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February 28, 2006

Mr. William Von Till
Chief, Uranium Processing Section
Fuel Cycle Facilities Branch
Division of Fuel Cycle Safety and Safeguards
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
11545 Rockville Pike
Rockville, Maryland 20852-2738

Re: Docket No. 40-6622, License No. SUA-442

Dear Mr. Von Till:

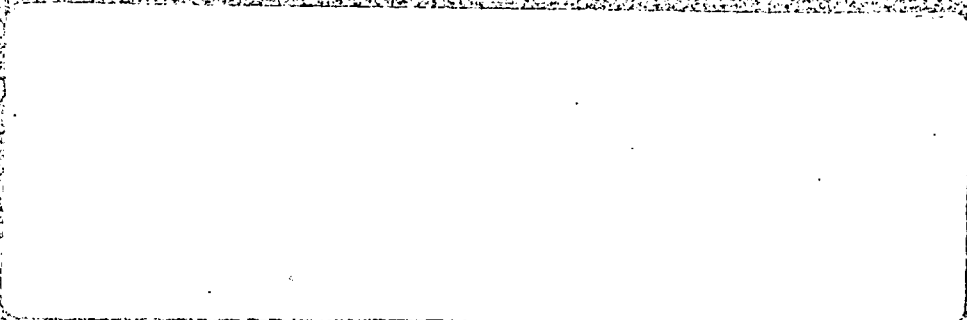
Enclosed please find two copies of the semi-annual ground water monitoring report as required by SUA-442 license condition 47C. Some of the reported data are limited to the fourth quarter, 2005 since the amended monitoring program did not begin until the fourth quarter. Historical data are included in the concentration versus time plots that are required by condition 47C. Please call me if you have any questions regarding the report.

Sincerely,

T. W. Hardgrove
Manager, Reclamation Operations

Enclosure

cc: J. Whitten, U.S. NRC – Region IV
D. L. Wichers



HYDRO - ENGINEERING, LLC

**SEMI-ANNUAL
GROUND-WATER MONITORING
FOR SHIRLEY BASIN MINE**

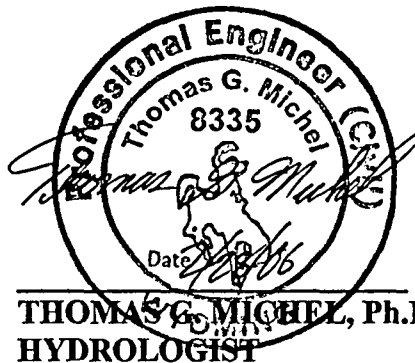
PREPARED FOR:

**PATHFINDER MINES CORPORATION
SHIRLEY BASIN MINE**

BY:

HYDRO-ENGINEERING, L.L.C.

FEBRUARY, 2006



**THOMAS G. MICHEL, Ph.D.
HYDROLOGIST**

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1.0 Introduction and Summary of Results

This semi-annual report presents the results of ground-water monitoring and surface-water monitoring through January 2006 for Pathfinder Mines Corporation's Shirley Basin mill and tailings facility. This report is the first in the series of semi-annual report required NRC License SUA-442, License Condition 47.C.

The following table lists the site standards that are in effect for POC wells NP01 and RPI-19B which are located to the east of the Shirley Basin tailings facility. The tabulation also lists the measured November 2005 concentrations for the POC wells. All of the present concentrations in the POC wells are significantly below the corresponding site standards.

TABLE 1. GROUND-WATER PROTECTION STANDARDS AND NOVEMBER 2005 WATER-QUALITY DATA FOR POINT-OF-COMPLIANCE WELLS NP01 AND RPI-19B.				
		WELL NP01		WELL RPI-19B
	POC WELL NP01	NOV. 2005	POC WELL RPI-19B	NOV. 2005
CONSTITUENT	SITE STANDARD	SAMPLE RESULTS	SITE STANDARD	SAMPLE RESULTS
ARSENIC	0.05	0.006	0.05	0.003
BARIUM	1.00	<0.1	1.00	<0.1
BERYLLIUM	0.02	<0.01	0.02	<0.01
CADMIUM	0.01	<0.01	0.01	<0.01
CHROMIUM	0.05	<0.05	0.05	<0.05
GROSS ALPHA	15	1.10	15	1.40
LEAD	0.05	<0.05	0.05	<0.05
MOLYBDENUM	0.10	<0.10	0.10	<0.10
NICKEL	0.05	<0.05	0.05	<0.05
RA-226 + RA-228	12.70	5.30	13.76	2.8
SELENIUM	0.158	0.049	0.163	0.0020
THORIUM-230	5.53	<0.2	5.76	<0.2
URANIUM	4.40	0.0783	4.45	0.0588
CHLORIDE	3275	25	3712	21
TDS	11529	392	12641	666
SULFATE	4612	72	5056	238
NOTE: All concentrations in mg/l except for radium, thorium, and gross alpha in pCi/l.				

2.0 Piezometric Data

The water-level data collected during 2005 and January of 2006 are presented in Table 2 along with the 2004 water-level data to provide some indication of recent trends. Figure 1 presents the piezometric surface of the Surficial aquifer in the area between the tailings and Spring Creek. Figure 2 presents plots of the water-level elevation versus time for wells MC-14, RPI-14, NP01, RPI-19B, and RPI-18A. The corresponding water-level elevation or constituent concentration is posted adjacent to the well location on the plan view figures of the area (such as Figure 1). Water-level elevations in 2004 and 2005 have reflected some decay of the ground-water mounds in the area of the recharge lines. This decay of the ground-water mounds can be attributed to recent discontinuation of the recharge injection operations and some disruption of collection and injection operations over the last two years by tailings area reclamation activities. The piezometric surface is expected to

approach a relatively steady condition with a general gradient from the tailings area to Spring Creek over the next one to two years. The November 2005 water level in well RPI-18A appears to be anomalous and indicates a much more dramatic water-level elevation decline than surrounding wells. This data point was not honored in the contours in Figure 1 because it would result in an internal depression in the piezometric surface and this is an unlikely circumstance.

3.0 Water-Quality Data

License Condition 47.A requires monitoring of water quality from the POC wells, other selected wells, and from surface water sites for the constituents presented in Table 1.

Figure 3 presents the November 2005 chloride concentrations for the Surficial aquifer and in Spring Creek at the surface water sampling sites. The chloride concentration is greatest at well P-6 which is located approximately 700 feet east of the tailings in the southern portion of the monitoring area. With the exception of a moderately elevated chloride concentration at well MC-11, chloride concentration at the other monitoring wells and in the surface water samples is not significantly elevated over natural levels. Figure 4 presents the plots of chloride concentration versus time for wells MC-14, RPI-14, NP01, RPI-19B, and RPI-20A. As indicated in Table 2, chloride concentration at well P-6 is increasing, but the concentrations at other wells is relatively steady. Figure 5 presents the plots of chloride concentration at surface water sampling locations SW-1A, SC-2 and POE-DS.

Figure 6 presents the November 2005 Ra226 + Ra228 activities for the Surficial aquifer and in Spring Creek at the surface water sampling sites. There are modestly higher Ra226 + Ra228 activities in well P-6 and background well MC-14. Measured radium, thorium, and gross alpha activities are typically more erratic than other constituents, and therefore iso-concentration contours are less reliable indicators of the extent of seepage impacts. Figure 7 presents the plots of Ra226 + Ra228 activity versus time for wells MC-14, RPI-14, NP01, RPI-19B, and RPI-20A. The greater variability of measured activity for Ra226 + Ra228 is reflected in the plot. Figure 8 presents the plots of Ra226 + Ra228 activities at surface water sampling locations SW-1A, SC-2 and POE-DS.

Figure 9 presents the November 2005 selenium concentrations for the Surficial aquifer and in Spring Creek at the surface water sampling sites. Selenium concentration is greatest at well MC-7 but the level is only slightly greater than that at wells P-6, RPI-16A, and NP01. In general, the selenium concentration is more indicative of natural variability and selenium concentration in recharge injection water than a discernable level of seepage impacts. Figure 10 presents the plots of selenium concentration versus time for wells MC-14, RPI-14, NP01, RPI-19B, and RPI-20A. Figure 11 presents the plots of selenium concentration at surface water sampling locations SW-1A, SC-2 and POE-DS.

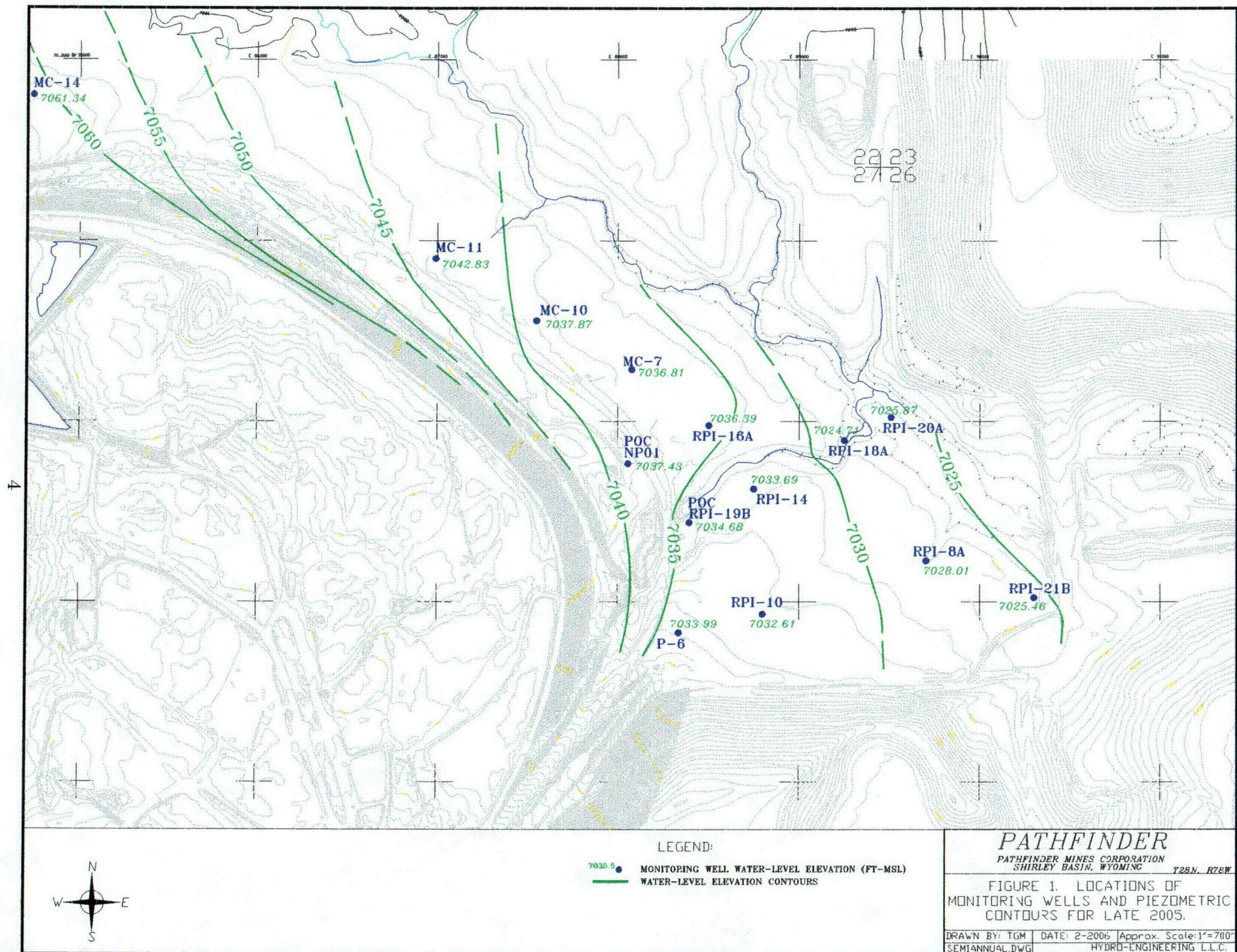
Figure 12 presents the November 2005 sulfate concentrations for the Surficial aquifer and in Spring Creek at the surface water sampling sites. Sulfate concentration is greatest at well RPI-20A and the late 2005 sample has an unusually large concentration as indicated by the data record in Table 2. Because the concentrations of other constituents in samples from well RPI-20A are relatively stable and within the range of typical background or restored aquifer values, the temporary increase in sulfate concentration is not of great concern. Figure 13 presents the sulfate concentrations in selected wells and illustrates relatively stable recent concentrations. All sulfate concentrations at the monitoring wells and surface water sampling locations are well below the site standards at the POC

wells. Figure 14 presents the plots of sulfate concentration at surface water sampling locations SW-1A, SC-2 and POE-DS.

Figure 15 presents the November 2005 thorium-230 activities for the Surficial aquifer and in Spring Creek at the surface water sampling sites. All November 2005 thorium-230 activities in ground-water samples and surface-water samples are below the detection level of 0.2 pCi/l. Figure 16 presents the plots of thorium-230 activity versus time for wells MC-14, RPI-14, NP01, RPI-19B, and RPI-20A. Figure 17 presents the plots of thorium-230 activity at surface water sampling locations SW-1A, SC-2 and POE-DS. The sample record for site SW-1A illustrates the variability of thorium-230 activity with occasional spikes interspersed in the typical below detection limit sample activity.

Figure 18 presents the November 2005 TDS concentrations for the Surficial aquifer and in Spring Creek at the surface water sampling sites. TDS concentration at well RPI-20A reflects the unusually large sulfate concentration in this well in late 2005. Like sulfate concentration, recent TDS concentrations have been relatively stable as shown in Figure 19. All TDS concentrations at the monitoring wells and surface water sampling locations are well below the site standards at the POC wells. Figure 20 presents the plots of TDS concentration at surface water sampling locations SW-1A, SC-2 and POE-DS.

Figure 21 presents the November 2005 uranium concentrations for the Surficial aquifer and in Spring Creek at the surface water sampling sites. Uranium concentration is increasing at well P-6, but is relatively stable at other locations (see Figure 22). All uranium concentrations at the monitoring wells and surface water sampling locations are well below the site standards at the POC wells. Figure 23 presents the plots of uranium concentration at surface water sampling locations SW-1A, SC-2 and POE-DS.



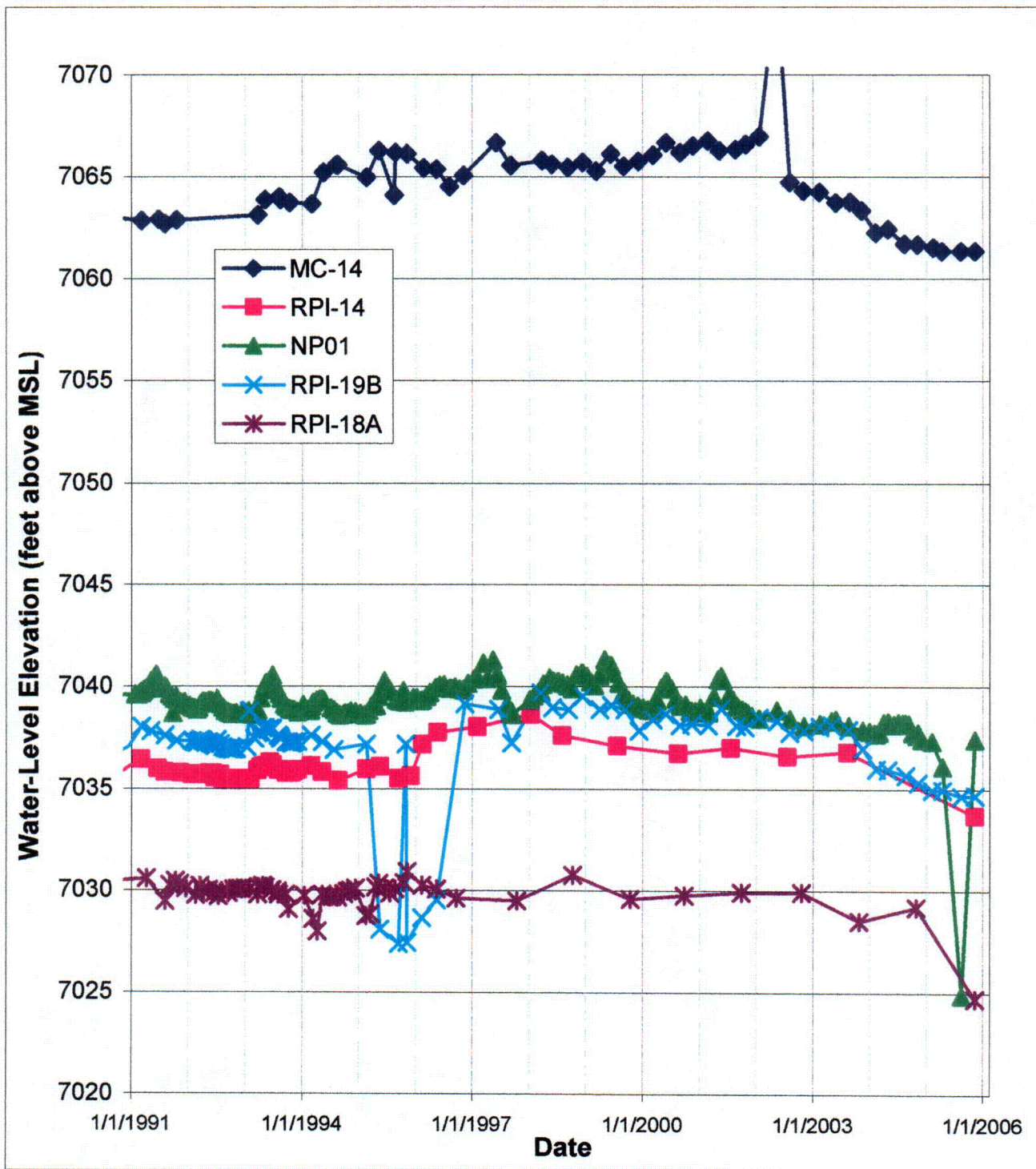
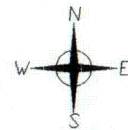
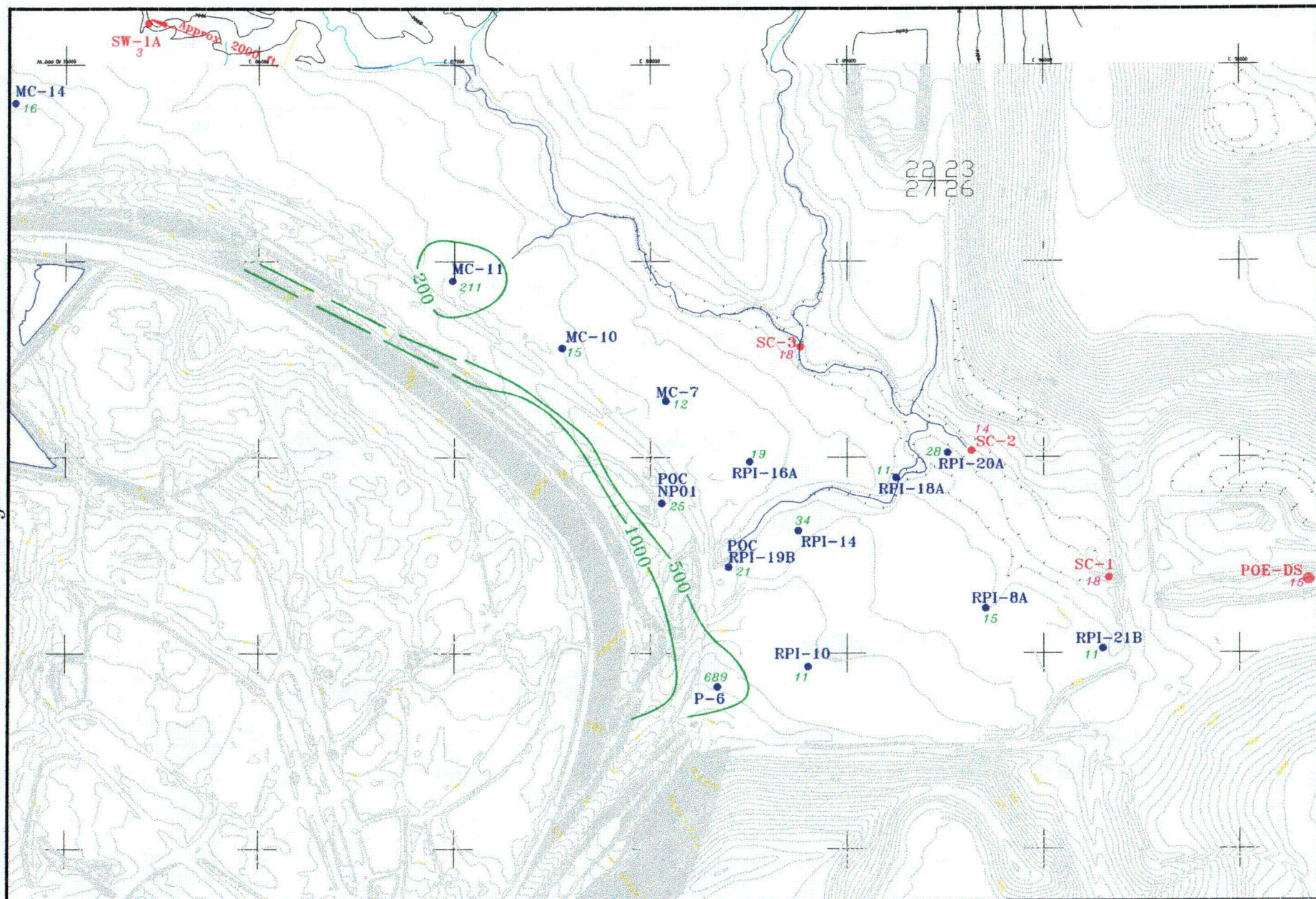


Figure 2. Water-Level Elevation Versus Time For Wells MC-14, RPI-14, NP01, RPI-19B and RPI-18A



LEGEND:

- 26 ● MONITORING WELL CHLORIDE CONCENTRATION (mg/l)
- CHLORIDE ISO-CONCENTRATION CONTOURS
- 10 ● SURFACE WATER CHLORIDE CONCENTRATION (mg/l)

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FIGURE 3. 2005 CHLORIDE CONCENTRATIONS IN SURFICIAL AQUIFER MONITORING WELLS.

DRAWN BY: TGM DATE: 2-2006 Approx. Scale: 1"=700'
SEMIANNUAL.BWG HYDRO-ENGINEERING L.L.C.

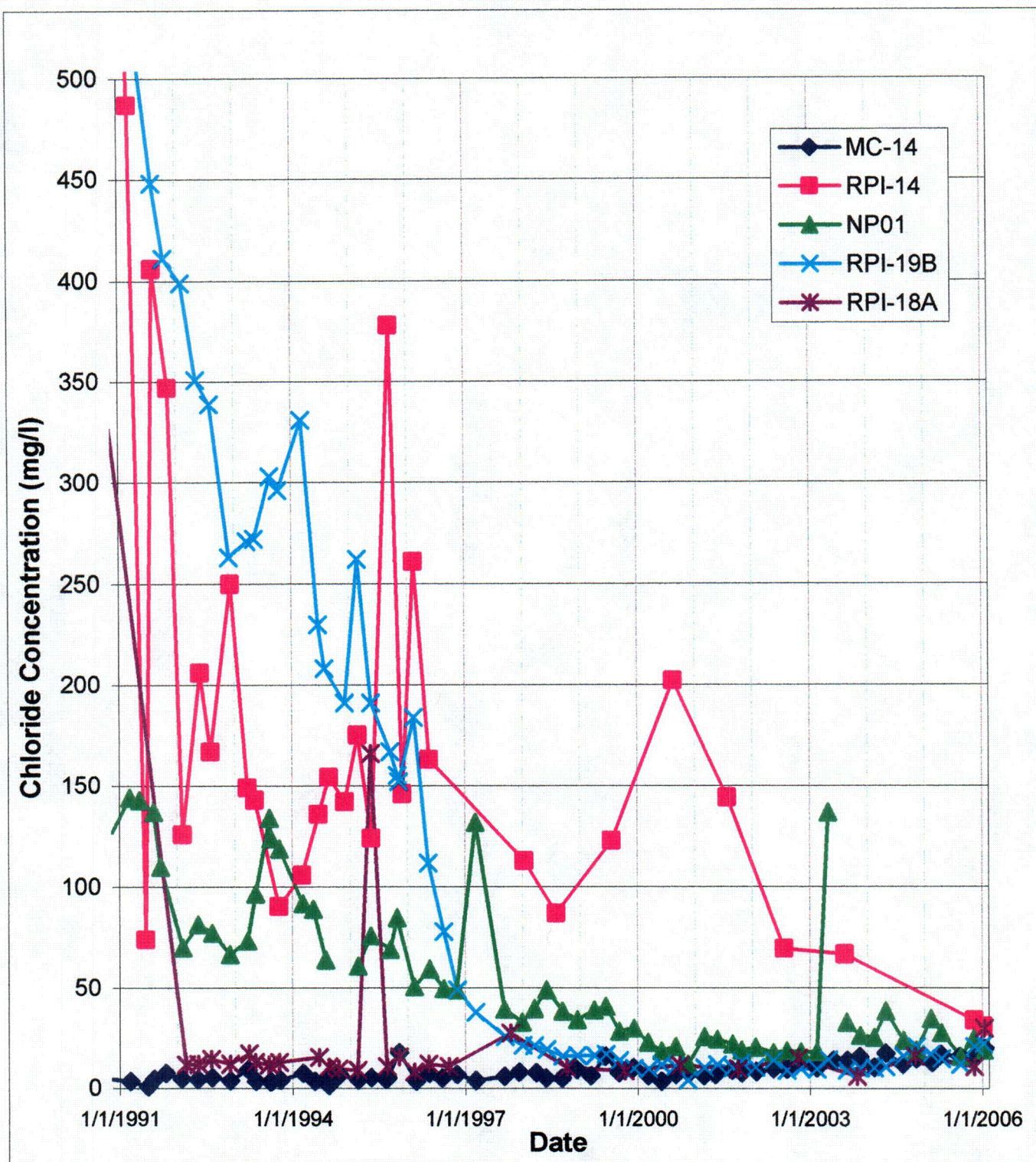


Figure 4. Chloride Concentration Versus Time For Wells MC-14, RPI-14, NP01, RPI-19B and RPI-18A

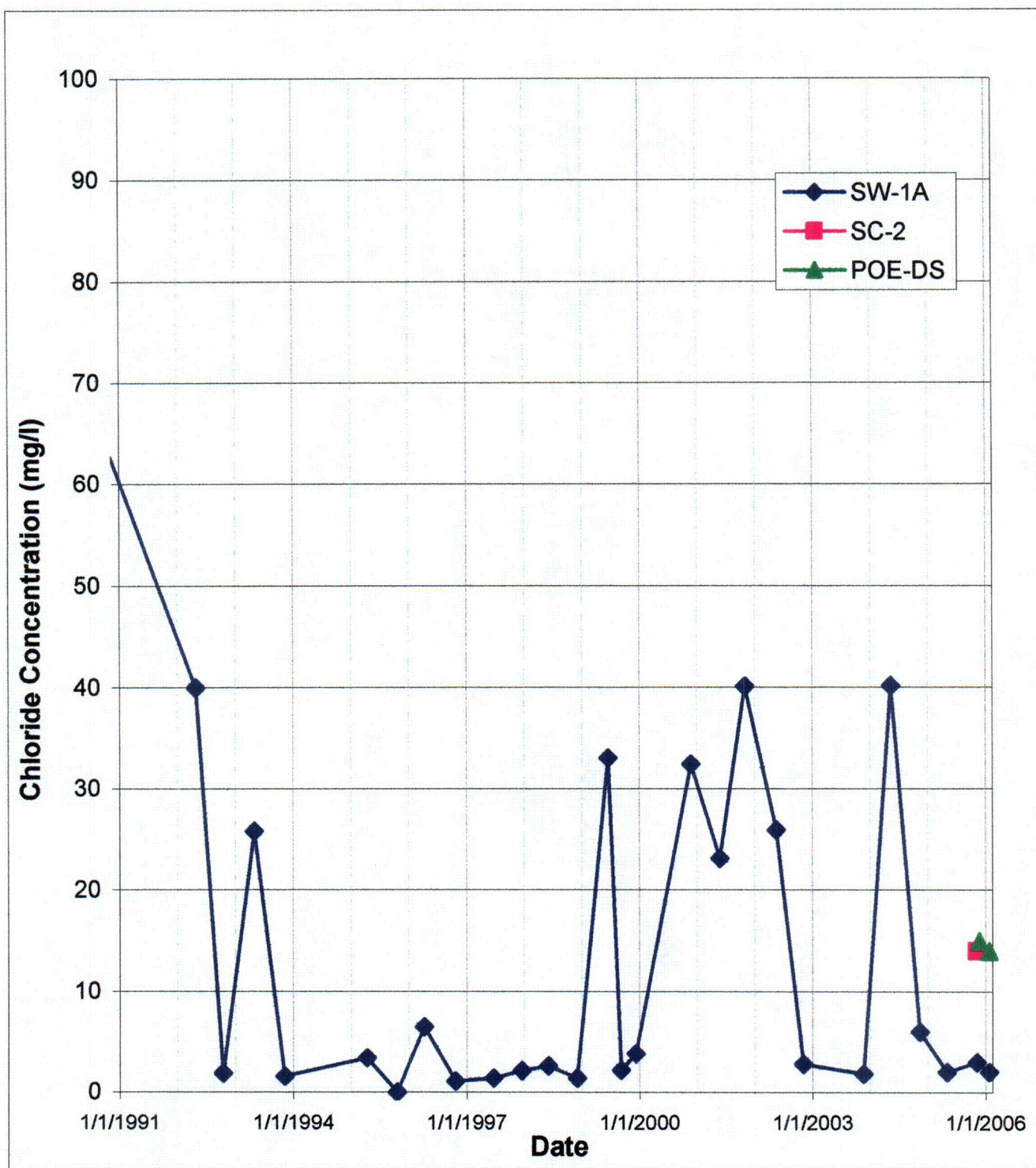
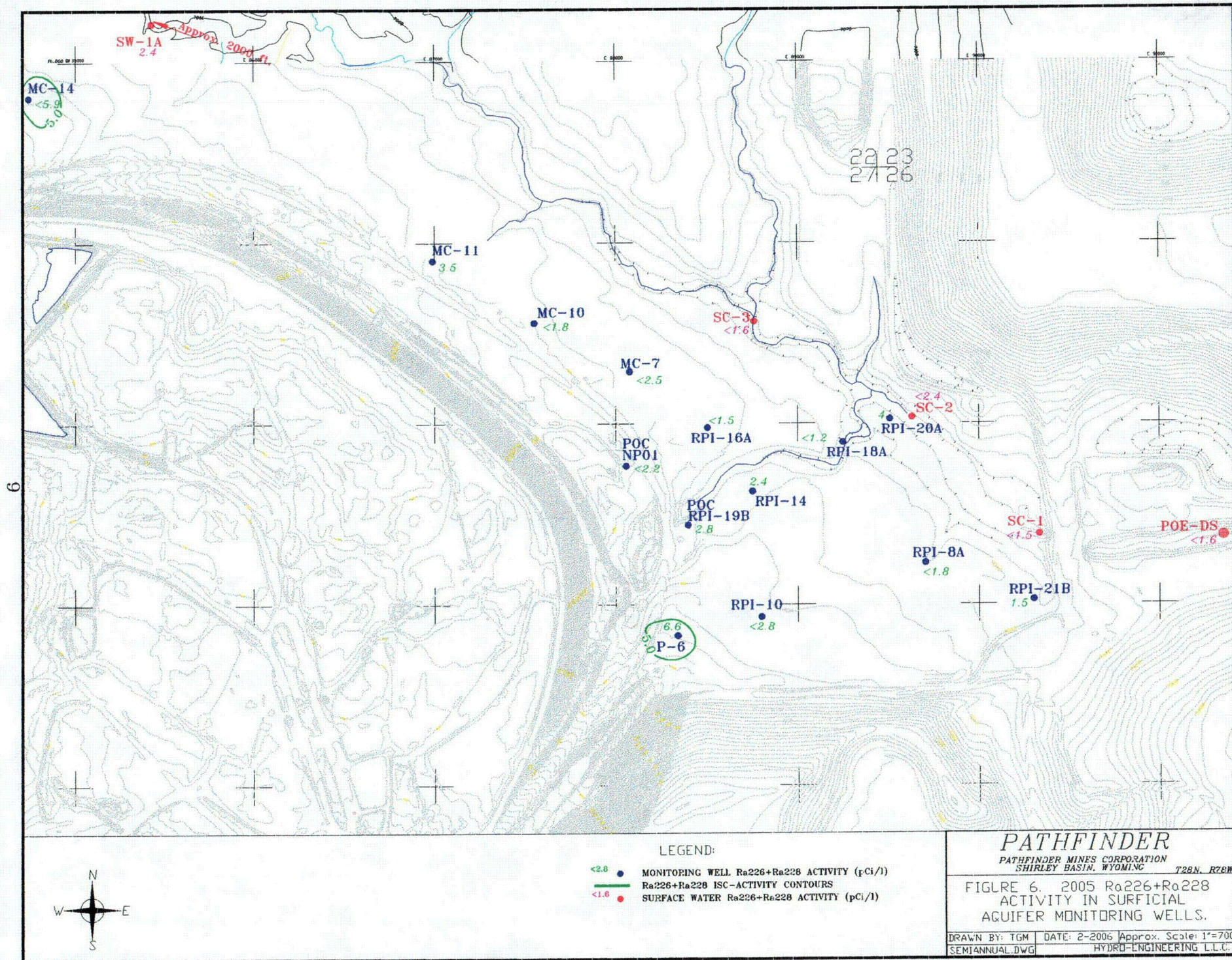


Figure 5. Chloride Concentration Versus Time For Surface Water
Sample Locations SW-1A, SC-2 and POE-DS



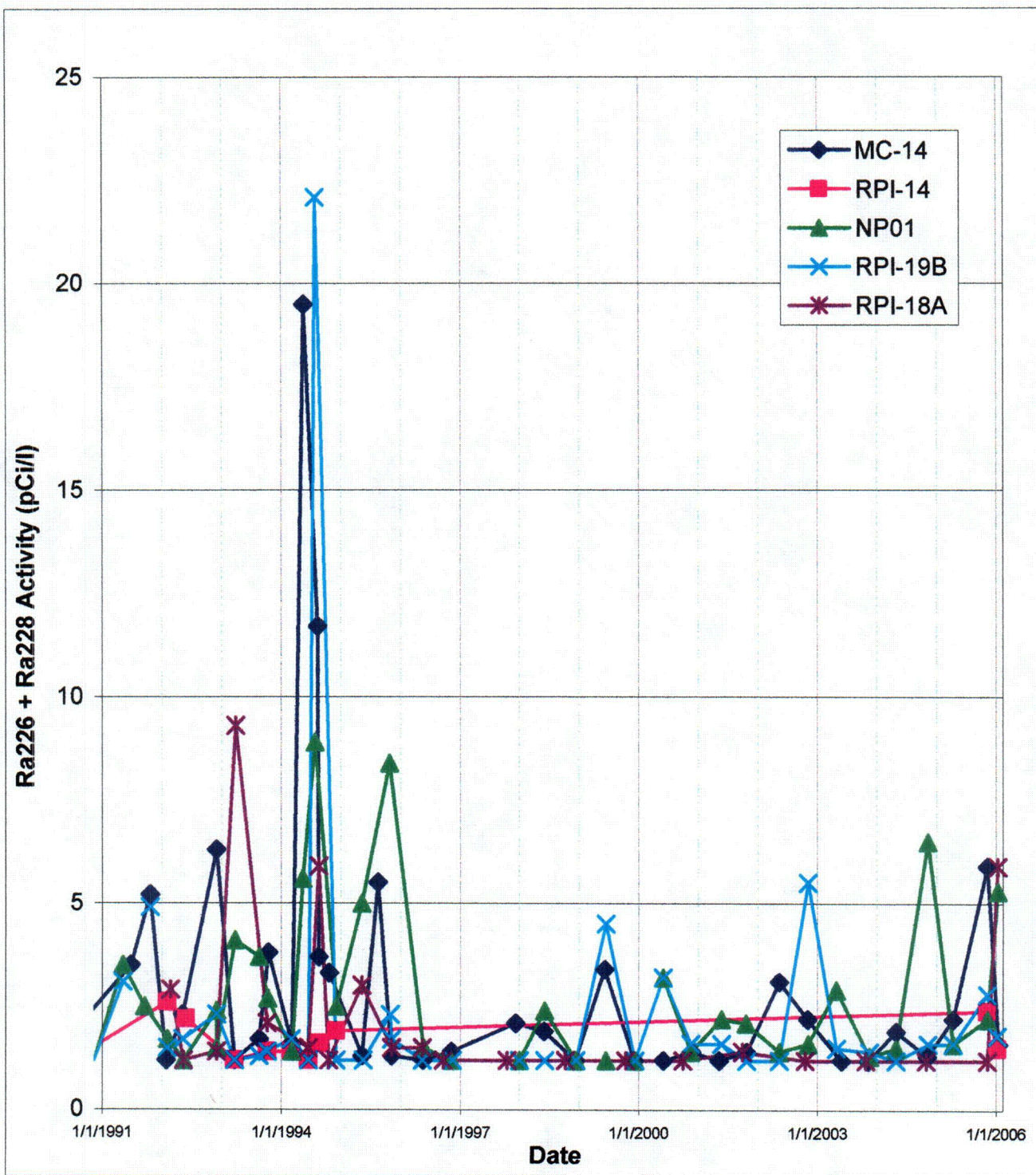


Figure 7. Ra226 + Ra228 Activity Versus Time For Wells MC-14, RPI-14, NP01, RPI-19B and RPI-18A

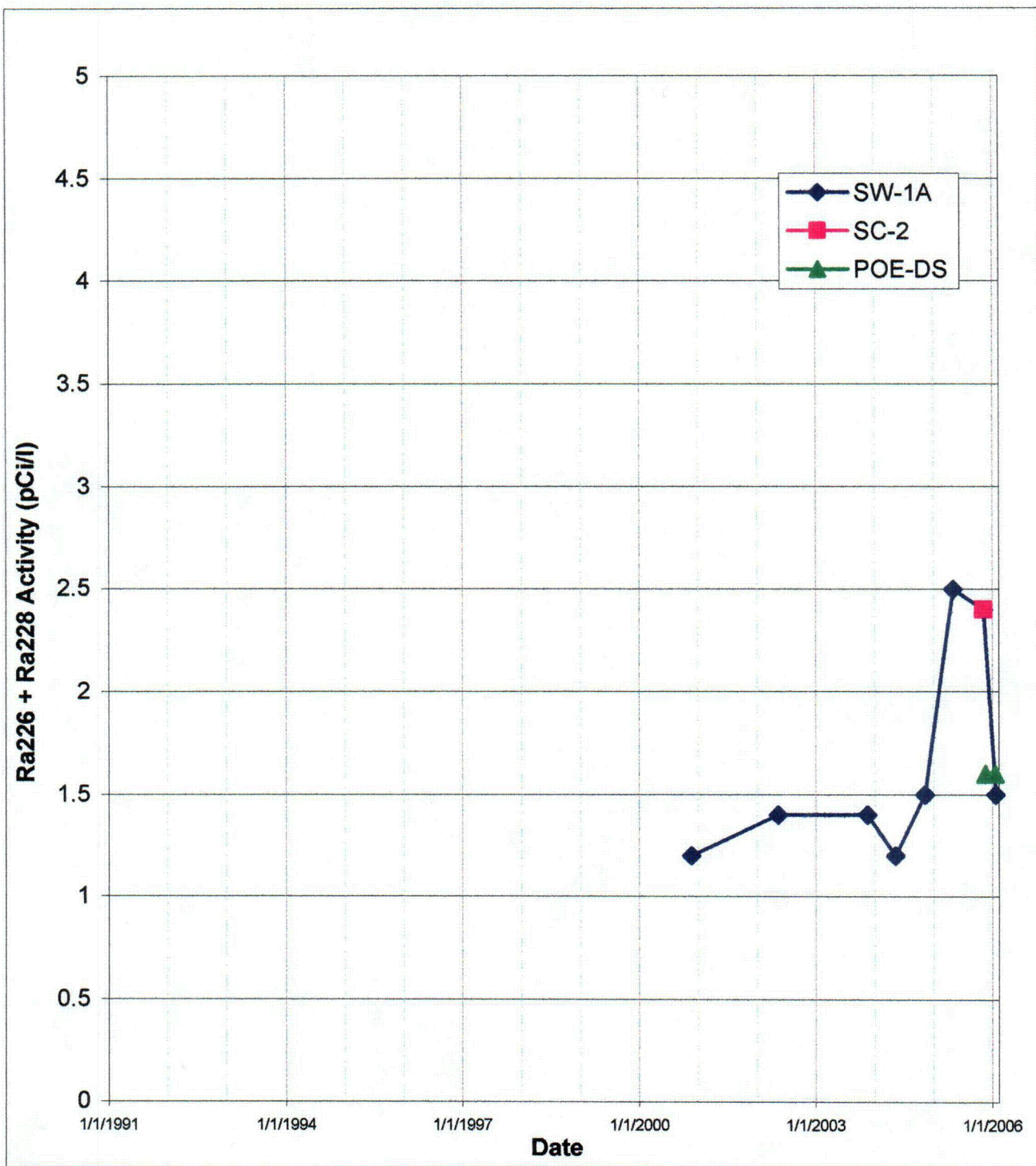
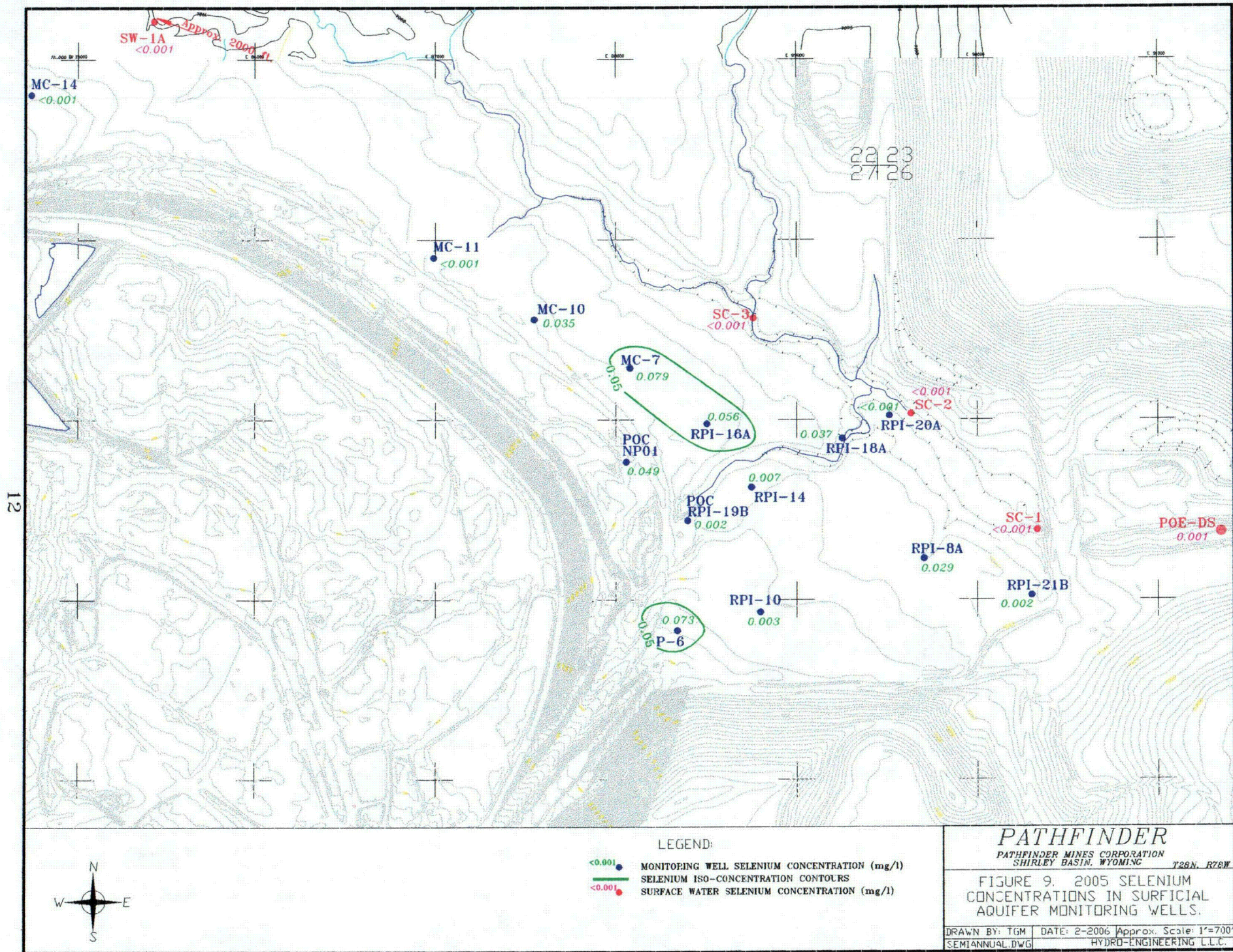


Figure 8. Ra226 + Ra228 Activity Versus Time For Surface Water Sample Locations SW-1A, SC-2 and POE-DS



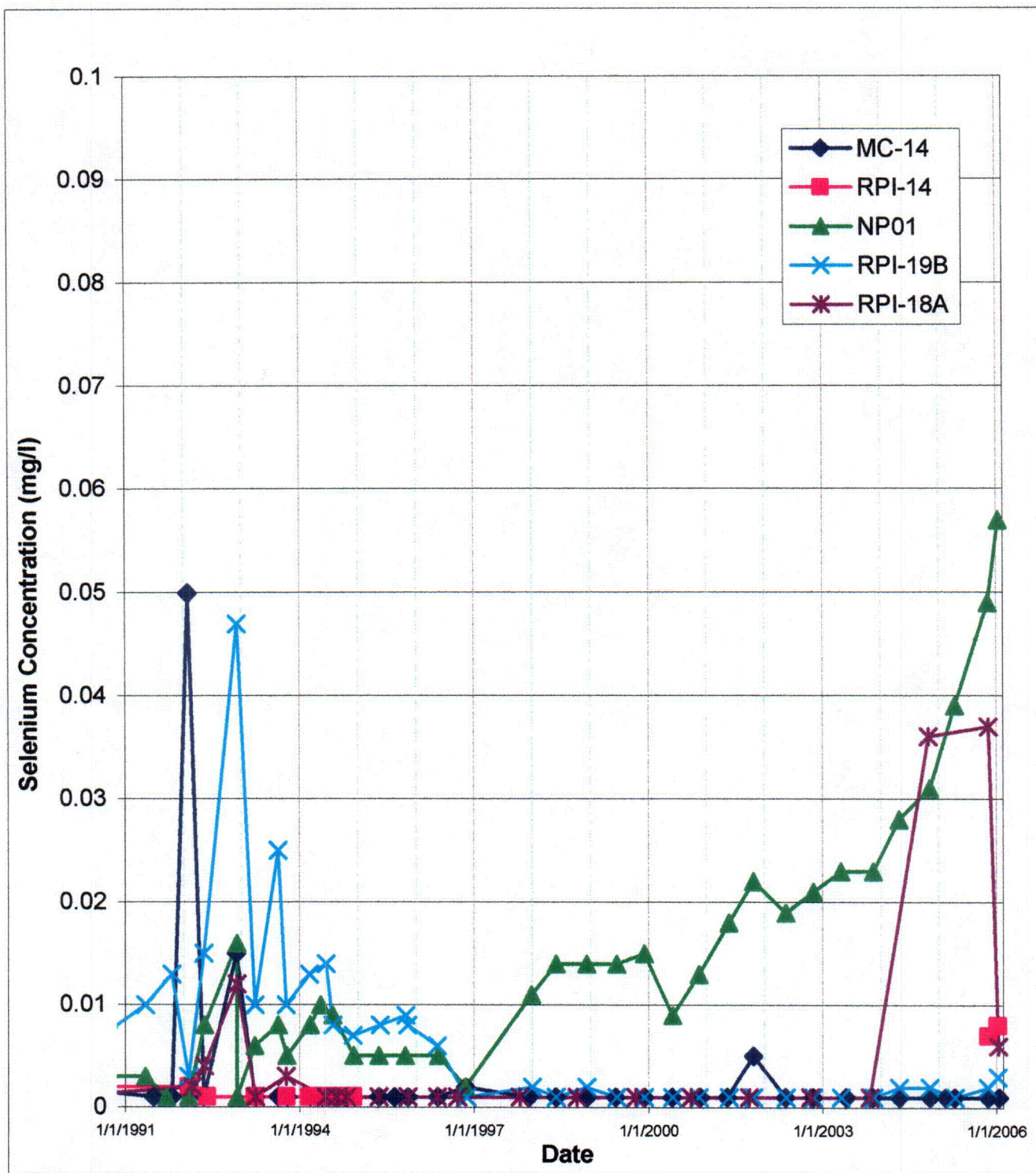


Figure 10. Selenium Concentration Versus Time For Wells MC-14, RPI-14, NP01, RPI-19B and RPI-18A

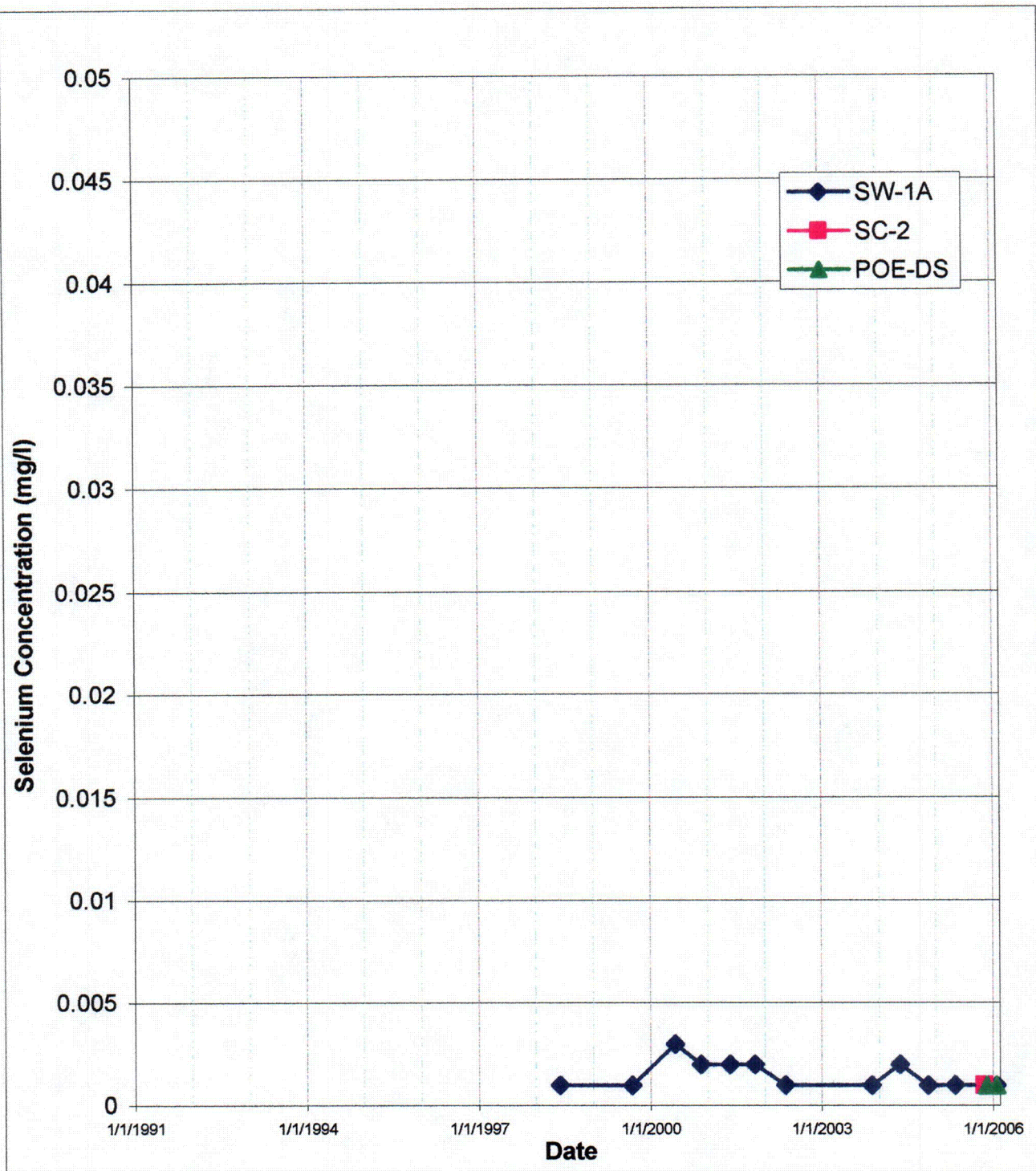
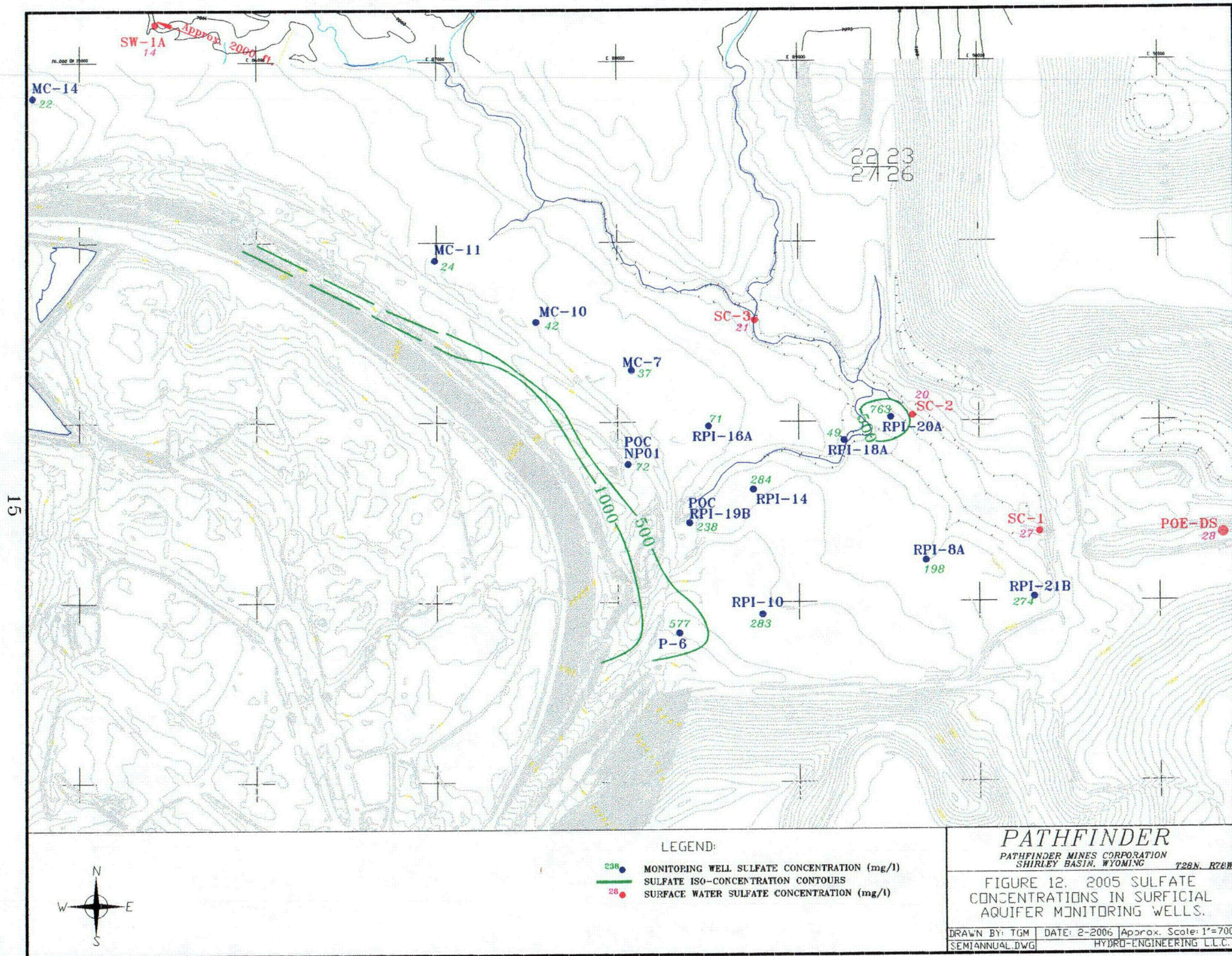


Figure 11. Selenium Concentration Versus Time For Surface Water Sample Locations SW-1A, SC-2 and POE-DS



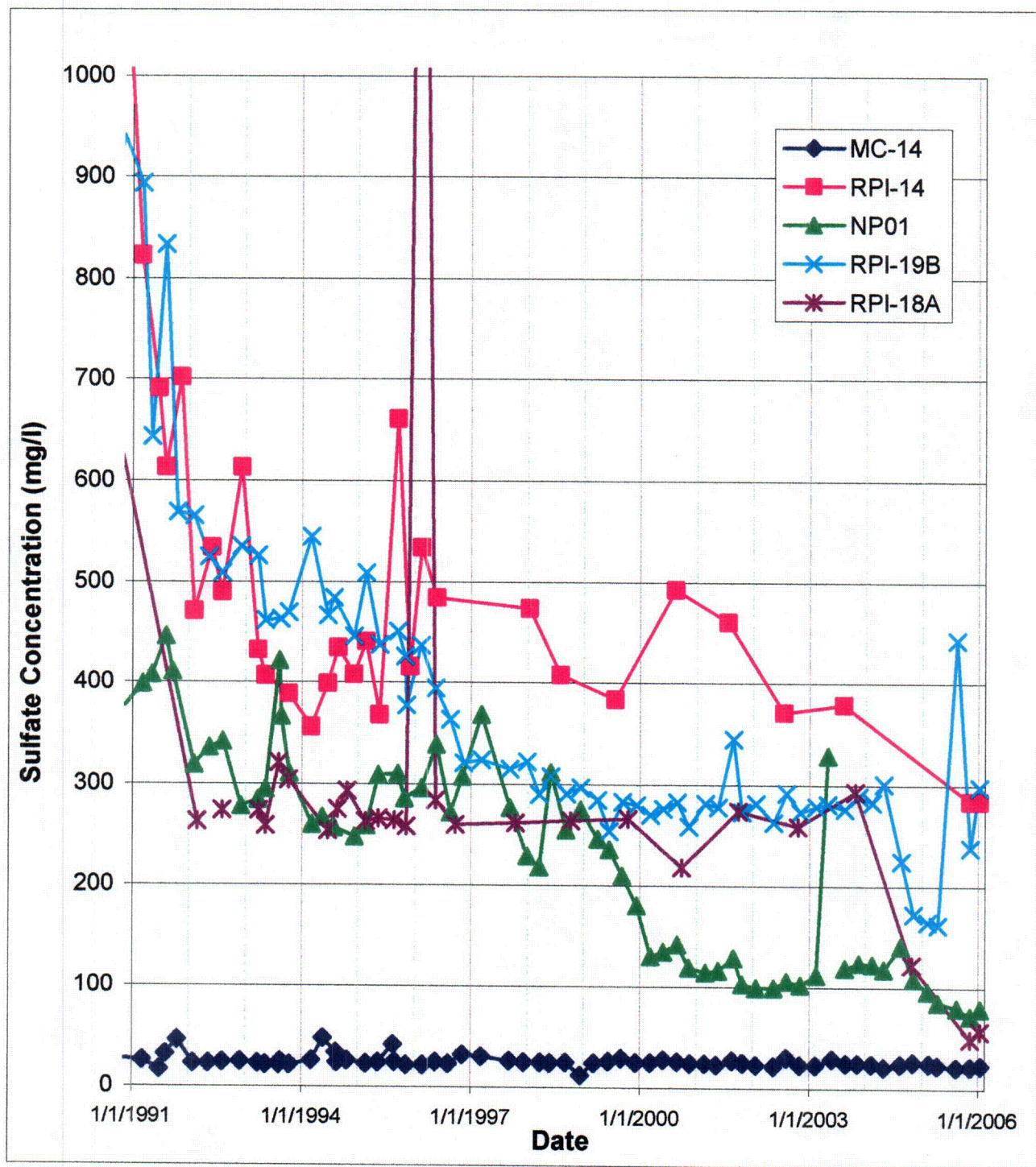


Figure 13. Sulfate Concentration Versus Time For Wells MC-14, RPI-14, NP01, RPI-19B and RPI-18A

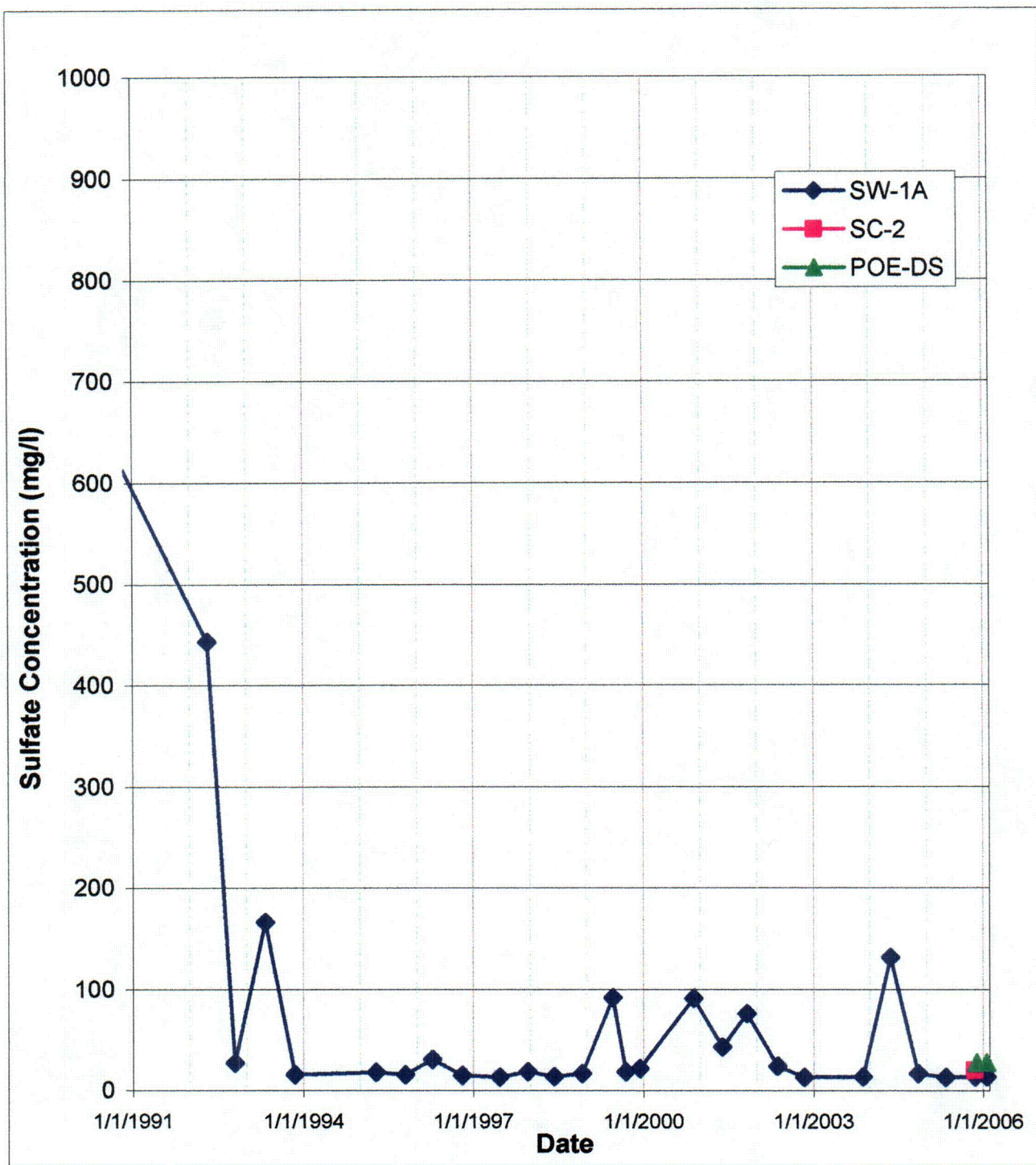
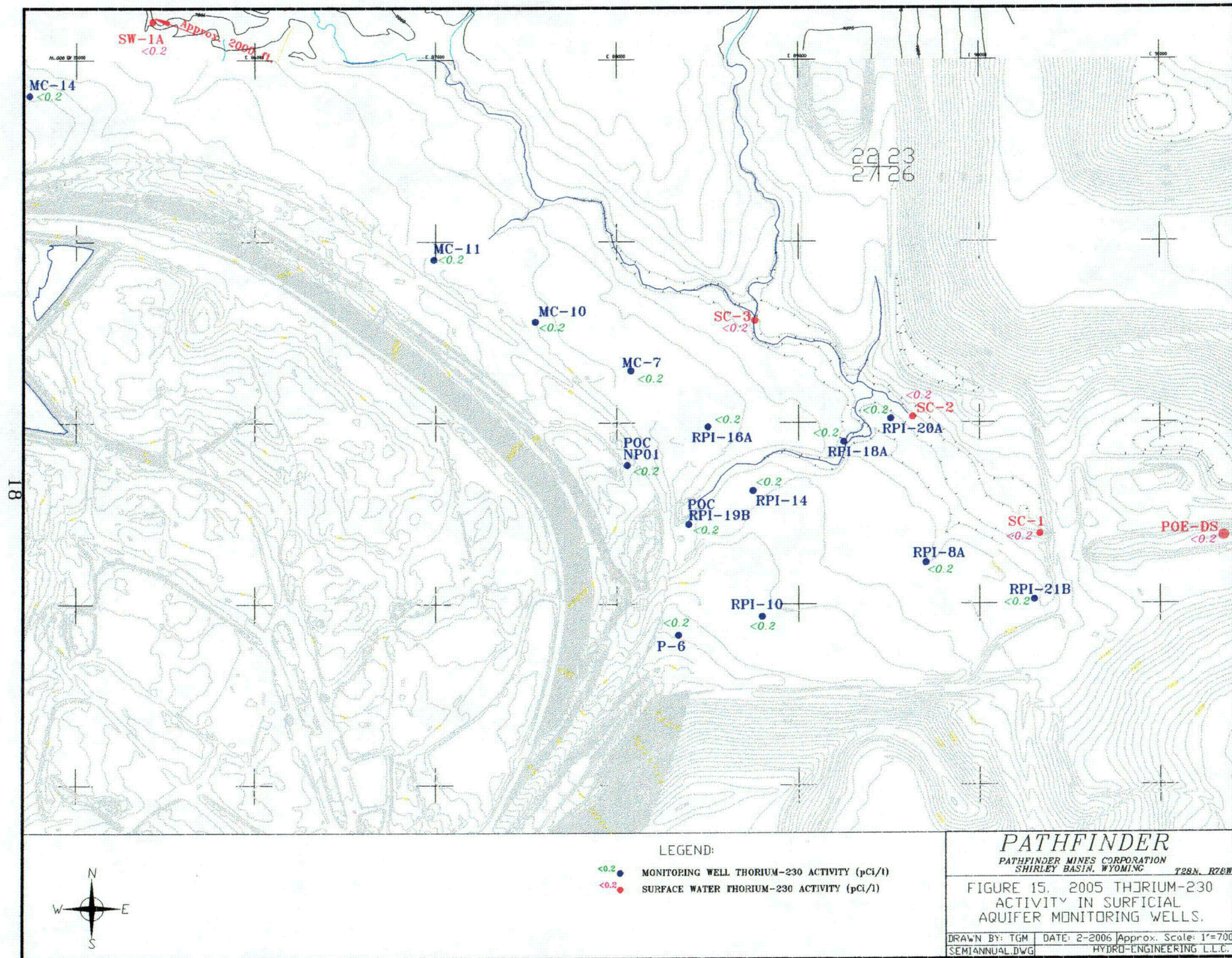


Figure 14. Sulfate Concentration Versus Time For Surface Water Sample Locations SW-1A, SC-2 and POE-DS



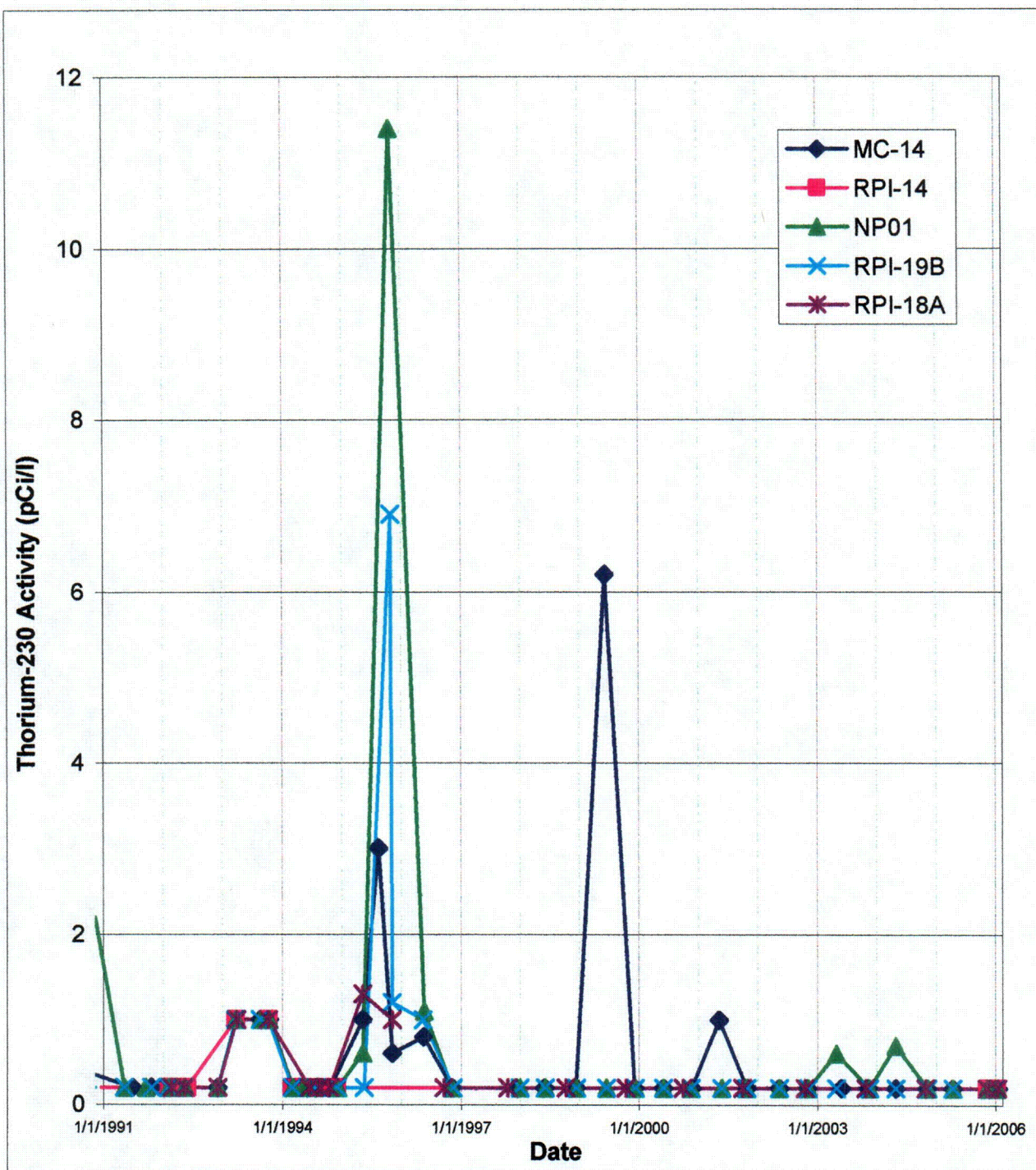


Figure 16. Thorium-230 Activity Versus Time For Wells MC-14, RPI-14, NP01, RPI-19B and RPI-18A

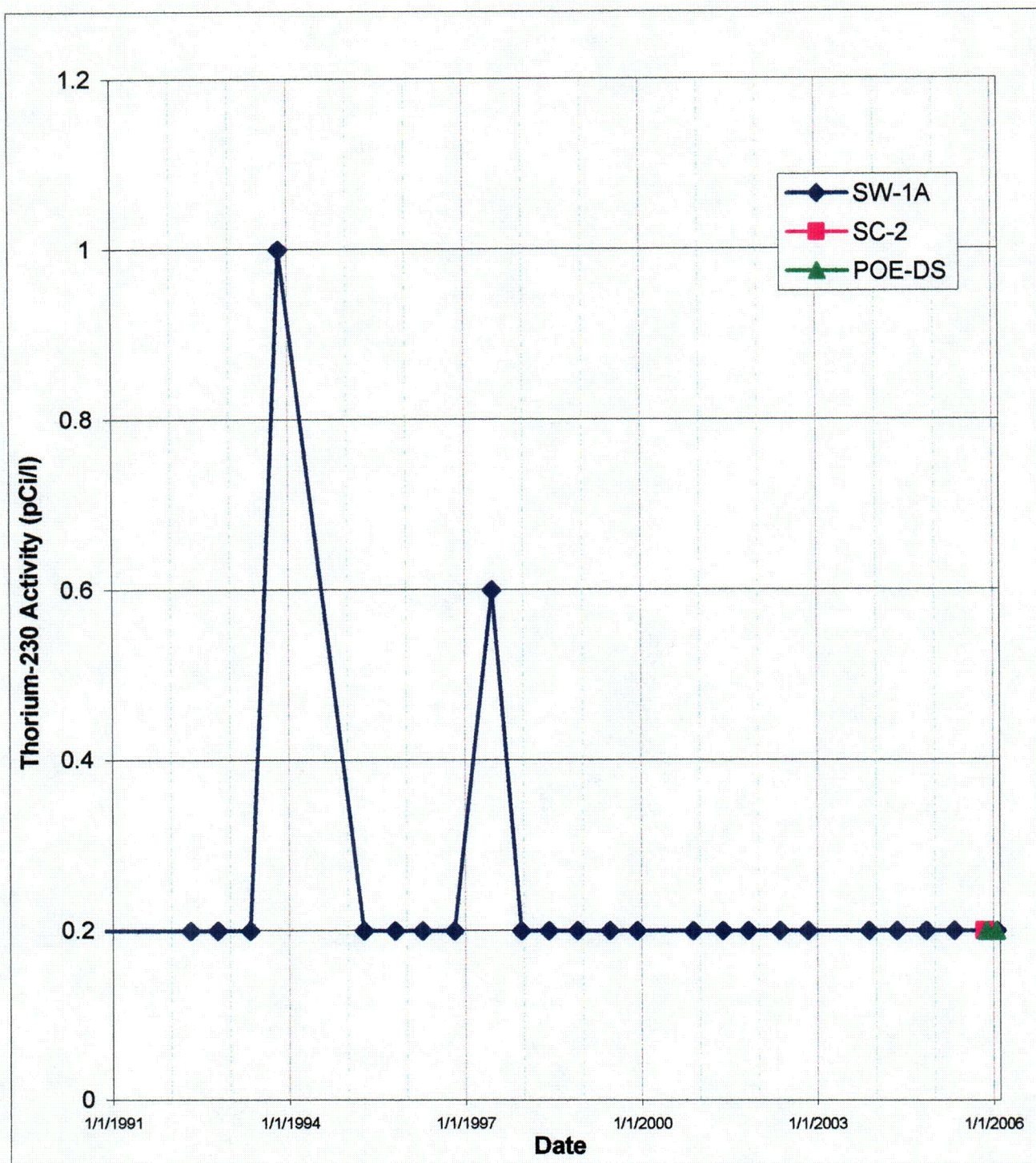
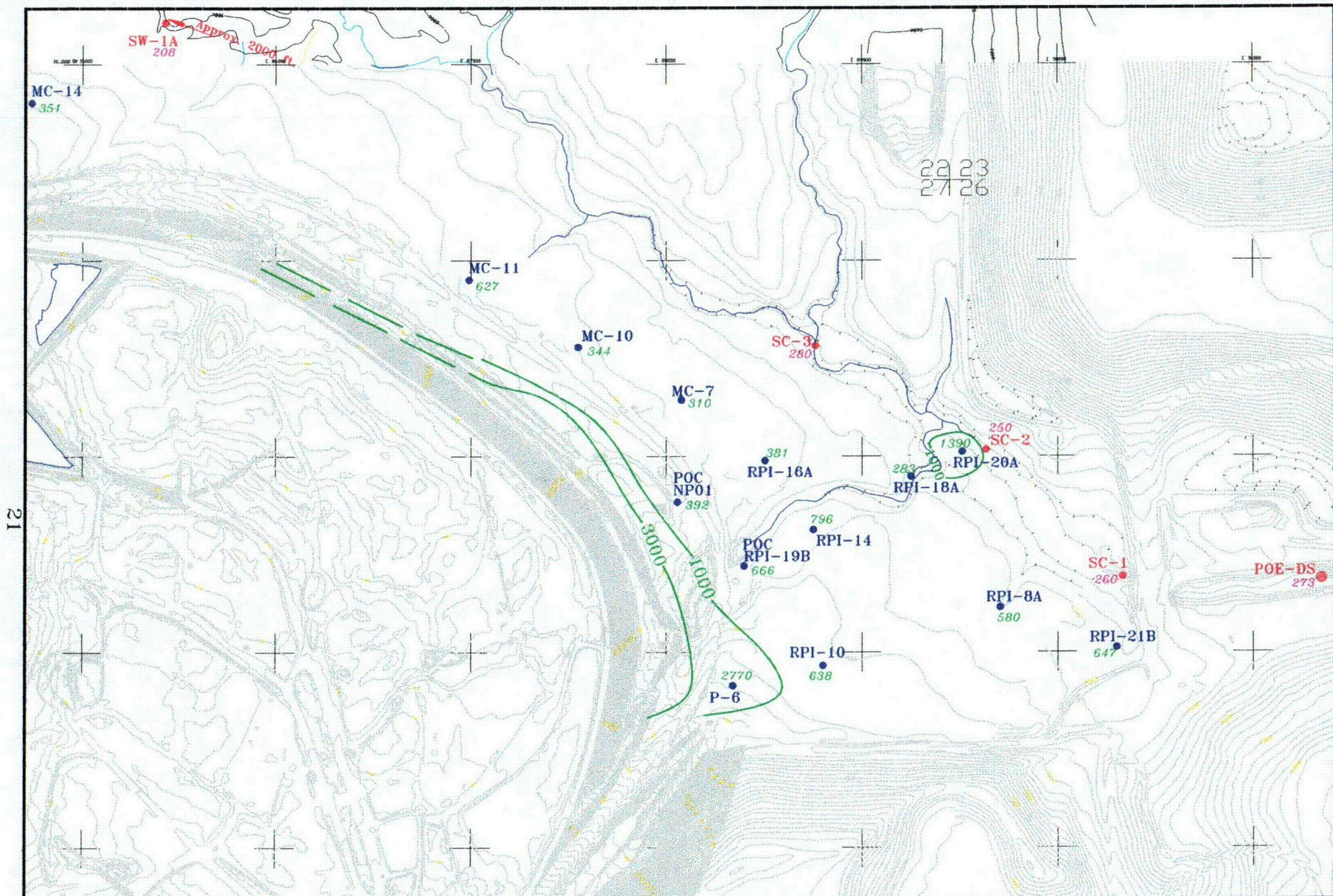


Figure 17. Thorium-230 Activity Versus Time For Surface Water Sample Locations SW-1A, SC-2 and POE-DS



LEGEND:

- 666 ● MONITORING WELL TDS CONCENTRATION (mg/l)
- TDS ISO-CONCENTRATION CONTOURS
- 273 ● SURFACE WATER TDS CONCENTRATION (mg/l)

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FIGURE 18. 2005 TDS
CONCENTRATIONS IN SURFICIAL
AQUIFER MONITORING WELLS.

DRAWN BY: TGM DATE: 2-2006 Approx. Scale: 1"=700'
SEMIANNUAL.DWG HYDRO-ENGINEERING LLC.

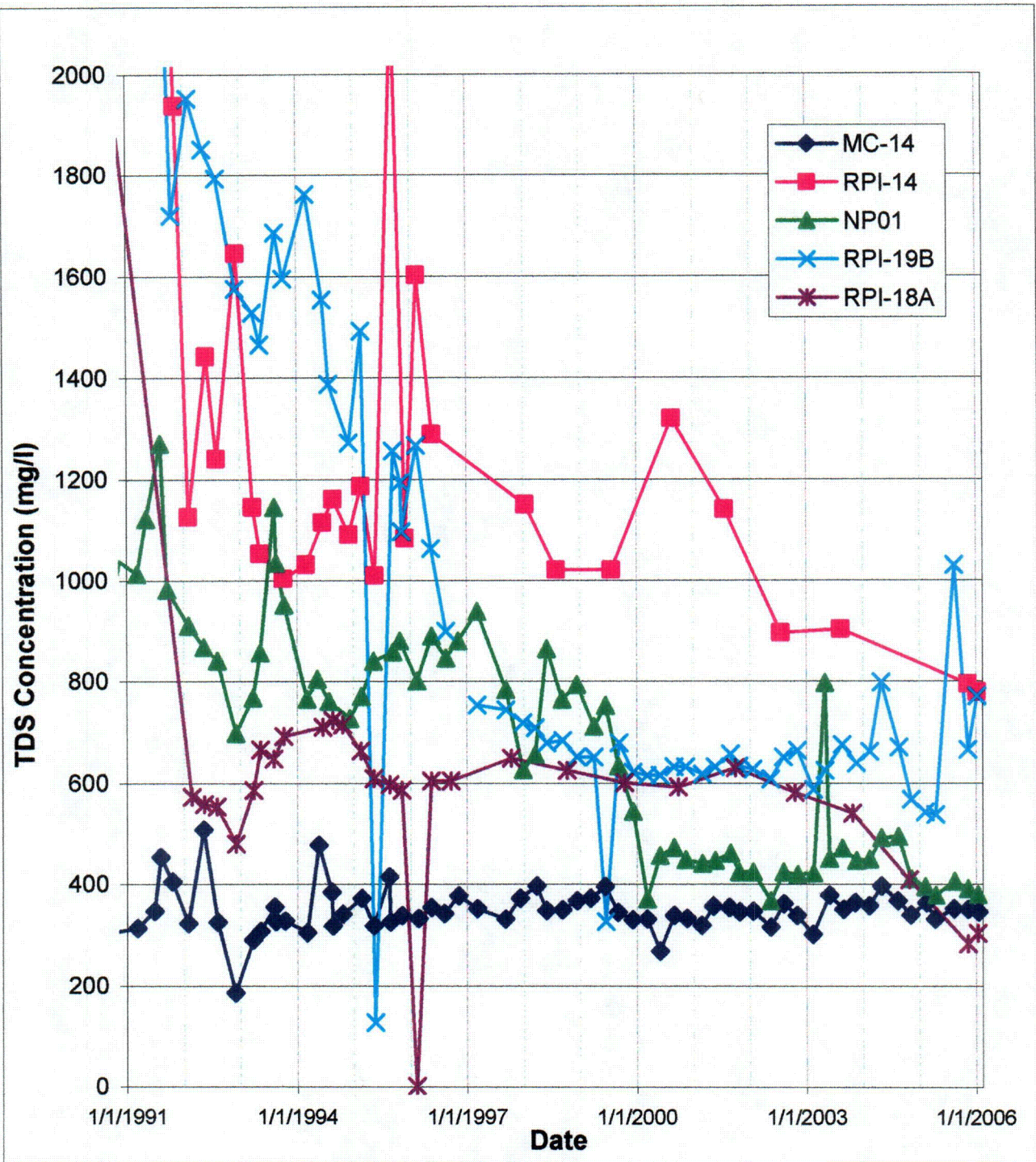


Figure 19. TDS Concentration Versus Time For Wells MC-14, RPI-14, NP01, RPI-19B and RPI-18A

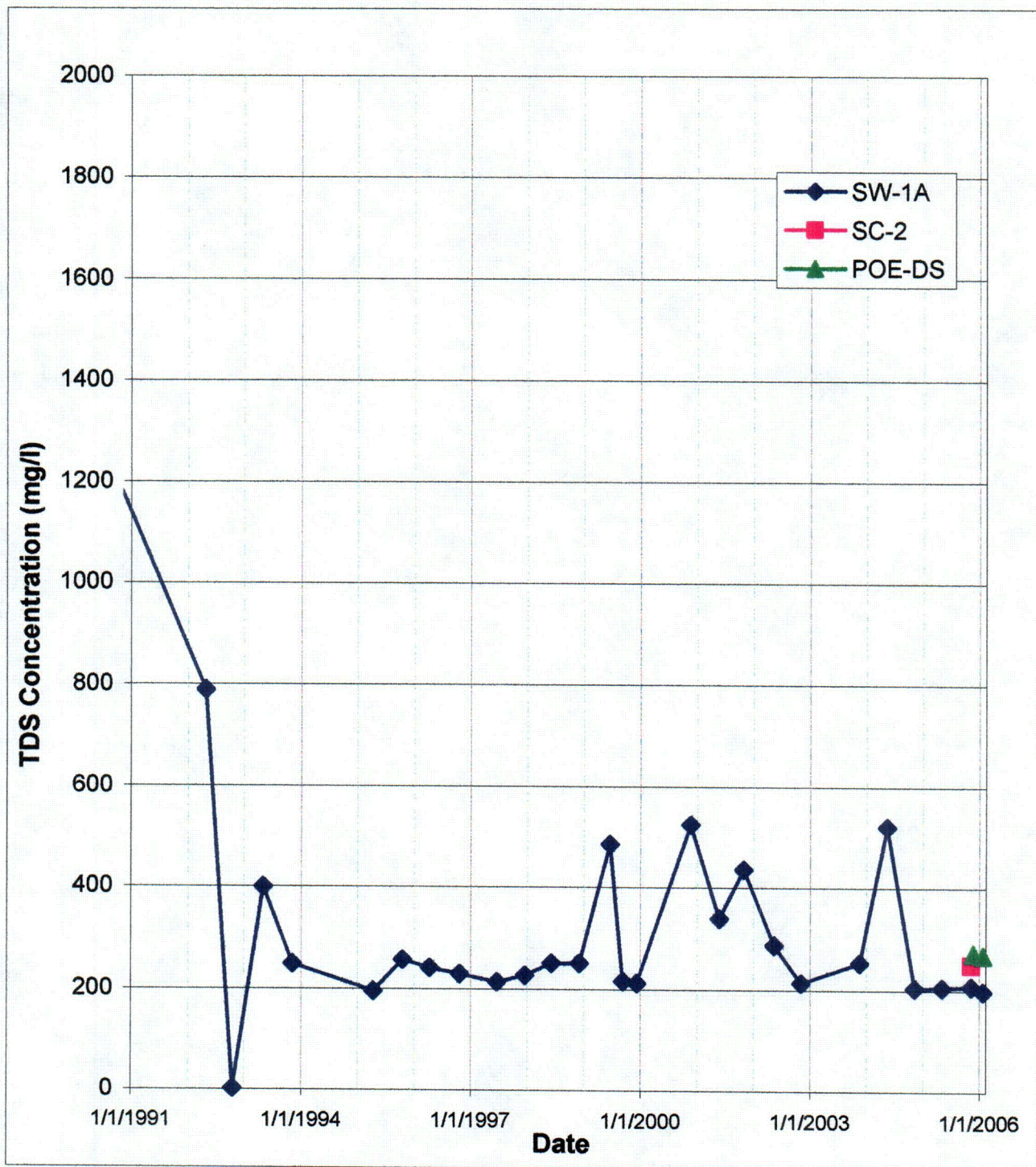
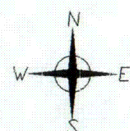
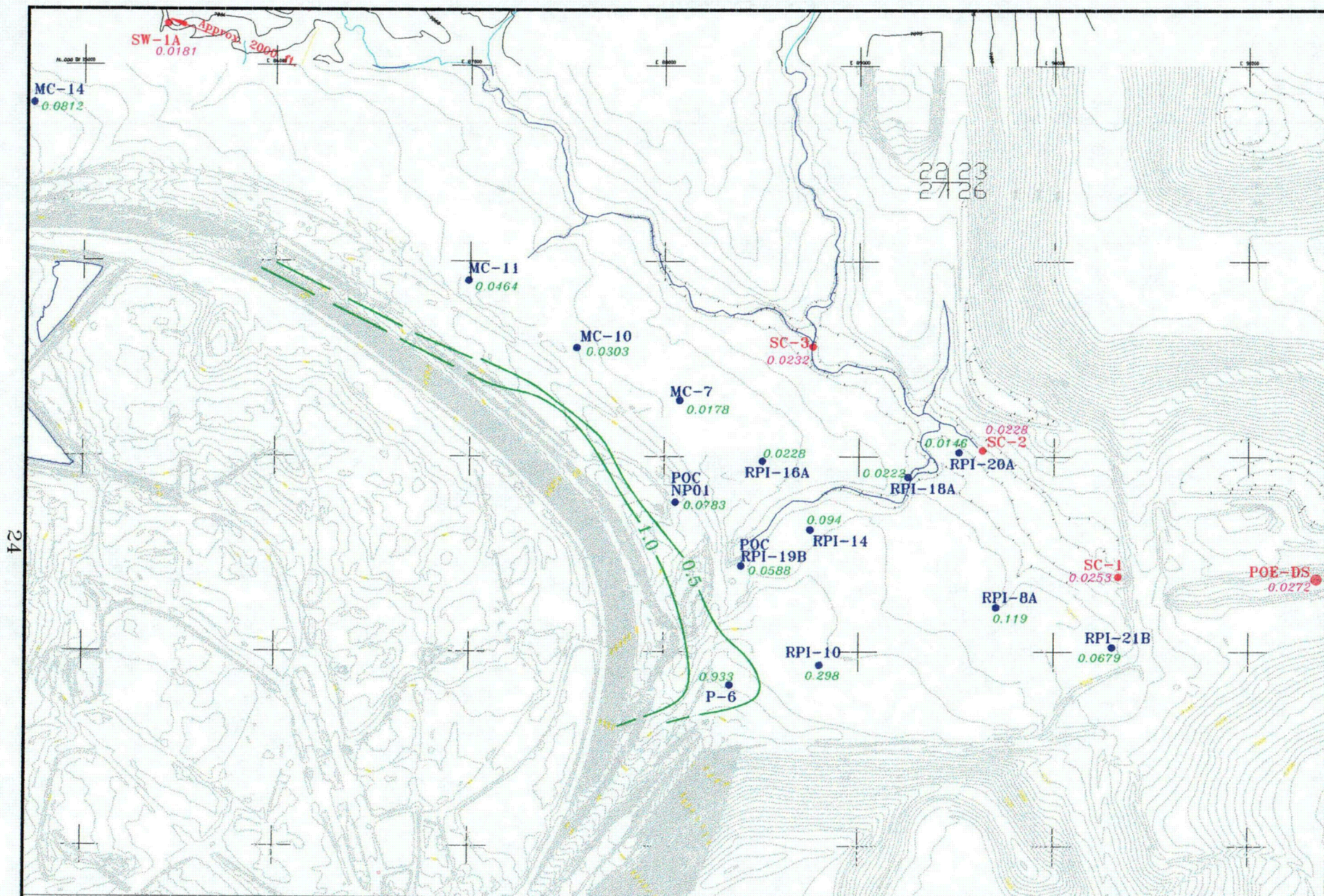


Figure 20. TDS Concentration Versus Time For Surface Water Sample Locations SW-1A, SC-2 and POE-DS



LEGEND:

- 0.0146 ● MONITORING WELL URANIUM CONCENTRATION (mg/l)
- URANIUM ISO-CONCENTRATION CONTOURS
- 0.0232 ● SURFACE WATER URANIUM CONCENTRATION (mg/l)

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FIGURE 21. 2005 URANIUM
CONCENTRATIONS IN SURFICIAL
AQUIFER MONITORING WELLS.

DRAWN BY: TGM DATE: 2-2006 Approx. Scale: 1"=700'
SEMIANNUAL.DWG HYDRO-ENGINEERING L.L.C.

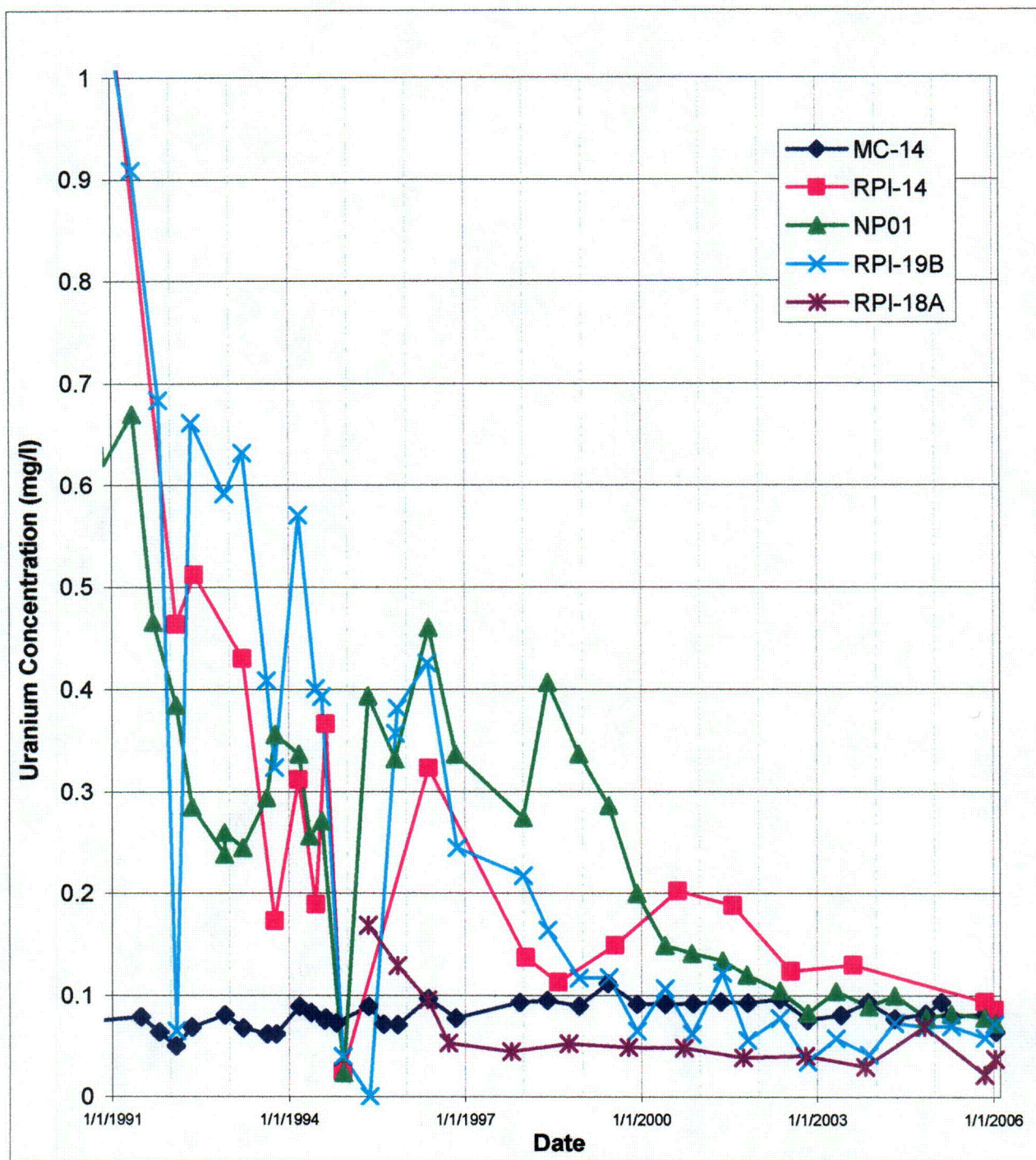


Figure 22. Uranium Concentration Versus Time For Wells MC-14, RPI-14, NP01, RPI-19B and RPI-18A

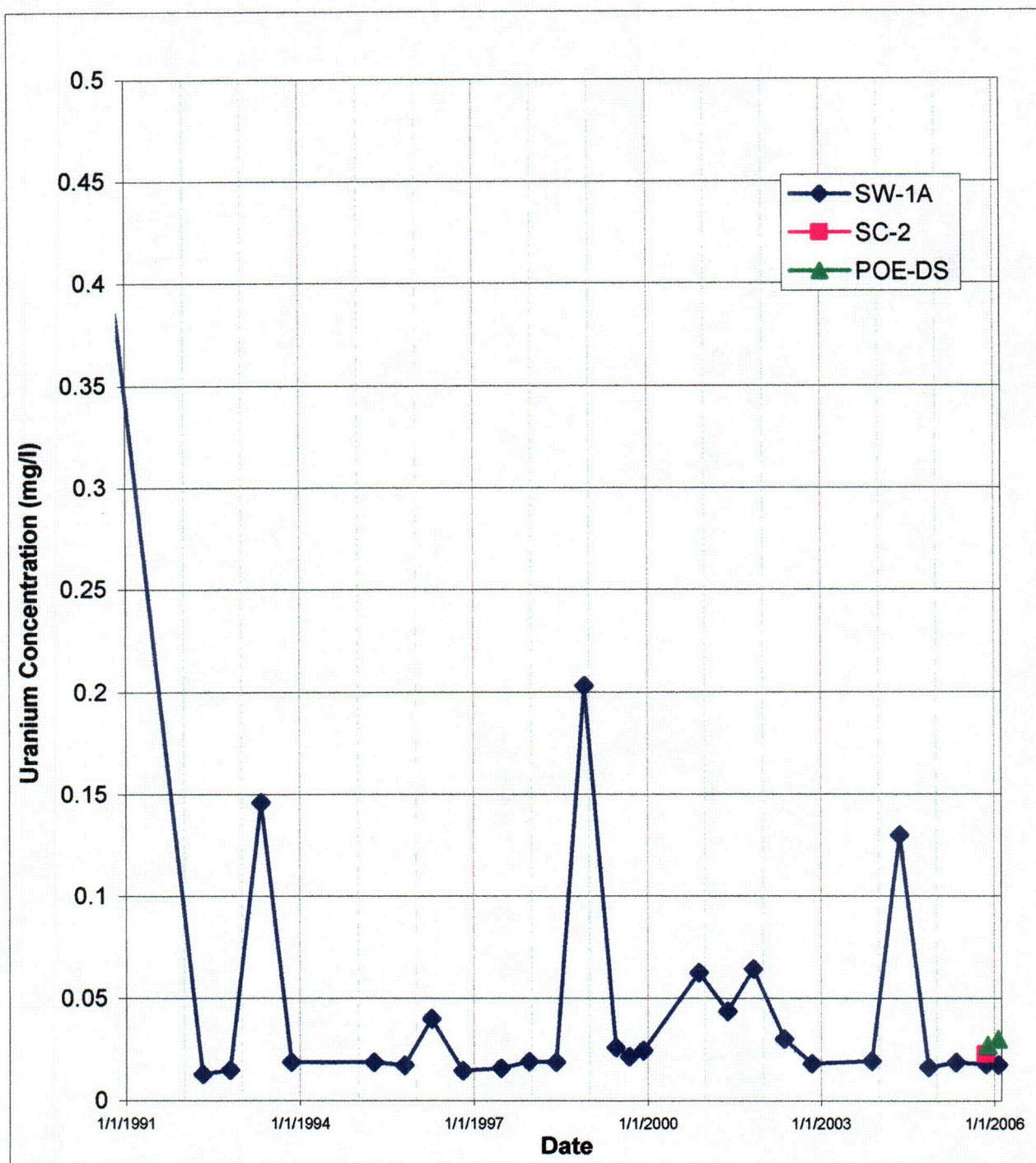


Figure 23. Uranium Concentration Versus Time For Surface Water Sample Locations SW-1A, SC-2 and POE-DS

TABLE 2. MONITOR WELL WATER-LEVEL AND WATER-QUALITY DATA

Sample Point Name	Date	WL (feet)	WL_ELEV (ft-msl)	pH(f) (std. units)	Cond(f) (µmhos)	TDS (mg/l)	SO4 (mg/l)	Cl (mg/l)	Unat (mg/l)	Se (mg/l)
MC07	2/10/2004	12.25	7037.36	7.60	547	374	84.5	14.7	—	—
	4/26/2004	11.72	7037.89	7.50	535	349	50.9	14.9	0.0140	0.0440
	8/12/2004	11.92	7037.69	7.90	448	323	51.0	14.0	—	—
	11/4/2004	12.10	7037.51	7.80	441	316	48.0	14.0	0.0112	0.0560
	2/3/2005	12.71	7036.90	7.85	446	323	42.0	14.0	—	—
	4/11/2005	12.52	7037.09	7.35	419	262	38.0	13.0	0.0141	0.0700
	8/8/2005	12.17	7037.44	7.00	426	279	39.0	13.0	—	—
	11/7/2005	12.80	7036.81	7.57	471	310	37.0	12.0	0.0178	0.0790
	1/16/2006	12.85	7036.76	6.85	529	272	40.0	13.0	0.0185	0.0830
MC10	6/10/2004	11.15	7041.45	8.10	505	310	41.3	20.7	0.0370	—
	11/21/2005	14.73	7037.87	7.92	518	344	42.0	15.0	0.0303	0.0350
	1/16/2006	14.75	7037.85	7.07	654	316	44.0	18.0	0.0247	0.0350
MC11	2/11/2004	12.97	7043.54	7.10	966	599	27.2	201	—	—
	4/27/2004	12.49	7044.02	7.45	990	657	35.2	123	0.0510	0.0030
	8/13/2004	12.24	7044.27	8.00	1081	647	35.0	207	—	—
	11/4/2004	12.99	7043.52	7.45	950	607	32.0	213	0.0480	0.0020
	2/3/2005	13.91	7042.60	7.60	1049	675	32.0	226	—	—
	4/11/2005	13.63	7042.88	6.85	1023	581	26.0	216	0.0483	0.0010
	8/9/2005	13.02	7043.49	7.20	1096	613	26.0	218	—	—
	11/8/2005	13.68	7042.83	6.61	1131	627	24.0	211	0.0464	< 0.0010
	1/16/2006	13.61	7042.90	6.37	1439	604	24.0	228	0.0441	0.0010
MC14	2/11/2004	22.44	7062.27	7.20	529	358	24.1	10.5	—	—
	4/27/2004	22.27	7062.44	7.50	560	397	21.2	17.7	0.0770	< 0.0010
	8/13/2004	22.98	7061.73	8.05	504	368	24.0	12.0	—	—
	11/5/2004	23.03	7061.68	7.20	528	340	26.0	15.0	0.0821	< 0.0010
	2/14/2005	23.17	7061.54	7.10	530	364	25.0	13.0	0.0931	0.0010
	4/11/2005	23.35	7061.36	7.10	530	331	23.0	17.0	0.0797	< 0.0010
	8/9/2005	23.36	7061.35	7.35	570	352	21.0	16.0	—	—
	11/8/2005	23.37	7061.34	6.58	610	351	22.0	16.0	0.0812	< 0.0010
	1/16/2006	23.45	7061.26	6.80	798	346	23.0	20.0	0.0647	< 0.0010
NP01	1/2/2004	13.98	7037.83	—	—	—	—	—	—	—
	2/2/2004	14.08	7037.73	—	—	—	—	—	—	—
	2/12/2004	14.11	7037.70	7.30	659	450	123	25.6	—	—
	3/4/2004	14.00	7037.81	—	—	—	—	—	—	—
	4/1/2004	13.54	7038.27	—	—	—	—	—	—	—
	4/28/2004	13.51	7038.30	8.00	677	492	118	38.6	0.100	0.0280
	5/3/2004	13.51	7038.30	—	—	—	—	—	—	—
	6/7/2004	13.65	7038.16	—	—	—	—	—	—	—
	7/6/2004	13.55	7038.26	—	—	—	—	—	—	—
	8/2/2004	13.58	7038.23	—	—	—	—	—	—	—
	8/18/2004	13.58	7038.23	7.70	649	495	141	24.0	—	—
	9/10/2004	13.60	7038.21	—	—	—	—	—	—	—
	10/1/2004	14.02	7037.79	—	—	—	—	—	—	—
	11/1/2004	14.15	7037.66	—	—	—	—	—	—	—

TABLE 2. MONITOR WELL WATER-LEVEL AND WATER-QUALITY DATA (continued)

Sample Point Name	Date	WL (feet)	WL_ELEV (ft-msl)	pH(f) (std. units)	Cond(f) (µmhos)	TDS (mg/l)	SO4 (mg/l)	Cl (mg/l)	Unat (mg/l)	Se (mg/l)
NP01	11/8/2004	14.05	7037.76	7.30	578	411	108	19.0	0.0784	0.0310
	12/1/2004	14.38	7037.43	—	—	—	—	—	—	—
	2/7/2005	14.45	7037.36	7.10	653	395	96.0	35.0	—	—
	4/14/2005	15.69	7036.12	7.20	575	379	85.0	28.0	0.0818	0.0390
	8/15/2005	26.90	7024.91	7.45	636	406	80.0	16.0	—	—
	11/8/2005	14.38	7037.43	6.75	658	392	72.0	25.0	0.0783	0.0490
	1/11/2006	14.41	7037.40	7.05	571	380	79.0	19.0	0.0723	0.0570
P-6	10/20/2004	27.72	7030.48	6.40	2110	2000	337	424	0.552	0.0920
	11/10/2005	24.21	7033.99	4.76	3800	2770	577	689	0.933	0.0730
	1/11/2006	23.81	7034.39	5.98	4200	3280	600	970	0.879	0.0680
RPI-8A	6/28/2004	8.81	7030.59	7.70	906	692	326	13.0	0.103	< 0.0010
	11/10/2005	11.39	7028.01	6.72	893	580	198	15.0	0.119	0.0290
	1/10/2006	11.02	7028.38	6.46	856	566	206	15.0	0.149	0.0350
RPI-10	2/11/2004	14.29	7035.12	7.00	869	682	292	10.9	—	—
	8/19/2004	15.37	7034.04	7.65	828	656	295	11.0	—	—
	2/7/2005	16.62	7032.79	6.90	844	638	305	11.0	—	—
	11/10/2005	16.80	7032.61	8.26	889	638	283	11.0	0.298	0.0030
	1/9/2006	11.73	7037.68	6.02	1178	794	284	7.00	0.316	0.0030
RPI-14	11/10/2005	8.21	7033.69	6.38	1327	796	284	34.0	0.0940	0.0070
	1/9/2006	8.16	7033.74	6.73	888	780	284	31.0	0.0861	0.0080
RPI-16A	10/28/2004	10.71	7036.89	7.20	527	362	66.0	34.0	0.0203	0.0490
	11/10/2005	11.21	7036.39	6.82	608	381	71.0	19.0	0.0228	0.0560
	1/12/2006	11.51	7036.09	6.69	567	396	73.0	33.0	0.0215	0.0650
RPI-18A	10/28/2004	2.66	7029.19	7.65	577	409	122	16.0	0.0696	0.0360
	11/10/2005	7.14	7024.71	6.29	320	283	49.0	11.0	0.0222	0.0370
	1/12/2006	4.69	7027.16	6.35	428	304	57.0	30.0	0.0376	0.0060
RPI-19B	2/13/2004	10.81	7036.00	7.85	947	663	283	10.4	—	—
	4/28/2004	10.84	7035.97	7.50	1063	799	301	10.8	0.0730	0.0020
	8/19/2004	11.13	7035.68	7.80	901	671	225	16.0	—	—
	11/8/2004	11.49	7035.32	7.65	793	568	173	21.0	0.0693	0.0020
	2/8/2005	11.84	7034.97	7.10	854	543	165	17.0	—	—
	4/14/2005	11.85	7034.96	7.10	800	538	162	15.0	0.0700	0.0010
	8/15/2005	12.15	7034.66	7.35	1444	1030	443	12.0	—	—
	11/9/2005	12.13	7034.68	6.37	1018	666	238	21.0	0.0588	0.0020
	1/9/2006	11.57	7035.24	6.93	1153	772	298	22.0	0.0720	0.0030
RPI-20A	2/13/2004	5.48	7026.13	—	—	—	—	—	—	—
	4/28/2004	5.25	7026.36	7.30	1022	753	260	21.9	0.0190	0.0010
	8/19/2004	5.86	7025.75	6.95	691	498	154	21.0	—	—
	11/8/2004	5.58	7026.03	7.50	718	515	185	25.0	0.0059	0.0010
	2/8/2005	5.89	7025.72	7.15	822	536	168	22.0	—	—
	4/20/2005	5.85	7025.76	6.85	674	425	100.0	19.0	0.0118	< 0.0010
	8/15/2005	7.00	7024.61	7.28	837	560	151	38.0	—	—
	11/9/2005	5.74	7025.87	6.46	1856	1390	763	28.0	0.0146	< 0.0010

TABLE 2. MONITOR WELL WATER-LEVEL AND WATER-QUALITY DATA (continued)

Sample Point Name	Date	WL (feet)	WL_ELEV (ft-msl)	pH(f) (std. units)	Cond(f) (µmhos)	TDS (mg/l)	SO4 (mg/l)	Cl (mg/l)	Unat (mg/l)	Se (mg/l)
RPI-20A	1/10/2006	6.60	7025.01	6.03	1440	1060	539	26.0	0.0182	0.0010
RPI-21B	2/13/2004	7.44	7029.20	7.90	889	652	377	9.81	—	—
	4/28/2004	7.72	7028.92	7.45	855	673	279	10.1	0.0810	0.0010
	8/19/2004	8.57	7028.07	7.95	841	640	284	10.00	—	—
	11/8/2004	9.13	7027.51	7.65	818	631	284	11.0	0.0648	0.0030
	2/8/2005	9.85	7026.79	7.25	904	624	288	11.0	—	—
	4/20/2005	9.80	7026.84	7.25	910	608	280	12.0	0.0671	0.0020
	8/15/2005	11.15	7025.49	6.85	907	652	270	723	—	—
	11/9/2005	11.18	7025.46	6.51	954	647	274	11.0	0.0679	0.0020
	1/10/2006	11.44	7025.20	6.17	933	624	285	10.00	0.0763	0.0020

TABLE 2. MONITOR WELL WATER-LEVEL AND WATER-QUALITY DATA (continued)

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+228 (pCi/l)	Alpha (pCi/l)
MC07	4/26/2004	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20	< 1.000
	11/4/2004	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20	1.50
	4/11/2005	< 0.200	—	0.400	0.300	< 1.000	—	< 1.40	1.10
	11/7/2005	< 0.200	—	1.50	± 0.600	< 1.000	—	< 2.50	1.10
	1/16/2006	< 0.200	—	0.400	± 0.300	< 1.000	—	< 1.40	< 1.000
MC10	11/21/2005	< 0.200	—	0.800	± 0.400	< 1.000	—	< 1.80	1.80
	1/16/2006	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20	< 1.000
MC11	4/27/2004	0.600	0.300	2.80	0.600	2.30	1.20	5.10	4.00
	11/4/2004	< 0.200	—	2.40	0.500	< 1.000	—	< 3.40	3.00
	4/11/2005	< 0.200	—	3.80	0.700	< 1.000	—	< 4.80	3.40
	11/8/2005	< 0.200	—	1.80	± 0.500	1.70	± 0.900	3.50	3.80
	1/16/2006	< 0.200	—	1.90	± 0.500	< 1.000	—	< 2.90	2.50
MC14	4/27/2004	< 0.200	—	0.900	0.400	< 1.000	—	< 1.90	1.000
	11/5/2004	< 0.200	—	0.300	0.300	< 1.000	—	< 1.30	< 1.000
	2/14/2005	—	—	0.900	0.200	—	—	—	—
	4/11/2005	< 0.200	—	1.20	0.400	< 1.000	—	< 2.20	1.90
	11/8/2005	< 0.200	—	4.90	± 0.800	< 1.000	—	< 5.90	1.70
	1/16/2006	< 0.200	—	0.600	± 0.300	< 1.000	—	< 1.60	1.000
NP01	4/28/2004	0.700	0.500	0.500	0.300	< 1.000	—	< 1.50	< 1.000
	11/8/2004	< 0.200	—	< 0.200	—	6.30	1.30	< 6.50	< 1.000
	4/14/2005	< 0.200	—	0.600	0.300	< 1.000	—	< 1.60	< 1.000
	11/8/2005	< 0.200	—	1.20	± 0.400	< 1.000	—	< 2.20	1.20
	1/11/2006	< 0.200	—	0.800	0.300	4.50	1.000	5.30	1.10
P-6	10/20/2004	< 0.200	—	0.800	0.400	< 1.000	—	< 1.80	1.20
	11/10/2005	< 0.200	—	2.50	± 0.500	4.10	± 1.000	6.60	2.20
	1/11/2006	< 0.200	—	2.60	0.600	5.10	1.000	7.70	1.80
RPI-8A	6/28/2004	< 0.200	—	0.400	0.300	< 1.000	—	< 1.40	—
	11/10/2005	< 0.200	—	0.800	± 0.400	< 1.000	—	< 1.80	< 1.000
	1/10/2006	< 0.200	—	0.700	0.400	1.20	0.900	1.90	< 1.000
RPI-10	11/10/2005	< 0.200	—	1.80	± 0.500	< 1.000	—	< 2.80	< 1.000
	1/9/2006	< 0.200	—	0.900	0.500	< 1.000	—	< 1.90	< 1.000
RPI-14	11/10/2005	< 0.200	—	0.700	± 0.300	1.70	± 0.900	2.40	< 1.000
	1/9/2006	< 0.200	—	0.500	0.300	< 1.000	—	< 1.50	< 1.000
RPI-16A	10/28/2004	< 0.200	—	< 0.200	1.000	1.60	—	< 1.80	< 1.000
	11/10/2005	< 0.200	—	0.500	± 0.300	< 1.000	—	< 1.50	< 1.000
	1/12/2006	0.200	—	0.600	0.300	4.10	1.000	4.70	< 1.000
RPI-18A	10/28/2004	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20	< 1.000
	11/10/2005	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20	< 1.000
	1/12/2006	< 0.200	—	0.500	0.300	5.40	1.000	5.90	< 1.000
RPI-19B	4/28/2004	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20	< 1.000
	11/8/2004	< 0.200	—	0.600	0.500	< 1.000	—	< 1.60	< 1.000
	4/14/2005	< 0.200	—	0.600	0.300	< 1.000	—	< 1.60	1.50
	11/9/2005	< 0.200	—	1.20	± 0.400	1.60	± 0.900	2.80	1.40

TABLE 2. MONITOR WELL WATER-LEVEL AND WATER-QUALITY DATA (continued)

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+228 (pCi/l)	Alpha (pCi/l)
RPI-19B	1/9/2006	< 0.200	—	0.800	0.600	< 1.000	—	< 1.80	< 1.000
RPI-20A	4/28/2004	< 0.200	—	0.400	0.300	< 1.000	—	< 1.40	< 1.000
	11/8/2004	< 0.200	—	< 0.200	—	< 1.000	—	< 1.20	< 1.000
	4/20/2005	0.200	0.200	0.200	0.300	< 1.000	—	< 1.20	< 1.000
	11/9/2005	< 0.200	—	2.30	± 0.500	1.70	± 0.900	4.00	2.20
	1/10/2006	< 0.200	—	1.40	0.400	1.30	0.900	2.70	< 1.000
RPI-21B	4/28/2004	< 0.200	—	0.600	0.400	< 1.000	—	< 1.60	< 1.000
	11/8/2004	< 0.200	—	0.400	0.300	< 1.000	—	< 1.40	< 1.000
	4/20/2005	0.200	0.200	0.800	0.400	< 1.000	—	< 1.80	< 1.000
	11/9/2005	< 0.200	—	1.10	± 0.400	< 1.000	—	< 2.10	1.10
	1/10/2006	< 0.200	—	0.700	0.400	1.30	1.000	2.00	< 1.000

TABLE 2. MONITOR WELL WATER-LEVEL AND WATER-QUALITY DATA (continued)

Sample Point Name	Date	As (mg/l)	Ba (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Mo (mg/l)	Pb (mg/l)	Ni (mg/l)
MC07	4/26/2004	0.0020	0.0380	< 0.0010	< 0.0010	0.0020	0.0060	< 0.0010	< 0.0030
	11/4/2004	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	4/11/2005	0.0020	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/7/2005	0.0050	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/16/2006	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
MC10	11/21/2005	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/16/2006	0.0060	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
MC11	4/27/2004	0.0020	0.0940	< 0.0010	< 0.0010	0.0020	< 0.0010	< 0.0010	0.0040
	11/4/2004	0.0020	0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	4/11/2005	0.0020	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/8/2005	0.0020	0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/16/2006	0.0020	0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
MC14	4/27/2004	0.0040	0.0580	< 0.0010	< 0.0010	< 0.0010	0.0020	< 0.0010	0.0020
	11/5/2004	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	2/14/2005	0.0040	< 0.100	—	< 0.0050	< 0.0500	< 0.100	< 0.0500	< 0.0500
	4/11/2005	0.0040	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/8/2005	0.0040	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/16/2006	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
NP01	4/28/2004	0.0050	0.0480	< 0.0010	< 0.0010	0.0020	0.0060	< 0.0010	0.0040
	11/8/2004	0.0060	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	4/14/2005	0.0050	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/8/2005	0.0060	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/11/2006	0.0060	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
P-6	10/20/2004	0.0060	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/10/2005	0.0040	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/11/2006	0.0040	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
RPI-8A	11/10/2005	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/10/2006	0.0020	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
RPI-10	11/10/2005	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/9/2006	0.0010	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
RPI-14	11/10/2005	0.0020	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/9/2006	0.0020	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
RPI-16A	10/28/2004	0.0090	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/10/2005	0.0090	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/12/2006	0.0080	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
RPI-18A	10/28/2004	0.0070	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/10/2005	0.0070	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/12/2006	0.0050	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
RPI-19B	4/28/2004	0.0020	0.0380	< 0.0010	< 0.0010	< 0.0010	0.0030	< 0.0010	0.0080
	11/8/2004	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	4/14/2005	0.0020	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/9/2005	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/9/2006	0.0020	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500

TABLE 2. MONITOR WELL WATER-LEVEL AND WATER-QUALITY DATA (continued)

Sample Point Name	Date	As (mg/l)	Ba (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Mo (mg/l)	Pb (mg/l)	Ni (mg/l)
RPI-20A	4/28/2004	0.0180	0.0370	< 0.0010	< 0.0010	< 0.0010	0.0010	< 0.0010	0.0070
	11/8/2004	0.0230	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	4/20/2005	0.0230	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/9/2005	0.0240	0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/10/2006	0.0210	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
RPI-21B	4/28/2004	0.0040	0.0340	< 0.0010	< 0.0010	< 0.0010	0.0070	< 0.0010	0.0060
	11/8/2004	0.0040	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	4/20/2005	0.0030	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	11/9/2005	0.0040	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500
	1/10/2006	0.0040	< 0.100	< 0.0100	< 0.0100	< 0.0500	< 0.100	< 0.0500	< 0.0500

TABLE 3. SURFACE WATER MONITORING DATA

Sample Point Name	Date	pH(f) (std. units)	Cond(f) (µmhos)	TDS (mg/l)	SO4 (mg/l)	Cl (mg/l)	Unat (mg/l)	Se (mg/l)
POE-DS	11/21/2005	5.05	431	273	28	15.0	0.0272	< 0.001
	1/23/2006	6.28	452	270	28	14.0	0.0301	0.001
SC1	11/21/2005	6.33	424	260	27	18.0	0.0253	< 0.001
	1/19/2006	6.51	375	252	20	13.0	0.0227	0.001
SC2	11/8/2005	6.50	389	250	20	14.0	0.0228	< 0.001
	11/8/2005	6.48	379	243	20	14.0	0.0227	0.001
SC3	11/21/2005	6.27	424	280	21	18.0	0.0232	< 0.001
	1/19/2006	6.66	637	252	19	13.0	0.0218	0.001
SW-1A	5/13/2004	7.15	751	521	132	40.2	0.130	0.002
	11/9/2004	7.20	287	204	17	6.0	0.0164	< 0.001
	5/2/2005	6.80	265	205	13	2.0	0.0189	0.001
	11/8/2005	6.91	324	208	14	3.0	0.0181	< 0.001
	1/23/2006	6.24	315	198	14	2.0	0.0178	0.001

TABLE 3. SURFACE WATER MONITORING DATA. (continued)

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)	Alpha (pCi/l)	Alpha(e) (pCi/l)
POE-DS	11/21/2005	< 0.20	—	0.6	± 0.4	< 1.0	—	< 1.6	1.8	—
	1/23/2006	< 0.20	—	0.6	± 0.4	< 1.0	—	< 1.6	< 1.0	—
SC1	11/21/2005	< 0.20	—	0.5	± 0.3	< 1.0	—	< 1.5	< 1.0	—
	1/19/2006	< 0.20	—	0.6	± 0.3	< 1.0	—	< 1.6	< 1.0	—
SC2	11/8/2005	< 0.20	—	1.4	± 0.6	< 1.0	—	< 2.4	1.0	± 0.7
	1/19/2006	< 0.20	—	0.4	± 0.3	< 1.0	—	< 1.4	< 1.0	—
SC3	11/21/2005	< 0.20	—	0.6	± 0.3	< 1.0	—	< 1.6	1.0	± 1.0
	1/19/2006	< 0.20	—	0.5	± 0.3	< 1.0	—	< 1.5	1.2	± 0.7
SW-1A	5/13/2004	< 0.20	—	< 0.2	—	< 1.0	—	< 1.2	< 1.0	—
	11/9/2004	< 0.20	—	< 0.2	—	1.3	1.2	< 1.5	< 1.0	—
	5/2/2005	< 0.20	—	1.2	0.6	1.3	1.1	2.5	< 1.0	—
	11/8/2005	< 0.20	—	0.8	± 0.4	1.6	± 0.90	2.4	< 1.0	—
	1/23/2006	< 0.20	—	0.5	± 0.4	< 1.0	—	< 1.5	< 1.0	—

TABLE 3. SURFACE WATER MONITORING DATA (continued)

Sample Point Name	Date	As (mg/l)	Ba (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Mo (mg/l)	Pb (mg/l)	Ni (mg/l)
POE-DS	11/21/2005	0.006	0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
	1/23/2006	0.005	0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
SC1	11/21/2005	0.005	0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
	1/19/2006	0.005	0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
SC2	11/8/2005	0.005	< 0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
	1/19/2006	0.005	0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
SC3	11/21/2005	0.005	0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
	1/19/2006	0.005	0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
SW-1A	5/13/2004	0.003	0.086	< 0.001	< 0.001	< 0.001	0.004	< 0.0010	0.003
	11/9/2004	0.004	< 0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
	5/2/2005	0.005	< 0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
	11/8/2005	0.004	< 0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050
	1/23/2006	0.005	< 0.10	< 0.010	< 0.010	< 0.050	< 0.100	< 0.050	< 0.050