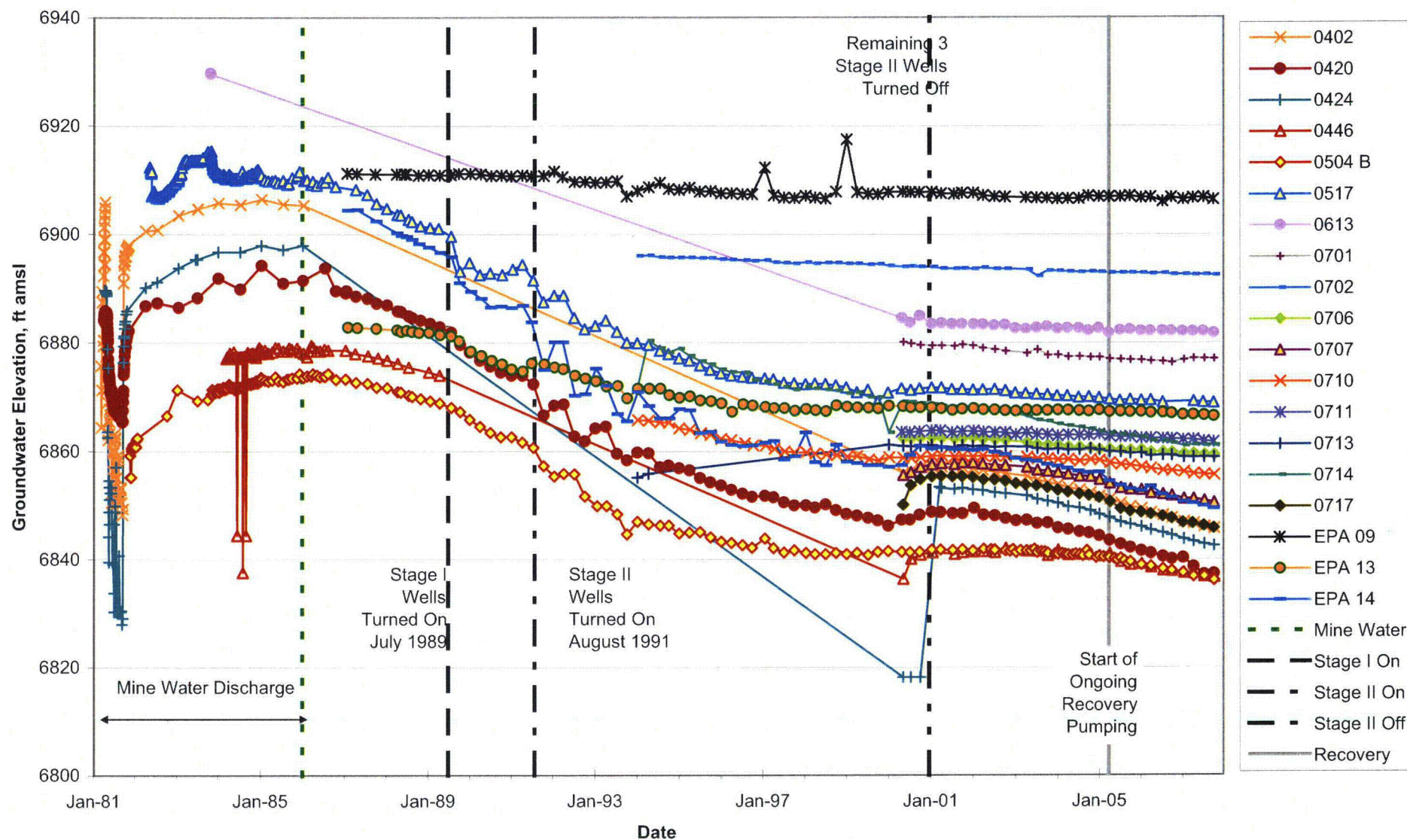


FIGURE 37
Effects of Past and Current Pumping to Dewater Zone 3
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico





Legend

- Monitoring Well
- ▲ Non-Pumping Well
- Pumping Well
- Cell Boundary
- Property Boundary
- Approximate Eastern Boundary of Zero Saturation
- Groundwater Elevation Contour
- Inferred Groundwater Elevation Contour
- (6861.49) Measured Groundwater Elevation
- [6834.48] Estimated Groundwater Elevation

Notes:

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

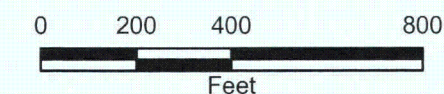
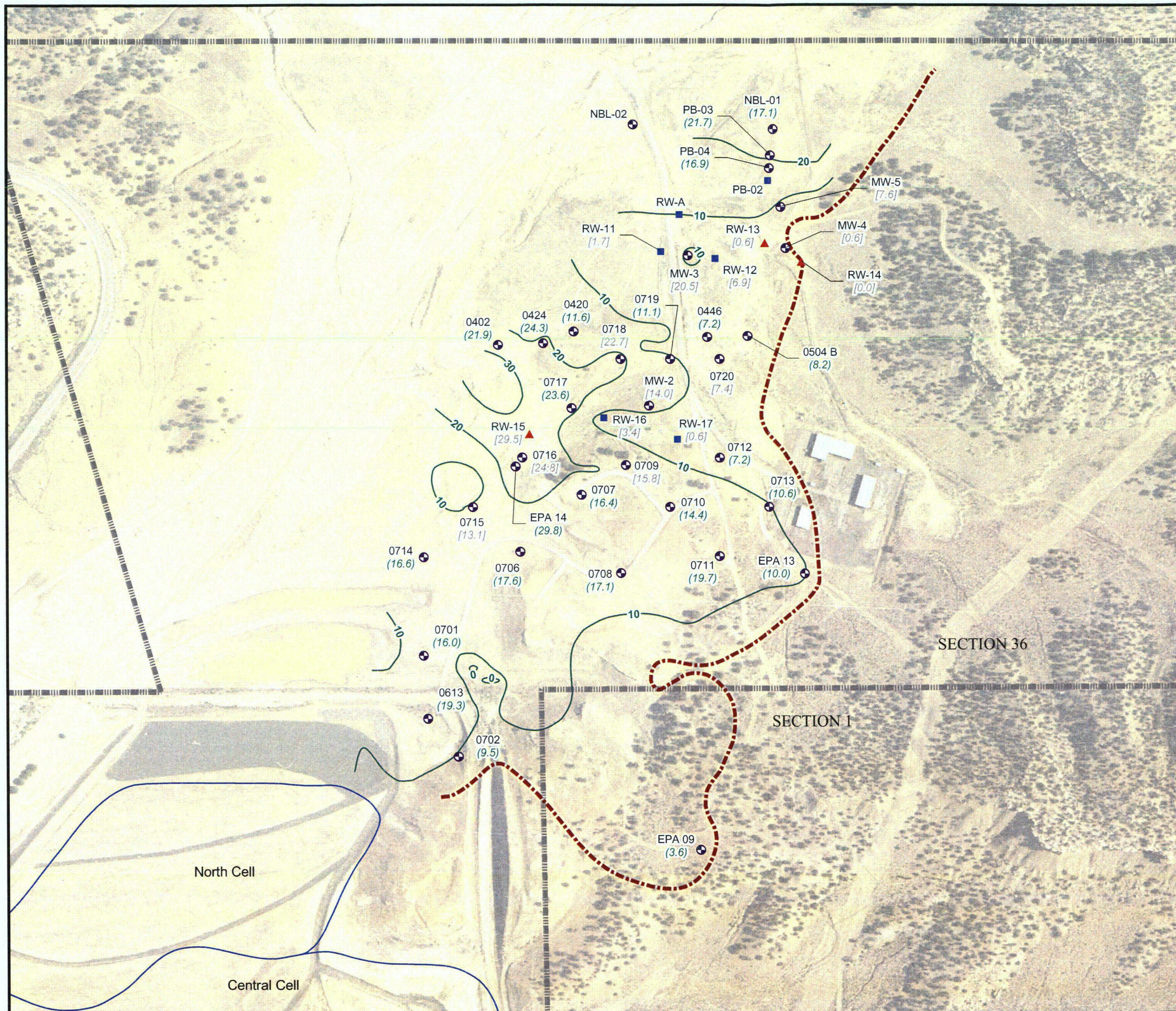


FIGURE 38

Zone 3 Potentiometric Surface Map
October 2007

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





Legend

- Monitoring Well
- ▲ Non-Pumping Well
- Pumping Well
- Saturated Thickness Contour
- - - Approximate Eastern Boundary of Zero Saturation
- Cell Boundary
- ▬ Property Boundary
- (12.8) Measured Saturated Thickness
- [16.4] Estimated Saturated Thickness

Notes:

1. Saturated thickness values shown in feet.
2. Well names are displayed with black text.
3. Aerial photo taken on August 1, 1996.

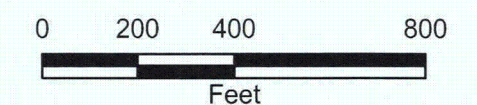


FIGURE 39

Zone 3 Saturated Thickness Map October 2007

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



FIGURE 40
 Zone 3 Bicarbonate Concentrations Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

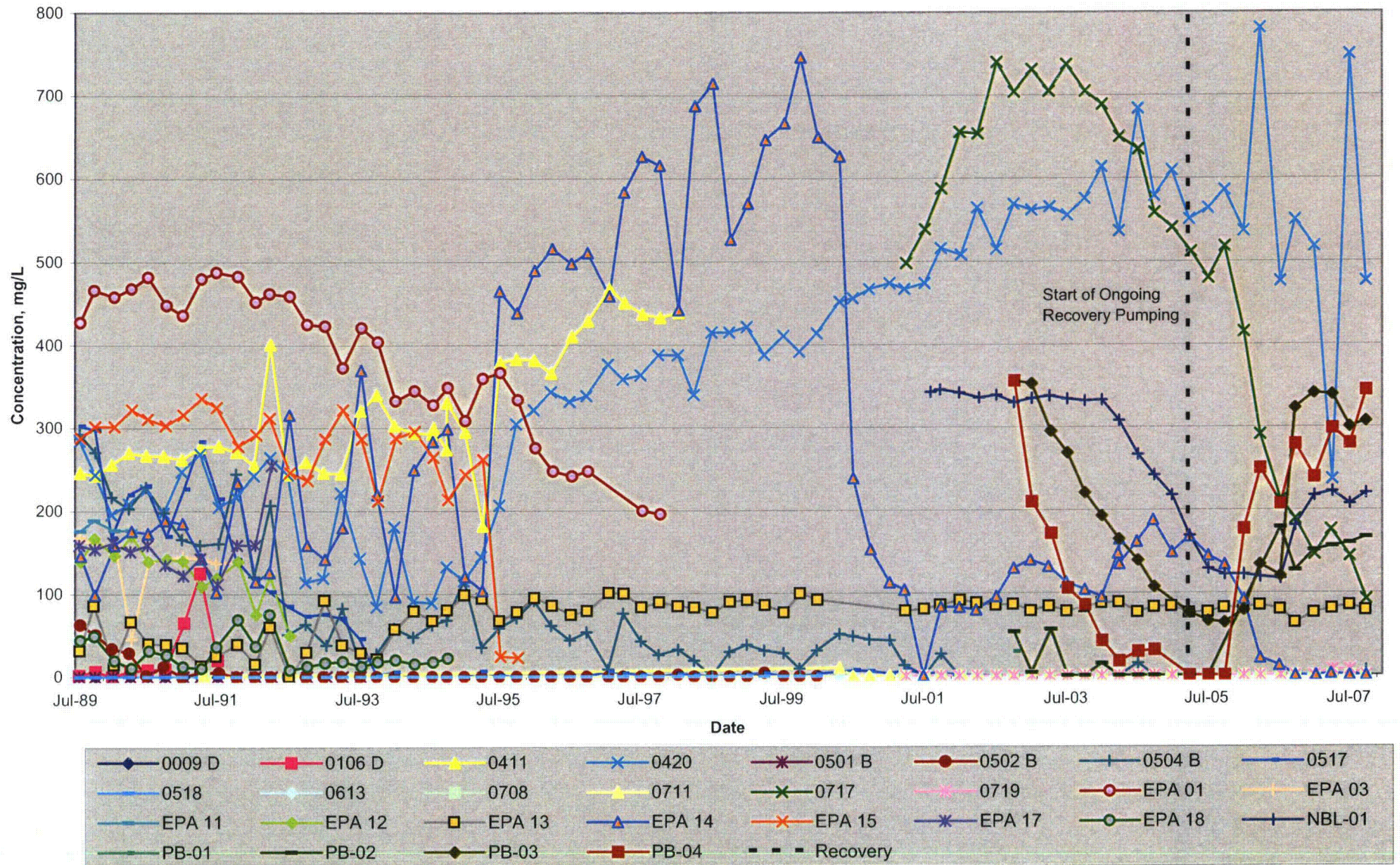


FIGURE 41
 Zone 3 Impact Perimeter Bicarbonate Concentrations Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

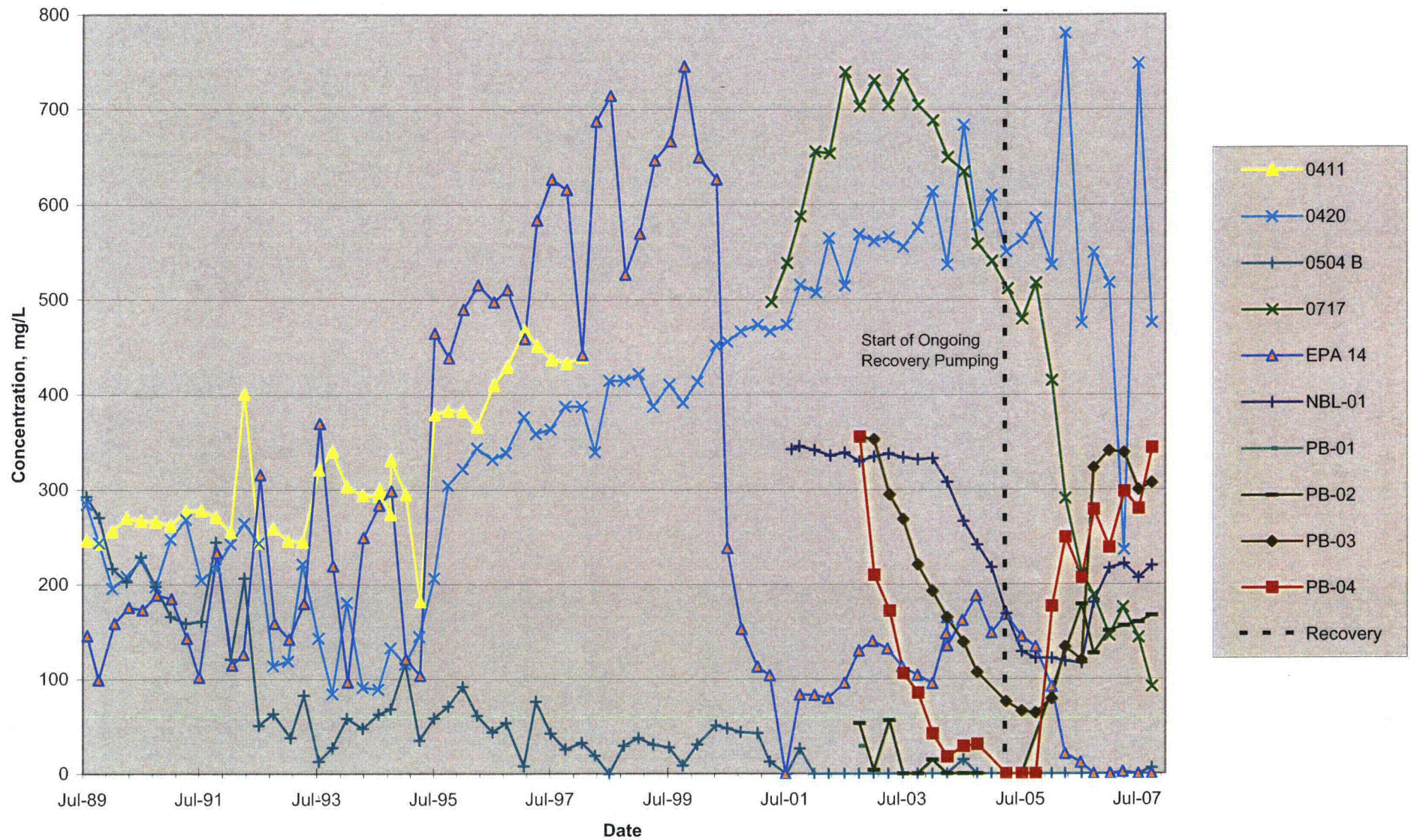


FIGURE 42
 Zone 3 Sulfate Concentrations Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

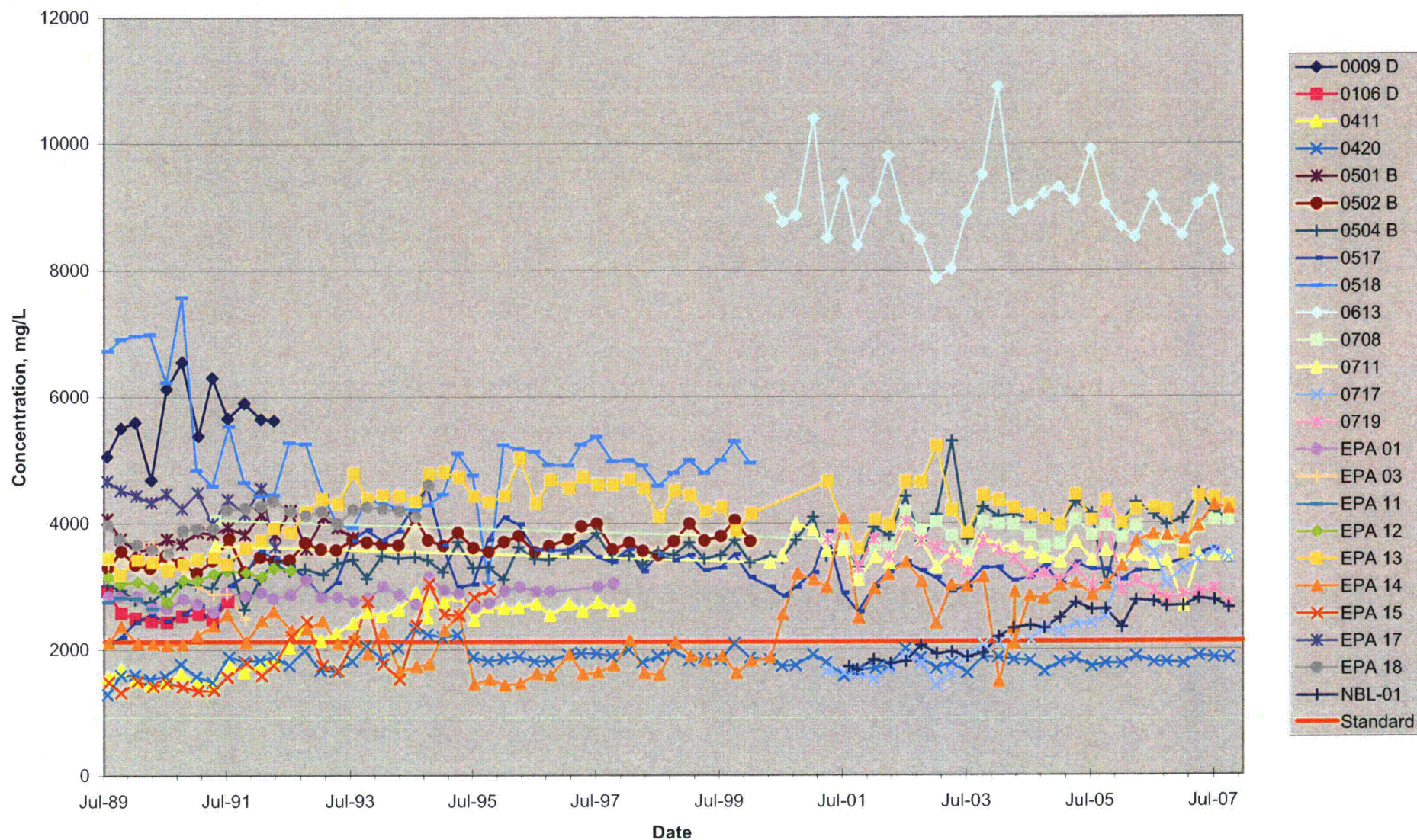


FIGURE 43A
Zone 3 Metals Concentrations over Time
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

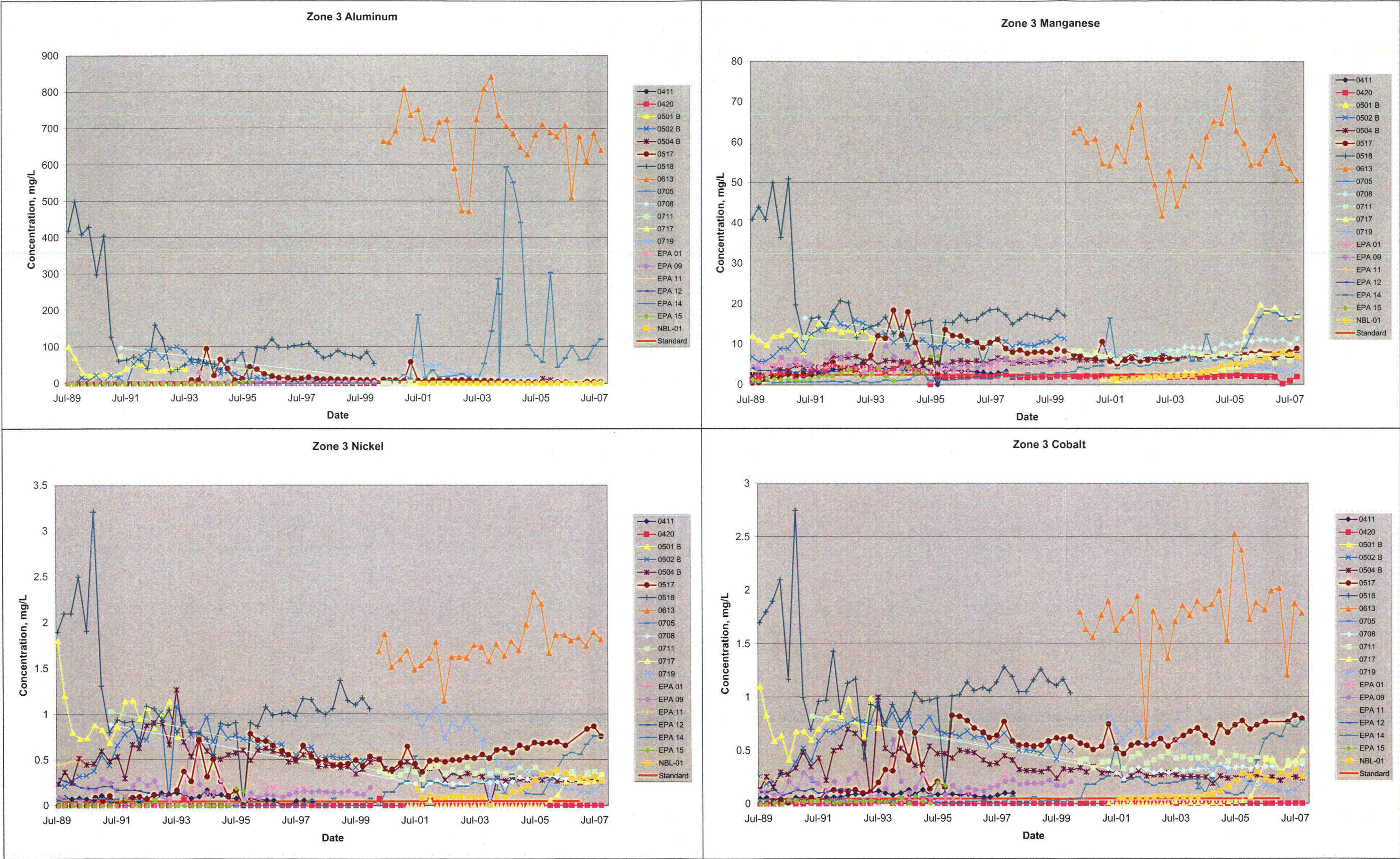
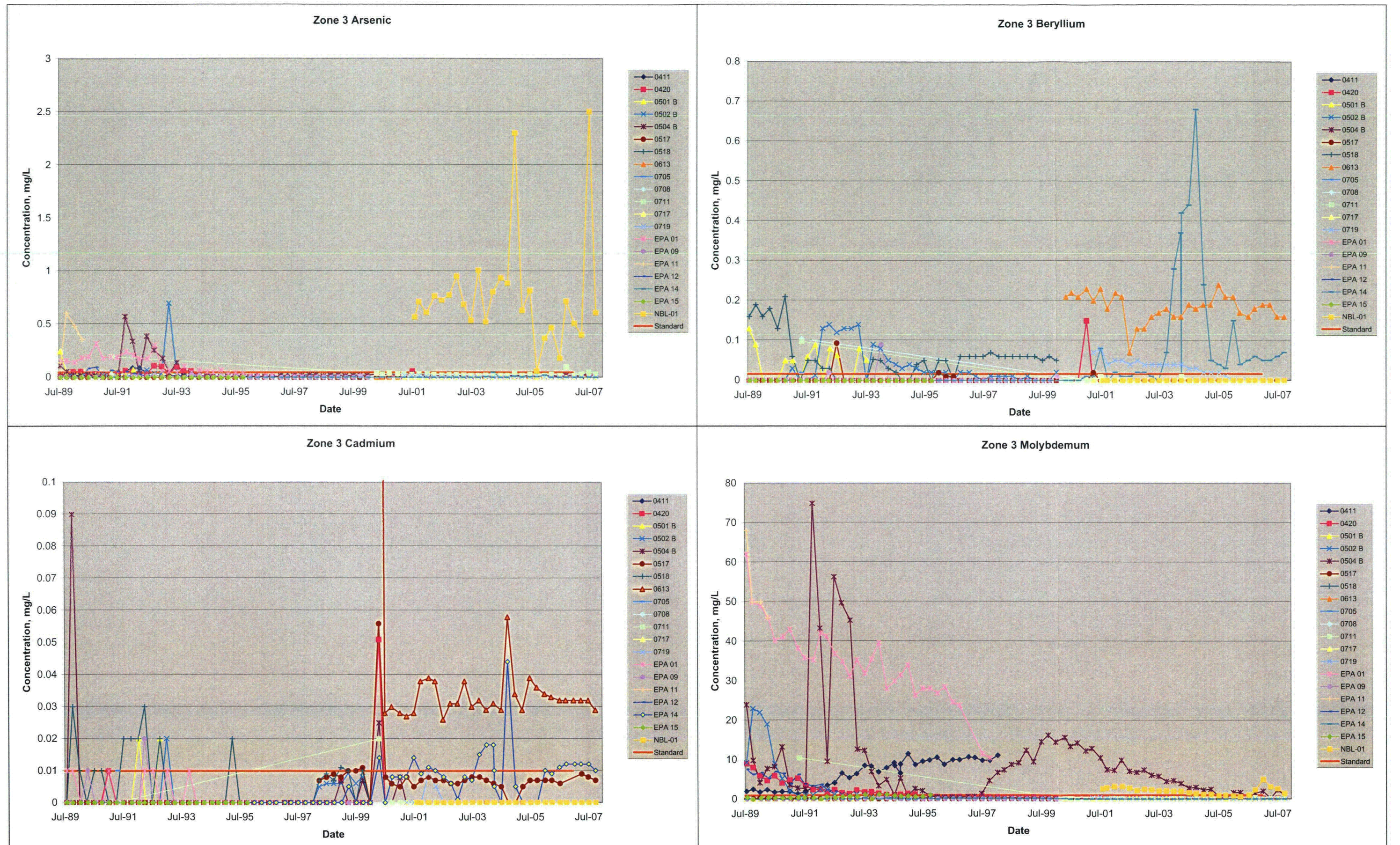


FIGURE 43B
 Zone 3 Metals Concentrations over Time
 United Nuclear Corporation Church Rock Site, Church Rock, New Mexico



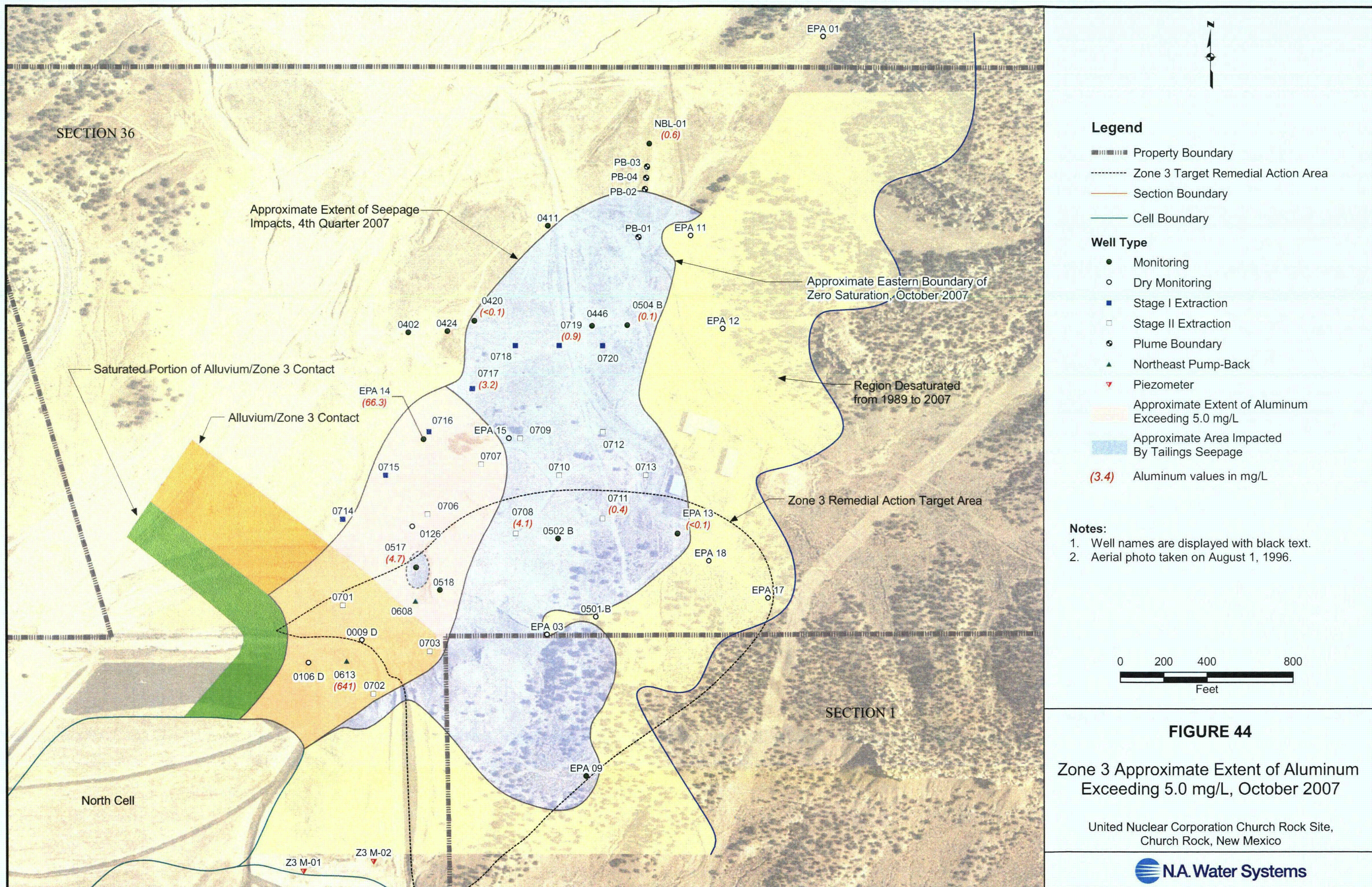


FIGURE 45

Zone 3 Uranium, Vanadium, and Radionuclides Concentrations over Time
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

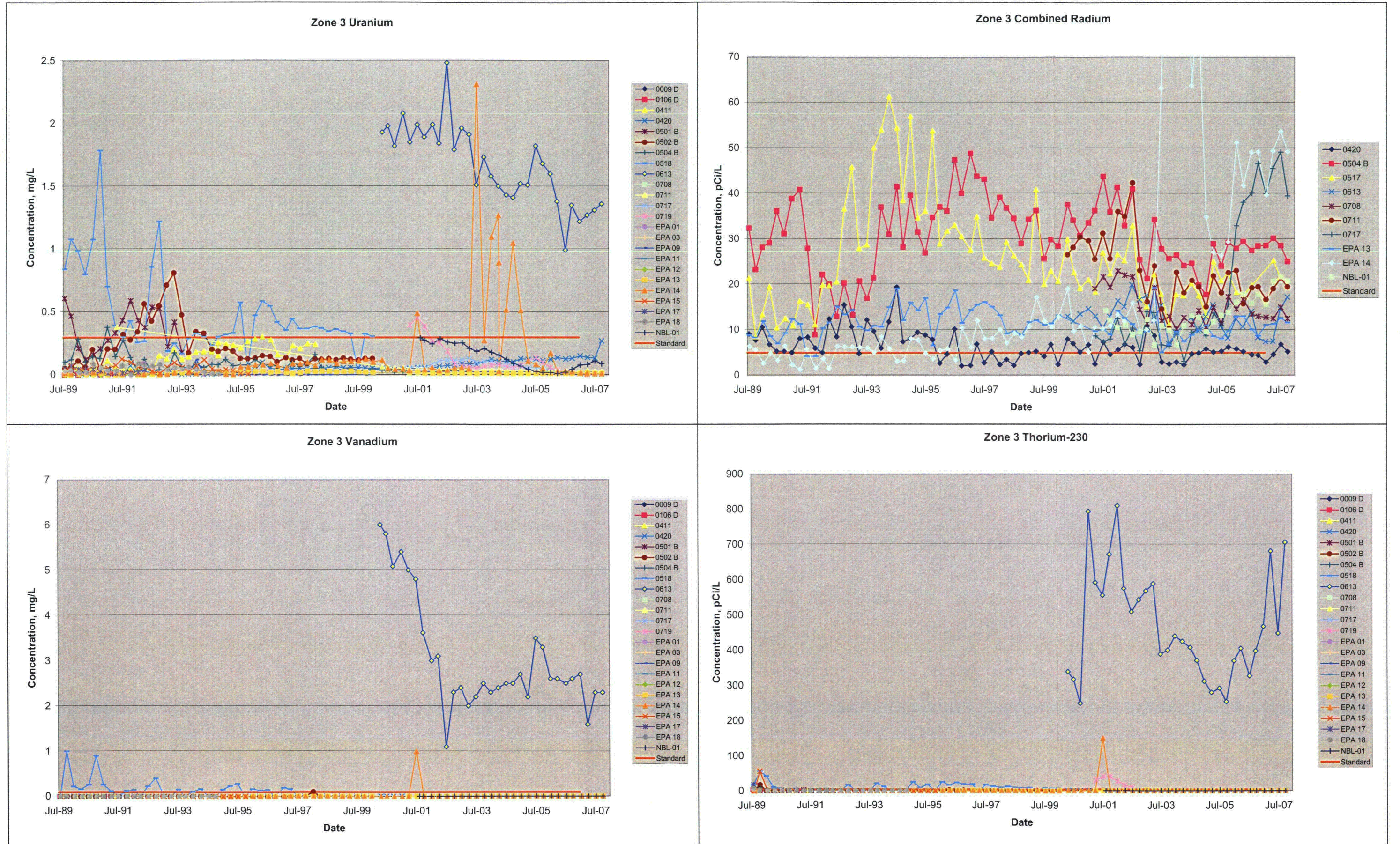
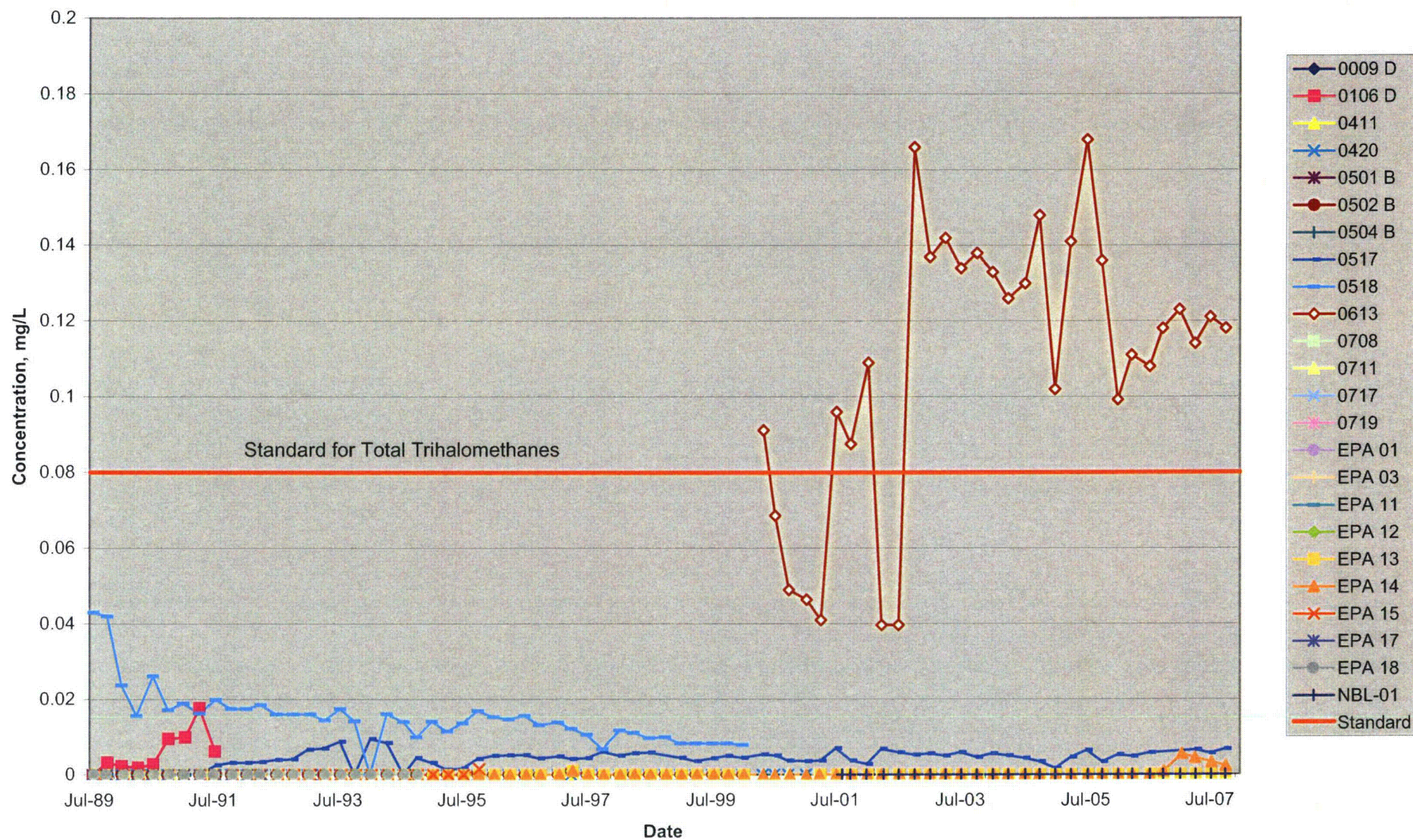
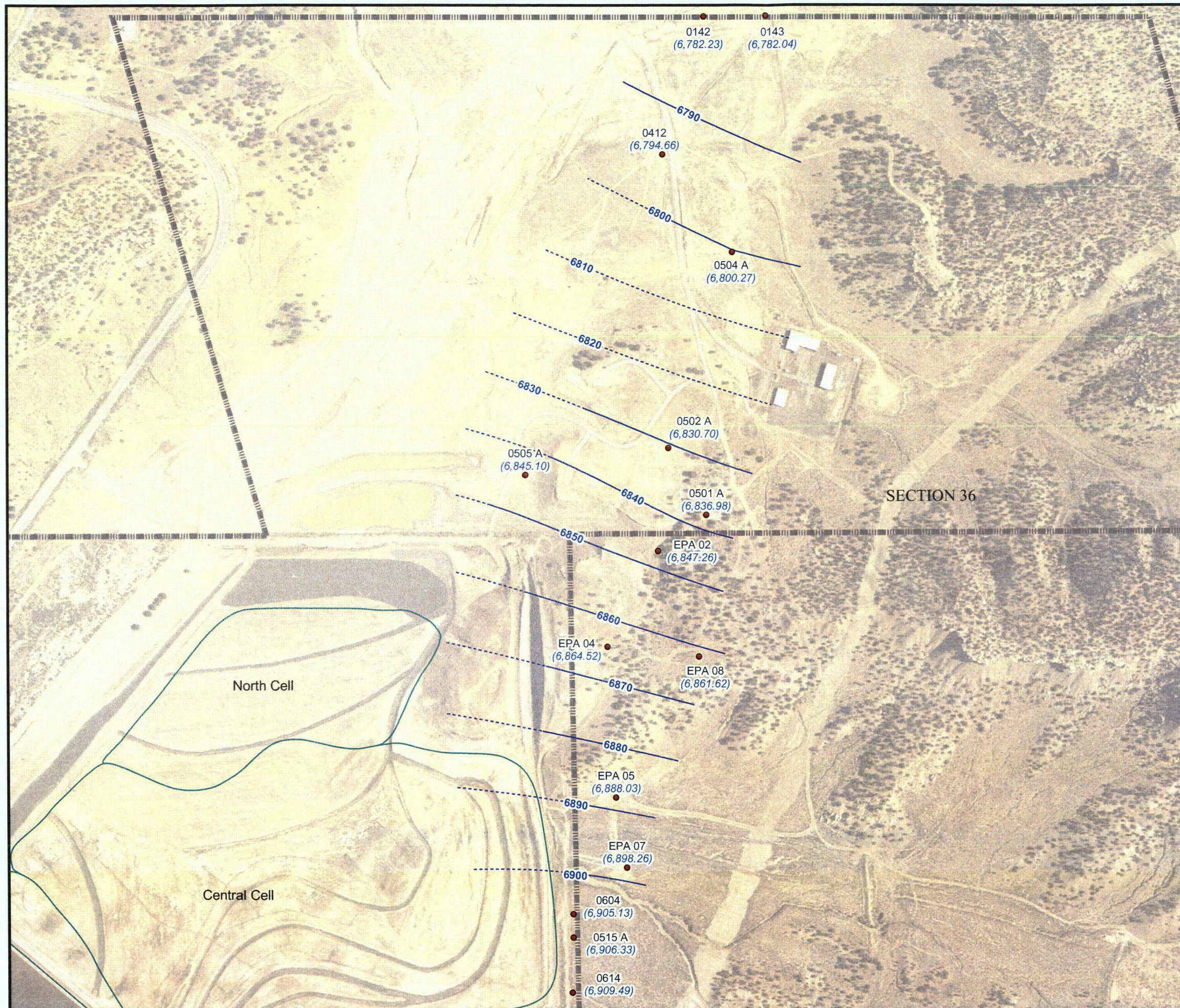


FIGURE 46
 Zone 3 Chloroform Concentrations Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico





Legend

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

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 and enclosed in parentheses.
4. Aerial photo taken on August 1, 1996.

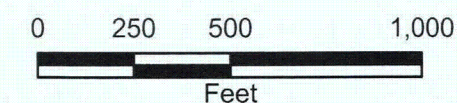


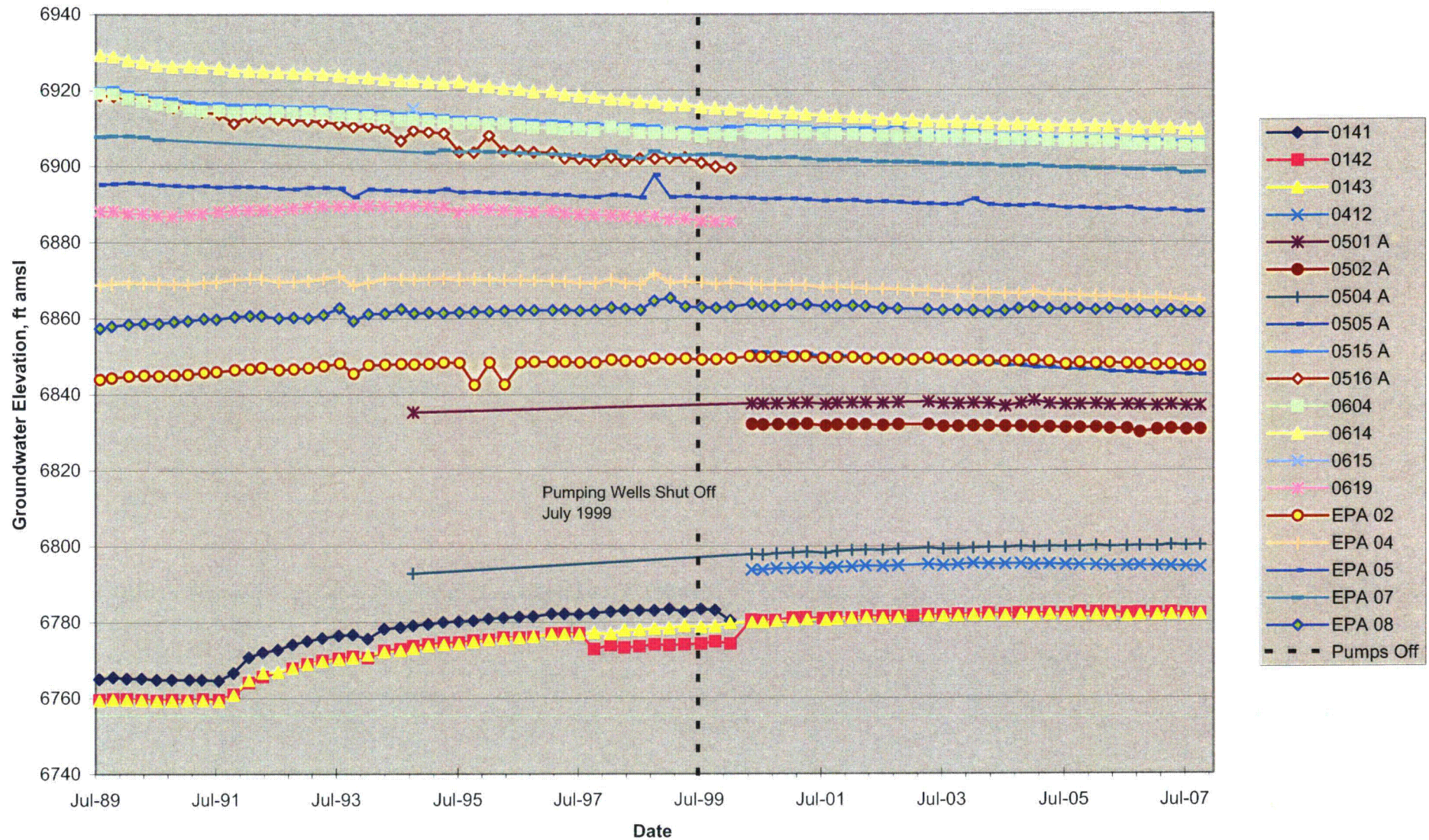
FIGURE 47

Zone 1 Potentiometric Surface Map
October 2007

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



FIGURE 48
 Zone 1 Water Levels Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico



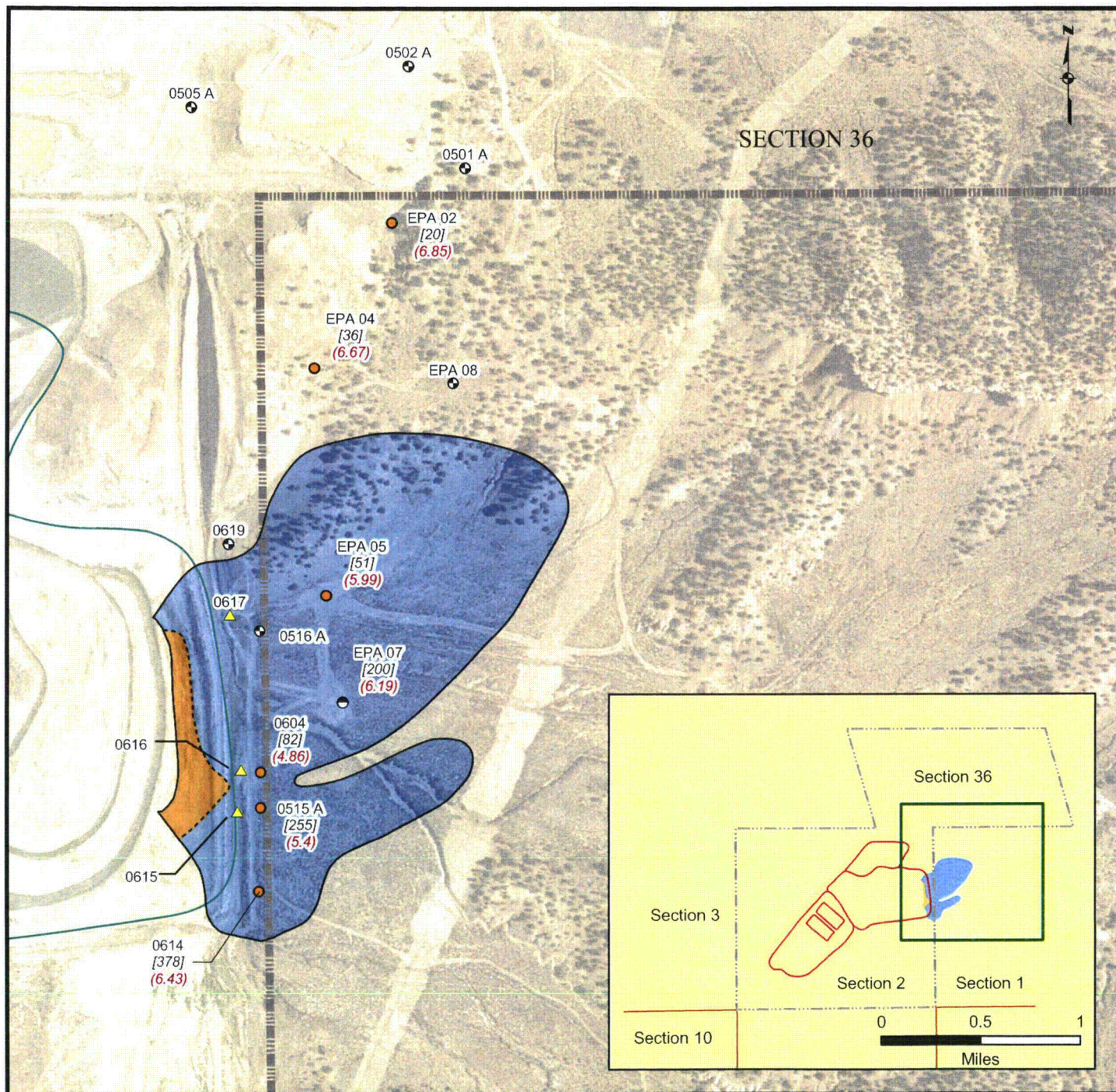


FIGURE 50
 Zone 1 pH Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

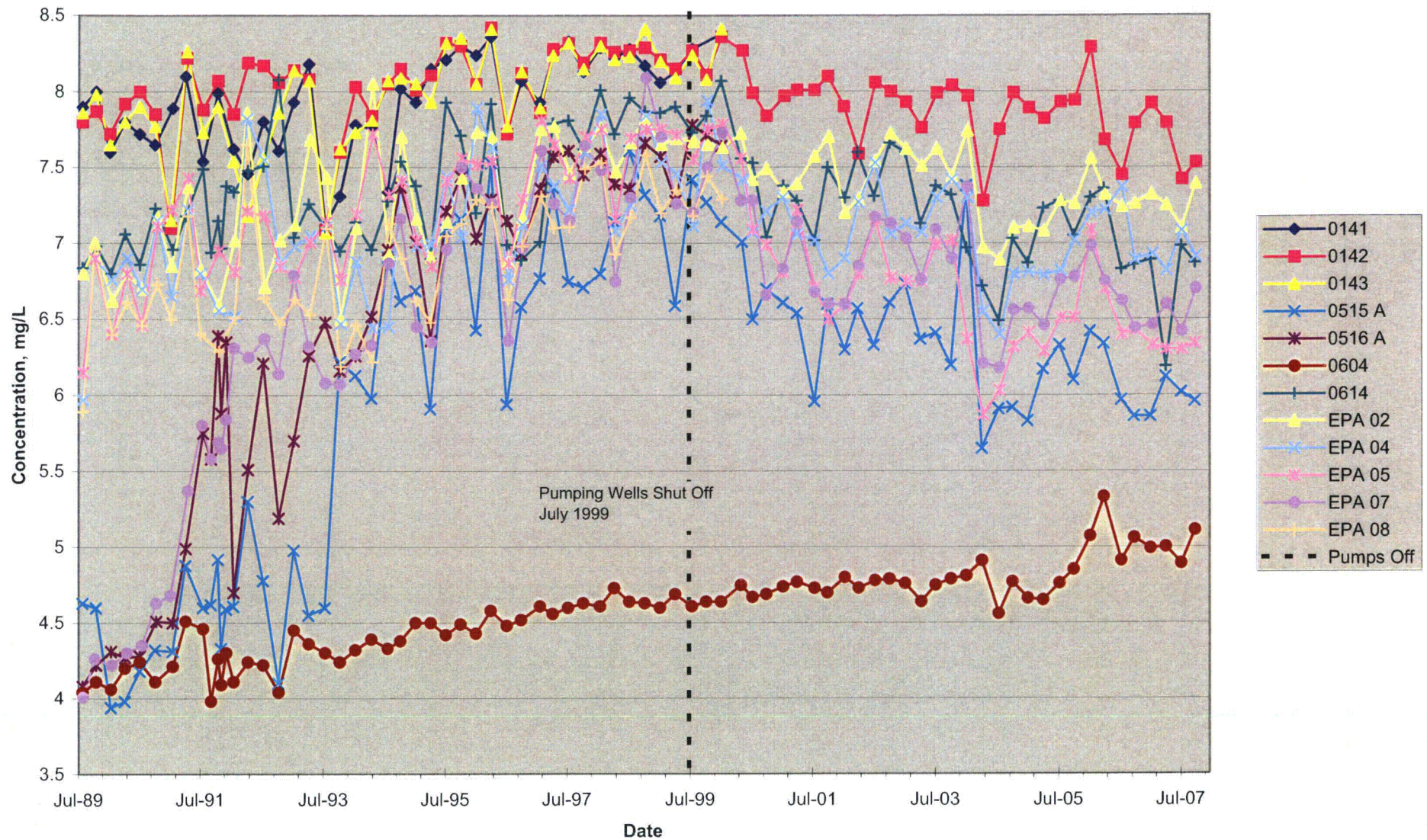
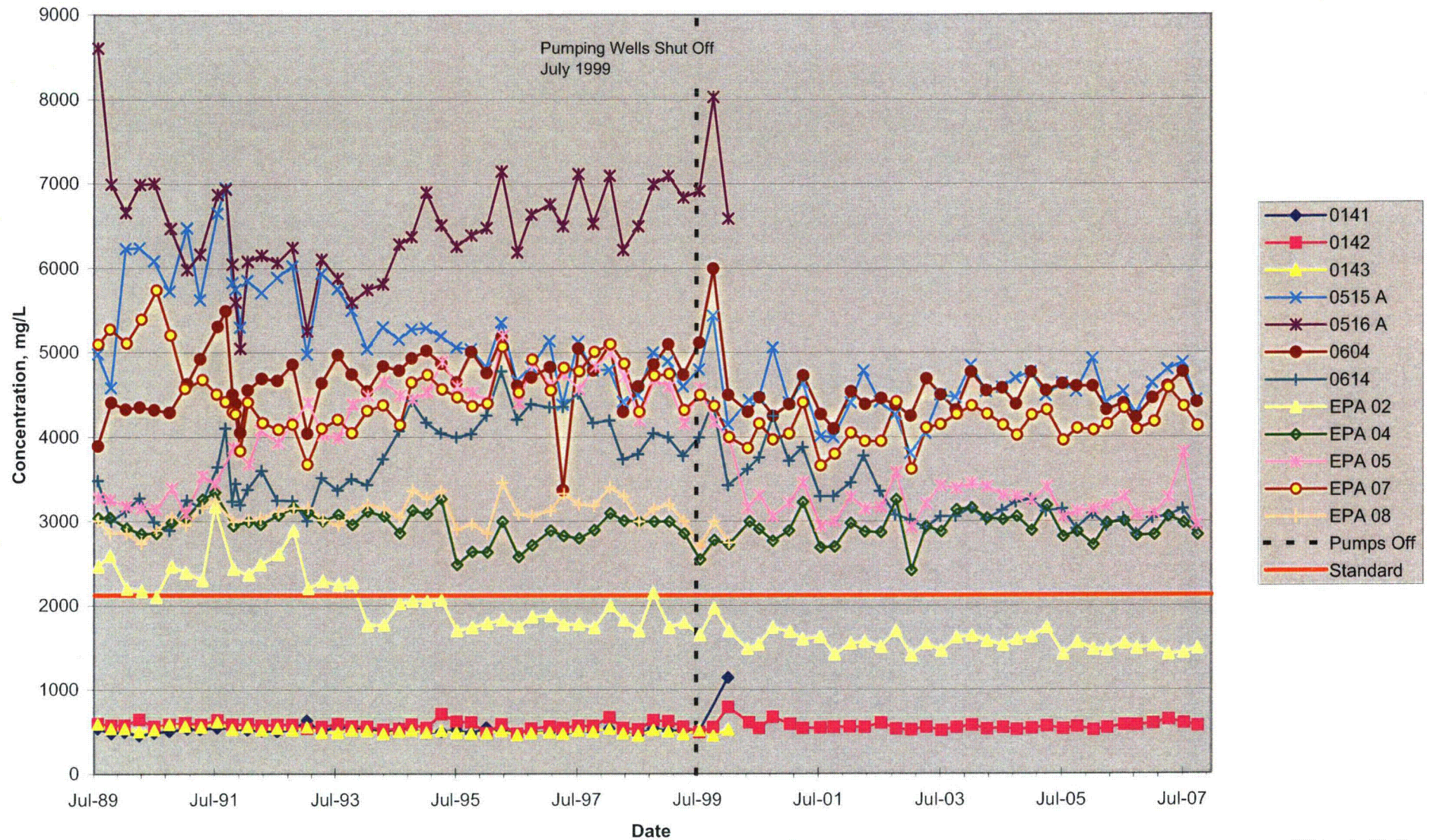
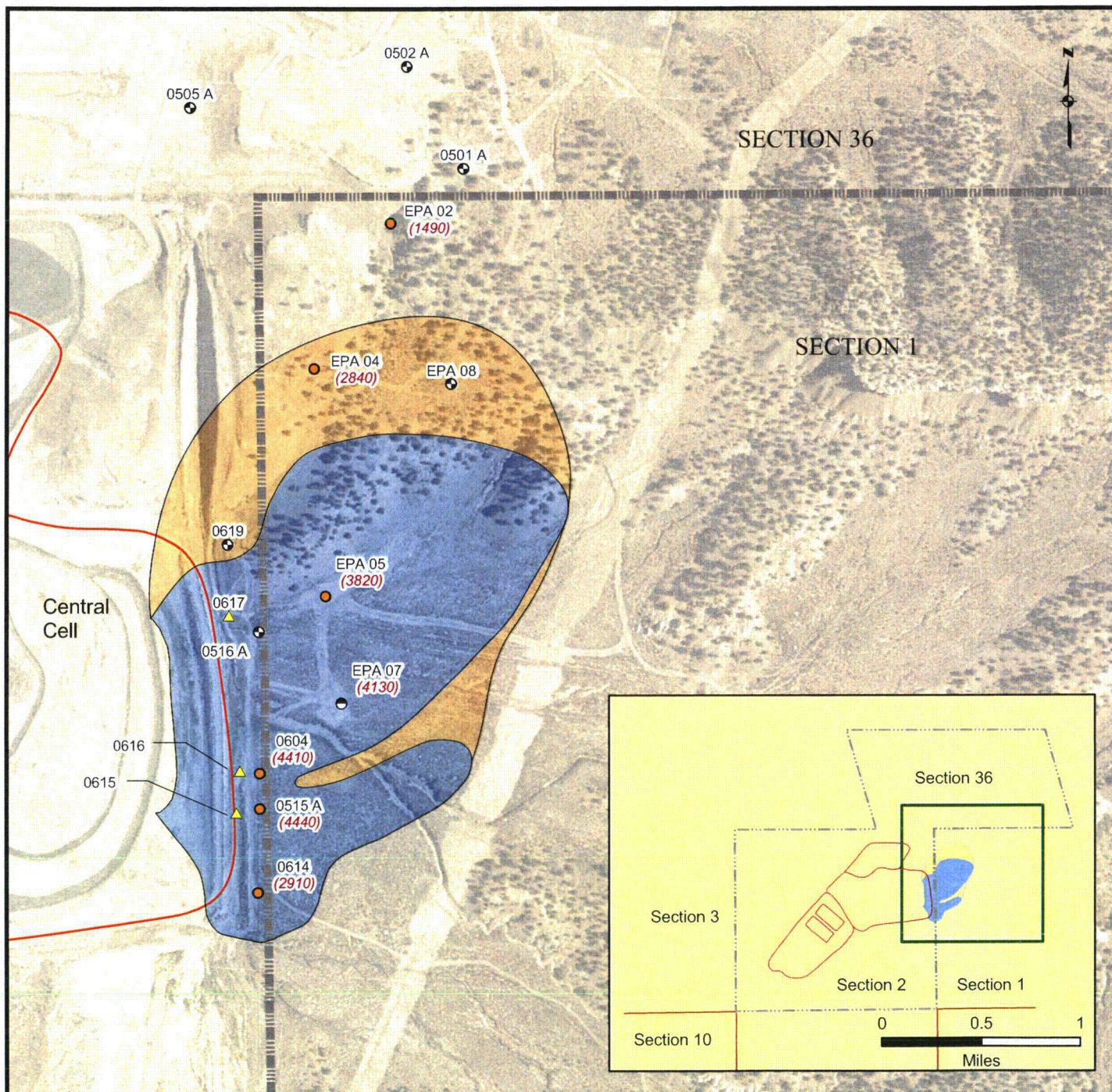


FIGURE 51
 Zone 1 Sulfate Concentrations Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico





Legend

Well Type

- Water Quality and Level Monitoring
- ⊙ Water Level Monitoring
- ⊙ Decommissioned East Pump Back
- ▲ Revised East Pump Back
- Cell Boundary
- ▬ Property Boundary
- Approximate Extent of Zone 1 Seepage Impacts
- Approximate Extent of Sulfate Exceeding 2,125 mg/L

(<0.01) Sulfate Concentration, mg/L

Notes:

1. Seepage impacts delineated by Chloride detections greater than 50 mg/L.
2. Well names are displayed with black text.
3. Aerial photo taken on August 1, 1996.

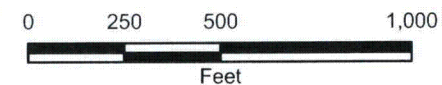


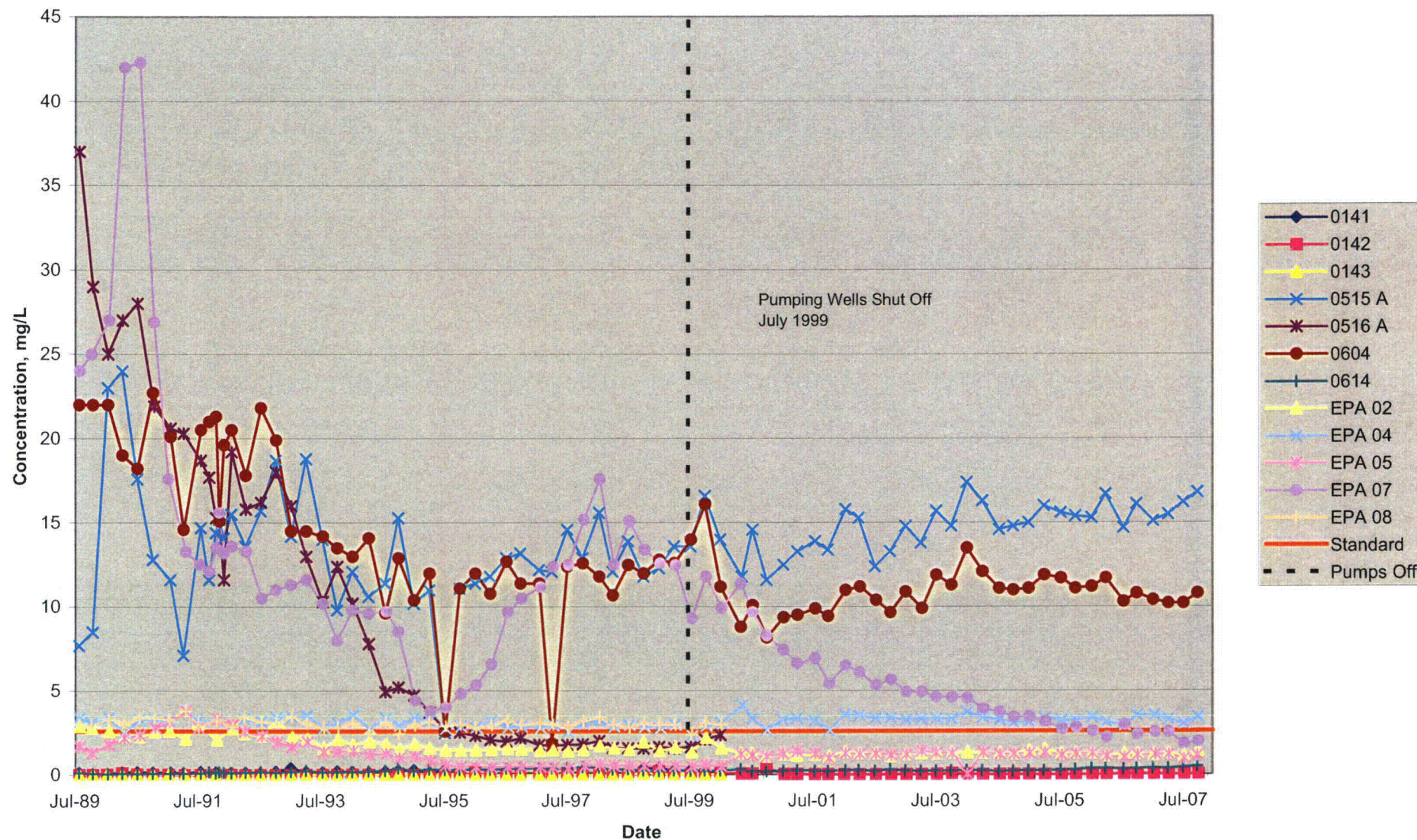
FIGURE 52

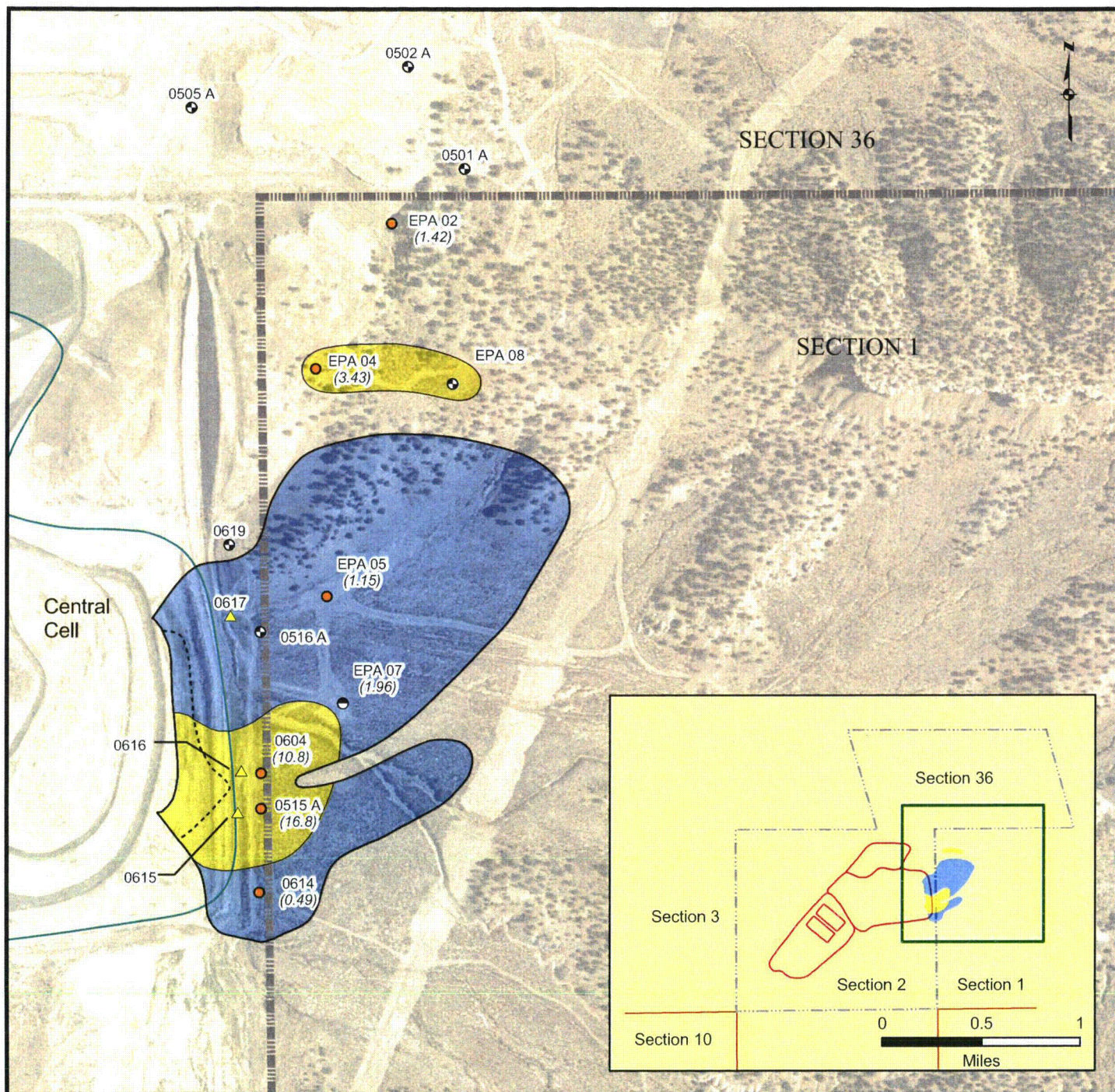
Zone 1 Approximate Extent of Sulfate Exceeding 2,125 mg/L, October 2007

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



FIGURE 53
Zone 1 Manganese Concentrations Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico





Legend

Well Type

- Water Quality and Water Level Monitoring
- Water Level Monitoring
- Decommissioned East Pump Back
- ▲ Revised East Pump Back (Inactive)

— Cell Boundary

▬ Property Boundary

Approximate Extent of Zone 1 Seepage Impacts

Approximate Extent of Manganese Exceeding 2.60 mg/L

(3.43) Manganese values in mg/L

Notes:

1. Seepage impacts delineated by chloride detections greater than 50 mg/L.
2. Aerial photo taken on August 1, 1996.

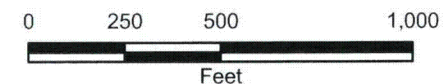


FIGURE 54

Zone 1 Approximate Extent of Manganese Exceeding 2.6 mg/L, October 2007

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



FIGURE 55
 Zone 1 Bicarbonate Concentrations Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

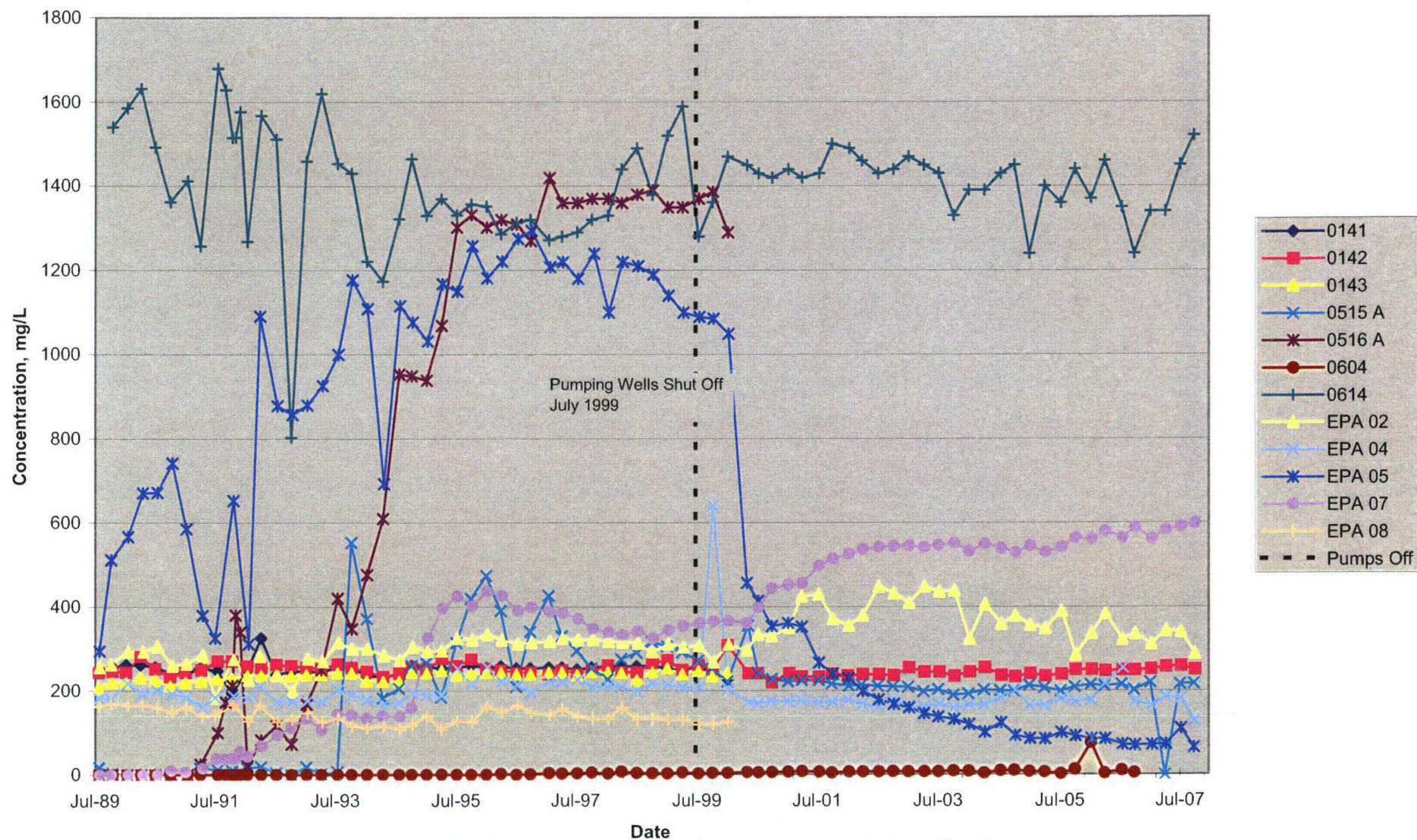
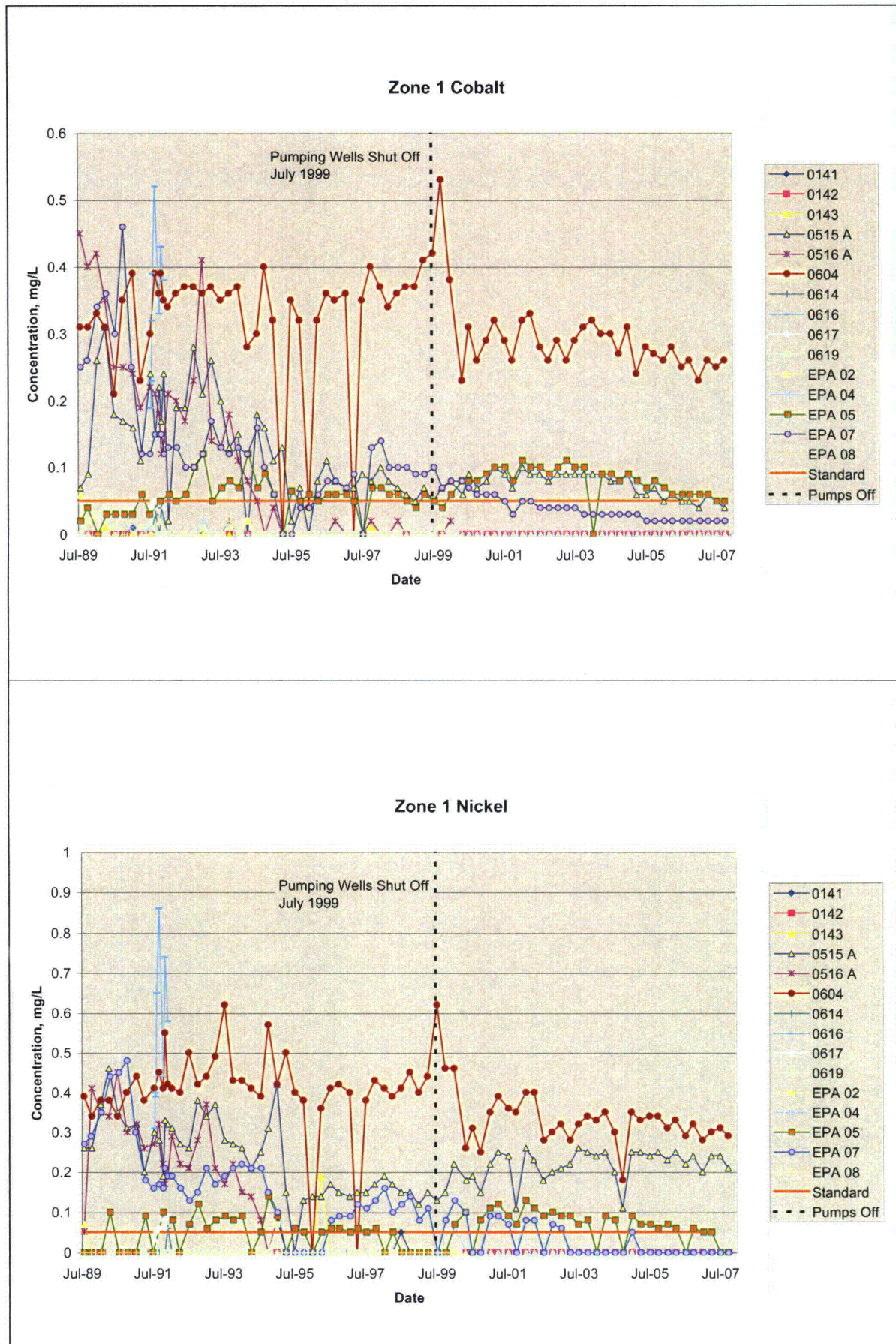
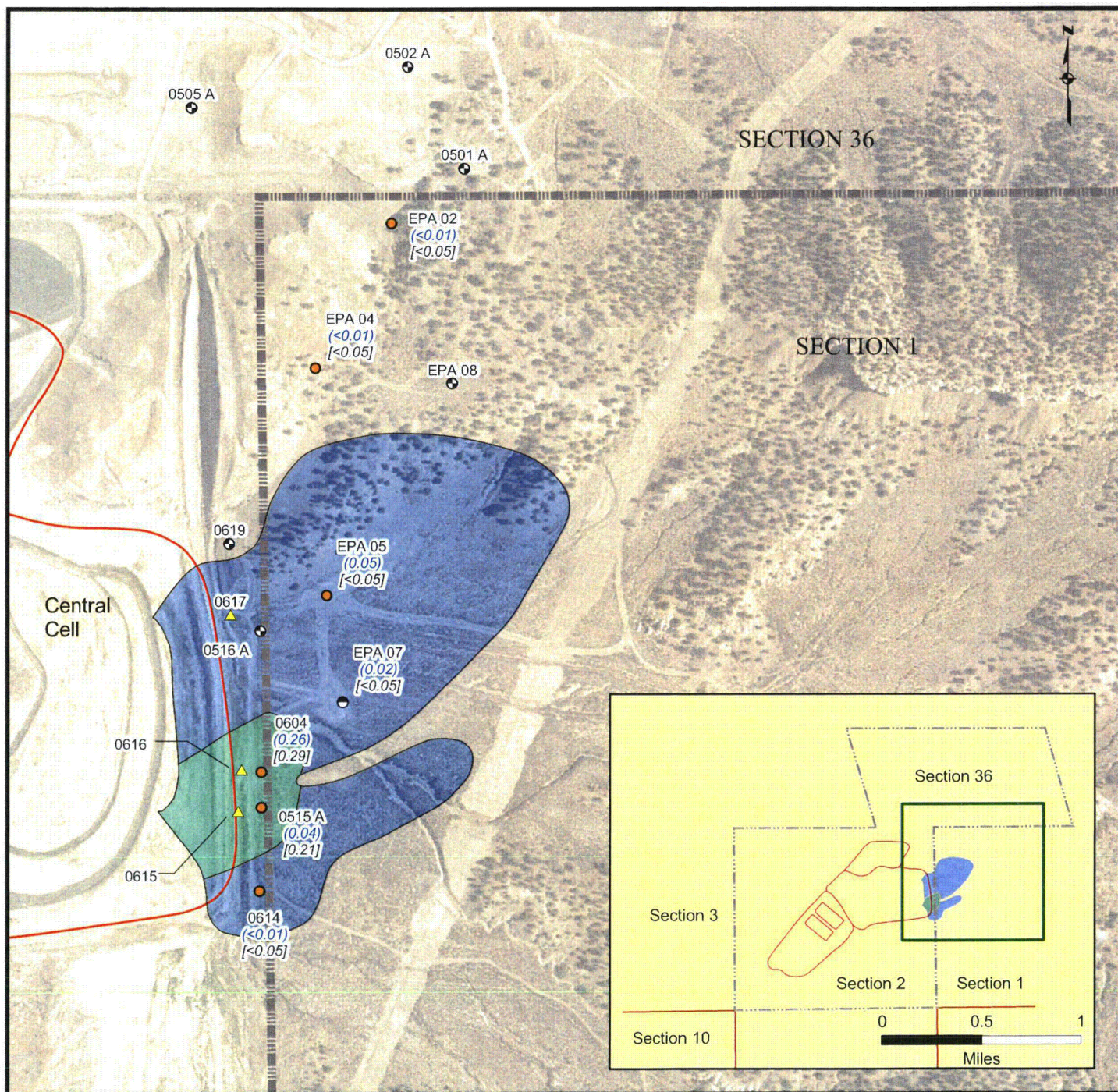


FIGURE 56
 Zone 1 Cobalt and Nickel Concentrations over Time
 United Nuclear Corporation Church Rock Site, Church Rock, New Mexico





Legend

Well Type

- Water Quality and Level Monitoring
- ⊙ Water Level Monitoring
- ⊖ Decommissioned East Pump Back
- ▲ Revised East Pump Back

— Cell Boundary

--- Property Boundary

Approximate Extent of Zone 1 Seepage Impacts

Approximate Extent of Cobalt and/or Nickel Exceeding 0.05 mg/L

(<0.01) Cobalt Concentration, mg/L
[<0.05] Nickel Concentration, mg/L

Notes:

1. Seepage impacts delineated by chloride detections greater than 50 mg/L.
2. Well names are displayed with black text.
3. Aerial photo taken on August 1, 1996.

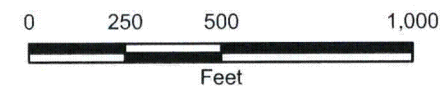


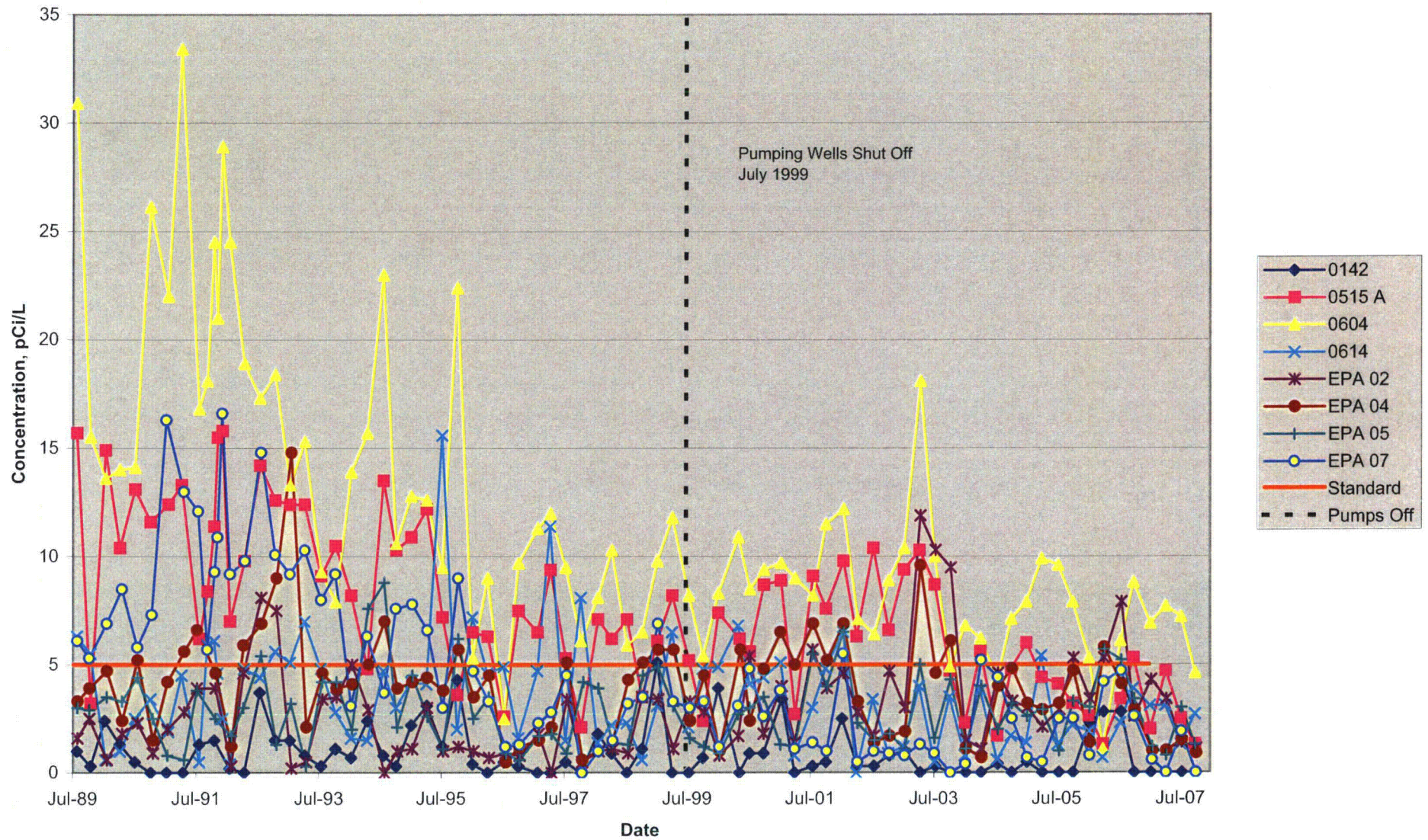
FIGURE 57

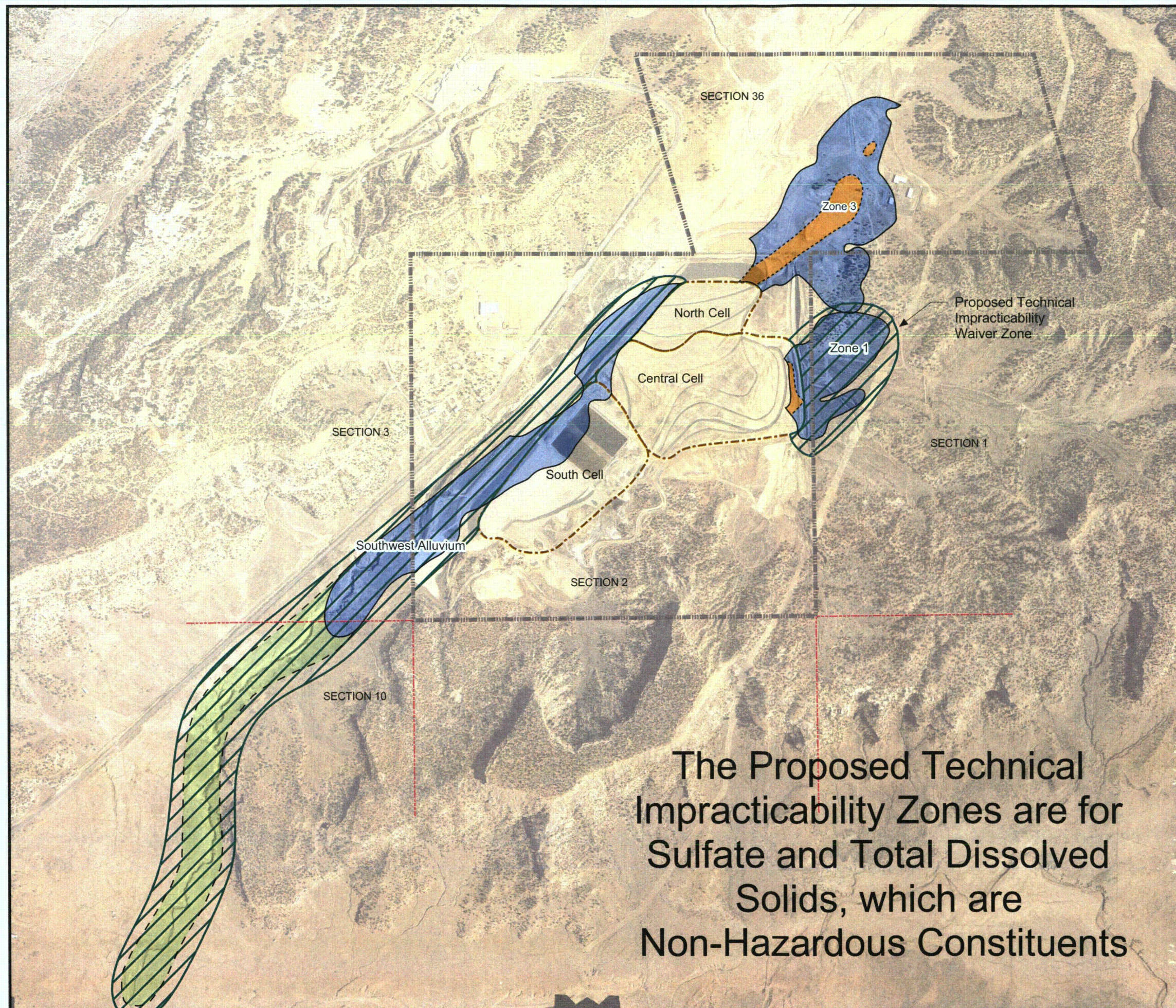
Zone 1 Extent of Cobalt and Nickel Exceeding 0.05 mg/L, October 2007

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



FIGURE 58
 Zone 1 Combined Radium-226 and Radium-228 Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico





Legend

- Section Boundary
- Property Boundary
- Tailing Pond
- Groundwater with pH ≤ 4
- Seepage-Impacted Groundwater
- Proposed Technical Impracticability Waiver Zone
- Seepage Impact in 2204
- Extrapolated Extent of Seepage Impact in Southwest Alluvium in 2204

Notes:

1. Extrapolated Extent of Southwest Alluvium Seepage Impact in 2204 based upon an average annual seepage impact advance of 30 feet per year.
2. Aerial photo taken on August 1, 1996.

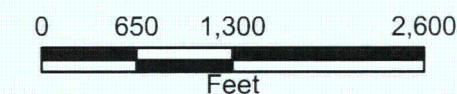


FIGURE 59

Proposed TI Waiver for Zone 1 and Extrapolated Extent of Southwest Alluvium Seepage Impact in 2204

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico



Appendix A
Southwest Alluvium Monitoring Data

