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
TEST STOCKPILES											
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 STOCKPILES											
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'	-	-	-	-	-	sandy sand damp	143.2	-	N
B STOCKPILES											
6-Jun	B1	1'	-	-	-	-	-	sandy sand damp	260	-	N
	B2	1'	-	-	-	-	-	sandy sand damp	329.6	-	N
	B3	1'	-	-	-	-	-	sandy sand damp	254	-	N
	B4	1'	-	-	-	-	-	sandy sand damp	260	-	N
	B5	1'	-	-	-	-	-	sandy sand damp	329.6	-	N
	B6	1'	-	-	-	-	-	sandy sand damp	254	-	N
	B7	1'	-	-	-	-	-	sandy sand damp	138	-	N

	B8	1'	-	-	-	-	-	sandy sand damp	249.6	-	N
	B9	1'	-	-	-	-	-	sandy sand damp	137.6	-	N
	B10	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'	-	-	-	-	-	sandy sand damp	243.6	-	N
	B22	1'	-	-	-	-	-	sandy sand damp	334	-	N
	B23	1'	-	-	-	-	-	sandy sand damp	456	-	N
	B24	1'	-	-	-	-	-	sandy sand damp	386.4	-	N
	B25	1'	-	-	-	-	-	sandy sand damp	**1376**	-	**Y**
	B26	1'	-	-	-	-	-	sandy sand damp	524	-	N
	B27	1'	-	-	-	-	-	sandy sand damp	**1016**	-	**Y**
	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	-	-	**Y**
	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	-	-	**Y**
	BSP6	1'	18	51	2.83	0.53	**1501**	sandy sand damp	-	-	**Y**
	BSP7	1'	16	50	3.13	0.38	**1187**	sandy sand damp	-	-	**Y**
	BSP8	1'	15	50	3.33	0.26	866	sandy sand damp	-	-	**Y**
	BSP9	1'	20	54	2.70	0.29	783	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	BSP12	1'	23	44	1.91	0.43	822	sandy sand damp	-	-	**Y**
	BSP13	1'	22	44	2.00	0.77	**1540**	sandy sand damp	-	-	**Y**
	BSP14	1'	18	44	2.44	0.62	**1515**	sandy sand damp	-	-	**Y**
	BSP15	1'	18	42	2.33	0.51	**1190**	sandy sand damp	-	-	**Y**
	BSP16	1'	19	43	2.26	0.57	**1290**	sandy sand damp	-	-	**Y**
	BSP17	1'	19	50	2.63	0.34	894	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	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	-	-	**Y**
	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	-	-	**Y**
	BSP31	1'	18	45	2.50	0.46	**1150**	sandy sand damp	-	-	**Y**
	BSP32	1'	19	48	2.53	0.65	**1642**	sandy sand damp	-	-	**Y**
	BSP33	1'	19	46	2.42	0.36	871	sandy sand damp	-	-	**Y**
	BSP34	1'	19	48	2.53	0.34	859	sandy sand damp	-	-	**Y**
	BSP35	1'	22	46	2.09	0.75	**1568**	sandy sand damp	-	-	**Y**
	BSP36	1'	22	47	2.14	0.5	**1068**	sandy sand damp	-	-	**Y**
	BSP37	1'	19	43	2.26	0.84	**1900**	sandy sand damp	-	-	**Y**
	BSP38	1'	22	42	1.91	0.81	**1546**	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	*Stockpiles in section B were reblended with sections C and F.										
	C STOCKPILES										
27-Apr	CSP1	1'	19	46	2.42	0.16	387	sandy sand damp	-	-	N
	CSP2	1'	17	46	2.71	0.15	406	sandy sand damp	-	-	N

	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	-	-	**Y**
	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	-	-	**Y**
	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	-	-	**Y**
	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	-	-	**Y**
17-May	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

	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	-	**Y**
	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	-	**Y**
	CSP54	1'	-	-	-	-	-	sandy sand damp	984	-	**Y**
	CSP55	1'	-	-	-	-	-	sandy sand damp	828	-	**Y**
	CSP56	1'	-	-	-	-	-	sandy sand damp	792	-	**Y**
	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	*	**Y**
	CSP61	1'	-	-	-	-	-	sandy sand damp	816	-	**Y**
	CSP62	1'	-	-	-	-	-	sandy sand damp	**1044**	-	**Y**
	*Stockpiles in section C were reblended with sections B and F.										
D STOCKPILES											
27-Apr	DSP1	1'	20	45	2.25	0.45	**1012**	sandy sand damp	-	-	**Y**
	DSP2	1'	19	49	2.58	0.37	954	sandy sand damp	-	-	**Y**
	DSP3	1'	17	48	2.82	0.52	**1468**	sandy sand damp	-	-	**Y**
	DSP4	1'	20	46	2.30	0.5	**1150**	sandy sand damp	-	-	**Y**
	DSP5	1'	17	46	2.71	0.52	**1407**	sandy sand damp	-	-	**Y**
	DSP6	1'	18	55	3.06	0.32	977	sandy sand damp	-	-	**Y**

	DSP7	1'	16	49	3.06	0.53	**1623**	sandy sand damp	-	-	**Y**
	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	**Y**
	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	-	-	**Y**
	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	-	-	**Y**
	DSP28	1'	18	48	2.67	0.36	960	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	DSP32	1'	15	54	3.60	0.38	**1368**	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	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 STOCKPILES											
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**	**Y**
F STOCKPILES											
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	-	-	**Y**
	FSP7	1'	18	49	2.72	0.3	816	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	FSP13	1'	17	46	2.71	0.35	947	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	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	-	-	**Y**
	FSP23	1'	17	48	2.82	0.33	931	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	FSP30	1'	14	50	3.57	0.23	821	sandy sand damp	-	*	**Y**
	FSP31	1'	19	47	2.47	0.39	964	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	FSP36	1'	17	48	2.82	0.4	**1129**	sandy sand damp	-	-	**Y**
	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	-	-	**Y**
	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

*Stockpiles in section F were reblended with sections B and C

H STOCKPILES

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	-	

	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	
POWER LINE SAMPLES											
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

	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 SAMPLES											
8-May	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

	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	-	-	**Y**
	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'	-	-	-	-	-	sandy sand damp	46.4	-	N
	G10	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'	-	-	-	-	-	sandy sand damp	58.4	-	N
	G15	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	-	N
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'	-	-	-	-	-	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'	-	-	-	-	-	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 Enviromental & 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

Analysis Requested													
	Lab Id:	552683-001		552683-002		552683-003		552683-004		552683-005		552683-006	
	Field Id:	D64		D63		D62		D61		D60		D59	
	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 13:05		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 13:15		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

Holly Taylor
Project Manager

Certificate of Analysis Summary 552683

KJE Enviromental & 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

Analysis Requested													
	Lab Id:	552683-007		552683-008		552683-009		552683-010					
	Field Id:	D58		D57		D56		D55					
	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				

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 Enviromental & 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,

Holly Taylor

Holly Taylor
Project Manager

Sample Cross Reference 552683

KJE Enviromental & 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

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 552683

KJE Enviromental & 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
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & 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 Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.17.17 08.00	Basis:	Wet Weight
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**D62**	Matrix:	Soil	Date Received:	05.08.17 15.00
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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.17.17 08.00	Basis:	Wet Weight
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**D61**	Matrix:	Soil	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
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & 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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.17.17 08.00	Basis:	Wet Weight
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & 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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	05.17.17 08.00	Basis:	Wet Weight
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & 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
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & 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
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & 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
Seq Number:	3017517				

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

Certificate of Analytical Results 552683

KJE Enviromental & 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
Seq Number:	3017517				

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

QC Summary 552683

KJE Enviromental & Civil Engineering

Bobcat/Red Hills Pipeline Release

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

Seq Number: 3017517 Matrix: Solid Date Prep: 05.17.17

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

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	267	107	249	100	90-110	7	20	mg/kg	05.17.17 12:37	

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

Seq Number: 3017517 Matrix: Soil Date Prep: 05.17.17

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

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

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

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

CHAIN OF CUSTODY

XENCO LABORATORIES

Page 1 Of 1

Setting the Standard since 1990

Stafford,Texas (281-240-4200) San Antonio, Texas (210-509-3334) Phoenix, Arizona (480-355-0900)

Dallas Texas (214-902-0300) Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote # Xenco Job # 552083

Client / Reporting Information

Company Name / Branch: KJE

Company Address: 500 Mosley Rd, Cross Roads, TX 76266

Email: james2[redacted]kjenvironmental.com Phone No:

Project Contact: James Fox - 940-387-0805

Samplers's Name

Project Information

Project Name/Number: Bobcat/Redhills Pipeline Release

Project Location: Jal, NM

Invoice To: oilwater logistics (owl)

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	D64	1'	5/4	1300	S	1								✓	✓	
2	D63			1305												
3	D62			1310												
4	D61			1315												
5	D60			1320												
6	D59			1325												
7	D58			1330												
8	D57			1335												
9	D56			1340												
10	D55	↓	↓	1345	↓	↓								↓	↓	

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☒ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☐ 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	James Fox	5/8 1500	Julian Martinez	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable ☐	On Ice ✓

Temp: 11.3 IR ID:R-9
CF:(0-6: 0.0°C) (6-23: +0.1°C)
Corrected Temp: 11.4

Notice: 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 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 invoiced at $5 per sample. 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: 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 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?	**Yes**	
#12 Chain of Custody agrees with sample 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 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**	
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**	
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Marithza Anaya Date: 05/09/2017

Marithza Anaya

Checklist reviewed by: Holly Taylor Date: 05/09/2017

Holly Taylor

Certificate of Analysis Summary 553327

KJE Enviromental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release

Project Id:

Contact: James Fox

Project Location: Jal, NM

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

Report Date: 19-MAY-17

Project Manager: Holly Taylor

Analysis Requested													
	Lab Id:	553327-001		553327-002		553327-003		553327-004		553327-005		553327-006	
	Field Id:	MB 10		E 10		D 10		D 20		D 30		D 40	
	Depth:	1 ft		1 ft		1 ft		1 ft		1 ft		1 ft	
	Matrix:	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 SUB: TX104704215	***Extracted:***	May-18-17 19:50		May-18-17 19:50		May-19-17 11:47		May-19-17 11:47		May-19-17 11:47		May-19-17 11:47	
	Analyzed:	May-18-17 21:05		May-18-17 21:14		May-19-17 12:53		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

Holly Taylor
Project Manager

Certificate of Analysis Summary 553327

KJE Enviromental & Civil Engineering, Aubrey, TX

Project Name: Bobcat/Red Hills Pipeline Release

Project Id:
Contact: James Fox
Project Location: Jal, NM

Date Received in Lab: Wed May-17-17 08:19 am
Report Date: 19-MAY-17
Project Manager: Holly Taylor

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

Holly Taylor
Project Manager

Analytical Report 553327

for

KJE Enviromental & 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 Enviromental & 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,

Holly Taylor

Holly Taylor
Project Manager

Sample Cross Reference 553327

KJE Enviromental & 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

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 553327

KJE Enviromental & 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
Tech:	DHE			% Moisture:	
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

Certificate of Analytical Results 553327

KJE Enviromental & 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
Seq Number:	3017719			SUB:	TX104704215

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

Certificate of Analytical Results 553327

KJE Enviromental & 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
Seq Number:	3017764			SUB:	TX104704215

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

Certificate of Analytical Results 553327

KJE Enviromental & 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
Seq Number:	3017764			SUB:	TX104704215

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

Certificate of Analytical Results 553327

KJE Enviromental & 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
Seq Number:	3017764			SUB:	TX104704215

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

Certificate of Analytical Results 553327

KJE Enviromental & 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
Tech:	DHE			% Moisture:	
Analyst:	DHE	Date Prep:	05.19.17 11.47	Basis:	Wet Weight
Seq Number:	3017764			SUB:	TX104704215

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

Certificate of Analytical Results 553327

KJE Enviromental & 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
Seq Number:	3017764			SUB:	TX104704215

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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(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	

QC Summary 553327

KJE Enviromental & Civil Engineering

Bobcat/Red Hills Pipeline Release

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017719 Matrix: Solid Date Prep: 05.18.17
MB Sample Id: 724873-1-BLK LCS Sample Id: 724873-1-BKS LCSD Sample Id: 724873-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	10.0	9.99	100	9.92	99	80-120	1	20	mg/kg	05.18.17 20:00	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017764 Matrix: Solid Date Prep: 05.19.17
MB Sample Id: 724904-1-BLK LCS Sample Id: 724904-1-BKS LCSD Sample Id: 724904-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<1.00	10.0	10.1	101	10.0	100	80-120	1	20	mg/kg	05.19.17 11:57	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: E300P
Seq Number: 3017719 Matrix: Soil Date Prep: 05.18.17
Parent Sample Id: 553187-001 MS Sample Id: 553187-001 S MSD Sample Id: 553187-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	771	100	860	89	857	86	80-120	0	20	mg/kg	05.18.17 20:28	

Analytical Method: **Inorganic Anions by EPA 300/300.1** Prep Method: SW9056P
Seq Number: 3017764 Matrix: Soil Date Prep: 05.19.17
Parent Sample Id: 553317-001 MS Sample Id: 553317-001 S MSD Sample Id: 553317-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	19600	106	19300	0	19500	0	80-120	1	20	mg/kg	05.19.17 14:42	X

CHAIN OF CUSTODY

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200) | San Antonio, Texas (210-509-3334) | Phoenix, Arizona (480-355-0900)

Dallas Texas (214-902-0300) | Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote # | Xenco Job # 553327

Client / Reporting Information

Company Name / Branch: KJ Environmental

Company Address: 500 Moseley Rd, Cross Roads, TX

Email: james@kjenvironmental.com

Phone No:

Project Contact: James Fox 940-368-3535

Samplers's Name

Project Information

Project Name/Number: Bobcat/Redhills Pipeline Release

Project Location: Jal, NM

Invoice To: OWL - oilfield Water Logistics

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	MB 10	1'	5/16	1500	S	1								X	X	
2	E 10	1'		1505												
3	D 10	1'		1510												
4	D 20	1'		1515												
5	D 30	1'		1520												
6	D 40	1'		1525												
7	D 50	1'	↓	1530	↓	↓								↓	↓	
8																
9																
10																

Turnaround Time (Business days)

- ☐ Same Day TAT
- ☐ 5 Day TAT
- ☐ Next Day EMERGENCY
- ☐ 7 Day TAT
- ☐ 2 Day EMERGENCY
- ☐ Contract TAT
- ☒ 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- ☐ Level II Std QC
- ☐ Level IV (Full Data Pkg /raw data)
- ☐ Level III Std QC+ Forms
- ☐ TRRP Level IV
- ☐ Level 3 (CLP Forms)
- ☐ UST / RG -411
- ☐ TRRP Checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	James Fox	5/17 815	Manaya 8:19	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable ☐	On Ice ☒ Cooler Temp. Thermo. Corr. Factor

Notice: 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 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 invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

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

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	2.6	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**	
#5 *Custody Seals Signed and dated for Containers/coolers	**N/A**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**N/A**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: mPaula Guerra Date: 05/18/2017

Maria Paula Guerra

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: KJE Enviromental & 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 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?	**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 test(s)?	**Yes**	
#19 All samples received within hold time?	**Yes**	
#20 Subcontract of sample(s)?	**Yes**	Houston
#21 VOC samples have zero headspace?	**N/A**	
#22 <2 for all samples preserved with HNO3,HCL, H2SO4? Except for samples for the analysis of HEM or HEM-SGT which are verified by the analysts.	**N/A**	
#23 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	**N/A**	

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Jessica Kramer Date: 05/17/2017
Jessica Kramer

Checklist reviewed by: Holly Taylor Date: 05/17/2017
Holly Taylor

Certificate of Analysis Summary 554471

KJE Enviromental & 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

Analysis Requested													
	Lab Id:	554471-001		554471-002		554471-003		554471-004		554471-005		554471-006	
	Field Id:	ASP20		ASP30		ASP40		ASP41		ASP42		ASP43	
	Depth:	1 ft		1 ft		1 ft		1 ft		1 ft		1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-31-17 10:00		May-31-17 12:00		May-31-17 14:00		Jun-01-17 09:00		Jun-01-17 09:05		Jun-01-17 09:10	
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 15:15		Jun-06-17 15:15		Jun-06-17 15:15	
	Analyzed:	Jun-06-17 15:53		Jun-06-17 16:16		Jun-06-17 16:24		Jun-06-17 16:31		Jun-06-17 16:39		Jun-06-17 17:02	
	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

Holly Taylor
Project Manager

Certificate of Analysis Summary 554471

KJE Enviromental & 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

Analysis Requested													
	Lab Id:	554471-007		554471-008		554471-009		554471-010		554471-011		554471-012	
	Field Id:	ASP44		ASP45		ASP46		ASP47		ASP48		ASP49	
	Depth:	1 ft		1 ft		1 ft		1 ft		1 ft		1 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-01-17 09:15		Jun-01-17 10:00		Jun-01-17 10:15		Jun-01-17 10:30		Jun-01-17 12:00		Jun-01-17 13:00	
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 15:15		Jun-06-17 15:15		Jun-06-17 15:15	
	Analyzed:	Jun-06-17 17:09		Jun-06-17 17:17		Jun-06-17 17:24		Jun-06-17 17:32		Jun-06-17 17:40		Jun-06-17 18:02	
	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

Holly Taylor
Project Manager

Certificate of Analysis Summary 554471

KJE Enviromental & 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

Analysis Requested							
	Lab Id:	554471-013					
	Field Id:	ASP50					
	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				

Holly Taylor
Project Manager

Analytical Report 554471

for

KJE Enviromental & 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,

Holly Taylor

Holly Taylor
Project Manager

Sample Cross Reference 554471

KJE Enviromental & 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

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 554471

KJE Enviromental & 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:	
Analyst:	MGO	Date Prep:	06.06.17 15.15	Basis:	Wet Weight
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.06.17 15.15	Basis:	Wet Weight
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**ASP45**	Matrix:	Soil	Date Received:	06.01.17 15.00
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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.06.17 15.15	Basis:	Wet Weight
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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:	Wet Weight
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.06.17 15.15	Basis:	Wet Weight
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & 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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.06.17 15.15	Basis:	Wet Weight
Seq Number:	3019052				

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

Certificate of Analytical Results 554471

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**ASP50**	Matrix:	Soil	Date Received:	06.01.17 15.00
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:	06.06.17 15.15	Basis:	Wet Weight
Seq Number:	3019052				

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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(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	

QC Summary 554471

KJE Enviromental & Civil Engineering

Bobcat/Red Hills Pipeline Release

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

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

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	250	100	248	99	90-110	1	20	mg/kg	06.06.17 13:53	

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

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

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
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: E300P

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

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

CHAIN OF CUSTODY

Page 1 Of 2

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200) | San Antonio, Texas (210-509-3334) | Phoenix, Arizona (480-355-0900)

Dallas Texas (214-902-0300) | Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote # | Xenco Job # 554471

Client / Reporting Information

Company Name / Branch: KJE

Company Address: 500 Moseley, Cross Roads, TX

Email: tanner@kjenvironmental.com | Phone No:

Project Contact: Tanner Evans 940-368-3535

Samplers's Name

Project Information

Project Name/Number: Bobcat/Redhills Pipeline Release

Project Location: Jal, NM

Invoice To: OWL - Oilfield Water Logistics

PO Number:

Analytical Information

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	ASP 20	1'	5/31	1000										X	X	
2	ASP30		5/31	1200												
3	ASP40		5/31	1400												
4	ASP41		6/1	0900												
5	ASP42			0905												
6	ASP43			0910												
7	ASP44			0915												
8	ASP45			1000												
9	ASP46			1015												
10	ASP47			1030												

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracking

Temp: 2.3 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 2.1

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Tanner Evans	6/1 1500	1	2		2
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:	Received By: 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice [x] Cooler Temp. Thermo. Corr.

Notice: 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 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 invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

CHAIN OF CUSTODY

Page 2 Of 2

XENCO LABORATORIES

Setting the Standard since 1990

Stafford,Texas (281-240-4200) | San Antonio, Texas (210-509-3334) | Phoenix, Arizona (480-355-0900)

Dallas Texas (214-902-0300) | Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote # | Xenco Job # 554471

Client / Reporting Information

Company Name / Branch: KJE

Company Address: 500 Moseley Road, Cross Roads, Tx

Email: tanner@kjenvironmental.com | Phone No:

Project Contact: Tanner Evans 940-368-3355

Samplers's Name

Project Information

Project Name/Number: Bobcat/Redhills Pipeline Release

Project Location: Jal, NM

Invoice To: Owl - Oilfield Logistics

PO Number:

Analytical Information

Chlorides

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	ASP48	1'	6/1	1200	S	1								X	X	
2	ASP49	↓		1300	↓	↓									↓	
3	ASP50			1400												
4																
5																
6																
7																
8																
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Track

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Tanner Evans	6/1	1	2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice

Temp: 2.3 IR ID:R-8

CF:(0-6: -0.2°C)

(6-23: +0.2°C)

Corrected Temp: 2.1

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

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 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?	**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 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 samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Jessica Kramer Date: 06/02/2017
Jessica Kramer

Checklist reviewed by: Holly Taylor Date: 06/05/2017
Holly Taylor

Certificate of Analysis Summary 554912

KJE Enviromental & 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-08-17 02:45 pm

Report Date: 12-JUN-17

Project Manager: Holly Taylor

Analysis Requested									
	Lab Id:	554912-001		554912-002		554912-003			
	Field Id:	B10		B20		B30			
	Depth:	1 ft		1 ft		1 ft			
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	Jun-08-17 13:00		Jun-08-17 13:00		Jun-08-17 13:00			
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jun-09-17 14:42		Jun-09-17 14:42		Jun-09-17 14:42			
	Analyzed:	Jun-09-17 19:56		Jun-09-17 20:03		Jun-09-17 20:26			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		296	4.93	127	4.89	266	4.96		

Holly Taylor
Project Manager

Analytical Report 554912

for

KJE Enviromental & 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,

Holly Taylor

Holly Taylor
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 554912

KJE Enviromental & 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 Enviromental & Civil Engineering

Project Name: Bobcat/Red Hills Pipeline Release

Project ID:
Work Order Number(s): *554912*

Report Date: *12-JUN-17*
Date Received: *06/08/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 554912

KJE Enviromental & 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
Seq Number:	3019449				

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

Certificate of Analytical Results 554912

KJE Enviromental & 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
Seq Number:	3019449				

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

Certificate of Analytical Results 554912

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**B30**	Matrix:	Soil	Date Received:	06.08.17 14.45
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:	
Analyst:	MGO	Date Prep:	06.09.17 14.42	Basis:	Wet Weight
Seq Number:	3019449				

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

QC Summary 554912

KJE Enviromental & Civil Engineering

Bobcat/Red Hills Pipeline Release

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

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

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

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

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	28.9	244	277	102	271	99	90-110	2	20	mg/kg	06.12.17 13:32	

CHAIN OF CUSTODY

XENCO LABORATORIES

Setting the Standard since 1990

Page 1 Of 1

Stafford,Texas (281-240-4200) | San Antonio, Texas (210-509-3334) | Phoenix, Arizona (480-355-0900)

Dallas Texas (214-902-0300) | Midland, Texas (432-704-5251)

www.xenco.com

Xenco Quote # | Xenco Job # 554912

Client / Reporting Information

Company Name / Branch: KJ Environmental

Company Address: 500 Moseley Rd, Cross Roads, TX

Email: james@kjenvironmental.com | Phone No:

Project Contact: J. Fox 940-368-3535

Samplers's Name JAMES FOX

Project Information

Project Name/Number: Bobcat/Redhills Pipeline Release

Project Location: Jal, NM

Invoice To: Phillip Sanders - OWL

PO Number:

Analytical Information

Chlorides

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW =Ground Water
DW = Drinking Water
P = Product
SW = Surface water
SL = Sludge
OW =Ocean/Sea Water
WI = Wipe
O = Oil
WW= Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Date	Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	B10	1'	6/8	1300	S	1								X	X	
2	B20	1'	↓	↓	↓	1								↓	↓	
3	B30	1'	↓	↓	↓	1								↓	↓	
4																
5																
6																
7																
8																
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] TRRP Checklist

Notes:

FED-EX / UPS: Tracl

Temp: 4.6 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.4

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received
1	J. Fox	6/8 1445		2		2
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor

Notice: 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 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 invoiced at $5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: KJE Enviromental & 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 Receipt 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?	**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 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 samples prior to placing in the refrigerator**

Analyst:

PH Device/Lot#:

Checklist completed by: Marithza Anaya Date: 06/08/2017

Marithza Anaya

Checklist reviewed by: Holly Taylor Date: 06/08/2017

Holly Taylor

Certificate of Analysis Summary 555513

KJE Enviromental & 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

Analysis Requested													
	Lab Id:	555513-001		555513-002		555513-003		555513-004		555513-005		555513-006	
	Field Id:	PLS4		PLS8		PLS12		PLS16		PLS20		PLS24	
	Depth:	4 ft		4 ft		4 ft		4 ft		4 ft		4 ft	
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-14-17 12:00		Jun-14-17 12:15		Jun-14-17 12:30		Jun-14-17 12:45		Jun-14-17 13:00		Jun-14-17 13:15	
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jun-21-17 15:30		Jun-21-17 15:30		Jun-21-17 15:30		Jun-21-17 15:30		Jun-21-17 15:30		Jun-21-17 15:30	
	Analyzed:	Jun-21-17 15:35		Jun-21-17 15:57		Jun-21-17 16:05		Jun-21-17 16:13		Jun-21-17 16:20		Jun-21-17 16:43	
	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

Holly Taylor
Project Manager

Certificate of Analysis Summary 555513

KJE Enviromental & 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

Analysis Requested													
	Lab Id:	555513-007		555513-008		555513-009		555513-010					
	Field Id:	PLS28		PLS32		PLS36		PLS40					
	Depth:	4 ft		4 ft		4 ft		4 ft					
	Matrix:	SOIL		SOIL		SOIL		SOIL					
	Sampled:	Jun-14-17 13:30		Jun-14-17 13:45		Jun-14-17 14:00		Jun-14-17 14:15					
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jun-21-17 15:30		Jun-21-17 15:30		Jun-21-17 15:30		Jun-21-17 15:30					
	Analyzed:	Jun-21-17 16:51		Jun-21-17 16:58		Jun-21-17 17:06		Jun-21-17 17:13					
	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				

Analytical Report 555513

for

KJE Enviromental & 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 Enviromental & 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,

Holly Taylor

Holly Taylor
Project Manager

Sample Cross Reference 555513

KJE Enviromental & 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

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 555513

KJE Enviromental & 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
Seq Number:	3020299				

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

Certificate of Analytical Results 555513

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**PLS8**	Matrix:	Soil	Date Received:	06.15.17 15.00
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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.21.17 15.30	Basis:	Wet Weight
Seq Number:	3020299				

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

Certificate of Analytical Results 555513

KJE Enviromental & 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
Seq Number:	3020299				

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

Certificate of Analytical Results 555513

KJE Enviromental & 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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.21.17 15.30	Basis:	Wet Weight
Seq Number:	3020299				

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

Certificate of Analytical Results 555513

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**PLS20**	Matrix:	Soil	Date Received:	06.15.17 15.00
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:	
Analyst:	MGO	Date Prep:	06.21.17 15.30	Basis:	Wet Weight
Seq Number:	3020299				

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

Certificate of Analytical Results 555513

KJE Enviromental & 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
Seq Number:	3020299				

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

Certificate of Analytical Results 555513

KJE Enviromental & 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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.21.17 15.30	Basis:	Wet Weight
Seq Number:	3020299				

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

Certificate of Analytical Results 555513

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.21.17 15.30	Basis:	Wet Weight
Seq Number:	3020299				

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	**10.8**	4.94	mg/kg	06.21.17 16.58		1

Certificate of Analytical Results 555513

KJE Enviromental & 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
Seq Number:	3020299				

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

Certificate of Analytical Results 555513

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**PLS40**	Matrix:	Soil	Date Received:	06.15.17 15.00
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
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	06.21.17 15.30	Basis:	Wet Weight
Seq Number:	3020299				

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

QC Summary 555513

KJE Enviromental & Civil Engineering

Bobcat/Red Hills Pipeline Release

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

Seq Number: 3020299 Matrix: Solid Date Prep: 06.21.17

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

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	232	93	238	95	90-110	3	20	mg/kg	06.21.17 15:19	

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

Seq Number: 3020299 Matrix: Soil Date Prep: 06.21.17

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

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	249	100	266	106	90-110	7	20	mg/kg	06.21.17 15:42	

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

Seq Number: 3020299 Matrix: Soil Date Prep: 06.21.17

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

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

CHAIN OF CUSTODY

Page 1 Of 2

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote #

Xenco Job # 555513

Client / Reporting Information

Company Name / Branch: KJE

Company Address: 500 McGehee Road, Cross Roads, Tx

Email: Tanner@kjenvironmental.com Phone No: (830) 928-7019

Project Contact: Tanner Evans

Samplers's Name: Tanner

Project Information

Project Name/Number: Bobcat/Redhills Pipeline Release

Project Location: Jal, NM

Invoice To: OWL - Oilfield Water Logistics

PO Number:

Analytical Information

Chlorides

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	PLS 4	4'	6/14	1200	S	1								X	X	
2	PLS 8			1215												
3	PLS 12			1230												
4	PLS 16			1245												
5	PLS 20			1300												
6	PLS 24			1315												
7	PLS 28			1330												
8	PLS 32			1345												
9	PLS 36			1400												
10	PLS 40			1415												

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracki

Temp: 4.7 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.5

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received
1	Tanner Evans	6/15 15:00	1	2		2
3	Relinquished by:	Date Time:	Received By: 6/15/17	Relinquished By: 4	Date Time:	Received 4
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable	On Ice ☒ Cooler Temp. Thermo. Corr. Factor

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: KJE Enviromental & 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 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?	**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 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 samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Marithza Anaya Date: 06/16/2017
Marithza Anaya

Checklist reviewed by: Holly Taylor Date: 06/16/2017
Holly Taylor

Certificate of Analysis Summary 556031

KJE Enviromental & Civil Engineering, Aubrey, TX

Project Name: OWL

Project Id: 102816D
Contact: James Fox
Project Location: Jal, NM

Date Received in Lab: Thu Jun-22-17 01:30 pm
Report Date: 27-JUN-17
Project Manager: Holly Taylor

Analysis Requested												
	Lab Id:	556031-001		556031-002		556031-003		556031-004		556031-005		
	Field Id:	G10		G20		G30		G40		G49		
	Depth:	1- ft		1- ft		1- ft		1- ft		1- ft		
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	Jun-22-17 12:45		Jun-22-17 12:45		Jun-22-17 12:45		Jun-22-17 12:45		Jun-22-17 12:45		
Inorganic Anions by EPA 300/300.1	***Extracted:***	Jun-26-17 20:17		Jun-26-17 20:17		Jun-26-17 20:17		Jun-26-17 20:17		Jun-26-17 20:17		
	Analyzed:	Jun-26-17 21:20		Jun-26-17 21:43		Jun-26-17 21:50		Jun-26-17 21:58		Jun-26-17 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	

Holly Taylor
Project Manager

Analytical Report 556031

for

KJE Enviromental & 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 Enviromental & 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,

Holly Taylor

Holly Taylor
Project Manager

Sample Cross Reference 556031

KJE Enviromental & Civil Engineering, Aubrey, TX

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 Enviromental & Civil Engineering

Project Name: OWL

Project ID: *102816D*
Work Order Number(s): *556031*

Report Date: *27-JUN-17*
Date Received: *06/22/2017*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 556031

KJE Enviromental & Civil Engineering, Aubrey, TX

OWL

Sample Id:	**G10**	Matrix:	Soil	Date Received:	06.22.17 13.30
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
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	**54.5**	4.97	mg/kg	06.26.17 21.20		1

Certificate of Analytical Results 556031

KJE Enviromental & Civil Engineering, Aubrey, TX

OWL

Sample Id:	**G20**	Matrix:	Soil	Date Received:	06.22.17 13.30
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
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	**58.6**	4.97	mg/kg	06.26.17 21.43		1

Certificate of Analytical Results 556031

KJE Enviromental & Civil Engineering, Aubrey, TX

OWL

Sample Id:	**G30**	Matrix:	Soil	Date Received:	06.22.17 13.30
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
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	**67.3**	4.99	mg/kg	06.26.17 21.50		1

Certificate of Analytical Results 556031

KJE Enviromental & 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

Certificate of Analytical Results 556031

KJE Enviromental & 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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(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	

QC Summary 556031

KJE Enviromental & Civil Engineering

OWL

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

Seq Number: 3020798 Matrix: Solid Date Prep: 06.26.17

MB Sample Id: 726771-1-BLK LCS Sample Id: 726771-1-BKS LCSD Sample Id: 726771-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	250	100	251	100	90-110	0	20	mg/kg	06.26.17 21:05	

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

Seq Number: 3020798 Matrix: Soil Date Prep: 06.26.17

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

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

Seq Number: 3020798 Matrix: Soil Date Prep: 06.26.17

Parent Sample Id: 556291-001 MS Sample Id: 556291-001 S MSD Sample Id: 556291-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	654	250	924	108	878	90	90-110	5	20	mg/kg	06.26.17 23:14	

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote # | Xenco Job # 550031

Client / Reporting Information

Company Name / Branch: KJ Environmental
Company Address: 500 Moseley Rd, Cross Roads, TX 76227
Email: dona@kjenvironmental.com, jones@kjenvironmental.com Phone No:
Project Contact: J. Fox
Samplers's Name: J. Fox

Project Information

Project Name/Number: OWL 102816D
Project Location: Jal, NM
Invoice To: OWL - Phillip Sanders
PO Number:

Analytical Information

Chlorides

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Field Comments
1	G10	1'	6/22	1245	S	1								X	
2	G20	↓	↓	↓	↓	↓								↓	
3	G30														
4	G40														
5	G49														
6															
7															
8															
9															
10															

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [x] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] Level II Report with TRRP checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

FED-EX / UP

Temp: 4.5°C IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 4.3°C

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:
1	J. Fox	6/22/17 1330	1	2	
3	Relinquished by:	Date Time:	Received By: 3	Relinquished By: 4	Date Time:
5	Relinquished by:	Date Time:	Received By: 5	Custody Seal #	Preserved where applicable

On Ice ✓ | Cooler Temp. | Thermo. Corr. Factor

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: KJE Enviromental & 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 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?	**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 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 samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Marithza Anaya Date: 06/22/2017
Marithza Anaya

Checklist reviewed by: Holly Taylor Date: 06/22/2017
Holly Taylor

Certificate of Analysis Summary 556631

KJE Enviromental & 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-29-17 02:33 pm
Report Date: 07-JUL-17
Project Manager: Holly Taylor

Analysis Requested							
	Lab Id:	556631-001					
	Field Id:	H10					
	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				

Holly Taylor
Project Manager

Analytical Report 556631

for

KJE Enviromental & 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 Enviromental & 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,

Holly Taylor

Holly Taylor
Project Manager

Sample Cross Reference 556631

KJE Enviromental & 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

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analytical Results 556631

KJE Enviromental & Civil Engineering, Aubrey, TX

Bobcat/Red Hills Pipeline Release

Sample Id:	**H10**	Matrix:	Soil	Date Received:	06.29.17 14.33
Lab Sample Id:	556631-001	Date Collected:	06.28.17 12.00		
Analytical Method:	Inorganic Anions by EPA 300/300.1			Prep Method:	E300P
Tech:	MGO			% Moisture:	
Analyst:	MGO	Date Prep:	07.06.17 14.45	Basis:	Wet Weight
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

	Phone	Fax
4147 Greenbriar Dr, Stafford, TX 77477	(281) 240-4200	(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	

QC Summary 556631

KJE Enviromental & Civil Engineering

Bobcat/Red Hills Pipeline Release

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

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

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

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	213	250	466	101	467	103	90-110	0	20	mg/kg	07.06.17 19:46	

CHAIN OF CUSTODY

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Page 1 Of 1

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote #: | Xenco Job #: 556431

Client / Reporting Information

Company Name / Branch: KJE
Company Address: 500 Moseley Road, Cross Roads Tx
Email: tanner@holenvironmental.com Phone No: (830)928 7019
Project Contact: Tanner Evans
Samplers's Name: Tanner Evans

Project Information

Project Name/Number: OWL Bobcat/Redhills Pipeline Release
Project Location: Jal, NM
Invoice To: OWL - Oilfield water logistics
PO Number:

Analytical Information

Chlorides

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	H10	1	6/28	1200	S	1								X	X	
2																
3																
4																
5																
6																
7																
8																
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [x] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [ ] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level III Std QC+ Forms
- [ ] Level 3 (CLP Forms)
- [ ] Level II Report with TRRP checklist
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] TRRP Level IV
- [ ] UST / RG -411

Notes:

Temp: 9.1 IR ID:R-8
CF:(0-6: -0.2°C)
(6-23: +0.2°C)
Corrected Temp: 9.3

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by	Date Time	Received By	Relinquished By	Date Time	Received By
1	Tanner Evans	1435 6/29	JKRAMER	2		
3				4		
5						

Custody Seal # | Preserved where applicable | On Ice: X | Cooler Temp. | Thermo. Corr. Factor

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

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 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?	**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 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 samples prior to placing in the refrigerator**

Analyst: PH Device/Lot#:

Checklist completed by: Jessica Kramer Date: 06/29/2017
Jessica Kramer

Checklist reviewed by: Holly Taylor Date: 06/29/2017
Holly Taylor

Certificate of Analysis Summary 556930

KJE Enviromental & 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 Jul-06-17 12:00 pm

Report Date: 10-JUL-17

Project Manager: Holly Taylor

Analysis Requested											
	Lab Id:	556930-001		556930-002		556930-003					
	Field Id:	H20		H30		H40					
	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					
	Analyzed:	Jul-08-17 01:47		Jul-08-17 01:55		Jul-08-17 02:18					
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL				
Chloride		367	4.99	380	4.96	973	4.99				

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 Enviromental & 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

Holly Taylor
Project Manager

Sample Cross Reference 556930

KJE Enviromental & 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

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.

Certificate of Analytical Results 556930

KJE Enviromental & 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

Certificate of Analytical Results 556930

KJE Enviromental & 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

Certificate of Analytical Results 556930

KJE Enviromental & 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
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	**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

QC Summary 556930

KJE Enviromental & Civil Engineering

Bobcat/Red Hills Pipeline Release

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

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

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

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	141	246	411	110	451	126	90-110	9	20	mg/kg	07.08.17 00:15	X

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

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

CHAIN OF CUSTODY

Revision 2016.1

Page 1 Of 1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote # | Xenco Job # 556930

Client / Reporting Information

Company Name / Branch: KJE
Company Address: 500 Mosley Road
Email: Tanner@kjenvironmental.com
Phone No: 830 928 7019
Project Contact: Tanner Evans
Samplers's Name: Tanner Evans

Project Information

Project Name/Number: 0nL Bobcat/Redhills pipeline Release
Project Location: Jal, NM
Invoice To: OnL
PO Number:

Analytical Information

Chlorides

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	H20	1	7/6	1000	S	1								X	X	
2	H30	1	7/6	1015	S	1								X	X	
3	H40	1	7/6	1030	S	1								X	X	
4																
5																
6																
7																
8																
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [x] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Tanner Evans	7/6	1	2	7-6-17 12:00	2 Shawnee Smith
3	Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
			3	4		4
5	Relinquished by:	Date Time:	Received By:	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor
			5			1.8

CHAIN OF CUSTODY

Page 1 Of 1

Revision 2016.1

XENCO LABORATORIES

Setting the Standard since 1990

Stafford, TX (281) 240-4200 | El Paso, TX (915) 585-3443 | Midland, TX (432) 704-5440 | Phoenix, AZ (480) 355-0900 | Service Center- Amarillo, TX (806)678-4514
Dallas, TX (214) 902-0300 | Lubbock, TX (806) 794-1296 | San Antonio, TX (210) 509-3334 | Service Center - Baton Rouge, LA (832) 712-8143 | Service Center- Hobbs, NM (575) 392-7550

www.xenco.com

Xenco Quote # | Xenco Job # 556930

Client / Reporting Information

Company Name / Branch: KJE
Company Address: 500 Moseley Road
Email: Tanner@kjenvironmental.com
Phone No: 830 928 7019
Project Contact: Tanner Evans
Samplers's Name: Tanner Evans

Project Information

Project Name/Number: 0w1 Bobcat / Redhills Pipeline Release
Project Location: Jal, NM
Invoice To: Owl
PO Number:

Analytical Information

Chlorides

Matrix Codes

W = Water
S = Soil/Sed/Solid
GW = Ground Water
DW = Drinking Water
P = Product
SW = Surface Water
SL - Sludge
OW = Ocean/Sea Water
WI = Wipe
O = Oil
WW = Waste Water
A = Air

No.	Field ID / Point of Collection	Collection: Sample Depth	Collection: Date	Collection: Time	Matrix	# of bottles	Number of preserved bottles: HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE	Chlorides	Field Comments
1	H20	1	7/6	1000	S	1								X	X	
2	H30	1	7/6	1015	S	1								X	X	
3	H40	1	7/6	1030	S	1								X	X	
4																
5																
6																
7																
8																
9																
10																

Turnaround Time (Business days)

- [ ] Same Day TAT
- [ ] 5 Day TAT
- [ ] Next Day EMERGENCY
- [ ] 7 Day TAT
- [ ] 2 Day EMERGENCY
- [ ] Contract TAT
- [x] 3 Day EMERGENCY

TAT Starts Day received by Lab, if received by 5:00 pm

Data Deliverable Information

- [ ] Level II Std QC
- [ ] Level IV (Full Data Pkg /raw data)
- [ ] Level III Std QC+ Forms
- [ ] TRRP Level IV
- [ ] Level 3 (CLP Forms)
- [ ] UST / RG -411
- [ ] Level II Report with TRRP checklist

Notes:

Temp: IR ID:R-8
CF:(0-6: -0.2°C) 9.3
(6-23: +0.2°C)
Corrected Temp: 9.3

FED-EX / UPS: Tracking #

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY

	Relinquished by Sampler / Relinquished by:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	Tanner Evans	7/6	1	2	7-6-19 12:00	2 Maurice Smith
3			3	4		4
5			5	Custody Seal #	Preserved where applicable	On Ice / Cooler Temp. / Thermo. Corr. Factor: 1.8 9.3

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 sample. 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: 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 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?	**Yes**	
#12 Chain of Custody agrees with sample label(s)?	**Yes**	
#13 Container label(s) legible and intact?	**Yes**	R8
#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 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 delivery of samples prior to placing in the refrigerator**

Analyst: ss

PH Device/Lot#:

Checklist completed by: Shawnee Smith Date: 07/06/2017

Shawnee Smith

Checklist reviewed by: Holly Taylor Date: 07/07/2017

Holly Taylor