

AP - 59

**ANNUAL GW MONITORING
REPORT**

**DATE:
2005**

R.T. HICKS CONSULTANTS, LTD.

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Annual Gw Mon
Report
2005

CERTIFIED MAIL

RETURN RECIEPT NO. 7099 3400 0017 1737 2619

February 21, 2006

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

**RE: 2005 ANNUAL GROUNDWATER MONITORING REPORT
F-35 SWD - UNIT 'F', SEC. 35, T17S, R35E (NMOCD CASE #1R0330)
G-35 SWD - UNIT 'G', SEC. 35, T17S, R35E (NMOCD CASE #1R0332)
VACUUM SWD SYSTEM, LEA COUNTY, NEW MEXICO**

AP-59

Mr. Price:

R. T. Hicks Consultants, Ltd. takes this opportunity to submit the 2005 Annual Groundwater Monitoring Report for the Vacuum F-35 and G-35 SWD sites located in the Vacuum Salt Water Disposal (SWD) System. In 2006, Arc Environmental will sample the monitoring wells and Environmental Lab of Texas of Odessa, Texas will continue to analyze the water samples. The Stage 1 and 2 Abatement Plan for these two sites was submitted to the NMOCD on January 2, 2006. After NMOCD approval of the public notices on January 12, 2006, they were published in the Albuquerque Journal and Hobbs News-Sun on January 28, 2006.

ROC is the service provider (operator) for the Vacuum Salt Water Disposal System and has no ownership of any portion of pipeline, well, or facility. The Vacuum SWD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis. In 2004, the Vacuum System Partners approved the discontinuance of the SWD System and the System has been abandoned.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions, do not hesitate to contact me at (423) 638-8740 or Kristin Farris Pope at (505) 393-9174.

Sincerely,



Gilbert J. Van Deventer, REM, PG
R. T. Hicks Consultants Ltd.

enclosures: Summary tables, figures, and laboratory analytical reports

cc: LBG, CDH, KFP, RTH, file

TABLES

Table 1
Summary of Groundwater Sampling Results
Vacuum F-35 SWD Site (Unit 'F', Sec. 35, T17S, R35E)

Monitoring Well	Sample Date	Depth to Groundwater* (feet BTOC)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
MW-1	01/10/02	58.00	5,200	5.0	9,425	0.050	0.053	0.050	0.090
	05/15/02	58.03	3,720	3.2	7,050	0.744	0.207	0.510	0.309
	08/19/02	58.05	3,630	10.7	6,040	0.705	0.172	0.112	0.076
	11/11/02	58.08	3,720	2.8	6,020	1.210	0.343	0.835	0.431
	02/28/03	58.10	2,200	26.2	4,040	0.909	0.840	0.321	0.124
	06/05/03	58.13	2,300	20.3	4,180	0.632	0.134	0.061	0.067
	08/21/03	58.15	2,060	4.9	4,000	0.617	0.360	0.202	0.192
	11/19/03	58.18	2,000	5.1	3,760	0.797	0.301	0.264	0.248
	02/18/04	58.20	1,819	0.19	3,932	0.349	0.038	0.121	0.027
	05/27/04	58.50	1,759	8.7	4,008	0.726	0.176	0.268	0.215
	09/07/04	58.20	1,040	19.9	3,000	0.429	0.221	0.143	0.225
	11/24/04	57.81	1,260	51	2,740	0.0489	0.313	0.209	0.251
	03/21/05	57.18	1,220	110	2,210	2.200	1.610	0.848	1.283
	05/11/05	57.19	1,490	24.6	2,970	0.686	0.451	0.374	0.176
	08/15/05	58.40	1,340	69.5	2,890	0.819	0.393	0.666	0.584
	10/25/05	57.45	1,080	72.7	2,540	0.779	0.243	0.394	0.306
	01/23/06	57.38	886	88.2	2,080	0.447	0.222	0.28	0.301
WQCC Standards			250	600	1,000	0.01	0.75	0.75	0.62

Total Dissolved Solids (TDS), chloride, sulfate, and BTEX concentrations listed in milligrams per liter (mg/L)

Values in boldface type indicate concentrations exceed New Mexico Water Quality Commission (WQCC) standards.

BTOC - Below Top of Casing

* Depth to groundwater data missing for gauging dates between 5/12/02 through 11/19/03 so values were interpolated linearly between former and latter known values.

Table 2
Summary of Groundwater Sampling Results
Vacuum G-35 SWD Site (Unit 'G', Sec. 35, T17S, R35E)

Monitoring Well	Sample Date	Depth to Groundwater (feet BTOC)	Chloride (mg/L)	Sulfate (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
MW-1	01/10/02	53.60	568	23	1,284	0.011	0.022	0.034	0.0550
	05/15/02	52.89	1,950	2.1	3,260	0.414	0.057	0.131	0.0650
	08/19/02	53.02	1,950	7	3,850	0.705	0.598	0.209	0.2530
	11/11/02	53.08	3,630	5.8	6,740	0.921	0.078	0.154	0.1310
	02/28/03	53.06	2,730	24.6	4,770	0.713	0.010	0.018	0.0270
	05/22/03	53.20	3,860	5.3	7,320	0.583	0.002	0.120	0.0270
	08/21/03	53.21	5,010	3.5	8,850	0.689	0.004	0.307	0.0320
	11/19/03	53.29	1,930	20.9	3,590	0.012	0.002	0.090	0.0030
	02/18/04	53.30	2,579	1.49	5,000	0.059	<0.002	0.350	0.0070
	05/27/04	52.90	1,899	2.15	4,188	1.170	0.308	0.357	0.3190
	09/07/04	52.60	4,700	17.7	8,270	1.110	0.053	0.346	0.1382
	11/24/04	52.91	5,200	799	10,400	0.881	0.023	0.133	0.0717
	03/21/05	52.40	5,750	136	9,190	2.760	0.247	0.399	0.2862
	05/11/05	52.45	5,890	9.75	10,700	2.490	0.466	0.672	0.693
	08/15/05	52.35	4,430	126	6,960	1.070	0.226	0.396	0.2417
	10/25/05	52.51	2,360	166	4,420	0.799	0.061	0.146	0.0839
	01/23/06	52.46	1,960	80.5	3,540	0.141	0.005	0.078	0.0229
WQCC Standards			250	600	1,000	0.01	0.75	0.75	0.62

Total Dissolved Solids (TDS), chloride, sulfate, and BTEX concentrations listed in milligrams per liter (mg/L)

Values in boldface type indicate concentrations exceed New Mexico Water Quality Commission (WQCC) standards.

BTOC - Below Top of Casing

FIGURES

Figure 1
TDS, Chloride, and Depth to Groundwater Values Versus Time Graph
MW-1 at the F-35 SWD Site (Unit 'F', Sec. 35, T17S, R35E)

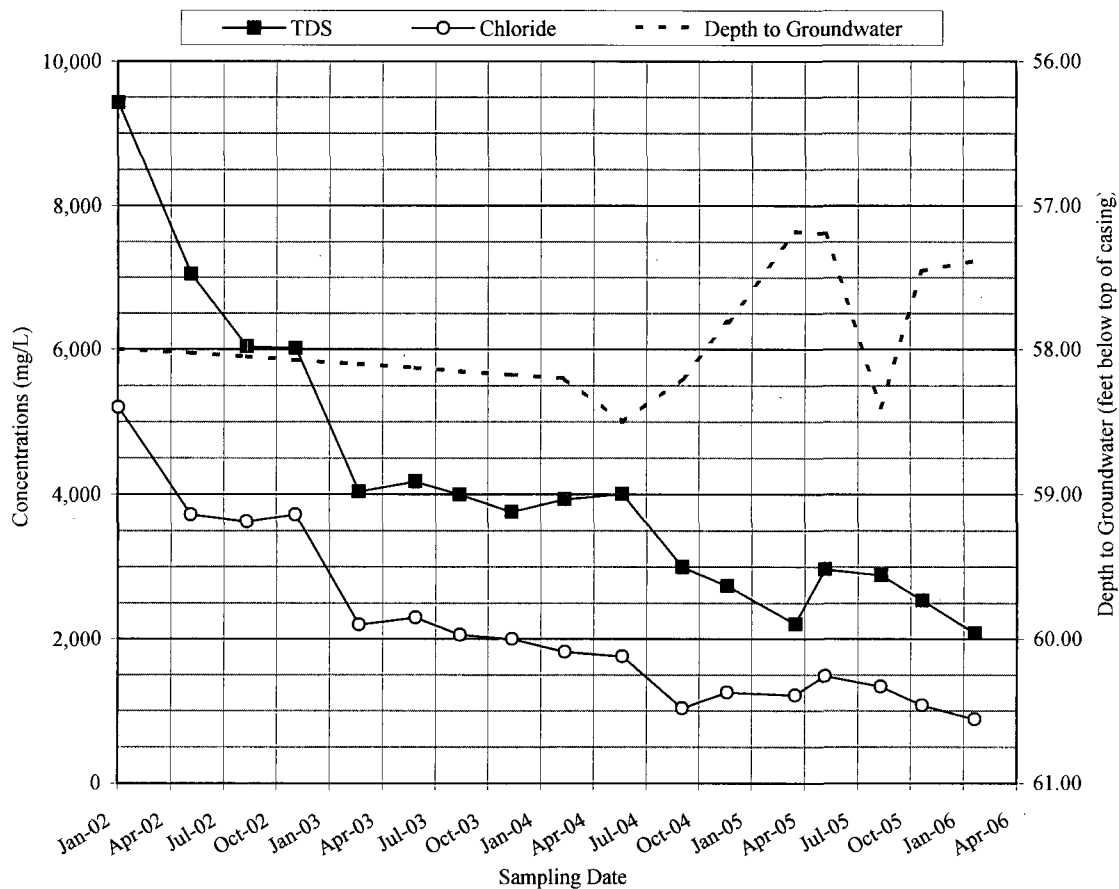


Figure 2
TDS, Chloride, and Depth to Groundwater Values Versus Time Graph
MW-1 at the G-35 SWD Site (Unit 'G', Sec. 35, T17S, R35E)

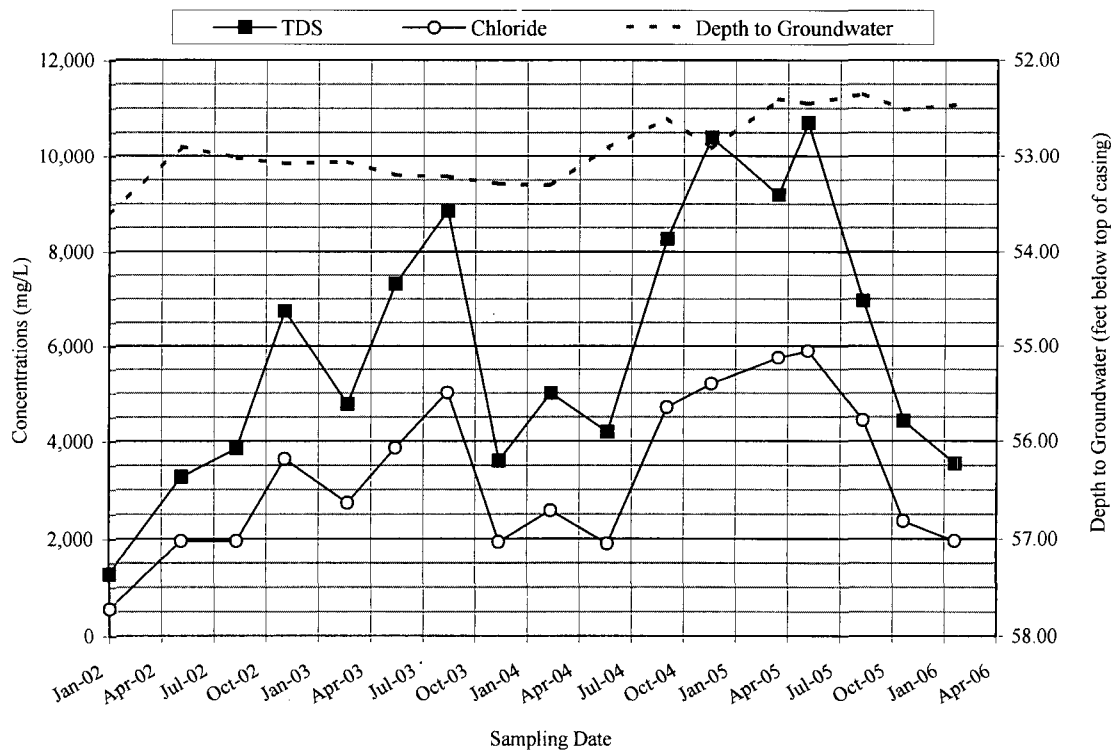


Figure 3
BTEX and Depth to Groundwater Values Versus Time Graph
MW-1 at the F-35 SWD Site (Unit 'F', Sec. 35, T17S, R35E)

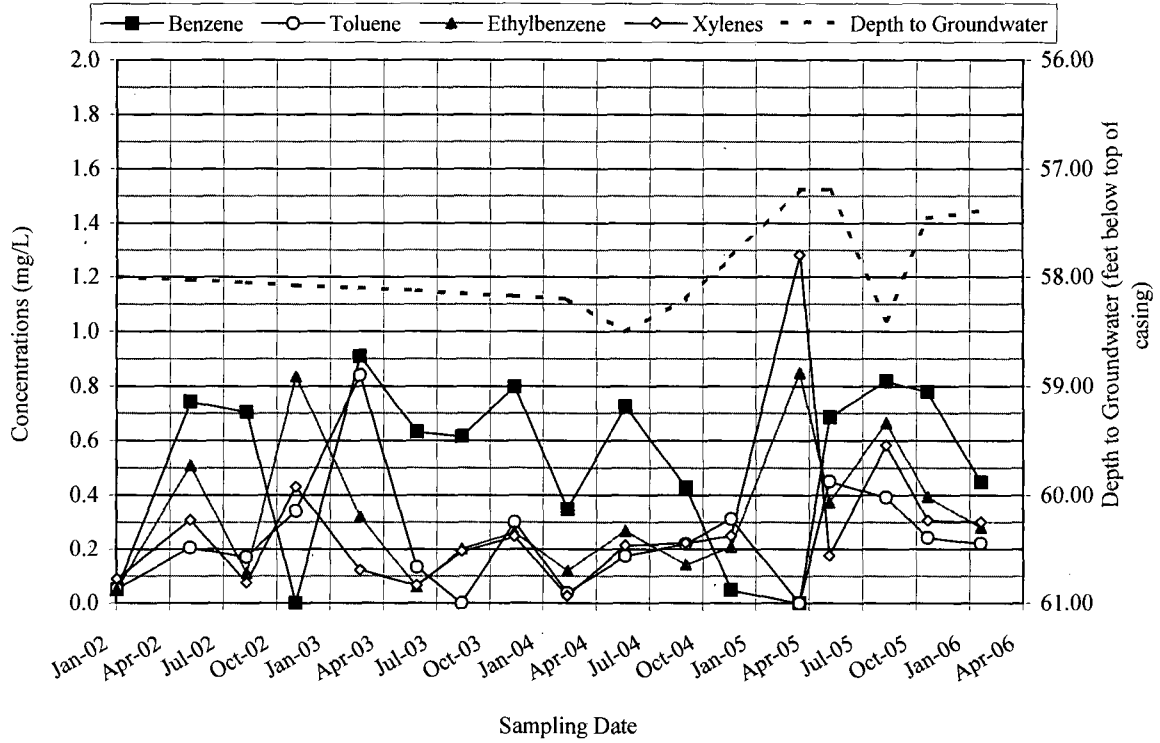
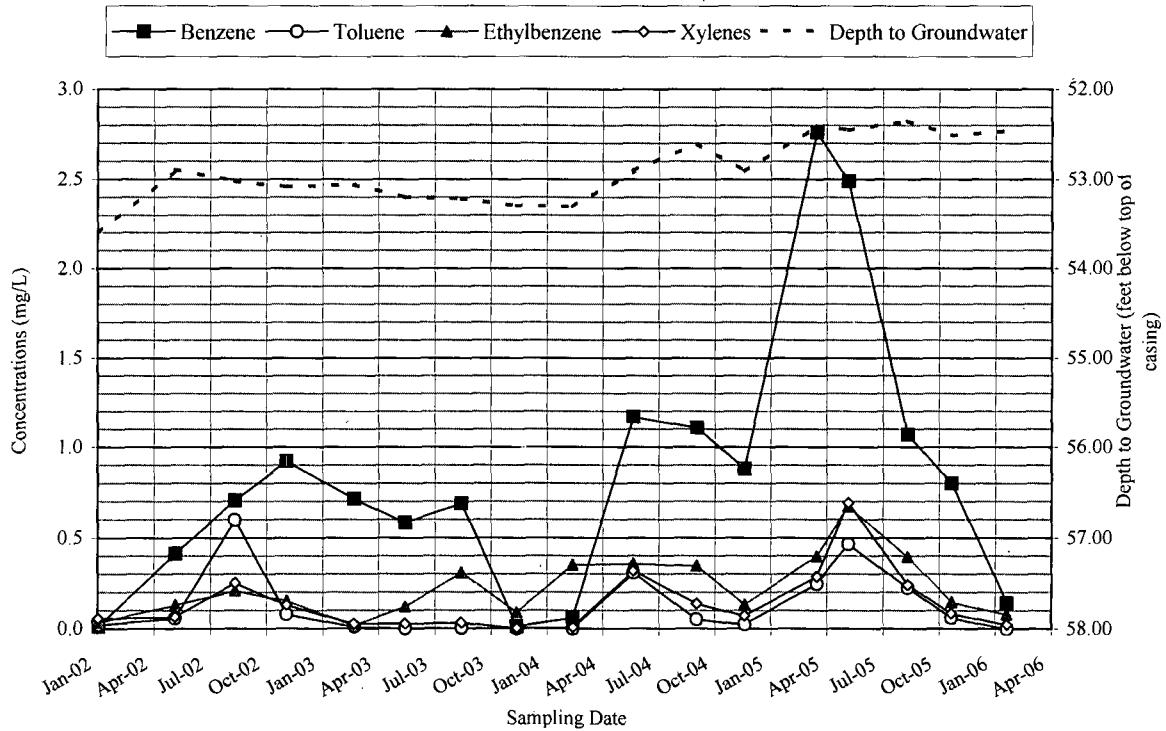


Figure 4
BTEX and Depth to Groundwater Values Versus Time Graph
MW-1 at the G-35 SWD Site (Unit 'G', Sec. 35, T17S, R35E)



LABORATORY ANALYTICAL REPORTS

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