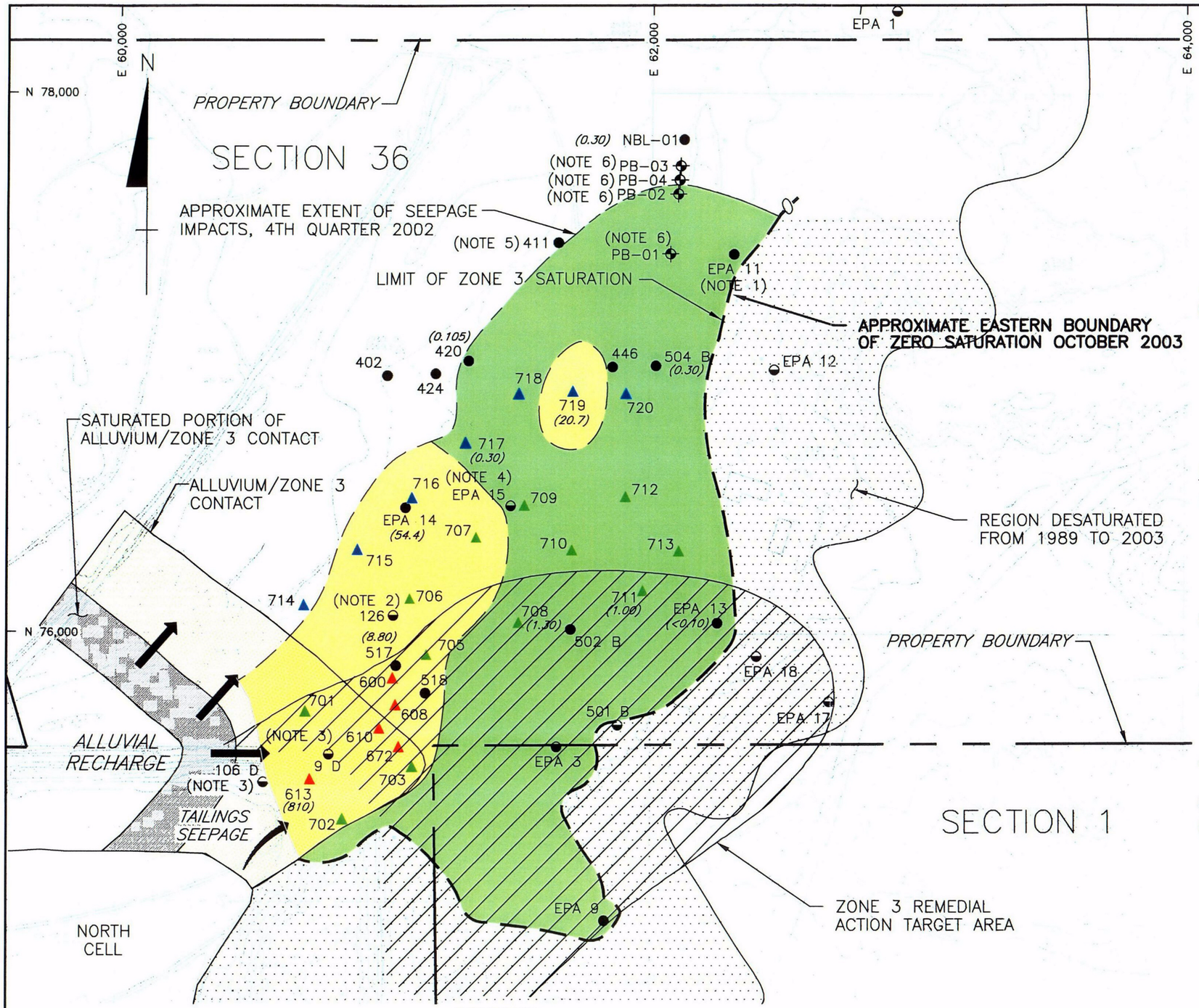

LEGEND:

608 ▲	NORTHEAST PUMP–BACK WELL LOCATION AND DESIGNATION
708 ▲	ZONE 3–STAGE I EXTRACTION WELL LOCATION AND DESIGNATION
714 ▲	ZONE 3–STAGE II EXTRACTION WELL LOCATION AND DESIGNATION
420 ●	ZONE 3 MONITORING WELL LOCATION AND DESIGNATION (CONTAINS WATER)
EPA 17 ◒	ZONE 3 MONITORING WELL LOCATION AND DESIGNATION (DRY OR CONTAINS INSUFFICIENT WATER FOR SAMPLE COLLECTION)
PB–01 (NOTE 6)	ZONE 3 PLUME BOUNDARY MONITORING WELL LOCATION AND DESIGNATION
	APPROXIMATE AREA IMPACTED BY TAILINGS SEEPAGE
	APPROXIMATE EXTENT OF ALUMINUM EXCEEDING 5.0 mg/L
(0.20)	ALUMINUM CONCENTRATION, mg/L

NOTES:

1. MONITORING WELL EPA–11 WAS NOT USABLE AS OF THIRD QUARTER 1990. THE WATER LEVEL DROPPED BELOW THE PUMP INTAKE. THE PUMP COULD NOT BE LOWERED BECAUSE IT IS CEMENTED IN THE WELL. THE NRC AND EPA WERE NOTIFIED OF THIS PROBLEM IN TELEPHONE CONVERSATIONS ON JULY 18 AND SEPTEMBER 5, 1990.
2. MONITORING WELL 126 WAS COMPLETED ABOVE THE BOTTOM OF ZONE 3. CONSEQUENTLY MEASUREMENTS OF SATURATED THICKNESS IN THIS WELL ARE LESS THAN ACTUAL CONDITIONS.
3. MONITORING WELLS 9 D AND 106 D APPEAR TO BE COMPLETED ABOVE THE BOTTOM OF ZONE 3. MEASUREMENTS OF SATURATED THICKNESS IN THESE WELLS MAY BE LESS THAN ACTUAL CONDITIONS.
4. THE BOTTOM OF MONITORING WELL EPA 15 IS COMPLETED IN A SHALE LAYER WHICH CONTAINS NO WATER.
5. WELL 411 FILLED WITH OIL AS OF SECOND QUARTER 1998.
6. THE PLUME BOUNDARY WELLS WERE INSTALLED IN JUNE 2002. THEY ARE NOT PART OF THE PERFORMANCE MONITORING PROGRAM.

FIGURE 35
ZONE 3 APPROXIMATE EXTENT OF ALUMINUM EXCEEDING 5.0 MG/L, OCTOBER 2003
PREPARED FOR:
UNC MINING AND MILLING
GALLUP, NEW MEXICO

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No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
1	12/06/02	ISSUED FOR DECEMBER 18,2003 ANNUAL REVIEW REPORT	MLS	KTS	SdP

FIG_35.DWG

REFERENCE:
TOPOGRAPHIC MAP OF SEC. 2, T16N, R16W N.M.P.M. & VICINITY PROVIDED BY UNITED NUCLEAR CORPORATION, GALLUP, N.M. DATED: 8–1–96. SCALE: 1" = 400'.

SCALE
400 0 400 FEET

1

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FIGURE 36

Zone 3 Uranium, Vanadium, and Radionuclides Over Time

United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

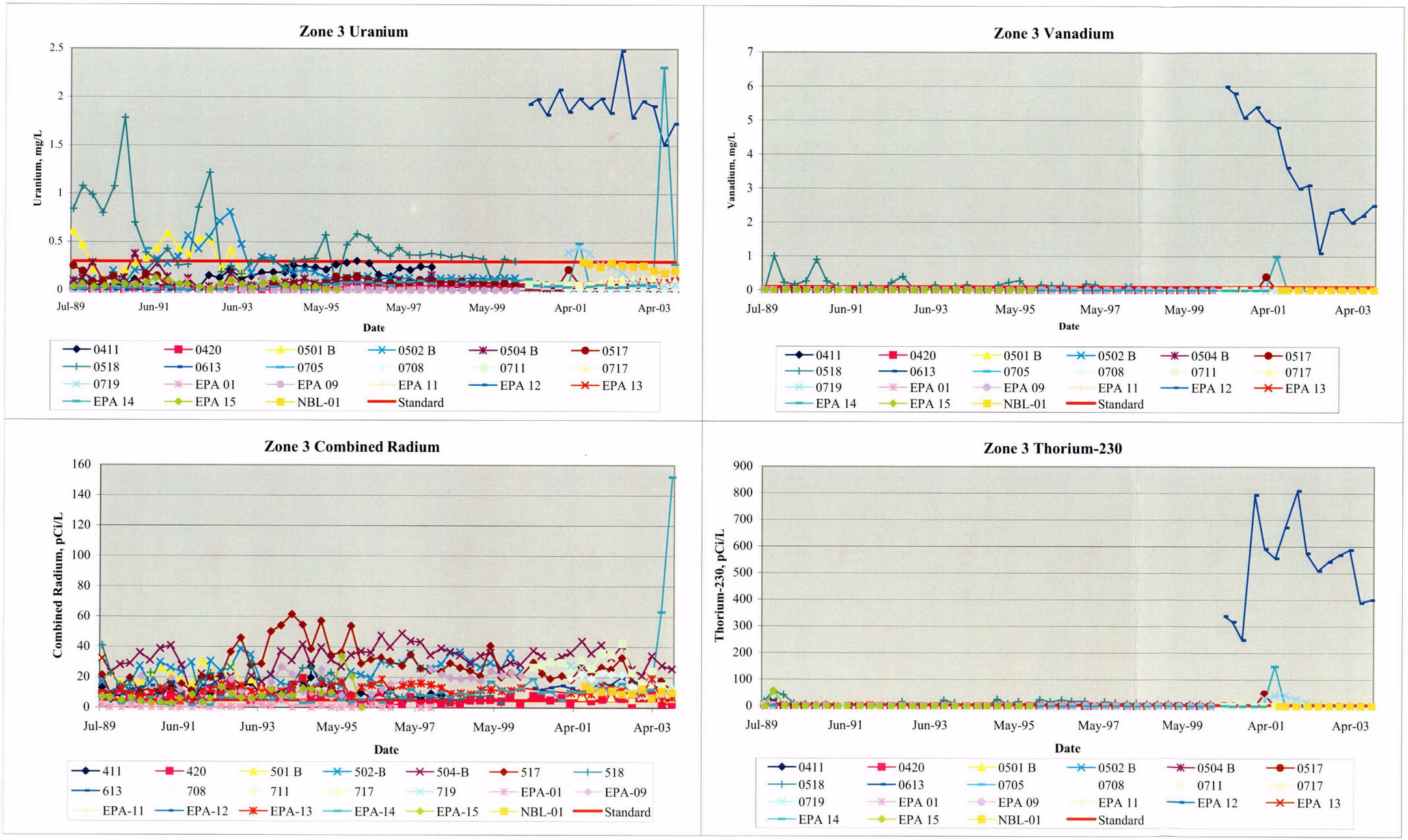

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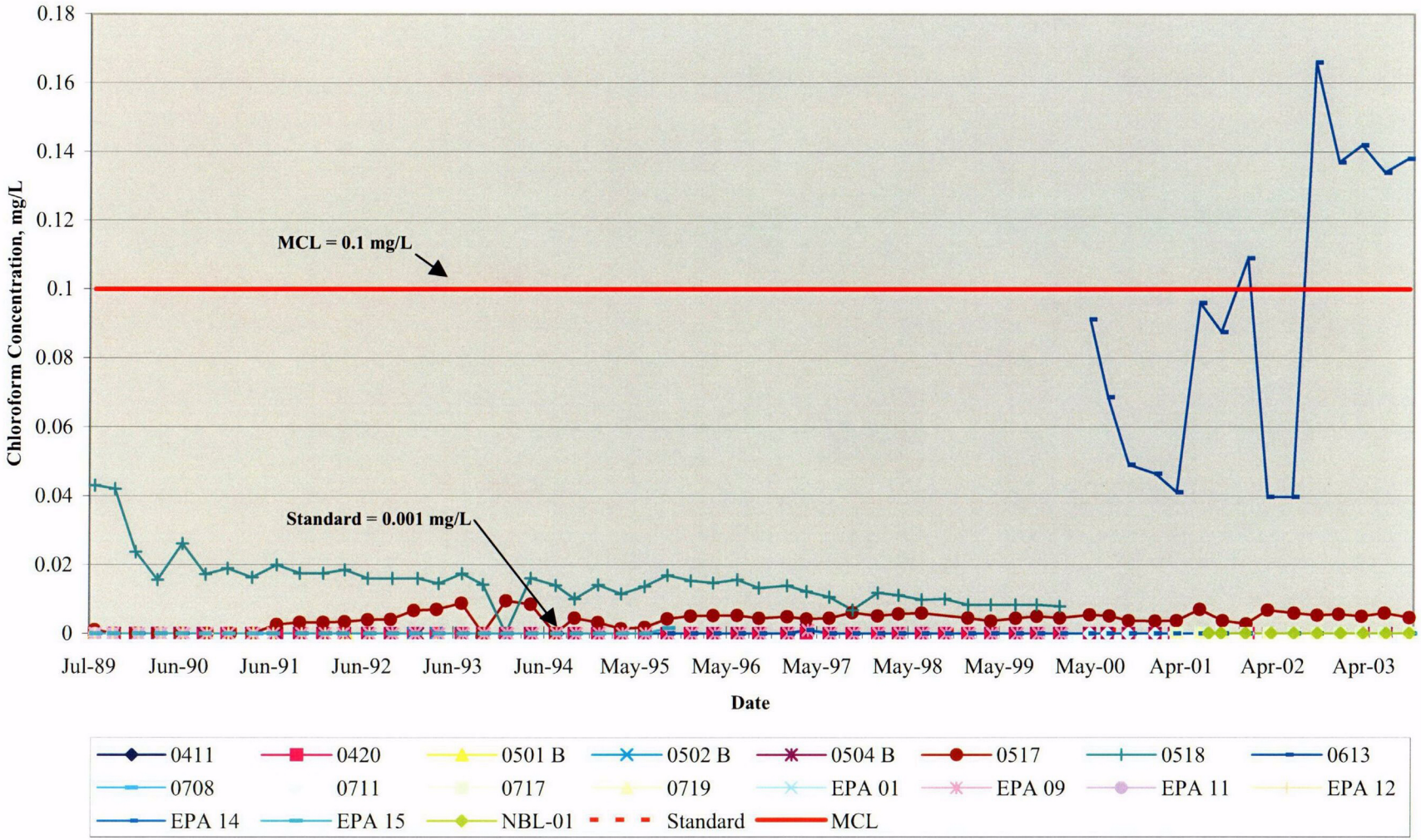
FIGURE 37

Zone 3 Chloroform Concentrations Over Time

United Nuclear Corporation Church Rock Site, Church Rock, New Mexico



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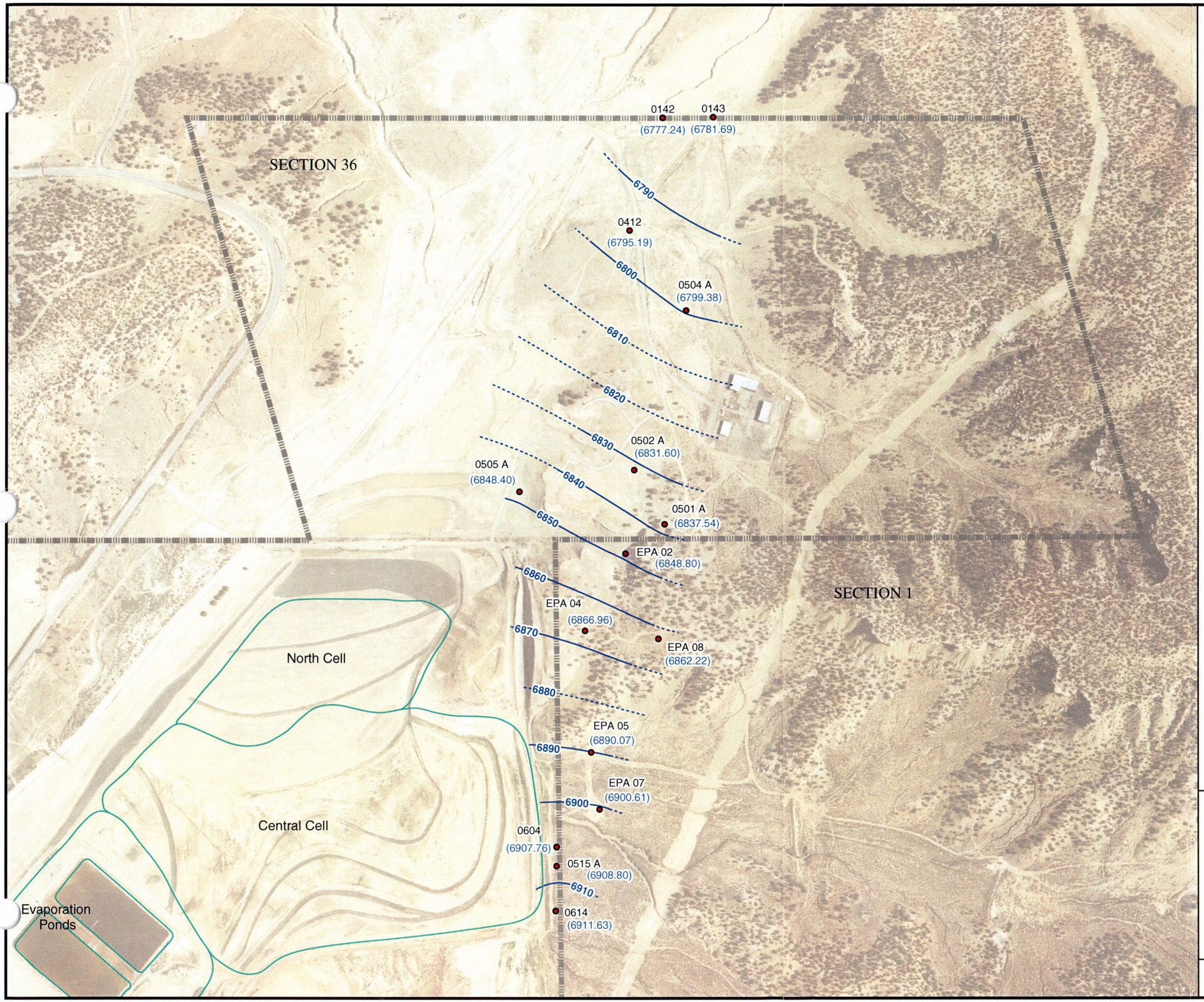

N

Legend

- Zone 1 Monitoring Well
- Cell Boundary
- Property Boundary
- Groundwater Elevation Contour
- Inferred Groundwater Elevation Contour

Notes:

1. Groundwater elevation values are displayed in feet above mean sea level.
2. Well names are displayed with black text.
3. Groundwater elevations are shown with blue text.
4. Aerial photo taken on August 1, 1996.

0 300 600 1,200 Feet

FIGURE 38

Zone 1 Piezometric Surface Map
October 2003

United Nuclear Corporation Church Rock Site,
Church Rock, New Mexico

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Path: Z:\databases\6209_GE_CR\GISDATA\arcmap_doc\2003_annual_report\gw_elev_zone1.mxd

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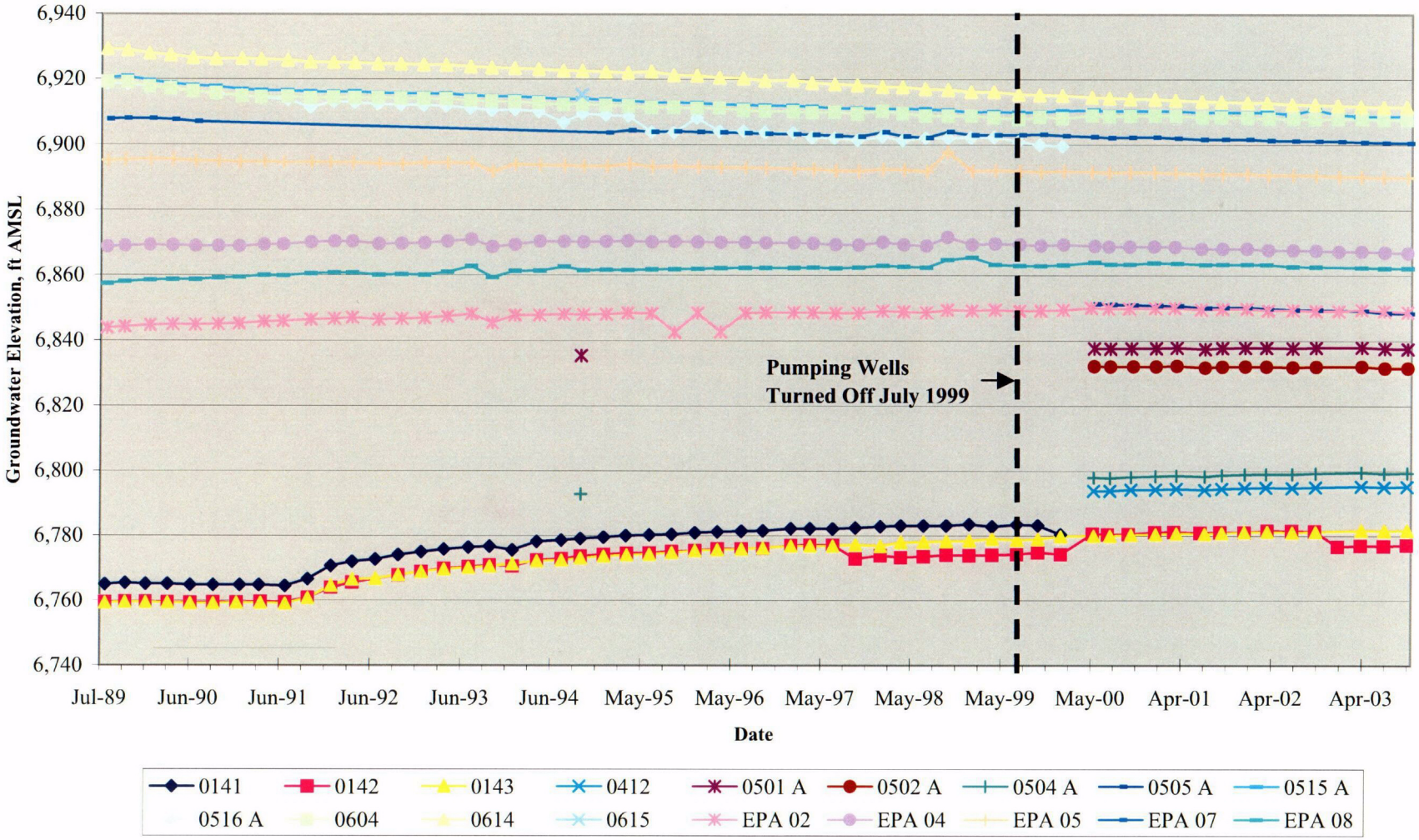
Date: 1/14/2004

FIGURE 39

Zone 1 Water Levels Over Time

United Nuclear Corporation Church Rock Site, Church Rock, New Mexico



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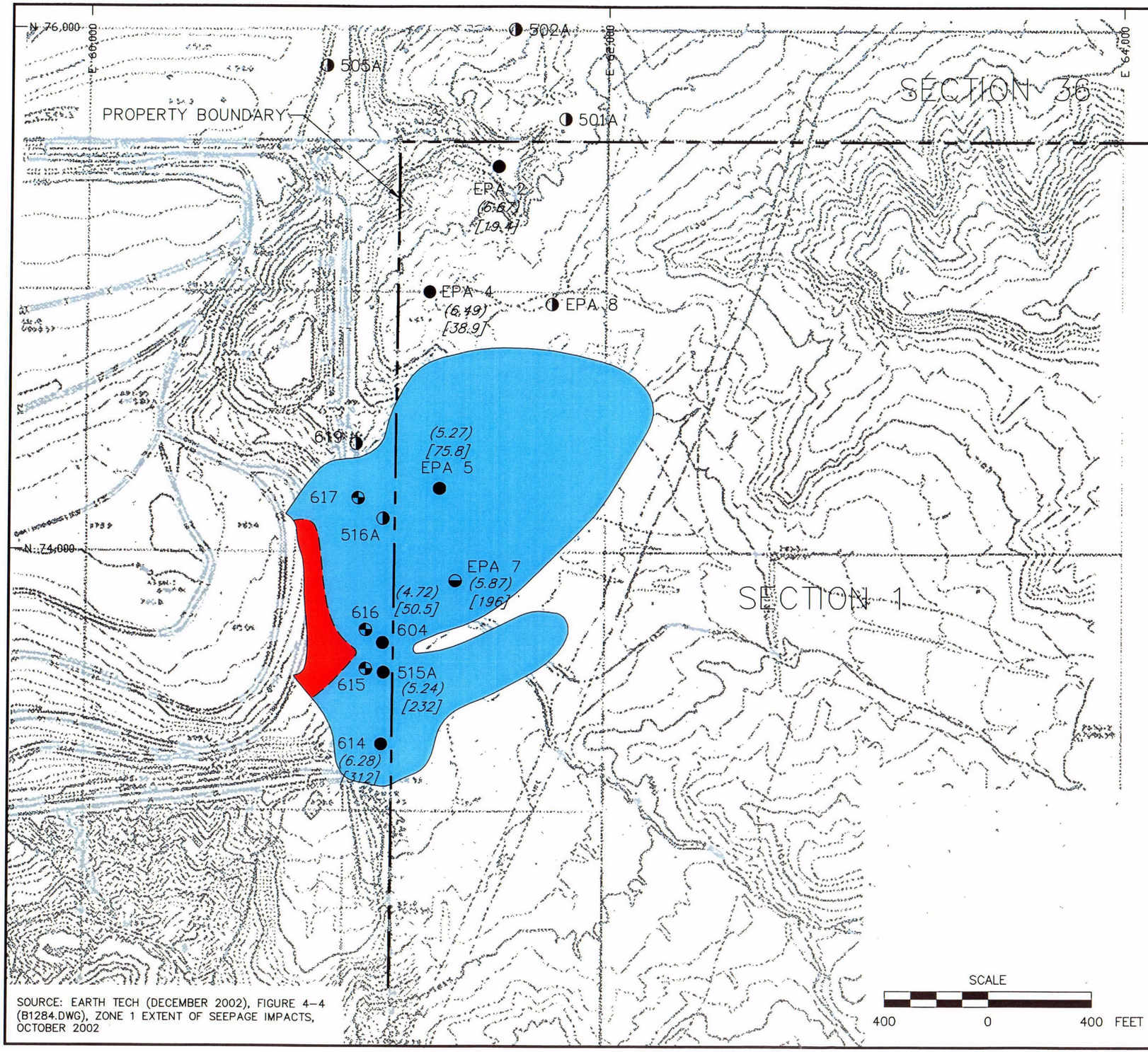

LEGEND:

617 REVISED EAST PUMP – BACK SYSTEM WELL, LOCATION AND DESIGNATION (TURNED OFF JULY, 1999)

EPA 7 DECOMMISSIONED EAST PUMP – BACK SYSTEM WELL, LOCATION AND DESIGNATION (TURNED OFF SEPTEMBER, 1990)

614 ZONE 1 MONITORING WELL, LOCATION AND DESIGNATION (WATER QUALITY AND WATER LEVEL)

501A ZONE 1 MONITORING WELL, LOCATION AND DESIGNATION (WATER LEVEL ONLY)

APPROXIMATE EXTENT OF ZONE 1 SEEPAGE IMPACTS (DELINEATED BY CHLORIDE >50 mg/L)

INFERRED APPROXIMATE EXTENT OF ZONE 1 pH LESS THAN 4.0

(6.14) pH READING

[51] CHLORIDE CONCENTRATION, mg/L)

NOTES:

1. WELL EPA 7 HAS SERVED AS BOTH A PUMP–BACK AND MONITORING WELL. THE PUMP WAS SHUT OFF OCTOBER 1994 DUE TO HIGH LEVELS OF PRECIPITATION IN THE PUMP AND PIPING.
2. REVISED MONITORING PROGRAM IMPLEMENTED IN SECOND QUARTER 2000.

N

REFERENCE:
TOPOGRAPHIC MAP OF SEC. 2, T16N, R16W N.M.P.M. & VICINITY PROVIDED BY UNITED NUCLEAR CORPORATION, GALLUP, N.M. DATED: 8–1–96. SCALE: 1" = 400'.

SCALE
400 0 400 FEET

SOURCE: EARTH TECH (DECEMBER 2002), FIGURE 4–4 (B1284.DWG), ZONE 1 EXTENT OF SEEPAGE IMPACTS, OCTOBER 2002

FIG_40.DWG

FIGURE 40
ZONE 1 EXTENT OF SEEPAGE IMPACTS
OCTOBER 2003

UNITED NUCLEAR CORPORATION CHURCH ROCK SITE, CHURCH ROCK, NEW MEXICO

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FIGURE 41
Zone 1 pH Over Time
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

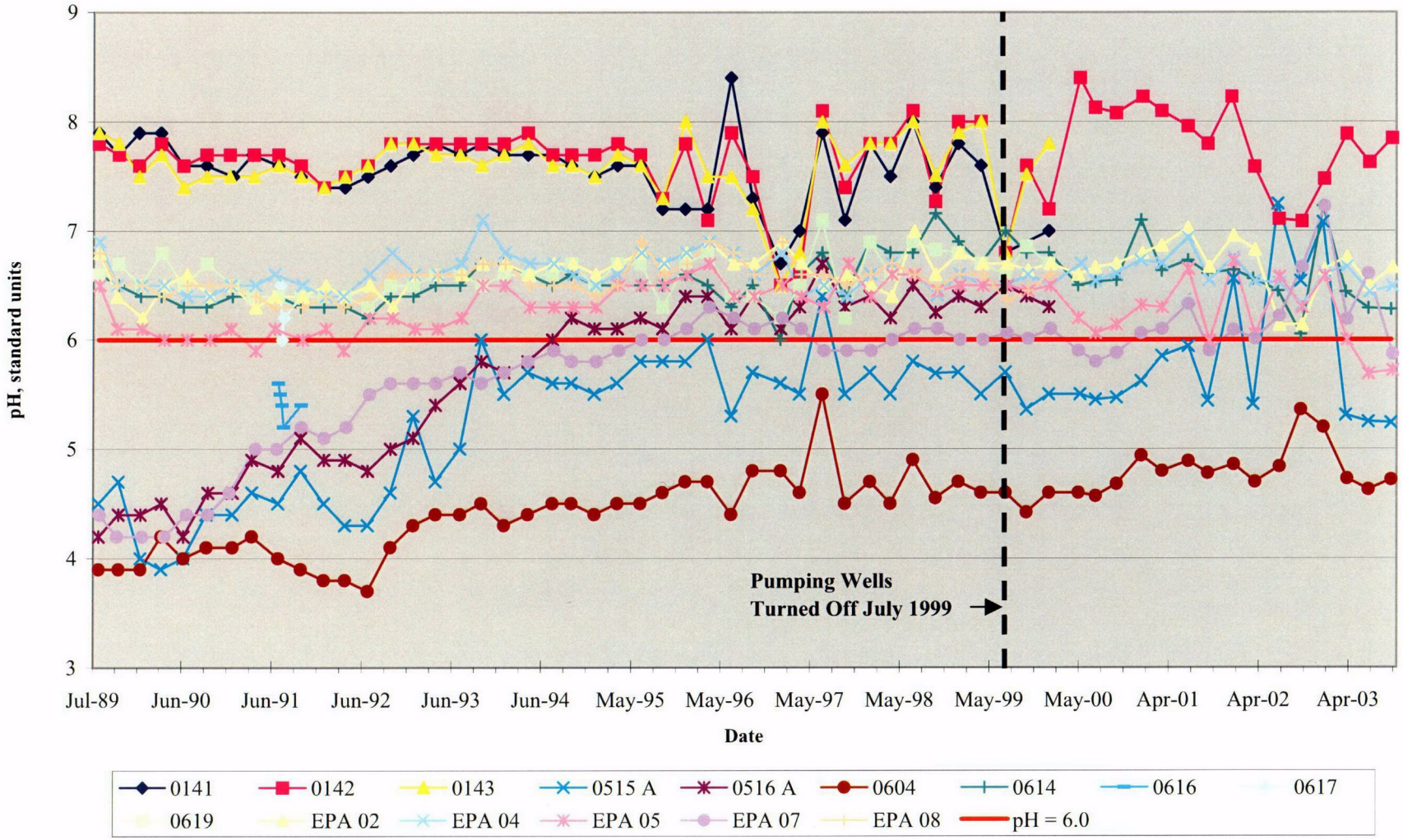

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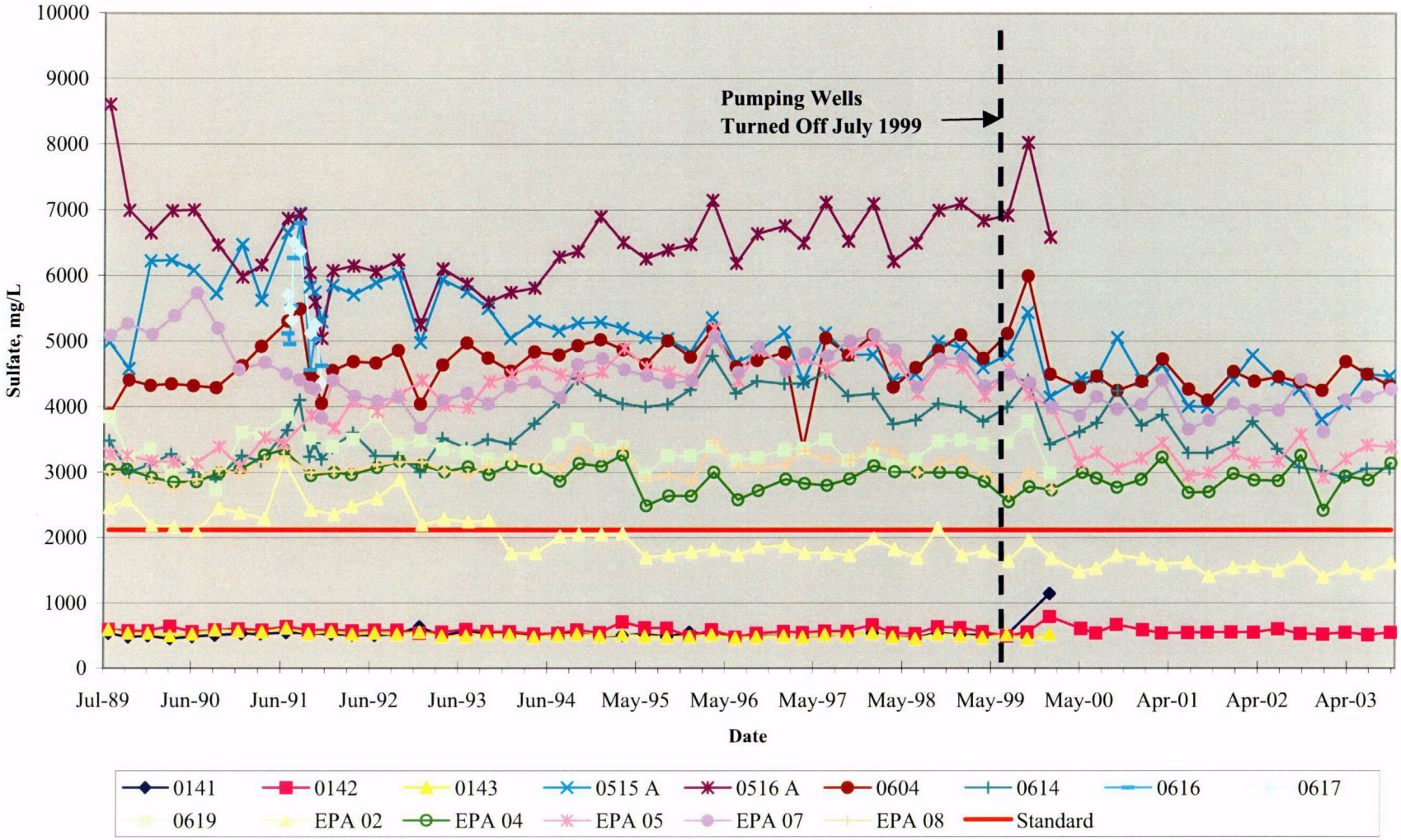
FIGURE 42

Zone 1 Sulfate Concentrations Over Time

United Nuclear Corporation Church Rock Site, Church Rock, New Mexico



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