

AP - 27

ANNUAL MONITORING REPORT

YEAR(S):
2009



TETRA TECH

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March 30, 2010

Mr. Edward Hansen
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Re: 2009 Annual Groundwater Summary Report & Project Status Report, Rice Operating Company, E-15 Release, BD SWD System, Unit D&E, Section 15, T-22-S, R-37-E, Lea County, New Mexico, NMOCD CASE #AP-027

Mr. Hansen:

Tetra Tech Inc. (Tetra Tech) submits the following 2009 Annual Groundwater Summary Report for the Rice Operating Company (ROC), E-15 Release, located in the BD Salt Water Disposal System. This report consists of the following sections:

1. Tables summarizing all laboratory results and depths to groundwater at the site, including the current year (2009).
2. Graphs depicting the concentration of chlorides, total dissolved solids (TDS), and sulfates over time.

In 2005, a groundwater remediation system was installed at the site to address the chloride impacts to the groundwater. Due to low volumes, silting, and equipment problems, the system was discontinued in 2007. Several of the silted or dry monitor wells were permanently abandoned. Since 2005, the four active monitor wells (MW-1 through MW-4) have been sampled on a quarterly basis. On July 17, 2009, a formal request was submitted to the NMOCD for suspension of further sampling of BTEX at the site. As of this report, a response has not been received from the NMOCD in regards to the suspension request.

ROC is the service provider (agent) for the BD Salt Water Disposal System and has no ownership of any portion of the 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.

Tetra Tech

1910 North Big Spring, Midland, TX 79705

Tel 432.682.4559

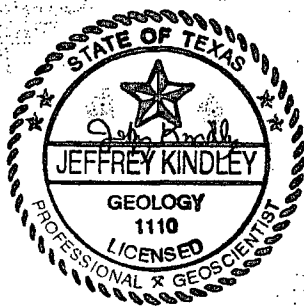
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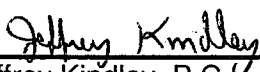


TETRA TECH

Thank you for your consideration of this annual summary information. If you have any questions, please contact me at (432) 682-4559, or Hack Conder of ROC at (575) 393-9174.



Respectfully Submitted,
Tetra Tech, Inc.



Jeffrey Kindley, P.G.
Senior Project Manager

cc: Hack Conder –ROC
Enclosures: Tables and Graphs

Table 1
Rice Operating Company
BD E-15

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	EthylBenzene	Total Xylenes	Sulfate	Comments
1	xxx	xxx	xxx	xxx	12/30/04	762	xxx	xxx	xxx	xxx	xxx	xxx	xxx
1	xxx	xxx	xxx	xxx	02/11/05	663	xxx	xxx	xxx	xxx	xxx	xxx	xxx
1	xxx	xxx	xxx	xxx	05/01/05	512	xxx	xxx	xxx	xxx	xxx	xxx	xxx
1	xxx	xxx	xxx	xxx	08/30/05	1,760	3,350	<0.001	<0.001	<0.001	<0.001	215	xxx
1	73.65	92.25	3.00	10	11/08/05	438	1,400	<0.001	<0.001	<0.001	<0.001	183	xxx
1	73.41	92.25	3.00	9	02/07/06	387	1,270	<0.001	<0.001	<0.001	<0.001	181	xxx
1	73.57	92.25	3.00	10	05/09/06	367	1,320	<0.001	<0.001	<0.001	<0.001	162	xxx
1	73.62	92.25	3.00	10	08/29/06	501	1,410	<0.001	<0.001	<0.001	<0.001	249	xxx
1	73.56	92.25	3.00	10	10/26/06	396	1,340	<0.001	<0.001	<0.001	<0.001	208	xxx
1	xxx	xxx	xxx	xxx	02/12/07	587	1,460	<0.001	<0.001	<0.001	<0.001	249	Red
1	73.60	91.96	2.90	10	04/24/07	480	1,470	<0.001	<0.001	<0.001	<0.001	221	No odor
1	73.62	91.96	2.90	10	09/24/07	528	1,382	<0.002	<0.002	<0.002	<0.006	337	No odor
1	73.63	91.96	2.90	10	11/30/07	430	1,423	<0.002	<0.002	<0.002	<0.006	190	No odor
1	73.73	91.97	2.90	12	03/07/08	496	1,600	<0.001	<0.001	<0.001	<0.003	271	No odor
1	73.70	91.97	2.90	12	05/30/08	464	1,360	<0.002	<0.002	<0.002	<0.006	240	No odor
1	73.76	91.97	2.90	12	08/11/08	530	1,810	<0.001	<0.001	<0.001	<0.003	259	No odor
1	73.90	91.97	2.90	12	11/14/08	700	1,870	<0.001	<0.001	<0.001	<0.003	177	No odor
1	73.79	92.90	3.10	12	01/22/09	550	1,760	<0.001	<0.001	<0.001	<0.003	258	No odor
1	73.84	94.76	3.30	12	04/23/09	460	1,450	<0.001	<0.001	<0.001	<0.003	210	No odor
1	73.89	94.76	3.30	12	07/17/09	510	1,430	<0.001	<0.001	<0.001	<0.003	243	No odor
1	73.91	94.76	3.30	12	10/14/09	550	1,520	<0.001	<0.001	<0.001	<0.003	212	No odor

Graph 1
 Rice Operating Company
 MW-1
 BD E-15
 Lea County, New Mexico

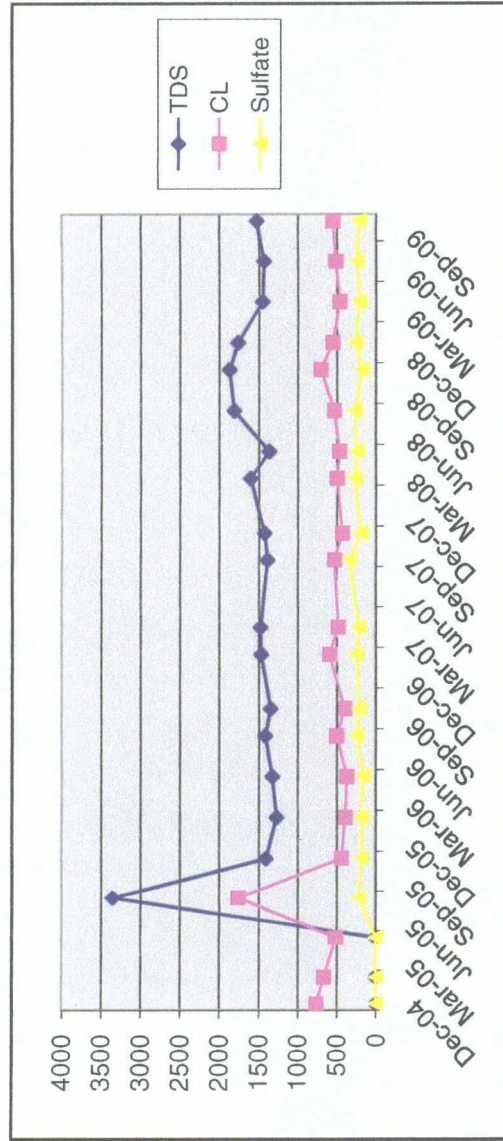


Table 2
Rice Operating Company
BD E-15
Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	EthylBenzene	Total Xylenes	Sulfate	Comments
2	xxx	xxx	xxx	xxx	12/30/04	25,400	xxx	xxx	xxx	xxx	xxx	xxx	xxx
2	xxx	xxx	xxx	xxx	02/11/05	18,000	xxx	xxx	xxx	xxx	xxx	xxx	xxx
2	xxx	xxx	xxx	xxx	05/01/05	23,900	xxx	xxx	xxx	xxx	xxx	xxx	xxx
2	xxx	xxx	xxx	xxx	08/30/05	676	1,810	<0.001	<0.001	<0.001	<0.001	229	xxx
2	76.45	86.75	1.60	6	11/08/05	17,200	28,600	0.00116	<0.001	<0.001	<0.001	1140	xxx
2	76.33	86.57	1.70	6	02/07/06	17,700	29,700	<0.001	<0.001	<0.001	<0.001	1140	xxx
2	76.38	86.75	1.70	10	05/09/06	16,200	26,600	<0.001	<0.001	<0.001	<0.001	1380	xxx
2	76.44	86.75	1.60	10	08/29/06	15,500	25,100	<0.001	<0.001	<0.001	<0.001	986	Red color
2	76.45	86.75	1.60	69	10/26/06	14,300	29,600	<0.001	<0.001	<0.001	<0.001	801	Red color
2	xxx	xxx	xxx	xxx	02/12/07	12,800	19,500	<0.001	<0.001	<0.001	<0.001	691	xxx
2	76.44	87.40	1.80	7	04/24/07	11,300	23,500	<0.001	<0.001	<0.001	<0.001	588	Clear/no odor
2	xxx	xxx	xxx	xxx	09/24/07	9,497	16,202	<0.002	<0.002	<0.002	<0.006	605	Clear/no odor
2	xxx	xxx	xxx	xxx	11/30/07	9,500	17,709	<0.002	<0.002	<0.002	<0.006	484	Clear/no odor
2	xxx	xxx	xxx	xxx	03/07/08	8,900	16,800	<0.001	<0.001	<0.001	<0.003	483	Clear/no odor
2	76.62	86.41	1.60	8	05/30/08	8,800	15,600	<0.002	<0.002	<0.002	<0.006	464	Clear/no odor
2	76.59	86.41	1.60	8	08/11/08	9,400	17,100	<0.001	<0.001	<0.001	<0.003	440	Clear/no odor
2	76.72	86.41	1.60	8	11/14/08	8,200	15,700	<0.001	<0.001	<0.001	<0.003	475	Clear/no odor
2	76.59	86.42	1.60	8	01/22/09	8,700	16,700	<0.001	<0.001	<0.001	<0.003	481	Clear/no odor
2	76.63	86.42	1.60	8	04/23/09	7,400	15,500	<0.001	<0.001	<0.001	<0.003	436	Clear/no odor
2	76.68	86.42	1.60	8	07/17/09	7,700	13,600	<0.001	<0.001	<0.001	<0.003	384	Clear/no odor
2	76.91	86.42	1.50	8	10/14/09	7,500	13,300	<0.001	<0.001	<0.001	<0.003	380	Clear/no odor

Graph 2
Rice Operating Company
MW-2
BD E-15
Lea County, New Mexico

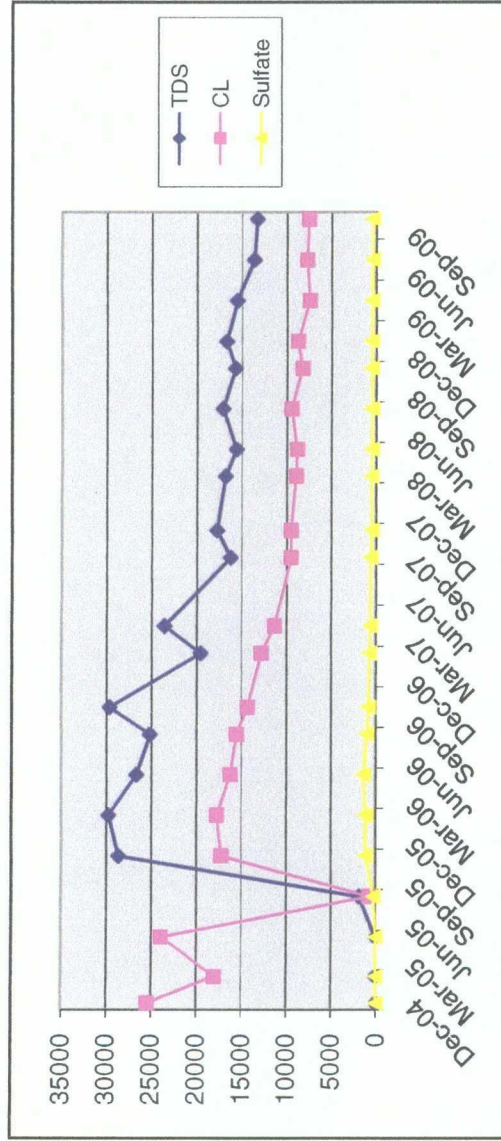


Table 3
Rice Operating Company
BD E-15
Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	EthylBenzene	Total Xylenes	Sulfate	Comments
3	xxx	xxx	xxx	xxx	06/01/04	1,790	5,700	<0.001	<0.001	<0.001	<0.001	1250	xxx
3	xxx	xxx	xxx	xxx	12/30/04	993	xxx	xxx	xxx	xxx	xxx	xxx	xxx
3	xxx	xxx	xxx	xxx	02/11/05	797	xxx	xxx	xxx	xxx	xxx	xxx	xxx
3	xxx	xxx	xxx	xxx	05/01/05	909	xxx	xxx	xxx	xxx	xxx	xxx	xxx
3	79.52	99.20	3.10	10	11/08/05	845	1,920	<0.001	<0.001	<0.001	<0.001	161	xxx
3	78.83	99.20	3.30	10	02/07/06	769	1,750	<0.001	<0.001	<0.001	<0.001	157	xxx
3	78.89	99.20	3.20	15	05/09/06	907	1,780	<0.001	<0.001	<0.001	<0.001	181	xxx
3	78.95	99.20	3.20	15	08/29/06	728	1,730	<0.001	<0.001	<0.001	<0.001	191	Clear
3	79.01	99.20	3.20	10	10/26/06	719	1,910	<0.001	<0.001	<0.001	<0.001	171	Clear
3	xxx	xxx	xxx	xxx	02/12/07	768	1,830	<0.001	<0.001	<0.001	<0.001	175	xxx
3	78.92	99.20	3.20	10	04/24/07	664	1,730	<0.001	<0.001	<0.001	<0.001	161	Clear/no odor
3	78.98	99.20	3.20	10	09/24/07	750	2,265	<0.002	<0.002	<0.002	<0.006	261	Clear/no odor
3	78.95	99.20	3.20	10	11/30/07	740	1,833	<0.002	<0.002	<0.002	<0.002	158	Clear/no odor
3	78.98	99.28	3.20	12	03/07/08	750	1,790	<0.001	<0.001	<0.001	<0.003	207	Clear/no odor
3	78.99	99.28	3.20	12	05/30/08	790	2,010	<0.002	<0.002	<0.002	<0.006	213	Clear/no odor
3	79.07	99.28	3.20	12	08/11/08	760	2,080	<0.001	<0.001	<0.001	<0.003	205	Clear/no odor
3	79.19	99.28	3.20	12	11/14/08	780	2,140	<0.001	<0.001	<0.001	<0.003	193	Clear/no odor
3	79.04	99.31	3.20	12	01/22/09	810	2,190	<0.001	<0.001	<0.001	<0.003	194	Clear/no odor
3	79.12	99.31	3.20	12	04/23/09	880	2,100	<0.001	<0.001	<0.001	<0.003	203	Clear/no odor
3	79.17	99.31	3.20	12	07/17/09	880	1,890	<0.001	<0.001	<0.001	<0.003	181	Clear/no odor
3	79.10	99.31	3.20	12	10/14/09	890	2,430	<0.001	<0.001	<0.001	<0.003	165	Clear/no odor

Graph 3
Rice Operating Company
MW-3
BD E-15
Lea County, New Mexico

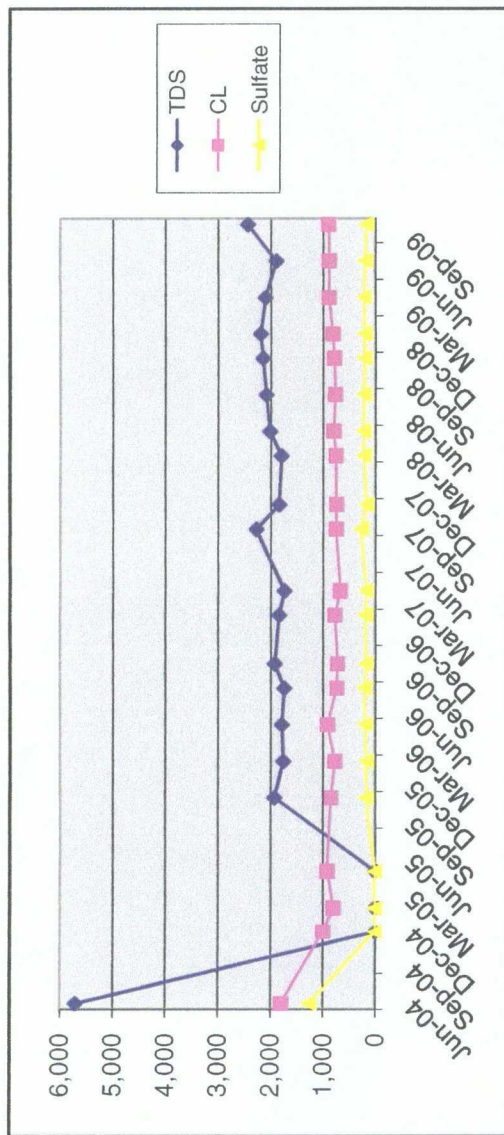


Table 4
Rice Operating Company
BD E-15
Lea County, New Mexico

MW	Depth to Water	Total Depth	Well Volume	Volume Purged	Sample Date	Cl	TDS	Benzene	Toluene	EthylBenzene	Total Xylenes	Sulfate	Comments
4	xxx	xxx	xxx	xxx	05/08/04	1,880	xxx	xxx	xxx	xxx	xxx	xxx	xxx
4	xxx	xxx	xxx	xxx	10/01/04	1,840	xxx	xxx	xxx	xxx	xxx	xxx	xxx
4	xxx	xxx	xxx	xxx	12/30/04	1,840	xxx	xxx	xxx	xxx	xxx	xxx	xxx
4	xxx	xxx	xxx	xxx	02/11/05	1,400	xxx	xxx	xxx	xxx	xxx	xxx	xxx
4	xxx	xxx	xxx	xxx	05/01/05	1,970	xxx	xxx	xxx	xxx	xxx	xxx	xxx
4	xxx	xxx	xxx	xxx	08/30/05	1,000	2,430	<0.001	<0.001	<0.001	<0.001	328	xxx
4	86.21	98.55	2.00	7	11/08/05	1,510	4,020	<0.001	<0.001	<0.001	<0.001	413	xxx
4	85.67	98.55	2.10	7	02/07/06	1,550	3,950	<0.001	<0.001	<0.001	<0.001	425	xxx
4	86.13	98.55	2.00	10	05/09/06	1,820	3,720	<0.001	<0.001	<0.001	<0.001	474	xxx
4	86.24	98.55	2.00	10	08/29/06	1,580	3,400	<0.001	<0.001	<0.001	<0.001	520	Red color
4	85.99	98.55	2.00	10	10/26/06	1,530	3,840	<0.001	<0.001	<0.001	<0.001	482	Red color
4	xxx	xxx	xxx	xxx	02/12/07	1,850	3,710	<0.001	<0.001	<0.001	<0.001	561	xxx
4	85.58	98.50	2.10	8	04/24/07	1,360	3,010	<0.001	<0.001	<0.001	<0.001	376	Clear/no odor
4	85.78	98.50	2.00	8	09/24/07	1,600	3,924	<0.002	<0.002	<0.002	<0.006	535	Clear/no odor
4	86.30	98.50	2.00	9	11/30/07	1,720	3,906	<0.002	<0.002	<0.002	<0.006	468	Clear/no odor
4	85.49	98.50	2.10	8	03/07/08	1,720	3,700	<0.001	<0.001	<0.001	<0.003	462	Clear/no odor
4	86.18	98.50	2.00	8	05/30/08	1,640	4,300	<0.002	<0.002	<0.002	<0.006	450	Clear/no odor
4	87.57	98.50	1.70	8	08/11/08	1,620	4,590	<0.001	<0.001	<0.001	<0.003	543	Clear/no odor
4	86.45	98.50	1.90	8	11/14/08	1,780	4,390	<0.001	<0.001	<0.001	<0.003	623	Clear/no odor
4	85.85	98.26	2.00	8	01/22/09	1,780	4,610	<0.001	<0.001	<0.001	<0.003	527	Clear/no odor
4	86.35	98.26	1.90	8	04/23/09	1,660	4,570	<0.001	<0.001	<0.001	<0.003	501	Clear/no odor
4	86.11	98.26	1.90	8	07/17/09	1,700	3,720	<0.001	<0.001	<0.001	<0.003	490	Clear/no odor
4	85.65	98.26	2.00	8	10/14/09	1,640	3,440	<0.001	<0.001	<0.001	<0.003	416	Clear/no odor

Graph 4
Rice Operating Company
MW-4
BD E-15
Lea County, New Mexico

