signed and dated?		N/A	
#8 *Chain of Custody present?		Yes	
#9 Sample instructions complete on Cha	in of Custody?	Yes	
#10 Any missing/extra samples?		No	
#11 Chain of Custody signed when relind	quished/ received?	Yes	
#12 Chain of Custody agrees with sampl	e label(s)?	Yes	
#13 Container label(s) legible and intact?		Yes	R9
#14 Sample matrix/ properties agree with	Chain of Custody?	Yes	
#15 Samples in proper container/ bottle?		Yes	
#16 Samples properly preserved?		Yes	
#17 Sample container(s) intact?		Yes	
#18 Sufficient sample amount for indicate	ed test(s)?	Yes	
#19 All samples received within hold time	e?	Yes	
#20 Subcontract of sample(s)?		N/A	
#21 VOC samples have zero headspace	?	N/A	
#22 <2 for all samples preserved with HN samples for the analysis of HEM or HEM-analysts.		N/A	
#23 >10 for all samples preserved with N	laAsO2+NaOH, ZnAc+NaOH?	N/A	
* Must be completed for after-hours de Analyst:	livery of samples prior to placing in PH Device/Lot#:	the refrige	rator
Checklist completed by:	Marithza Anaya	Date: <u>05/0</u>	9/2017
Checklist reviewed by:	Hely Taylor Holly Taylor	Date: <u>05/09</u>	9/2017



Certificate of Analysis Summary 553327

KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

Project Location:

James Fox

Jal, NM

Date Received in Lab: Wed May-17-17 08:19 am

Report Date: 19-MAY-17

Project Manager: Holly Taylor

	Lab Id:	553327-0	001	553327-0	002	553327-0	03	553327-0	04	553327-0	05	553327-0	06
Analysis Requested	Field Id:	MB 10)	E 10		D 10		D 20		D 30		D 40	
Anaiysis Requesieu	Depth:	1 ft		1 ft		1 ft		1 ft		1 ft		1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL	SOIL SOIL		
	Sampled:	May-16-17	15:00	May-16-17	15:05	May-16-17	15:10	May-16-17	15:15	May-16-17	15:20	May-16-17	15:25
Inorganic Anions by EPA 300/300.1	Extracted:	May-18-17	19:50	May-18-17	19:50	May-19-17	1:47	May-19-17	1:47	May-19-17	11:47	May-19-17	11:47
SUB: TX104704215	Analyzed:	May-18-17	21:05	May-18-17	21:14	May-19-17	2:53	May-19-17 13:02		May-19-17 13:11		May-19-17 14:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		64.7	9.98	1400	9.88	163	9.77	169	9.75	346	9.71	284	9.60

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Holly Taylor Project Manager



KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

Project Location:

James Fox

Jal, NM

Date Received in Lab: Wed May-17-17 08:19 am

Report Date: 19-MAY-17

Project Manager: Holly Taylor

	Lab Id:	553327-007			
Analysis Requested	Field Id:	D 50			
Anaiysis Kequesieu	Depth:	1 ft			
	Matrix:	SOIL			
	Sampled:	May-16-17 15:30			
Inorganic Anions by EPA 300/300.1	Extracted:	May-19-17 11:47			
SUB: TX104704215	Analyzed:	May-19-17 14:23			
	Units/RL:	mg/kg RL			
Chloride		232 9.62			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Analytical Report 553327

for KJE Environmental & Civil Engineering

Project Manager: James Fox Bobcat/Red Hills Pipeline Release

19-MAY-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





19-MAY-17

Project Manager: James Fox KJE Environmental & Civil Engineering 500 Mosley Rd Aubrey, TX 76227

Reference: XENCO Report No(s): 553327

Bobcat/Red Hills Pipeline Release

Project Address: Jal, NM

James Fox:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 553327. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 553327 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

thely Taylor

Holly Taylor

Project Manager

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Sample Cross Reference 553327



$KJE\ Environmental\ \&\ Civil\ Engineering,\ Aubrey,\ TX$

Bobcat/Red Hills Pipeline Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
MB 10	S	05-16-17 15:00	- 1 ft	553327-001
E 10	S	05-16-17 15:05	- 1 ft	553327-002
D 10	S	05-16-17 15:10	- 1 ft	553327-003
D 20	S	05-16-17 15:15	- 1 ft	553327-004
D 30	S	05-16-17 15:20	- 1 ft	553327-005
D 40	S	05-16-17 15:25	- 1 ft	553327-006
D 50	S	05-16-17 15:30	- 1 ft	553327-007



CASE NARRATIVE

Client Name: KJE Environmental & Civil Engineering

Project Name: Bobcat/Red Hills Pipeline Release

Project ID: Report Date: 19-MAY-17 Work Order Number(s): 553327 Date Received: 05/17/2017

Sample receipt non conformances and comments:	
Sample receipt non conformances and comments per sample:	
None	





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: MB 10 Matrix: Soil Date Received:05.17.17 08.19

Lab Sample Id: 553327-001 Date Collected: 05.16.17 15.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P % Moisture:

Tech: DHE

Analyst:

DHE

Date Prep: 05.18.17 19.50 Basis: Wet Weight

Seq Number: 3017719 SUB: TX104704215

 Parameter
 Cas Number
 Result
 RL
 Units
 Analysis Date
 Flag
 Dil

 Chloride
 16887-00-6
 64.7
 9.98
 mg/kg
 05.18.17 21.05
 1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: E 10 Matrix: Soil Date Received:05.17.17 08.19

Lab Sample Id: 553327-002 Date Collected: 05.16.17 15.05 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: DHE % Moisture:

Analyst: DHE Date Prep: 05.18.17 19.50 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1400	9.88	mg/kg	05.18.17 21.14		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: **D 10** Matrix: Soil Date Received:05.17.17 08.19

Lab Sample Id: 553327-003 Date Collected: 05.16.17 15.10 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: DHE % Moisture:

Analyst: DHE Date Prep: 05.19.17 11.47 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	163	9.77	mg/kg	05.19.17 12.53		1	





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D 20 Matrix: Soil Date Received:05.17.17 08.19

Lab Sample Id: 553327-004 Date Collected: 05.16.17 15.15 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: DHE % Moisture:

Analyst: DHE Date Prep: 05.19.17 11.47 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	169	9.75	mg/kg	05.19.17 13.02		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D 30 Matrix: Soil Date Received:05.17.17 08.19

Lab Sample Id: 553327-005 Date Collected: 05.16.17 15.20 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: DHE % Moisture:

Analyst: DHE Date Prep: 05.19.17 11.47 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	346	9.71	mg/kg	05.19.17 13.11		1	



DHE

Tech:

Certificate of Analytical Results 553327



KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: **D 40** Matrix: Soil Date Received:05.17.17 08.19

Lab Sample Id: 553327-006 Date Collected: 05.16.17 15.25 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

% Moisture:

Analyst: DHE Date Prep: 05.19.17 11.47 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Chloride	16887-00-6	284	9.60	mg/kg	05.19.17 14.13		1	





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: D 50 Matrix: Soil Date Received:05.17.17 08.19

Lab Sample Id: 553327-007 Date Collected: 05.16.17 15.30 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: DHE

% Moisture:

Analyst: DHE Date Prep: 05.19.17 11.47

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	232	9.62	mg/kg	05.19.17 14.23		1



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238 (210) 509-3334 (210) 509-3335
1211 W Florida Ave, Midland, TX 79701 (432) 563-1800 (432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282 (602) 437-0330



QC Summary 553327

KJE Environmental & Civil Engineering

Bobcat/Red Hills Pipeline Release

LCSD

LCSD

LCSD

%Rec

100

Analytical Method: Inorganic Anions by EPA 300/300.1

MB

E300P Prep Method:

Seq Number: 3017719 Matrix: Solid Date Prep: 05.18.17

LCS

LCS

LCS Sample Id: 724873-1-BKS MB Sample Id: 724873-1-BLK

Spike

LCSD Sample Id: 724873-1-BSD RPD

Units

Parameter Result Result Limit Date Amount %Rec %Rec Result

Chloride 9.92 99 80-120 20 05.18.17 20:00 <1.00 10.0 9.99 100 mg/kg

Analytical Method: Inorganic Anions by EPA 300/300.1

E300P Prep Method:

Units

mg/kg

Seq Number: 3017764 Matrix: Solid

Date Prep:

20

05.19.17

MB Sample Id:

724904-1-BLK

LCS Sample Id: 724904-1-BKS LCSD Sample Id:

724904-1-BSD

Parameter

Chloride

MB

LCS LCS

%Rec

101

Result

10.1

LCSD

Result

10.0

%RPD RPD Limit

1

%RPD

Analysis

05.19.17 11:57

Analysis

Flag

Flag Date

Analytical Method: Inorganic Anions by EPA 300/300.1

3017719 Matrix: Soil

Spike

100

Amount

Spike

10.0

Amount

Prep Method:

E300P

Seq Number:

771

Result

19600

Result

<1.00

Date Prep:

Date Prep:

20

05.18.17

Parent Sample Id: 553187-001 MS Sample Id: 553187-001 S

89

MSD Sample Id: 553187-001 SD

mg/kg

Parameter

MS MS

MSD **MSD** Limits %RPD

Limits

Limits

80-120

RPD Units Limit

Analysis Flag

Chloride

Parent Result

Result %Rec 860

Result 857 %Rec 86 80-120

20 0

Date 05.18.17 20:28

Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3017764

Matrix: Soil

106

Prep Method:

1

SW9056P

Parent Sample Id:

05.19.17

MS Sample Id: 553317-001 S MSD Sample Id: 553317-001 SD 553317-001 RPD MS MS %RPD Parent Spike MSD MSD Limits Units **Parameter**

Analysis Flag

X

Chloride

Amount Result

19300

%Rec

Result 19500

%Rec 80-120

0

Limit

mg/kg

Date 05.19.17 14:42

Page 15 of 18

Final 1.000



CHAIN OF CUSTODY

Dallas Texas (214-902-0300) Stafford, Texas (281-240-4200) Setting the Standard since 1990 Midland, Texas (432-704-5251) San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

		+		80008	
Client / Reporting Information	Project		Analytical Information		Matrix Codes
company Name / Branch: KJ Environmental	Project Name/Number:			W	W = Water
eds,	Project Location:	11 peline	Kellaxe	S S S	S = Soil/Sed/Solid GW =Ground Water
mail: Phone No:	Invoice	DWL - oilfield Water Logistics		S S V	P = Product SW = Surface water SI = Sludge
roject Contact: James Fox 940-368-3535	PO Nu	0	5	W OV	OW =Ocean/Sea Water WI = Wipe
			des	≸ 0	O = Oil
No. Field ID / Point of Collection	ion	CCI ACH/Zn NO3 OT Pressive et al. OH HISO4	Chlorid	> 5	WW= Waste Water A = Air
1 MB 10	5/15 1500	HIC Na Ac HIC H2 Na Na	< NO	Field C	Field Comments
2 € 10	_		- >		
3 D 10	1 1510				
4 D 20	1315				
5 D 30	() 1520				
6 040	() 1828				
7 050	1, 1 1230	(<		
9					
10					
Turnaround Time (Business days)		Data Deliverable Information			
Same Day TAT 5 Day TAT	Level	Level II Std QC Level IV (Full Data Pkg /raw.d		Notes:	
Next Day EMERGENCY 7 Day TAT	Level	Level III Std QC+ Forms TRRP Level IV			
2 Day EMERGENCY Contract TAT	Level				
3 Day EMERGENCY	TRRP Checklist				
TAT Starts Day received by Lab, if received by 5:00 pm					
	WUST BE DOCUMENTED BELOW EACH	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE DOSSESSION MOTOR CONTROL OF THE PROPERTY OF T		FED-EX / UPS: Tracking #	
Sampler: PX	Date Time: Received By:	Relinquished By:	y: Date Time:	Received By:	
ē		Relinquished By:	y: Date Time:	Received By:	
Relinquished by:	Date Time: Received By:		Preserved where applicable	4 On les Coole Terro	



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Houston IOS #: 1043851

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sent By:	Jessica Kramer	Date Sent:	05/17/2017 11:30 AM
Received By:	Maria Paula Guerra	Date Received:	05/18/2017 09:30 AM

Received By: Maria Paula Guerra	Date Received: 05/18/2017	09:30 AM	
	Sample Receipt Check	dist	Comments
#1 *Temperature of cooler(s)?		2.6	
#2 *Shipping container in good condition	on?	Yes	
#3 *Samples received with appropriate	temperature?	Yes	
#4 *Custody Seals intact on shipping c	ontainer/ cooler?	N/A	
#5 *Custody Seals Signed and dated for	or Containers/coolers	N/A	
#6 *IOS present?		Yes	
#7 Any missing/extra samples?		No	
#8 IOS agrees with sample label(s)/ma	ıtrix?	Yes	
#9 Sample matrix/ properties agree wit	h IOS?	Yes	
#10 Samples in proper container/ bottle	e?	Yes	
#11 Samples properly preserved?		Yes	
#12 Sample container(s) intact?		N/A	
#13 Sufficient sample amount for indic	ated test(s)?	Yes	
#14 All samples received within hold ti	me?	Yes	
* Must be completed for after-hours d NonConformance:	elivery of samples prior to pla	acing in the refrigerator	
Corrective Action Taken:			
	Nonconformance Docu	umentation	
Contact:	Contacted by :	Date:	
Checklist reviewed by:	uyaula Guerra Maria Paula Guerra	Date: 05/18/2017	



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: KJE Environmental & Civil Engineering

Date/ Time Received: 05/17/2017 08:19:00 AM

Work Order #: 553327

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used: R8

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		3.1	
#2 *Shipping container in good condition	?	Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seal present on shipping co	ntainer/ cooler?	N/A	
#5 *Custody Seals intact on shipping cor	ntainer/ cooler?	N/A	
#6 Custody Seals intact on sample bottle	s?	N/A	
#7 *Custody Seals Signed and dated?		N/A	
#8 *Chain of Custody present?		Yes	
#9 Sample instructions complete on Cha	in of Custody?	Yes	
#10 Any missing/extra samples?		No	
#11 Chain of Custody signed when relind	quished/ received?	Yes	
#12 Chain of Custody agrees with sampl	e label(s)?	Yes	
#13 Container label(s) legible and intact?)	Yes	
#14 Sample matrix/ properties agree with	Chain of Custody?	Yes	
#15 Samples in proper container/ bottle?		Yes	
#16 Samples properly preserved?		Yes	
#17 Sample container(s) intact?		Yes	
#18 Sufficient sample amount for indicate	ed test(s)?	Yes	
#19 All samples received within hold time	e?	Yes	
#20 Subcontract of sample(s)?		Yes	Houston
#21 VOC samples have zero headspace	?	N/A	
#22 <2 for all samples preserved with HN samples for the analysis of HEM or HEM- analysts.		N/A	
#23 >10 for all samples preserved with N	laAsO2+NaOH, ZnAc+NaOH?	N/A	
Must be completed for after-hours de		the refrig	erator
Analyst:	PH Device/Lot#:		
Checklist completed by:	Jessica Kramer	Date: <u>05/</u>	17/2017
Checklist reviewed by:	thely Taylor Holly Taylor	Date: <u>05/</u>	17/2017



KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

Project Location:

James Fox

Jal, NM

Date Received in Lab: Thu Jun-01-17 03:00 pm

Report Date: 07-JUN-17

Project Manager: Holly Taylor

	Lab Id:	554471-0	01	554471-0	02	554471-0	03	554471-0	04	554471-0	05	554471-0	06
Analysis Requested	Field Id:	ASP20		ASP30	ASP30		ASP40			ASP42	,	ASP43	
Anatysis Requestea	Depth:	1 ft	1 ft		1 ft		1 ft		1 ft		1 ft		
	Matrix:	SOIL	SOIL			SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-31-17	May-31-17 10:00		May-31-17 12:00		14:00	Jun-01-17 0	9:00	Jun-01-17 09:05		Jun-01-17 09:10	
Inorganic Anions by EPA 300/300.1	Extracted:	Jun-06-17 1	5:15	Jun-06-17 15:15		Jun-06-17 15:15		Jun-06-17 1	5:15	Jun-06-17 15:15		Jun-06-17 1	5:15
	Analyzed:	Jun-06-17 1	5:53	Jun-06-17 1	6:16	Jun-06-17 1	6:24	Jun-06-17 1	6:31	Jun-06-17 1	6:39	Jun-06-17 1	7:02
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		316	4.94	607	4.96	200	4.90	180	4.88	183	4.94	380	4.96

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Version: 1.%



KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

James Fox

Project Location: Jal, NM

Date Received in Lab: Thu Jun-01-17 03:00 pm

Report Date: 07-JUN-17

Project Manager: Holly Taylor

	Lab Id:	554471-0	007	554471-0	554471-008		09	554471-0	10	554471-0	11	554471-0	012
Analysis Requested	Field Id:	ASP44	ļ	ASP45	ASP45		ASP46			ASP48	ASP48)
Anatysis Requestea	Depth:	1 ft	1 ft		1 ft		1 ft		1 ft		1 ft		
	Matrix:	SOIL	SOIL			SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-01-17 (Jun-01-17 09:15		Jun-01-17 10:00		0:15	Jun-01-17 1	0:30	Jun-01-17 1	2:00	Jun-01-17 1	3:00
Inorganic Anions by EPA 300/300.1	Extracted:	Jun-06-17	15:15	Jun-06-17 15:15		Jun-06-17 15:15		Jun-06-17 1	5:15	Jun-06-17 1	5:15	Jun-06-17 1	5:15
	Analyzed:	Jun-06-17	Jun-06-17 17:09		7:17	Jun-06-17 1	7:24	Jun-06-17 1	7:32	Jun-06-17 1	7:40	Jun-06-17 1	8:02
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		176	4.95	388	5.00	202	4.90	163	4.88	322	4.99	195	4.94

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KJE Environmental & Civil Engineering, Aubrey, TX





Project Id: Contact:

Project Location:

James Fox

Jal, NM

Date Received in Lab: Thu Jun-01-17 03:00 pm

Report Date: 07-JUN-17 **Project Manager:** Holly Taylor

	Lab Id:	554471-013			
Analysis Requested	Field Id:	ASP50			
Analysis Requested	Depth:	1 ft			
	Matrix:	SOIL			
	Sampled:	Jun-01-17 14:00			
Inorganic Anions by EPA 300/300.1	Extracted:	Jun-06-17 15:15			
	Analyzed:	Jun-06-17 18:10			
	Units/RL:	mg/kg RL			
Chloride		192 4.98			

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Version: 1.%

Analytical Report 554471

for KJE Environmental & Civil Engineering

Project Manager: James Fox Bobcat/Red Hills Pipeline Release

07-JUN-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





07-JUN-17

Project Manager: **James Fox KJE Enviromental & Civil Engineering**500 Mosley Rd
Aubrey, TX 76227

Reference: XENCO Report No(s): 554471

Bobcat/Red Hills Pipeline Release

Project Address: Jal, NM

James Fox:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 554471. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 554471 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

thely Taylor

Holly Taylor

Project Manager

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Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America



Sample Cross Reference 554471



KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
ASP20	S	05-31-17 10:00	- 1 ft	554471-001
ASP30	S	05-31-17 12:00	- 1 ft	554471-002
ASP40	S	05-31-17 14:00	- 1 ft	554471-003
ASP41	S	06-01-17 09:00	- 1 ft	554471-004
ASP42	S	06-01-17 09:05	- 1 ft	554471-005
ASP43	S	06-01-17 09:10	- 1 ft	554471-006
ASP44	S	06-01-17 09:15	- 1 ft	554471-007
ASP45	S	06-01-17 10:00	- 1 ft	554471-008
ASP46	S	06-01-17 10:15	- 1 ft	554471-009
ASP47	S	06-01-17 10:30	- 1 ft	554471-010
ASP48	S	06-01-17 12:00	- 1 ft	554471-011
ASP49	S	06-01-17 13:00	- 1 ft	554471-012
ASP50	S	06-01-17 14:00	- 1 ft	554471-013



CASE NARRATIVE

Client Name: KJE Environmental & Civil Engineering

Project Name: Bobcat/Red Hills Pipeline Release

Project ID: Report Date: 07-JUN-17 Work Order Number(s): 554471 Date Received: 06/01/2017

Sample receipt non conformances and comments:
Sample receipt non conformances and comments per sample:
None





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP20 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-001 Date Collected: 05.31.17 10.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO

% Moisture:

Basis:

Analyst: MGO

Date Prep: 06.06.17 15.15

Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	316	4.94	mg/kg	06.06.17 15.53		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP30 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-002 Date Collected: 05.31.17 12.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	607	4.96	mg/kg	06.06.17 16.16		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP40 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-003 Date Collected: 05.31.17 14.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO %

% Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	200	4.90	mg/kg	06.06.17 16.24		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP41 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-004 Date Collected: 06.01.17 09.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	180	4.88	mg/kg	06.06.17 16.31		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP42 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-005 Date Collected: 06.01.17 09.05 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	183	4.94	mg/kg	06.06.17 16.39		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP43 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-006 Date Collected: 06.01.17 09.10 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Pre

Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	380	4.96	mg/kg	06.06.17 17.02		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP44 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-007 Date Collected: 06.01.17 09.15 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	176	4.95	mg/kg	06.06.17 17.09		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: Matrix: Soil Date Received:06.01.17 15.00 ASP45

Date Prep:

Lab Sample Id: 554471-008 Date Collected: 06.01.17 10.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

MGO % Moisture:

Tech: MGO Analyst: 06.06.17 15.15 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	388	5.00	mg/kg	06.06.17 17.17		1





Wet Weight

KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP46 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-009 Date Collected: 06.01.17 10.15 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15 Basis:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	202	4.90	mg/kg	06.06.17 17.24		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP47 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-010 Date Collected: 06.01.17 10.30 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

PA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	163	4.88	mg/kg	06.06.17 17.32		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP48 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-011 Date Collected: 06.01.17 12.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	322	4.99	mg/kg	06.06.17 17.40		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: ASP49 Matrix: Soil Date Received:06.01.17 15.00

Lab Sample Id: 554471-012 Date Collected: 06.01.17 13.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

MGO % Moisture:

Analyst: MGO Date Prep: 06.06.17 15.15

Basis: Wet Weight

Seq Number: 3019052

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	195	4.94	mg/kg	06.06.17 18.02		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

06.06.17 15.15

Sample Id: Matrix: Soil Date Received:06.01.17 15.00 ASP50

Lab Sample Id: 554471-013 Date Collected: 06.01.17 14.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO % Moisture:

Analyst:

MGO Date Prep: Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	192	4.98	mg/kg	06.06.17 18.10		1



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 (281) 240-4280

 9701 Harry Hines Blvd , Dallas, TX 75220
 (214) 902 0300
 (214) 351-9139

 5332 Blackberry Drive, San Antonio TX 78238
 (210) 509-3334
 (210) 509-3335

 1211 W Florida Ave, Midland, TX 79701
 (432) 563-1800
 (432) 563-1713

 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282
 (602) 437-0330

Final 1.000



QC Summary 554471

KJE Environmental & Civil Engineering

Bobcat/Red Hills Pipeline Release

E300P

E300P

E300P

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method:

Seq Number: 3019052 Matrix: Solid Date Prep: 06.06.17 MB Sample Id: 725682-1-BLK LCS Sample Id: 725682-1-BKS LCSD Sample Id: 725682-1-BSD

Spike LCS RPD MB LCS Limits %RPD **LCSD** LCSD Units Analysis Flag **Parameter** Result Result Limit Date Amount %Rec %Rec Result

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method:

Seq Number: 3019052 Matrix: Soil Date Prep: 06.06.17

Parent Sample Id: 554471-001 MS Sample Id: 554471-001 S MSD Sample Id: 554471-001 SD

RPD Parent Spike MS MS Limits %RPD Units **MSD** MSD Analysis Flag **Parameter** Amount %Rec Result Result Limit Date Result %Rec

Chloride 316 247 572 104 563 100 90-110 2 20 mg/kg 06.06.17 16:01

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method:

Seq Number: 3019052 Matrix: Soil Date Prep: 06.06.17

Parent Sample Id: 554471-011 MS Sample Id: 554471-011 S MSD Sample Id: 554471-011 SD

MS RPD %RPD Parent Spike MSMSD **MSD** Limits Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec Chloride 322 20 06.06.17 17:47 250 565 97 565 97 90-110 0 mg/kg



CHAIN OF CUSTODY

Stafford, Texas (281-240-4200) Setting the Standard since 1990

Client / Reporting Information	WWW.xenco.com Xenco Quote # Xe
Client / Reporting Information	ject information
Company Addisses: KSE	콩
500 Mose les, cross Roads, Tol	Project Location:
Yanner@ Kyenvironmental . Com	invoice to:
mner Evens 940-368-	S535 PONUMBER:
	- Chamber,
No. Field ID / Point of Collection	Collection Number of preserved buttles
	CI aOH/Zn celate NO3 2SO4 aOH aHSO4 EOH
1 ASP 20	2/3 10 00 E 2/4 E
2 ASC30	_
3 ASP40	
4 45641	-):
0	0405
6 ASTYS	0 9 10
7 45044	0415
8 ASP45	1080
9 ASP46	1015
10 A6 C47	T W 1070
lime (Business days)	Data Deliverable Information
Same Day TAT X 5 Day TAT	Level II Std QC Level IV (Full Data Pkg /raw data)
Next Day EMERGENCY 7 Day TAT	Level III Std QC+ Forms TRRP Level IV
2 Day EMERGENCY Contract TAT	Level 3 (CLP Forms) UST / RG -411
3 Day EMERGENCY	TRRP Checklist
TAT Starts Day received by Lab, if received by 5:00 pm	pm
	BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER
annu Evars	Date Time: Sold Regelved By:
	Date Time: Received By) Relinquished By: Date Time:
reinquisned by:	Date Time: Received By: Custody Seal # Preserved where applicable On Ige Cooler Temp. Thermu

Page 23 of 25

Final 1.000



CHAIN OF CUSTODY

Dallas Texas (214-902-0300) Stafford, Texas (281-240-4200)

San Antonio, Texas (210-509-3334)

Phoenix, Arizona (480-355-0900)

Client / Reporting Information		Particular transfer of the second sec	Analytical	Analytical Information		Matrix Codes
Company Address:	Projec	Project NamerNumber: 308 Cat / Redhills PipBling Releas	elesse		5	W = Water
les Road, cross		Jal N			D 0 "	S = Soil/Sed/Solid GW =Ground Water DW = Drinking Water
MARICO KJEANGOMENTAL	940-366-3 335 PO Number:	G			< 0 to to 10	P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water WI = Wipe
Field ID / Point of Collection	Collection	Shon Number of preserved battles	inide.		. < -	O = 0II WW= Waste Water A = Air
	Sample	The second secon	NE			
1 ASPHE		Marinx Doubles House Name Account Name Name Name Name Name Name Name Name	-		Field	Field Comments
2 ASPU9		1300 1	- 'Y			
3 A S P S 0		0044				
CO 2						
0						
ω -						
9						
10		4				
Turnaround Time (Business days)		Data Deliverable Information				
Same Day TAT S Day TAT			Level IV (Full Data Pkg /raw data)			
Next Day EMERGENCY		Level III Std QC+ Forms TRRP Level IV	d			
2 Day EMERGENCY Contract TAT	AT					
3 Day EMERGENCY						
TAT Starts Day received by Lab, if received by 5:00 pm	5:00 pm				Temn.	5
Relinquished by Sampler:	STODY MUST BE DOCUME	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER	DELIVERY	FED-EX / UPS: Track	CE/O.S. O.S.	IH ID:R-8
Frang	6/1	Received By: (2 / / /) Relinquished By:		Received	(6-23· ±0.2°C)	
3	Date Time;	Received By: Relinquished By:	Date Time:	Receive:	Corrected Temp:	_ ڼ
s reinquished by:	Date Time:	Date Time: Received By: 4 On Custody Seal # Preserved where applicable On Cooler Temp. Thermo. Corr. Factor	Preserved where applicable	pplicable 4	Onlice Cooler Temp.	Thermo, Corr. Factor



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: KJE Enviromental & Civil Engineering

Date/ Time Received: 06/01/2017 03:00:00 PM

Work Order #: 554471

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Date: 06/05/2017

Temperature Measuring device used: R8

	Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?		2.1
#2 *Shipping container in good condition	?	Yes
#3 *Samples received on ice?		Yes
#4 *Custody Seal present on shipping co	ntainer/ cooler?	N/A
#5 *Custody Seals intact on shipping cor	ntainer/ cooler?	N/A
#6 Custody Seals intact on sample bottle	es?	N/A
#7 *Custody Seals Signed and dated?		N/A
#8 *Chain of Custody present?		Yes
#9 Sample instructions complete on Cha	in of Custody?	Yes
#10 Any missing/extra samples?		No
#11 Chain of Custody signed when relind	quished/ received?	Yes
#12 Chain of Custody agrees with sampl	e label(s)?	Yes
#13 Container label(s) legible and intact?		Yes
#14 Sample matrix/ properties agree with	Chain of Custody?	Yes
#15 Samples in proper container/ bottle?		Yes
#16 Samples properly preserved?		Yes
#17 Sample container(s) intact?		Yes
#18 Sufficient sample amount for indicate	ed test(s)?	Yes
#19 All samples received within hold time	e?	Yes
#20 Subcontract of sample(s)?		N/A
#21 VOC samples have zero headspace	?	N/A
* Must be completed for after-hours de	livery of samples prior to placing in	the refrigerator
Analyst:	PH Device/Lot#:	
Checklist completed by:	Jessica Kramer	Date: <u>06/02/2017</u>

Checklist reviewed by: Hely Taylor
Holly Taylor



Certificate of Analysis Summary 554912

KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

Project Location:

James Fox

Jal, NM

Date Received in Lab: Thu Jun-08-17 02:45 pm

Report Date: 12-JUN-17 **Project Manager:** Holly Taylor

	Lab Id:	554912-0	01	554912-0	02	554912-0	03			
Analysis Requested	Field Id:	B10		B20		B30				
Anaiysis Kequesieu	Depth:	1 ft		1 ft		1 ft				
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Jun-08-17 1	3:00	Jun-08-17 1	3:00	Jun-08-17 1	3:00			
Inorganic Anions by EPA 300/300.1	Extracted:	Jun-09-17 1	4:42	Jun-09-17 1	4:42	Jun-09-17 1	4:42			
	Analyzed:	Jun-09-17 1	9:56	Jun-09-17 2	0:03	Jun-09-17 2	0:26			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		296	4.93	127	4.89	266	4.96			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Holly Taylor Project Manager

Analytical Report 554912

for KJE Environmental & Civil Engineering

Project Manager: James Fox Bobcat/Red Hills Pipeline Release

12-JUN-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





12-JUN-17

Project Manager: **James Fox KJE Enviromental & Civil Engineering**500 Mosley Rd
Aubrey, TX 76227

Reference: XENCO Report No(s): **554912**

Bobcat/Red Hills Pipeline Release

Project Address: Jal, NM

James Fox:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 554912. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 554912 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

thely Taylor

Holly Taylor

Project Manager

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Sample Cross Reference 554912



KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
B10	S	06-08-17 13:00	- 1 ft	554912-001
B20	S	06-08-17 13:00	- 1 ft	554912-002
B30	S	06-08-17 13:00	- 1 ft	554912-003



CASE NARRATIVE

Client Name: KJE Environmental & Civil Engineering

Project Name: Bobcat/Red Hills Pipeline Release

Project ID: Report Date: 12-JUN-17 Work Order Number(s): 554912 Date Received: 06/08/2017

Sample receipt non conformances and comments:
Sample receipt non conformances and comments per sample:
None





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: B10 Matrix: Soil Date Received:06.08.17 14.45

Lab Sample Id: 554912-001 Date Collected: 06.08.17 13.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.09.17 14.42 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	296	4.93	mg/kg	06.09.17 19.56		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: **B20** Matrix: Soil Date Received:06.08.17 14.45

Lab Sample Id: 554912-002 Date Collected: 06.08.17 13.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.09.17 14.42 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	127	4.89	mg/kg	06.09.17 20.03		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: Matrix: Soil Date Received:06.08.17 14.45 **B30**

Lab Sample Id: 554912-003 Date Collected: 06.08.17 13.00 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

MGO Analyst: 06.09.17 14.42 Date Prep:

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	266	4.96	mg/kg	06.09.17 20.26		1



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238 (210) 509-3334 (210) 509-3335
1211 W Florida Ave, Midland, TX 79701 (432) 563-1800 (432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282 (602) 437-0330



QC Summary 554912

KJE Environmental & Civil Engineering

Bobcat/Red Hills Pipeline Release

E300P

Analytical Method:Inorganic Anions by EPA 300/300.1Prep Method:Seq Number:3019449Matrix: SolidDate Prep:

 Seq Number:
 3019449
 Matrix:
 Solid
 Date Prep:
 06.09.17

 MB Sample Id:
 725871-1-BLK
 LCS Sample Id:
 725871-1-BKS
 LCSD Sample Id:
 725871-1-BSD

%RPD Spike LCS RPD MB LCS LCSD Limits LCSD Units Analysis Flag **Parameter** Result Result Limit Date Amount %Rec %Rec Result

Chloride <5.00 250 258 103 256 102 90-110 1 20 mg/kg 06.09.17 17:39

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Seq Number: 3019449 Matrix: Soil Date Prep: 06.09.17

Parent Sample Id: 554810-031 MS Sample Id: 554810-031 S MSD Sample Id: 554810-031 SD

RPD Parent Spike MS MS Limits %RPD Units **MSD** MSD Analysis Flag **Parameter** Result Amount Result %Rec Limit Date Result %Rec

Chloride 38.7 248 298 105 297 104 90-110 0 20 mg/kg 06.09.17 19:41

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Seq Number: 3019449 Matrix: Soil Date Prep: 06.12.17

Parent Sample Id: 554810-018 MS Sample Id: 554810-018 S MSD Sample Id: 554810-018 SD

MS RPD %RPD Parent Spike MSMSD **MSD** Limits Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec

Chloride 28.9 244 277 102 271 99 90-110 2 20 mg/kg 06.12.17 13:32



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Dallas Texas (214-902-0300) Stafford, Texas (281-240-4200) Midland, Texas (432-704-5251) San Antonio, Texas (210-509-3334) Phoenix, Arizona (480-355-0900)

Beporting Information Beanch: K) Epul Domond. Scale Red Could by Could Scale Red D/Point of Collection BLO BLO BLO BLO BLO BLO BLO BLO BLO BL	Society Red, Crock Reads, TX Department Name Project Information Froject Information Froje	Baconting information Project	Applied information Branch K.) E part De France-Lo. J. Freide Name and M. Applied Information Branch K.) E part De France-Lo. J. Freide Name and M. Applied Information Branch K.) E part De France-Lo. J. Freide Name and M. Applied Information Branch K.) E part De France-Lo. J. Freide Name and M. Applied Information Branch K.) E part De France-Lo. J. Freide Name and M. Applied Information Branch K.) E part De France-Lo. J. Freide Name and J. A. J. M. M. Sample De Hard Collection Sample De Hard Collection Sample De Hard M. Applied Information Branch The (Bastess days)	Regarding information	Relinquished by:	Relinquished by:	4	Relinquish	IAIO	3 Day] [3000	Next D	Same	1	10	9	ω	7	6	CI	4	ω	2	-	No.	compress name	amolare's Na	roject Contact	ja we	500 1	Company Address:	Clien	
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Project Information Project Information Project Information Project Information: Project Location:	Project Information Project Location: Date Immediate Collection Project Location: Date Immediate Collection Number of preserved bottles Number of preserved	Project Name/Number: Project Name/Number:	Project Information Projec	Project Moundations Projec		7		SAMPLE CUSTO	Lab, if received by 5:		Contract IAI		7 Day TAT	5 Day TAT	ys)											of Collection	rox	1	340.31.0	Phone No:		samouted		
Project Information Name/Number: A M M To: It of Schause - owe of the second of th	Project Information Name/Number: It is Location: A	Analytical Date Time:	Analytical information Analytical information FED-EX / UPS: Traci Pate Time: Receive: Pate Time: Receive: Receive: Receive: Receive:	Analytical Information Analytical Information Fig. 10.2°C) Fig. 10.2°C) Date Time: Receives CF:(0-6: 10.2°C) Pacelves (6-23: +0.2°C) Corrected Temp: A On Ke Coolet Temp:	Date Time:	Date Time:	68 14	DY MUST BE DOCUM	00 pm														1 1	()		170				Invoice		Project		
	TRRP Level IV (Full Data Pkg /rav Data Pkg /rav	Analytical Date Time: Date Time:	Analytical information Analytical information FED-EX / UPS: Traci Pate Time: Receive: Pate Time: Receive: Receive: Rece	Analytical Information Analytical Information Fig. 1 Fig. 1 Fig. 2 Fig. 2 Fig. 3 Fig. 4 Fig. 5 Fig. 6 Fig. 7 Fig. 7	Received By:	Received By	145 Received By:	ENTED BELOW EACH TIME SAMPLES CHANG		TRRP Checklist	Level 3 (CLP Forms)	Level III Std QC+ Forms	Level III Std OC. Target	Level II Std QC	Data Deliverable Info								+		1300 5 1	Time Matrix bottles H		nber:		j.	ial, NM		Project Information	

will be enforced unless previously negotiated under a fully executed client if such loses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be involced at \$5 per sample. These terms

Page 11 of 12

Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: KJE Environmental & Civil Engineering

Date/ Time Received: 06/08/2017 02:45:00 PM

Work Order #: 554912

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used: r8

Sample Ro	eceipt Checklist	Comments
#1 *Temperature of cooler(s)?	4.4	
#2 *Shipping container in good condition?	Yes	
#3 *Samples received on ice?	Yes	
#4 *Custody Seal present on shipping container/ cooler?	N/A	
#5 *Custody Seals intact on shipping container/ cooler?	N/A	
#6 Custody Seals intact on sample bottles?	N/A	
#7 *Custody Seals Signed and dated?	N/A	
#8 *Chain of Custody present?	Yes	
#9 Sample instructions complete on Chain of Custody?	Yes	
#10 Any missing/extra samples?	No	
#11 Chain of Custody signed when relinquished/ received	ed? Yes	
#12 Chain of Custody agrees with sample label(s)?	Yes	
#13 Container label(s) legible and intact?	Yes	
#14 Sample matrix/ properties agree with Chain of Custo	ody? Yes	
#15 Samples in proper container/ bottle?	Yes	
#16 Samples properly preserved?	Yes	
#17 Sample container(s) intact?	Yes	
#18 Sufficient sample amount for indicated test(s)?	Yes	
#19 All samples received within hold time?	Yes	
#20 Subcontract of sample(s)?	N/A	
#21 VOC samples have zero headspace?	N/A	
* Must be completed for after-hours delivery of sample	es prior to placing in the refrige	rator

Must be	completed for after-hours de	livery of samples prior to pla	cing in the refrigerator
Analyst:		PH Device/Lot#:	
	Checklist completed by:	Marithza Anaya	Date: <u>06/08/2017</u>
	Checklist reviewed by:	thely Taylor Holly Taylor	Date: 06/08/2017



Certificate of Analysis Summary 555513

KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

Tanner Evans

Project Location: Jal, NM

Date Received in Lab: Thu Jun-15-17 03:00 pm

Report Date: 22-JUN-17

Project Manager: Holly Taylor

	Lab Id:	555513-0	01	555513-002		555513-003		555513-0	04	555513-0	05	555513-0	06
Analysis Requested	Field Id:	PLS4		PLS8	PLS8		PLS12			PLS20		PLS24	
Anaiysis Requesieu	Depth:	4 ft	4 ft		4 ft		4 ft		4 ft		4 ft		
	Matrix:	SOIL	SOIL		SOIL		SOIL			SOIL		SOIL	
	Sampled:	Jun-14-17 1	n-14-17 12:00 Jur		2:15	5 Jun-14-17 12:30		Jun-14-17 1	2:45	Jun-14-17 13:00		Jun-14-17 1	3:15
Inorganic Anions by EPA 300/300.1	Extracted:	Jun-21-17 1	Jun-21-17 15:30		Jun-21-17 15:30		5:30	Jun-21-17 1	5:30	Jun-21-17 1	5:30	Jun-21-17 1	5:30
	Analyzed: Jun-21-17 15:35		Jun-21-17 1	5:57	Jun-21-17 1	6:05	Jun-21-17 1	6:13	Jun-21-17 1	6:20	Jun-21-17 1	6:43	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		<4.99	4.99	8.39	4.94	5.83	4.95	6.98	4.91	<4.94	4.94	12.4	4.96

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.%

Holly Taylor Project Manager



Certificate of Analysis Summary 555513

KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

Tanner Evans

Project Location: Jal, NM

Date Received in Lab: Thu Jun-15-17 03:00 pm

Report Date: 22-JUN-17

Project Manager: Holly Taylor

	Lab Id:	555513-0	07	555513-0	08	555513-0	09	555513-0	10			
Analysis Requested	Field Id:	PLS28		PLS32		PLS36		PLS40				
Anaiysis Kequesieu	Depth:	4 ft	4 ft		4 ft		4 ft		4 ft			
	Matrix:	SOIL	SOIL		SOIL			SOIL				
	Sampled:	Jun-14-17 1	n-14-17 13:30 Jun		Jun-14-17 13:45		4:00	Jun-14-17 1	4:15			
Inorganic Anions by EPA 300/300.1	Extracted:	Jun-21-17 1	5:30	Jun-21-17 15:30		Jun-21-17 1	5:30	Jun-21-17 1	5:30			
	Analyzed:	Jun-21-17 1	n-21-17 16:51 Jur		6:58	Jun-21-17 17:06		Jun-21-17 1	7:13			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		<4.98	4.98	10.8	4.94	<4.99	4.99	<4.95	4.95			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.%

Holly Taylor Project Manager

Analytical Report 555513

fo

KJE Environmental & Civil Engineering

Project Manager: Tanner Evans Bobcat/Red Hills Pipeline Release

22-JUN-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





22-JUN-17

Project Manager: **Tanner Evans**

KJE Environmental & Civil Engineering

500 Mosley Rd Aubrey, TX 76227

Reference: XENCO Report No(s): 555513

Bobcat/Red Hills Pipeline Release

Project Address: Jal, NM

Tanner Evans:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 555513. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 555513 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

thely Taylor

Holly Taylor

Project Manager

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Sample Cross Reference 555513



KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
PLS4	S	06-14-17 12:00	- 4 ft	555513-001
PLS8	S	06-14-17 12:15	- 4 ft	555513-002
PLS12	S	06-14-17 12:30	- 4 ft	555513-003
PLS16	S	06-14-17 12:45	- 4 ft	555513-004
PLS20	S	06-14-17 13:00	- 4 ft	555513-005
PLS24	S	06-14-17 13:15	- 4 ft	555513-006
PLS28	S	06-14-17 13:30	- 4 ft	555513-007
PLS32	S	06-14-17 13:45	- 4 ft	555513-008
PLS36	S	06-14-17 14:00	- 4 ft	555513-009
PLS40	S	06-14-17 14:15	- 4 ft	555513-010



CASE NARRATIVE

Client Name: KJE Environmental & Civil Engineering

Project Name: Bobcat/Red Hills Pipeline Release

Project ID: Report Date: 22-JUN-17 Work Order Number(s): 555513 Date Received: 06/15/2017

Sample receipt non conformances and comments:
Sample receipt non conformances and comments per sample:
None





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: PLS4 Matrix: Soil Date Received:06.15.17 15.00

Lab Sample Id: 555513-001 Date Collected: 06.14.17 12.00 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.21.17 15.30

Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	06.21.17 15.35	U	1





Wet Weight

KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

06.21.17 15.30

Sample Id: PLS8 Matrix: Soil Date Received:06.15.17 15.00

Date Prep:

Lab Sample Id: 555513-002 Date Collected: 06.14.17 12.15 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Basis:

Tech: MGO % Moisture:

Seq Number: 3020299

Analyst:

MGO

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.39	4.94	mg/kg	06.21.17 15.57		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: PLS12 Matrix: Soil Date Received:06.15.17 15.00

Lab Sample Id: 555513-003 Date Collected: 06.14.17 12.30 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.21.17 15.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	5.83	4.95	mg/kg	06.21.17 16.05		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: PLS16 Matrix: Soil Date Received:06.15.17 15.00

Lab Sample Id: 555513-004 Date Collected: 06.14.17 12.45 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

% Moisture:

Analyst: MGO Date Prep: 06.21.17 15.30 Basis: Wet Weight

Seq Number: 3020299

MGO

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.98	4.91	mg/kg	06.21.17 16.13		1



Seq Number: 3020299

Certificate of Analytical Results 555513



Wet Weight

KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: Matrix: Soil Date Received:06.15.17 15.00 PLS20

Lab Sample Id: 555513-005 Date Collected: 06.14.17 13.00 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

MGO Analyst: Basis: Date Prep: 06.21.17 15.30

Parameter Cas Number Result RLUnits **Analysis Date** Flag Dil Chloride 16887-00-6 U 06.21.17 16.20 <4.94 4.94 mg/kg 1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: PLS24 Matrix: Soil Date Received:06.15.17 15.00

Lab Sample Id: 555513-006 Date Collected: 06.14.17 13.15 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.21.17 15.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	12.4	4.96	mg/kg	06.21.17 16.43		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: PLS28 Matrix: Soil Date Received:06.15.17 15.00

Lab Sample Id: 555513-007 Date Collected: 06.14.17 13.30 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

% Moisture:

Analyst: MGO Date Prep: 06.21.17 15.30 Basis: Wet Weight

Seq Number: 3020299

MGO

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	06.21.17 16.51	U	1



Tech:

Chloride

Seq Number: 3020299

Certificate of Analytical Results 555513



Wet Weight

1

KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

 mg/\overline{kg}

06.21.17 16.58

Sample Id: PLS32 Matrix: Soil Date Received:06.15.17 15.00

Lab Sample Id: 555513-008 Date Collected: 06.14.17 13.45 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

MGO % Moisture:

10.8

Analyst: MGO Date Prep: 06.21.17 15.30 Basis:

16887-00-6

Parameter Cas Number Result RL Units Analysis Date Flag Dil

4.94





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: PLS36 Matrix: Soil Date Received:06.15.17 15.00

Lab Sample Id: 555513-009 Date Collected: 06.14.17 14.00 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Tech: MGO

% Moisture:

Analyst: MGO Date Prep: 06.21.17 15.30 Basis: Wet Weight

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	06.21.17 17.06	U	1





Wet Weight

KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: Matrix: Soil Date Received:06.15.17 15.00 PLS40

Date Prep:

Lab Sample Id: 555513-010 Date Collected: 06.14.17 14.15 Sample Depth: 4 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

MGO % Moisture:

Tech: MGO Analyst: 06.21.17 15.30 Basis:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	06.21.17 17.13	U	1



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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QC Summary 555513

KJE Environmental & Civil Engineering

Bobcat/Red Hills Pipeline Release

E300P

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: Seq Number: 3020299 Matrix: Solid Date Prep:

06.21.17 LCS Sample Id: 726453-1-BKS LCSD Sample Id: 726453-1-BSD MB Sample Id: 726453-1-BLK

Spike LCS RPD MB LCS Limits %RPD **LCSD** LCSD Units Analysis Flag **Parameter** Result Result Limit Date Amount %Rec %Rec Result

Chloride 250 232 93 238 95 90-110 3 20 06.21.17 15:19 < 5.00 mg/kg

E300P Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method:

Seq Number: 3020299 Matrix: Soil Date Prep: 06.21.17

MS Sample Id: MSD Sample Id: 555513-001 SD Parent Sample Id: 555513-001 555513-001 S

Parent Spike MS MS Limits %RPD RPD Units **MSD** MSD Analysis Flag **Parameter** Amount Result Result %Rec Limit Date Result %Rec

Chloride <4.99 250 249 100 266 106 90-110 7 20 mg/kg 06.21.17 15:42

Prep Method: E300P Analytical Method: Inorganic Anions by EPA 300/300.1

Seq Number: 3020299 Matrix: Soil Date Prep: 06.21.17

MS Sample Id: 555516-001 S MSD Sample Id: 555516-001 SD Parent Sample Id: 555516-001

MS RPD %RPD Parent Spike MS MSD **MSD** Limits Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec Chloride 20 06.21.17 17:29 223 249 455 93 457 94 90-110 0

mg/kg

Revision 2016.1

XENCO

CHAIN OF CUSTODY

Setting the Standard since 1990

Stafford, TX (281) 240-4200 Dallas, TX (214) 902-0300

El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296

Midland, TX (432) 704-5440 San Antonio, TX (210) 509-3334

Phoenix, AZ (480) 355-0900 Service Center - Baton Rouge, LA (832) 712-8143

> Service Center- Amarillo, TX (806)678-4514 Service Center- Hobbs, NM (575) 392-7550

Delinerished by	Relinquished by:	Relinquished by Sampler:		TAT Starts Day received by Lab, if received by 5:00 pm	3 Day EMERGENCY	2 Day EMERGENCY	Next Day EMERGENCY	Same Day TAT	Turnaround Time (Business days)	10 brs 70	9 82536	8 81832		b2 578 9	5 6 1 5 20	4 81516	3 61511	2 PLS8	+ PLSH	No. Field ID / Point of Collection	2000	Samplers's Name:	roject Contact: anger Lives	Tanner Clusenvilanninkl. Com 7014 OW	500 MCECLES Road, Cross Roads, TX	Company Name / Branch: 人ンド	Client / Reporting Information		
1	D		SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY	ab, if received by 5:00		Contract TAT	7 Day TAT	S Day TAT	s)														アスシ	Phone No: 830	and cross hours	,,,			
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٥	Reče	1 Rece	MENTED BEL						A	Sihi	1400	1345	1330	1315	1300	5h21	1230	1218	b/4 1200	Date Time	Collection		PO Number:	OWL-0: 1 Field Water Logistics	Project Location:	Project Name/Number/Red 4:115 Pipeline Release			
	Received By:	Received By:	OW EACH TI		Level II R	Level 3 (CLP Forms)	Level III St	Level II Std QC		2 .0	00	ふ	90	4)	8	5	00	-	N	Matrix				0.	1/1	Lumber / R	Project Information		
			ME SAMPLE		eport with	LP Forms)	Level III Std QC+ Forms	d QC	Data Delivera	<								-	•	# of Dottles				19:3	MM	20414	rmation		www.xelico.com
		2/15	S CHANGE F		Level II Report with TRRP checklist		ns [Data Deliverable Information												Numbe			d Wa		8 P.P			-
4	Relinqu	Relinqu	OSSESSION		klist	UST / RG -411	TRRP	Level	ion											HNO3 H2SO4 NaOH	Number of preserved bottles			trh		Eline			
	Relinquished By:	Relinquished By:	, INCLUDING			RG -411	TRRP Level IV	V (Full Data												NaHSO4 MEOH	ed bottles			wist.c		Releas		Ì	
			COURIER DE					Level IV (Full Data Pkg /raw data)		4									×	Chla	r: 6	10		8		7,			
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				FED-EX / UPS: Tracki					Notes:																		7	Analytical Information	
4	Received	Received 2		S: Tracki																									
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	Corrected Temp:	(6-23: +0.2°C)	CF:(0-6: -0.2°C)	エー															1	Field C		1	W	O WI ON	SW.	S W		7	
-	4,5			IR ID:R-8																Field Comments		1	WW = Waste Water	SL-Sludge OW = Ocean/Sea Water WI = Wipe O = Oil	DW = Drinking Water P = Product SW = Surface Water	W = Water S = Soil/Sed/Solid		Matrix Codes	



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: KJE Environmental & Civil Engineering

Date/ Time Received: 06/15/2017 03:00:00 PM

Work Order #: 555513

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used: r8

	Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?		4.5
#2 *Shipping container in good condition	?	Yes
#3 *Samples received on ice?		Yes
#4 *Custody Seal present on shipping co	ontainer/ cooler?	N/A
#5 *Custody Seals intact on shipping cor	ntainer/ cooler?	N/A
#6 Custody Seals intact on sample bottle	es?	N/A
#7 *Custody Seals Signed and dated?		N/A
#8 *Chain of Custody present?		Yes
#9 Sample instructions complete on Cha	in of Custody?	Yes
#10 Any missing/extra samples?		No
#11 Chain of Custody signed when relind	quished/ received?	Yes
#12 Chain of Custody agrees with sampl	e label(s)?	Yes
#13 Container label(s) legible and intact	?	Yes
#14 Sample matrix/ properties agree with	n Chain of Custody?	Yes
#15 Samples in proper container/ bottle?)	Yes
#16 Samples properly preserved?		Yes
#17 Sample container(s) intact?		Yes
#18 Sufficient sample amount for indicat	ed test(s)?	Yes
#19 All samples received within hold time	e?	Yes
#20 Subcontract of sample(s)?		N/A
#21 VOC samples have zero headspace	?	N/A
* Must be completed for after-hours de		the refrigerator
Analyst:	PH Device/Lot#:	
Checklist completed by:	Marithza Anaya	Date: 06/16/2017
Checklist reviewed by:	thely Taylor	Date: 06/16/2017

Holly Taylor



Jal, NM

Certificate of Analysis Summary 556031

KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: OWL



Project Id: 102816D Contact: James Fox

Project Location:

Date Received in Lab: Thu Jun-22-17 01:30 pm

Report Date: 27-JUN-17 **Project Manager:** Holly Taylor

	Lab Id:	556031-0	01	556031-0	02	556031-0	03	556031-0	04	556031-0	005	
Analysis Requested	Field Id:	G10		G20		G30		G40		G49		
Anaiysis Kequesieu	Depth:	1- ft		1- ft		1- ft		1- ft		1- ft		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Jun-22-17 1	2:45	Jun-22-17 1	2:45	Jun-22-17 1	2:45	Jun-22-17 1	2:45	Jun-22-17	12:45	
Inorganic Anions by EPA 300/300.1	Extracted:	Jun-26-17 2	20:17	Jun-26-17 2	0:17	Jun-26-17 2	0:17	Jun-26-17 2	0:17	Jun-26-17 2	20:17	
	Analyzed:	Jun-26-17 2	21:20	Jun-26-17 2	21:43	Jun-26-17 2	1:50	Jun-26-17 2	1:58	Jun-26-17 2	22:05	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		54.5	4.97	58.6	4.97	67.3	4.99	14.9	4.92	50.6	4.98	

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent beest judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Version: 1.%

Holly Taylor Project Manager

Analytical Report 556031

for

KJE Environmental & Civil Engineering

Project Manager: James Fox
OWL
102816D
27-JUN-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





27-JUN-17

Project Manager: James Fox

KJE Environmental & Civil Engineering

500 Mosley Rd Aubrey, TX 76227

Reference: XENCO Report No(s): 556031

OWL

Project Address: Jal, NM

James Fox:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 556031. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 556031 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

thely Taylor

Holly Taylor

Project Manager

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Sample Cross Reference 556031



$\begin{tabular}{ll} \textbf{KJE Environmental \& Civil Engineering, Aubrey, TX} \\ \end{tabular}$

OWL

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
G10	S	06-22-17 12:45	1 ft	556031-001
G20	S	06-22-17 12:45	1 ft	556031-002
G30	S	06-22-17 12:45	1 ft	556031-003
G40	S	06-22-17 12:45	1 ft	556031-004
G49	S	06-22-17 12:45	1 ft	556031-005



CASE NARRATIVE

Client Name: KJE Environmental & Civil Engineering

Project Name: OWL

 Project ID:
 102816D
 Report Date:
 27-JUN-17

 Work Order Number(s):
 556031
 Date Received:
 06/22/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None





Wet Weight

KJE Environmental & Civil Engineering, Aubrey, TX

OWL

06.26.17 20.17

Sample Id: G10 Matrix: Soil Date Received:06.22.17 13.30

Date Prep:

Lab Sample Id: 556031-001 Date Collected: 06.22.17 12.45 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Basis:

Tech: MGO % Moisture:

Seq Number: 3020798

Analyst:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	54.5	4.97	mg/kg	06.26.17 21.20		1





KJE Environmental & Civil Engineering, Aubrey, TX

OWL

06.26.17 20.17

Sample Id: G20 Matrix: Soil Date Received:06.22.17 13.30

Date Prep:

Lab Sample Id: 556031-002 Date Collected: 06.22.17 12.45 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Wet Weight

Basis:

Tech: MGO % Moisture:

Seq Number: 3020798

Analyst:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.6	4.97	mg/kg	06.26.17 21.43		1





Wet Weight

KJE Environmental & Civil Engineering, Aubrey, TX

OWL

06.26.17 20.17

Sample Id: G30 Matrix: Soil Date Received:06.22.17 13.30

Date Prep:

Lab Sample Id: 556031-003 Date Collected: 06.22.17 12.45 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Basis:

Tech: MGO % Moisture:

Seq Number: 3020798

Analyst:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	67.3	4.99	mg/kg	06.26.17 21.50		1





KJE Environmental & Civil Engineering, Aubrey, TX

OWL

Sample Id: G40 Matrix: Soil Date Received:06.22.17 13.30

Lab Sample Id: 556031-004 Date Collected: 06.22.17 12.45 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.26.17 20.17 Basis: Wet Weight

Seq Number: 3020798

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	14.9	4.92	mg/kg	06.26.17 21.58		1





KJE Environmental & Civil Engineering, Aubrey, TX

OWL

Sample Id: G49 Matrix: Soil Date Received:06.22.17 13.30

Lab Sample Id: 556031-005 Date Collected: 06.22.17 12.45 Sample Depth: 1 ft

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 06.26.17 20.17 Basis: Wet Weight

Seq Number: 3020798

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	50.6	4.98	mg/kg	06.26.17 22.05		1



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238 (210) 509-3334 (210) 509-3335
1211 W Florida Ave, Midland, TX 79701 (432) 563-1800 (432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282 (602) 437-0330



QC Summary 556031

KJE Environmental & Civil Engineering

OWL

Analytical Method: Inorganic Anions by EPA 300/300.1

Date Prep: 06.26.17

Prep Method:

E300P

Seq Number: 3020798 Matrix: Solid LCS Sample Id: 726771-1-BKS LCSD Sample Id: 726771-1-BSD MB Sample Id: 726771-1-BLK

%RPD LCS RPD MB Spike LCS LCSD Limits Analysis LCSD Units Flag **Parameter** Result Result Limit Date Amount %Rec %Rec Result

Chloride 250 250 251 100 90-110 20 06.26.17 21:05 < 5.00 100 0 mg/kg

Analytical Method: Inorganic Anions by EPA 300/300.1

E300P Prep Method:

Seq Number: 3020798 Matrix: Soil Date Prep: 06.26.17

MS Sample Id: 556031-001 S MSD Sample Id: 556031-001 SD Parent Sample Id: 556031-001

RPD Parent Spike MS MS Limits %RPD Units **MSD** MSD Analysis Flag **Parameter** Amount Result Result %Rec Limit Date Result %Rec

Chloride 54.5 249 305 101 316 105 90-110 4 20 mg/kg 06.26.17 21:27

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P 3020798

Seq Number: Matrix: Soil Date Prep: 06.26.17 MS Sample Id: 556291-001 S MSD Sample Id: 556291-001 SD Parent Sample Id: 556291-001

MS RPD %RPD **Parent** Spike MSMSD **MSD** Limits Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec

Chloride 654 20 06.26.17 23:14 250 924 108 878 90 90-110 5 mg/kg

CHAIN OF CUSTODY

Matrix Codes	Analytical Information			
Service Center- Hobbs, NM (575) 392-755	Service Center - Baton Rouge, LA (832) 712-8143 Xenco Quote # Xenco Job #	San Antonio, TX (210) 509-3334	Lubbock, TX (806) 794-1296	Dallas, TX (214) 902-0300
Service Center- Amarillo, TX (806)678-4514	Phoenix, AZ (480) 355-0900	Midland, TX (432) 704-5440	El Paso, TX (915) 585-3443	Stafford, TX (281) 240-4200
				Setting the Standard since 1990

		Relinquishe		TAT Star	3 Day E	2 Day E	Next D	Same Day TAT	Tur	10	9	00	7	6	5 9	4 5	5	2 6	1 610	No.		Samplers's Name:	Project Contact:	Kime	nail: dossa	Soo mo	ompany Nai	Client /		
	d by:	Relinquished by Sampler:		TAT Starts Day received by Lab, if received by 5:00 pm	3 Day EMERGENCY	2 Day EMERGENCY	Next Day EMERGENCY	ау ТАТ	Turnaround Time (Business days)						49	940	30	b 20	10	Field ID / Point of Collection		ame: J. Rx	act: J. Fox	Kimes DKjenvironmentch, com	Email: dona & KjenniranentelicomPhone No:	Sou Moseby Rd, (2054 Roads, TX 76227	Company Name / Branch:	Client / Reporting Information		
			SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY	ab, if received by 5:		Contract TAT	7 Day TAT	5 Day TAT	s)											Collection				entch.com	Home No:	Roads, TX +6	red,			
	Date Time:	Date Time:	Y MUST BE D	00 pm											+			-	1,1	Sample Depth										
		17 1330	OCUMENTE												+				6/22	Date	Collection		PO Number:	OW	Invoice To:	Project Location:	Project Name/Number:			
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	Ву:	200	ACH TIME		Level II Report with TRRP checklist	Level 3 (CLP Forms)	Level III Std QC+ Forms	Level II Std QC	Data						+			_	S				,	4.11.		7	020	Project Information		WW
	7	Z.	SAMPLE		ort with	Forms)	C+ Forr	Ö	Data Deliverable Information		-				+				_	# of HCI				S			102	ation		www.xenco.com
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4				FED-EX / UP					Notes:																				Analytical Information	
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	rrect	(6-2	CF:(0-6: -0.2°C)	Temp:																										C
,	ed 16	3: +0	7.0-		4																									0
	Corrected Lemp:	(6-23: +0.2°C)	5	5	00																									0
				1																Field			AW	0 ×	o s	SPDG	S & A			-
	4.5°C	7		B-H:U:H-8																Field Comments			WW = Waste Water A = Air	WI = Wipe O = Oil	SL - Sludge OW = Ocean/Sea Water	DW = Drinking Water P = Product SW = Surface Water	W = Water S = Soil/Sed/Solid		Matrix Codes	
																							iter		a Water	Vater	bi			

Final 1.000



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: KJE Environmental & Civil Engineering

Date/ Time Received: 06/22/2017 01:30:00 PM

Work Order #: 556031

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used: R8

	Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?		4.3
#2 *Shipping container in good condition	?	Yes
#3 *Samples received on ice?		Yes
#4 *Custody Seal present on shipping co	ontainer/ cooler?	N/A
#5 *Custody Seals intact on shipping cor	ntainer/ cooler?	N/A
#6 Custody Seals intact on sample bottle	es?	N/A
#7 *Custody Seals Signed and dated?		N/A
#8 *Chain of Custody present?		Yes
#9 Sample instructions complete on Cha	in of Custody?	Yes
#10 Any missing/extra samples?		No
#11 Chain of Custody signed when relind	quished/ received?	Yes
#12 Chain of Custody agrees with sampl	e label(s)?	Yes
#13 Container label(s) legible and intact?	?	Yes
#14 Sample matrix/ properties agree with	Chain of Custody?	Yes
#15 Samples in proper container/ bottle?		Yes
#16 Samples properly preserved?		Yes
#17 Sample container(s) intact?		Yes
#18 Sufficient sample amount for indicate	ed test(s)?	Yes
#19 All samples received within hold time	e?	Yes
#20 Subcontract of sample(s)?		N/A
#21 VOC samples have zero headspace	?	N/A
* Must be completed for after-hours de Analyst:	livery of samples prior to placing in PH Device/Lot#:	the refrigerator
Checklist completed by: Checklist reviewed by:	Marithza Anaya Hely Taylor Holly Taylor	Date: 06/22/2017 Date: 06/22/2017



Certificate of Analysis Summary 556631

KJE Environmental & Civil Engineering, Aubrey, TX Project Name: Bobcat/Red Hills Pipeline Release





Project Id: Contact:

Project Location:

Tanner Evans

Jal, NM

Date Received in Lab: Thu Jun-29-17 02:33 pm

Report Date: 07-JUL-17 Project Manager: Holly Taylor

	Lab Id:	556631-001			
Analysis Requested	Field Id:	H10			
Anaiysis Kequesieu	Depth:				
	Matrix:	SOIL			
	Sampled:	Jun-28-17 12:00			
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-06-17 14:45			
	Analyzed:	Jul-06-17 21:11			
	Units/RL:	mg/kg RL			
Chloride		411 4.96			

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Holly Taylor Project Manager

Analytical Report 556631

for KJE Environmental & Civil Engineering

Project Manager: Tanner Evans Bobcat/Red Hills Pipeline Release

07-JUL-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





07-JUL-17

Project Manager: **Tanner Evans**

KJE Environmental & Civil Engineering

500 Mosley Rd Aubrey, TX 76227

Reference: XENCO Report No(s): 556631

Bobcat/Red Hills Pipeline Release

Project Address: Jal, NM

Tanner Evans:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 556631. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 556631 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

thely Taylor

Holly Taylor

Project Manager

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Sample Cross Reference 556631



$KJE\ Environmental\ \&\ Civil\ Engineering,\ Aubrey,\ TX$

Bobcat/Red Hills Pipeline Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
H10	S	06-28-17 12:00	N/A	556631-001



CASE NARRATIVE

Client Name: KJE Environmental & Civil Engineering

Project Name: Bobcat/Red Hills Pipeline Release

Project ID: Report Date: 07-JUL-17 Work Order Number(s): 556631 Date Received: 06/29/2017

Sample receipt non conformances and comments:	
Sample receipt non conformances and comments per sample:	
None	





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: H10 Matrix: Soil Date Received:06.29.17 14.33

Date Prep:

Lab Sample Id: 556631-001 Date Collected: 06.28.17 12.00

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

Wet Weight

Tech: MGO

Analyst:

% Moisture: 07.06.17 14.45 Basis:

Seq Number: 3021689

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	411	4.96	mg/kg	07.06.17 21.11		1



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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 (214) 902 0300
 (214) 351-9139

 5332 Blackberry Drive, San Antonio TX 78238
 (210) 509-3334
 (210) 509-3335

 1211 W Florida Ave, Midland, TX 79701
 (432) 563-1800
 (432) 563-1713

 2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282
 (602) 437-0330



QC Summary 556631

KJE Environmental & Civil Engineering

Bobcat/Red Hills Pipeline Release

E300P

Analytical Method:Inorganic Anions by EPA 300/300.1Prep Method:Seq Number:3021689Matrix: SolidDate Prep:

Seq Number: 3021689 Matrix: Solid Date Prep: 07.06.17 MB Sample Id: 727282-1-BLK LCS Sample Id: 727282-1-BKS LCSD Sample Id: 727282-1-BSD

%RPD LCS RPD MB Spike LCS Limits Analysis **LCSD** LCSD Units Flag **Parameter** Result Amount Result Limit Date %Rec %Rec Result

Chloride <5.00 250 258 103 247 99 90-110 4 20 mg/kg 07.06.17 19:23

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Seq Number: 3021689 Matrix: Soil Date Prep: 07.06.17

Parent Sample Id: 556598-001 MS Sample Id: 556598-001 S MSD Sample Id: 556598-001 SD

RPD Parent Spike MS MS Limits %RPD Units Analysis **MSD** MSD **Parameter** Flag Amount %Rec Limit Result Result Date Result %Rec

Chloride 213 250 466 101 467 103 90-110 0 20 mg/kg 07.06.17 19:46

			WWW.VGIICO.COIII				プラマン
					Analyti	Analytical Information	Matrix Codes
Client / Reporting Information Company Name / Branch:	Pro	Project Information	Project Information	0.0 11 0			W = Water
Company Address: Seo Moseles Road, Cross Roads Ft	1	Project Location:	(A)	5			GW = Ground Water DW = Drinking Water P = Product
tanne @ huly rome say com (830)928	Phone No: (9'50)929 Inv	Invoice To:	PINICO CAROLLA WEAR LOOKS HOR	atr bootsty			SL - Sludge OW = Ocean/Sea Water WI = Wipe
Project Contact: Thank lowers	-\$ PO	PO Number:					WW = Waste Water
Samplers's Name: Thorac Trons	\$	Wullibel.			les		3
		Collection	Number of	Number of preserved bottles	rio		
No. Field ID / Point of Collection	Sample	ate Time Matrix	# of # of	H2SO4 NaOH NaHSO4 MEOH NONE	Chla		Field Comments
H10		,		0	*		
		,					
Tuesday Time (Business days)							
	X 5 Day TAT	Level II Std OC	doc	Love IV (Full Data Pkg /raw data)	(raw data)		
Next Day EMERGENCY	7 Day TAT	Level III St	Level III Std QC+ Forms	TRRP Level IV		Temp: 9 °	10 IR ID:R-8
2 Day EMERGENCY	Contract TAT	Level 3 (CLP Forms)	LP Forms)	UST / RG -411		(6-23	(6-23: +0.2°C)
3 Day EMERGENCY		Level II Ro	Level II Report with TRRP checklist	st		Correcte	Corrected Temp:
TAT Starts Day received by Lab, if received by 5:00 pm	received by 5:00 pm					FED-EX / UPS: Tracking #	1.1
	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY Date Time: Received B: Date Time: Date Time: Date Time: Date Time: Date Time: Received B: Date Time: Date Ti	Received By:	ME SAMPLES CHANGE POS	Beinquished By:	Date Time:	e: Received By:	
Relinquished by:		1	(-			

Notice: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco, A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per samples. These terms will be enforced unless previously negotiated under a fully executed client contract.



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: KJE Enviromental & Civil Engineering

Date/ Time Received: 06/29/2017 02:33:00 PM

Work Order #: 556631

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Date: 06/29/2017

Temperature Measuring device used: R8

	Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?		9.3
#2 *Shipping container in good condition?		Yes
#3 *Samples received on ice?		Yes
#4 *Custody Seal present on shipping con	tainer/ cooler?	N/A
#5 *Custody Seals intact on shipping cont	ainer/ cooler?	N/A
#6 Custody Seals intact on sample bottles	?	N/A
#7 *Custody Seals Signed and dated?		N/A
#8 *Chain of Custody present?		Yes
#9 Sample instructions complete on Chair	of Custody?	Yes
#10 Any missing/extra samples?		No
#11 Chain of Custody signed when relinqu	uished/ received?	Yes
#12 Chain of Custody agrees with sample	label(s)?	Yes
#13 Container label(s) legible and intact?		Yes
#14 Sample matrix/ properties agree with	Chain of Custody?	Yes
#15 Samples in proper container/ bottle?		Yes
#16 Samples properly preserved?		Yes
#17 Sample container(s) intact?		Yes
#18 Sufficient sample amount for indicated	d test(s)?	Yes
#19 All samples received within hold time?	?	Yes
#20 Subcontract of sample(s)?		N/A
#21 VOC samples have zero headspace?		N/A
* Must be completed for after-hours deli	very of samples prior to placing in	the refrigerator
Analyst:	PH Device/Lot#:	
Checklist completed by:	JESSICIA VRAMUR Jessica Kramer	Date: 06/29/2017

Checklist reviewed by: Hely Taylor
Holly Taylor



Certificate of Analysis Summary 556930

KJE Environmental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release



Project Id: Contact:

Chloride

Tanner Evans

Project Location: Jal, NM

Date Received in Lab: Thu Jul-06-17 12:00 pm

Report Date: 10-JUL-17 **Project Manager:** Holly Taylor

						_
	Lab Id:	556930-001	556930-002	556930-003		
Analysis Paguested	Field Id:	H20	H30	H40		
Analysis Requested	Depth:					
	Matrix:	SOIL	SOIL	SOIL		
	Sampled:	Jul-06-17 10:00	Jul-06-17 10:15	Jul-06-17 10:30		
Inorganic Anions by EPA 300/300.1	Extracted:	Jul-07-17 17:10	Jul-07-17 17:10	Jul-07-17 17:10		1
	Analyzed:	Jul-08-17 01:47	Jul-08-17 01:55	Jul-08-17 02:18		
	Units/RI.	mg/kg RL	mg/kg RL	mg/kg RL		II.

4.96

973

4.99

380

367

4.99

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent beest judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Holly Taylor Project Manager

Analytical Report 556930

for KJE Enviromental & Civil Engineering

Project Manager: Tanner Evans Bobcat/Red Hills Pipeline Release

10-JUL-17

Collected By: Client





1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab code: TX00122): Texas (T104704215), Arizona (AZ0765), Florida (E871002), Louisiana (03054) Oklahoma (9218)

Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295) Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400)

Xenco-San Antonio: Texas (T104704534)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757) Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)





10-JUL-17

Project Manager: Tanner Evans

KJE Environmental & Civil Engineering

500 Mosley Rd Aubrey, TX 76227

Reference: XENCO Report No(s): 556930

Bobcat/Red Hills Pipeline Release

Project Address: Jal, NM

Tanner Evans:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 556930. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 556930 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Holly Taylor

Project Manager

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Sample Cross Reference 556930



$KJE\ Environmental\ \&\ Civil\ Engineering,\ Aubrey,\ TX$

Bobcat/Red Hills Pipeline Release

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
H20	S	07-06-17 10:00	N/A	556930-001
H30	S	07-06-17 10:15	N/A	556930-002
H40	S	07-06-17 10:30	N/A	556930-003



CASE NARRATIVE

Client Name: KJE Environmental & Civil Engineering Project Name: Bobcat/Red Hills Pipeline Release

Project ID: Report Date: 10-JUL-17 Work Order Number(s): 556930 Date Received: 07/06/2017

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3021784 Inorganic Anions by EPA 300/300.1

Lab Sample ID 556930-002 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 556930-001, -002, -003.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: **H20** Matrix: Soil Date Received:07.06.17 12.00

Lab Sample Id: 556930-001 Date Collected: 07.06.17 10.00

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 07.07.17 17.10 Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	367	4.99	mg/kg	07.08.17 01.47		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: H30 Matrix: Soil Date Received:07.06.17 12.00

Lab Sample Id: 556930-002 Date Collected: 07.06.17 10.15

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Tech: MGO % Moisture:

Analyst: MGO Date Prep: 07.07.17 17.10 Basis: Wet Weight

Seq Number: 3021784

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	380	4.96	mg/kg	07.08.17 01.55		1





KJE Environmental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id: H40 Matrix: Soil Date Received:07.06.17 12.00

Lab Sample Id: 556930-003 Date Collected: 07.06.17 10.30

Analytical Method: Inorganic Anions by EPA 300/300.1

Prep Method: E300P

MGO % Moisture:

Analyst: MGO Date Prep: 07.07.17 17.10 Basis: Wet Weight

Seq Number: 3021784

Tech:

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	973	4.99	mg/kg	07.08.17 02.18		1



Flagging Criteria



- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- **K** Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.
- ** Surrogate recovered outside laboratory control limit.
- BRL Below Reporting Limit.
- **RL** Reporting Limit

MDL Method Detection Limit SDL Sample Detection Limit LOD Limit of Detection

PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

- + NELAC certification not offered for this compound.
- * (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

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5332 Blackberry Drive, San Antonio TX 78238 (210) 509-3334 (210) 509-3335
1211 W Florida Ave, Midland, TX 79701 (432) 563-1800 (432) 563-1713
2525 W. Huntington Dr. - Suite 102, Tempe AZ 85282 (602) 437-0330



QC Summary 556930

KJE Environmental & Civil Engineering

Bobcat/Red Hills Pipeline Release

E300P

X

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method:

Seq Number: 3021784 Matrix: Solid Date Prep: 07.07.17

MB Sample Id: 727342-1-BLK LCS Sample Id: 727342-1-BKS LCSD Sample Id: 727342-1-BSD

%RPD Spike LCS RPD MB LCS Limits **LCSD** LCSD Units Analysis Flag **Parameter** Result Result Limit Date Amount %Rec %Rec Result

Chloride <5.00 250 265 106 268 107 90-110 1 20 mg/kg 07.07.17 23:52

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Seq Number: 3021784 Matrix: Soil Date Prep: 07.07.17

Parent Sample Id: 556810-004 MS Sample Id: 556810-004 S MSD Sample Id: 556810-004 SD

Parent Spike MS MS Limits %RPD RPD Units **MSD** MSD Analysis **Parameter** Flag Amount Result Result %Rec Limit Date Result %Rec

Chloride 141 246 411 110 451 126 90-110 9 20 mg/kg 07.08.17 00:15

Analytical Method: Inorganic Anions by EPA 300/300.1 Prep Method: E300P

Seq Number: 3021784 Matrix: Soil Date Prep: 07.07.17

Parent Sample Id: 556930-002 MS Sample Id: 556930-002 S MSD Sample Id: 556930-002 SD

MS RPD %RPD **Parent** Spike MSMSD **MSD** Limits Units Analysis Flag **Parameter** Result Limit Date Result Amount %Rec Result %Rec Chloride 20 07.08.17 02:02 380 248 638 104 596 87 90-110 7 mg/kg X

CHAIN OF CUSTODY

Stafford, TX (281) 240-4200 Setting the Standard since 1990

El Paso, TX (915) 585-3443

Midland, TX (432) 704-5440

Phoenix, AZ (480) 355-0900

Service Center- Amarillo, TX (806)678-4514

Revision 2016.1

		www.xenco.com	STATE OF THE PARTY		220020
				Analytical Information	Matrix Codes
Client / Reporting Information	Proje	Project Information Project Name/Number:	upher:		W=Water
Company Address:		Project Location:	The state of the s		GW = Ground Water DW = Drinking Water P = Product SW = Surface Water
the ner WXJe nuron manta & 30 928 7019	530 928 7019 Emple No:	Invoice To: Ow L			SL - Sludge OW = Ocean/Sea Water WI = Wipe
Project Contact: Tonne Evens		PO Number:	!\$		WW = Waste Water A = Air
Samplers's Name: Tance	5		:de		
		Collection	Number of preserved bottles		
No. Field ID / Point of Collection	Sample Depth	Time Matrix bottles H	Acetate HNO3 H2SO4 NaOH NaHSO4 MEOH NONE		Field Comments
02 H	-1	1000			
2 1430	1 7/6	1 3 5101 9,	×		
3 HYO	1 7/	1/6 1070 5 1	×		
4					
55					
6					
7					
8					
9					
10					
Turnaround Time (Business days)		Data Deliverable Information	ormation	Notes:	
Same Day TAT	5 Day TAT	Level II Std QC	Level IV (Full Data Pkg /raw data)	ata)	
Next Day EMERGENCY	7 Day TAT	Level III Std QC+ Forms	TRRP Level IV		
2 Day EMERGENCY	Contract TAT	Level 3 (CLP Forms)	UST/RG-411		
3 Day EMERGENCY		Level II Report with TRRP checklist	checklist		
TAT Starts Day received by Lab, if received by 5:00 pm	b, if received by 5:00 pm			FED-EX / UPS: Tracking #	cking#
Relinquished by Sampler:	SAMPLE CUSTODY MUST BE DOCUM	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY Date Time: 7/6 Received By: Date Time: 7/6 1 Date Time: 7/6 1	Relinquished By:	Date Time: Received By:	ad By:
Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time: Received By:	ed By:
		•	4	2	

CHAIN OF CUSTODY

Setting the Standard since 1990

			www.xenco.com		Xenco Quote #	Xenco Job #	20930
					Analytical Information	rmation	Matrix Codes
Company Name / Branch: ICDE	Pro	Project I	nformati	on pipeline			W=Water S=Soil/Sed/Solid
Company Address:		Project Location:	MN In				GW = Ground Water DW = Drinking Water P = Product SW = Surface Water
Email: Email: Plante Mos Power Polar Tola	630 928 7019 Example No:	Invoice To:	Our				SL - Sludge OW = Ocean/Sea Water WI = Wipe
Project Contact: Thone Bushs		PO Number:			\$		WW = Waste Water
1	Š				de		
		Collection	Nu	Number of preserved bottles	or:		
No. Field ID / Point of Collection	ion Sample Depth c		Matrix # of # HCI NaOH/Zn	Acetate HNO3 H2SO4 NaOH NaHSO4 MEOH NONE	Chi		Field Comments
02H	1 7	16 1000		×	*		
2 1430	1 7,	16 1015	1 3	×	×		
	1 7	7/6 1030	5	×			
4							
5							
0							
7							
8							
9							
10							
Turnaround Time (Business days)			Data Deliverable Information	ormation		Notes:	
Same Day TAT	5 Day TAT	Level	Level II Std QC	Level IV (Full Data Pkg /raw data)	g /raw data)	Temp:	IR ID:R-8
Next Day EMERGENCY	7 Day TAT	Level	Level III Std QC+ Forms	TRRP Level IV		CF:(0-6: -0.2°C) O	
2 Day EMERGENCY	Contract TAT	Level	Level 3 (CLP Forms)	UST / RG -411		(6-23: +0.2°C)	2°C)
3 Day EMERGENCY		Leve	Level II Report with TRRP checklist	checklist		Corrected Lemp:	mp: 0,3
TAT Starts Day received by Lab, if received by 5:00 pm	eceived by 5:00 pm				FED-	FED-EX / UPS: Tracking #	
Relinquished by Sampler:	SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVE Date Time: 7/6 Received By: Relinquished By:	Received By:	CH TIME SAMPLES CHAI	Relinquished By:	Date Time:	Received By:	100 mm2
	Date Time:	Received By:	y,	Relinquished By:	Date Time:	Received By:	
		3		14			



XENCO Laboratories Prelogin/Nonconformance Report- Sample Log-In



Client: KJE Environmental & Civil Engineering

Date/ Time Received: 07/06/2017 12:00:00 PM

Work Order #: 556930

Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used:

	Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?		15.8	
#2 *Shipping container in good condition?		Yes	
#3 *Samples received on ice?		Yes	
#4 *Custody Seal present on shipping conta	ainer/ cooler?	N/A	
#5 *Custody Seals intact on shipping contain	iner/ cooler?	N/A	
#6 Custody Seals intact on sample bottles?		N/A	
#7 *Custody Seals Signed and dated?		N/A	
#8 *Chain of Custody present?		Yes	
#9 Sample instructions complete on Chain	of Custody?	Yes	
#10 Any missing/extra samples?		No	
#11 Chain of Custody signed when relinquis	shed/ received?	Yes	
#12 Chain of Custody agrees with sample la	abel(s)?	Yes	
#13 Container label(s) legible and intact?		Yes	R8
#14 Sample matrix/ properties agree with C	hain of Custody?	Yes	
#15 Samples in proper container/ bottle?		Yes	
#16 Samples properly preserved?		Yes	
#17 Sample container(s) intact?		Yes	
#18 Sufficient sample amount for indicated	test(s)?	Yes	
#19 All samples received within hold time?		Yes	
#20 Subcontract of sample(s)?		No	
#21 VOC samples have zero headspace?		N/A	
* Must be completed for after-hours delive	ery of samples prior to placing ir	n the refrige	erator
Analyst: ss	PH Device/Lot#:		

Checklist completed by:

Shawnee Smith

Date: 07/06/2017