

LEGEND

▣▣▣▣▣▣ Approximate Site Location

NEW MEXICO INSET LEGEND

- Major City
- ▲ Church Rock Site Location
- Interstate Highway
- ▭ State Boundary

Notes:

1. Topographic basemap taken from the United States Geologic Survey 30x60 minute, 1:100,000 scale, Gallup, New Mexico Topographic Map, 1981.
2. Data for New Mexico Inset map taken from ESRI Data & Maps 2002 CD-ROM set.

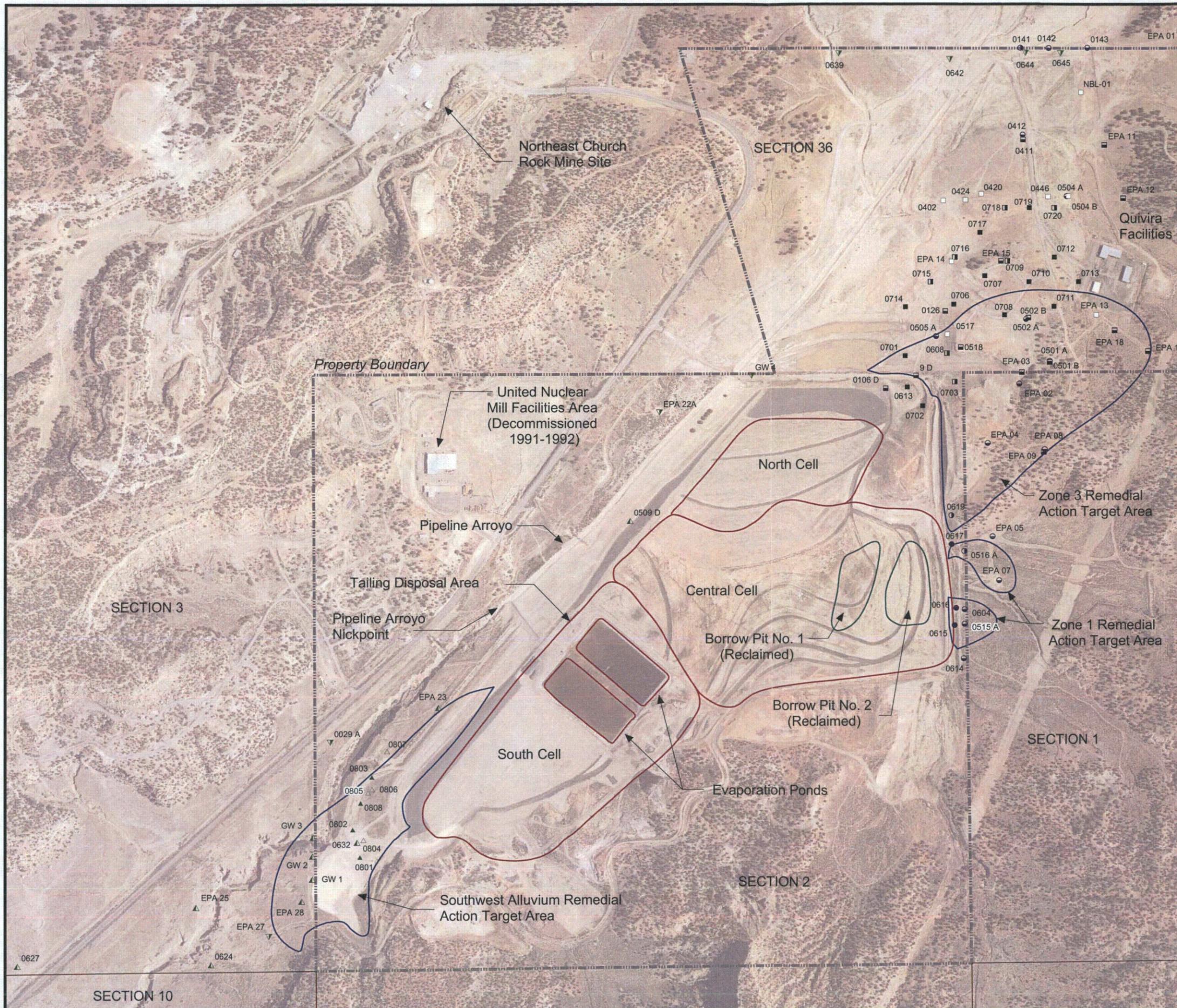


FIGURE 1

Site Location Map

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





Legend

Southwest Alluvium

- ▲ Idled Extraction Well
- ▲ Monitoring Well
- ▲ Water Level Monitoring Well
- ▼ Dry Monitoring Well

Zone 3

- Idled Extraction Well Used for Monitoring
- Decommissioned or Idle Extraction Well
- Monitoring Well
- Dry or Decommissioned Monitoring Well

Zone 1

- Decommissioned Extraction Well
- Decommissioned Monitoring Well
- Monitoring Well

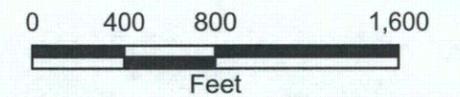
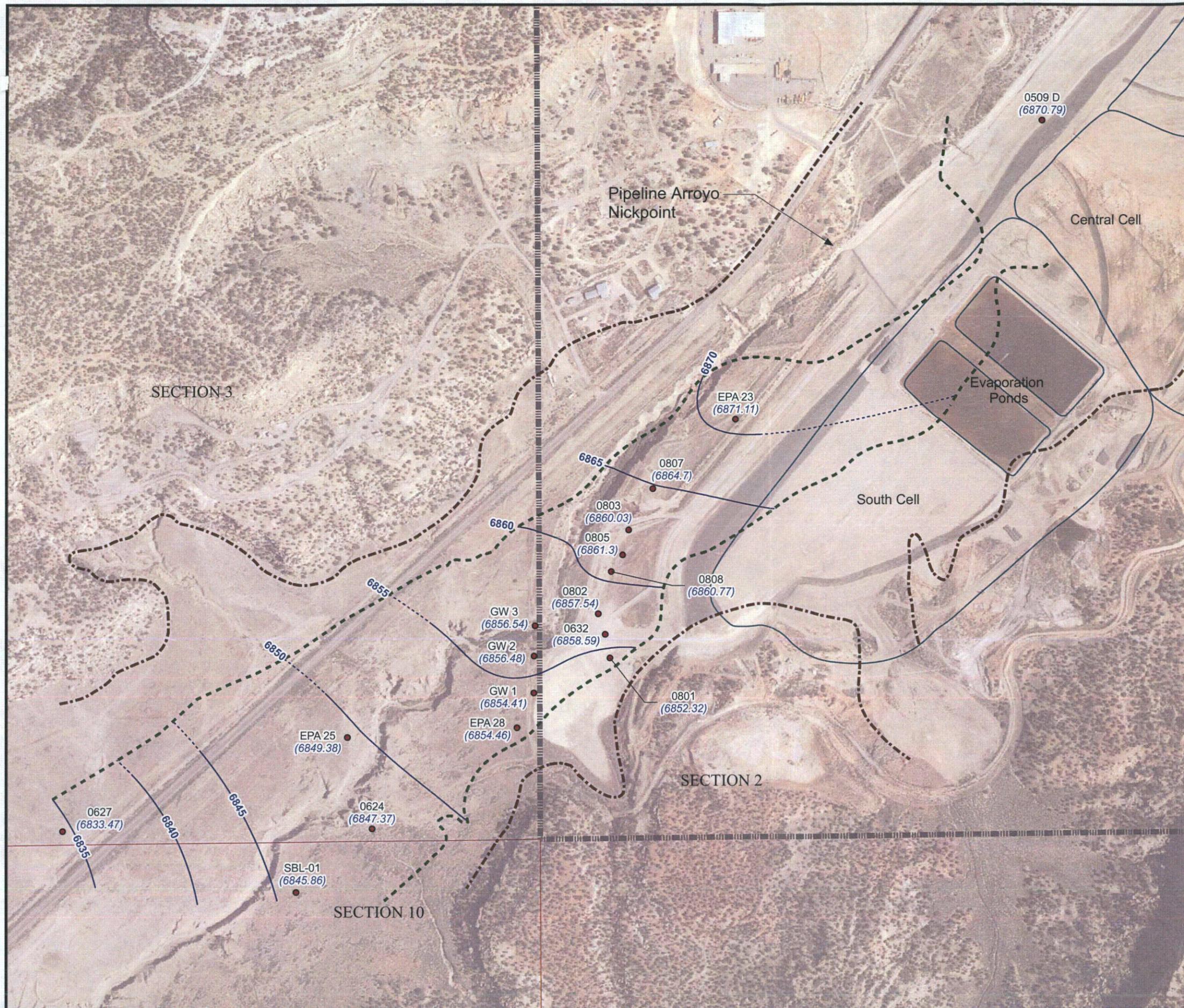


FIGURE 2

Site Layout and Performance
Monitoring Well Locations
2010 Operating Year

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





Legend

- Southwest Alluvium Monitoring Well
- Groundwater Elevation Contour
- - - - - Inferred Groundwater Elevation Contour
- · - · - Approximate Extent of Alluvium
- · - · - Approximate Extent of Saturated Alluvium
- ▣ Property Boundary
- Section Boundary
- Cell 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.

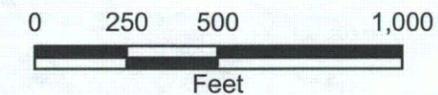
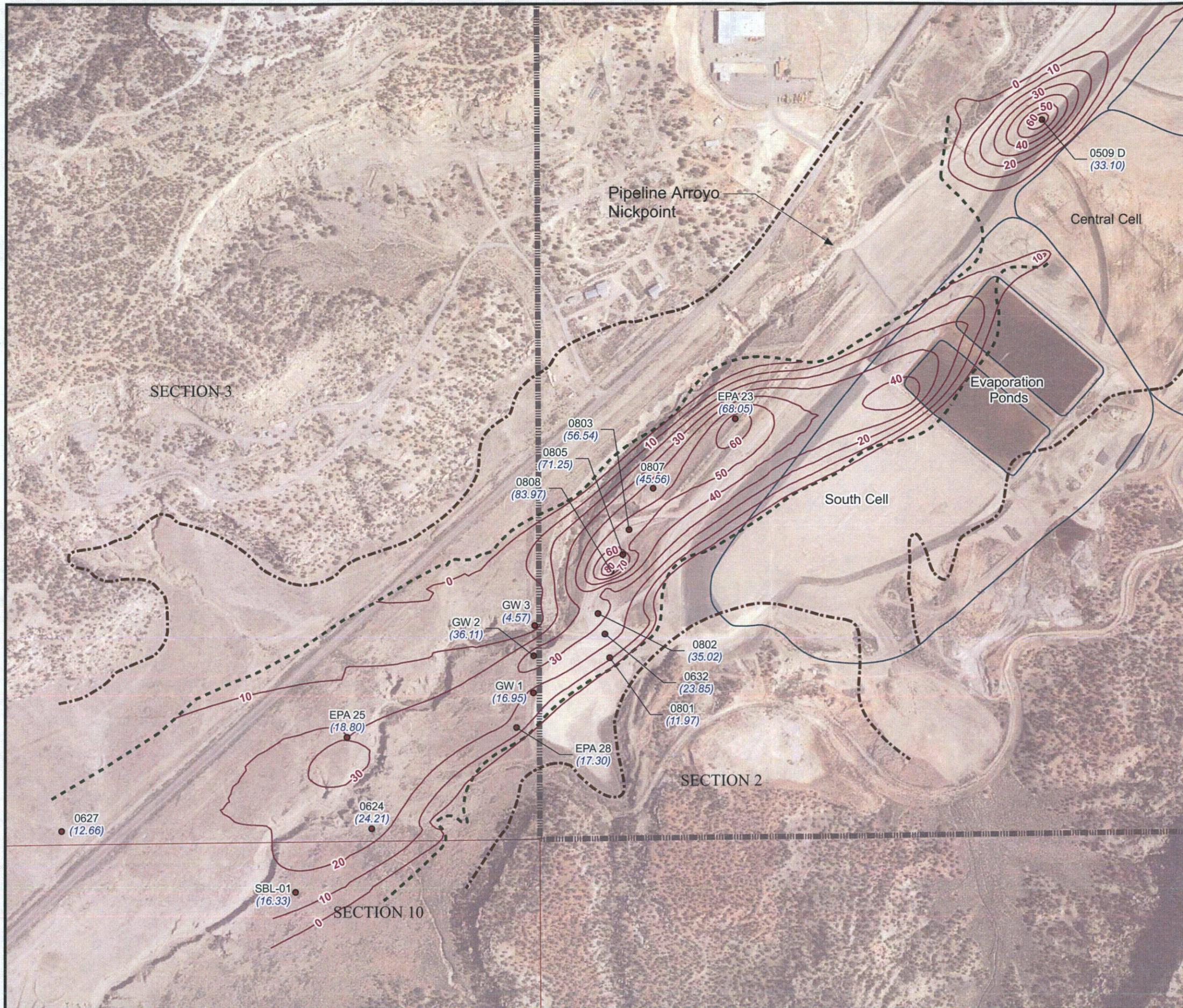


FIGURE 3A

Southwest Alluvium
Potentiometric Surface Map
October 2010

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





Legend

- Southwest Alluvium Monitoring Well
- - - - - Approximate Extent of Alluvium
- Approximate Extent of Saturated Alluvium
- ||||| Property Boundary
- Section Boundary
- Cell Boundary
- Saturated Thickness Contours (feet)

Notes:

1. Well names are displayed with black text.
2. Saturated thicknesses (feet) are shown with blue text and enclosed in parentheses.
3. Aerial photo taken on August 1, 1996.
4. The posted value of saturated thickness at well 0509 D derives from reference to the screen bottom. The alluvium extends as much as 38 feet below this depth in the vicinity of this well.

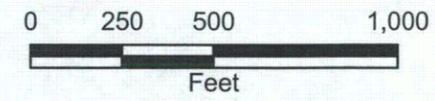


FIGURE 3B

Southwest Alluvium
Saturated Thickness Map
October 2010

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



FIGURE 4
 Southwest Alluvium Water Levels Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock New Mexico

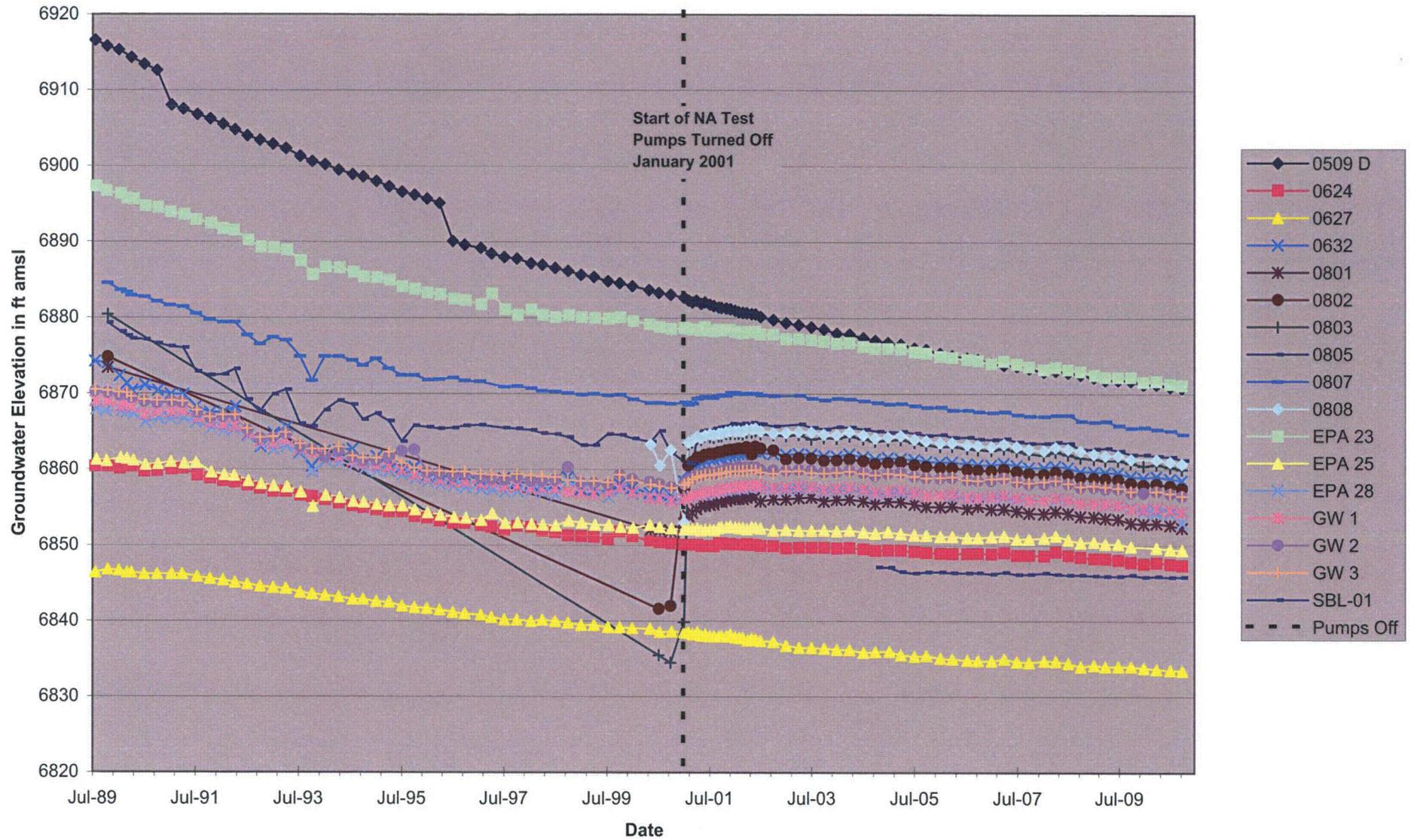
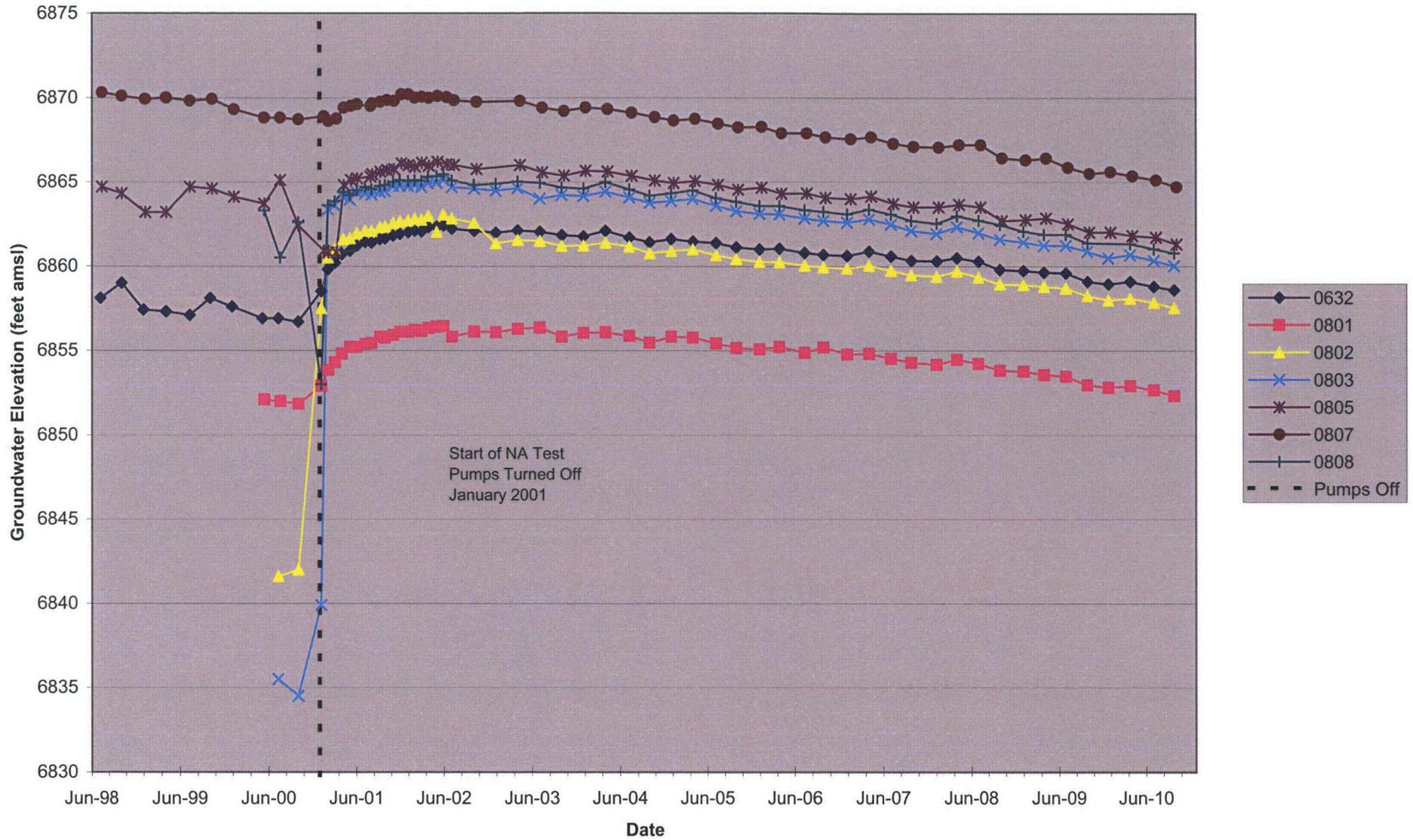
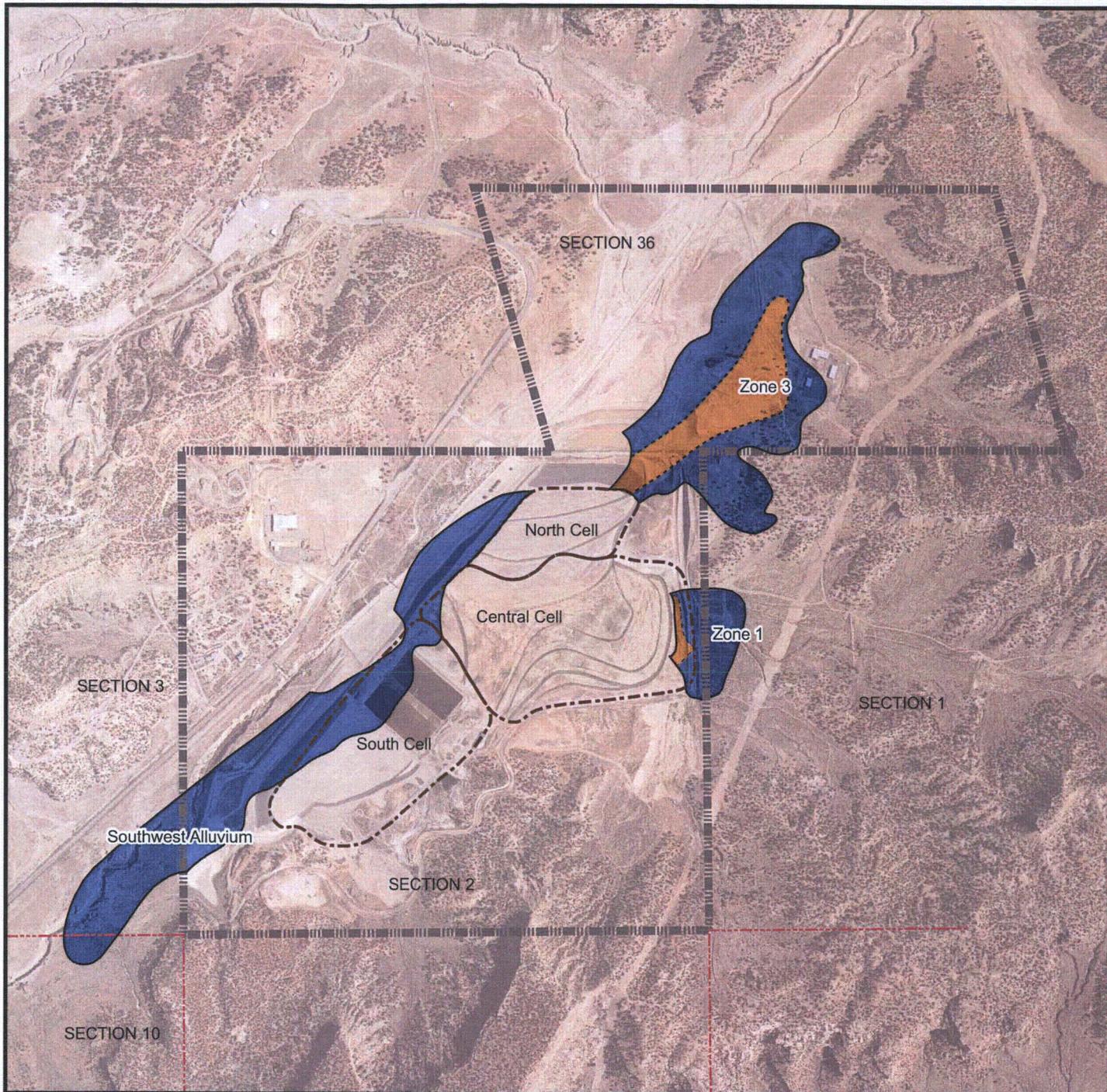


FIGURE 5
 Southwest Alluvium Pumping Well Water Levels Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock New Mexico





LEGEND

-  Section Boundary
-  Property Boundary
-  Tailings Pond
-  Groundwater with pH <= 4
-  Seepage-Impacted Groundwater

Aerial photo taken on August 1, 1996.

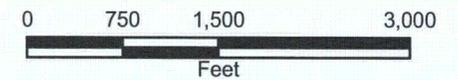


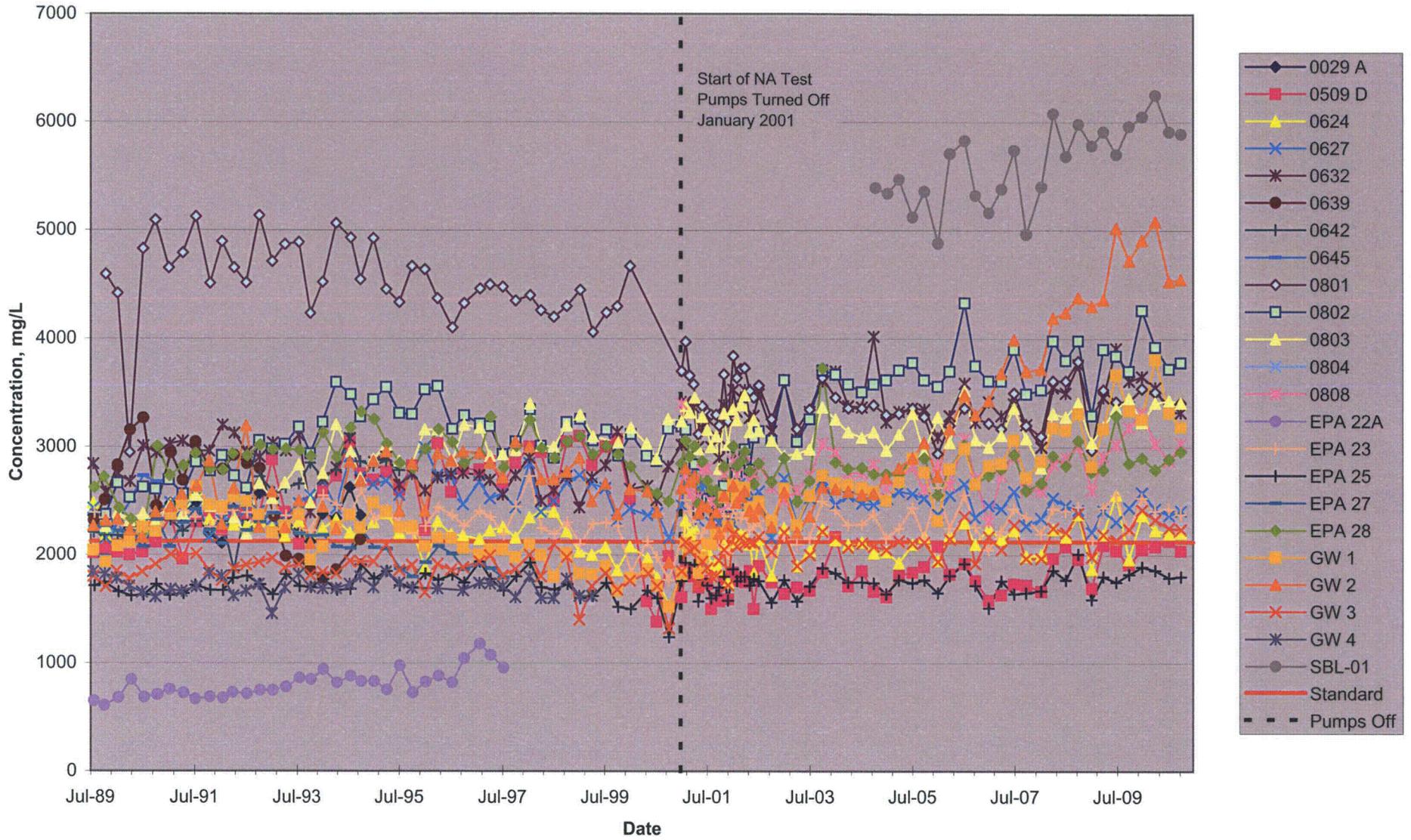
FIGURE 6

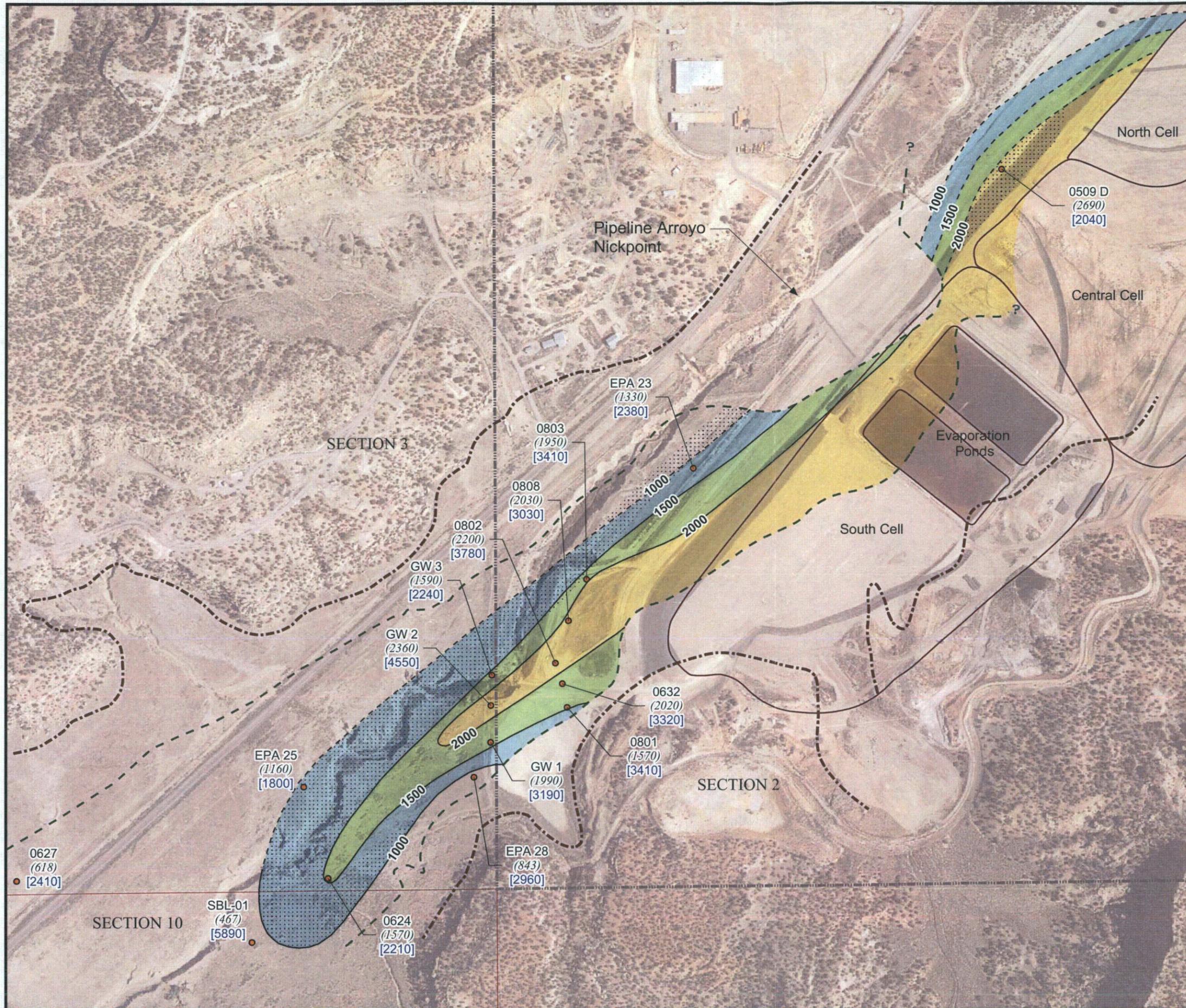
Extent of Seepage-Impacted Groundwater, October 2010

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico



FIGURE 7
 Southwest Alluvium Sulfate Concentraions Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico





Legend

- Southwest Alluvium Well
 - - - Approximate Extent of Saturated Alluvium
 - · - · - Approximate Extent of Alluvium
 - Bicarbonate Isoconcentration Contour in mg/L
 - - - Inferred Bicarbonate Isoconcentration Contour in mg/L
- Bicarbonate Concentrations (mg/L)**
- 1000 - 1500
 - 1500 - 2000
 - >2000
- · - · - Property Boundary
 - Section Boundary
 - Tailings Pond
 - ▤ Sulfate Below 2125 mg/L
 - (2350) Bicarbonate result in mg/L
 - [3580] Sulfate result in mg/L

- Notes:**
1. Well names are displayed with black text.
 2. Aerial photo taken on August 1, 1996.

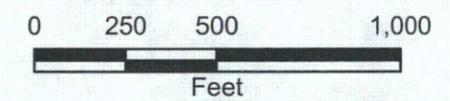


FIGURE 8

Southwest Alluvium Bicarbonate Isoconcentration Map and Distribution of Sulfate Below 2125 mg/L, October 2010

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



FIGURE 9

Primary Components of Total Dissolved Solids in the Southwest Alluvium, October 2010
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

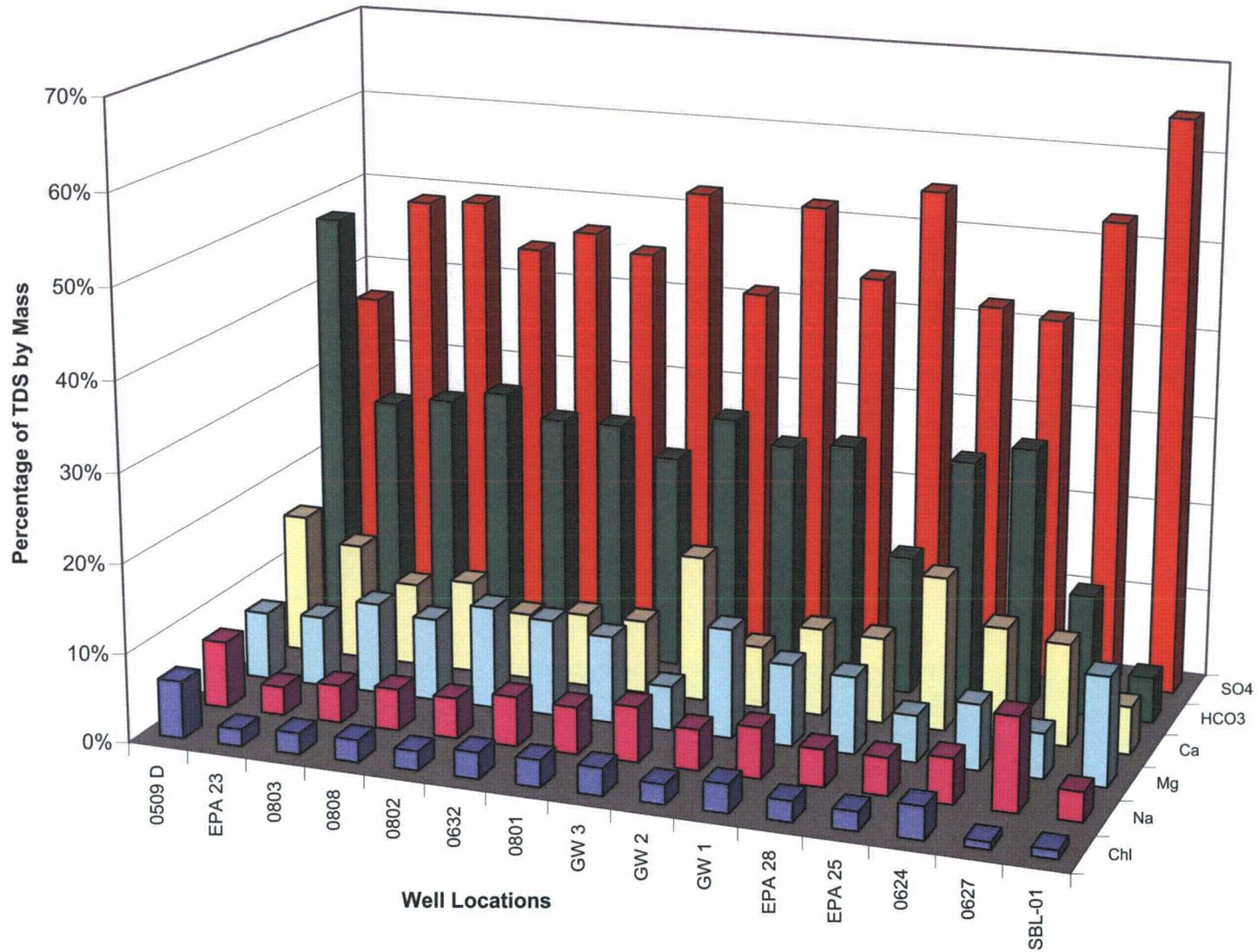


FIGURE 10
 Southwest Alluvium Chloride Concentrations From 1999 Through October 2010
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

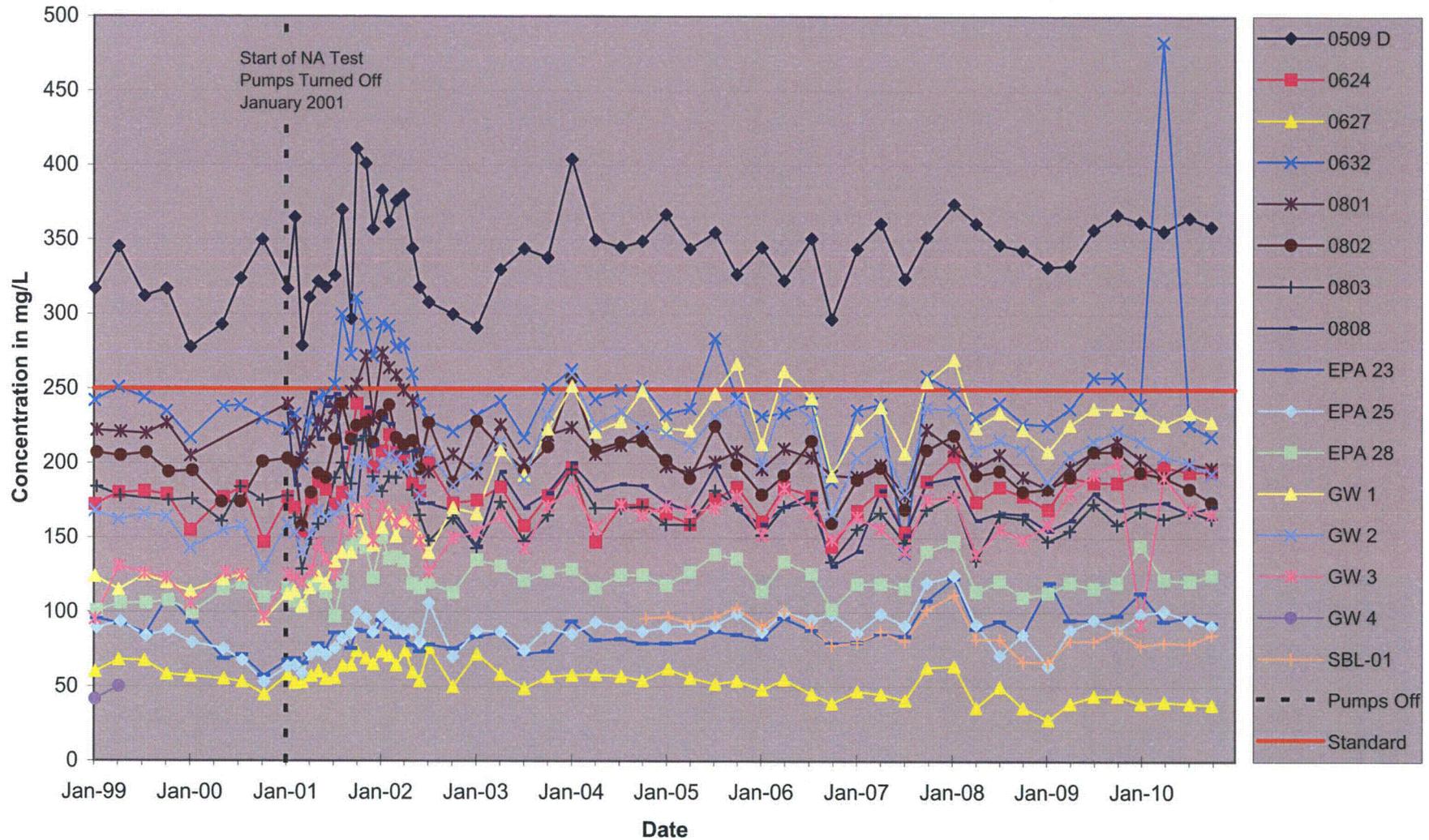


FIGURE 11
 Southwest Alluvium Manganese Concentrations From 1999 Through October 2010
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

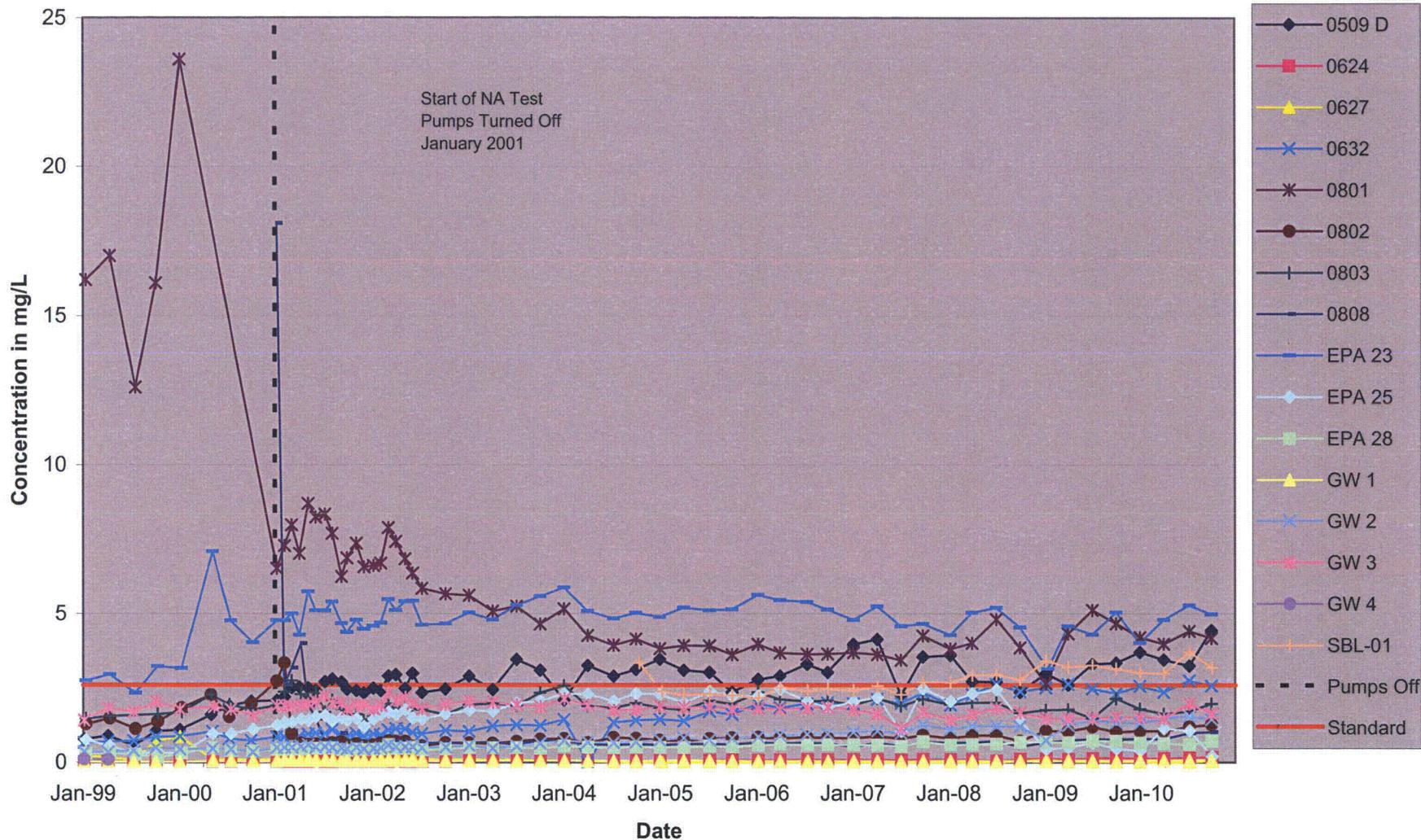


FIGURE 12
 Southwest Alluvium Total Dissolved Solids Concentrations Over Time
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

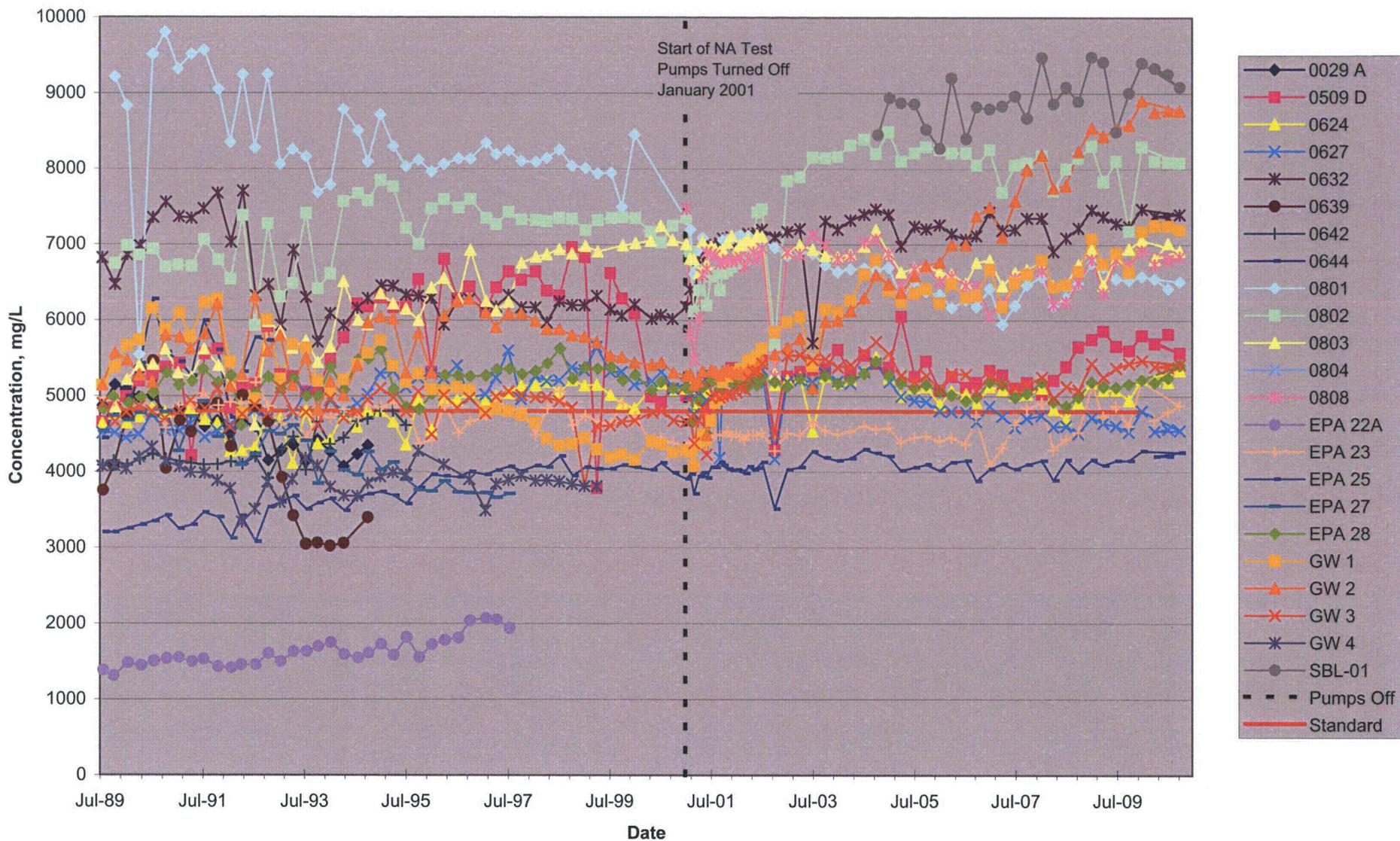


FIGURE 13
 Calcium and Bicarbonate Concentrations in Selected Background and Seepage-Impacted Wells
 United Nuclear Corporation Church Rock site, Church Rock, New Mexico

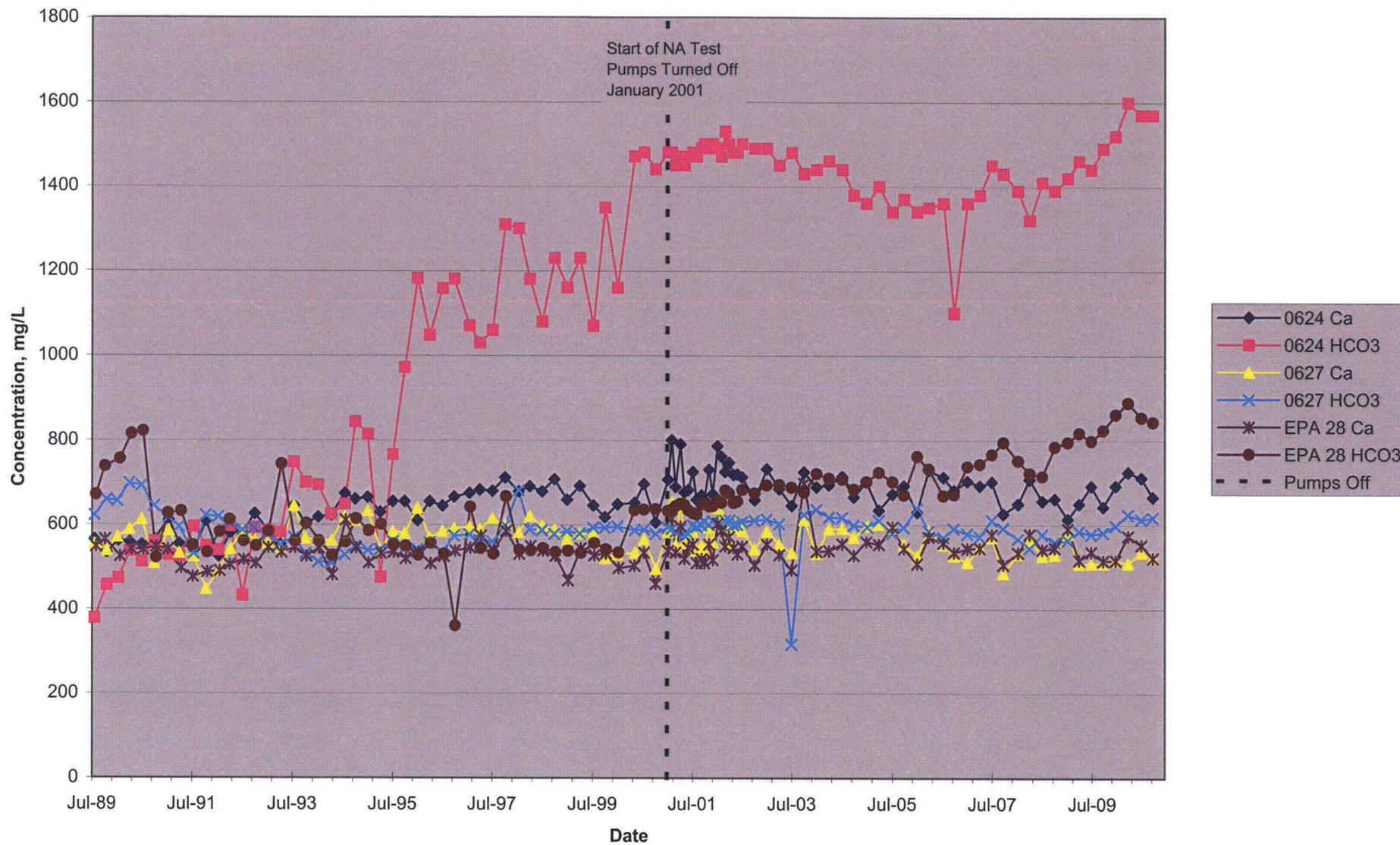


FIGURE 14
 Southwest Alluvium Calcium Concentrations From 1999 Through October 2010
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

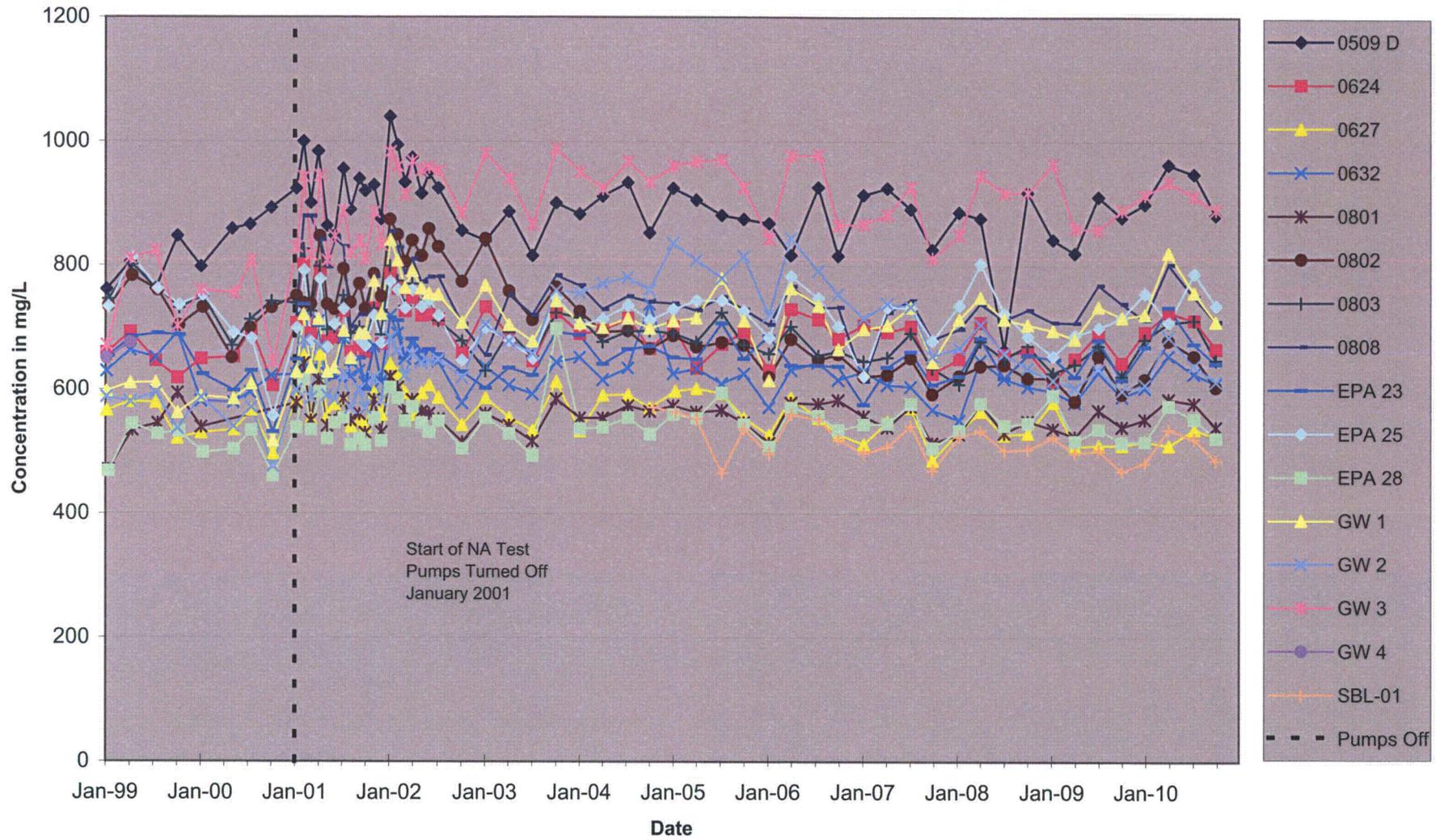


FIGURE 15

Southwest Alluvium Bicarbonate Concentrations From 1999 Through October 2010
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

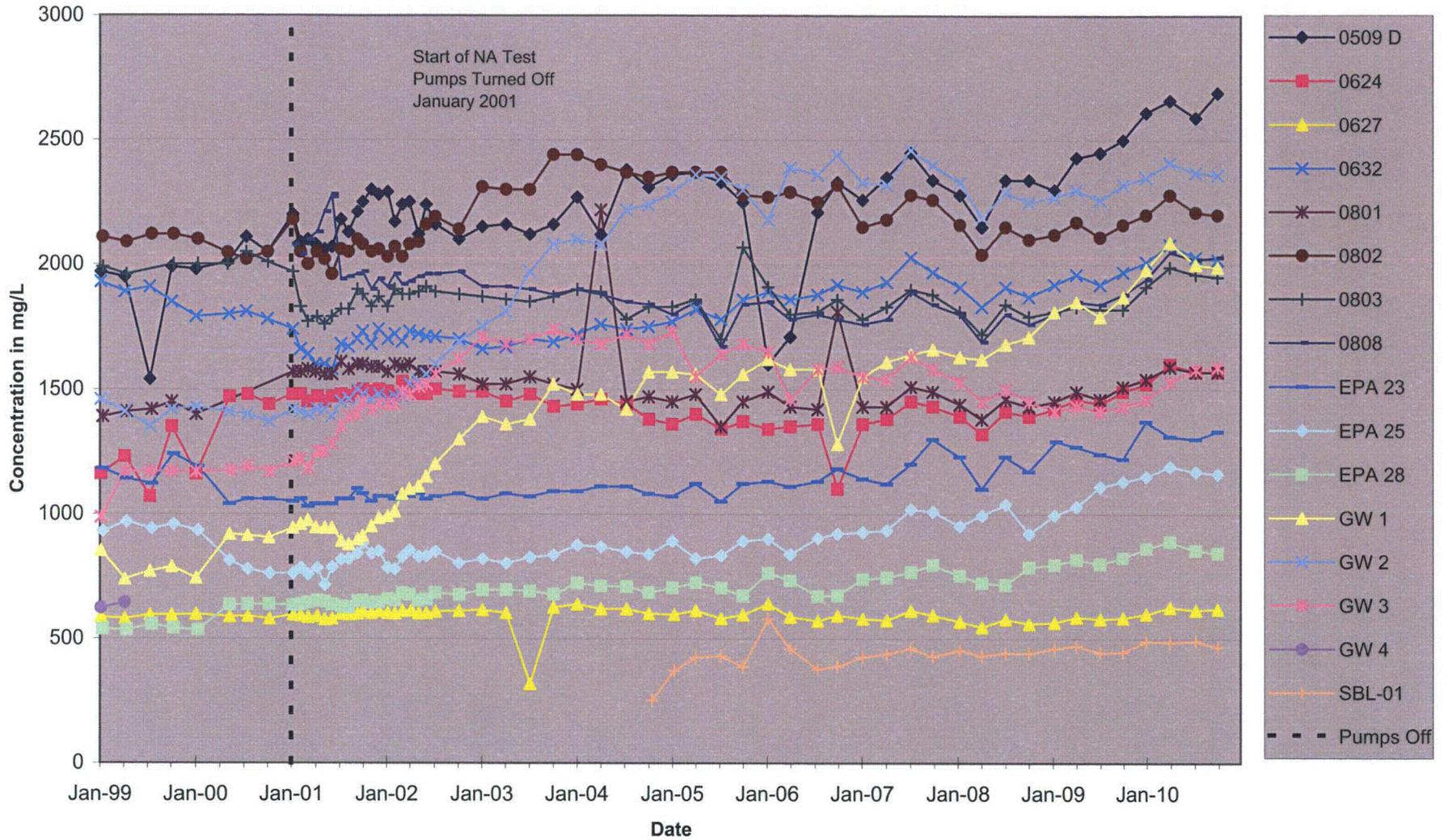


FIGURE 16
 Southwest Alluvium Sulfate Concentrations From 1999 Through October 2010
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

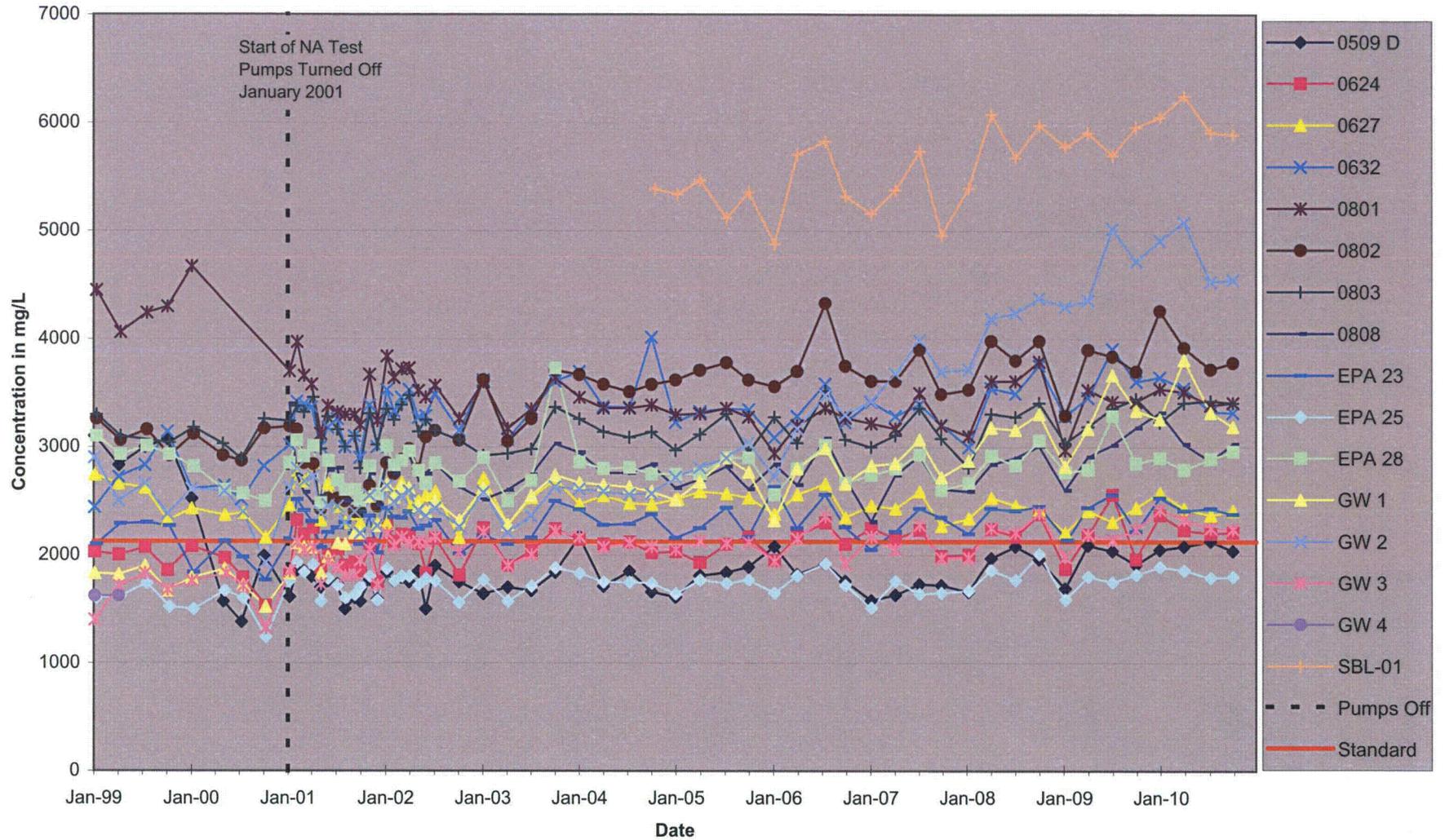


FIGURE 17
 Southwest Alluvium Total Dissolved Solids Concentrations From 1999 Through October 2010
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

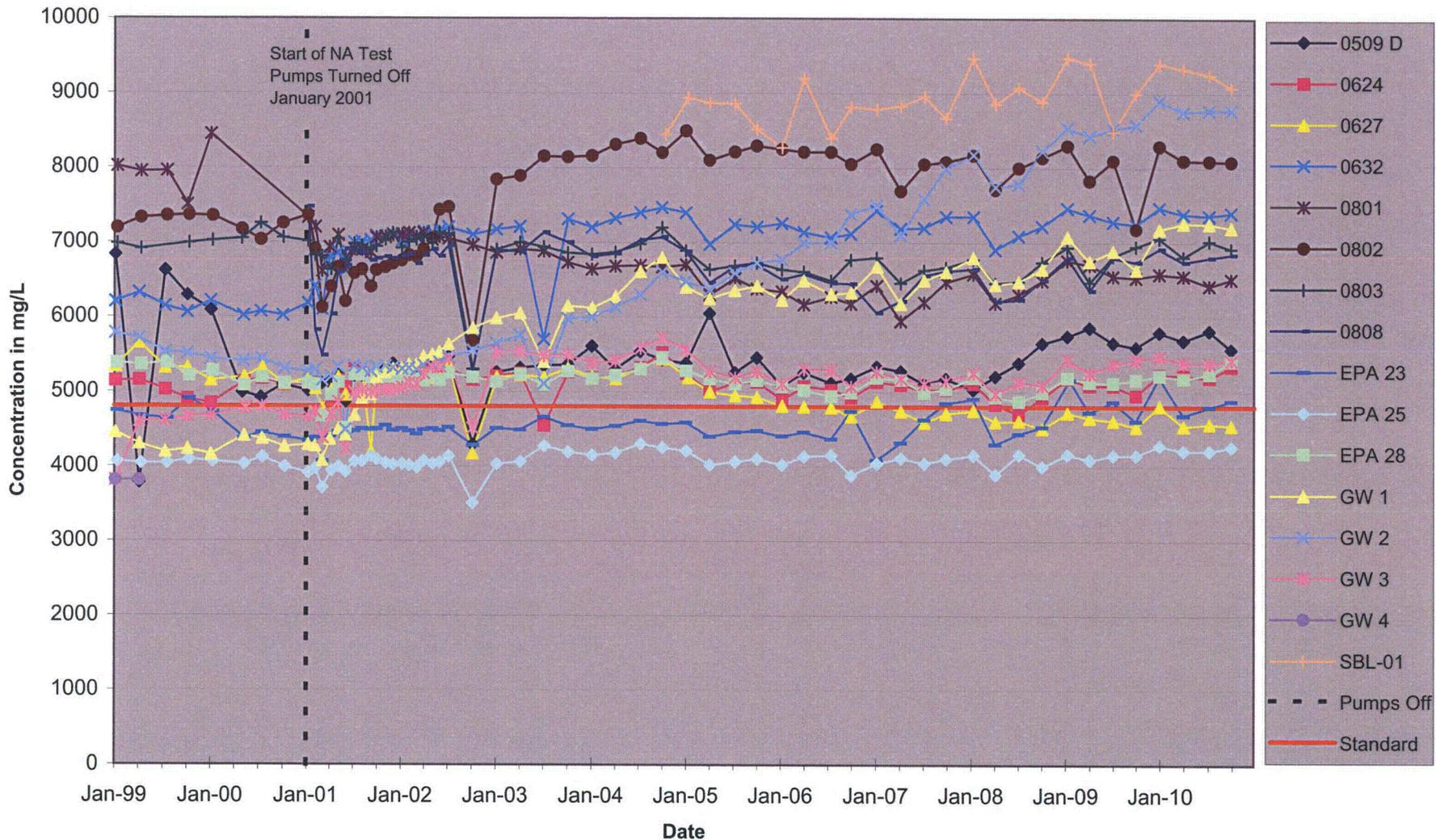


FIGURE 18
 Uranium Concentrations in Selected Southwest Alluvium Wells
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

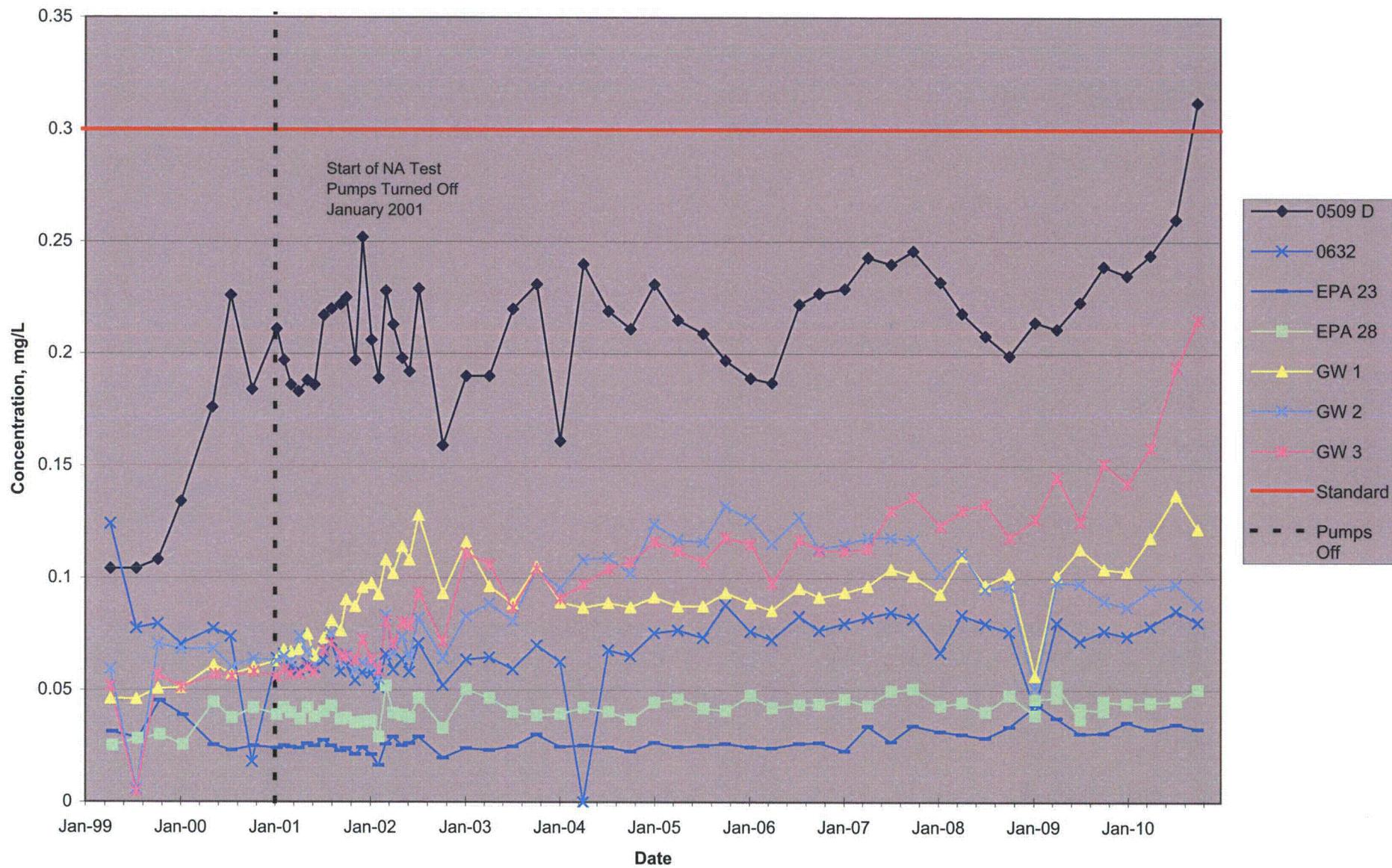


FIGURE 19
 Uranium Concentrations in Selected Southwest Alluvium Wells
 United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

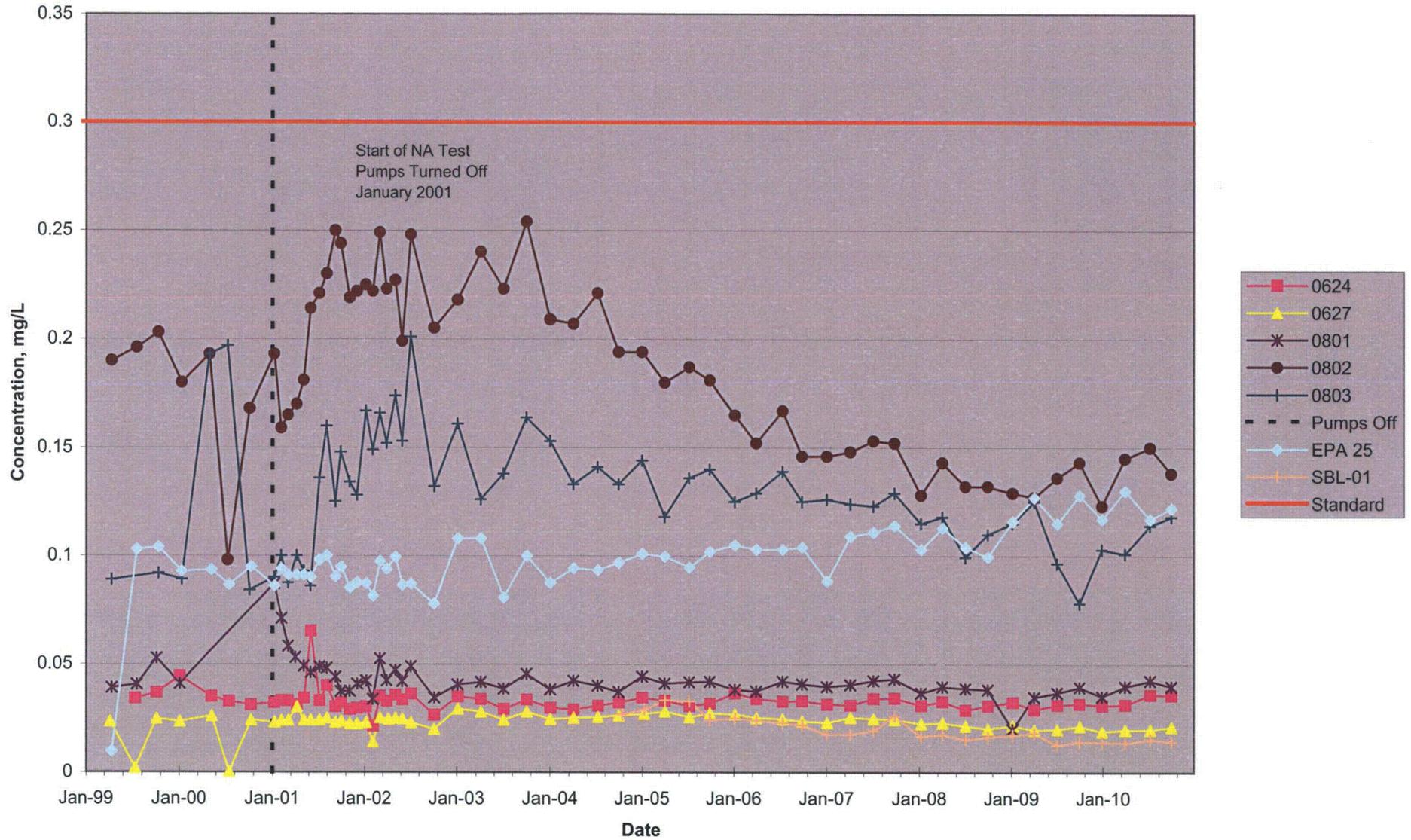


FIGURE 20
Uranium Concentration in Well 0509 D
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

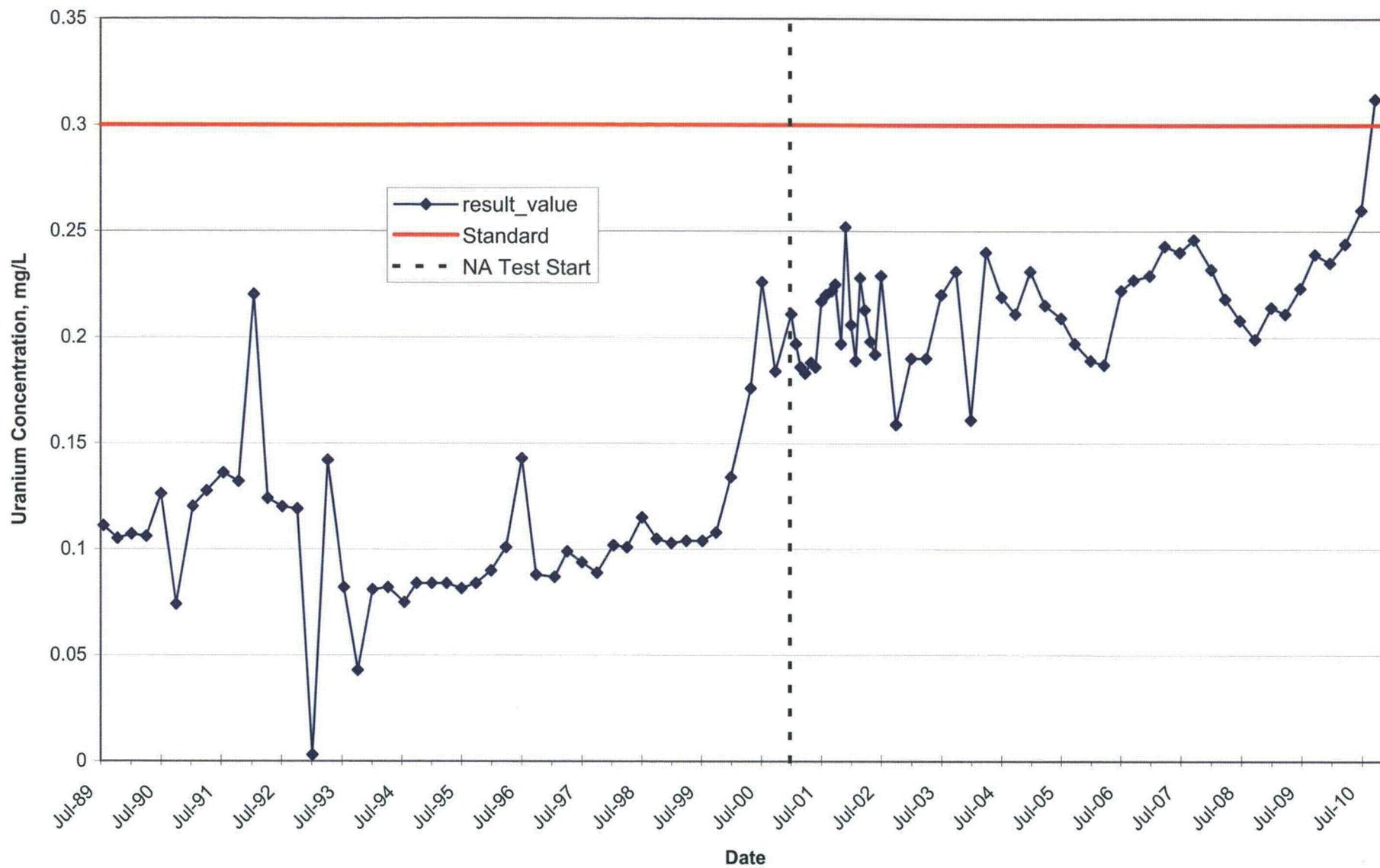


FIGURE 22
Uranium Concentration in Well 0802
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

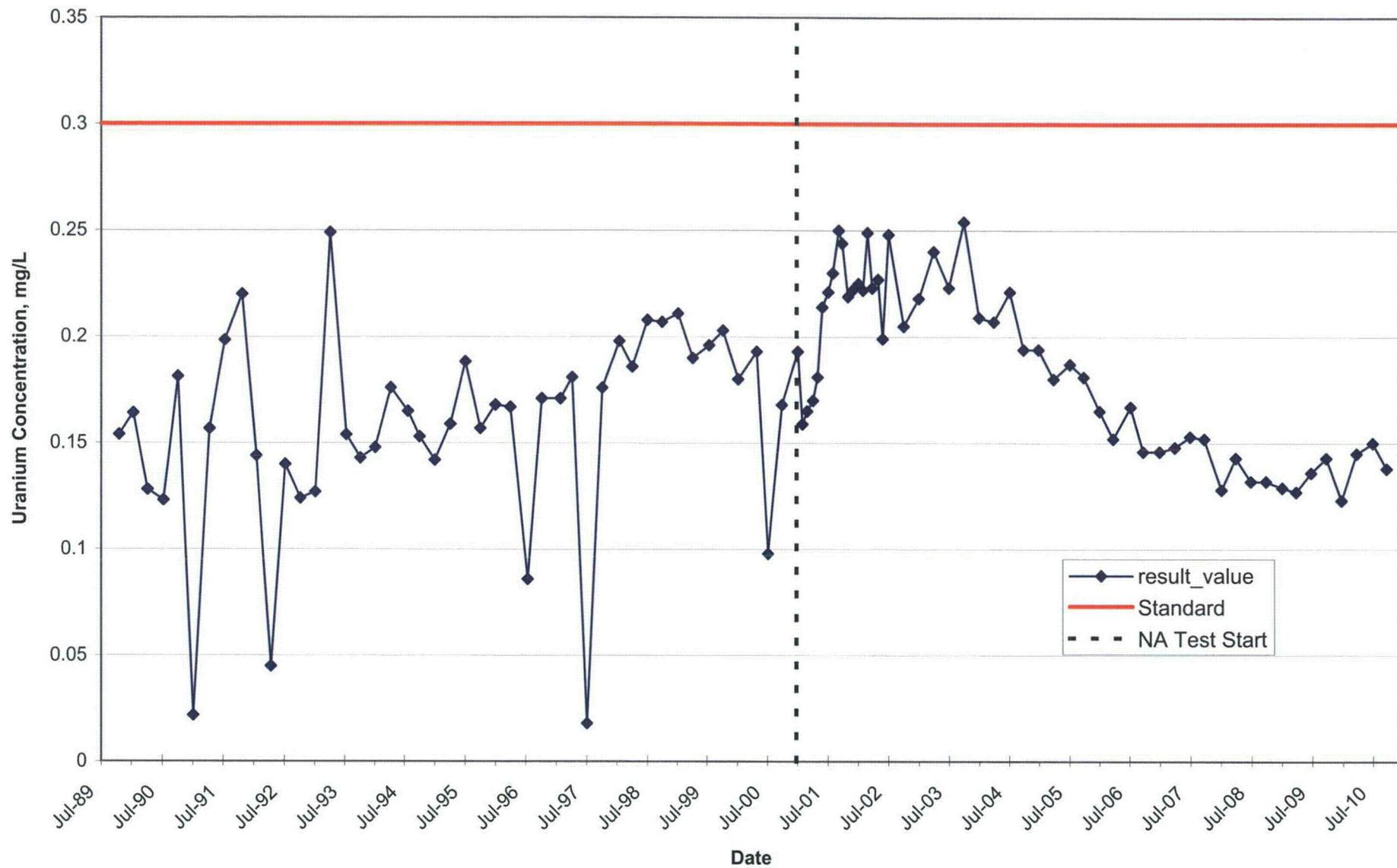


FIGURE 23
Uranium Concentration in Well 0803
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

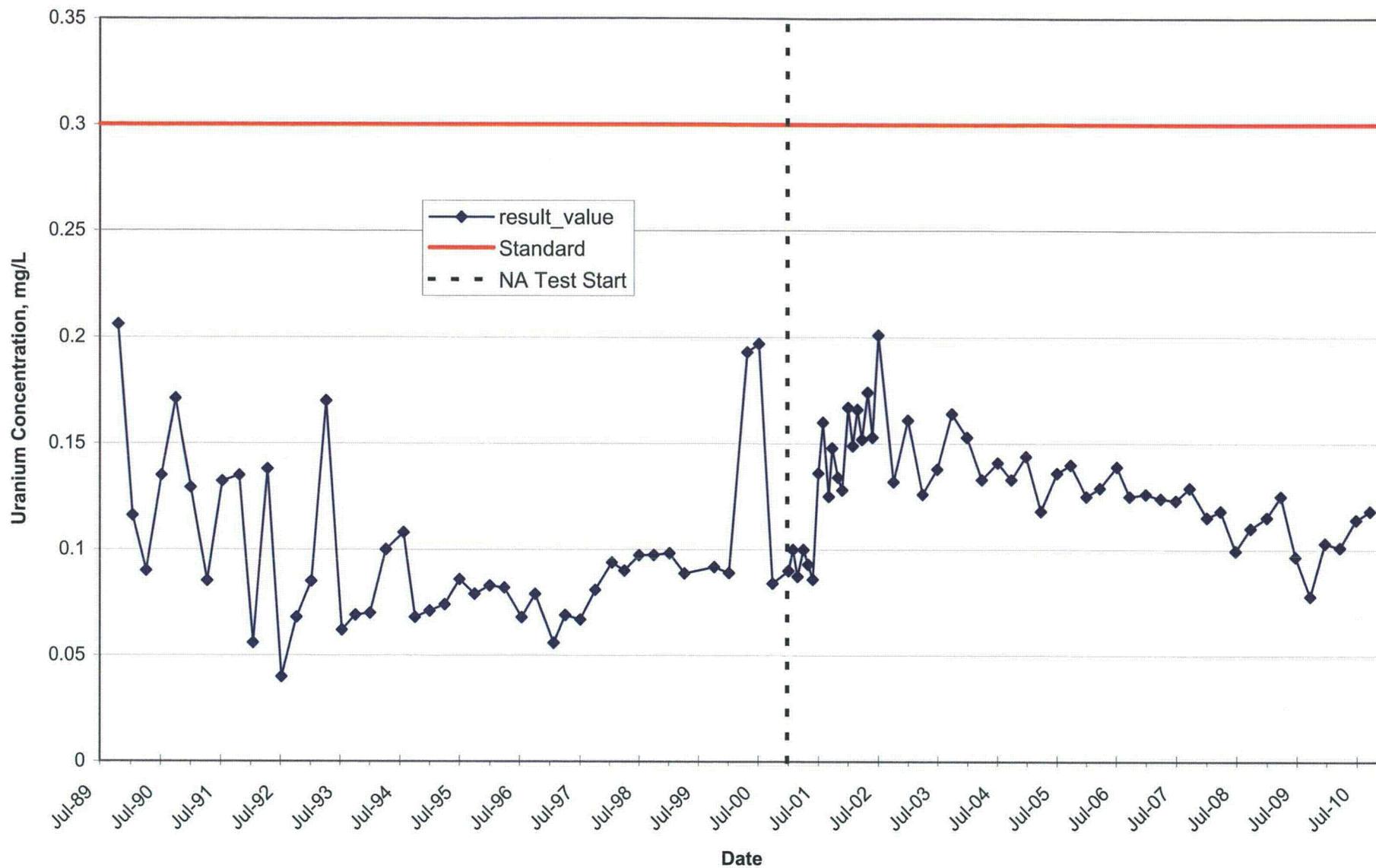


FIGURE 24
 Uranium and Bicarbonate Concentrations in Well GW 1
 United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

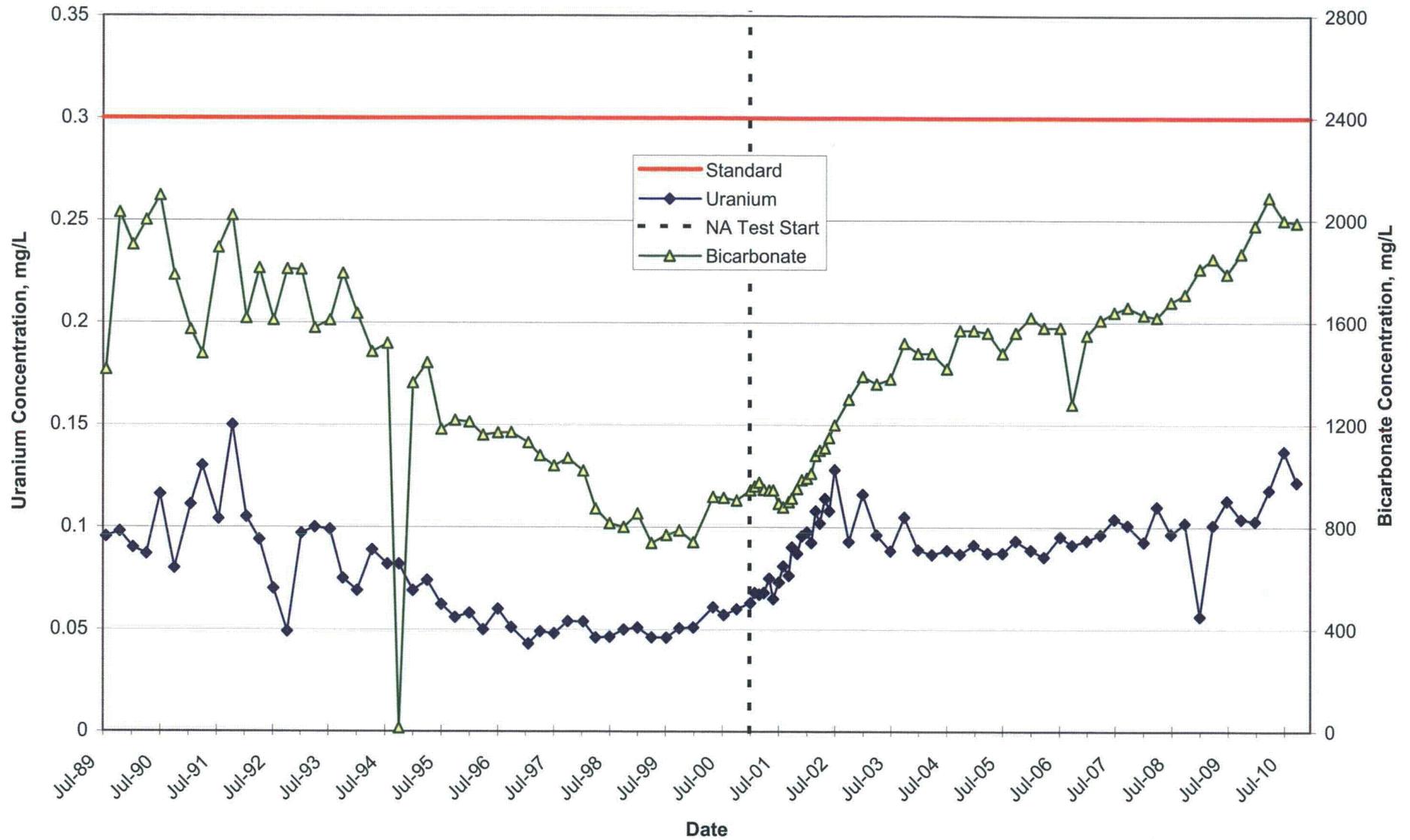


FIGURE 25
Uranium Concentration in Well GW 2
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

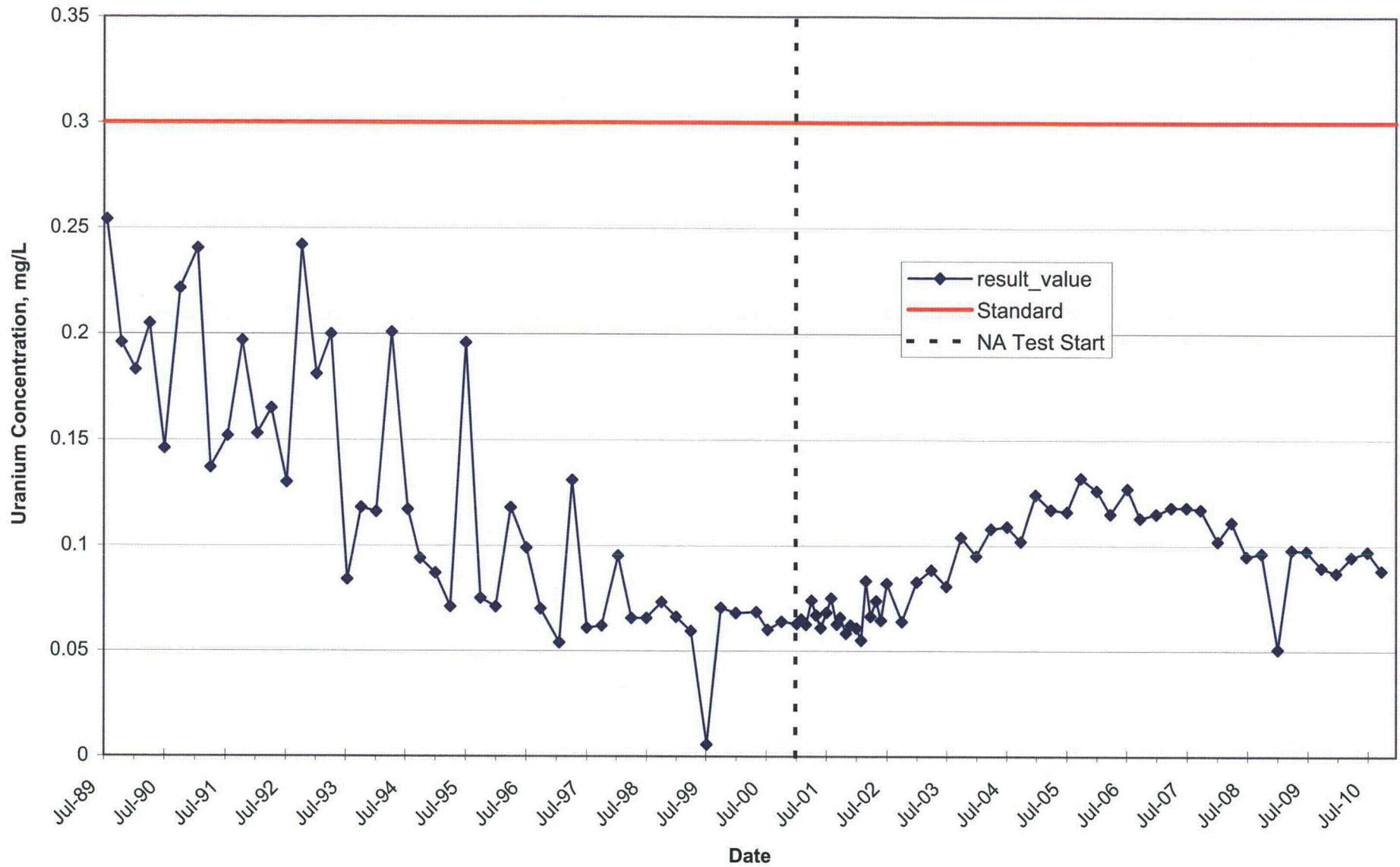


FIGURE 26
Uranium Concentration in Well GW 3
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

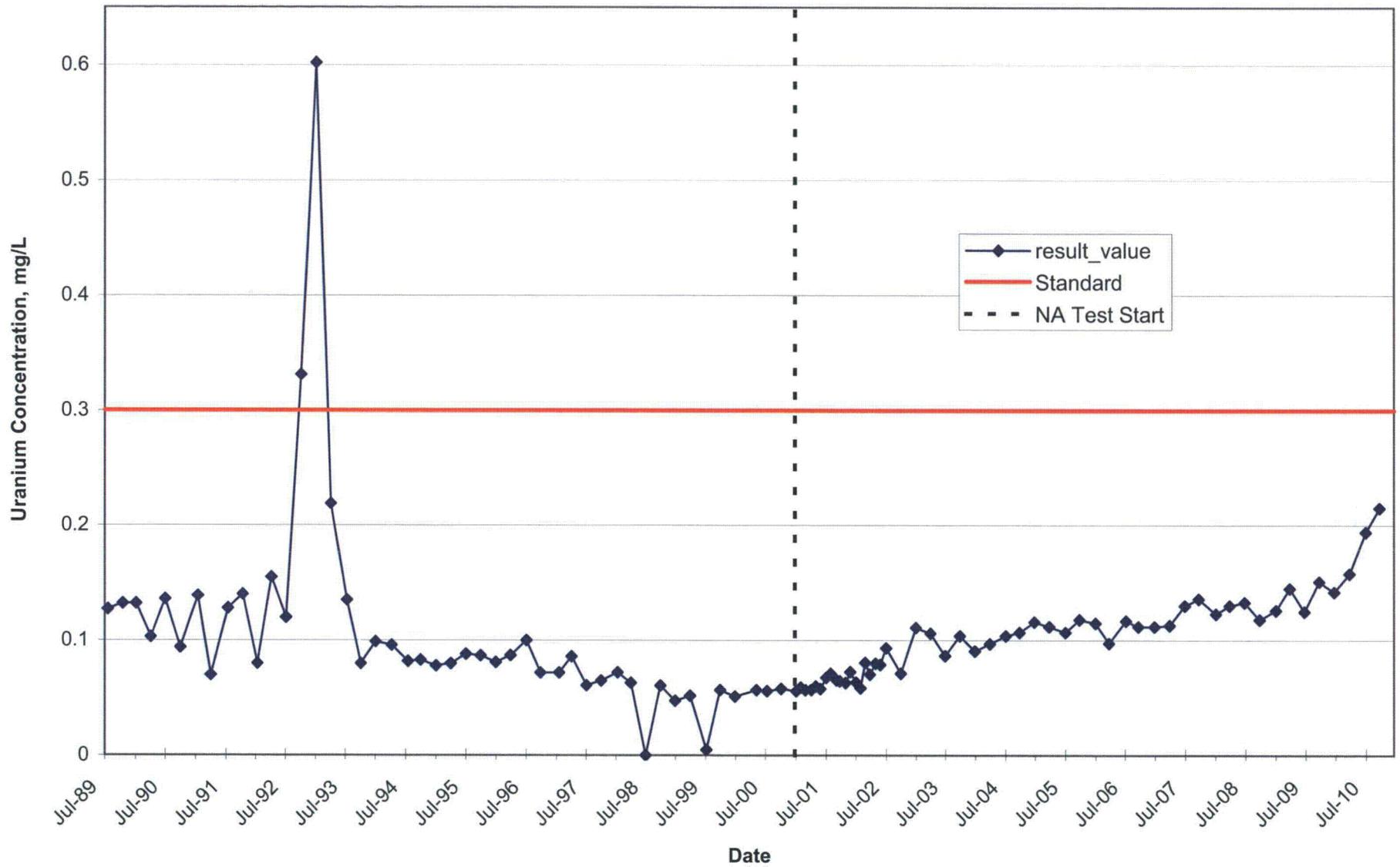


FIGURE 27
 Uranium and Bicarbonate Concentrations in Well 0624
 United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

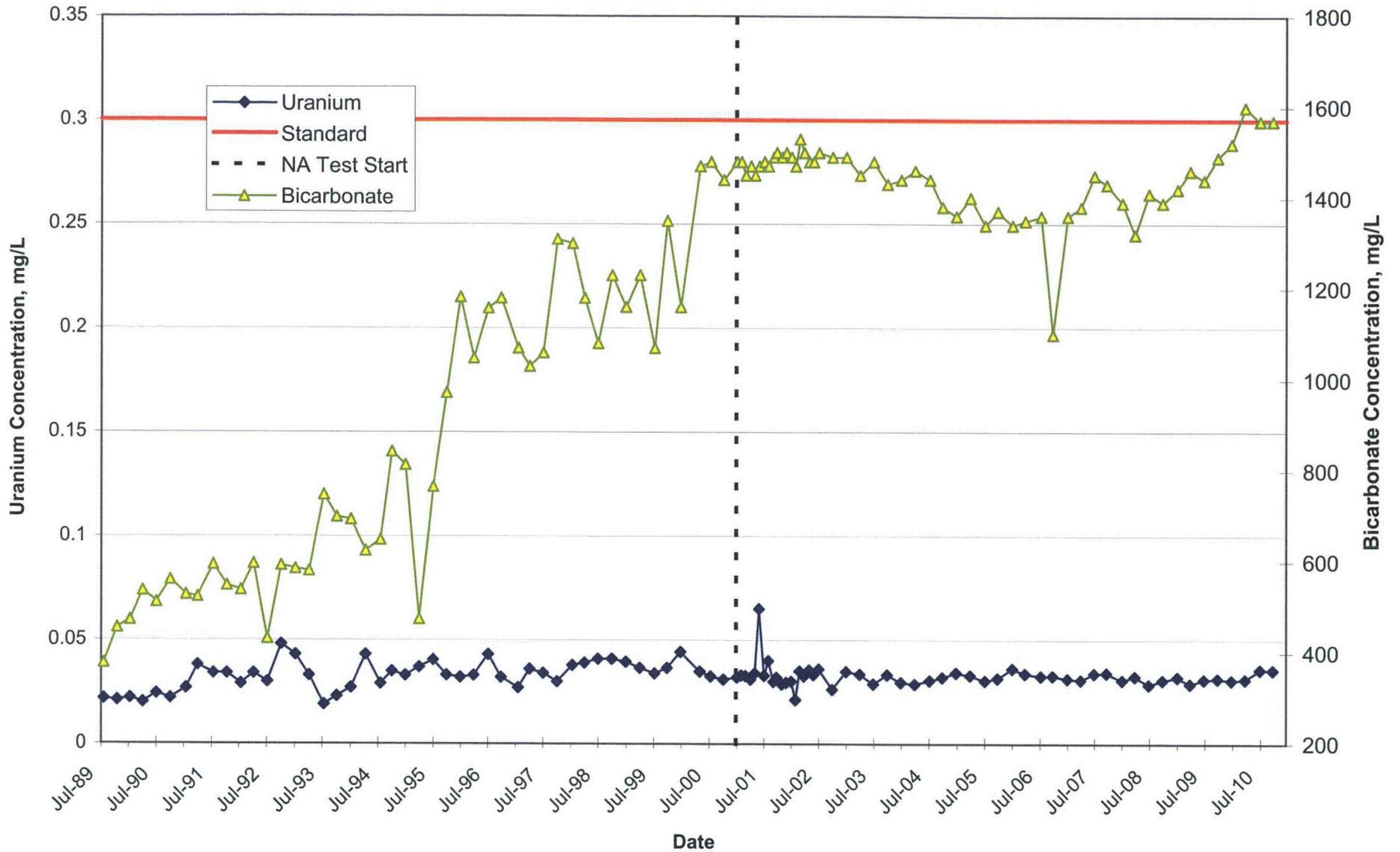


FIGURE 28
Uranium Concentration in Well 0632
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

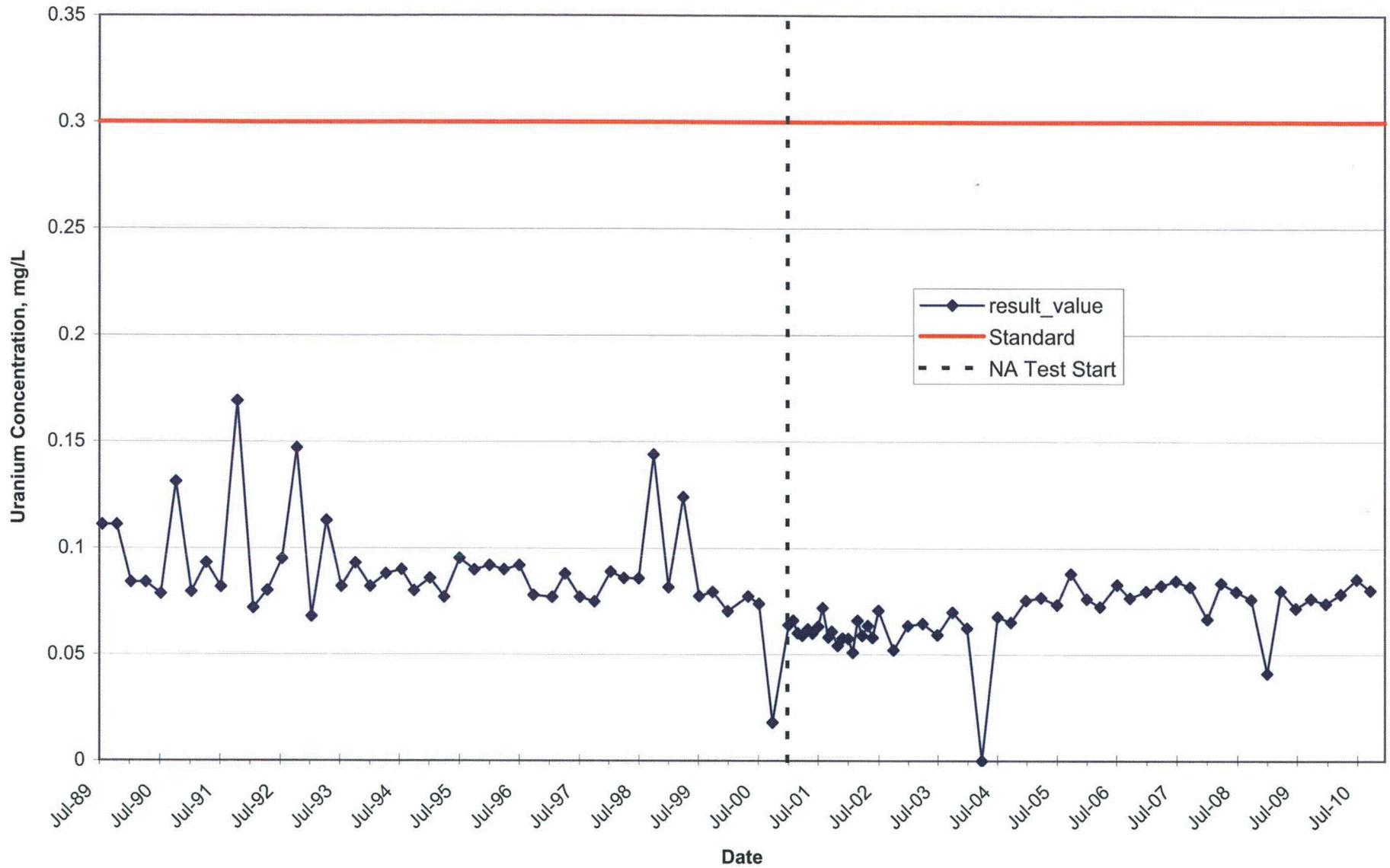


FIGURE 29
Uranium Concentration in Well 0627
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

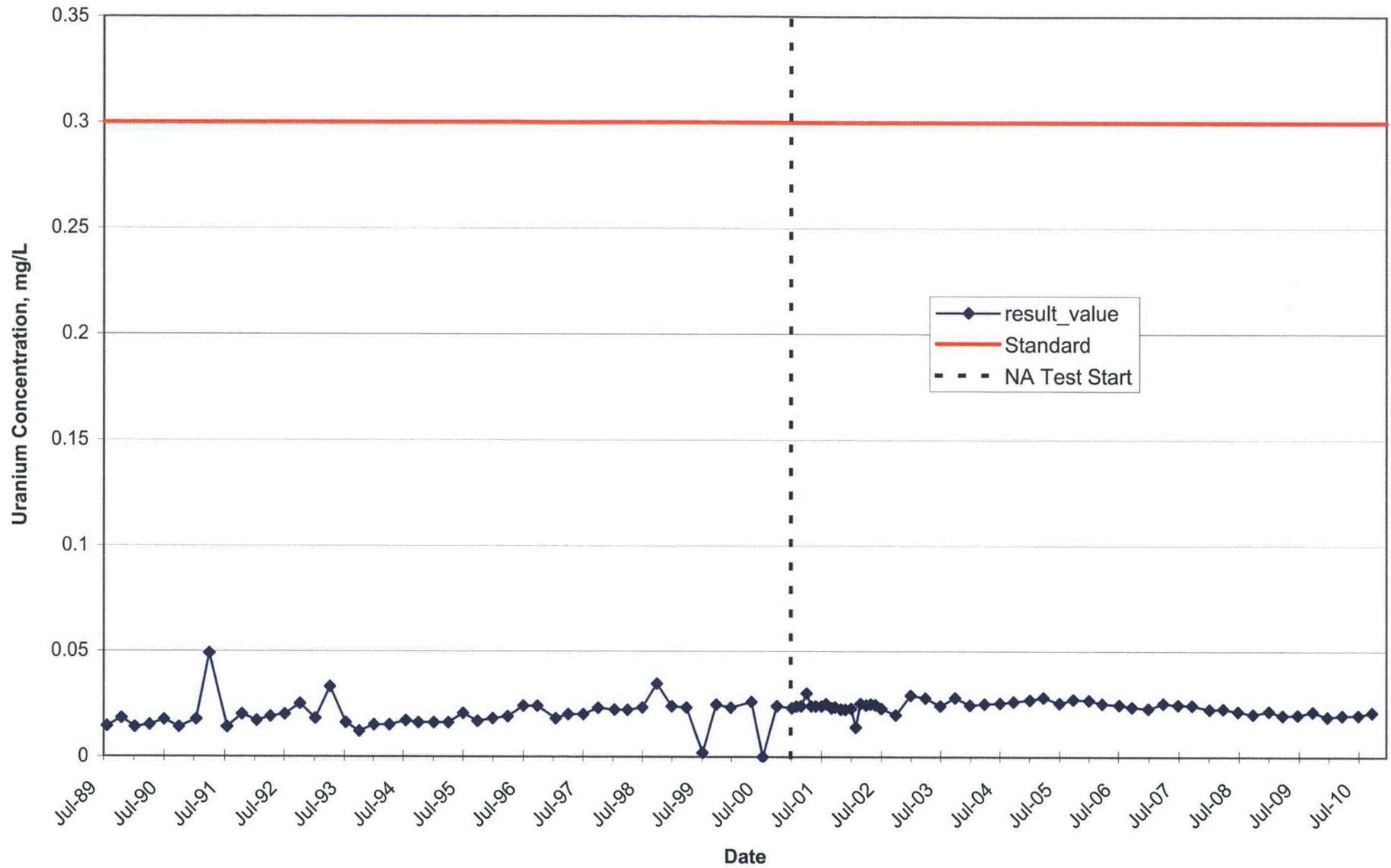


FIGURE 30
Uranium Concentration in Well 0808
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

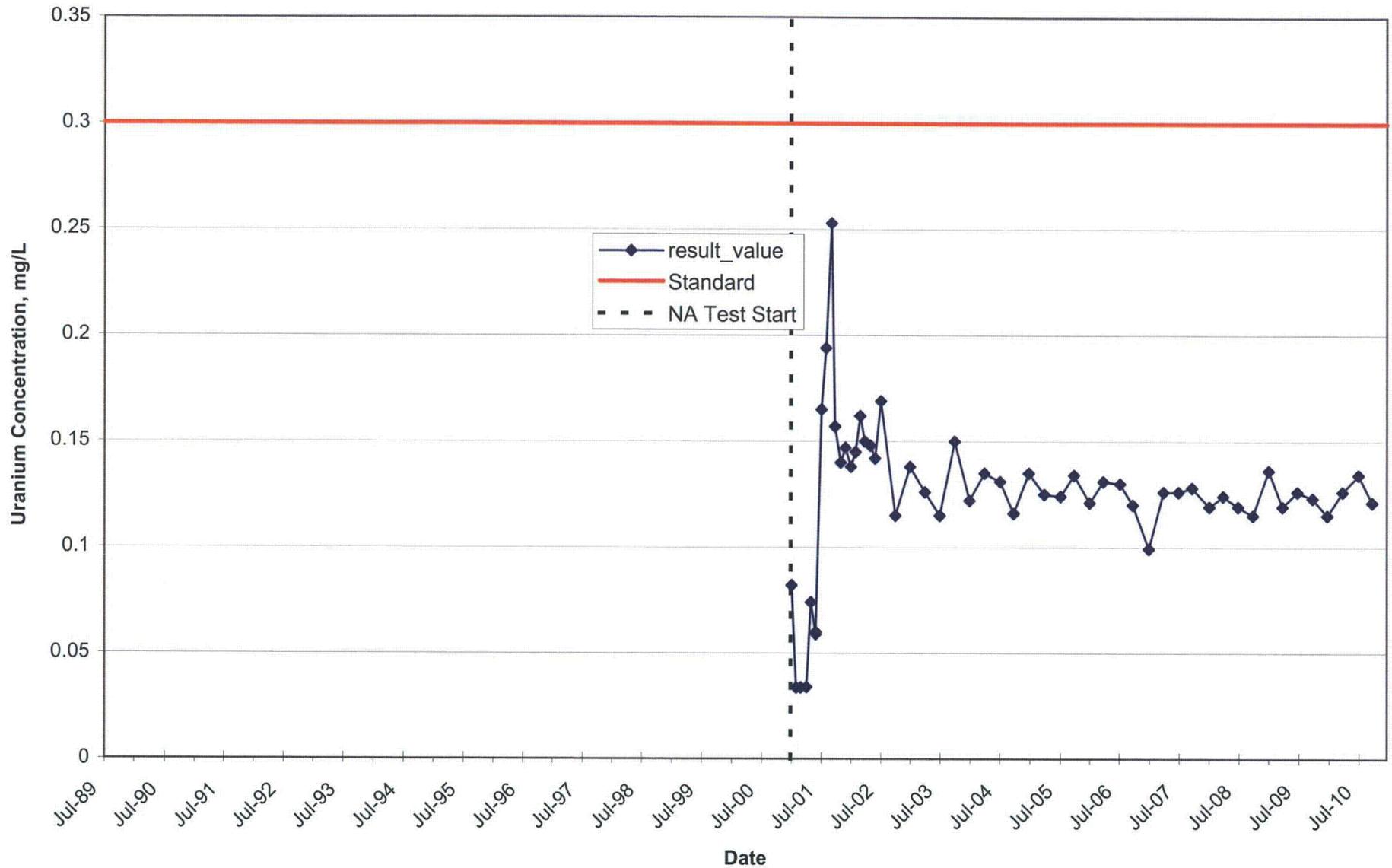


FIGURE 31
Uranium Concentration in Well EPA 23
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

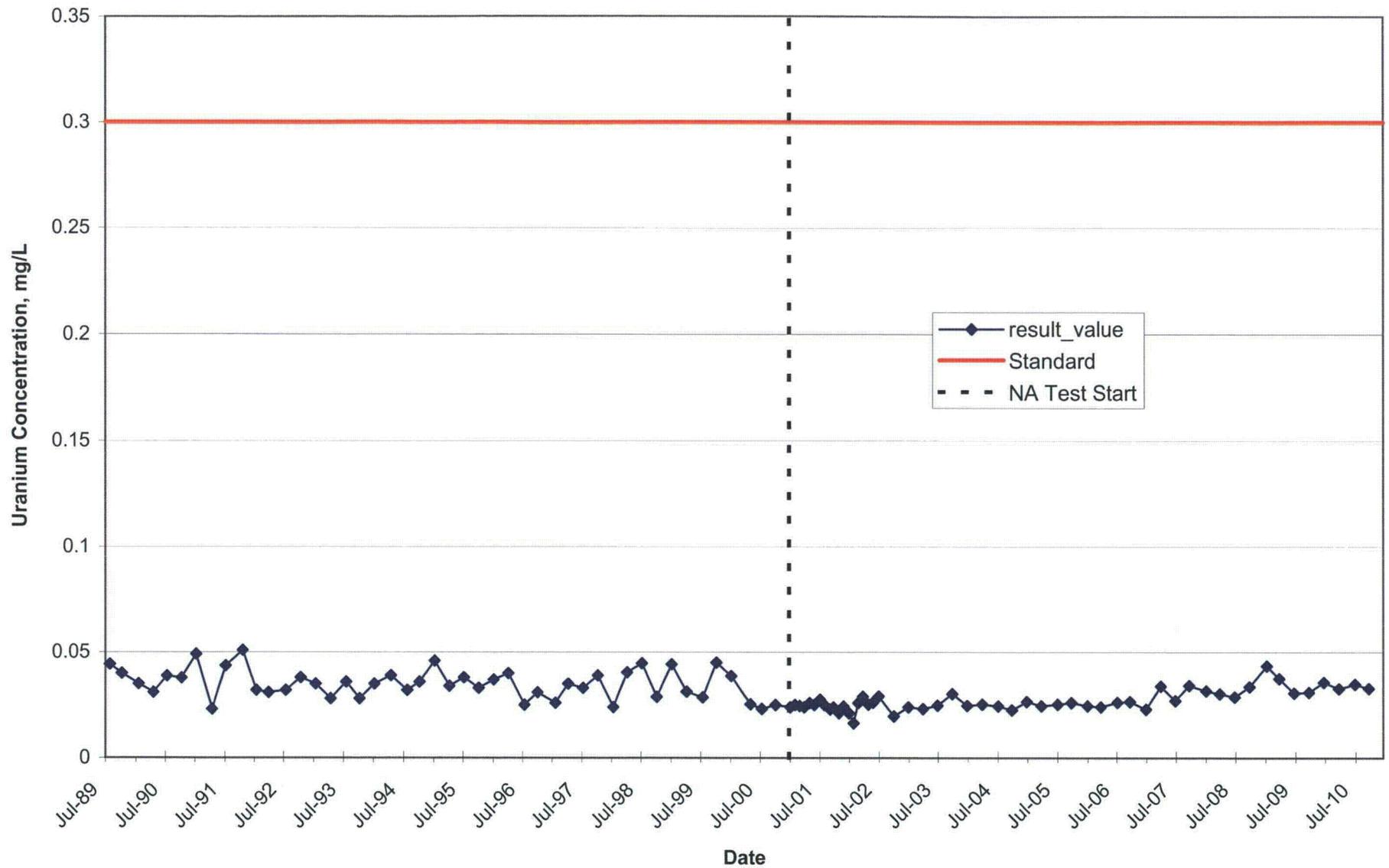


FIGURE 32
 Uranium and Bicarbonate Concentrations in Well EPA 25
 United Nuclear Corporation Church Rock Site, Church Rock, New Mexico

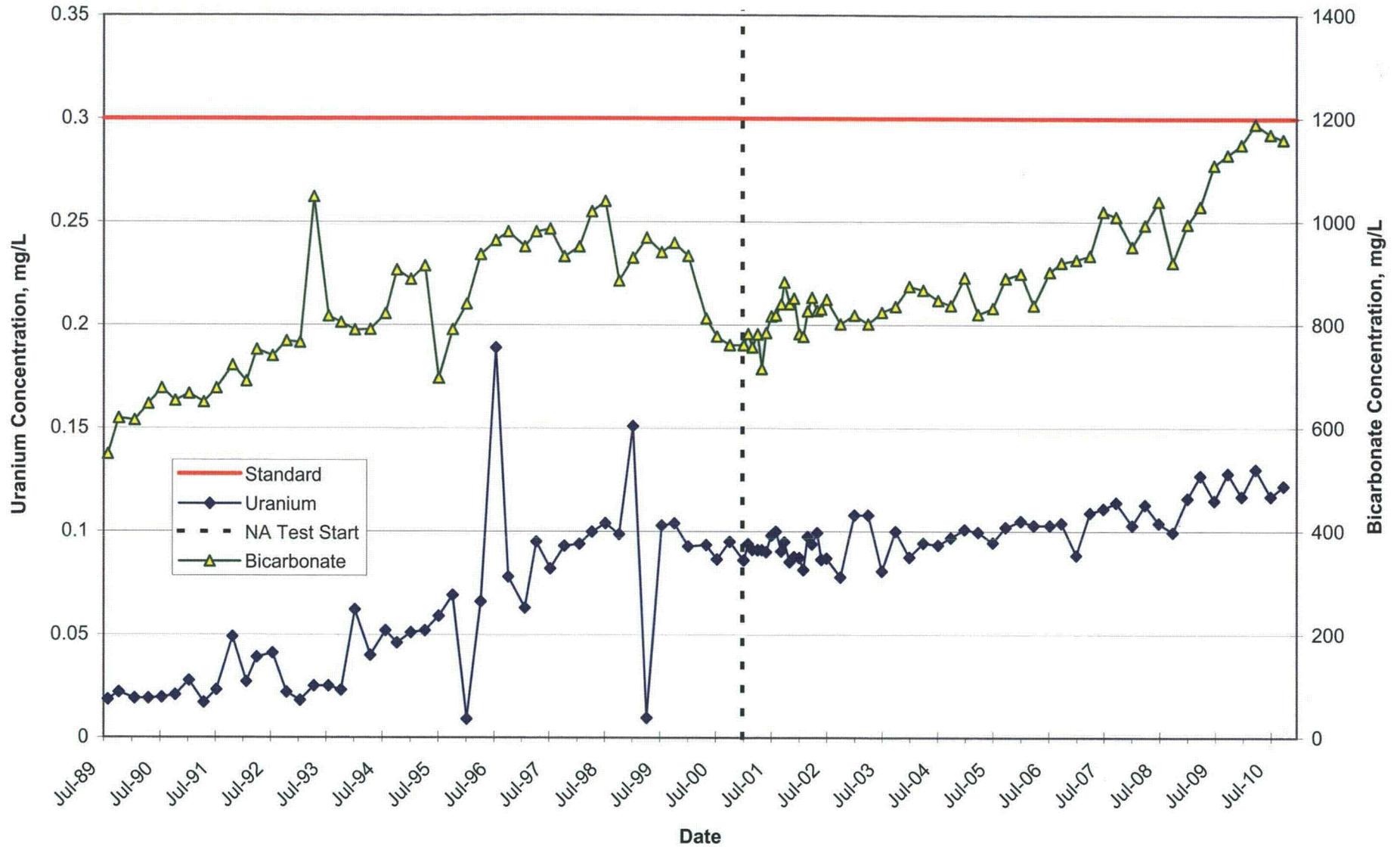
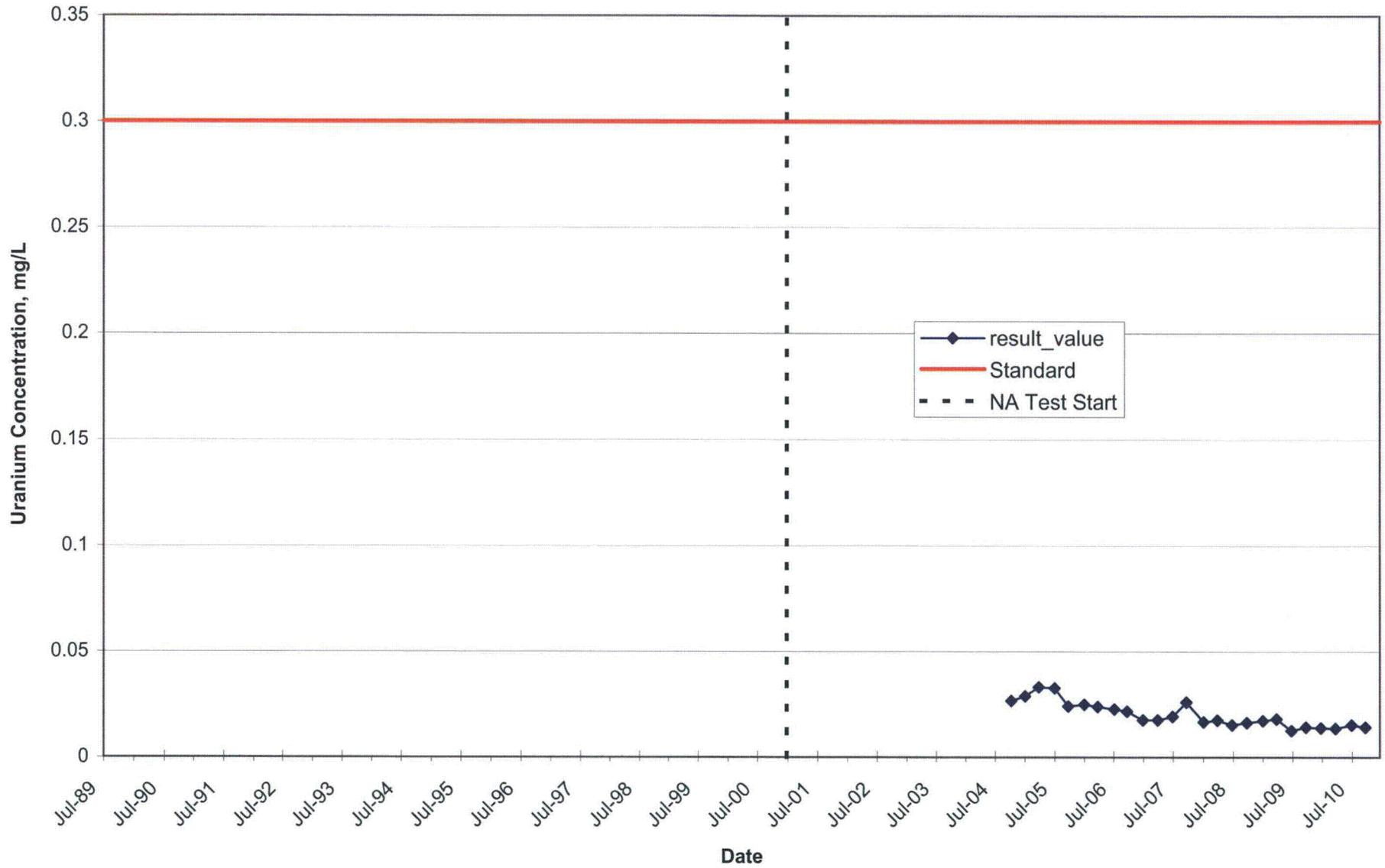
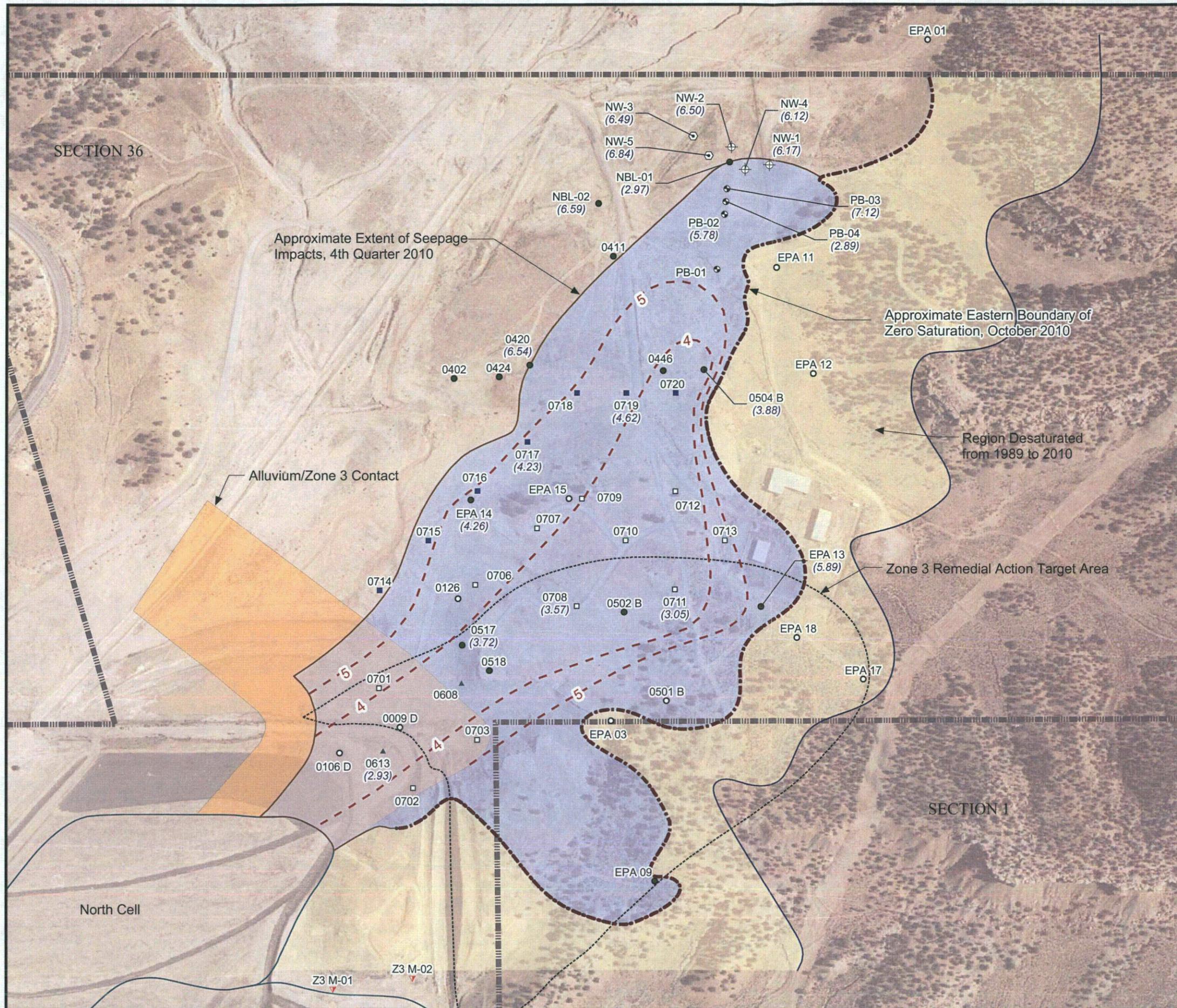


FIGURE 34
Uranium Concentration in Well SBL-01
United Nuclear Corporation Church Rock Site, Church Rock, New Mexico





Legend

- ▬▬▬▬▬ Property Boundary
 - Zone 3 Target Remedial Action Area
 - Section Boundary
 - Cell Boundary
 - Approximate Area Impacted by Tailings Seepage
- Well Type**
- Monitoring
 - ⊕ Northernmost Pumping Wells
 - ⊙ Northernmost Pumping Wells (Off)
 - Dry Monitoring
 - Stage I Extraction
 - Stage II Extraction
 - ⊙ Plume Boundary
 - ▲ Northeast Pump-Back
 - ▼ Piezometer
 - Approximate Eastern Boundary of Zero Saturation
 - - - - - pH contour

Notes:

1. Well names are displayed with black text.
2. Values for field measured pH are shown with purple text and enclosed in parentheses.
3. Aerial photo taken on August 1, 1996.

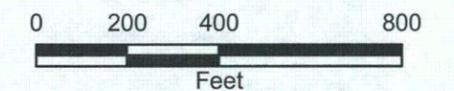


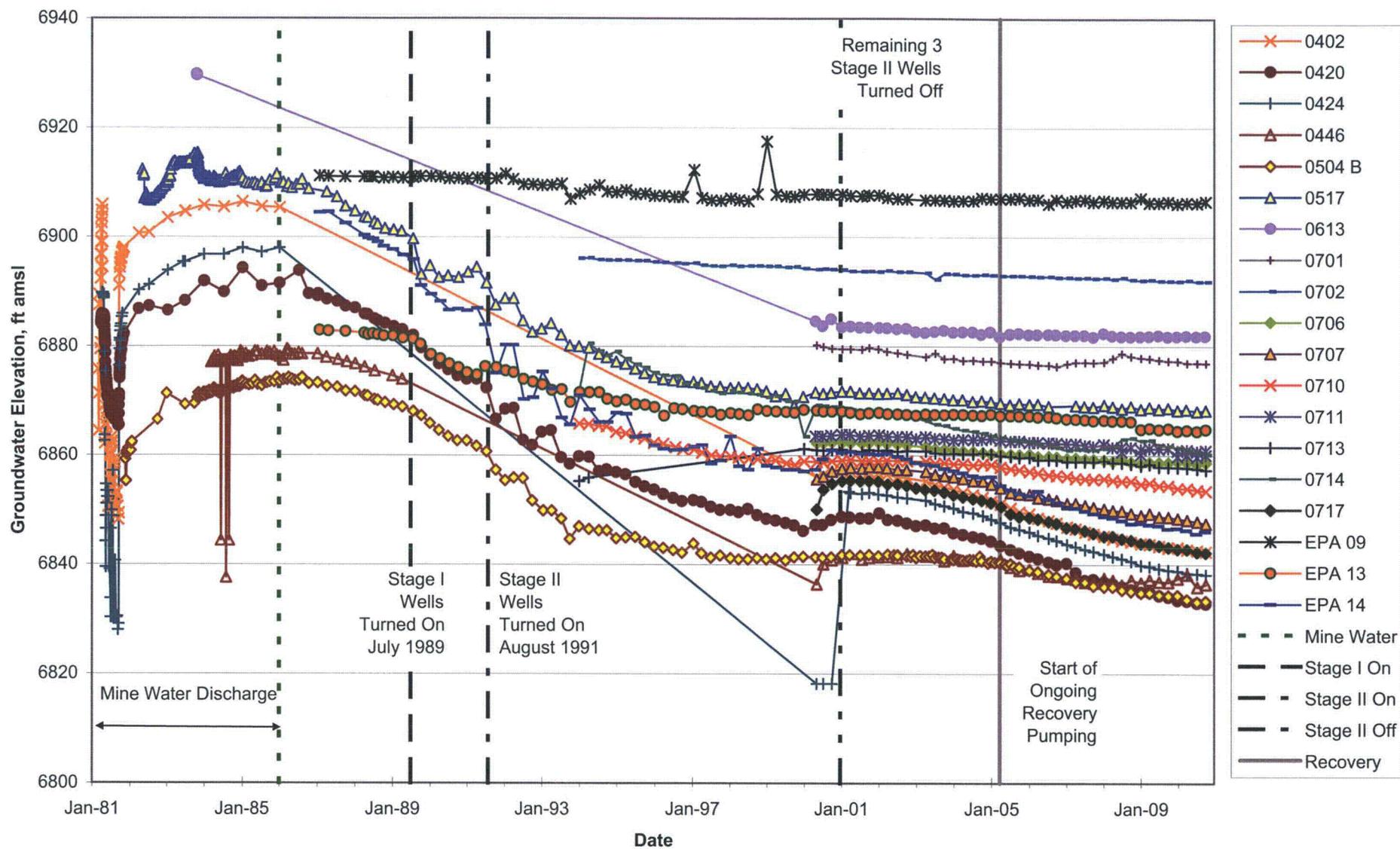
FIGURE 35

Zone 3 Approximate Extent of Seepage Impacts, October 2010

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



FIGURE 36
 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
- (6906.46) Measured 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.

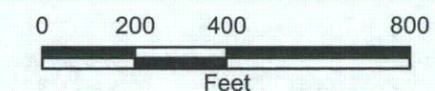
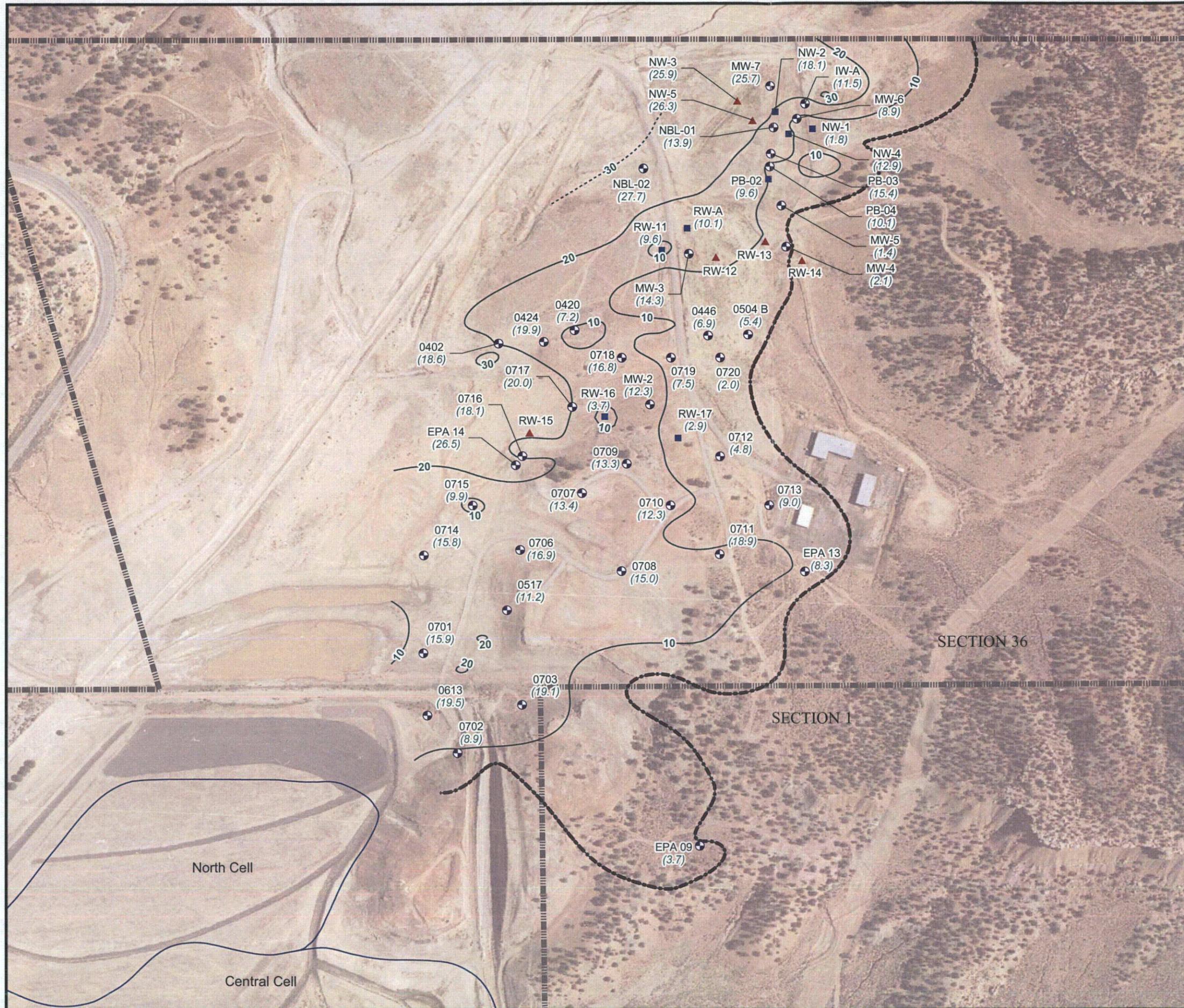


FIGURE 37
 Zone 3 Potentiometric Surface Map
 October 2010

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





Legend

- ⊕ Monitoring Well
- ▲ Non-Pumping Well
- Pumping Well
- Saturated Thickness Contour
- - - - - Inferred Saturated Thickness Contour
- - - - - Approximate Eastern Boundary of Zero Saturation
- Cell Boundary
- ▬▬▬▬ Property Boundary
- (3.6) Measured 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.

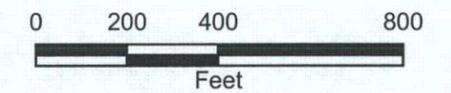


FIGURE 38

**Zone 3 Saturated Thickness Map
October 2010**

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

