

AP - 97

STAGE 1 WORKPLANS

DATE:

5-2-13

Texerra LLC

20055 Laredo Lane Monument, CO 80132
Tel: 719-339-6791 E-mail: lpg@texerra.com

May 2nd, 2013

Mr. Edward Hansen

New Mexico Energy, Minerals, & Natural Resources
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87504

RE: **Request for Approval of Additional Delineation**
Rice Operating Company
BD P-26-1 and BD P-26-2 (AP-97)
T21S, R37E, Sec. 26, UL P

RECEIVED OCD
2013 MAY - 8 P 3:12

Sent via E-mail and U.S. Certified Mail No. 7011 0110 0002 5197 1372

Mr. Hansen:

Rice Operating Company (ROC) requests NMOCD approval for the installation of an additional 2-inch monitoring well at ROC's BD P-26-1 and BD P-26-2 location per direction given during the meeting between NMOCD and ROC on January 25th, 2012. The location of the site is given in Figure 1 (Appendix). The proposed well will be located down-gradient of MW-2 located at P-26-2 and is shown in relation to existing monitor wells and facilities in Figure 2 (Appendix). We thus plan to conduct quarterly sampling and analysis of groundwater from the proposed monitor well for chlorides and BTEX in tandem with that of the existing wells.

In 2004, ROC replaced the former junction boxes (vents) at these two locations, BD P-26-1 and BD P-26-2. Based on preliminary soils evaluation, ROC submitted a Notice of Potential Groundwater Impact to NMOCD on August 25th, 2004. Further soil delineation and groundwater monitoring culminated in the development of a Stage 1 and 2 Abatement Plan for both sites and submittal to NMOCD on October 10th, 2008, which was, subsequently, assigned a combined project number, AP-97. Corrective actions to the vadose zone at each site have already taken place with the new construction and relocation of watertight junction boxes, upgrade to poly pipeline, and installation of a one-foot thick clay layer to minimize infiltration through the vadose zone (Figure 3). The clay layer installed at P-26-1 has dimensions of 25 by 35 ft and was installed at 6 ft bgs. The clay layer installed at P-26-2 has dimensions 10 by 12 ft and was installed at 6 ft bgs.

Annual reports summarizing the results of groundwater sampling and analyses have been submitted in each of the years following the submittal of the Stage 1 and 2 Abatement Plan, with a compilation of results presented in the most recent report (March 28th, 2013). A compilation of groundwater sampling results to date is given in Table 1 (Appendix).

Rice Operating Company BD P-26-1 & 2

We thus propose to compile and analyze all of the site data following the last quarterly sample to be taken in 2013 and propose a path forward based on the results found, anticipating that information gained from the proposed, new monitor well will be helpful in this regard.

ROC is the service provider (agent) for the BD Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The BD SWD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Please do not hesitate to contact either Rice Operating Company or myself if you have any questions or need additional information.

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to be 'L. Peter Galusky, Jr.', written in a cursive style.

L. Peter Galusky, Jr. Ph.D.
Principal

Copy: Rice Operating Company



BD P-26-1 & 2

NMOCD Case#: AP-97

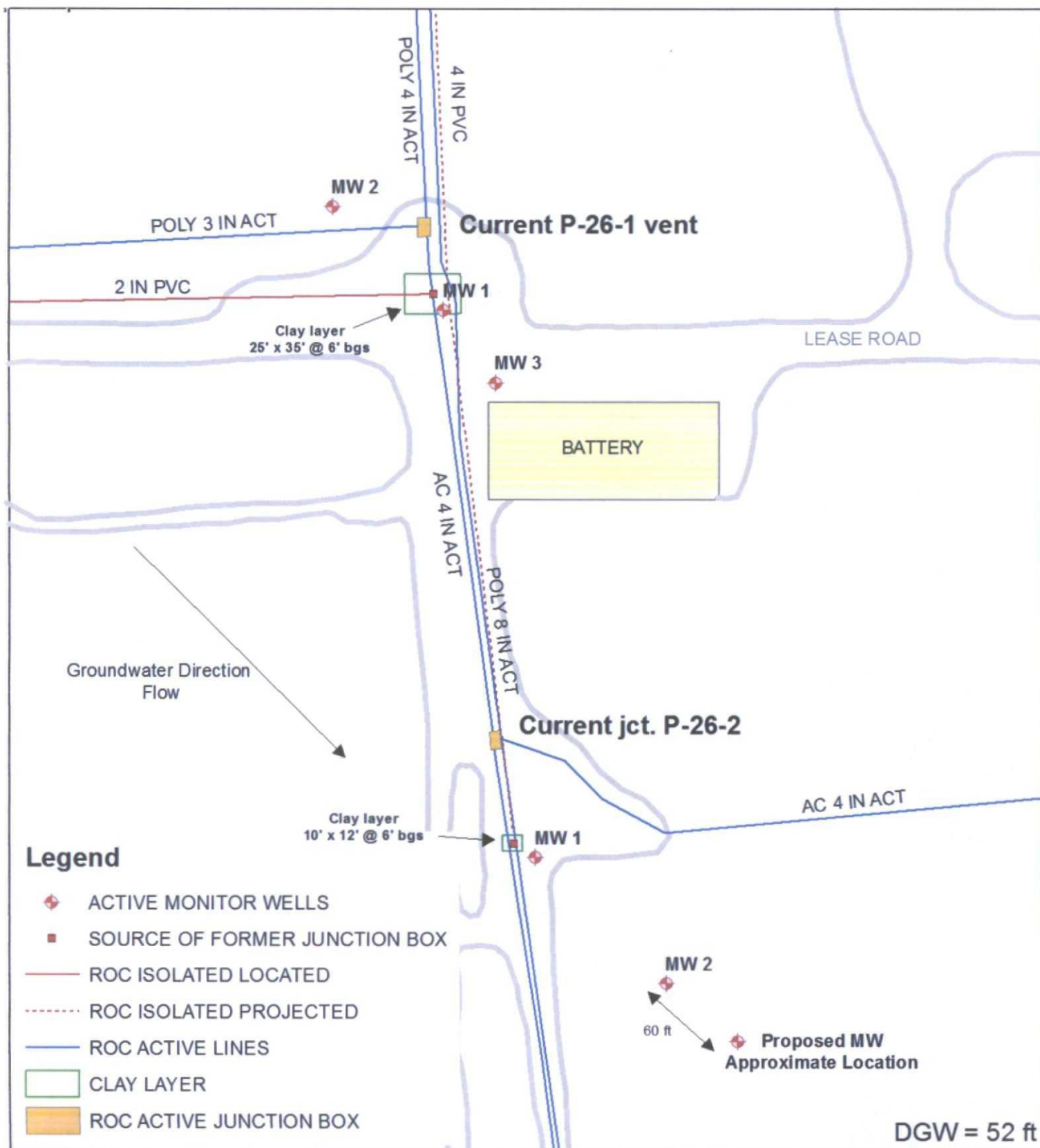
UL/P SECTION 26
T-21-S R-37-E
LEA COUNTY, NM

Figure 1



0 0.25 0.5
Miles

Drawing date: 3/28/12
Drafted by: L. Weinheimer



BD P-26-1 & 2

NMOCD Case#: AP-97

UL/P SECTION 26
T-21-S R-37-E
LEA COUNTY, NM



Drawing date: 5/10/13
Drafted by: L. Weinheimer

Table 1

BD P-26-1 (AP-97)

MW-1 (near-source)								
Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
50.37	11/12/2007	4350	8396	<0.002	<0.002	<0.002	<0.006	347
49.8	1/14/2008	3900	7655	<0.001	<0.001	<0.001	<0.003	355
50	4/4/2008	3000	6340	<0.001	<0.001	<0.001	<0.003	304
50.28	7/16/2008	2160	4930	<0.001	<0.001	<0.001	<0.003	299
50.89	10/6/2008	2560	5940	<0.001	<0.001	<0.001	<0.003	309
50.56	1/16/2009	2160	4300	<0.001	<0.001	<0.001	<0.003	310
50.48	4/15/2009	1700	3420	<0.001	<0.001	<0.001	<0.003	289
49.43	7/15/2009	650	1740	<0.001	<0.001	<0.001	<0.003	233
49.13	10/9/2009	540	1520	<0.001	<0.001	<0.001	<0.003	230
49.63	1/15/2010	560	1400	<0.001	<0.001	<0.001	<0.003	216
50.15	4/13/2010	220	941	<0.001	<0.001	<0.001	<0.003	223
49.93	7/13/2010	316	1120	<0.001	<0.001	<0.001	<0.003	205
48.57	10/8/2010	232	920	<0.001	<0.001	<0.001	<0.003	182
48.23	1/18/2011	1640	3880	<0.001	<0.001	<0.001	<0.003	348
48.12	4/14/2011	1670	3270	<0.001	<0.001	<0.001	<0.003	347
48.33	7/21/2011	1300	2740	<0.001	<0.001	<0.001	<0.003	279
48.58	10/17/2011	980	2290	<0.001	<0.001	<0.001	<0.003	215
48.59	1/20/2012	1040	2280	<0.001	<0.001	<0.001	<0.003	243
48.63	4/19/2012	1180	2580	<0.001	<0.001	<0.001	<0.003	226
53.31	7/17/2012	920	1900	<0.001	<0.001	<0.001	<0.003	152
51.89	10/15/2012	700	1720	<0.001	<0.001	<0.001	<0.003	245
54.1	1/9/2013	920	1960	<0.001	<0.001	<0.001	<0.003	165

MW-2 (up-gradient)								
Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
49.51	7/16/2008	196	968	<0.001	<0.001	<0.001	<0.003	187
50.14	10/6/2008	184	933	<0.001	<0.001	<0.001	<0.003	216
49.72	1/16/2009	192	913	<0.001	<0.001	<0.001	<0.003	207
49.71	4/15/2009	188	932	<0.001	<0.001	<0.001	<0.003	186
48.62	7/15/2009	192	887	<0.001	<0.001	<0.001	<0.003	180
48.46	10/9/2009	180	895	<0.001	<0.001	<0.001	<0.003	182
48.62	1/15/2010	328	1040	<0.001	<0.001	<0.001	<0.003	185
49.13	4/13/2010	192	896	<0.001	<0.001	<0.001	<0.003	210
48.97	7/13/2010	196	848	<0.001	<0.001	<0.001	<0.003	203
48.01	10/8/2010	168	888	<0.001	<0.001	<0.001	<0.003	167
47.68	1/18/2011	164	881	<0.001	<0.001	<0.001	<0.003	191
47.61	4/14/2011	168	867	<0.001	<0.001	<0.001	<0.003	189
47.76	7/21/2011	180	825	<0.001	<0.001	<0.001	<0.003	170
48.06	10/17/2011	172	813	<0.001	<0.001	<0.001	<0.003	136
48.08	1/20/2012	176	924	<0.001	<0.001	<0.001	<0.003	189
48.12	4/19/2012	168	868	<0.001	<0.001	<0.001	<0.003	187
52.33	7/17/2012	204	968	<0.001	<0.001	<0.001	<0.003	194
51.02	10/15/2012	192	937	<0.001	<0.001	<0.001	<0.003	220
53.14	1/9/2013	196	862	<0.001	<0.001	<0.001	<0.003	193

BD P-26-1 (AP-97)

MW-3 (down-gradient)								
Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
49.2	7/16/2008	212	926	<0.001	<0.001	<0.001	<0.003	174
49.61	10/6/2008	188	936	<0.001	<0.001	<0.001	<0.003	190
49.33	1/16/2009	208	896	<0.001	<0.001	<0.001	<0.003	207
49.31	4/15/2009	204	924	<0.001	<0.001	<0.001	<0.003	190
48.06	7/15/2009	176	895	<0.001	<0.001	<0.001	<0.003	169
48.02	10/9/2009	204	930	<0.001	<0.001	<0.001	<0.003	169
48.36	1/15/2010	328	1150	<0.001	<0.001	<0.001	<0.003	176
49.12	4/13/2010	460	1290	<0.001	<0.001	<0.001	<0.003	197
48.91	7/13/2010	450	1170	<0.001	<0.001	<0.001	<0.003	189
47.22	10/8/2010	830	1840	<0.001	<0.001	<0.001	<0.003	142
46.9	1/18/2011	1800	3670	<0.001	<0.001	<0.001	<0.003	259
46.77	4/14/2011	2450	4430	<0.001	<0.001	<0.001	<0.003	329
46.96	7/21/2011	1860	3700	<0.001	<0.001	<0.001	<0.003	323
47.26	10/17/2011	1240	2870	<0.001	<0.001	<0.001	<0.003	252
47.21	1/20/2012	1040	2600	<0.001	<0.001	<0.001	<0.003	322
47.31	4/19/2012	920	2340	<0.001	<0.001	<0.001	<0.003	268
52.36	7/17/2012	1950	3760	<0.001	<0.001	<0.001	<0.003	297
50.53	10/15/2012	910	2100	<0.001	<0.001	<0.001	<0.003	234
52.98	1/9/2013	2020	3800	<0.001	<0.001	<0.001	<0.003	323

BD P-26-2 (AP-97)

MW-1 (near-source)								
Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
47.84	11/12/2007	5000	9415	<0.002	<0.002	<0.002	<0.006	430
47.39	1/14/2008	5100	9453	<0.001	<0.001	<0.001	<0.003	469
47.45	4/4/2008	5300	10100	<0.001	<0.001	<0.001	<0.003	437
48.07	7/16/2008	5300	9870	<0.001	<0.001	<0.001	<0.003	448
48.35	10/6/2008	5600	10700	<0.001	<0.001	<0.001	<0.003	473
48.76	1/16/2009	4000	7680	<0.001	<0.001	<0.001	<0.003	497
47.94	4/15/2009	4500	8190	<0.001	<0.001	<0.001	<0.003	462
47.23	7/15/2009	3050	6000	<0.001	<0.001	<0.001	<0.003	403
46.92	10/9/2009	2100	4360	<0.001	<0.001	<0.001	<0.003	516
47.18	1/15/2010	2120	4600	<0.001	<0.001	<0.001	<0.003	410
47.42	4/13/2010	2850	5530	<0.001	<0.001	<0.001	<0.003	489
47.25	7/13/2010	2300	4750	<0.001	<0.001	<0.001	<0.003	453
46.5	10/8/2010	920	2540	<0.001	<0.001	<0.001	<0.003	437
46.15	1/18/2011	820	2140	<0.001	<0.001	<0.001	<0.003	319
46.03	4/14/2011	800	2100	<0.001	<0.001	<0.001	<0.003	356
46.19	7/19/2011	1320	2760	<0.001	<0.001	<0.001	<0.003	327
46.51	10/17/2011	1480	3260	<0.001	<0.001	<0.001	<0.003	281
46.49	1/20/2012	2370	4630	<0.001	<0.001	<0.001	<0.003	392
46.53	4/19/2012	2100	4190	<0.001	<0.001	<0.001	<0.003	384
51.57	7/17/2012	2220	3810	<0.001	<0.001	<0.001	<0.003	376
49.56	10/15/2012	1620	3480	<0.001	<0.001	<0.001	<0.003	427
51.04	1/9/2013	1780	4100	<0.001	<0.001	<0.001	<0.003	370

BD P-26-2 (AP-97)

MW-2 (down-gradient)								
Depth to Water	Sample Date	Cl	TDS	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Sulfate
47.11	7/16/2008	432	1470	<0.001	<0.001	<0.001	<0.003	253
47.38	10/6/2008	384	1350	<0.001	<0.001	<0.001	<0.003	289
47.83	1/16/2009	400	1360	<0.001	<0.001	<0.001	<0.003	262
46.99	4/15/2009	412	1370	<0.001	<0.001	<0.001	<0.003	259
46.47	7/15/2009	432	1420	<0.001	<0.001	<0.001	<0.003	268
46.11	10/9/2009	480	1470	<0.001	<0.001	<0.001	<0.003	237
46.35	1/15/2010	590	1660	<0.001	<0.001	<0.001	<0.003	215
46.52	4/13/2010	690	1720	<0.001	<0.001	<0.001	<0.003	261
46.37	7/13/2010	820	1940	<0.001	<0.001	<0.001	<0.003	255
45.76	10/8/2010	690	1760	<0.001	<0.001	<0.001	<0.003	246
45.42	1/18/2011	900	2400	<0.001	<0.001	<0.001	<0.003	361
45.29	4/14/2011	890	2010	<0.001	<0.001	<0.001	<0.003	319
45.46	7/19/2011	810	1900	<0.001	<0.001	<0.001	<0.003	283
45.78	10/17/2011	780	1950	<0.001	<0.001	<0.001	<0.003	237
45.74	1/20/2012	830	1950	<0.001	<0.001	<0.001	<0.003	323
45.78	4/19/2012	870	2100	<0.001	<0.001	<0.001	<0.003	363
50.67	7/17/2012	1340	2870	<0.001	<0.001	<0.001	<0.003	278
48.64	10/15/2012	1140	2470	<0.001	<0.001	<0.001	<0.003	373
49.78	1/9/2013	1090	2410	<0.001	<0.001	<0.001	<0.003	298

Hansen, Edward J., EMNRD

From: Katie Jones <kjones@riceswd.com>
Sent: Wednesday, May 29, 2013 3:56 PM
To: Hansen, Edward J., EMNRD
Cc: Hack Conder; L Peter Galusky; Laura Pena
Subject: ROC - BD P-26-1 and 2 (AP-97) Request for Approval of Additional Delineation
Attachments: ROC - BD P-26-1 and P-26-2 (AP-97) Additional Delineation Request 5.2.13.pdf; ROC - BD P-26 1 & 2 - Proposed Well and Clay Liners.jpg

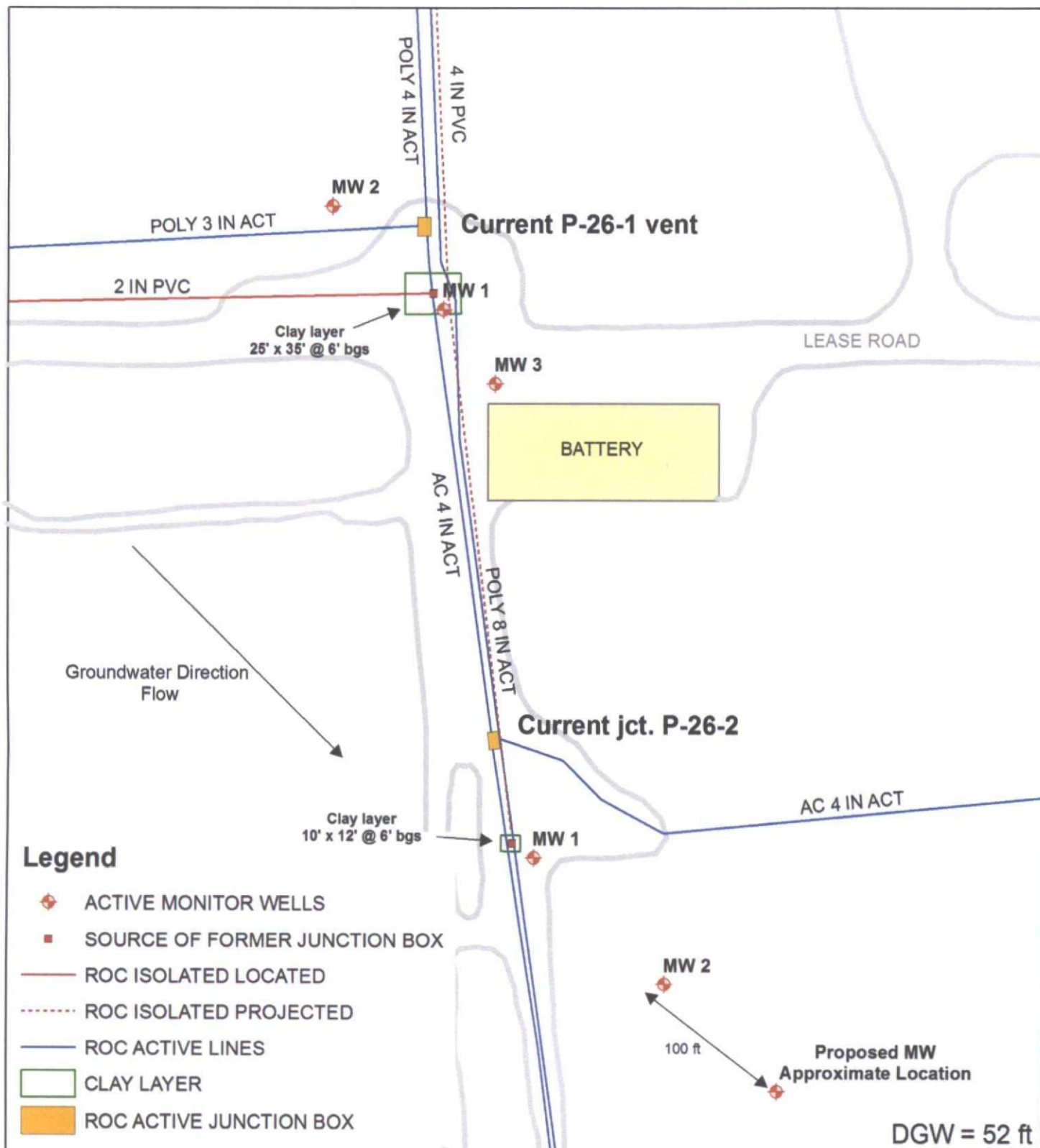
Mr. Hansen

ROC submits the following as an Addendum to the BD P-26-1 and P-26-2 (AP-97) Request for Approval of Additional Delineation. Page 1, Paragraph 1: text in blue lettering, below, will be added to the paragraph. The attached, updated Figure 2 will replace page 4 of the original report. If you need any further information, please let me or Hack know.

“Rice Operating Company (ROC) requests NMOCD approval for the installation of an additional 2-inch monitoring well at ROC’s BD P-26-1 and BD P-26-2 location per direction given during the meeting between NMOCD and ROC on January 25th, 2012. The location of the site is given in Figure 1 (Appendix). The proposed well will be located approximately 100 ft down-gradient of MW-2 located at P-26-2 and is shown in relation to existing monitor wells and facilities in Figure 2 (Appendix). We thus plan to conduct quarterly sampling and analysis of groundwater from the proposed monitor well for chlorides and BTEX in tandem with that of the existing wells”

Thank you.

Katie Jones
Environmental Project Manager
RICE Operating Company



BD P-26-1 & 2

NMOCD Case#: AP-97

UL/P SECTION 26
T-21-S R-37-E
LEA COUNTY, NM