FIVE-YEAR REVIEW REPORT

Second Five-Year Review Report

for the

United Nuclear Corporation
Ground Water Operable Unit

Church Rock

McKinley County, New Mexico

September 2003

PREPARED BY:

United States Environmental Protection Agency Region 6
Dallas, TX



157511

SECOND FIVE-YEAR REVIEW

United Nuclear Corporation Superfund Site
EPA ID# NMD030443303
Church Rock, McKinley County, New Mexico

This memorandum documents the U.S. Environmental Protection Agency (EPA) approval of the United Nuclear Corporation Superfund Site Second Five-Year Review Report prepared by EPA Region 6 with the assistance of the United Nuclear Corporation (UNC), the General Electric Company (GE), and UNC environmental contractors Earth Tech, Inc. and USFilter.

Summary of Five-Year Review Findin-gs

The remedy for the UNC Superfund Site (the Site) is currently considered protective of human health and the environment because there is no evidence that there is current exposure. However, the remedy is not functioning as intended by the 1988 EPA CERCLA Record of Decision (ROD). Operational results for the Zone 1 and Zone 3 extraction well systems demonstrated significant declines in pumping rates over time due to insufficient natural recharge of the aquifers. The loss in saturation reached levels which did not support pumping and the systems were shut down. The Zone 3 system was also shut down because it was accelerating the migration of the contaminant plume, rather than containing it. In the case of the Southwest Alluvium, the extraction well system provided partial hydraulic containment to tailing-seepage migration, but there was little progress in achieving Site cleanup levels over time. The Southwest Alluvium extraction well system was temporarily shut off to conduct a natural attenuation test. The UNC has completed the natural attenuation test, along with a technical impracticability (TI) evaluation. The UNC has presented those test results to the EPA and other regulatory agencies, and has recommended to the EPA that it consider monitored natural attenuation (MNA) and a TI Waiver as remedial alternatives for the Southwest Alluvium and Zone 1. The UNC is studying other remedial options for Zone 3. The UNC has also initiated discussions with the Navajo Nation for the possible use of institutional controls (ICs) to restrict the use of seepage-impacted ground water outside of the UNC property boundary.

Actions Needed

Based on the remedial technical data and the findings of this review, as well as the scheduled promulgation by the EPA of several new Maximum Contaminant Levels under the Safe Drinking Water Act (SDWA) for Site contaminants of concern (COCs), there is a question as to the long-term protectiveness of the Site ground water operable unit remedy. Accordingly, I have determined that the EPA will implement a supplemental feasibility study in order to investigate and evaluate possible remedial alternatives and to support a possible Amended ROD, or Explanation of Significant Differences as appropriate. It is recommended that further characterization of the Southwest Alluvium contaminant plume be performed. It is also recommended that the supplemental feasibility study examine the establishment of institutional controls (ICs) to restrict the use of impacted ground water, as well as other issues identified in Sections 9 and 10 of this report.

Determination

I have determined that the ground water operable unit remedy for the Site remains protective, provided that certain recommended actions are accomplished as set forth above.

Myron O. Knudson, P.E.
Director, Superfund Division
U.S. Environmental Protection Agency Region 6

9/18/03
Date

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Determinations

I have determined that the ground water operable unit remedy for the Site remains protective, provided that certain recommended actions are accomplished as set forth above.

_____ _____

Myron O. Knudson, P.E. Date
Director, Superfund Division
U.S. Environmental Protection Agency Region 6

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ABBREVIATIONS AND ACRONYMS

ARAR	Applicable or Relevant and Appropriate Requirement
ALARA	As Low As Reasonably Achievable
ACL	Alternate Concentration Limit
CaCO3	Calcium Carbonate
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Cl	Chloride
cm/sec	Centimeters Per Second
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
ESD	Explanation of Significant Differences
FS	Feasibility Study
gpm	Gallons Per Minute
HIs	Hazard Indices
IC	Institutional Control
in/yr	Inches Per Year
MCL	Maximum Concentration Limit
mg/l	Milligram(s) Per Liter
Mn	Manganese
MOU	Memorandum of Understanding
NCP	National Contingency Plan
Navajo EPA	Navajo Environmental Protection Agency
NMAAS	New Mexico Alternate Abatement Standards
NMAC	New Mexico Administrative Code
NMED	New Mexico Environmental Department (formerly NMEID)
NMEID	New Mexico Environmental Improvement Division
NMWQA	New Mexico Water Quality Act
NMWQCC	New Mexico Water Quality Control Commission Regulations
NO3	Nitrate
NPL	National Priority List
NRC	U.S. Nuclear Regulatory Commission
NSP	Navajo Superfund Program
O&M	Operations and Maintenance
OU	Operable Unit
pCi/l	picoCurie(s) per liter
PRP	Potentially Responsible Party
PHA	Public Health Assessment
RA	Remedial Action
RAP	Remedial Action Plan
RD	Remedial Design
RI	Remedial Investigation
RI/FS	Remedial Investigation and Feasibility Study
ROD	Record of Decision
SO4	Sulfate

TDS	Total Dissolved Solids
UMTRCA	Uranium Mill Tailings Radiation Control Act
UNC	United Nuclear Corporation
USFWS	U.S. Fish and Wildlife Service

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EXECUTIVE SUMMARY

The Five-Year Review summarizes the remedial activities undertaken from September 1998 to date by the United Nuclear Corporation (UNC) for the former Church Rock Uranium Mill Superfund site (Site) in McKinley County, New Mexico. This is the second Five-Year Review report (Report) for the Site. The triggering action for the review is the issuance date of the previous Five-Year Review, dated September 24, 1998. The Five-Year Review is required because hazardous substances, pollutants, or contaminants (hereinafter "contaminants") remain at the Site above levels that allow for unlimited use and unrestricted exposure.

Based on the requirements of the United States Environmental Protection Agency's (EPA's) 1988 Record of Decision (ROD) as implemented through a Unilateral Administrative Order (UAO) issued by the EPA to UNC on June 29, 1989, UNC, assisted by the General Electric Company (GE), and several UNC environmental contractors, compiled investigative data, characterized contaminants, conducted engineering designs and implemented the required remedial actions. Remedial activities at the Site have included ground water extraction and aeration to remove metals, radionuclides, total dissolved solids (TDS), sulfate, and nitrates from three aquifers, quarterly ground water monitoring; and operation and maintenance of the treatment system. These activities have been fully documented in annual reports, engineering design reports and as-built construction reports. All reports were provided to the EPA, the U.S. Nuclear Regulatory Commission (NRC), the New Mexico Environmental Department (NMED), and the Navajo Nation Environmental Protection Administration (Navajo EPA) as well as made available to the public via the public record repositories. This Report has been prepared to provide a summary of remedial activities completed from 1998 through 2002 and to assure that each remedial activity has been effective in protecting human health and the environment.

Site Background

Under a 1988 Memorandum of Understanding (MOU) between the EPA and the NRC, 53 Fed. Reg. 37887 (Sept. 28, 1988), the NRC is the lead federal agency regulating the reclamation and closure activities completed at the by-product material (tailings) disposal site, pursuant to Source Materials License No. SUA-1475 (License) and the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978, 42 U.S.C. §7901 *et seq*. Under the MOU, the NRC-regulated reclamation and source control actions are subject to the EPA monitoring and review to ensure that such actions will allow attainment of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requirements. Further, the EPA is the lead federal

agency responsible for remediation of ground water contamination outside of the tailings disposal site.

The Site was listed on the CERCLA National Priorities List (NPL) of Superfund sites by the EPA, 48 Fed. Reg. 40658 (Sept. 8, 1983), due to migration of radionuclides and chemical constituents into the ground water. The migration resulted from releases of uranium mill tailings from the Site. The EPA conducted a Site Remedial Investigation (RI) and Feasibility Study (FS) from 1984 through 1988. The RI report concluded that mine discharges and tailing seepage impacted the alluvial aquifer, and Zone 1 and Zone 3 of the Upper Gallup Sandstone. Mine water discharges significantly recharged these three aquifers and mixed with seepage from the tailings ponds after milling operations began in 1977. The dewatering of uranium mines, as well as spills and seepage from tailings disposal area caused contamination of three geologic formations, the Southwest Alluvium, Zone 1 of the Gallup Sandstone, and Zone 3 of the Gallup Sandstone. The quality and presence of ground water that may have resided prior to operation of the Site is a subject of some contention.

Remedial Action

The EPA conducted the RI/FS, resulting in the issuance of a ROD to address ground water contamination outside of the tailings disposal site. The NMED and NRC reviewed the RI/FS and supported the remedial action described in the ROD. The ROD specified that the contaminants of primary concern are arsenic, cadmium, cobalt, nickel, radium-226/228, selenium, and gross alpha. Other contaminants that were also identified in the ROD as exceeding contaminant-specific applicable or relevant and appropriate requirements (ARARs) were aluminum, manganese, molybdenum, nitrate, and total dissolved solids (TDS). Sulfate was among other compounds listed in the ROD as contaminant-specific ARARs. The ROD dictated a remedy at the Site to contain, remove, and evaporate contaminated ground water from the three geologic formations. The ROD set cleanup levels from either National Primary Drinking Water Standards (Maximum Contaminant Levels, MCLs); New Mexico Water Quality Control Commission (NMWQCC) regulation standards; health-based standards, for those constituents where MCLs and NMWQCC standards were not available; and background standards where background levels were higher than federal and state standards. The remedy comprises the following six elements:

- *Implementation of a monitoring program to detect any increases in the areal extent, or concentration of groundwater contamination at, and outside of, the boundary of the tailings disposal area;*

- *Operation of existing seepage extraction systems in the Upper Gallup aquifers*
- *Containment and removal of contaminated ground water in Zone 3 of the Upper Gallup Sandstone utilizing existing and additional wells;*
- *Containment and removal of contaminated ground water in the Southwest Alluvium utilizing existing and additional wells;*
- *Evaporation of [extracted] ground water … using evaporation ponds supplemented with mist or spray systems to enhance the rate of evaporation;*
- *Implementation of a performance monitoring and evaluation program to determine water level and contaminant reductions in each formation, and the extent and duration of pumping actually required outside the tailings disposal area.*

First Five-Year Review

The remedial action achieved construction completion in 1989 and has been operating in accord with the ROD since that time. The first Five-Year Review for the Site was finalized on September 24, 1998. That review documented in a report issued by the EPA, generally concluded that each unit (Southwest Alluvium, Zone 1 and Zone 3) needed to be assessed independently, because of the unique and specific hydrogeological and hydrogeochemical differences between them. In the Southwest Alluvium, the report recommended that UNC apply for Alternate Concentration Limits (ACLs), or pursue approval of a Technical Impracticability (TI) Waiver or an As Low as Reasonably Achievable (ALARA) demonstration. Upon satisfactory completion of one of those alternatives, then the Southwest Alluvium ground water extraction system could be converted into monitoring wells. The report recommended that in Zone 3, ground water extraction wells be converted to monitoring wells because of ineffective extraction rates and potential for accelerating contaminant migration. In Zone 3, as in the Southwest Alluvium, the report recommended that UNC apply for ACLs, or a TI Waiver. The report indicated that UNC should also conduct a background water quality evaluation for all constituents that were being included in the performance-monitoring program. Finally, for Zone 1, the report recommended that all extraction wells be turned off and converted into monitoring wells, with any converted wells being required to be analyzed quarterly. Again, UNC was invited to apply for ACLs, or alternatively to seek a TI Waiver or an ALARA demonstration.

As a result of the conclusions and recommendations of the first Five-Year Review, the three formations have been evaluated separately, and the results documented in Annual Reports, formation-specific geochemistry reports, and other technical memoranda. The ground water

monitoring network was revised in 2001 by conversion of recommended extraction wells to monitoring wells, as well as adding water-quality sampling and water level monitoring in certain Site-related wells. A Southwest Alluvium geochemistry report was submitted in June 2000 and a natural attenuation (NA) and TI evaluation report was submitted in November 2002. Ground water extraction in Zone 3 was suspended in November 2000 with approval from EPA, NMED, and NRC. In Zone 3, ground water monitoring, including the installation of four new "plume boundary" wells, and hydraulic analyses are underway to determine whether alternate remedial options are appropriate and feasible. The Zone 1 pumping wells were turned off in July 1999, with the EPA and the NRC approval, and a Zone 1 geochemistry report was submitted in May 2000. That report proposed that the remedy be changed to a combination of (1) monitored natural attenuation (MNA) for neutralization and chemical removal; (2) a TI Waiver because of low formation yield and background levels of sulfate, TDS, and manganese; and (3) institutional controls (ICs) to restrict the use of contaminated ground water.

Conclusions and Recommendations of this Five-Year Review

The principal conclusion of this second Five-Year Review is that the Site remedy is currently protective of human health and the environment. Several significant issues are noted during this Five-Year Review that do not appear to directly impact the protectiveness of the remedy at this time, but which will require follow-up: (1) any necessary further plume characterization, analysis, and monitoring activities (including the installation and sampling of additional monitoring wells) and identification and evaluation of ICs, should be completed for the Southwest Alluvium in connection with the Supplemental Feasibility Study noted below; (2) analysis of NA and potential TI Waivers for Zone 1 and the Southwest Alluvium should be completed and decisions made with respect to their acceptability in accordance with NCP procedures; and (3) a Supplemental Feasibility Study should be implemented to identify and evaluate further remedial alternatives in support of possible future CERCLA response action decision-making.

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Five-Year Review Summary Form

SITE IDENTIFICATION

Site name *(from WasteLAN)*: United Nuclear Corporation

EPA ID *(from WasteLAN)*: NMD030443303

Region: 6	**State: NM**	**City/County: Church Rock / McKinley County**

SITE STATUS

NPL status: ☒ Final ☐ Deleted ☐ Other (specify)

Remediation status (choose all that apply): ☐ Under Construction ☒ Operating ☐ Complete

Multiple OUs?* ☐ YES ☒ NO | **Construction completion date:** _10__ / 31___ / __89_

Has Site been put into reuse? ☐ YES ☒ NO

REVIEW STATUS

Lead agency: ☒ EPA ☐ State ☐ Tribe ☐ Other Federal Agency _____

Author name: Mark Purcell

Author title: Remedial Project Manager | **Author affiliation: EPA**

Review period:** __12_ / ___ / 03_____ to _9__ / _24__ / __03____

Date(s) of Site inspection: __1_ / 29___ / ___03___

Type of review:

☒ Post-SARA ☐ Pre-SARA ☐ NPL-Removal only
☐ Non-NPL Remedial Action Site ☐ NPL State/Tribe-lead
☐ Regional Discretion

Review number: ☐ 1 (first) ☒ 2 (second) ☐ 3 (third) ☐ Other (specify) _____

Triggering action:

☐ Actual RA OnSite Construction at OU #__ ☐ Actual RA Start at OU#____
☐ Construction Completion ☒ Previous Five-Year Review Report
☐ Other (specify)

Triggering action date *(from WasteLAN)*: __9_ / _24__ / _1998_____

Due date *(five years after triggering action date)*: __9_ / _24__ / 2003_____

* ["OU" refers to operable unit.]
** [Review period should correspond to the actual start and end dates of the Five-Year Review in WasteLAN.]

Five-Year Review Summary Form, cont'd.

Issues:

- Lack of institutional controls for restricting the use of ground water in Zone 1 and the Southwest Alluvium.
- Monitored natural attenuation and technical impracticability for the Southwest Alluvium and Zone 1 of the Gallup Formation.
- Remedy effectiveness for the Southwest Alluvium and Zone 1 and Zone 3 of the Gallup Formation.
- Zone 3 plume migration.
- Increasing contaminant concentrations during the natural attenuation test and delineation of contaminant plume (sulfate and TDS) in the Southwest Alluvium.

Recommendations and Follow-up Actions:

- A Supplemental Feasibility Study (SFS) should be performed to identify further remedial alternative(s) in support of possible future CERCLA response action decision-making. The SFS would consider potential new site ARARs, as well as the issues noted below.
- Institutional controls should be evaluated and considered in accordance with the NCP as part of the SFS for the seepage-impacted areas in the Southwest Alluvium in Section 3 and Section 10, and in Zone 1 of the Gallup Formation in Section 1.
- Further plume characterization should be conducted for the Southwest Alluvium.
- Analysis of proposal for changing the Southwest Alluvium and Zone 1 remedial actions to monitored natural attenuation with technical impracticability waivers should be evaluated and considered as part of the SFS.

Protectiveness Statement(s):

The ground water remedy at the United Nuclear Corporation Church Rock Site currently protects human health and the environment because there are no known users of the impacted ground water and, consequently, there is no evidence of exposure.

Long-Term Protectiveness:

In order to assure the protectiveness of the remedy in the long term, the actions recommended above should be implemented.

Five-Year Review Summary Form, cont'd.

Other Comments:

The Site appears to be well maintained, and the operator is effectively maintaining the remedial systems as designed and installed. The key parties involved with the Site cleanup are the U.S. Nuclear Regulatory Commission, the New Mexico Environment Department, the Navajo Nation Environmental Protection Administration, the United Nuclear Corporation and the U.S. Environmental Protection Agency.

Five-Year Review Report
United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

1.0 INTRODUCTION

The United States Environmental Protection Agency (EPA) Region 6 has conducted a Five-Year Review of the remedial actions implemented at the United Nuclear Corporation (UNC) Church Rock Superfund Site (hereafter the "Site"), located approximately 17 miles northeast of Church Rock, McKinley County, New Mexico (Figure 1-1).

The purpose of this Five-Year Review Report (Report) is to summarize the remedial actions at this Site during the five-year period from 1998 through April 2003, evaluate the effectiveness of the remedial actions, and demonstrate that the remedial actions still in progress continue to be protective of human health and the environment.

This Report provides the basis for the Five-Year Review required by Section 121(c) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, and Section 300.430 (f)(4)(ii) of the National Oil and Hazardous Substances Contingency Plan (NCP). CERCLA §121 states:

> *If the President selects a remedial action that results in any hazardous substances, pollutants, or contaminants remaining at the Site, the President shall review such remedial action no less often than each five years after the initiation of such remedial action to assure that human health and the environment are being protected by the remedial action being implemented. In addition, if upon such review it is the judgment of the President that action is appropriate at such Site in accordance with section [104] or [106], the President shall take or require such action. The President shall report to the Congress a list of facilities for which such review is required, the results of all such reviews, and any actions taken as a result of such reviews.*

The agency interpreted this requirement further in the National Contingency Plan (NCP); 40 CFR §300.430(f)(4)(ii) states:

> *If a remedial action is selected that results in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, the lead agency shall review such action no less often than every five years after the initiation of the selected remedial action.*

This Report documents the results of the Five-Year Review conducted from December 2002 through September 2003. The review was performed in accord with the EPA's Comprehensive Five-Year Review Guidance (EPA, June 2001).

This is the second Five-Year Review for the Site. The triggering action for the review is the signature date of the previous Five-Year Review report, September 24, 1998. The Five-Year Review is required because hazardous substances, pollutants, or contaminants (hereinafter "contaminants") remain at the Site above levels that allow for unlimited use and unrestricted exposure.

The United States Nuclear Regulatory Commission (NRC) is the lead federal agency regulating the reclamation, and closure activities at the by-product material (tailings) disposal site, pursuant to Source Materials License No. SUA-1475 (License). Once those activities are completed and the NRC terminates the License, the property will be released and turned over to the United States Department of Energy (DOE) for long-term surveillance monitoring. This transfer is dictated by the Uranium Mill Tailings Radiation Control Act (UMTRCA) of 1978, which directs DOE to stabilize, dispose of, and control uranium mill tailings at inactive mill sites (DOE, October 1999).

Under a 1988 Memorandum of Understanding (MOU) between the EPA and the NRC, the EPA is responsible for regulating the remediation of ground water contamination outside of the tailings disposal site under CERCLA and the NRC is the lead agency responsible for surface reclamation and source control at the licensed site.

The first Five-Year Review for the Site was conducted in 1998 and generally concluded that since little progress had been made in reaching CERCLA ground water remediation goals with respect to components of the remedy, the Respondent UNC (the Site owner and operator) could apply for alternate concentration limits (ACLs) or technical impracticability (TI) waivers.

2.0 SITE CHRONOLOGY

A chronology of significant Site events and dates is included in Table 2-1. Sources of this information are listed in Attachment A, Documents Reviewed.

TABLE 2-1
Chronology of Site Events
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Event	Date
UNC milling operations begin.	June 1977
Dam on south tailings disposal cell is breached, releasing an estimated 93 million gallons of uranium mill tailings and pond water to Pipeline Canyon and the Rio Puerco. EPA Region 6 and NMEID respond to release.	July 1979
New Mexico Environment Improvement Division orders UNC to implement discharge plan to control contaminated tailing seepage.	October 1979
UNC announces mill closing due to depressed uranium market.	May 1982
Site placed on the National Priorities List (NPL) of Superfund Sites due to off-site migration of radionuclides and chemical constituents in ground water.	1983
EPA conducts Remedial Investigation (RI) field activities to determine the nature and extent of groundwater contamination in the three water-bearing formations at the Site.	March 1984-August 1987
In 1984, UNC blocked EPA access to the Church Rock facility, and EPA brought an action to compel site access. UNC counterclaimed seeking declaratory and injunctive relief. The U.S. District Court granted an EPA motion to dismiss the UNC counterclaims, and UNC provided access to the Site to EPA. *United States v. United Nuclear Corporation*, 610 F Supp. 527, 528 (D.N.M., 1985).	April 18, 1985
NMEID returns Uranium Mill Tailings Radiation Control Act (UMTRCA) federal regulatory program to the U.S. Nuclear Regulatory Commission (NRC)	June 1986
EPA and NRC sign MOU coordinating EPA's CERCLA ground water remedial action with NRC's reclamation and closure activities under the Source Materials License.	August 26, 1988
EPA releases RI and Feasibility Study (FS) report along with proposed plan of action field sheet.	August 1988
EPA issues ROD for extraction of contaminated water and evaporation of the extracted water as the remedy for ground water contamination outside of the tailings disposal site.	September 30, 1988
UNC submits Remedial Design Report.	April 1989
Remedial action implemented in Zone 3 – 12 new extraction wells begin pumping.	August 1989
Remedial action implemented in Zone 1 – Borrow Pit No. 2 dewatered.	April 1989

TABLE 2-1
Chronology of Site Events
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

EPA issues Unilateral Administrative Order Docket No. CERCLA 6-11-89 to UNC requiring UNC to implement the Site CERCLA ground water operable unit remedy determined by the ROD.	June 29, 1989
Remedial action implemented in Southwest Alluvium – 3 new extraction wells begin pumping.	October 1989
Ground Water Corrective Action Annual Review 1989 documents remedial action construction completion.	December 1989
United States had brought action against UNC in 1991 for response cost recovery under CERCLA; and in late 1992, the U.S. District Court issued an opinion and order granting a U.S. motion for partial summary judgment on the issue of costs and denying a UNC cross motion for summary judgment. *United States v. United Nuclear Corporation*, 814 F Supp. 1552 (D.N.M., 1992).	December 28, 1992
NRC issues a background water quality study that recommends higher concentrations of background constituents than presented in the ROD.	1996
First Five-Year Review completed.	September 24, 1998
NRC, EPA, and NMED approve the decommissioning of 10 Zone 3 wells, 3 Zone 1 wells, and 1 Southwest Alluvium well because they meet the decommissioning criteria of producing less than 1 gpm.	July 30, 1999
NRC approves eliminating the Section 1 portion of Zone 3 as a point of exposure.	September 16, 1999
UNC submits Technical Impracticability waiver request to EPA, NRC and NMED	May 2000
All but three Zone 3 wells decommissioned in accord with criterion.	June 2000
EPA directs UNC to shut down remaining three Zone 3 wells to slow seepage migration rate.	November 2000
License Amendment No. 31 allows UNC to temporarily suspend the corrective action pumping in Zone 3. A decision on future remedial actions in Zone 3 will be made after 12-18 months of sampling.	December 29, 2000
License Amendment No. 32 approves the conversion of the Zone 3 Phase II extraction wells to monitoring wells.	March 8, 2001
EPA gives UNC approval to temporarily shut down Southwest Alluvium extraction wells and an 18-month Natural Attenuation Test is conducted.	February 2001 through July 2002, report submitted November 2002
UNC submits Final Report and Technical Impracticability Evaluation – Southwest Alluvium Natural Attenuation Test to EPA, NRC and NMED	November 2002

3.0 BACKGROUND

3.1 Physical Characteristics

The UNC operated the Site as a uranium mill facility from 1977 to 1982. The Site includes a former ore processing mill and tailings disposal area, which cover about 25 and 100 acres, respectively (Figure 3-1). The tailings disposal area is subdivided by dikes into three cells identified as the South Cell, Central Cell, and North Cell.

Pipeline Canyon runs through the Site from northeast to southwest. Site alluvium occurs along this drainage feature, including its floodplain. Upslope, Pipeline Canyon passes into Pipeline Arroyo (into which uranium mine water was formerly discharged). Pipeline Canyon is locally flanked by gentle mesas and land that has been regraded in conjunction with milling and former waste handling activities.

Site area annual precipitation averages 11 inches per year (in/yr). The Site alluvium ground water flows toward the southwest (in the same direction as surface water flow).

3.2 Site Hydrogeology

The Site is situated on alluvial valley fill and sandstones and shales of Cretaceous age. The stratigraphic units identified in the vicinity of the Site, in descending order, are as follows:

- Southwest Alluvium
- Dilco Member of the Crevasse Canyon Formation
- Upper Gallup Sandstone
  - Zone 3, upper sandstone
  - Zone 2, shale and coal
  - Zone 1, lower sandstone
- Mancos Shale

The Mancos Shale, which has a low permeability, acts as an aquitard to prevent or retard the downward migration of ground water. Lithologic well logs indicate that the Mancos Shale is approximately 130 feet thick in the vicinity of the Site (EPA, 1998).

Geologic surface mapping showed the sedimentary bedrock layers are overall very gently dipping (inclined) toward the north (though the bed contacts undulate and are locally flexured).

The ground water operable unit (OU) consists of the three uppermost water-bearing units or aquifers. From the geologically youngest to the oldest, these units are referred to as: (1) Southwest Alluvium (Quaternary age unconsolidated materials along Pipeline Canyon, having a maximum thickness of approximately 150 ft and a maximum width of approximately 4,000 ft); (2) Zone 3 (uppermost stratigraphic unit of the Cretaceous age Upper Gallup Sandstone, having a thickness of 70 to 90 ft in the former tailings disposal area); and (3) Zone 1 (lowest stratigraphic unit of the Cretaceous age Upper Gallup Sandstone, having a thickness of 80 to 90 ft in the former tailings deposit area) (Canonie Environmental, 1987).

Mine water was discharged to the Pipeline Arroyo, which infiltrated into the alluvium and then into the Zone 3 and Zone 1 aquifers. The mine-discharge water is referred to as the post-mining, pretailings water in the ROD and is considered the background water for the Site. Seepage from the tailings, which were deposited in the tailings disposal area beginning in 1977, then impacted this background water. Impact from the tailings seepage has been observed in the alluvium southwest of the tailings impoundment (Southwest Alluvium) and in Zone 3 and Zone 1 to the northeast and east of the impoundment (EPA, 1998).

Water in the Southwest Alluvium flows to the southwest along the Pipeline Arroyo. Water in Zones 1 and 3 flows to the northeast. The source of the water in all three formations is in large measure historical mine-discharge water infiltration. Water levels in all three formations reached their highest levels between 1977 and 1986 and have been steadily declining since the mine water discharge ceased in 1986 and are returning to pre-mining levels. As of the end of 1996, the mine discharge water in the northern part of the alluvium, located approximately 2,800 feet north of the tailings disposal area, had all drained out as evidence by the fact that several wells (Wells 639, 642, 644, and 645) were all dry.

3.3 Land and Resource Use

The Site was historically used to mill uranium and related activities, as described in Section 3.4. Milling activities ceased at the Site in 1982, and the tailings disposal areas have since been closed in accord with UNC's License for radioactive material. Currently, activities at the Site are limited to operations and maintenance (O&M) of the ground water remedial program and the tailings cap. Two full-time and one part-time employees work at the Site and there is one employee residence on the Site near the

former milling building. Both the residence and the Site use bottled water for drinking. An on-Site well drilled into the Westwater Formation, well below the Gallup Formation, supplies other domestic uses.

Land use at the time of the ROD, as described in the Remedial Investigation (RI) (CH2MHILL, 1988), is as follows: *The Church Rock Site is in an isolated area. There are no people living within the Site boundary. The closest downgradient public-use well is about 2,700 meters to the northeast. With the exception of the mine and mill activity, the land use is primarily grazing for sheep, cattle, and horses.*

The area around the Site is still sparsely populated and includes Indian Tribal Land as well as UNC-owned property. The primary use of the Indian Tribal Land is grazing. Land use has not changed since the issuance of the ROD.

It is noted that the Ft. Defiance Housing Corporation, in conjunction with the U.S. Department of Housing and Urban Development and the Navajo Housing Authority, is planning to develop a 1000-unit housing complex, called the Springstead Estates Project, in the vicinity of Springstead (approximately seven miles to the southwest of the Site, along Route 566). It is not exactly known where the developers plan to get the water supply for this project. However, it appears that on-site ground water wells may be used to pump ground water from the Westwater Canyon or the Dakota Sandstone aquifers.

It is also noted that Hydro Resources Incorporated (HRI) has received a Source Materials License (SUA-1580) from NRC for an *in-situ* uranium mining project to be located in Sections 8 and 17, approximately three or four miles south of the Site.

3.4 History of Contamination

The UNC uranium mill was granted a radioactive materials license by the State of New Mexico in May 1977, and operated from June 1977 to May 1982. The mill, designed to process 4,000 tons of ore per day, extracted uranium using conventional crushing, grinding, and acid-leach solvent extraction methods. Uranium ore processed at the Site came from the Northeast Church Rock and the Old Church Rock mines. The average ore grade processed was approximately 0.12 percent uranium oxide. The milling of uranium ore produced an acidic slurry of ground waste rock and fluid (tailings) that was pumped to the tailings disposal area. Uranium milling and tailings disposal were conducted and an estimated 3.5 million tons of tailings were disposed in the tailings impoundments (EPA, 1998).

3.4.1 Tailings Disposal and Leaching

Tailings disposal began in May 1977 and continued through May 1982. The primary sources of tailings seepage were the tailings liquids stored in the areas of Borrow Pits Nos. 1 and 2, the North Cell, and the South Cell. The North Cell has been the primary source of tailings seepage. An estimated 5 million gallons was previously available to migrate into the alluvium and Zone 3 located beneath the North Cell. Zone 1 is not affected by the seepage source in the North Cell because it is hydraulically separated from this source by Zone 2 (the middle unit of the Upper Gallup Sandstone, comprising approximately 15 to 20 ft. of coal and shale which acts as an aquiclude, strongly inhibiting vertical hydraulic communication and contaminant transport) (Canonie Environmental, 1987).

Two soil borrow pits (Pits No. 1 and No. 2) were present in the Central Cell area. Borrow Pit No. 1 was used to dispose of tailings and Borrow Pit No. 2 was used to retain tailings liquids (EPA, September 1988). The liquid stored in Borrow Pit No. 2 has been neutralized since 1983. However, it has been proposed (Canonie Environmental, 1987) that prior to 1983, both borrow pits behaved as a single hydraulic unit and provided a source of acidic seepage to the alluvium, Zone 3, and Zone 1.

3.4.2 Tailings Spill

In July 1979, the dam on the south cell breached, releasing approximately 93 million gallons of tailings and pond water to the Rio Puerco. The dam was repaired shortly after its failure. Cleanup of the resultant spill was conducted according to criteria imposed by state and federal agencies, including the EPA, at that time.

3.4.3 Ground Water Contamination

The Northeast Church Rock Mine operated from 1968 through 1982. To access the uranium ore in the deep bedrock, the mine had to be dewatered. Water from the Northeast Church Rock Mine was discharged to the northwest branch of Pipeline Arroyo at a location just north of the mine. Water was also discharged to the arroyo from a nearby mine operated by Quivira (formerly Kerr McGee). Mine water was discharged to the arroyo from March 1969 through February 1986 at an average rate of approximately 3,000 gallons per minute (gpm). The mine discharge water infiltrated the near-surface alluvium and the Upper Gallup Sandstone, significantly recharging these aquifers and creating an artificially high water table under the Site. The RI estimated that discharge water infiltrated into the alluvium at a rate of 250 gpm (CH2MHILL, August 1988). The

leaching or seepage of radioactive and non-radioactive contaminants, and associated constituents, occurred from the tailings disposal cells downward through the underlying soils and into the ground water. The primary contaminants-of-concern (COCs) that are present in ground water at the Site are listed on Table 3-1.

Three separate aqueous contaminant plumes have been investigated and characterized at the Site (Figure 3-2), one in each of the three aquifers, the Southwest Alluvium, Zone 1 and Zone 3. The contaminant plumes have been mapped by evaluating ground water chemistry conditions reflecting an effect from tailings fluid seepage. The affected ground waters have relatively low (acidic) pH and elevated concentrations of nitrate, sulfate, total dissolved solids (TDS), bicarbonate, chloride, select heavy metals, and select radionuclides. The background water, unaffected by tailings fluid seepage, exceeds New Mexico Water Quality Control Commission (NMWQCC) numerical ground water standards for several contaminants, including sulfate and TDS. The current configurations of the plumes are shown on Figure 3-2.

3.5 Initial Response

Prior to ROD issuance, UNC undertook the following actions under its NRC License. Initial corrective action to address ground water concerns began with tailings seepage investigations and neutralization of the acidic tailings. These actions were performed from 1979 through 1982. Tailings neutralization included the addition of ammonia and lime to the tailings. The NMED also required that UNC remediate ground water in Zones 1 and 3. This remediation, which began in 1982, consisted of installing and operating wells to extract tailings seepage, neutralizing the extracted water, and discharging the neutralized water into the tailings disposal cells.

The processes for reclamation and ground water remediation were implemented beginning in 1986 under the NRC License. A draft reclamation plan was submitted to NRC in 1987 and the final plan was approved in March 1991. The NRC required that reclamation construction activities begin in 1988, three years prior to final approval of the reclamation plan. The ground water remediation, as required under NRC regulations and in the License, was incorporated into the reclamation plan. The Corrective Action Plan (CAP) included cleanup standards for the Site as determined by the NRC.

The EPA's involvement at the Site began in 1981 when the Site was placed on the Interim Priority List under CERCLA. The Site was proposed for listing on the NPL in 1982 and placed on the NPL in 1983, because of seepage from the tailings and the

consequent off-site migration of radiological and chemical constituents in the ground water. The EPA commenced the remedial investigation and feasibility study (RI/FS) in March 1984 with the RI field activities being conducted from March 1984 through August 1987. The objectives of the RI field activities were to determine the nature and extent of ground water contamination in the Southwest Alluvium, and Zone 1 and Zone 3 of the Upper Gallup Sandstone. The EPA released the RI/FS report in August 1988, along with a proposed plan-of-action fact sheet for the Site ground water remediation. A Public Health Assessment (PHA) was included as an appendix to the RI. The PHA addressed the potential hazards to public health associated with the potential use of the impacted ground water near the Site. The PHA concluded that the potential risk associated with the use of ground water from Zones 1 and 3 exceeded 10^{-6} and the potential hazard quotient exceeded 1.0.

The RI concluded the following:

- An alluvial plume is present that extends a minimum of 1,000 feet past the south cell (Southwest Alluvium). The extent of the plume was beyond the furthest downgradient well (at that time). Alluvial contaminants included TDS, nitrate, sulfate, heavy metals (selenium, manganese, cadmium, and molybdenum), and radionuclides (predominantly gross alpha, but including detections of gross beta, radium-226, and -228).
- In Zone 3, an elongate TDS plume was present more than 2,000 feet from the north cell. Contaminants included TDS, ammonia, low pH, sulfate, nitrate, heavy metals (cadmium, chromium, manganese, arsenic, and beryllium), and radionuclides (thorium, uranium, gross alpha, gross beta, radium-226, and -228).
- In Zone 1, two plumes had migrated northeast and east at least 800 feet from former Borrow Pit No. 2. Contaminants included TDS, acidic pH, nitrates, heavy metals (cadmium, arsenic, and manganese), and radionuclides (thorium, uranium, gross alpha, and gross beta).

On August 26, 1988, the EPA and NRC signed the MOU that provided for coordination of the NRC reclamation and closure activities at the tailings disposal site and the EPA CERCLA ground water remedial action. The intent of the MOU was to "establish the roles, responsibilities, and relationship between" the EPA and NRC and to "help assure that remedial actions occur in a timely and effective manner." The MOU recognized that the EPA would conduct a RI/FS and sign a ROD that addresses ground water contamination outside of the tailings disposal site. The EPA would then require UNC (the potentially responsibility party [PRP]) to implement the selected CERCLA remedial action under the EPA oversight.

3.6 Basis for Taking Action

This section describes the contaminants found in the ground water plumes at the Site. No other media are relevant to this review. The characteristics of the three ground water plumes are described in Section 3.3.2. and in Section 6.4.

3.6.1 ARARs

Section 121(d)(2)(A) of CERCLA incorporates the CERCLA Compliance Policy, which specifies that Superfund remedial actions must meet any federal standards, requirements, criteria, or limitations legally determined to be Applicable or Relevant and Appropriate Requirements (ARARs). Also included is the provision that state ARARs must be met if they are more stringent than federal requirements. The ARARs evaluated for this Site include:

- National Primary Drinking Water Standards;
- New Mexico Water Quality Control Commission Regulation Standards (including Human Health "Drinking Water Standards");
- Resource Conservation and Recovery Act Standards applicable to background; and,
- Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 Code of Federal Regulations [CFR] 192), as adopted by 10 CFR 40, Appendix A, pursuant to UMTRCA.

Contaminant-specific ground water ARARs presented in the ROD are shown in Table 3-1 (below). Changes to ARARs that are more conservative than those included in the ROD are indicated by footnotes on Table 3-1. 40 CFR §300.430 (f)(1)(ii)(B)(*1*) states that *requirements that are promulgated or modified after ROD signature must be attained (or waived) only when determined to be applicable or relevant and appropriate and necessary to ensure that the remedy is protective of human health and the environment.* Accordingly, any new potentially applicable or relevant and appropriate requirements must be attained only under certain specific conditions. The protectiveness of the ROD Standards in light of revised ARARs is discussed in Section 7.2.1.

3.6.2 Contaminants-of-Concern

The ROD set cleanup levels from either National Primary Drinking Water Standards (Maximum Contaminant Levels, MCLs); New Mexico Water Quality Control Commission (NMWQCC) regulation standards; health-based standards, for those contaminants where MCLs and NMWQCC standards were not available; and background

standards where background levels were higher than federal and state standards. The contaminants-of-concern (COCs) and cleanup levels in the ROD are listed on Table 3-1.

- Background standards were set for iron, manganese, sulfate, nitrate, and TDS. Alternate background standards for sulfate, nitrate and TDS were proposed in a report issued by the NRC in 1996. The changes were approved by the NMED.
- MCLs were selected as the cleanup levels for arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, radium-226 and –228, and gross alpha.
- NMWQCC standards were selected as the cleanup levels for aluminum, cobalt, copper, molybdenum, nickel, zinc, chloride, and uranium-238. NMWQCC standards and MCLs were the same for barium, cadmium, chromium, lead, mercury, and silver.
- Health-based standards were calculated using reference doses, assuming a 70-kilogram individual who consumes 2 liters of water per day, for antimony, beryllium, thallium, and vanadium. Since the issuance of the ROD, MCLs have been published for antimony, beryllium, and thallium.

TABLE 3-1
Contaminants of Concern and ROD Cleanup Levels
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Contaminant	ROD Cleanup Level[a]	Source of ROD Standard	Cleanup Level or ARAR exceeded on-Site?
Aluminum	5.0	New Mexico Water Quality Control Commission (NMWQCC)	Zone 1, Zone 3
Antimony[b]	0.014	Health-based	No
Arsenic	0.05	MCL	Zone 3
Barium	1.0	MCL, NMWQCC	No
Beryllium[c]	0.017	Health-based	Zone 3 (ARAR Zone 1)
Cadmium[d]	0.01	MCL, NMWQCC	Zone 3 (ARAR Zone 1 and SW Alluvium)
Chromium	0.05	MCL, NMWQCC	No
Cobalt	0.05	NMWQCC	Zone 1, Zone 3
Copper	1.0	NMWQCC	No
Iron	5.5	Background Level	Not analyzed
Lead	0.05	MCL, NMWQCC	No
Manganese (Mn)	2.6	Background Level	Zone 1, Zone 3, SW Alluvium
Mercury	0.002	MCL, NMWQCC	Not analyzed
Molybdenum	1.0	NMWQCC	Zone 3
Nickel	0.2	NMWQCC	Zone 1 and Zone 3

Contaminant	ROD Cleanup Level[a]	Source of ROD Standard	Cleanup Level or ARAR exceeded on-Site?
Selenium	0.01	MCL	No
Silver	0.05	MCL, NMWQCC	Not analyzed
Thallium[e]	0.014	Health-based	Not analyzed
Vanadium	0.7	Health-based	Zone 3
Zinc	10	NMWQCC	Not analyzed
Chloride (Cl)	250	NMWQCC	Zone 1, SW Alluvium
Sulfate (SO_4)[f]	2,160 (2,125)	Background Level (proposed)	Zone 3, Zone 1, SW Alluvium
Nitrate[f]	30 (190)	Background Level (proposed)	No
Total Dissolved Solids (TDS)[f]	3,170 (4,800)	Background Level (proposed)	Zone 1, Zone 3, SW Alluvium
Radium 226 and 228	5 pCi/l	MCL	Zone 3, Zone 1
Uranium[g]	5.0 mg/L	NMWQCC	No (ARAR Zone 1, Zone 3, SW Alluvium)
Thorium-230[h]	15 pCi/l	MCL	Zone 3
Gross Alpha	15 pCi/l	MCL	Zone 3

Notes:

a) In mg/l, except as noted.
b) Antimony MCL of 0.006 mg/L published since ROD issuance.
c) Beryllium MCL of 0.004 mg/L published since ROD issuance.
d) Cadmium MCL reduced to 0.005 mg/L since ROD issuance.
e) Thallium MCL of 0.002 mg/L published since ROD issuance.
f) Background standards proposed in 1996 NRC report.
g) Uranium MCL reduced to 0.03 mg/L, effective 12/03, Proposed NM WQCC for uranium: 0.007 mg/l
h) based on 15 pCi/l gross alpha.

4.0 REMEDIAL ACTIONS

4.1 Remedy Selection

The EPA selected extraction and evaporation of contaminated ground water as the remedy in the ROD that was signed on September 30, 1988. Both the NMED and the NRC reviewed and commented on the ROD and endorsed the remedy. The selected remedy expanded upon the remediation previously required by the NRC under the License and added a requirement for ground water extraction in the Southwest Alluvium. The NRC ground water CAP was subsequently amended to include remediation in the Southwest Alluvium. The EPA's cleanup standards for the ground water were presented in the ROD and were also incorporated into the NRC License.

The goal of the selected remedy at the Site was to restore ground water outside the tailings disposal area to federal and state standards, or background, to the maximum extent practicable, and to the extent necessary to adequately protect public health and the environment. The remedial action consisted of a ground water pump-and-evaporate system. However, in Appendix A of the ROD, the contingencies of the selected remedy are stated in the following way: "…However, operational results may demonstrate that it is technically impracticable to achieve cleanup levels in a reasonable time period, and a waiver to meeting certain contaminant-specific ARARs may require re-evaluation as a result. Operational results may also demonstrate significant declines in pumping rates with time due to insufficient natural recharge of the aquifers. The probability of significant reductions in saturated thickness of aquifers at the Site must be considered during performance evaluations since much of the water underlying the tailings disposal area is the result of mine water and tailings discharge, both of which no longer occur. In the event the saturated thickness cease to support pumping, remedial activity would be discontinued or adjusted to appropriate levels".

The remedy consists of the following six components:

1. *Implementation of a monitoring program to detect any increases in the areal extent, or concentration of, ground water contamination outside the tailings disposal area;*
2. *Operation of existing seepage extraction systems in the Upper Gallup Aquifers. Because seepage from tailings had migrated into the underlying Zone 1 and Zone 3 sandstones, the selected remedy included operation of remediation systems until adequate dissipation of the tailing seepage mound has been achieved;*

3. *Containment and removal of contaminated ground water in Zone 3 of the Upper Gallup Sandstone utilizing existing and additional wells. The ROD states that seepage collection in Zone 3 will be designed to create a hydraulic barrier to further migration of contamination;*
4. *Containment and removal of contaminated ground water in the Southwest Alluvium utilizing existing and additional wells. The ROD states that seepage collection will be designed to create a hydraulic barrier to further migration of contamination while the [sources were either controlled or depleted];*
5. *Evaporation of [extracted] ground water using evaporation ponds supplemented with mist or spray systems to enhance the rate of evaporation;*
6. *Implementation of a performance monitoring and evaluation program to determine water level and contaminant reductions in each aquifer, and to evaluate the extent and duration of pumping actually required outside the tailings disposal area.*

The ROD states that the EPA remedy incorporates source-control remedial action (surface reclamation, capping, and mill decommissioning) under the NRC's licensing requirements as specified in the MOU between EPA and the NRC.

4.2 Remedy Implementation

4.2.1 General

Ground water remediation by UNC is required under CERCLA by the September 1988 EPA ROD and an EPA Unilateral Administrative Order (UAO), Docket No. CERCLA 6-11-89, issued June 29, 1989.

The key dates of remedial design, remedial action, and relevant agreements and documents are listed in Table 2-1. The performance of the remedial action in each of the three formations is described in the following sections.

Prior to the issuance of the ROD in 1988, remedial actions in Zone 1 and Zone 3 seepage-impacted areas began in 1982 and 1984, respectively, with the installation and operation of pump-back wells under NMED direction and oversight. The extracted contaminated ground water was neutralized by the addition of lime and stored in Borrow Pit No. 2, which was lined with a one-foot thick layer of compacted clay. The remedial action also included the addition of lime to the tailings disposal cells to neutralize tailings liquid and cause precipitation of metals (EPA, 1998).

The remedy set forth in the ROD was implemented by the remedial action activities described in the following sections.

4.2.2 Zone 3

The purpose of the Zone 3 extraction well system was to create a hydraulic barrier to control further contaminant migration and to dewater the target area. The volume required to dewater the target area was estimated at 200 million gallons. The extraction well system for this area consisted of five North-East Pump-Back wells, twelve Stage I wells and seven Stage II wells. The location of the extraction wells and the target area are shown on Figure 3-1. The North-East Pump-Back wells began operating in 1982 and were incorporated into the extraction well system by the NRC and EPA. The Stage I wells began operating in 1989 and the Stage II wells were added in 1991. The Stage II wells were expected to enhance system performance as predicted saturation declines reduced the productivity of the Stage I and North-East Pump-Back extraction wells. Twenty-three monitoring wells, including three decommissioned monitoring wells, are currently installed in Zone 3.

The system design included a decommissioning criterion that allows shutdown of individual wells, or the system, if the efficiency of the wells declines so much that continued operation provides no benefit. The latter has been defined as not meeting a minimum yield of 1.0 gpm. Wells that produce less than 1 gpm are to be cleaned and stimulated, and if the well still does not produce 1.0 gpm then it is decommissioned.

The North-East Pump-Back wells and Stage I wells have been decommissioned, and the Stage II wells shut down, with the approval of the EPA, NMED, and NRC.

With the shut down of the Stage II extraction wells, active remediation of the Zone 3 ground water contaminant plume ceased. The progress of the Zone 3 remedy is discussed in Section 6.3.

4.2.3 Zone 1

The remedial action in Zone 1 has consisted of source remediation (neutralization and later dewatering of Borrow Pit No. 2) and pumping a series of extraction wells from 1984 through 1999. There are currently 14 monitoring wells in Zone 1. The locations of these features are shown on Figure 3-1. The wells were decommissioned in 1999, with the approval of the EPA, NMED, and NRC. With the shut down and decommissioning of the extraction wells, active remediation of the Zone 1 ground water contaminant plume ceased. The progress of the Zone 1 remedy is discussed in Section 6.4.

4.2.4 Southwest Alluvium

The remedial action for the Southwest Alluvium has consisted of four extraction wells (801, 802, 803 and 808) that were designed as a barrier/collection system in the target area. The system was located approximately 400 feet downgradient from the southern edge of the South Cell of the tailings impoundment and upgradient of the NRC's four Point of Compliance (POC) wells (EPA 28, GW 1, GW 2, 632) for the Southwest Alluvium. The locations of extraction wells and monitoring wells are shown on Figure 3-1.

The wells were designed to create a hydraulic barrier for controlling further migration of contaminated ground water while the source was being remediated. There are nine water-quality and water-level monitoring wells upgradient of the South Cell of the tailings disposal area, and five ground water monitoring wells downgradient of the POC wells. The wells were installed by 1991. Source control was achieved by regrading and re-contouring the South Cell and installing a low-permeability soil cover.

Active remediation of the Southwest Alluvium contaminant plume has been temporarily discontinued to evaluate the ability of the contaminants to naturally attenuate in the aquifer (*i.e.*, Natural Attenuation (NA) Test). Such testing was part of UNC's effort to evaluate the appropriateness of obtaining a TI waiver for sulfate and TDS since the concentration of those contaminants showed little change over time. The progress of the Southwest Alluvium remedy is discussed in Section 6.4.

4.2.5 Water Collection and Treatment

Ground water produced from all Site extraction wells is evaporated in two five-acre, evaporation ponds, and a spray evaporation system installed on the surface of the re-graded and covered tailings. An evaporation mist system constructed on the interior berm between the two evaporation ponds enhances the disposal of the extracted water. Additionally, the Site is equipped with 28 water cannons distributed across the surface of the re-graded and covered tailings. The cannons were designed to spray water at a rate to optimize evaporation and prevent saturation of the tailings. Both the mist system and cannons are only used during the summer months. During the winter months, water is stored in the evaporation ponds. Based on visual observations of water levels in the evaporation ponds during the fall and winter of 2002, the ponds do not appear to be leaking.

4.3 NRC-Lead Surface Reclamation and Source Control

The MOU between the EPA and the NRC gave the NRC the authority and responsibility for surface reclamation and source control. The ROD stated that, "…Upon approval of a final reclamation plan, both ground water and source control/surface reclamation remedial actions will be integrated and coordinated to achieve comprehensive reclamation and remediation of the Site" (p. 41). The following section provides a background for the source control portion of the remedy, which falls under the purview of NRC's License.

4.3.1 Source Control

The source-control measures include regrading and recontouring the tailings, placing a low permeability compacted soil cover over the regraded tailings, and constructing drainage swales on and around the reclaimed impoundments. The cover consists of an initial interim cover of compacted soil followed by the final cover of compacted soil and rock as a radon barrier and for erosion protection. The source-control measures were designed primarily to effectively minimize infiltration, seepage, and mobilization of contaminants from the tailings (EPA, 1998).

Reclamation of the South Cell occurred between 1991 and 1996 and included regrading and recontouring of the tailings and placement of the interim and final covers over those portions of the South Cell not occupied by the evaporation ponds. The interim cover comprised 12 inches of compacted soil with average permeability measurements of $3x10^{-8}$ centimeters per second (cm/sec). The final radon cover comprises an additional six inches of compacted soil and a six-inch soil/rock matrix layer for erosion protection. The area of the South Cell occupied by the evaporation ponds will be reclaimed after the ground water remediation is complete and the evaporation ponds are no longer needed (EPA, 1998).

The remediation of the North Cell began in 1989 and consisted of regrading and recontouring of the tailings area and placement of twelve inches of compacted soil as the interim cover. Similar to the South Cell, the interim cover eliminated direct contact of surface precipitation with tailings material and minimized future infiltration. Final reclamation of the North Cell was performed in 1993 and consisted of placing a radon cover consisting of an additional six inches of compacted soil and a six-inch soil/rock matrix layer for erosion protection. Drainage swales on the North Cell maximize surface drainage from the cover while controlling the velocity of surface runoff to prevent excessive erosion (EPA, 1998).

Reclamation of the Central Cell and Borrow Pit No. 2 occurred between 1989 and 1995. The work consisted of dewatering Borrow Pit No. 2, regrading and recontouring the tailings, backfilling the borrow pit with debris from mill decommissioning, and placement of the interim and final cover layers. For the Central Cell, the interim cover was completed in 1991 and the final radon cover was placed in 1994. The backfilling of Borrow Pit No. 2 occurred from 1991 to 1994. The placement of the interim and final covers was completed in 1994 and 1995, respectively (EPA, 1998).

The results of the Emanation Testing of the Final Radon Cover Over UNC's Church Rock Tailings' Site were reported to the NRC on January 3, 1997 (UNC, January 1997). The report documented the tests conducted on September 26, 1996. Sampling included the collection of 115 radon samples from the surface of the radon cover and resulted in an average radon flux for the tailings of 6.46 picocuries (pCi) per meter squared (m2) per second (sec). All areas were less than the Site License standard of 20 pCi per m2 per sec with the exception of the South Cell in the vicinity of the evaporation ponds, where the radon barrier has not been installed yet.

4.4 System Operations and Maintenance (O&M)

4.4.1 System Operations and O&M Requirements

Required O&M activities at the Site are stipulated in the NRC License. The O&M activities are also specified in a number of internal documents kept at the Site. Ground water O&M is required under CERCLA by the EPA ROD and UAO.

The O&M activities include:

- Operation, maintenance, and monitoring of the ground water extraction wells and associated piping.
- Maintenance of the final radon barrier and interim covers on the tailings piles.
- Operation and maintenance of the evaporation ponds, misters, and cannons.
- Maintenance and sampling of ground water monitoring wells.
- Maintenance of fences and gates.

As discussed above, the operation of the extraction well systems for the Southwest Alluvium, Zone 1 and Zone 3 aquifers has been discontinued. Only maintenance and monitoring activities for those systems are being performed at this time.

Personnel are at the Site daily during the week to perform O&M activities.

4.4.2 Problems with Implementing System Operations/O&M

The remedial systems at the Site were implemented as directed by the ROD and have operated as intended. As areas have been dewatered, extraction well efficiency declined and the wells were decommissioned in accord with decommissioning criteria in the ROD.

4.4.3 O&M Costs

The O&M costs are not stipulated in any of the decision documents for the Site. The NRC License contains a condition requiring UNC to provide a financial surety to cover the cost to implement the remaining reclamation and closure activities. The EPA UAO also requires UNC to submit financial assurances to the EPA Region 6. Annual O&M costs are summarized in Table 4-1.

TABLE 4-1
Annual System Operations/O&M Costs
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Year	Annual O&M Cost
1998	$1.153 Million (MM)
1999	$1.125 MM
2000	$0.920 MM
2001	$0.658 MM
2002	$0.615 MM

The annual system operations/O&M values shown in Table 4-1 are estimates that take into account O&M costs for both the ground water remediation and the NRC License compliance. These costs are closely interrelated and are tracked together.

4.4.4 Reasons for Any Unanticipated or Unusually High O&M Costs

None.

5.0 PROGRESS SINCE THE LAST REVIEW

The recommendations of the previous Five-Year review are provided below in bold italics. A brief summary of the progress made for each of the recommendations is provided below it in regular print. The overall progress of the remedy is described in detail in Section 6.4.

General

- ***Each unit (Southwest Alluvium, Zone 1, and Zone 3) needs to be assessed independently. Each unit has certain specific hydrogeological and hydrogeochemical parameters which are different and separate from the others.***

  The three formations have been evaluated separately, and the results documented in Annual Reports, formation-specific geochemistry reports, and other technical memoranda. The geochemical analyses focused on the importance of equilibrium conditions on the background concentrations of sulfate, TDS, and manganese.

- ***The natural background concentrations for TDS, nitrate (NO_3), and sulfate (SO_4) appear to be higher than the levels which were stated in the EPA ROD. As such, the action levels need to be re-evaluated and increased to reflect actual background values.***

  Geochemical and statistical reports documenting this work have been generated for Zone 1 and the Southwest Alluvium (NRC, June 1996; Earth Tech, May 2000a and June 2000). The results of this process are described in Sections 6.4.2 and 6.4.3 respectively.

- ***A statistical analysis needs to be performed on the heavy metals and radionuclides to determine if concentrations are occurring at levels above those that occur naturally in the background.***

  Because the shallow ground water aquifers have been significantly affected by mine discharge water, it is difficult to determine appropriate background concentrations. After discussion, all parties agreed that it was best to not directly address the background issue at that time because no consensus has been reached concerning the background concentrations of the heavy metals and radionuclides.

- ***A revised ground water monitoring network, and the associated sampling procedures, must be developed to ensure that ground water conditions are accurately depicted and any statistical increases in concentrations are detected.***

The ground water monitoring network was revised in 2001 by adding water quality sampling at five Zone 3 wells and water level monitoring at two Zone 3 wells. Water level monitoring was added at five Zone 1 wells. Water level and water quality monitoring were added at one Southwest Alluvium well. At least one additional monitoring well is planned for the Southwest Alluvium to delineate further the downgradient extent of tailing-seepage impacts. The construction of the well has been delayed because of access issues to Navajo Trust Lands. The recommended extraction wells were converted to monitoring wells.

Southwest Alluvium

- ***The ground water recovery system in the Southwest Alluvium is providing an adequate barrier to contaminant migration. However, little progress has been made toward reaching the cleanup levels in the EPA ROD/NRC License for NO_3, SO_4, and TDS. The measured concentrations of these constituents have shown little change over time. It is therefore recommended that UNC apply for alternate concentration levels for the Southwest Alluvium. However, if UNC determines that a Technical Impracticability Waiver (TI Waiver) or ALARA demonstration is more appropriate, then UNC may pursue these options as well.***

  Although concentrations have not reached the established cleanup levels, over 131 million gallons of water were extracted between 1998 and 2001, which contained 3.3 million pounds of sulfate, 84,000 pounds of nitrate, 1,300 pounds of manganese, and other constituents. The UNC submitted a Final Report and TI Evaluation for the Southwest Alluvium Natural Attenuation (NA) Test (NA Report) in November 2002 (Earth Tech, November 2002), which demonstrated how the criteria for obtaining a TI Waiver have been attained for sulfate and TDS. This is described in detail in Section 6.4.3. Any decision to approve Alternate Concentration Limits (ACLs) or ALARA, or any decision to grant a TI Waiver for any ground water related ARAR, should, if made, be determined by EPA in an Amended ROD, or Explanation of Significant Differences (ESD), as appropriate.

- ***Once the alternate concentration levels have been reached, or the TI waiver is granted, or the ALARA demonstration is approved, the extraction system should be converted into a long- term monitoring system***.

  This was recommended in the NA Report. Any decision concerning conversion of the ground water extraction system must be made and approved by the EPA.

- ***Extraction Well 801 is pumping at a rate of approximately 0.1 gpm. Monitoring Well 801 should be decommissioned as an extraction well and converted into a ground water monitoring well***.

  Extraction Well 801 was decommissioned and converted to a monitoring well in July 1999.

Zone 3

- ***The downgradient Stage II wells are recovering over 75% of the ground water that is being produced in Zone 3. The analytical results indicate that the downgradient Stage II wells are producing ground water whose constituent concentrations are very similar to probable background concentrations. In order to avoid the potential of having contamination drawn downgradient by the Stage II extraction wells, the downgradient extraction wells should be turned off and converted to ground water monitoring wells.***

  Twelve of the Stage II extraction wells met the decommissioning criteria and were shut off in June 2000, with the approval of the EPA, NRC, and NMED. The three remaining Stage II Wells (716, 717, and 718) were converted to monitoring wells in November 2000 (Earth Tech, December 2002), as recommended by the EPA, and approved by the NMED and NRC, because they were pumping background quality water and increasing the downgradient migration of the seepage-impacted water.

- ***The extraction system in Zone 3 has eight extraction wells which are operating at pumping rates below 0.75 gpm. These wells are not providing an effective hydraulic barrier for the prevention of contaminant migration. It is therefore recommended that the recovery wells which are operating at less than 0.75 gpm be turned off and converted to ground water monitoring wells.***

  The Stage I extraction wells were converted to monitoring wells in 1999, when they met the decommissioning criteria, as approved by the EPA, and approved by the NMED and NRC.

- ***Since the ROD/NRC License concentration levels have not been reached, with the exception of NO_3, and since ground water quality has shown little improvement after seven years of remedial activities, it is recommended that UNC apply for alternate concentration levels at Zone 3. However, if UNC determines that a TI Waiver is more appropriate, then UNC may pursue obtaining a TI Waiver.***

  Although these issues have been discussed in Annual Reports (Earth Tech, December 2002 and January 2002), no formal requests have been submitted. Discussions with regulators and hydraulic studies to determine the feasibility of further dewatering Zone 3 are underway. Any decision to approve ACLs or ALARA, or to grant a TI Waiver for any ground water related ARAR, should, if made, be determined by EPA in an Amended ROD, or ESD, as appropriate.

- ***A ground water monitoring network must be developed and the wells in the network must be analyzed quarterly to determine if target constituent concentrations statistically increase over time. If the concentrations do statistically increase, additional remedial activities may be necessary.***

  Changes to the Site's performance monitoring and evaluation program, which were approved by the EPA and NMED, and incorporated into the License, are discussed earlier in this section. The performance monitoring data are used to evaluate and refine the pumping systems, and changes are recommended in

Annual Reports. Since the issuance of the 1998 Five-Year Review report, water quality monitoring has been added at five Zone 3 wells, and water level monitoring has been added at two wells. Concentration trends are discussed in Section 6.3. Any additional remedial activities related to ground water outside of the tailings disposal site must, if undertaken, be determined and approved by the EPA pursuant to the NCP.

- ***UNC should conduct an evaluation of background water quality for all constituents that are currently included in the performance-monitoring program for Zone 3.***

  Please see discussion of background water quality under the General comments section and in Section 6.4.1.

Zone 1

- ***Borrow Pit No. 2 has been dewatered and reclaimed. This eliminated a major contamination source area as well as the ground water source for the seepage in Zone 1. The potentiometric results indicate that the ground water elevations are diminishing.***

  No action necessary.

- ***The extraction system in Zone 1 is operating at such low rates (cumulative rate of 0.49 gpm) that it is ineffective in providing a hydraulic barrier for the prevention of contaminant migration. It is therefore recommended that the Pump-Back wells be turned off and converted into ground water monitoring wells.***

  The Pump-Back wells were converted to ground water monitoring wells in July 1999, in accord with the decommissioning criteria, with the approval of the EPA, NMED, and NRC. Water quality has been stable or improving since the wells were decommissioned, as discussed in Section 6.4.

- ***Since the ROD/NRC License concentration levels have not been reached, it is recommended that UNC apply for alternative concentration levels at Zone 1. However, if UNC determines that a TI Waiver or ALARA demonstration is more appropriate, then UNC may pursue these options.***

  The Zone 1 Geochemistry Report (Earth Tech, May 2000) recommended a hybrid remedy of monitored natural attenuation (MNA), TI, and institutional controls (ICs) for Zone 1, demonstrating how the criteria for obtaining a TI Waiver have been attained for sulfate, TDS, and manganese. There has been no formal response to this document. The document is described in more detail in Section 6.4.2.

- ***All converted ground water monitoring wells must be analyzed quarterly to determine if target constituent concentrations statistically increase over time. If the concentrations do statistically increase over time, additional remedial activities may be necessary.***

Changes to the Site's performance monitoring and evaluation program, which were approved by the EPA, NMED, and incorporated into the License, are discussed in earlier in this section. The quarterly performance monitoring data are used to evaluate and refine the pumping systems, and changes are recommended in Annual Reports. Since the issuance of the 1998 Five-Year Review report, water level monitoring has been added at five Zone 1 wells. Concentration levels are discussed in Section 6.4.2. Contaminant trends in these wells have not been analyzed to determine if they are statistically increasing over time.

6.0 FIVE-YEAR REVIEW PROCESS

This Five-Year Review has been conducted in accordance with the EPA's Comprehensive Five-Year Review Guidance, dated June 2001 (EPA, June 2001). Interviews were conducted with relevant parties, a Site inspection was conducted, and a review of applicable data and documentation covering the period of the review was performed. The findings of the review are described in the following sections.

6.1 Administrative Components

The current Five-Year Review for this Site was initiated by the EPA in December 2002. A contractor, USFilter, was tasked to perform the technical components of the review. The review was led by the EPA Region 6 Remedial Project Manager for this Site, Mark Purcell. Agency representatives assisting the review team included: Bill Von Till, NRC; Kevin Myers, NMED Ground Water Quality Bureau, Mining Environmental Compliance Section; Robin Brown, NMED Ground Water Quality Bureau, Superfund Oversight Section; Arlene Luther, Navajo Nation EPA; and Diana Malone, Navajo EPA.

Larry Bush, President of UNC, and Roy Blickwedel of GE also supported the review team, providing a draft Five-Year Review report, extensive review and comment, information related to the Site and assistance during the Site inspection.

The components of the review included Community Involvement, Document Review, Data Review, Site Inspection, Interviews, and development of the Report, as described below. Mark Purcell conducted the interviews with key individuals involved with the Site remedial activities.

6.2 Community Notification and Involvement

A community fact sheet announcing the start of EPA's second Five Year Review and upcoming community involvement activities was prepared in January 2003 (*see* Appendix F). Copies of the fact sheet were distributed to persons on EPA's Site mailing list and handed out to local residents during a Pinedale Chapter House meeting. Copies of the fact sheet were also placed in the following information repositories maintained for this Site:

Octavia Fellin Public Library
115 West Hill Avenue
Gallup, NM 87301

(505) 863-1291

New Mexico Environment Department
Suite N2300, Harold Runnels Bldg.
1190 St. Francis Dr.
Santa Fe, NM 87505
(800) 219-6157

Navajo Nation
Navajo Superfund Office
43 Crest Road
St. Michaels, AZ 86501
(520) 871-6859

USEPA – Region 6
Library, Suite 12D13
1445 Ross Avenue, Ste. 700
Dallas, TX 75202
(214) 665-6707

Upon completion of the Five-Year Review, copies of the Five-Year Review Report (Report) will be placed in the information repositories:

Additionally, a public notice will be issued announcing completion of the Five-Year Review and the availability of the Report at the information repositories. A public meeting will be held to present the results of the Five-Year Review.

6.3 Document Review

This Five-Year Review included a review of relevant documents, including the ROD, ground water cleanup plans, reclamation plans, the NRC License, Annual Reports, the first Five-Year Review report, and related monitoring data. Documents that were reviewed are listed in Attachment A.

6.4 Data Review

A great deal of data has been collected since cleanup activities began at the Site in 1989. Examples of these data have included ground water quality data, ground water elevation

data, the volume of ground water extracted, and the mass of contaminants removed. These data were evaluated for the purposes of this Five-Year Review.

The data review is organized by aqueous plume, in the following sections.

6.4.1 Zone 3

6.4.1.1 Summary

This section describes ground water flow and contaminant migration in Zone 3, based on analyses of ground water elevations and water quality through time.

Active remediation by the Zone 3 extraction well system has been discontinued. The most recent pumping system (Stage II) was shut off in 2000, with the approval of EPA, NRC, and NMED, in order to slow the rate of migration, and to allow longer residence times for more effective neutralization of the seepage impacts and natural attenuation of contaminants. Ground water flow and contaminant plume migration are toward the north to northeast.

The current Zone 3 performance-monitoring program involves quarterly water-level monitoring in 23 wells and water-quality monitoring in 11 wells, including one sentinel monitoring well to the north of the plume (NBL 01). In June 2002 this program was supplemented by four new monitoring wells (PB 01 through –04) that serve to track the present, northernmost edge of the plume. The performance-monitoring program is summarized in Table 6-1 and the monitoring well locations are shown in Figure 6-1. A summary of the COCs listed in the ROD and detected in Zone 3 in October 2002 is provided in Table 6-2. Historic results are tabulated in Attachment B.

The current plume layout is compared with those since 1998, based on evaluation of pH, bicarbonate, chloride, and select metals. The Zone 3 plume is approximately 3,120 ft long, extending from the northeast corner of the former North Cell. Site background-water quality locally shows exceedances for sulfate, TDS, arsenic, molybdenum, nickel, cobalt, and combined radium, above established drinking water standards. Water quality trends in time and space show that the Zone 3 rock matrix and background water are attenuating the plume by neutralization, adsorption, precipitation, and dilution. However, the attenuation occurs at a rate that has thus far not stabilized the plume migration.

6.4.1.2 Geologic Controls on Zone 3 Ground Water Flow

The regional bedrock is characterized by localized monoclinal flexuring and block tilting. According to a structural lineament summary map of the area (SAI and Bearpaw, 1980), the northeast-trending Pipeline Canyon Lineament passes through all three former tailings ponds associated with the Site.

Geologic mapping of the area (SAI and Bearpaw, 1980) indicated that in the Site vicinity the surficial bedrock layers, just east of the Pipeline Canyon Lineament, dip approximately five to ten degrees to the northeast in locations approximately 4,000 ft southwest of the former South Cell, and approximately five degrees to the northeast at a location approximately 3,000 ft northeast of the former North Cell.

Just west of the Pipeline Canyon Lineament, this same geologic mapping indicated the surficial bedrock dips approximately three to four degrees to the west-northwest and northwest. These observations suggest that this Lineament occurs along a flexure zone separating bedrock blocks having very gentle northwest dips, to the west of the flexure, and very gentle northeast dips to the east. The entire Zone 3 aqueous plume (discussed below) appears to be within the bedrock block to the east of this Lineament, where the overall dip is very gently to the northeast.

Canonie Environmental (1987; their Figure 2-6) has shown a northeast apparent dip of approximately four degrees to Zone 3 hydrostratigraphic unit, beneath and to the northeast of the former North Cell. In this same area, they have also shown very gentle folds or warps in the Gallup Sandstone (Zones 1 through 3). One such fold has a amplitude of approximately 30 ft and is not shown as part of a regular train of folds. Fold amplitudes and plunge directions were not specified by Canonie Environmental (1987). Canonie Environmental's report showed that the flow of ground water in Zone 3 was perched along the base of this hydrostratigraphic unit. This has been confirmed by subsequent Site technical investigations.

Earth Tech (April 2001), in analyzing the spatial changes in Zone 3 saturation through time, stated:

> *"The irregular outline of the eastern, updip edge of saturation is caused by folding. The effect of the folding has become more evident over time as the water has drained out of the formation and water levels have dropped. Wells located in troughs of folds maintain measurable water levels longer than wells located on or near the crests of folds. For example, Well EPA 3 dried up very quickly while*

Well 501B has continued to have measurable water levels. The farthest eastern (updip) extent of saturation in Zone 3 is defined by Well EPA 17, which was dry when it was installed in 1985 and never had more than 2 feet of saturation. The extent is further indicated by the other wells including, from north to south, Wells EPA 1, EPA 12, EPA 18, and EPA 9, as shown on [their] *Figure 1*."

The approximate eastward boundary of Zone 3 saturation in the 4th Quarter of 1989 is shown by the heavy, wavy line in Figure 6-1. As indicated above, Earth Tech (April 2001) suggested that Zone 3 has an overall dip toward the northwest. Structure contour maps of the base of Zone 3 indicate very gentle dips that predominantly vary from the north to the northwest (Earth Tech, 2001; USFilter, 2003). These maps show irregular, very gentle warps in the basal Zone 3 contact that are associated with localized dips toward the northeast. Piezometric contour lines indicate ground water flow is toward the north-northeast to northeast overall (Figure 6-2).

6.4.1.3 Remedial Action Summary

Historic remedial action in Zone 3 consisted of pumping the three sets of extraction wells shown on Figure 6-1: (1) Northeast Pump-Back System (red triangles), (2) Stage I Remedial Action System (green triangles), and (3) Stage II Remedial Action System (blue triangles). The Northeast Pump-Back wells started operation in 1983; the Stage I and II wells were added later as part of the Remedial Action plan (United Nuclear, 1989) implemented in 1989.

Eighteen years of remedial pumping have shown that once the saturated thickness falls to approximately 25 ft or less, well efficiency declines and pumping rates fall to less than 1.0 gpm (Earth Tech, April 2001). For this reason, the 25-ft saturation contour line is highlighted in orange in Figure 6-1. Table 6-3 presents the reductions in saturated thickness for Zone 3 wells between the 3rd Quarter of 1989 and the 4th Quarter of 2002. Values of saturated thickness greater than 25 ft are shaded. Figure 6-3 summarizes the number of wells and the pumped volumes during the period of Zone 3 remedial action from 1989 through 2000.

The saturation in Zone 3 has declined substantially. As discussed in the "Technical Memorandum, Change in Zone 3 Saturated Thickness" (Earth Tech, April 2001) submitted to the NRC on April 23, 2001, the loss of saturated thickness over time resulted in a decrease in the efficiency of the extraction wells to the point that only three of the total 24 wells were still pumping at rates greater than 1.0 gpm in June 2000. The

UNC's May 2000 License amendment request to shut off remaining Zone 3 pumping wells (Earth Tech, May 2000b) concluded that operation of these pumping wells increased the hydraulic gradient and accelerated the rate of downgradient plume migration. The UNC requested that these extraction wells be shut off to reduce the plume migration rate, allowing more time for the background water to neutralize the seepage and attenuate the hazardous constituents. Additionally, these wells were pumping background-quality water and served no purpose in reducing contaminant mass in seepage-impacted waters. The NRC amended the License (with approval from NMED and EPA) to shut off the three remaining wells (716, 717, and 718) in December 2000. Recent water-quality data from Well EPA 14 (located approximately 100 ft southwest of Well 716) confirm the beneficial effects from the shutdown of these last three extraction wells and the recovery of the hydraulic system from the effects of pumping (Earth Tech, December 2002).

The extraction wells accelerated the process of natural drainage of the water from Zone 3. In this sense, "natural" drainage refers to the reduction of saturated thickness and potential energy by gravitative flow and dissipation into the contiguous unsaturated parts of Zone 3. Extraction-well enhancement of the natural drainage is demonstrated by the data shown in Figure 6-4. Figure 6-1 shows that between 1989 and the 4th Quarter of 2002, a very large portion of the Zone 3 Remedial Action Target Area (shown with a dot pattern) had been desaturated (effectively dewatered). The eastern limit of Zone 3 saturation has shifted to the northwest over this time period (from the location of the heavy, wavy black line, showing the saturation limit in 1989, to the dashed blue line showing the recent "zero" saturation limit).

6.4.1.4 Performance Monitoring Evaluation

The current Zone 3 performance-monitoring program is summarized in Table 6-1 and comprises quarterly monitoring of water levels in 23 wells and water quality in 11 wells. This program went into effect in the 2nd Quarter of 2000 and was modified in the 2nd Quarter of 2001, at the request of the NRC, to include the following additional components:

- Water quality monitoring at Wells EPA 13, 717, and 719;
- Water-level and water-quality monitoring at Well 708; and
- Installation of Well NBL 01 (July 2001) as a new downgradient monitoring well.

The location of Well NBL 01 (Figure 6-1) was selected to bound the downgradient edge of the plume.

To supplement the performance-monitoring program, four new monitoring wells were installed (June 2002) between Wells 504 B and NBL 01: PB 01, PB 02, PB 03, and PB 04 (Figure 6-1). Drilling logs and well completion forms are included in Earth Tech (December 2002; their Appendix B). These wells serve to track the northernmost plume boundary. Monthly water levels and water- quality data are collected from three of these wells: PB 02, PB 03, and PB 04. (Well PB 01 was installed within the plume and has been excluded from further monitoring that is intended to track the plume edge). Water-quality analyses conducted monthly include field measurements of pH, specific conductivity, bicarbonate, and chloride. The latter two analyses are performed using Hach field-testing kits.

Additional samples collected during October 2002 were submitted to a laboratory to check the field results (the laboratory analyzed TDS in lieu of specific conductivity). All of these data, and graphic comparisons of the field and laboratory analytical results for bicarbonate and chloride, are presented in Earth Tech (December 2002; their Appendix B) and are shown on Table 6-4. Overall, the field-parameter determinations provide a good qualitative indicator of the migration of the plume. Periodic samples for laboratory analyses will continue to be collected to verify the field measurements.

6.4.1.5 Water Level Evaluation

Water level data from 1989 through the 4th Quarter of 2002 have been tabulated by Earth Tech (December 2002; their Tables B.1 and B.2 in their Appendix B). Water levels from the 4th Quarter of 2002 are shown on the piezometric surface map in Figure 6-2. These piezometric contour lines indicate ground water flows toward the north and northeast, approximately parallel with the eastern limit of Zone 3 saturation. This piezometric field closely mirrors that depicted for the 4th Quarter of 2001 (Earth Tech, January 2002). Mine water discharge into Pipeline Arroyo ceased in 1986. Since then, Zone 3 ground water flow directions have shifted from the east- to- northeast, to the north-northeast- to-northeast, as recharge from, and ground water mounding within, the alluvium to the southwest and west have decreased. This earlier, east to northeast flow direction caused the ground water impacts that formed the original basis for delineation of the Zone 3 Remedial Action Target Area, shown by the diagonal lines on Figure 6-1.

The Zone 3 effects from alluvium recharge and extraction-well pumping drawdowns have largely dissipated and rates of water level change are very small. Variation from the current direction of ground water flow is very unlikely. Since cessation of mine water discharge, water levels have been declining. Extraction wells temporarily accelerated the local rates of water-level decline until the saturated thickness was reduced to less than approximately 25 ft, after which the decline in levels slowed to natural rates of drainage. Since about 1997 the water-level trends in Zone 3 have asymptotically flattened (Earth Tech, December 2002), as shown on Figure 6-4.

Contours of saturated thickness during the 4th Quarter of 2002 (Figure 6-1) show the combined effects of pumping and natural drainage on Zone 3. The eastern extent of saturation has contracted to the west so that the current boundary of saturation is approximately where the 25-ft saturated thickness contour was located in 1989 (shown on Figure 6-1 and Figure 6-5). Also, the wells located to the west, closer to the recharge area, have lost substantial saturation. For example, Well EPA 14 had 76 ft of saturation in 1989 and 40 ft in the 4th Quarter of 2002.

6.4.1.6 Water Quality Evaluation

Figure 6-2 shows the recharge area where water in the alluvium (significantly recharged by mine water discharge) percolated into the underlying Zone 3. This Figure shows the saturated portion of the alluvium/Zone 3 contact (dark gray tone pattern) as well as the unsaturated portion of this same contact zone (medium density stippled pattern). This ground water, which includes mine water discharge, is considered the background water for Zone 3 and reflects post-mining, pre-tailings background ground water conditions (EPA, September 1988). *See also* Responsiveness Summary, Appendix H of the ROD, for EPA's rationale for establishing post-mining, pre-tailings conditions as Site ground water background levels.

This background water was later impacted by acidic seepage from tailings in the North Cell. These seepage fluids contained elevated concentrations of metals, radionuclides, and major ions including sulfate and chloride. Source control (neutralizing and later dewatering of the North Cell), plus neutralization of the seepage by natural attenuation and mixing with the background water, have reduced contaminant concentrations.

Seepage-impacted (plume) water, some of which exceeds Site standards, is contained within the property boundary in Section 36. The portion of the plume that extends off the property into Section 1 (Figure 6-6) was eliminated as a point of exposure (POE) because

there is now less than 5 ft of saturation, which is projected to drain out to pre-mining levels in about 10 years. The decision to eliminate this area as a POE is documented in a letter from the NRC (September 1999).

Current Extent of Seepage Plume

It is important to note that exceedances of Site standards in some Site wells represent background water quality. For example, exceedances of the total radium and sulfate standards in Well EPA 14 significantly predate the beginning of strong seepage impacts that were first observed at that well during 2000 (the water-quality history of this well is discussed below). From 1989 through 1997, Well 411 showed long-term background exceedances in total radium, cobalt, molybdenum, nickel, and sulfate. Background water quality is discussed further in the natural attenuation system performance evaluation.

Delineation of the extent of the plume in Zone 3 is based primarily on the values of two parameters: pH and bicarbonate concentrations. Chloride concentrations have been used in previous analyses as a third key indicator of seepage impact in Zone 3 (e.g., Earth Tech, December 2002), because chloride was present in the seepage in high concentrations. However, chloride trends in Zone 3 do not systematically correlate with pH and bicarbonate trends where the latter are associated with ground water that has been impacted to varying degrees. At concentrations of less than approximately 60 mg/L (which is characteristic of most Zone 3 wells), chloride is of relatively limited use as an impact parameter in Zone 3.

The following threshold or bracketing values for pH and bicarbonate, which indicate seepage impact to the water, have been discussed in the Technical Memorandum (Earth Tech, May 2000b):

- **pH** < 5.0 indicates seepage impact. Such impacted water has not yet migrated far enough to reach equilibrium, or to react sufficiently, with carbonate minerals in the Zone 3 strata (Canonie Environmental, 1987; their Table 4-5 indicates a measured $CaCO_3$ content of 0.02% in the Zone 3 bedrock). pH > 5.0 indicates either no seepage impact, or acid neutralization to varying degrees (usually a function of residence time and migration distance).

- **bicarbonate** (HCO_3) concentrations < 100 mg/L and > 500 mg/L indicate seepage impact. In non-impacted areas, background water has approximately reached equilibrium with the carbonate minerals resulting in bicarbonate concentrations ranging from approximately 100 to 500 mg/L. These threshold values reflect sequential chemical reactions. When acidic seepage-impacted water first entered Zone 3 it lacked bicarbonate. Once the seepage water

migrates a short distance from its point of entry, bicarbonate is generated by reaction with calcite in the bedrock. With increasing time of neutralization at a given location, the bicarbonate typically shows a gradual increase to levels above background (generally > 500 mg/L). Eventually the neutralization capacity is exceeded and bicarbonate values reduce to near zero. Further discussion of bicarbonate concentration trends is provided below.

As predicted in the EPA's first Five-Year Review report (EPA, 1998) and discussed in the Technical Memorandum (Earth Tech, May 2000b), continued pumping of the downgradient Stage II extraction wells may have caused the seepage-impacted waters of the plume to migrate to the northwest and north toward the pumping locations. For example, until May 2000, Wells 708 and 711 had pH values greater than 4.0, but after that time they dropped to below 3.0.

Increasing concentrations of bicarbonate in a well indicate that the plume is migrating to that location. Bicarbonate concentration trends are relatively complex through time and space. Geochemical reactions can limit the remedial efficacy of bicarbonate neutralization (*e.g.,* Earth Tech, December 2002). Values from 2002 for pH and bicarbonate indicate that Well EPA 14 water quality is improving and recovering from the formerly higher flux of seepage waters caused by Stage II extraction pumping, which temporarily caused a reduction in the local capacity for neutralization and natural attenuation processes.

Figure 6-6 shows the extent of seepage impacts in Zone 3 measured in October 2002. This extent is primarily based on evaluation of pH and bicarbonate concentrations over time in (1) seepage-impacted wells (*e.g.,* Wells 613, 518, and 517), (2) background and former background wells (*e.g.,* Wells EPA 1, 411, and 420), and (3) the new plume boundary wells PB 01 through PB 04. The acidic "core" of the plume is shown with the dashed red line indicating the pH value of 4.0. Until the cessation of mine-water discharge in 1986, seepage impacts in Zone 3 migrated to the east and northeast, due to groundwater mounding in the alluvium recharge area to the west. As the hydraulic head in the alluvium recharge area has decreased, migration has been toward the north (in relatively southern locations) and northeast (in more northerly locations), subparallel to the edge of saturation.

Figure 6-7 shows Stiff diagrams for Well EPA 14 in annual "snapshots" of water quality from October 1998 through October 2002. Before October 2000, the Ca/Mg ratio was greater than 1 and the bicarbonate concentrations were elevated; from October 2000 to October 2002, the Ca/Mg ratio has been less than 1 and the bicarbonate was depleted.

Modest exceedances of the aluminum and cobalt standards in this well began in 2000, when the bicarbonate concentration decreased suddenly and sharply.

October 2002 bicarbonate data indicate that seepage impacts extend past Well PB 01 to Well PB 02 (Figure 6-6). From October 2002 through February 2003, bicarbonate concentrations at Well PB 02 have been less than 60 mg/L. However, the pH measured in October 2002 (7.09) indicated that acidic water had not yet reached this location. Continued pH measurements at Well PB 02 from November 2002 (pH = 5.95) through February 2003 (pH = 5.57) appear to confirm that the seepage-impacted plume edge is migrating through this well location, but it has not reached the next plume boundary well to the north, PB 04. These data are included on Table 6-4.

Figure 6-8 shows Stiff diagrams for ten Zone 3 wells during October 2002. Well NBL 01, to the north of the present plume edge, is a calcium-sulfate type of water that remains non-impacted and is believed to be representative of background water quality.

Well 420, shown as just along the western edge of the plume in Figure 6-6, is a calcium-sulfate type water that is believed to be predominantly background (largely non-impacted) – in 2002, exceedances of nickel and total radium Site standards were detected in this well. However, in October 2002 water collected from Well 420 had a bicarbonate concentration of 569 mg/L; bicarbonate concentrations have been increasing since 1994. These observations are interpreted as indicating the plume edge is approaching.

Well 717, shown as just within the western edge of the plume in Figure 6-6**,** provides a third example of a calcium-sulfate type water that is interpreted as predominantly background (largely non-impacted) – in 2001 and 2002 (the only two years for which water quality data are available), only total radium has been detected at concentrations above its Site standard. However, over this time period the bicarbonate concentration has steadily increased from 498 to 704 mg/L. These observations are interpreted as indicating that the plume edge is approaching.

All of the other seven wells depicted with Stiff diagrams in Figure 6-8 are impacted magnesium-sulfate types of waters. For example, Well 613 (in the southwestern part of the seepage plume shown in Figure 6-8) showed very high sulfate, a calcium to magnesium (Ca/Mg) ratio less than one, a non-detect for bicarbonate, a chloride concentration of 165 mg/L, a pH of 2.85, and exceedances in most parameters except several metals, lead and some of the major ions. This well's water is the most impacted of any of the wells shown. Although some of the downgradient wells also show

significant impacts (*e.g.*, Wells 708 and 719), these same well waters indicate that neutralization accompanies migration from the waters' source area.

Extent of Plume from 1998 to 2001

Historic water-quality data have been reviewed to delineate the approximate extent of the plume, as interpreted by seepage impacts in annual "snapshots" of the Zone 3 plume from October 1998 (Figure 6-9) to October 2001 (Figure 6-12). The designation as "seepage impacted" incorporates consideration of the waters' type, pH, and concentration trends for bicarbonate, chloride, and additional contaminants including metals. The plume maps also show the approximate location of the pH contour isopleth having a value of 4.0. Only those wells are shown for which water-quality data are available from October of the specified year.

Viewed together with the plume map from October 2002 (Figure 6-6), these five serial plume maps indicate that the plume has migrated both northward and westward at various times during the last five years. During this time period, the eastern limit of Zone 3 saturation gradually shifted to the northwest under the influence of extraction well pumpage and dewatering. This pumpage ceased in 2000 but it has taken time for the potentiometric system to recover.

Rate of Plume Migration

Table 6-5 summarizes the key factors, locations, and criteria underpinning the calculations of seepage travel times for Zone 3. The source starting location was assumed to be the northeastern corner of the North Cell in 1980. The calculated rates vary from 61 ft/yr to 204 ft/yr, with a geometric mean of 110 ft/yr (Earth Tech, December 2002). Based on these calculations, UNC estimates that the contaminant plume will migrate beyond the UNC's northern property boundary in approximately 7 years.

Natural Attenuation Evaluation

Natural attenuation in Zone 3 comprises the hydro-geochemical interactions between the bedrock matrix, the background waters, and the tailings fluids. The natural system is attenuating the seepage impacts by the processes of neutralization, precipitation, adsorption, and mixing with the background waters. However, the Zone 3 contaminant plume has not yet fully stabilized.

Natural geochemical processes slow the migration of contaminants associated with the acidic seepage in Zone 3 (as in the Southwest Alluvium and Zone 1). These processes neutralize the acidic seepage, which causes the precipitation and adsorption of metals and radionuclides. Evidence for this neutralization process includes: (1) increase in pH and corresponding decrease in concentrations of metals and radionuclides, with increasing distance from the source area; and (2) increase in bicarbonate in wells such as EPA 14, 420, and 717, when acidic seepage begins migrating into a previously nonimpacted (background water) area (Earth Tech, December 2002).

Shutoff of the remaining Stage II wells in 2000, with the approval of the EPA, NMED, and NRC, enhanced the effectiveness of the natural attenuation processes. As seen at Well EPA 14, some contaminant concentrations are beginning to stabilize and decline since pumping ceased (the historic water quality data for this well are provided in Earth Tech, December 2002; their Table B.1 in their Appendix B).

A summary of the COCs listed in the ROD and other constituents that were detected in Zone 3 in October 2002 is provided in Table 6-2. Historic data are provided in Attachment B. These data indicate the following contaminants exceed the Site standards in Zone 3:

- Sulfate and TDS;
- Metals (aluminum, arsenic, beryllium, cadmium, cobalt, manganese, molybdenum, and nickel); and
- Radionuclides (uranium, combined radium-226 and –228, thorium, vanadium, and gross alpha).

The geochemical processes influencing the migration of these contaminants are discussed below.

Sulfate and TDS

Earth Tech (December 2002; their Figures 3-11 and 3-12) presented a graph showing sulfate concentrations in Zone 3 from 1987 through 2002, and a map showing the approximate extent of sulfate in Zone 3 exceeding the Site standard in October 2002. Sulfate exceeds the standard in most wells within the plume boundary and some wells representing background water quality (*e.g.,* Wells 411 and EPA 1). Concentrations are relatively high where seepage impacts have been greatest.

Natural attenuation appears to have reduced sulfate concentrations substantially from those reported in the tailings source area. Figure 6-13 shows that the concentrations decrease by about 85% between the North Cell and the seepage-impacted water at Well 613. Concentrations decrease another 11% from Well 613 to the non-impacted water at Well NBL 01.

Natural attenuation or active remediation may not reduce sulfate concentrations below the Site standard because the concentrations are partly controlled by groundwater equilibrium with the common, naturally occurring mineral gypsum (as in the Southwest Alluvium and Zone 1). For example, from 1989 through 1997, Well EPA 1 consistently had sulfate concentrations in the range of 2,500 mg/L to 3,000 mg/L. This well is located approximately 900 feet downgradient of the current northeastern edge of the plume (Figure 6-6) and showed background water quality until this part of Zone 3 lost saturation. The TDS will continue to exceed the Site standard because sulfate comprises most of the TDS (as in the Southwest Alluvium and Zone1).

Metals

Attachment C contains graphs showing concentrations of metals (from 1987 through 2002) that exceed the Site standards: aluminum, arsenic, beryllium, cadmium, cobalt, manganese, molybdenum, and nickel (the metals uranium and vanadium are discussed later with the radionuclides).

Arsenic and molybdenum exceed the current Site standards primarily in the background water. These two contaminants have elevated concentrations in background Wells EPA 1 and NBL 01, while very low to non-detect concentrations are found in most wells within the plume, including Well 613. The only exceptions are Well 504B, where molybdenum concentrations continue to exceed the standard of 1.0 mg/L and Well EPA13, where arsenic exceeds the 0.05 mg/L standard. This pattern of exceedances is the reverse of what is expected for metals associated with the plume and indicates that, for at least arsenic and molybdenum, the primary source is the background water.

Many of the other metals exceed the Site standards in at least one background well, usually EPA 1. For example, nickel and cobalt both exceed their Site standards in the background wells. Nickel concentrations in NBL 01 exceed the standard, and both cobalt and nickel concentrations exceeded their standards at Well EPA 1. Therefore, although neutralization of the acidic seepage will likely continue to reduce metals concentrations,

the background Site conditions may prevent them from being reduced to below the current Site standards (Earth Tech, December 2002).

The metals exhibit a consistent pattern of higher concentrations in wells such as 613, 517, and 719, that have an acidic pH and much lower concentrations where the pH is more neutral. This difference in concentrations is due to attenuation as the acidic seepage is neutralized.

Graphs included in Attachment C show that attenuation occurs throughout the plume, including areas where the pH is less than 4.0. Well 613 represents the center of the plume closest to the source area where pH has ranged from 2.0 to 3.0 since this well was first monitored in 1980. On graphs for six of the eight constituents, this well shows the highest metals concentrations. The effectiveness of natural attenuation, and seepage impact mitigation, is shown by the metals concentrations at Well 719. Although this well has a pH similar to that measured in Well 613 (< 3.0), the concentrations of metals are generally much lower. In fact, the concentrations are similar to those in other wells located downgradient in the plume and are either below the standards (arsenic, cadmium, and molybdenum) or show a decreasing trend (aluminum, beryllium, cobalt, nickel, and manganese). These decreasing trends indicate that since the pumping wells were shut off, the downgradient seepage migration is slowing and the natural system is becoming more effective in attenuating seepage impacts.

Certain metals, such as manganese, continue to be present at higher concentrations at more neutral pH values. Cobalt and nickel have patterns of exceedances similar to manganese. These two metals generally do not attenuate until the pH is about 6.5 or more, a condition that currently occurs only at Well 717 within the plume. Cobalt and nickel will remain stable at or near current concentrations until the pH increases.

Uranium, Vanadium, and Radionuclides

Attachment C presents graphs of the concentrations of uranium, vanadium, and the two radionuclides from 1987 through 2002. Uranium, vanadium, and thorium-230 are typically present above the Site standards in wells such as 613 and 517, which have acidic pH. Much lower concentrations are reported where the pH is more neutral. These reductions are most likely due to attenuation by neutralization and adsorption. In October 2002, the only exceedances of vanadium and thorium-230 were in samples collected from Well 613, where the pH is less than 3.0.

Most wells show uranium concentrations below the Site standard of 5 mg/L and the current MCL of 0.3 mg/L. If the ROD were amended to adopt the new, lower MCL for uranium (0.03 mg/L), most of the Zone 3 wells, including background quality well NBL 01, would show exceedances.

Combined radium concentrations exceed the Site standards at wells in both the plume and background water (with the exception of Well EPA1). Radium is less easily attenuated than the other radionuclides, and reductions in concentration are in part controlled by co-precipitation with gypsum (Earth Tech, December 2002). Although neutralization of acidic seepage will continue to attenuate the radionuclides, the natural conditions may prevent combined radium from being reduced to concentrations below the current Site standards.

6.4.1.7 Recommendations for the Zone 3 Remedial Action

Active remediation of the Zone 3 contaminant plume has ceased without the Site standards being achieved for the COCs. The Stage II extraction wells were shut off to avoid accelerating the migration of contamination by pumping. The natural attenuation evaluation indicates that contaminants are attenuating, but at a very slow rate and the migration of the contaminant plume has not stabilized. At this time migration of the contaminants in Zone 3 is uncontrolled and there is a future threat to human health if the contaminant plume migrates beyond the UNC property boundary. The UNC estimates the contaminant plume will migrate beyond the property boundary to the north and northeast in approximately 7 years.

For these reasons, a Supplemental Feasibility Study (FS) is recommended to evaluate other remedial alternatives to contain and remove the Zone 3 contaminant plume. Further response actions will be necessary to prevent future exposure and ensure the protectiveness of the remedy.

At this time, continued monthly monitoring at the plume boundary wells (PB 02, PB 03, and PB 04), plus the quarterly monitoring of downgradient sentinel Well NBL 01 and the other wells, will track the edge of the contaminant plume (Earth Tech, December 2002).

6.4.2 Zone 1

6.4.2.1 Summary

This section describes the current status of the Zone 1 remedial action. It also describes the ground water flow and contaminant migration in Zone 1, based on analyses of ground water elevations and water quality through time. Flow and migration are down the predominant bedrock dip direction toward the northeast. The current Zone 1 performance monitoring comprises quarterly water level monitoring in 15 wells and water-quality monitoring in eight wells. The performance-monitoring program is summarized in Table 6-6 and the monitoring well locations are shown in Figure 3-1. Figure 3-1 shows the locations of the Zone 1 monitoring wells that are sampled quarterly. COCs listed in the ROD and other constituents detected in Zone 1 in October 2002 are summarized on Table 6-7. Historic results are tabulated in Attachment B.

Water-quality trends in time and space show that the natural attenuation occurring in Zone 1 is successfully mitigating the seepage impacts by neutralization, adsorption, precipitation, and dilution. Steady declines in well productivity in this hydrostratigraphic unit led to decommissioning of the last extraction wells in 1999, with the approval of EPA, NMED, and NRC.

The current length of the Zone 1 plume is approximately 1,600 ft, extending to the northeast of former Borrow Pit No. 2 (now reclaimed). The plume extends onto Section 1. Further eastward migration of the plume is limited by the extent of Zone 1 saturation. In the 4th Quarter of 2002, seepage-impacted waters showed local exceedances of Site standards for sulfate, chloride, aluminum, manganese, cobalt, nickel, and combined radium. Background water locally contains concentrations of sulfate, TDS, manganese, and combined radium that exceed Site standards.

The 1998 Five-Year Review report recommended that UNC apply for an Alternate Concentration Limit (ACL) or Technical Impracticability (TI) waiver for Zone 1. UNC concluded that implementing a TI Waiver would provide the most comprehensive mechanism for completion of the Zone 1 component of the remedy at the Site, and that a TI Waiver would substantively meet the requirements for New Mexico Alternate Abatement Standards (NMAAS) and NRC ACLs (Davis, Graham & Stubbs LLP, May 2000). Therefore, UNC provided a technical report demonstrating how the criteria for obtaining a TI Waiver have been met for manganese, sulfate, and TDS (*see* the Zone 1 Groundwater Geochemistry Report (Earth Tech, May 2000a)), and proposed an

alternative remedial strategy to attain compliance with the CERCLA ROD. The recommended alternative remedial strategy consisted of:

- Monitored Natural Attenuation (MNA) – for neutralization and on-Site contaminant removal;
- Technical Impracticability (TI) – limited formation yields and natural geochemical conditions prevent manganese, sulfate, and TDS concentrations from meeting the water quality standards;
- Institutional Controls (IC) – to support MNA and the TI waiver.

Information supporting this alternative remedial strategy is provided in the following sections, which discuss the ground water flow and geochemistry of the Zone 1 plume.

The EPA, along with NRC, NMED and the Navajo EPA are evaluating the UNC proposal, however, adoption and implementation of such a strategy would require appropriate remedial decision making by the EPA in accordance with the NCP.

6.4.2.2 Geologic Controls on Zone 1 Ground Water Flow

The bedrock in the Site area and region has been characterized earlier in this Report in discussion of Zone 3 (Section 6.4.2). Based on structure- contour mapping of the base of Zone 1 (internal work product: Smith Environmental, 1995), this hydrostratigraphic unit exhibits very gentle dips (less than approximately four degrees) that predominantly vary from the north to the north-northeast. Irregular, very gentle warps in the basal Zone 1 contact are associated with localized dips toward the northwest. Based on aquifer tests (Canonie Environmental, 1987), Zone 1 mean transmissivity is 150 gpd/ft, which is about one order of magnitude lower than the mean transmissivity of Zone 3 (1,000 gpd/ft).

The approximate eastward boundary to Zone 1 saturation is shown in Figure 6-14. The piezometric surface shown in this Figure indicates that ground water flow is toward the north-northeast to northeast, approximately parallel to the overall northeast trend to the saturation boundary. This indicates that the potentiometric field driving ground water flow is not affected by the very gentle local bedrock warps.

Canonie Environmental (1987) showed that the flow of the ground water in Zone 1 was along the base of this hydrostratigraphic unit (the top of the Mancos Shale). This has been confirmed by subsequent Site technical investigations.

6.4.2.3 Remedial Action Summary

The Zone 1 remedial action comprised source remediation (neutralization and later dewatering of Borrow Pit No. 2) and pumping of a series of extraction wells from 1984 through 1999 (Earth Tech, December 2002). Well productivity in this hydrostratigraphic unit has always been very low.

Figure 6-15 summarizes the pumping program for Zone 1, including the well systems pumped, the number of wells operating for each system, and the combined annual pumping rates. The productivity of wells drilled in Zone 1 was always very low as indicated by the maximum combined pumping rate of 14 gpm achieved by the 17 East and North Cross-Dike Pump-Back wells. The productivity declined steadily over time and by July 1999, when the system was decommissioned, the three remaining wells were yielding a combined annual average of 0.65 gpm. The three remaining Zone 1 wells (615, 616 and 617) were decommissioned at the end of July 1999 in accordance with a letter from the NRC dated July 30, 1999 (Earth Tech, January 2002), with the concurrence of the EPA and NMED.

With the decommissioning of the three remaining Zone 1 wells in 1999, active remediation of the Zone 1 contaminant plume ceased without all cleanup standards being achieved.

6.4.2.4 Performance Monitoring Evaluation

The current performance-monitoring program in Zone 1 is summarized in Table 6-6**.** This program comprises quarterly monitoring of water levels in 15 wells and water quality in eight wells. Figure 3-1 shows the locations of Zone 1 monitoring wells that are sampled quarterly. A summary of the COCs listed in the ROD and other constituents detected in Zone 1 in October 2002 is provided on Table 6-7 and historic data are provided in Attachment B.

6.4.2.5 Water Level Evaluation

Historic water-level data for Zone 1 wells have been presented in Earth Tech (December 2002; their Tables C.1 and C.2, in their Appendix C). Water levels for the 4th Quarter of 2002 are shown on the piezometric surface map included as Figure 6-14. Water levels through time are shown on Figure 6-16.

Earlier ground water flow in Zone 1 was approximately eastward, reflecting ground water mounding and recharge within the alluvium to the west. Since the dewatering of Borrow

Pit No. 2 and termination of mine-water discharge into Pipeline Arroyo, the former mounding has declined as the ground water drains to pre-mining levels. Zone 1 water levels have significantly dissipated and they are trending toward asymptotic levels with very small rates of change (Earth Tech, December 2002). The rate of ground water drainage is relatively slow, which is consistent with the unit's relatively low transmissivity, the very low transmissivity of the underlying aquiclude, and low production from the former extraction wells.

6.4.2.6 Water Quality Evaluation

Mine-water discharge is the primary source of recharge to the Zone 1 aquifer. This ground water, which includes mine-water discharge, is considered the background water for Zone 1 and is referred to as the post-mining, pre-tailings background condition (EPA, September 1988).

This ground water was later impacted by acidic seepage from Borrow Pit No. 2 (Figure 6-17). These seepage fluids contained elevated concentrations of metals, radionuclides, and major ions including sulfate and chloride.

Source remediation (neutralization and subsequent dewatering of the borrow pit), supplemented by neutralization of the seepage by natural geochemical processes and mixing with the background water, have reduced concentrations of most contaminants to below the Site cleanup standards. However, as discussed below, exceedances of some contaminants still occur in Zone 1.

Current Extent of Zone 1 Plume

Water quality has continued to improve since shutoff of the pumping wells, indicating that the Zone 1 contaminant plume is stable to diminishing. Figure 6-17 shows the extent of the plume (*i.e.*, seepage impacts) in October 2002. Zone 1-seepage impacts have been delineated by chloride concentrations greater than 50 mg/L (Earth Tech, May 2000a). The seepage has predominantly migrated toward the northeast. Further eastward components to migration are limited by the proximity of the edge of saturation. The acidic "core" to the plume is approximated by the red area on Figure 6-17, where pH is less than 4.0. In October 2002, the following contaminants exceeded the Site standards in Section 1:

- TDS – Well EPA 7.
- sulfate – Wells EPA 4, EPA 5, and EPA 7.

- metals – Wells EPA 4 (manganese), EPA 5 (cobalt and nickel), and EPA 7 (manganese and nickel).

All of the contaminants listed above have generally exceeded standards at the cited wells since 1989. It is noted that Well EPA 4 is located approximately 220 ft to the north of the current plume edge, within an area of background water quality. Within the UNC property boundary, these contaminants exceed Site standards and several wells also showed the following exceedances in October 2002: chloride (Well 614), aluminum (Well 604), and combined radium (Wells 515 A and 604).

It is important to note that exceedances of Site standards in some wells may represent background water quality. For example, since 1989 background Well EPA 4 (in Section 1) has persistently shown exceedances in sulfate; has generally shown exceedances in manganese; and has shown concentrations of combined radium that have fluctuated above and below the standard. Background water quality is discussed further in the Section titled "Natural Attenuation Evaluation". The extent of seepage impacts as delineated by a chloride concentration greater than 50 mg/L has not changed in the past five years, including the period since the shutoff of the extraction wells. However, water quality has continued to improve since shutoff, indicating that the plume is stable to diminishing. For example, the pH at Well 604 has increased from 3.9 in 1989 to 5.36 in October 2002. Natural attenuation processes include acid neutralization by (1) reaction with the Zone 1 bedrock (which has a calcite (calcium carbonate) content of 0.03% (Canonie Environmental, 1987; their Table 4.5)); (2) mixing with the neutral background water; (3) precipitation of metals and radionuclides; and (4) adsorption of metals (excluding manganese) and radionuclides. These processes attenuate the pH, metals, and other seepage contaminants. The relatively low transmissivity of Zone 1 and the underlying aquiclude promotes slow migration and increased residence time for the impacted water to successfully attenuate.

Natural Attenuation Evaluation

The Zone 1 natural attenuation system comprises the hydro-geochemical interactions between the bedrock matrix, the background waters and the tailings fluids. The natural system is successfully attenuating the seepage impacts by the processes of neutralization, precipitation, adsorption, and mixing with the background waters.

Table 6-8 shows the predicted geochemical performance of the natural attenuation occurring in Zone 1 (Earth Tech, December 2002). In summary, sulfate and TDS

concentrations are not expected to meet Site standards because gypsum equilibrium in the ground water prevents any further reduction in sulfate concentration. Manganese may meet the Site standards if sufficient bicarbonate is available for attenuation. The remaining metals and radionuclides are expected to meet the standards through attenuation by neutralization and adsorption. The individual COCs are discussed below.

Sulfate and TDS

Sulfate concentrations exceed the Site standard in both the seepage-impacted water and the background water in Zone 1. Regardless of whether the extraction wells were operating, sulfate concentrations in Zone 1 are likely controlled by the natural system's equilibrium with gypsum. Based on the overall stable concentrations and the results of the geochemical investigation presented by Earth Tech (May 2000a), sulfate is not expected to meet the cleanup standards within Section 1. As in the Southwest Alluvium and Zone 3, most of the TDS comprises sulfate. Accordingly, TDS concentrations are not expected to meet the cleanup standards in Section 1, though they should gradually decrease to background levels.

Manganese

Manganese concentrations exceed the Site standard in both the seepage-impacted water (Wells 604, 515A and EPA 7) and the background water (*e.g.*, Wells EPA 4 and EPA 8) in Zone 1. The higher concentrations in the background water are usually equal to, or slightly greater than, the current cleanup standard (Earth Tech, December 2002; their Figures 4-9 and 4-10). Concentrations in the seepage-impacted water are higher. However, these concentrations have decreased over time as the acidic seepage has been neutralized, but the magnitude of the decrease is believed to be partly controlled by the bicarbonate concentrations (Earth Tech, May 2000a).

The seepage-impacted wells that have had bicarbonate concentrations greater than 1,000 mg/L (*e.g.*, Wells 614 and EPA 5) have either never had manganese exceedances or have shown a decrease in manganese concentrations to below the standard. Wells 515 A, 604, and EPA 7 still have manganese exceedances. Although neutralization has attenuated some of the manganese, bicarbonate concentrations are not sufficiently high to reduce the concentrations to below the standard. Well EPA 7 (in Section 1) bicarbonate concentrations have recently increased to more than 500 mg/L and the manganese concentration has declined. If the bicarbonate concentration continues to increase, then

the manganese concentration is expected to decrease to below the Site standard within the next few years (Earth Tech, December 2002).

Exceedance of the manganese standard within the property boundary is expected to continue unless sufficient bicarbonate is generated by the neutralization process to reduce the manganese concentrations.

Cobalt and Nickel

The only metals other than manganese that exceed Site standards in Section 1 are cobalt and nickel. Other metals were attenuated within the property boundary. Exceedances of cobalt and nickel are primarily limited to the area within the property boundary where the acidic seepage has not been fully neutralized.

Cobalt and nickel typically do not adsorb sufficiently to reduce their concentrations to below their standards until the pH is approximately 6.5 or more. Concentration trends for these two metals, versus well-water pH, have been presented in Earth Tech (December 2002; their Figures 4-12 and 4-14). Currently the cobalt and nickel concentrations in Well EPA 7 are fluctuating around the Site standards as the pH has increased to above 6.0. Over time, it is expected that continued neutralization will lead to adsorption and attenuation of these two metals and that their concentrations will fall to below the standards.

Combined Radium-226 and –228

Similar to the metals, combined radium is believed to be attenuated by neutralization, precipitation, and adsorption. The primary exceedances of combined radium are within the property boundary where the pH is more acidic. Concentration trends for combined radium have been presented in Earth Tech (December 2002; their Figure 4-15).

The combined radium standard has occasionally been exceeded in the three background wells (EPA 2, EPA 4, and EPA 8). The combined radium concentrations are expected to decrease to at least the background levels, and possibly to below the standard, with continued natural attenuation.

6.4.2.7 Recommendations for Completion of the Zone 1 Remedial Action

As anticipated in Appendix A of the ROD, *Contingencies for Selected Remedy*, operational results have demonstrated that it is technically impracticable to achieve all

cleanup levels in a reasonable time period, and saturated thicknesses have ceased to support pumping. For these reasons, UNC is recommending the following alternate remedial strategy (Earth Tech, May 2000a):

1. Continue to perform monitoring on an annual basis because the water quality is stable or improving.
2. Close the Zone 1 component of the remedy using a combination of:
    - Monitored Natural Attenuation (MNA) – for chloride, metals, and radionuclides:
        - MNA contracts the plume. Acidic pH is neutralized, causing metals and radionuclide precipitation.
        - MNA stabilizes the plume. Equilibrium conditions and mixing with background water maintains or reduces sulfate and manganese.
    - Technical Impracticability (TI) Waiver – for sulfate, TDS, and manganese:
        - The TI waiver accounts for natural hydraulic conditions which limit well yields to very low rates and prevent pumping wells from achieving hydraulic containment.
        - The TI waiver also accounts for natural geochemical conditions which prevent the attainment of standards for manganese because of bicarbonate availability, and sulfate/TDS because of gypsum equilibrium.
    - Institutional Controls - to support MNA and the TI waiver.

The UNC's recommended alternate remedial strategy is currently being reviewed by the EPA, NMED, NRC and the Navajo EPA, however, adoption and implementation of such a strategy would require appropriate remedial decision making by the EPA in accordance with the NCP.

6.4.3 Southwest Alluvium

6.4.3.1 Summary

This section describes the current status of the Southwest Alluvium component of the remedy. It also summarizes data collection and analyses for the Southwest Alluvium contaminant plume since the previous Five-Year Review. Progress toward the recommendations for this plume that were made in that review is evaluated, and new recommendations are made based on the data collected over the last five years. Ground water quality data are available for the Southwest Alluvium from 1989 to present. Table 6-9 lists the Southwest Alluvium monitoring wells that are sampled quarterly. Their locations are shown on Figure 3-1. A summary of contaminants detected in the

Southwest Alluvium in October 2002 is provided on Table 6-10. Historic data are provided in Attachment B.

The 1998 Five-Year Review report recommended that UNC apply for ACLs or a TI Waiver for completing the Southwest Alluvium remedial action. UNC provided a technical report that concluded how the criteria for obtaining a TI Waiver have been met for sulfate and TDS, the Southwest Alluvium Groundwater Geochemistry Report (Earth Tech, June 2000). That report also proposed an alternate remedial strategy that could attain compliance with the CERCLA ROD. The recommended alternate remedial strategy is a combination of:

- Monitored Natural Attenuation (MNA) – for neutralization and on-Site contaminant removal;
- Technical Impracticability (TI) – for the natural geochemical conditions that prevent sulfate and TDS concentrations from meeting the water quality standards; and
- Institutional Controls (IC) – to support the TI waiver.

The UNC's TI Waiver request and proposed alternate remedial strategy for the Southwest Alluvium are currently under review by the EPA, NMED, NRC, and the Navajo EPA, however, adoption and implementation of such a strategy would require appropriate remedial decision making by the EPA in accordance with the NCP.

6.4.3.2 Status of Southwest Alluvium Remedial Action

Active remediation of the Southwest Alluvium contaminant plume has been temporarily discontinued. The ground water extraction well system was turned off in February 2001 to evaluate the ability of the contaminants to naturally attenuate in the aquifer. Such testing was part of UNC's effort to evaluate the appropriateness of obtaining a TI waiver for sulfate and TDS since the concentration of those contaminants showed little change during active remediation.

A Natural Attenuation (NA) Test was conducted from February 2001 through July 2002. UNC presented the Test results in the report titled "Final Report and Technical Impracticability Evaluation Southwest Alluvium Natural Attenuation Test, Church Rock Site" (Earth Tech, Inc. November 2002) (NA Report). The NA Report concluded that natural attenuation was at least as effective as pumping for controlling the migration of contaminants in the Southwest Alluvium.

However, it is noted that the results of the NA Test showed that the concentrations of some cotaminants (*e.g.*, uranium) increased during the NA Test. Those results, along

with the UNC's conclusions, are still being evaluated as part of the regulatory agencies ongoing review of the NA Report. The UNC's evaluation of the NA Test is provided below.

The remedial action for the Southwest Alluvium has consisted of four extraction wells (801, 802, 803 and 808) that were designed as a barrier/collection system in the target area. The system was located approximately 400 feet downgradient from the southern edge of the South Cell of the tailings impoundment and upgradient of the four NRC Point of Compliance (POC) wells (EPA 28, GW 1, GW 2, 632). The locations of extraction wells and monitoring wells are shown on Figure 3-1. Extraction Well 801 was decommissioned and converted to a monitoring well in July 1999.

At least one additional monitoring well is planned for Section 10 to delineate the downgradient extent of the contaminant plume. The construction of this well has been delayed because of access issues with Navajo Trust Land.

6.4.3.3 Southwest Alluvium Ground Water Flow

The current length of the delineated Southwest Alluvium plume, shown on Figure 3-2 is approximately 5,220 ft, trending to the southwest along the western margins of the North, Central, and South Cells, and continuing to the southwest. The plume extends approximately 1,400 ft onto the southeastern corner of adjacent Section 3; from here it turns southward and continues for approximately 480 ft onto the north-central portion of adjacent Section 10 (Figure 3-2). The extent of the plume in the downgradient direction has not been defined, with Well 624, the furthest most downgradient well, being within the plume boundary. Sulfate and TDS are the only contaminants that exceed current Site standards outside the property boundary in both Site and background wells.

Ground water in the Southwest Alluvium was significantly recharged by the infiltration of pumped mine water that was discharged to the Pipeline Arroyo. This water percolated into the alluvium and increased the saturation in the vicinity of the tailings disposal cells. This ground water, which has been impacted by mine-water discharge, is established by EPA as the Southwest Alluvium background water and represents the post-mining, pre-tailings background condition (EPA, September 1988). Saturation has been declining since the mine water discharge ceased in 1986. As a result, the flanks of the alluvial valley and the northern property boundary have been desaturated and, as of 2000, a 31 percent (%) saturation loss had been observed further to the south (Earth Tech, June

2000). The Southwest Alluvium piezometric surface map for July 2002 is included as Figure 6-18.

The Southwest Alluvium ground water is moving to the southwest, along the Pipeline Arroyo (*see* Southwest Alluvium piezometric surface contour map, Figure 6-18). Based on UNC's calculations of the volume of background ground water drainage through the valley in comparison to historic pumping rates, UNC concluded that the drainage has exceeded the pumping rate throughout the remediation period by 30% or more (Earth Tech, June 2000).

Figure 6-19 shows water levels over time in Southwest Alluvium wells, illustrating the overall long-term trend of decreasing water levels as water continues to drain from the Southwest Alluvium to pre-mining levels. Water levels in the vicinity of the pumping wells increased after the pumping wells were turned off in January 2001 for the start of the NA Test. Water levels in the former pumping wells have since stabilized at elevations similar to those measured in nearby monitoring wells. These stable to declining water levels indicate that the system has fully recovered from the effects of pumping. A summary of operational data for the Southwest Alluvium is provided on Table 6-11.

The water balance evaluation conducted by UNC also indicates that ground water pumping by the existing extraction well system provided partial hydraulic containment prior to shut down for the NA Test. However, based on its calculations, UNC concluded that pumping did not contain the Southwest Alluvium contaminant plume and will not do so in the future as currently designed. (Earth Tech, June 2000). The EPA continues to evaluate the overall effectiveness of both the remedial system and NA for remediating the Southwest Alluvium contaminant plume.

6.4.3.3 Southwest Alluvium Geochemistry

The Southwest Alluvium water was locally impacted by acidic seepage from the Site's tailings impoundments. This seepage contained elevated concentrations of metals, radionuclides, sulfate, and chloride. Table 6-10 lists the concentrations of detected COCs and other constituents and identifies exceedances of standards in samples collected in the 3rd Quarter of 2002.

The approximate extent of seepage, shown on Figure 6-20, is delineated by:

- Bicarbonate – released during the neutralization of acidic tailings solutions as naturally occurring calcite dissolves, bicarbonate concentrations exceed 1,000 mg/L in seepage-impacted water.
- Chloride – associated with the milling process, chloride is present in higher concentrations in the seepage compared to the background water, and is a chemically non-reactive ion in solution. Chloride concentrations greater than 150 mg/L indicate seepage impacts.

The justification for using these two indicator parameters to delineate seepage impacts is provided in the Southwest Alluvium Geochemistry Report (Earth Tech, June 2000). The pH is not used because unlike in Zones 1 and 3, both the seepage-impacted area and the background area have near-neutral pH. This is a result of the high capacity of the alluvium to neutralize the acidic seepage. This neutralization capacity is also responsible for preventing the migration of metals, which have been detected only in wells located immediately adjacent to the South Cell.

Currently only two contaminants, sulfate and TDS, exceed the current Site standards in the Southwest Alluvium outside the UNC property boundary in Sections 3 and 10. Sulfate and TDS also exceed Site standards in the background water (Well 627). The majority of the TDS is composed of sulfate; therefore, TDS concentrations mimic sulfate concentrations (Earth Tech, June 2000). Uranium concentrations are below the Site standard, but they would exceed the pending MCL of 0.03 mg/L in almost all samples collected from the Southwest Alluvium, including samples of background water (Well EPA 25). Natural attenuation appears to have reduced sulfate concentrations substantially from those reported in the tailings disposal area. Figure 6-21 shows that the concentrations decrease by about 73% between the tailings liquid and the lysimeter at the base of the tailings. Concentrations decrease another 24% from there to Well GW-1.

Other contaminants are present at concentrations exceeding the Site standards within the UNC property boundary, including:

- Chloride – Chloride concentrations exceed Site standards at Well 509 D. Historically, chloride concentrations also exceeded the standards in Wells 632 and 801, but recent concentrations are less than the standards and the concentrations in all three wells are decreasing slightly (Earth Tech, November 2002).
- Manganese – The only metal that exceeds its Site standard is manganese, and these exceedances only occur within the property boundary at Wells 801 and EPA 23, and occasionally at Well 509 D. All of these concentrations are decreasing with time (Earth Tech, November 2002 and June 2000). Historically,

manganese also exceeded its Site standard in Wells 802, 803, and 808 (Earth Tech, November 2002).

Maps showing the extent of these exceedances are provided in the NA Report.

Stiff diagrams are graphical representations of the relative concentrations of major ions and the ionic strength of natural waters. These can be used to show when seepage impacts reach a well. For example, Figures 6-22 and 6-23 show Stiff diagrams for Wells GW-1 and GW-2 waters over time. Initially, GW-1 water was a calcium-sulfate type, similar to the background water. GW-2 water was already a magnesium-sulfate type in 1998. The waters in GW-1 changed from a calcium-sulfate type to a magnesium-sulfate type between 1998 and 2002. Chloride and bicarbonate concentrations trends are also evident on the Stiff diagrams.

Figure 6-24 is a map of Stiff diagrams for the October 2002 samples of Southwest Alluvium wells. As shown on Figure 6-24, the Stiff diagram of a non-impacted well, for example EPA 25, shows a predominantly calcium-sulfate type water, whereas the Stiff diagram for an impacted well, for example 801, shows a magnesium-sulfate water, with higher bicarbonate and calcium concentrations than the background water.

Although impacted wells can be clearly identified, impact of the plume is limited to exceedances of sulfate and TDS standards. Unlike the Zone 1 and 3 plumes, the pH of the Southwest Alluvium impacted water is nearly neutral. Consequently, there are not exceedances of metals or radionuclides, with the exception of a few minor exceedances of manganese. As stated above, uranium would exceed the pending MCL of 0.03 mg/L in almost all samples collected from the Southwest Alluvium.

6.4.3.4 Southwest Alluvium Natural Attenuation Test

The UNC conducted the NA Test from February 2001 to July 2002 to determine whether shutting off the Southwest Alluvium extraction wells would adversely affect water quality. The Southwest Alluvium extraction wells were shut off in February 2001 for the duration of the test. The NA Report was submitted to the EPA, NMED, and NRC on November 4, 2002 (Earth Tech, November 2002).

In the NA Report UNC concluded that turning off the extraction wells does not have an adverse effect on water quality and that the natural system is as effective as, or more effective than, pumping for controlling the migration of metals and radionuclides. The UNC also concluded that natural attenuation reduces sulfate and TDS concentrations to

non-impacted background levels. The UNC believes this is demonstrated by the sulfate concentrations from wells within the plume that are equivalent to the non-impacted background concentrations. Although the remediation system did remove sulfate and TDS mass, the concentrations, which are partly dependent on the chemical equilibrium of gypsum, remained similar to those previously achieved through geochemical processes that occur within the existing aquifer. The concentrations of sulfate and TDS do not appear to be solely dependent on continuing the current pumping operations, but may be controlled as well by natural geochemical reactions.

The NA Report included nonparametric trend analysis to determine whether increases in contaminant concentration occurred during the Test and whether the changes were significant. Increases in upward trends were identified for bicarbonate, chloride, and TDS, although bicarbonate was evaluated as an indicator parameter only, not as a COC. These increases were attributed to the elimination of the partial hydraulic capture provided by the extraction wells. The NA Report states that no change in trend was observed for the sulfate concentrations because these are naturally equilibrated with gypsum. The NA Report also concluded that there was no change in trend for manganese or uranium.

The NA Report concluded from these analyses that even though seepage-impacted water continues to migrate, as shown by upward trends in bicarbonate, the migration of metals and radionuclides is arrested by attenuation processes, (*i.e.*, adsorption and precipitation).

The NA Report and UNC's evaluation and proposal for a TI Waiver for sulfate and TDS are currently under review by the regulatory agencies. However, as stated above, concentrations of some contaminants (*e.g.*, uranium) increased in some wells during the NA Test. The EPA continues to evaluate the results of the NA Test and its effectiveness in mitigating uranium and other COCs as part of its review of the NA Report.

6.4.3.5 Natural Attenuation Evaluation

Table 6-12 shows the predicted performance of the Southwest Alluvium natural geochemical system, according to the NA Report. According to that report, Sulfate and TDS concentrations are not expected to meet Site standards because gypsum equilibrium in the groundwater appears to limit reduction of sulfate concentrations. The remaining metals and radionuclides are expected to meet the current standards through attenuation by neutralization and adsorption. However, uranium concentrations would not be expected to meet the EPA's pending MCL of 0.03 mg/L (effective December 2003) if the

new standard is adopted. Further, uranium concentrations have increased significantly in some wells since the extraction well system was shut down to conduct the Natural Attenuation Test. The individual COCs are discussed below.

Sulfate and TDS

Sulfate concentrations exceed the Site standard in both the seepage-impacted water and the background water in the Southwest Alluvium. Monitoring data have shown that sulfate concentrations in the Southwest Alluvium may be controlled by the natural system's equilibrium with gypsum, rather than by active remediation. Based on the overall stable concentrations and the results of the geochemical investigation presented by Earth Tech (June 2000), sulfate is not expected to meet the cleanup standards in the Southwest Alluvium. As in Zone 1 and Zone 3, most of the TDS is comprised of sulfate. Accordingly, TDS concentrations are not expected to meet the cleanup standards.

Chloride

Chloride concentrations exceed the Site standard at Well 509 D. Chloride was previously present at concentrations exceeding the standard in Wells 632 and 801, but recent concentrations are below the standard and concentrations in all three wells show a declining trend. It is expected that chloride concentrations in Well 509 D will also decrease to below the standard.

Manganese

The only metal that exceeds its current standard is manganese. The exceedances occur only within the property boundary at Wells 801 and EPA 23. Manganese was previously present at concentrations exceeding the standard in Wells 509 D, 802, 803, and 808, but these concentrations have been reduced to below the standard. It is expected that manganese concentrations will continue to diminish to below the standard in all Southwest Alluvium wells.

Uranium

Uranium concentrations do not exceed the current Site standard listed in the ROD of 5 mg/L. While the ROD standards generally remain fixed [40 CFR §300.430 (f)(1)(ii)(B)(*1*)], the new MCL for uranium, if adopted by the EPA as a chemical-specific ARAR for remedy protectiveness, would decrease the standard to 0.03 mg/L, effective December 2003. Uranium concentrations in most of the Southwest Alluvium wells,

including background (EPA 25) wells, exceed the pending MCL. If it is determined that Site background levels of uranium are above the new MCL, or NMWQA standards, then approved background levels would be adopted as the cleanup standard.

Although the statistics included in the NA Report concluded that there was not a significant increase in trend for uranium, the graphs of uranium concentration in several wells indicated a possible increase prior to and during the NA Test. This issue is clarified as follows.

Graphs of contaminant concentrations for the periods before and during the NA test (through July 2002) were included in Appendix A of the NA Report; these are reproduced in Figure 6-25. These graphs included trend lines for both periods, although the statistical fit of many of the lines was very poor. For most of the wells, including Wells 509 D, 624, 627, 632, 801, EPA 23, EPA 25, and EPA 28, the trend line during the NA test is very similar to the pre-test line, or shows a slight reduction. However, in several wells the trend line for uranium associated with the NA Test appears to dramatically increase from an upward or stable trend or changes from a decreasing trend to an increasing trend. These wells are 802, 803, GW 1, GW 2, and GW 3.

Graphs of uranium concentrations in Wells 509 D, 801, 802, 803, GW 1, GW 2, and GW 3, through January 2003, are included as Figures 6-26 and 6-27. These graphs show the following:

- The uranium concentrations in some of the wells began to increase prior to the start of the NA test, as indicated by the yellow circles on Figure 6-26.
- The uranium concentrations in Wells GW 1 increased from a relatively stable trend during the NA Test.
- The uranium concentrations in Well GW 3 changed from a decreasing trend to a slightly increasing trend after the start of the NA Test.
- The uranium concentrations in Well 801 began to increase prior to the January 2001 sampling event and decreased through most of the NA Test.
- Uranium concentrations in Wells 802 and 803 were generally increasing before and during the test.
- The uranium concentration in Well 803 increased from a slightly upward trend prior to the May 2000 sampling event, decreased after the May 2000 event and began to increase again during the NA Test.
- The uranium concentrations in Well 509 D, which is located upgradient of the South Cell and the other Southwest Alluvium wells, increased prior to the NA

Test (beginning in January 2000), remained elevated through July 2002, decreased in October 2002, and rebounded in January 2003.

The greatest reduction was observed in the most upgradient well, 509 D (decrease of 70 ug/L), and generally the concentration drop decreased from upgradient to downgradient, as shown on Figure 6-28. Well EPA 23 does not follow this pattern, but it is one of the few wells in the Southwest Alluvium that is screened partially in the Mancos Shale. The uranium concentration increase in Well 509 D predates, and is therefore unrelated to, the NA Test. Well 509 D's upgradient location and the earlier increase in uranium concentration point to a source other than the South Cell and a cause other than the NA test for the increase.

The NA Report contained data through July 2002. Uranium concentrations in all the Southwest Alluvium wells decreased in October 2002 and rebounded in January 2003. More recent preliminary data provided by UNC (through mid-2003) have shown that the uranium concentrations in those wells are beginning to level off or decline, suggesting that conditions may be stabilizing.

No conclusions will be made by the EPA regarding the initial increase in uranium concentrations or other COC concentrations at this time. The EPA, along with the other regulatory agencies, are continuing to evaluate the NA Report and the more recent monitoring data provided by UNC.

6.4.3.6 Recommendations for the Southwest Alluvium Remedial Action

The following recommendations are made for the Southwest Alluvium component of the remedial action:

1. Delineate the downgradient extent of the contaminant plume by adding additional wells, as appropriate, to the ground water monitoring network.
2. Complete analysis of natural attenuation and potential TI Waiver and make a decision with respect to their acceptability, utilizing the appropriate procedures for such decision making under the NCP.

6.4.4 Recommended Changes to Monitoring Program

During the Five-Year Review, the ground water monitoring program was evaluated by UNC using guidelines presented in the U.S. Department of Energy's Guidance for Optimizing Ground Water Response Actions at U.S. Department of Energy Sites (May 2002). Three criteria are provided for the elimination of unnecessary analytes:

- *Analytes not found in initial samples and for which there is no evidence of a release;*
- *Analytes not identified above detection limits in three successive samples; and*
- *Analytes detected at less than half the action level for at least three successive samples and displaying a static or downward trend.*

The 2002 Site data were evaluated using these criteria. Lead and lead-210 have not been detected at the Site during the previous three sampling events. Selenium has been detected only twice, both times at concentrations less than half of the Site standard, during the previous three sampling events. Accordingly, UNC is recommending that lead, lead-210, and selenium be eliminated from the entire Site monitoring program.

6.4.5 Contaminant Mass Removal

Contaminant mass removal values are summarized from the 1999, 2000 and 2001 Annual Reports (Earth Tech, December 1999, Earth Tech, December 2000; Earth Tech, January 2002). The estimated mass extracted is summarized in Tables 6-13, 6-14, and 6-15.

6.5 Site Inspection

A Site inspection was conducted on January 29, 2003, by the EPA, along with the NRC, NMED and the Navajo EPA. Photographs taken during the Site inspection are included as Attachment D. The purpose of the inspection was to assess current Site conditions as they relate to the protectiveness of the remedy.

No significant issues were observed during the Site inspection. The Site appeared to be well maintained and operated. The tailings disposal area is surrounded by barbed wire fencing (Photographs 10 and 21). The radon barrier and protective rock cover on the tailings piles appeared to be in good condition. There were no signs of deterioration or erosion (Photographs 1, 6, 7, and 8). The Site contains many extraction and monitoring wells. Because of the large number of wells at the Site, each well was not inspected, but those that were inspected were in good condition (Photographs 12, 13, 14, 15, 16, 17, 18, 20, and 21). No extraction wells were operating at the time of the inspection.

Native vegetation has reestablished itself on the radon barrier and protective rock cover (Photographs 1, 6, 7, and 8).

6.6 Interviews

Interviews for this Five-Year Review were conducted by EPA with representatives of the NMED, the NRC, and the Navajo Nations EPA Representatives of UNC declined to be interviewed directly by the EPA, but did provide written statements to EPA's interview questions. The EPA also met with representatives of the Navajo Pinedale Chapter and local residents on the day of the Site Inspection to discuss Site activities and their concerns. Representatives of the Navajo EPA, NRC, and UNC attended the meeting to support EPA in this effort. Interview Record Forms are provided in Attachment E.

7.0 TECHNICAL ASSESSMENT

The Five-Year Review must determine whether the Site remedy is protective of human health and the environment. The EPA guidance provides three questions that are used to organize and evaluate data and information, and to ensure that all relevant issues are considered when determining the protectiveness of a remedy. These questions are answered for the Site in the following sections. Section 7 is concluded with a summary of the technical assessment.

7.1 Question A: Is the remedy functioning as intended by the decision documents?

The primary documents that detail the remedial decisions for the Site are the EPA Record of Decision (ROD), which controls the EPA Site ground water remediation, along with the NRC Source Materials License No. SUA-1475 (License), and the NRC-approved Reclamation Plan, which govern source area closure and reclamation activities. The remedy for tailings and mill reclamation described by the NRC Reclamation Plan have been implemented as specified, with the exception of final closure and installation of the radon barrier over the South Cell after the ground water remediation is complete and the evaporation ponds are removed. The EPA ground water remedy is being implemented and operated as specified by the ROD.

7.1.1 Remedial Action Performance

The ground water extraction and evaporation systems were installed in accord with the ROD and License. Extraction well networks were installed for each of the three Site plumes: Zone 3, Zone 1, and the Southwest Alluvium.

7.1.1.1 Whether the remedial action continues to be operating and functioning as designed

The remedial action is no longer operating and functioning as designed. For reasons discussed in detail in this Five-Year Review report (Report), the three extraction well systems have been decommissioned or, in the case of the Southwest Alluvium, temporarily shut off, and performance monitoring is ongoing.

7.1.1.2 Whether the remedial action is performing as expected and cleanup levels are being achieved

The remedial action performed as expected until the ground water extraction well systems were shut off. The cleanup levels have not been achieved for any of the three aquifers.

Performance monitoring, conducted both before and after the extraction systems were shut off, indicates that for most COCs, natural attenuation may be at least as effective as, if not more effective than, the active remediation systems in attenuating the seepage-impacted water. Acidic seepage is being neutralized, resulting in attenuation of metals and radionuclides. Cleanup levels may not be achieved for sulfate, manganese, and TDS, which exceed the Site standards in background ground water as well as seepage-impacted ground water. Geochemical conditions related to gypsum equilibrium and bicarbonate availability may limit the reduction of sulfate, TDS, and manganese concentrations in all three aquifers, regardless of whether the extraction wells are operated.

Although the extraction well systems are not currently operating, the ROD anticipated this situation. The ROD discusses, in a section titled "Contingencies for Selected Remedy" (Appendix A), the possibility that cleanup levels may not be achieved and that the saturation may decline and reach a level that would make continued pumping impracticable:

> *However, operational results may demonstrate that it is technically impractical(sic) to achieve all cleanup levels in a reasonable time period, and a waiver to meeting certain contaminant-specific applicable or relevant and appropriate requirements (ARARs) may require re-evaluation as a result.*
>
> *In the event that saturated thicknesses cease to support pumping, remedial activity would be discontinued or adjusted to appropriate levels (EPA, 1988).*

7.1.1.3 Whether Containment is Effective

The extraction well systems are no longer operating and, therefore, active remediation to contain and remove contamination has ceased.

In the Southwest Alluvium natural attenuation may be containing metals and radionuclides as effectively as ground water extraction. Uranium concentrations are below current Site standards. However, they exceed the EPA's pending MCL for uranium of 0.03 mg/L (effective December 2003) within the plume and in background water. The only contaminants that exceed current Site standards in the portion of the Southwest Alluvium plume outside the UNC property are sulfate and TDS, the

concentrations of which may be controlled by geochemical processes and background water-quality conditions.

In Zone 1 natural attenuation is effectively containing metals and radionuclides, but exceedances of several metals are still present outside the property boundary in Section 1. Those metals include cobalt, nickel, and manganese. The portion of the plume that contains metals exceedances has been consistently shrinking toward the property boundary, and is expected to continue to do so.

The Zone 3 extraction well system was shut down because it was accelerating the migration of the plume rather than containing it. Since the system has been shut down, natural attenuation has limited the migration of contaminants in Zone 3, but the effective "attenuation rate" here is slower than in Zone 1 and the Southwest Alluvium. Because the Zone 3 plume has not yet stabilized, and the migration of contaminants is uncontrolled, further response actions are necessary to prevent potential exposure and ensure protectiveness.

The possible, eventual migration of the Zone 3 plume beyond the property boundary could place protectiveness at risk in the absence of additional institutional controls. For this reason, UNC has installed several new plume-boundary and sentinel wells.

The Site is surrounded by barbed-wire fence and marked with "No Trespassing" signs. Entrances are gated and locked. Neighboring livestock occasionally break down the fences, but the fences are repaired promptly and the livestock are returned to their grazing allotments.

7.1.5.2 Whether institutional controls are in place and prevent exposure

Institutional controls (ICs) are not currently in place and they were not part of the original remedy selected by the EPA. However, discussions are underway to investigate their potential utility and effectiveness. The ICs, if established and enforced, would prevent exposure by restricting the use of contaminated ground water in those areas outside of the UNC property boundary.

The UNC provided to the Navajo EPA and the U.S. Department of Justice a Draft Resolution and Environmental Right-of-Way Procedures (Davis, Graham & Stubbs, LLP, March 23, 2001) (Draft Resolution). This document presented a draft Tribal Resolution

to define ICs in certain seepage-impacted areas in the Southwest Alluvium in Section 3 and Section 10, and in Zone 1 of the Gallup Formation in Section 1.

The approximate areas covered by the proposed ICs are shown on Figure 7-1. The ICs would cover approximately 40 acres of Navajo Trust lands in Sections 3 and 10, and individual allotments, if necessary. The ICs for Section 1 would cover approximately 35 acres located in the northwest corner of the section. Grazing and surface activities would not be affected by the ICs. The UNC also provided the procedures to establish an environmental right-of-way under the U.S. Department of Interior regulations. The duration of the right-of-way would be 50 years, subject to right of renewal. In the Draft Resolution, UNC has proposed to drill a water supply well into the underlying Dakota formation. The Dakota is a higher yielding and better water-quality aquifer in comparison to the ground water aquifers in the Gallup Formation and the alluvium.

It is noted that in a letter to the EPA, dated September 3, 2003, the Navajo EPA stated that it did not recommend the use of ICs on any projects, especially Superfund activities where ground water is impacted. The Navajo EPA also stated that it does not have a mechanism in place to enforce the ICs and that a permanent staff would be required to oversee the project. Further, it stated that a lack of funds might hinder the establishment of such an oversight program for ICs.

7.2 Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of remedy selection still valid?

This section addresses the following: (1) changes in ARARs and To-Be-Considereds (TBCs), and (2) changes in exposure pathways.Changes in Standards and TBCs

7.2.1.1 Changes in Standards and Newly Promulgated Standards

This section describes standards identified in the ROD that have been revised or newly promulgated and whether these changes call into question the protectiveness of the remedy.

The following ARARs for the Site were identified for the selected remedy in the ROD, dated September 30, 1988.

1. National Primary Drinking Water Standards – Ground water will attain Final Maximum Contaminant Levels (MCLs) where these levels are above background, to the maximum extent practicable.

2. New Mexico Water Quality Control Commission (NMWQCC) Regulation Standards – Ground water will attain NMWQCC Standards, where these levels are above background, to the maximum extent practicable.
3. RCRA Standards Applicable to Background – Ground water will attain background levels, if they are above MCLs or NMWQCC Standards, to the maximum extent practicable.
4. Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 CFR Part 192) as adopted by 10 CFR 40 Appendix A – Ground water concentration limits set herein are equivalent to MCLs and will be attained to the maximum extent practicable where they are above background levels.

Contaminant-specific ground water ARARs are shown in Table 7-1. The ARARs established for the following contaminants and hazardous substances have been, or are scheduled to be, changed from those presented in the ROD, due to initial promulgation or pending revision of MCLs, or re-analysis of background:

1. Arsenic – The arsenic MCL will be reduced to 0.010 mg/l, effective January 2006.
2. Antimony – An MCL was promulgated for antimony (0.006 mg/l) in 1992.
3. Beryllium – An MCL was promulgated for beryllium (0.004 mg/l) in 1992.
4. Cadmium – The cadmium MCL was reduced to 0.005 mg/l in 1991.
5. Thallium – An MCL was promulgated for thallium (0.002 mg/l) in 1992.
6. Nitrate – The background value for nitrate was changed by NMED to 190 mg/l on the basis of additional background studies conducted by NRC in 1996. No decision has yet been made by the EPA on this change.
7. Sulfate – The background value for sulfate was changed by NMED to 2,125 mg/l on the basis of additional background studies conducted by NRC in 1996. No decision has yet been made by the EPA on this change.
8. TDS – The background value for TDS was changed by NMED to 4800 mg/l on the basis of additional background studies conducted by NRC in 1996. No decision has yet been made by the EPA on this change.
9. Uranium – The uranium MCL was reduced to 0.030 mg/l, effective December 2003.

None of these changes are believed to affect the current protectiveness of the remedy because there is no evidence of exposure at levels above ARARs. However, they may call into question the protectiveness of the remedy in the long term. The adoption of these newly promulgated or revised MCLs, or approved background levels if above the

MCLs (or NMWQCC standards), as ARARs would need to be fully considered as part of any future response action decision making

There have been no changes to location-specific or action-specific ARARs since the last Five-Year Review that affect the protectiveness of the remedy.

7.2.1.2 Changes in TBCs

The following TBCs were included in the ROD:

1. Maximum Contaminant Level Goals (MCLGs) – For constituents with MCLGs, ground water will attain the MCLGs to the maximum extent practicable where the MCLs or NMWQCC standards are yet to be promulgated (if above background levels).
2. Health-based criteria are factors to consider for inorganics detected at the Site without federal MCLs or NMWQCC Standards – Ground water should attain health-based standards to the maximum extent practicable where above background levels.
3. National Archaeological and Historical Preservation Act - Remedial Actions at the Site will not disturb archaeological Sites on Indian Lands.

There have been no changes to the TBCs that affect the protectiveness of the remedy. With the promulgation of MCLs for antimony, beryllium, and thallium since the ROD was issued, vanadium is the only remaining inorganic compound for which the ROD-specified ARAR (0.7 mg/l) is a health-based criterion. Current health-based criteria for vanadium include the EPA Region III risk-based concentration (RBC) for tap water ingestion (0.26 mg/l) and the EPA Region IX preliminary remediation goal (PRG) for tap water ingestion (0.26 mg/l). Because vanadium concentrations in ground water are typically below these criteria, except at locations such as Well 613, located well within the property boundary, where the pH is less than 3.0, these criteria do not affect the protectiveness of the remedy.

The cleanup levels selected for this Site were determined based on the ARARs, including federal and state drinking water quality standards, several health-based levels, and background ground water quality. The Public Health Assessment prepared for this Site as part of the FS (EPA, 1988) was not used as a basis to establish cleanup values. No changes have occurred in the assumptions used to establish the applicable ARARs and no new exposure pathways have been identified as a result of this Five-Year Review.

7.3 Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No other information regarding newly identified ecological risks, impacts from natural disasters and any other information has come to light that could affect the protectiveness of the remedy.

7.4 Technical Assessment Summary

According to the data review, Site inspection, and interviews, the remedy for the Site has been implemented, but modifications are recommended to meet the objectives of the ROD and other decision documents.

8.0 ISSUES

Several issues are identified for this Site, as described in the following paragraphs and summarized on Table 8-1.

TABLE 8-1
Summary of Issues Identified in the Five-Year Review
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Issues	Affects Current Protectiveness (Y/N)	Affects Future Protectiveness (Y/N)
Institutional Controls for Restricting the Use of Ground water in Zone 1 and the Southwest Alluvium	N	Y
Monitored natural attenuation and technical impracticability for Zone 1.	N	N
Monitored natural attenuation and technical impracticability for the Southwest Alluvium.	N	N
Zone 3 Plume Migration	N	Y
Increasing contaminant concentrations during the Southwest Alluvium Natural Attenuation Test	N	Y

8.1 Institutional Controls for Restricting the Use of Ground Water in Zone 1 and the Southwest Alluvium

One issue at the Site is the theoretical potential for use of the seepage-impacted ground water by local residents or landowners on the Navajo Trust property surrounding the Site. There are currently no known users of the impacted water and local Navajo chapter officials indicate that there are no future plans to use the water. The yield and quality of the background water do not make it practical for use as a water supply, especially because alternative water sources in the deeper aquifer, specifically the Dakota, provide potable quality and quantities of water. Although these factors make it unlikely, the potential installation of a shallow well that would intercept water impacted by the Site has been considered. As discussed, there are currently no IC's in place since they were not part of the original remedy set forth in the ROD. However, discussions are underway to investigate and evaluate their implementation.

8.2 Southwest Alluvium Natural Attenuation and Technical Impracticability Demonstrations

A Natural Attenuation (NA) and Technical Impracticability (TI) Report (NA Report) was submitted to the regulatory agencies for the Southwest Alluvium in November 2002

(Earth Tech, November 2002). As discussed in Section 6.4.3.4, the NA Report concluded that even though seepage-impacted water continues to migrate beyond the property boundary, the migration of metals and radionuclides is arrested by attenuation processes (*i.e.,* adsorption and precipitation), and the natural attenuation is as effective as, or more effective than, pumping to remediate these constituents.

The Report also presented a TI evaluation for two constituents, sulfate and total dissolved solids (TDS). These two constituents exceed the Site standards inside and outside the property boundary, as well as in background water not impacted by tailings seepage. The Report also states that active remediation (pumping) is not effective in reducing sulfate and TDS concentrations because the concentrations of these two constituents are controlled by natural geochemical conditions.

The regulatory agencies are evaluating the NA Report and have not yet formally commented on UNC's proposal.

8.3 Zone 3 Plume Migration

The Zone 3 extraction well system was shut down because it was accelerating the migration of the plume, rather than containing it. Since the system has been shut down, natural attenuation has limited the migration of contaminants in Zone 3, but the effective "attenuation rate" here is slower than in Zone 1 and the Southwest Alluvium. Water-quality trends in time and space show that the Zone 3 natural system is likely attenuating the seepage impacts by neutralization, adsorption, precipitation, and mixing with background waters. However, the attenuation occurs at a rate that has thus far not completely stabilized the plume migration. For these reasons, other options must be explored to hydraulically contain and remove the contaminant plume in Zone 3.

8.4 Contaminant Concentrations Increase During the Southwest Alluvium Natural Attenuation Test

Some contaminant concentrations and concentration-time trends increased initially in some extraction wells and wells downgradient and in close proximity to the extraction wells during the period of shut down of the Southwest Alluvium extraction well system (*i.e.*, uranium, sulfate, and TDS). However, more recent preliminary data provided by UNC show that uranium concentrations are beginning to level off or decline, suggesting that conditions may be stabilizing. The EPA and the other regulatory agencies will continue to evaluate the monitoring data for uranium and the other COCs as part of their review of the NA Report.

9.0 RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Based on the Five-Year Review, it appears that the remedial actions for the Site originally set forth in the ROD and other decision documents have been implemented as planned, but are no longer performing as intended. Because of the extensive Site monitoring data and the findings from several studies discussed in this report, as well as the potential impact of new MCL's on Site contaminants-of-concern and revised state standards for TDS, sulfate, and nitrate, it is recommended that a Supplemental Feasibility Study (SFS) be implemented to address remedial alternatives to meeting Site remediation goals, or whether such goals can in fact be met. The SFS would be used to investigate and evaluate potential remedial alternatives and to support further possible EPA decision-making with respect to response action at the Site. It is also recommended that ICs be evaluated as a part of the SFS as a mechanism to restrict the use of seepage-impacted ground water in areas outside of the UNC property boundary. It is further recommended that the analysis of natural attenuation and potential TI Waivers for Zone 1 and the Southwest Alluvium be completed and decisions made with respect to their acceptability in accordance with NCP procedures. Finally, it is determined that additional characterization of the Southwest Alluvium contaminant plume should be performed.

Other recommended follow-up actions that do not affect the protectiveness of the remedy are the investigation of the merits to eliminate lead, lead 210, and selenium from the Site monitoring program and the completion of additional trend and spatial analyses of the analytical data. The additional analyses should include regular trend analysis and graphical presentation of specific COCs in specific wells for the COCs that are proposed for any TI Waivers.

Recommendations and follow-up actions are summarized in Table 9-1, below.

TABLE 9-1
Recommendations and Follow-up Actions
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Recommendations and Follow-up Actions	Party Responsible	Oversight Agency	Milestone Date	Affects Protectiveness (Y/N)	
				Current	Future
Institutional Controls	Navajo Nation, UNC	Navajo EPA, Navajo Nation Council, and BIA	None Recommended	N	Y
Complete analysis of NA test and potential TI waivers for Zone 1 and Southwest Alluvium and make decisions with regard to their acceptability	EPA, NRC and NMED		03/31/04	N	N
Conduct further plume characterization for Southwest Alluvium	NRC	EPA, NRC and NMED	09/31/04	N	Y
Complete Supplemental Feasibility Study to support further response action decision making	EPA		03/30/05	N	Y
Investigate merits to eliminate lead, lead-210, and selenium from the Site monitoring program	NRC, EPA		03/30/04	N	N
Perform regular trend analysis and graphical presentation for specific COCs in specific wells for the COCs being proposed for TI Waivers	UNC	EPA, NRC, and NMED	01/31/04	N	N

10.0 PROTECTIVENESS STATEMENT(S)

The remedy at the UNC Church Rock Site, OU1 currently protects human health and the environment because, although tailing-seepage impacted ground water is migrating beyond the UNC property boundary, there are no known users of the impacted ground water and, consequently, no evidence of exposure. However, in order for the remedy to be protective in the long term, the following actions need to be taken:

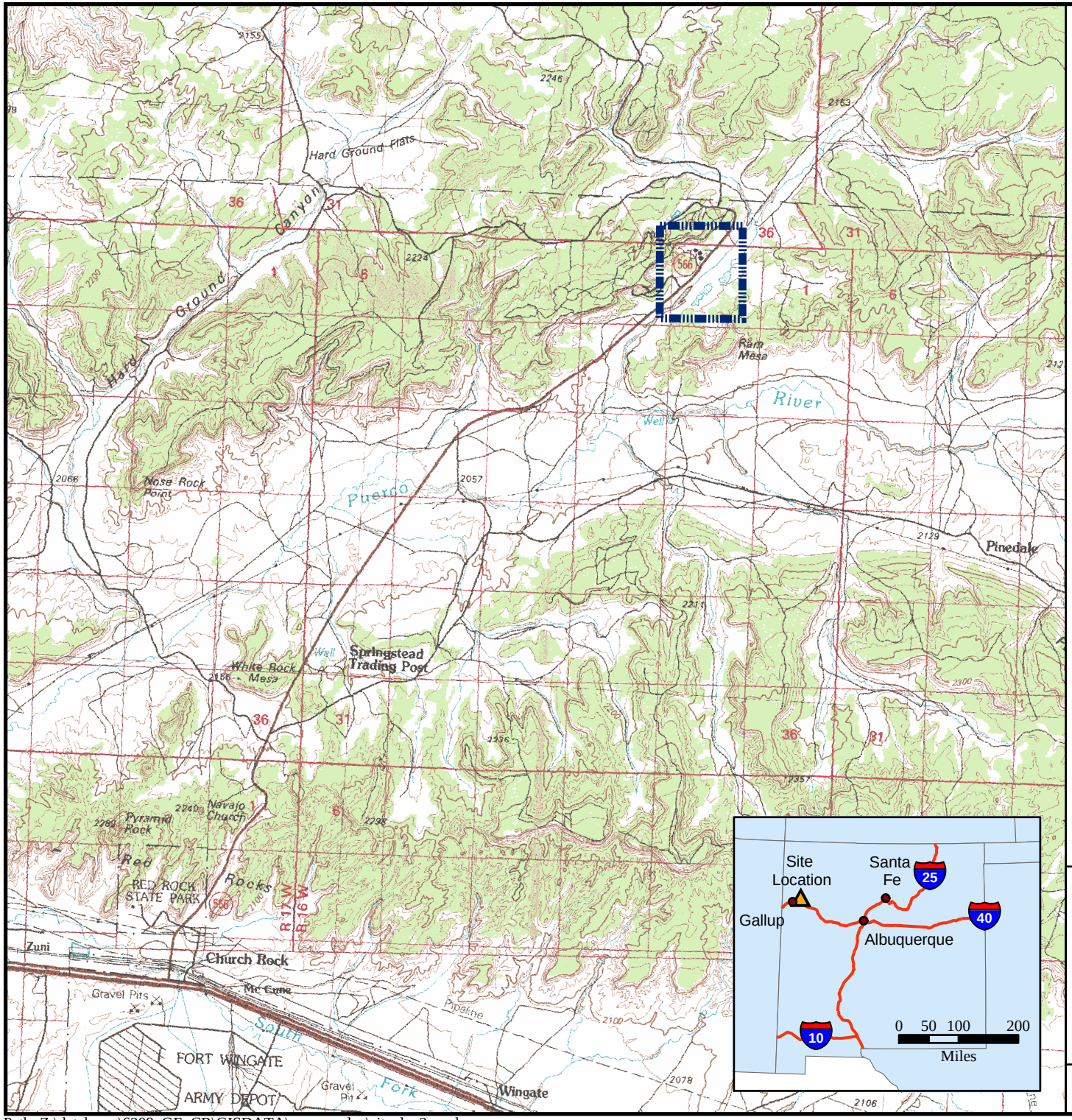
- Implement a Supplemental Feasibility Study (SFS) to identify further remedial alternative in support of future CERCLA response action decision making in the light of a number of issues raised in this Report, including potential ICs, potential TI Waivers, newly promulgated MCLs, potential state ARAR revisions for certain contaminants, and other matters;

- Evaluate Institutional Controls as a part of the SFS process in order to restrict the use of seepage-impacted ground water in the Southwest Alluvium in Section 3 and Section 10, and in Zone 1 of the Gallup Formation in Section 1;

- Perform further characterization of the Southwest Alluvium contaminant plume.

11.0 NEXT REVIEW

The next Five-Year Review will be due five years from the submission of this Review, in September 2008.



N

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.

1 0.5 0 1

Miles

FIGURE 1-1

Site Location Map

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

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Path: Z:\databases\6209_GE_CR\GISDATA\arcmap_doc\site_loc2.mxd

Date: 5/8/2003

N 78,000
N 76,000
N 74,000
N 72,000
E 56,000
E 58,000
E 60,000
E 62,000
E 64,000

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

SECTION 36
SECTION 3
SECTION 2
SECTION 1

NECR MINE SITE
PROPERTY BOUNDARY
UNITED NUCLEAR MILL FACILITIES AREA (DECOMMISSIONED 1991-1992)
PIPELINE ARROYO
NORTH CELL
CENTRAL CELL
SOUTH CELL
RECLAIMED TAILINGS AREA
BORROW PIT No. 1 (RECLAIMED)
BORROW PIT No. 2 (RECLAIMED)
EVAPORATION PONDS
QUIVIRA FACILITIES
ZONE 3 REMEDIAL ACTION TARGET AREA
ZONE 1 REMEDIAL ACTION TARGET AREA
SOUTHWEST ALLUVIUM REMEDIAL ACTION TARGET AREA

639 642 644 645 141 142 143 EPA 1 NBL-01 412 411 EPA 11 420 402 424 446 504A 504 B EPA 12 718 719 720 717 716 EPA 14 EPA 15 709 712 715 707 710 713 714 706 126 708 502A 502B 711 EPA 13 EPA 18 505A 517 518 608 701 501A 501 B EPA 17 EPA 3 9D 703 EPA 2 GW-4 106 D 613 702 EPA 22A EPA 4 EPA 8 EPA 9 509 D 619 617 EPA-5 516A EPA 7 616 604 615 515A 614 EPA 23 29A 807 803 806 805 808 (SEE NOTE 3) 802 804 632 801 GW 3 GW 2 GW 1 EPA 25 EPA 28 EPA 27 627 624

N

LEGEND:

SOUTHWEST ALLUVIUM
- 803 ▲ IDLED EXTRACTION WELL, LOCATION AND DESIGNATION
- 627 ▲ MONITORING WELL (WATER QUALITY AND WATER LEVELS), LOCATION AND DESIGNATION
- 804 △ MONITORING WELL (WATER LEVELS ONLY), LOCATION AND DESIGNATION
- EPA 27 ▼ DRY MONITORING WELL

ZONE 3
- 716 ■ IDLED EXTRACTION WELL USED FOR MONITORING, LOCATION AND DESIGNATION
- 714 ◨ DECOMMISSIONED OR IDLE EXTRACTION WELL, LOCATION AND DESIGNATION
- 518 □ MONITORING WELL, LOCATION AND DESIGNATION (CONTAINS WATER)
- EPA 18 ⬓ DRY OR DECOMMISSIONED MONITORING WELL, LOCATION AND DESIGNATION

ZONE 1
- 616 ● DECOMMISSIONED EXTRACTION WELL, LOCATION AND DESIGNATION
- EPA 7 ◒ DECOMMISSIONED MONITORING WELL, LOCATION AND DESIGNATION
- 614 ◑ MONITORING WELL, LOCATION AND DESIGNATION
- INDICATES APPROXIMATE LIMITS OF TAILINGS UNDERLYING RECLAIMED AREA

SCALE
800 0 800 FEET

NOTE:

REVISED MONITORING PROGRAM IMPLEMENTED IN SECOND QUARTER 2000. REFER TO SECTIONS 2, 3, & 4 OF EARTH TECH DEC. 2000 REPORT AND TO THE LETTERS DATED JANUARY 13 AND APRIL 26, 2000 FOR WELL LOCATIONS AND OTHER DETAILS ABOUT THE PROGRAM.

SOURCE: EARTH TECH (DECEMBER 2002), FIGURE 1-1 (B1282.DWG), PERFORMANCE MONITORING WELLS 2002 OPERATING WELL

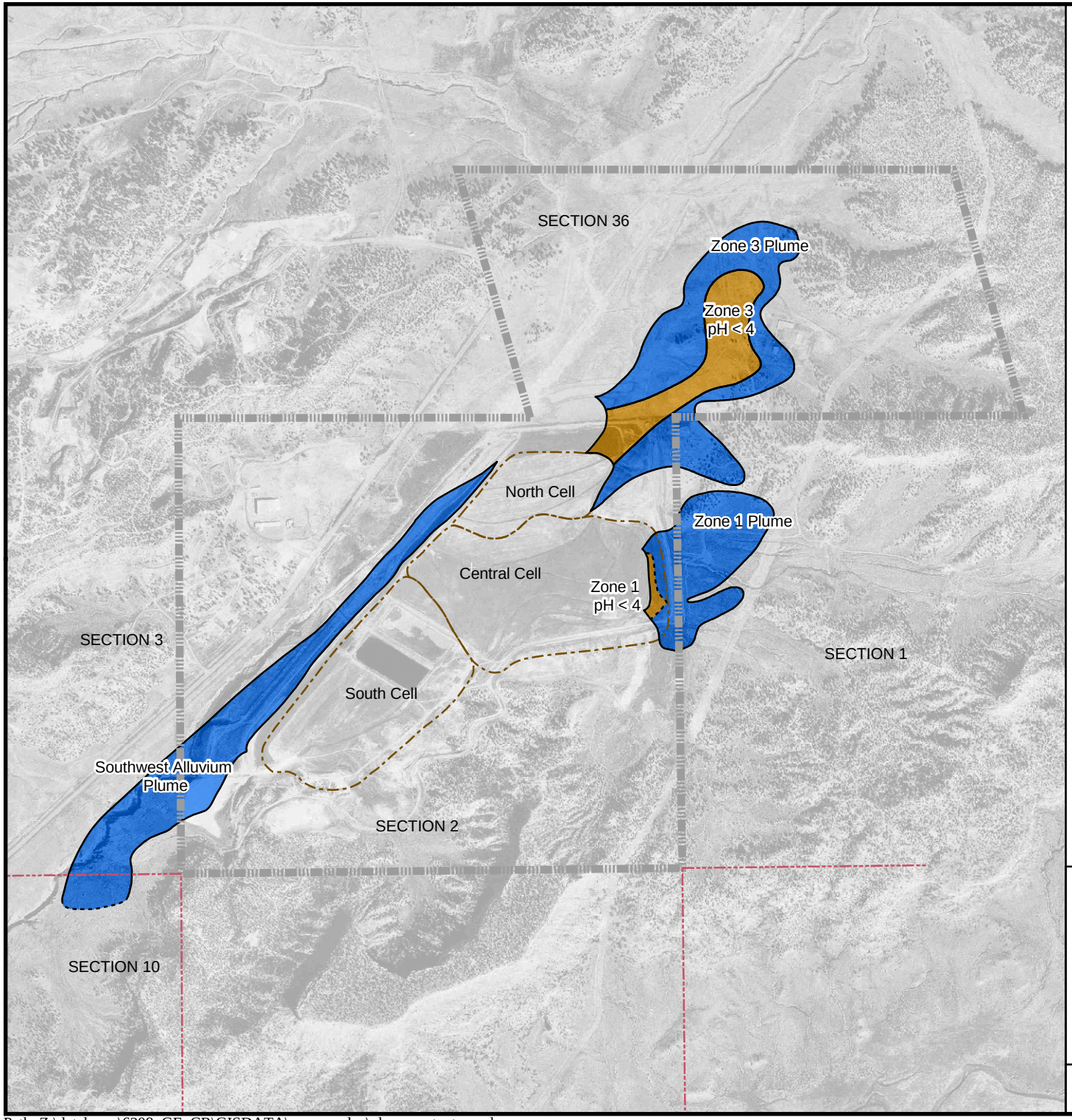
FIGURE 3-1

SITE LAYOUT AND PERFORMANCE MONITORING WELL LOCATIONS

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

USFilter

3-2.DWG



N

LEGEND

- Section Boundary
- Property Boundary
- Groundwater plume, dashed where inferred
- Groundwater with pH <= 4
- Tailings Pond

1,500 750 0 1,500

Feet

FIGURE 3-2

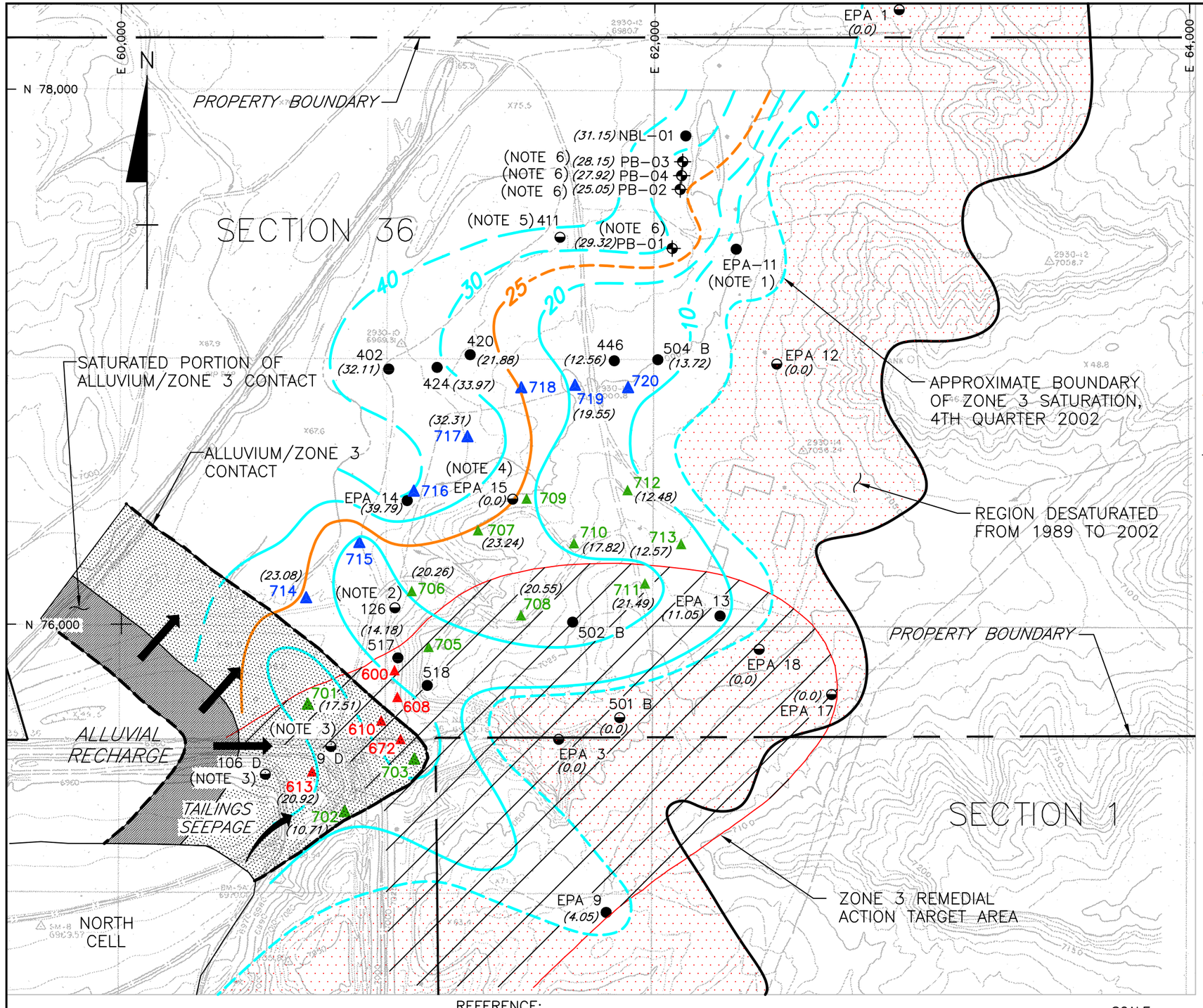
Extent of Groundwater Plumes

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

Path: Z:\databases\6209_GE_CR\GISDATA\arcmap_doc\plume_extents.mxd

Date: 5/8/2003



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
- (32.31) — SATURATED THICKNESS, FEET 4TH QUARTER 2002
- —30— — SATURATED THICKNESS OF ZONE 3, 4TH QUARTER 2002 (DASHED WHERE INFERRED)
- —25— — MINIMUM SATURATED THICKNESS REQUIRED FOR GROUNDWATER EXTRACTION

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. WATER LEVEL MEASURED AUGUST 19, 2002.

SOURCE: EARTH TECH (DECEMBER 2002), FIGURE 3-4 (B1281.DWG), ZONE 3 SATURATED THICKNESS, 4TH QUARTER 2002

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

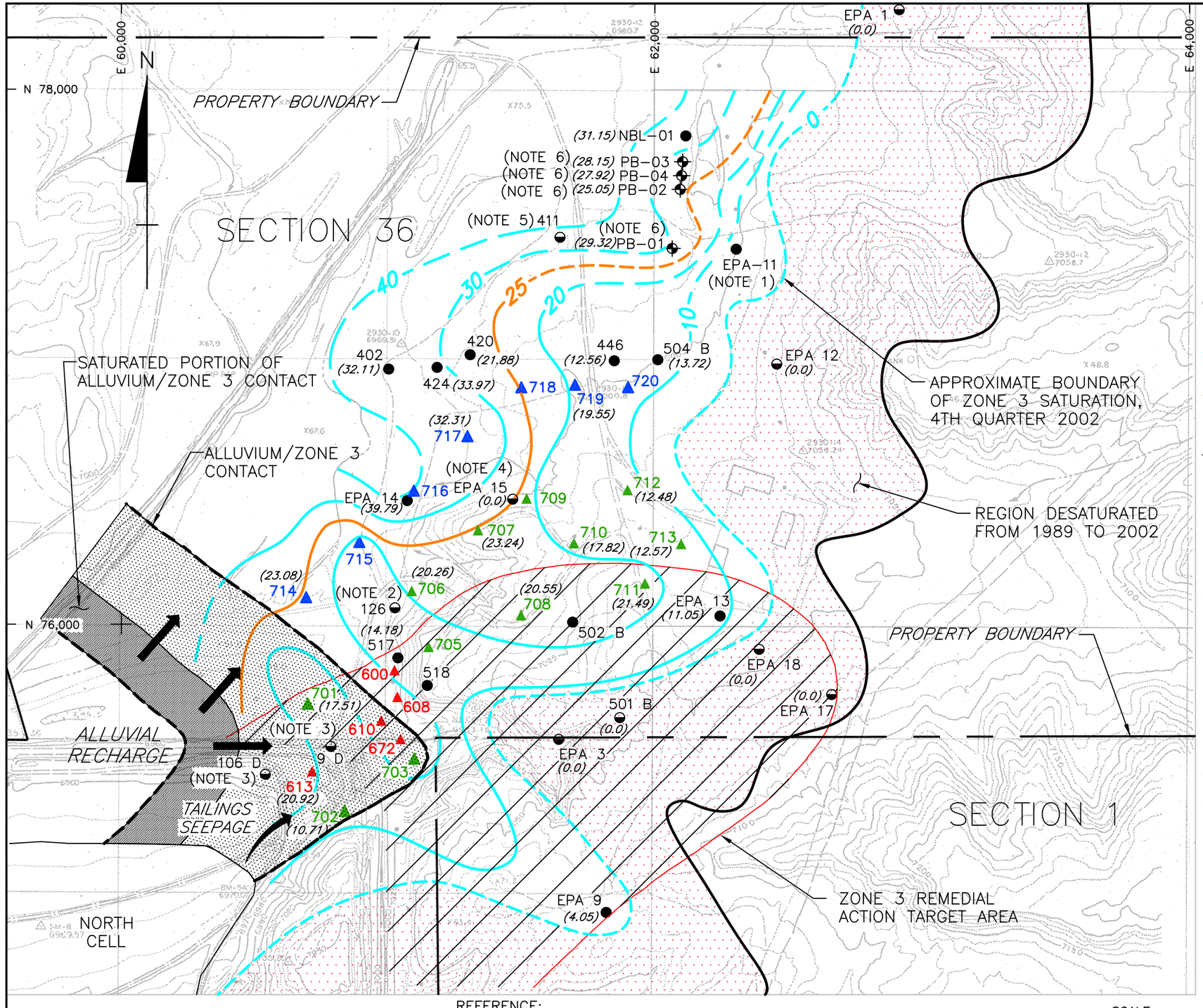
FIGURE 6-1

ZONE 3 SATURATED THICKNESS 4TH QUARTER 2002

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

USFilter

4-1.DWG



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
- (32.31) — SATURATED THICKNESS, FEET 4TH QUARTER 2002
- —30— — SATURATED THICKNESS OF ZONE 3, 4TH QUARTER 2002 (DASHED WHERE INFERRED)
- —25— — MINIMUM SATURATED THICKNESS REQUIRED FOR GROUNDWATER EXTRACTION

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. WATER LEVEL MEASURED AUGUST 19, 2002.

SOURCE: EARTH TECH (DECEMBER 2002), FIGURE 3-4 (B1281.DWG), ZONE 3 SATURATED THICKNESS, 4TH QUARTER 2002

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

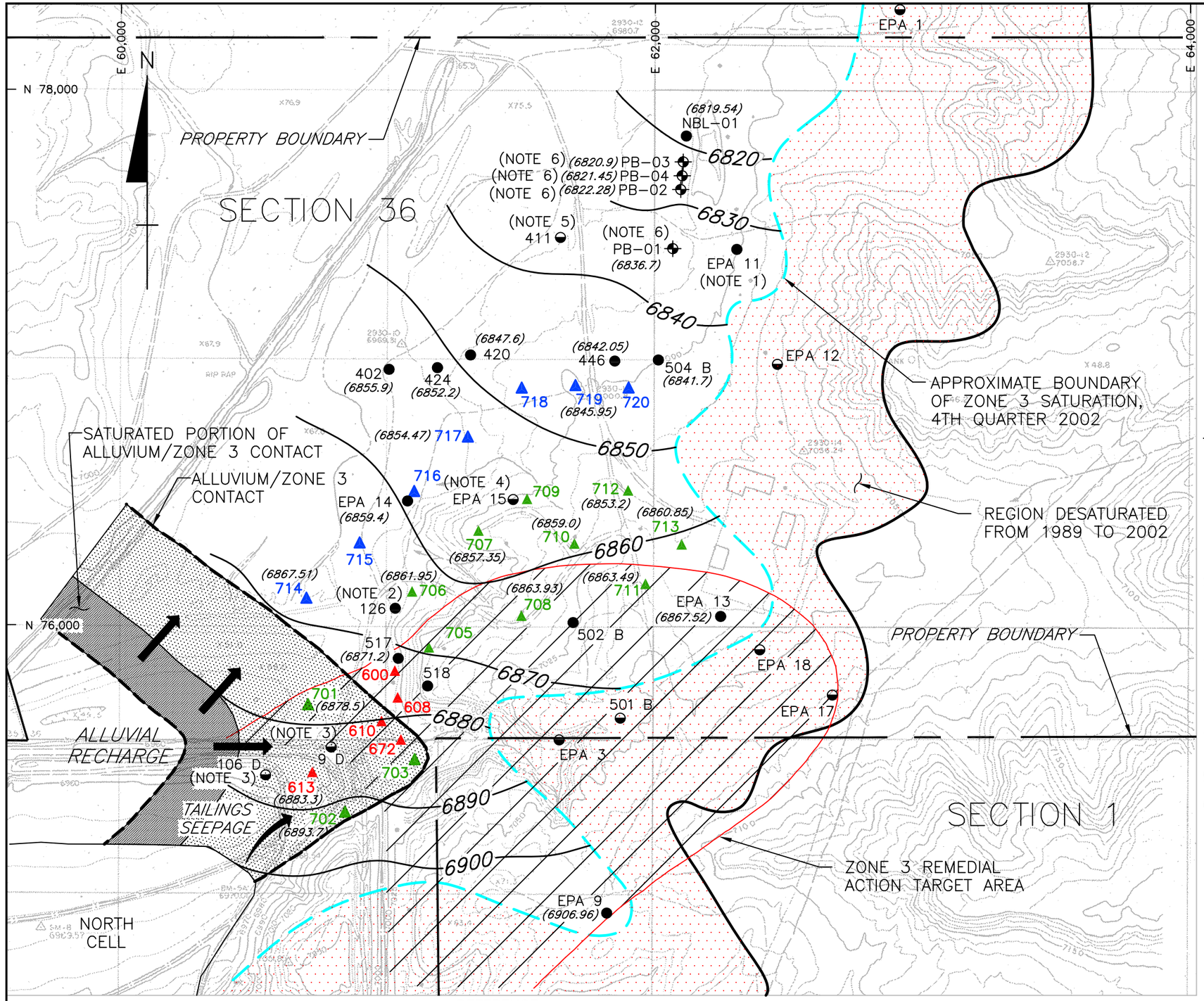
FIGURE 6-1

ZONE 3 SATURATED THICKNESS 4TH QUARTER 2002

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

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4-1.DWG



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
- —6880— CONTOUR OF EQUAL WATER ELEVATION (DASHED WHERE INFERRED)
- (6841.7) WATER LEVEL ELEVATION, FEET (MSL)

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. WATER LEVEL MEASURED AUGUST 19, 2002.

SOURCE: EARTH TECH (DECEMBER 2002), FIGURE 3-5 (B1273.DWG), ZONE 3 PIEZOMETRIC SURFACE, OCTOBER 2002

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

FIGURE 6-2
ZONE 3 PIEZOMETRIC SURFACE OCTOBER 2002

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

USFilter

6-1.DWG

E 60,000 E 62,000 E 64,000

N 78,000

N 76,000

N

SECTION 36

SECTION 1

EPA 1 (14.7)

411 (62.5)

(30.8) EPA 11

420 (56.3)

504 B (40.1)

EPA 12 (10.7)

718 719 720

717

716 EPA 14 (76.3)

715

EPA 15 (60.8)

709 (56.1)

712 (39.1)

707 (58.8)

710 (45.5)

713 (34.2)

714

126 (22.3) (NOTE 1)

706

(49.8) 708

711 (43.7)

(24.8) EPA 13

502 B (48.5)

(42.7) 517

705

600

518 (37.2)

608

701 (46.1)

(NOTE 2) 610

(19.8) 9 D

672

106 D (11.8) (NOTE 2)

613

703 (32.6)

702 (24.1)

501 B (20.2)

EPA 3 (8.3)

EPA 18 (2.5)

EPA 17 (1.4)

EPA 9 (8.1)

25

SATURATED PORTION OF ALLUVIUM/ZONE 3 CONTACT

ALLUVIUM/ZONE 3 CONTACT

APPROXIMATE BOUNDARY OF ZONE 3 SATURATION, 3RD QUARTER 1989

ZONE 3 REMEDIAL ACTION TARGET AREA

ALLUVIAL RECHARGE

TAILINGS SEEPAGE

NORTH CELL

LEGEND:

- 608▲ NORTHEAST PUMP–BACK WELL LOCATION AND DESIGNATION (NOTE 3)
- 708▲ ZONE 3–STAGE I EXTRACTION WELL LOCATION AND DESIGNATION
- 714▲ ZONE 3–STAGE II EXTRACTION WELL LOCATION AND DESIGNATION (NOTE 4)
- 420● ZONE 3 MONITORING WELL LOCATION AND DESIGNATION
- (56.3) SATURATED THICKNESS, FEET 3RD QUARTER 1989
- —25— SATURATED THICKNESS OF ZONE 3 3RD QUARTER 1989 (DASHED WHERE INFERRED)

NOTES:

1. MONITORING WELL 126 WAS COMPLETED ABOVE THE BOTTOM OF ZONE 3. CONSEQUENTLY MEASUREMENTS OF SATURATED THICKNESS IN THIS WELL ARE LESS THAN ACTUAL CONDITIONS.
2. 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.
3. NORTHEAST PUMP–BACK WELLS WERE PUMPING AT THIS TIME. WATER LEVEL DATA NOT AVAILABLE.
4. NO WATER LEVEL DATA AVAILABLE IN 1989, STAGE II WELLS WERE INSTALLED IN 1991.

SOURCE: EARTH TECH (DECEMBER 2002), FIGURE 3–1 (B1280.DWG), ZONE 3 REMEDIAL ACTION TARGET AREA vs SATURATED THICKNESS 1989

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

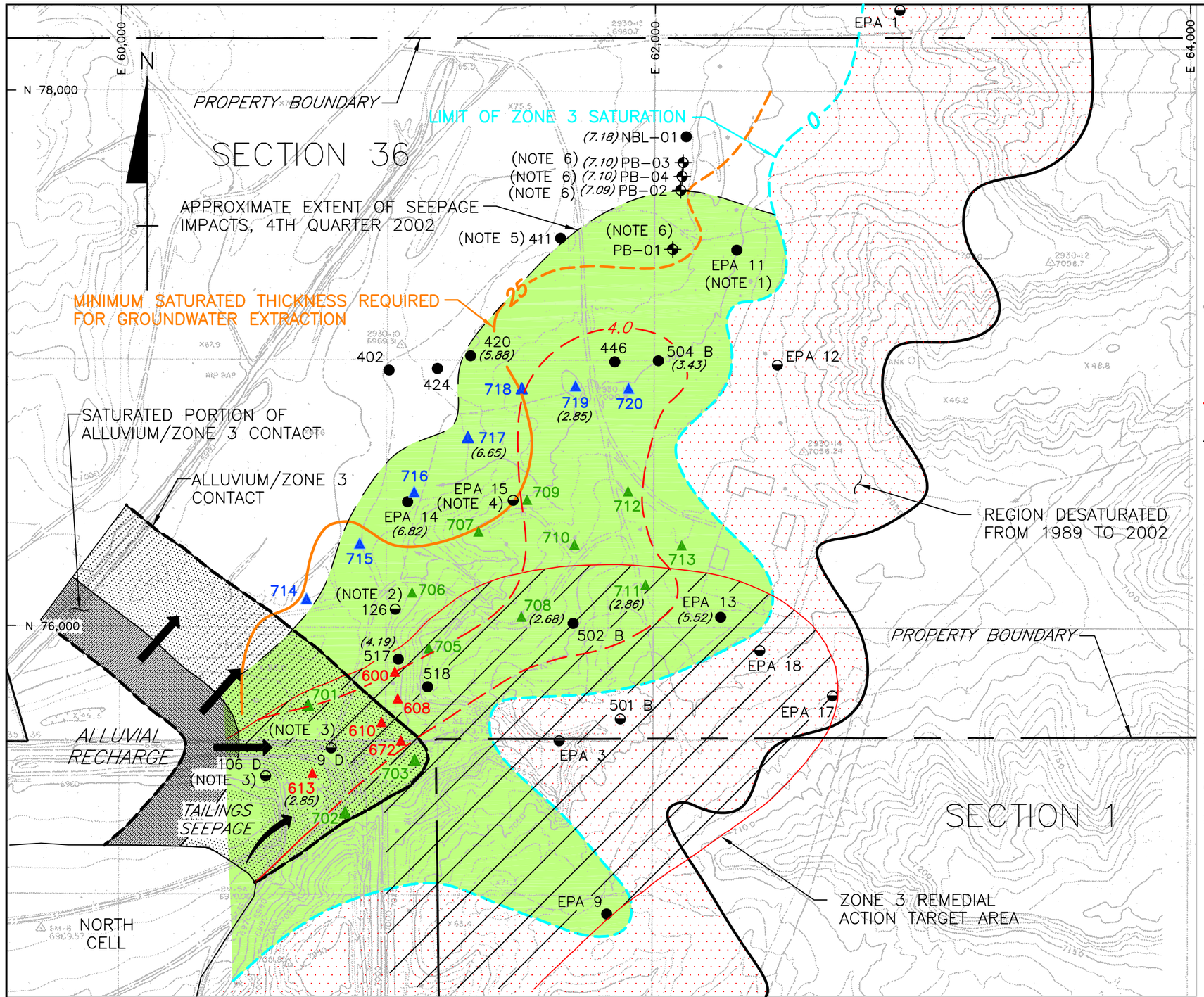
FIGURE 6-5

ZONE 3 REMEDIAL ACTION TARGET AREA vs SATURATED THICKNESS 1989

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

USFilter

4–2.DWG



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
(3.43)	pH READING
-4.0-	pH OF 4.0 CONTOUR

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.

SOURCE: EARTH TECH (DECEMBER 2002), FIGURE 3-7 (B1274.DWG), ZONE 3 APPROXIMATE EXTENT OF SEEPAGE IMPACTS, OCTOBER 2002

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

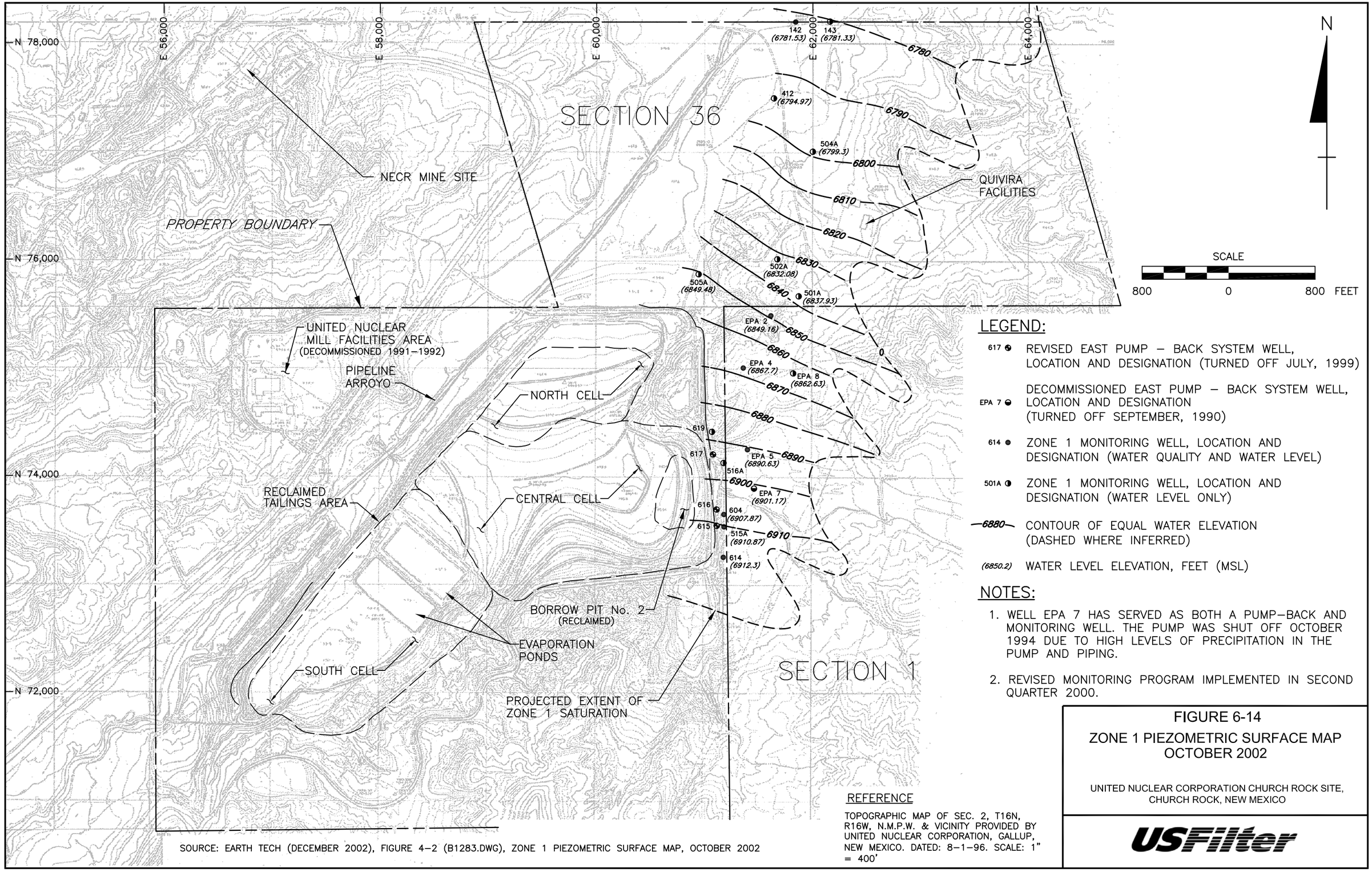
FIGURE 6-6

ZONE 3 APPROXIMATE EXTENT OF SEEPAGE IMPACTS, OCTOBER 2002

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

USFilter

6-4.DWG



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)
- —6880— CONTOUR OF EQUAL WATER ELEVATION (DASHED WHERE INFERRED)
- (6850.2) WATER LEVEL ELEVATION, FEET (MSL)

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.

SOURCE: EARTH TECH (DECEMBER 2002), FIGURE 4–2 (B1283.DWG), ZONE 1 PIEZOMETRIC SURFACE MAP, OCTOBER 2002

REFERENCE

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

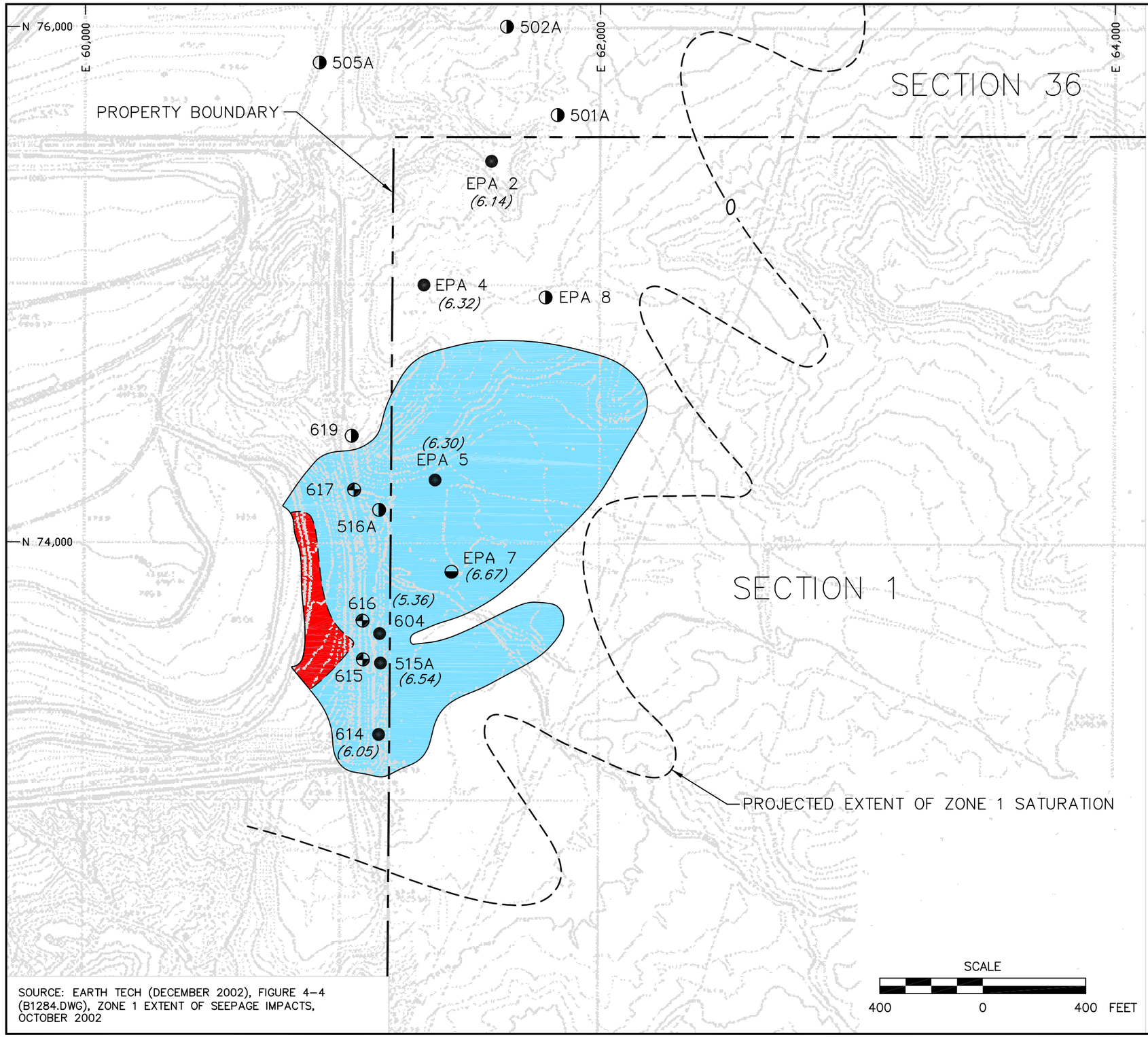
FIGURE 6-14

ZONE 1 PIEZOMETRIC SURFACE MAP OCTOBER 2002

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

USFilter

6–12.DWG



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

6–14.DWG

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)
- APPROXIMATE EXTENT OF ZONE 1 pH LESS THAN 4.0
- *(6.14)* pH READING

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.

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'.

FIGURE 6-17

ZONE 1 EXTENT OF SEEPAGE IMPACTS, OCTOBER 2002

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

USFilter

LEGEND:

- 624 ● MONITORING WELL
- 632 ■ POINT OF COMPLIANCE MONITORING WELL
- 801 ▲ SOUTHWEST ALLUVIUM EXTRACTION WELL
- 804 △ SOUTHWEST ALLUVIUM OBSERVATION WELL
- *(6877.87)* WATER LEVEL ELEVATION, FEET (MSL)
- *6880* CONTOUR OF EQUAL WATER ELEVATION (DASHED WHERE INFERRED)

NOTES:

1. WELL 808 INSTALLED JUNE 1991 IN ACCORDANCE WITH AMENDMENT 12 OF THE NRC LICENSE.

N

E 54,000

E 56,000

E 58,000

N 74,000

N 72,000

PROPERTY BOUNDARY

APPROXIMATE LIMIT OF SATURATED ALLUVIUM

(6880.17) 509 D

CENTRAL CELL

6880

EVAPORATION PONDS

SECTION 2

SECTION 3

SECTION 10

EPA 23 *(6877.87)*

RECLAIMED TAILINGS AREA

6875

6870

6865

(6869.85) 807

803 *(6864.68)*

805 *(6866.00)*

808 *(6865.08)*

SOUTH CELL

6860

PIPELINE ARROYO

6855

(6862.81) 802

GW 3 *(6859.65)*

632 *(6862.21)*

GW 2 *(6859.98)*

801 *(6855.81)*

6850

GW 1 *(6857.75)*

6845

(6852.25) EPA 25

EPA 28 *(6857.60)*

6840

APPROXIMATE EXTENT OF ALLUVIUM

627 *(6837.42)*

624 *(6849.95)*

SCALE

400 0 400 FEET

FIGURE 6-18

SOUTHWEST ALLUVIUM PIEZOMETRIC SURFACE MAP, JULY 2002

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

USFilter

SOURCE: EARTH TECH (NOVEMBER 2002), FIGURE 2-2 (B1266.DWG), SOUTHWEST ALLUVIUM PIEZOMETRIC SURFACE MAP, JULY 2002

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'.

4-4.DWG

LEGEND:

- 624 ● MONITORING WELL
- 632 ■ POINT OF COMPLIANCE MONITORING WELL
- 801 ▲ SOUTHWEST ALLUVIUM EXTRACTION WELL
- 804 △ SOUTHWEST ALLUVIUM OBSERVATION WELL
- TI ZONE FOR SULFATE AND TDS
- APPROXIMATE AREA IMPACTED BY TAILINGS SEEPAGE
- APPROXIMATE EXTENT OF SULFATE EXCEEDING 2,125 mg/L, JANUARY 2002
- *(2,430)* SULFATE CONCENTRATION, mg/L

NOTES:

1. WELL 808 INSTALLED JUNE 1991 IN ACCORDANCE WITH AMENDMENT 12 OF THE NRC LICENSE.
2. SEEPAGE–IMPACTED WATER EXTENDS APPROXIMATELY 404 FEET DOWNGRADIENT FROM WELL 624, JANUARY 2002.

N

E 54,000

E 56,000

E 58,000

N 74,000

N 72,000

PROPERTY BOUNDARY

APPROXIMATE LIMIT OF SATURATED ALLUVIUM

509 D *(1,840)*

CENTRAL CELL

EVAPORATION PONDS

SECTION 2

EPA 23 *(2,430)*

RECLAIMED TAILINGS AREA

SECTION 3

DIRECTION OF ALLUVIAL WATER FLOW

△ 807

803 *(3,350)*

△ 805

808 *(2,870)*

802 *(2,850)*

SOUTH CELL

PIPELINE ARROYO

GW 3 *(2,200)*

632 *(3,530)*

GW 2 *(2,640)*

801 *(3,840)*

GW 1 *(2,650)*

EPA 25 *(1,870)*

EPA 28 *(3,010)*

APPROXIMATE EXTENT OF ALLUVIUM

NOTE 2

627 *(2,290)*

624 *(2,270)*

SECTION 10

SCALE

400 0 400 FEET

SOURCE: EARTH TECH (NOVEMBER 2002), FIGURE 3–2 (B1271.DWG), TI ZONE FOR SULFATE AND TDS IN THE SOUTHWEST ALLUVIUM

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'.

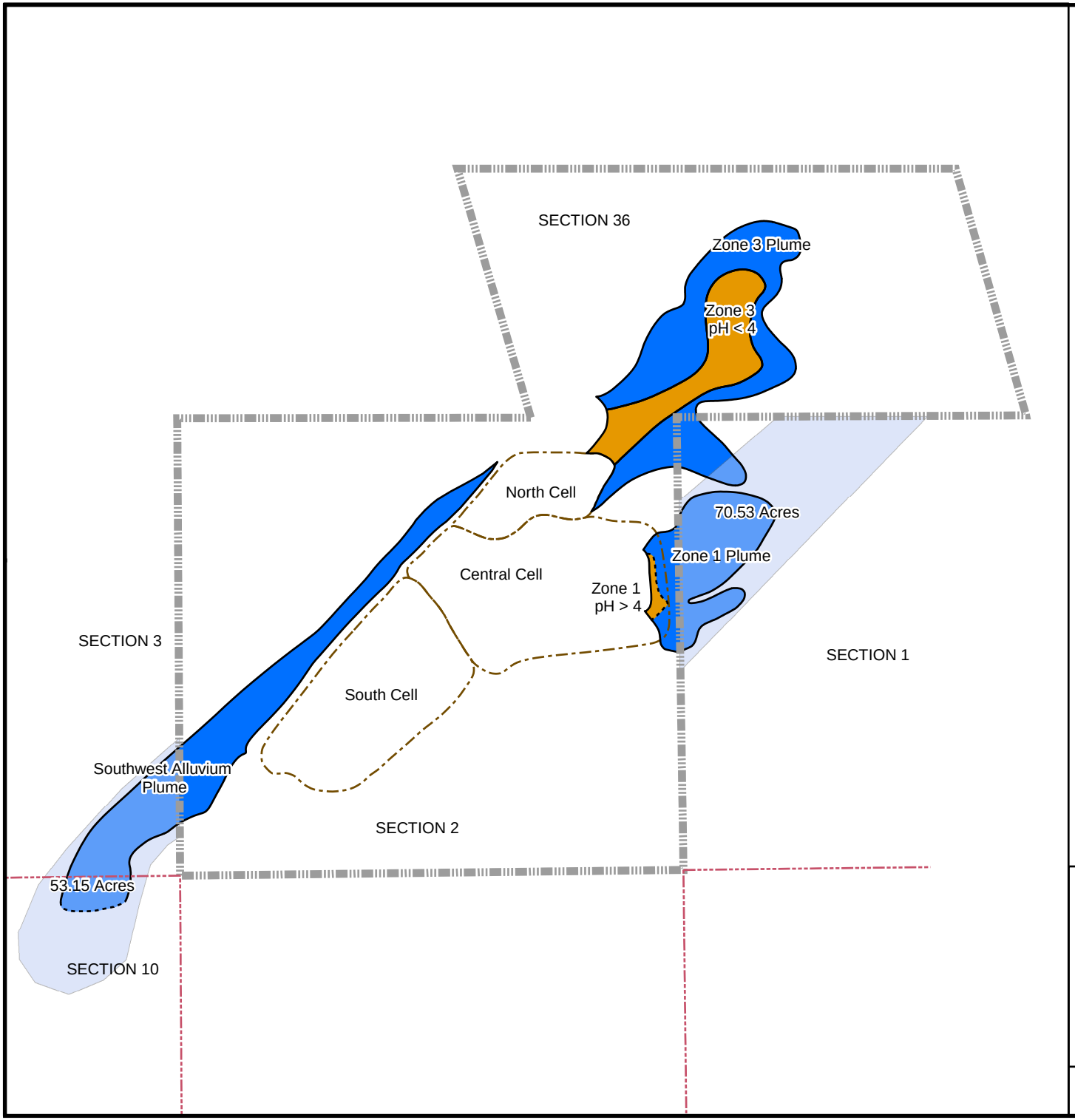
FIGURE 6-20

TI ZONE FOR SULFATE AND TDS IN THE SOUTHWEST ALLUVIUM

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

USFilter

6–16.DWG



N

LEGEND

- Section Boundary
- Property Boundary
- Groundwater plume, dashed where inferred
- Groundwater with pH <= 4
- Tailings Pond
- Institutional Control Area

1,500 750 0 1,500

Feet

FIGURE 7-1

Proposed Areas for Institutional Controls

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

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Date: 3/31/2003

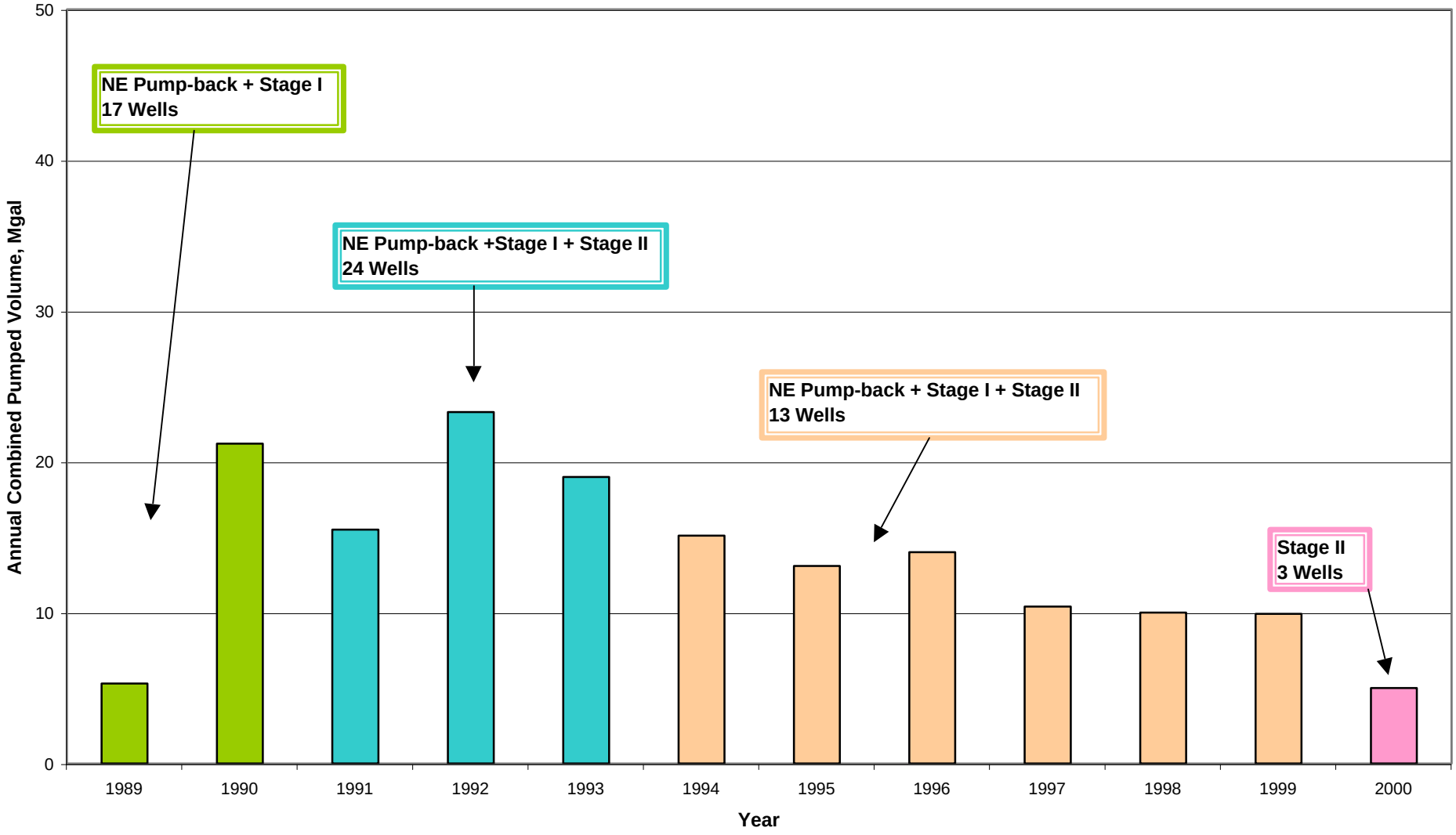
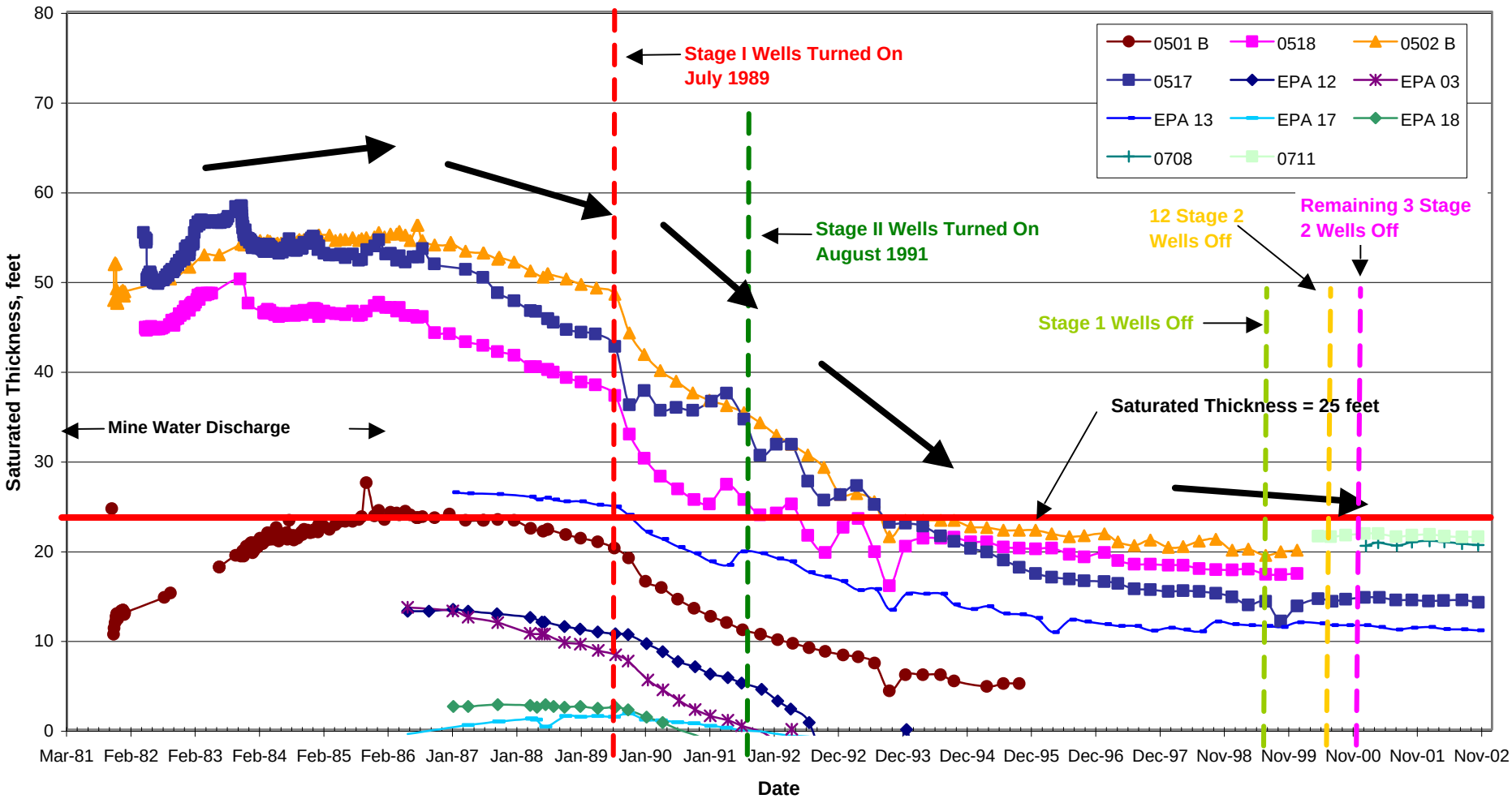


FIGURE 6-3
Zone 3 Annual Pumped Volumes
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Source: Earth Tech December 2002, Figure 3-3

FIGURE 6-4

Effect of Pumping to Enhance Natural Drainage in Zone 3
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

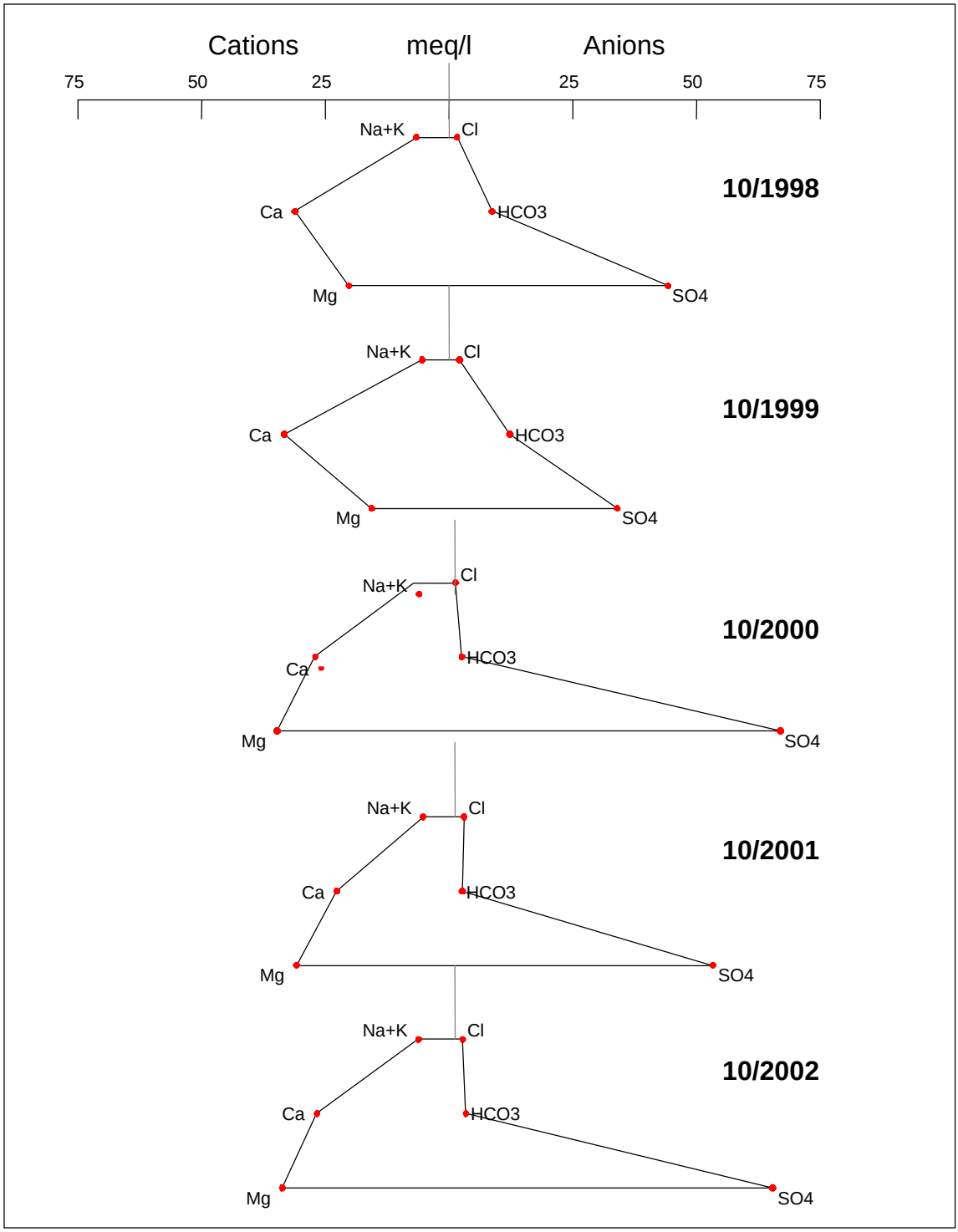
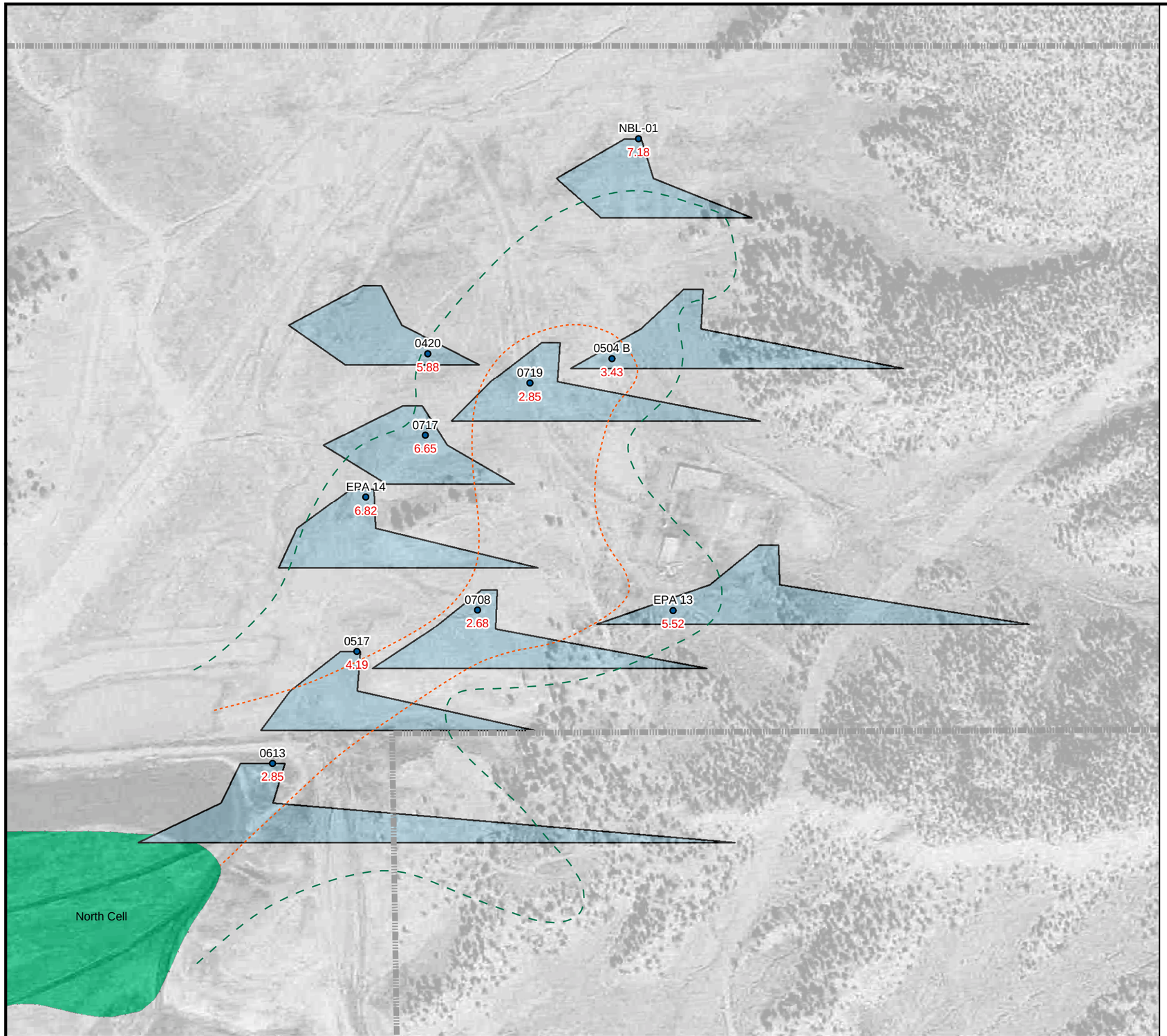
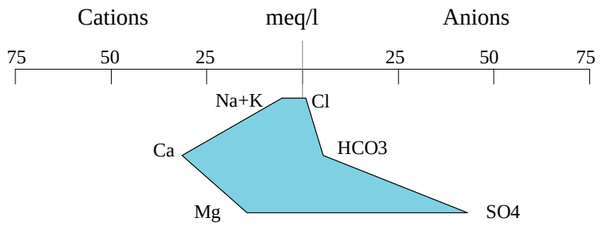


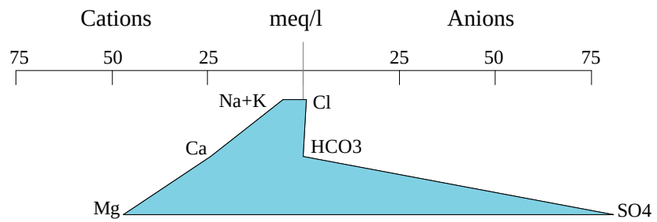
FIGURE 6-7
Zone 3 Well EPA 14
Stiff Diagrams From October 1998 through October 2002
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



N

Stiff Diagram Keys





LEGEND

- Zone 3 Monitoring Wells. Well names are shown in black, October 2002 pH measurments are shown in red.
- Approximate Extent of Waters With pH < 4.0 (from EarthTech Dec 2002)
- Approximate Area Impacted By Tailings Seepage (from EarthTech Dec 2002)
- Property Boundary
- North Cell Area
- October 2002 Zone 3 Stiff Digrams

0 200 400 800

Feet

FIGURE 6-8

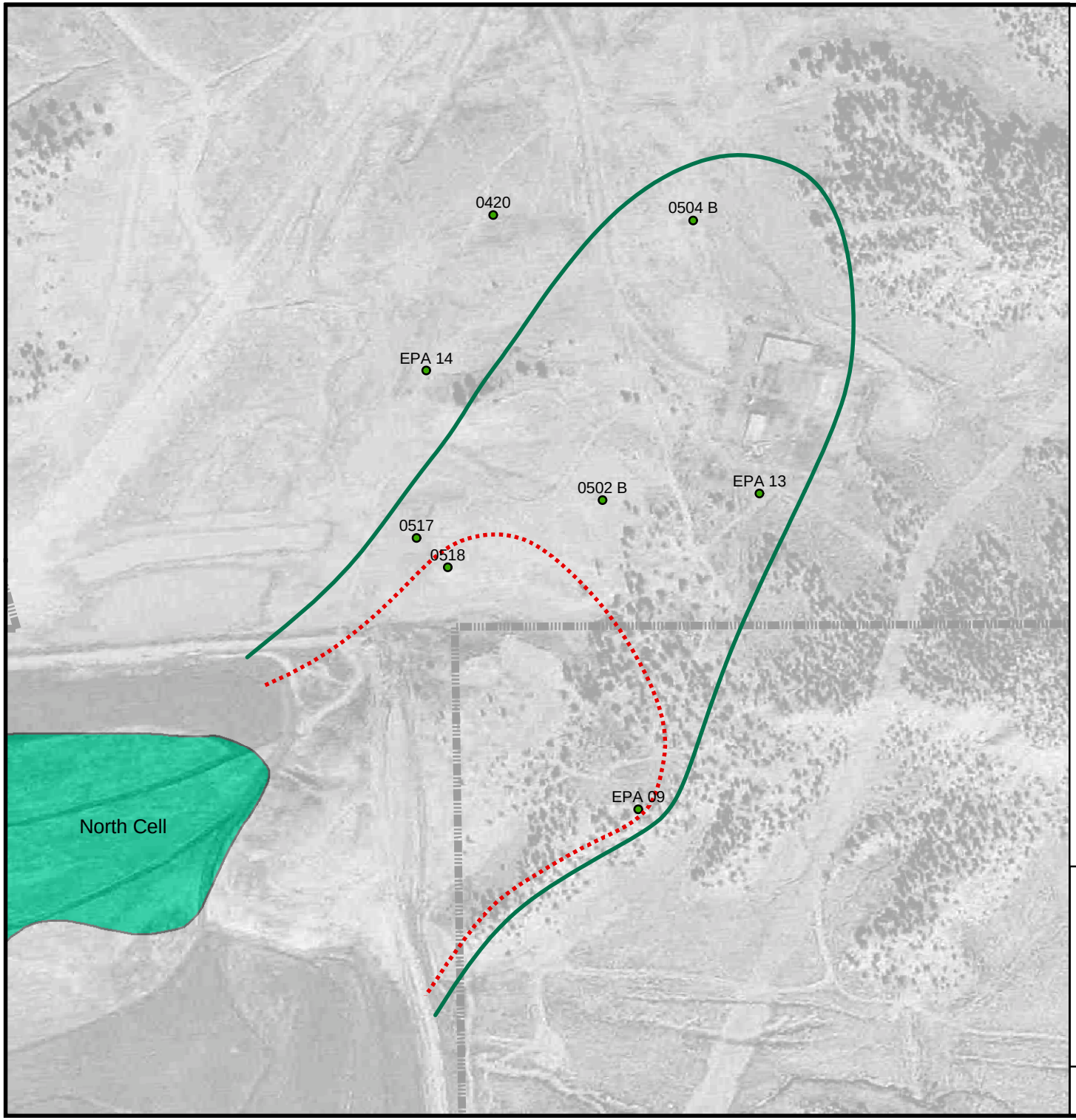
Zone 3 Stiff Diagrams for Select Wells October 2002

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

Path: Z:\databases\6209_GE_CR\GISDATA\arcmap_doc\stiff_diagram\2002_zone3.mxd

Date: 5/8/2003



N

LEGEND

- Approximate Area Impacted By Tailings Seepage
- pH of 4.0 Contour
- Zone 3 Monitoring Well Location and Designation
- Property Boundary
- North Cell Area

500 250 0 500

Feet

FIGURE 6-9

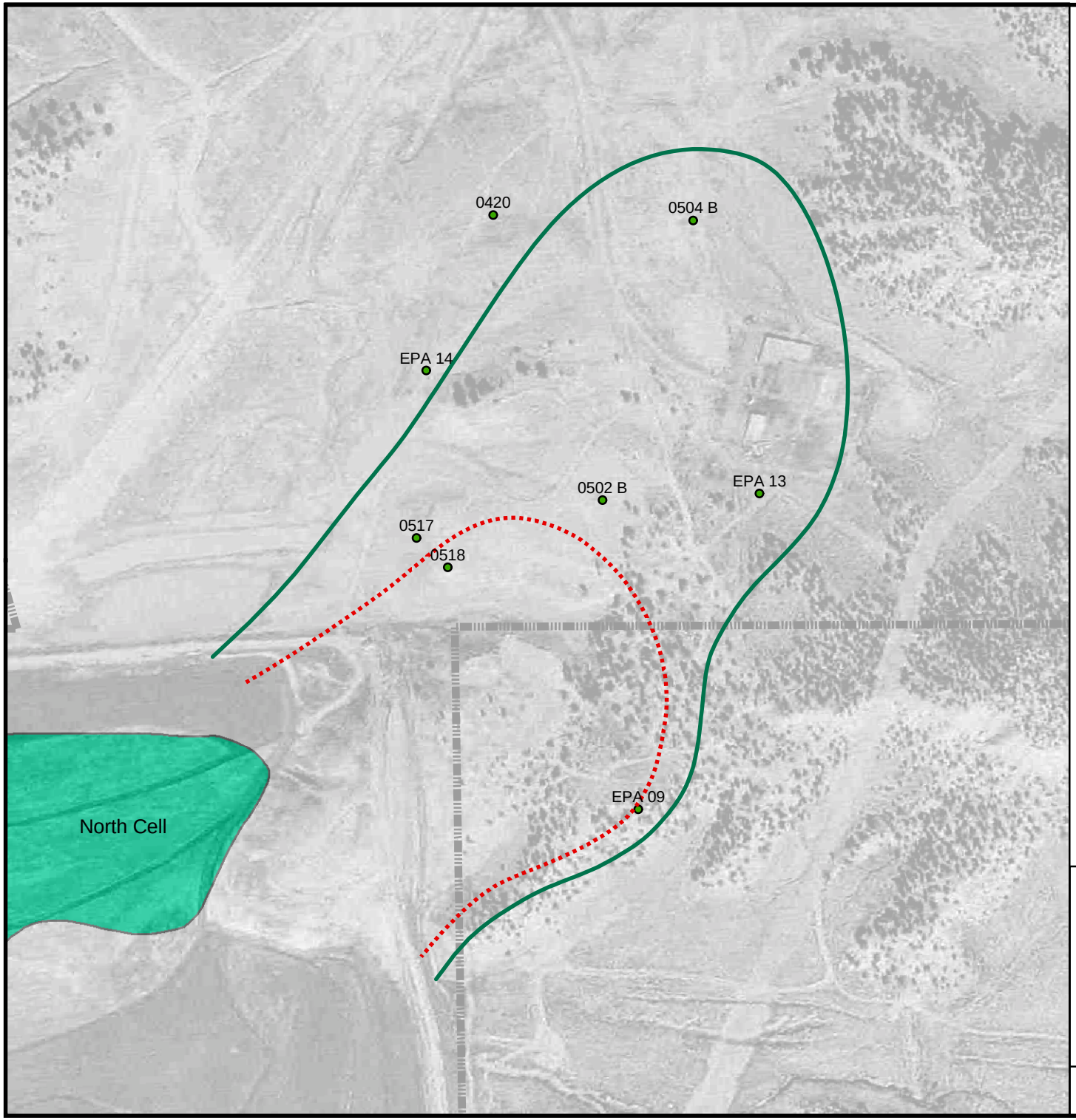
Zone 3 Approximate Extent of Seepage Impacts October 1998

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

Path: Z:\databases\6209_GE_CR\GISDATA\arcmap_doc\zone3_plume\1998_contour_final.mxd

Date: 5/8/2003



N

LEGEND

- Approximate Area Impacted By Tailings Seepage
- pH of 4.0 Contour
- Zone 3 Monitoring Well Location and Designation
- Property Boundary
- North Cell Area

500 250 0 500

Feet

FIGURE 6-10

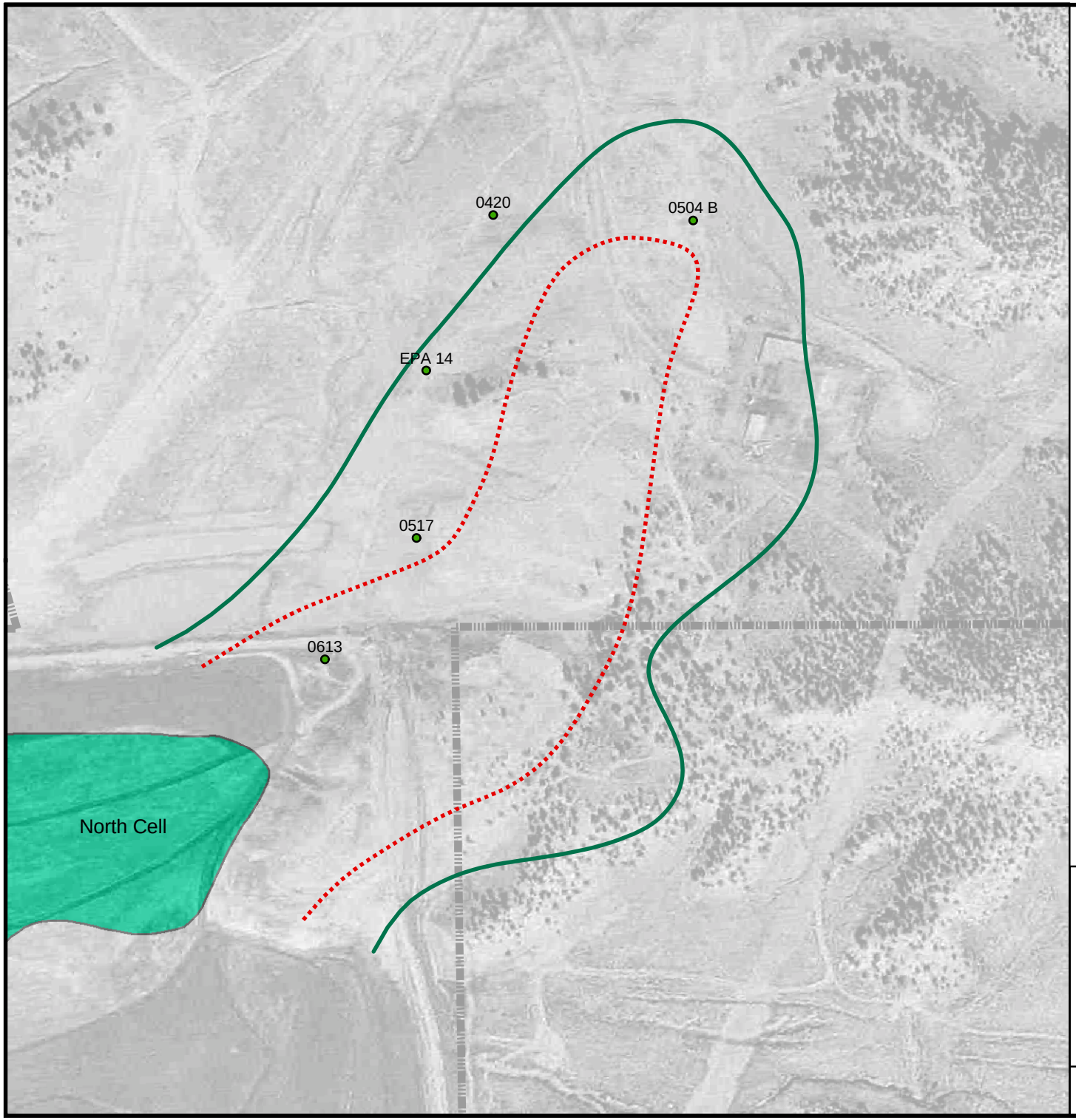
Zone 3 Approximate Extent of Seepage Impacts October 1999

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

Path: Z:\databases\6209_GE_CR\GISDATA\arcmap_doc\zone3_plume\1999_contour_final.mxd

Date: 5/8/2003



N

LEGEND

- Approximate Area Impacted By Tailings Seepage
- pH of 4.0 Contour
- Zone 3 Monitoring Well Location and Designation
- Property Boundary
- North Cell Area

500 250 0 500

Feet

FIGURE 6-11

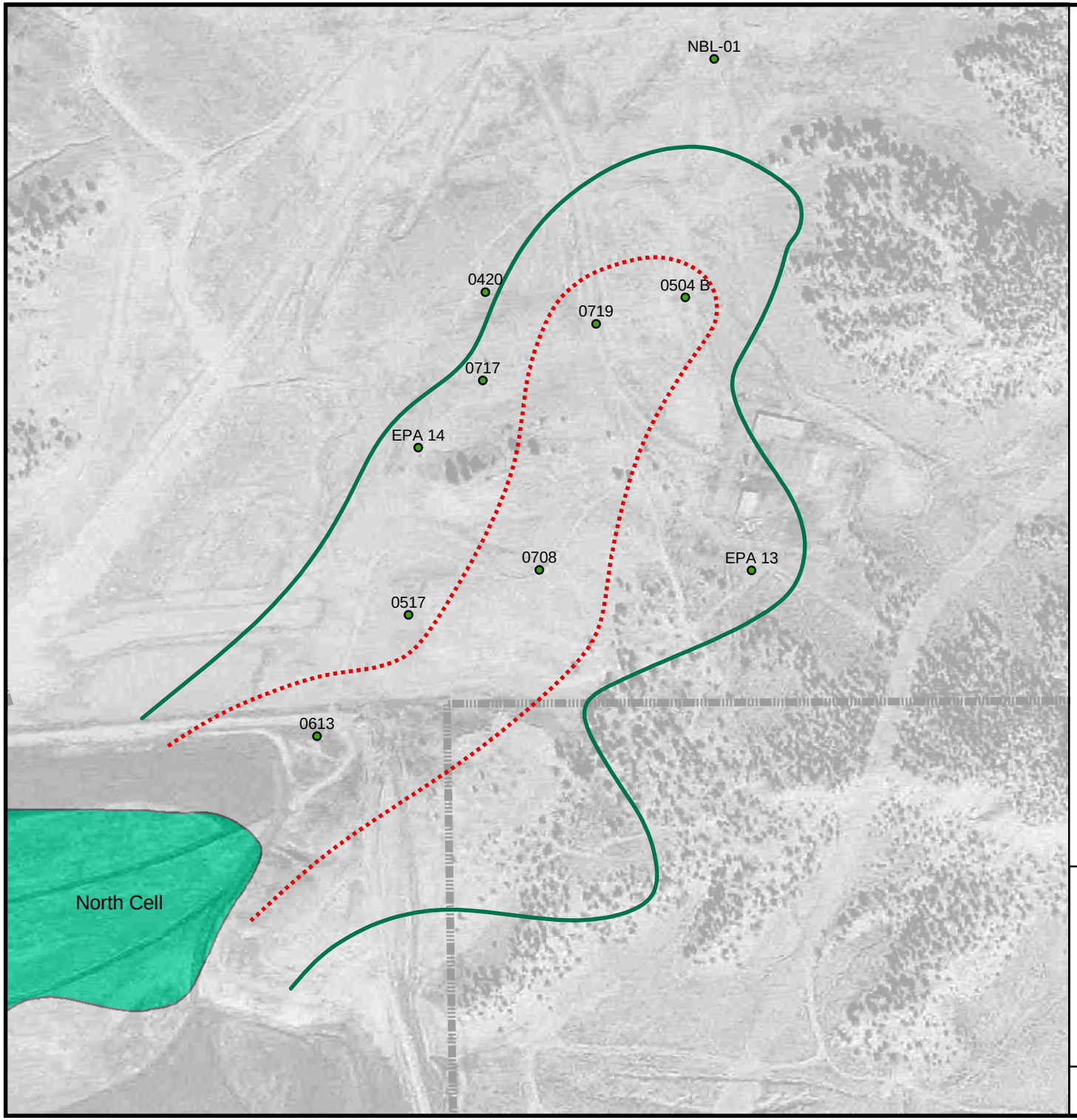
Zone 3 Approximate Extent of Seepage Impacts October 2000

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

Path: Z:\databases\6209_GE_CR\GISDATA\arcmap_doc\zone3_plume\2000_contour_final.mxd

Date: 5/8/2003



N

LEGEND

- Approximate Area Impacted By Tailings Seepage
- pH of 4.0 Contour
- Zone 3 Monitoring Well Location and Designation
- Property Boundary
- North Cell Area

500 250 0 500

Feet

FIGURE 6-12

Zone 3 Approximate Extent of Seepage Impacts October 2001

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

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Date: 5/8/2003

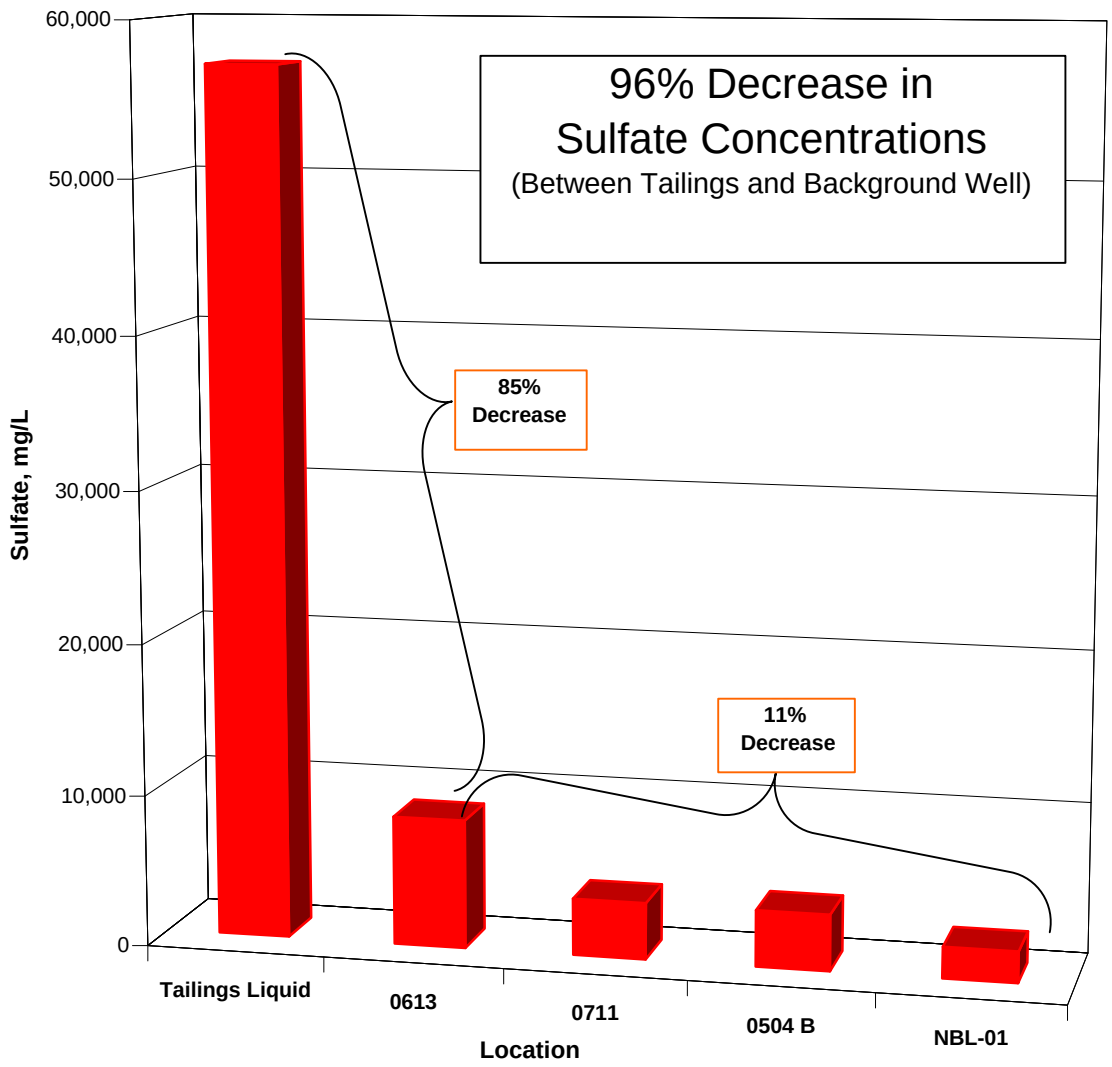


FIGURE 6-13
Attenuation of Sulfate in Zone 3 by Natural Processes
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

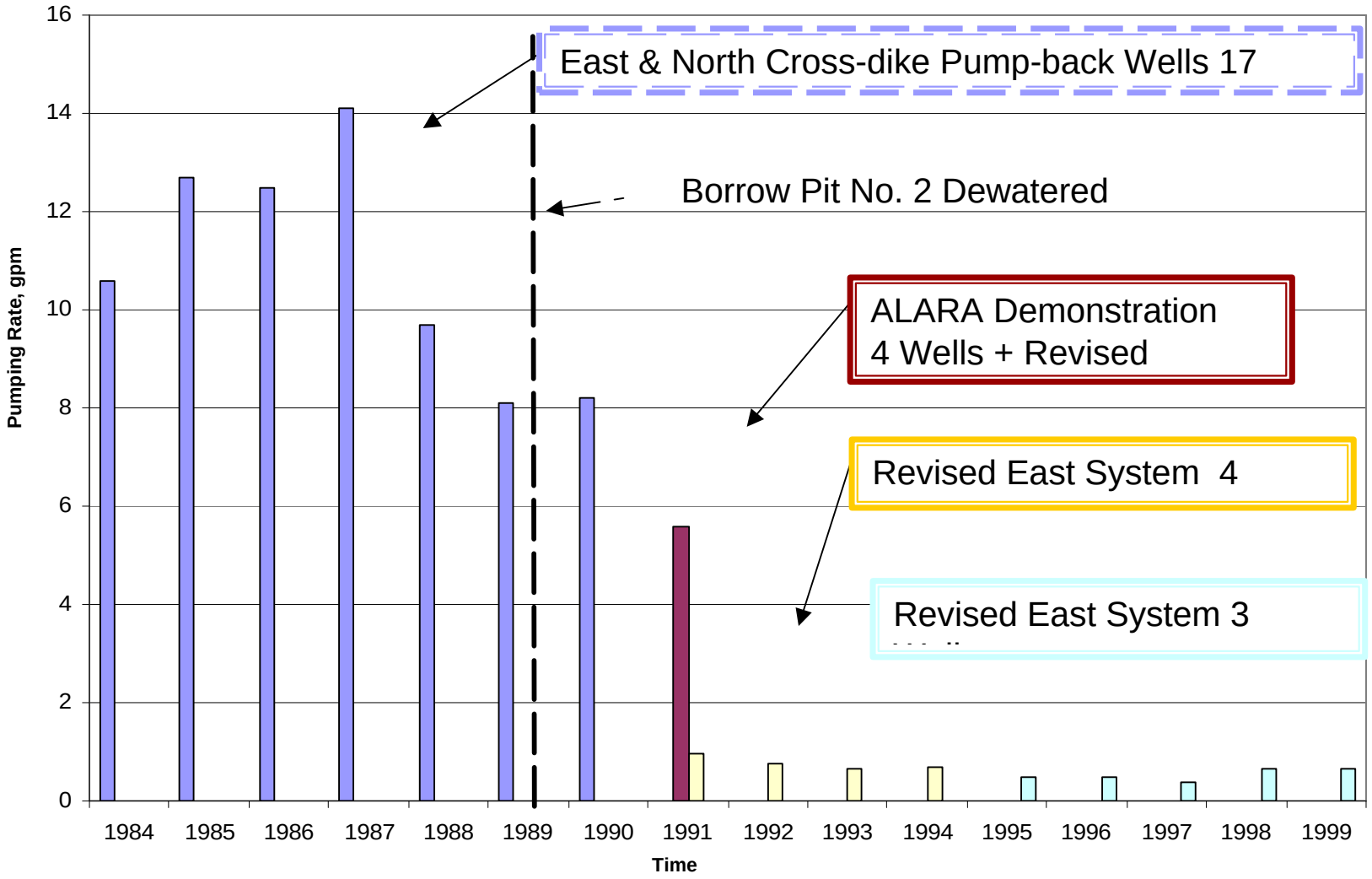


FIGURE 6-15
Zone 1 Annual Pumping Rates
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Source: Earth Tech December 2002, Figure 4-1

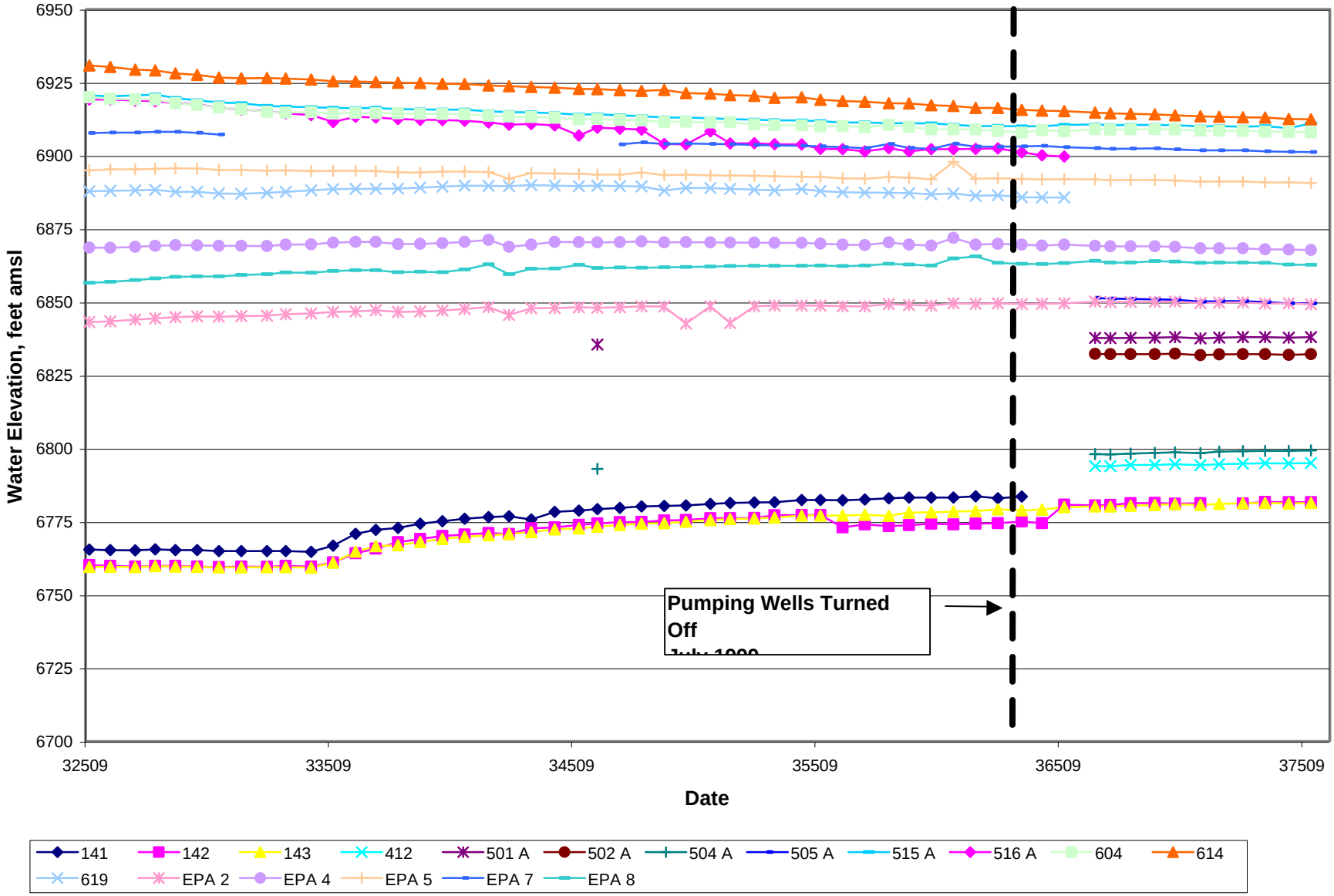


FIGURE 6-16

Zone 1 Water Levels Over Time

United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico

Source: Earth Tech December 2002, Figure 4-3

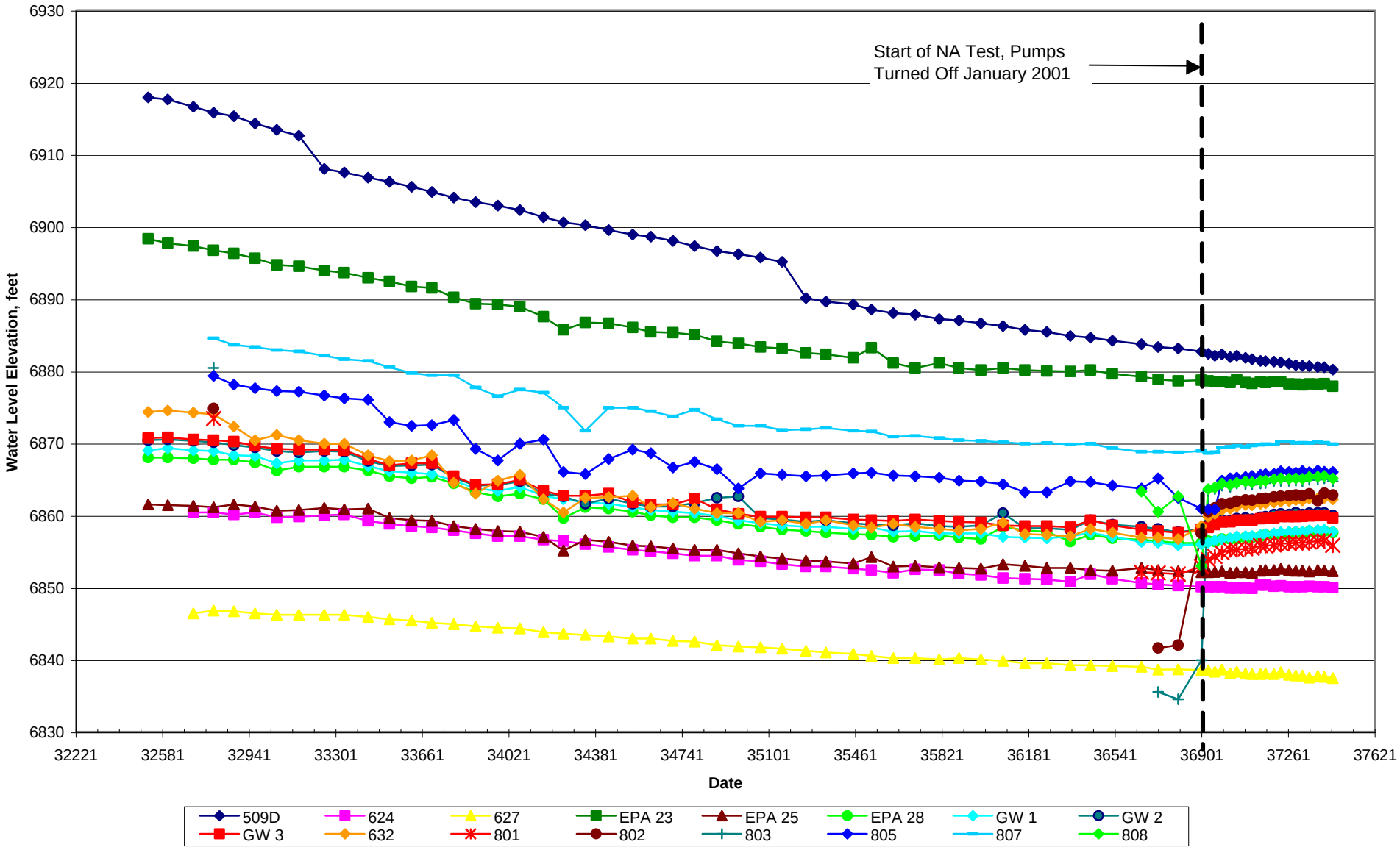
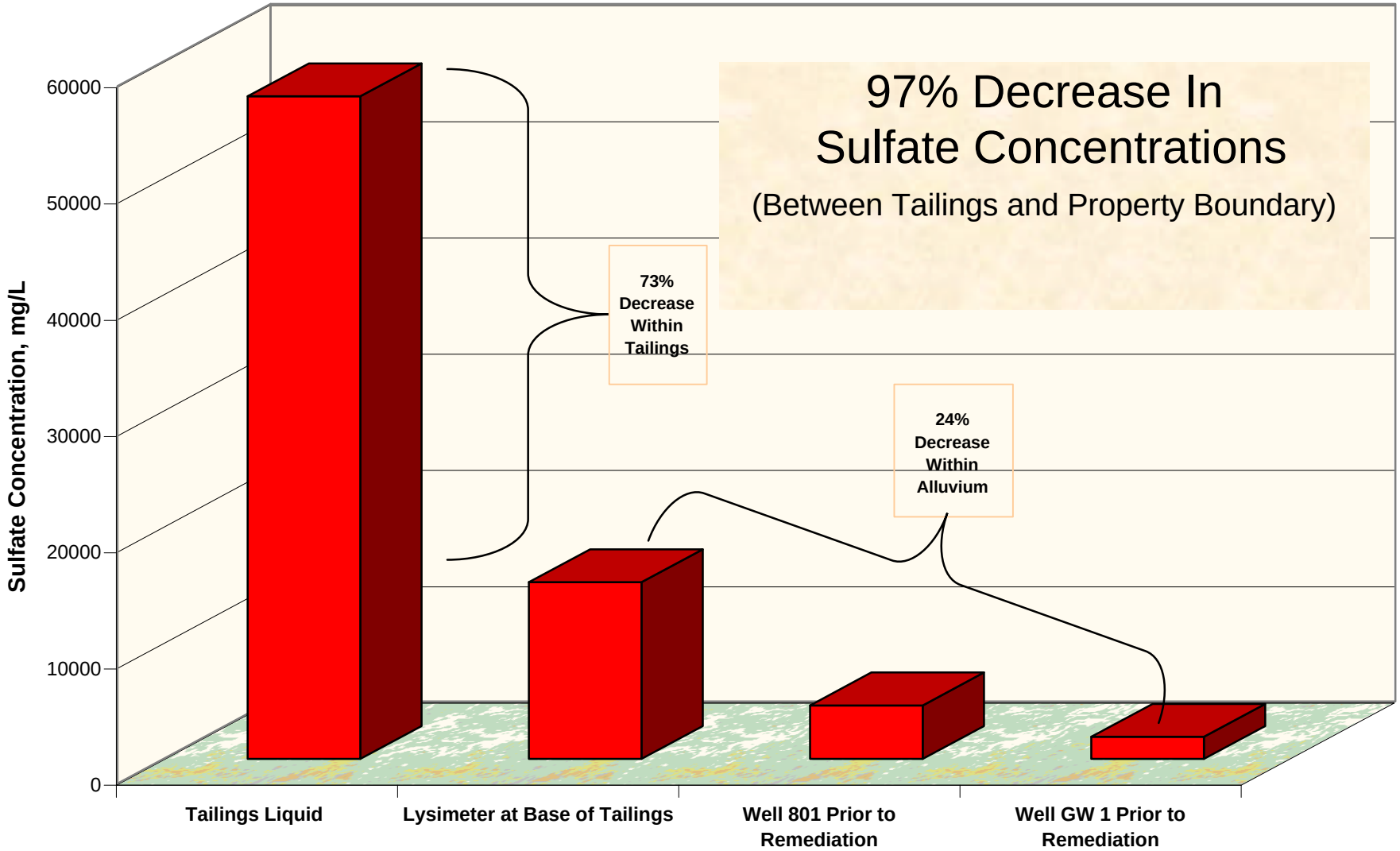


FIGURE 6-19
Southwest Alluvium Water Levels Over Time
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Source: Earth Tech November 2002, Figure 2-3A



Source: Earth Tech, November 2002, Figure 3-13

FIGURE 6-21
Attenuation of Sulfate by Natural Processes in the SW Alluvium
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

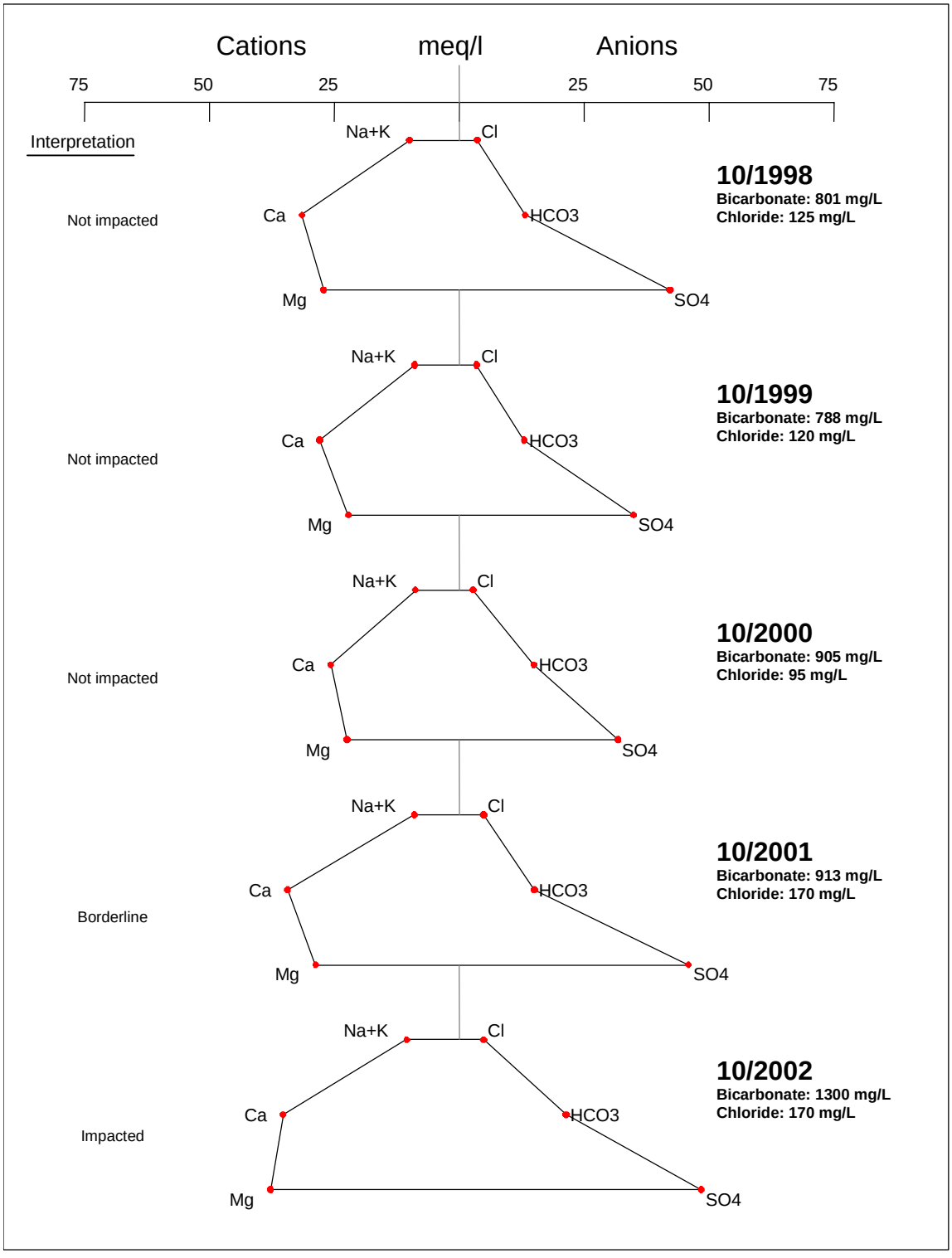


FIGURE 6-22
Southwest Alluvium Well GW-1
Annual Stiff Diagrams From October 1998 through October 2002
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Note: Seepage impacted water in Southwest Alluvium is characterized by bicarbonate concentration >1000 mg/L and chloride concentration >150 mg/L. Seepage impact is interpreted from stiff diagrams when Mg/Ca ratio exceeds one (i.e., Mg to the left of Ca on diagram) and SO_4 increases.

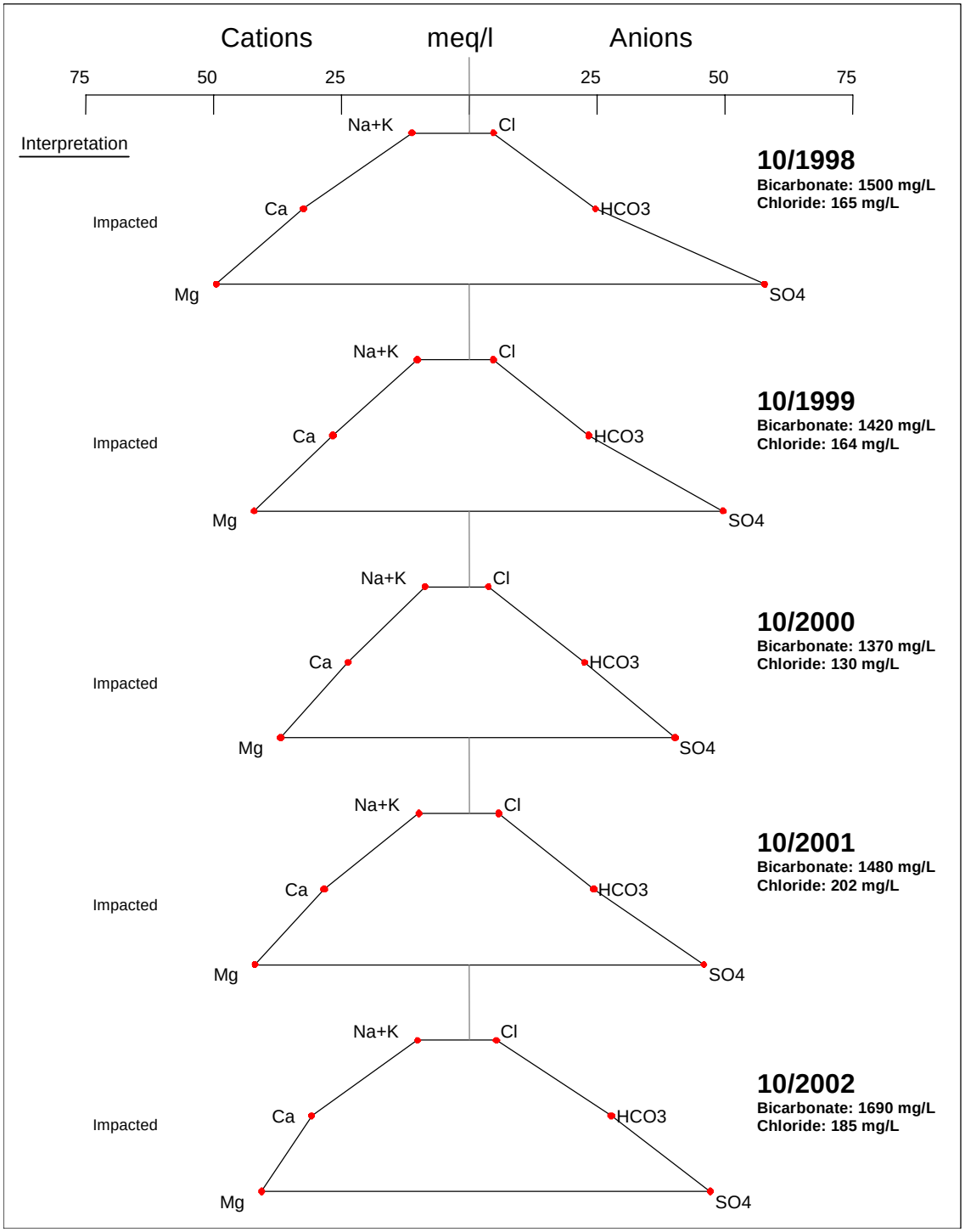
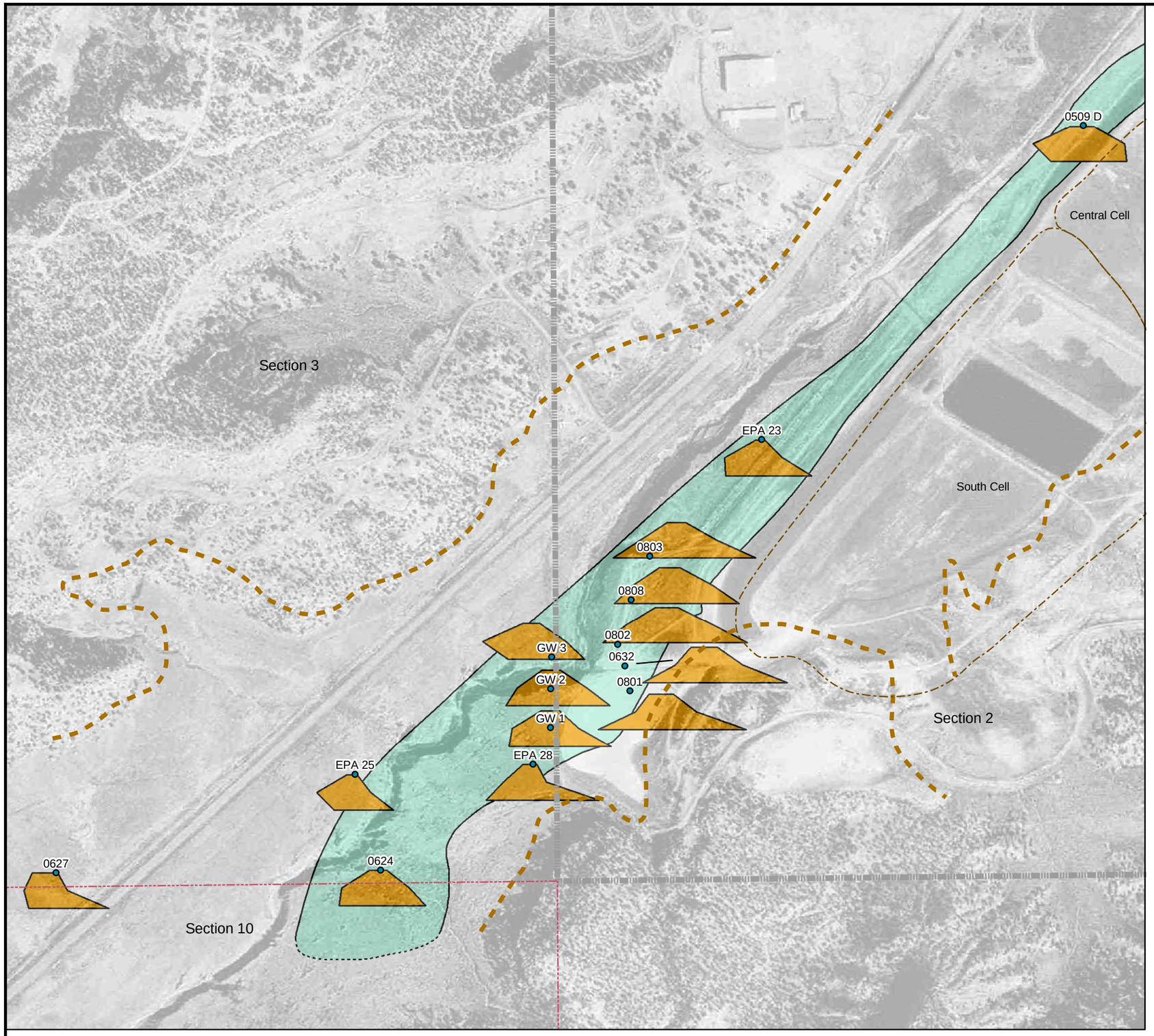


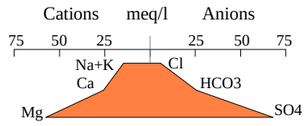
FIGURE 6-23
Southwest Alluvium Well GW-2
Annual Stiff Diagrams From October 1998 through October 2002
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Note: Seepage impacted water in Southwest Alluvium is characterized by bicarbonate concentration >1000 mg/L and chloride concentration >150 mg/L. Seepage impact is interpreted from stiff diagrams when Mg/Ca ratio exceeds one (i.e., Mg to the left of Ca on diagram) and SO_4 increases.

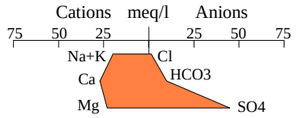


N

Stiff Diagram Key



Impacted



Unimpacted

LEGEND

- Southwest Alluvium Monitoring Wells
- Approximate Extent of Alluvium
- Property Boundary
- Section Boundary
- Southwest Alluvium Groundwater Plume, Plume Boundary Dashed Where Inferred
- October 2002 SW Alluvium Stiff Diagrams
- Tailings Pond

500 250 0 500

Feet

FIGURE 6-24

Southwest Alluvium Stiff Diagrams for Select Wells October 2002

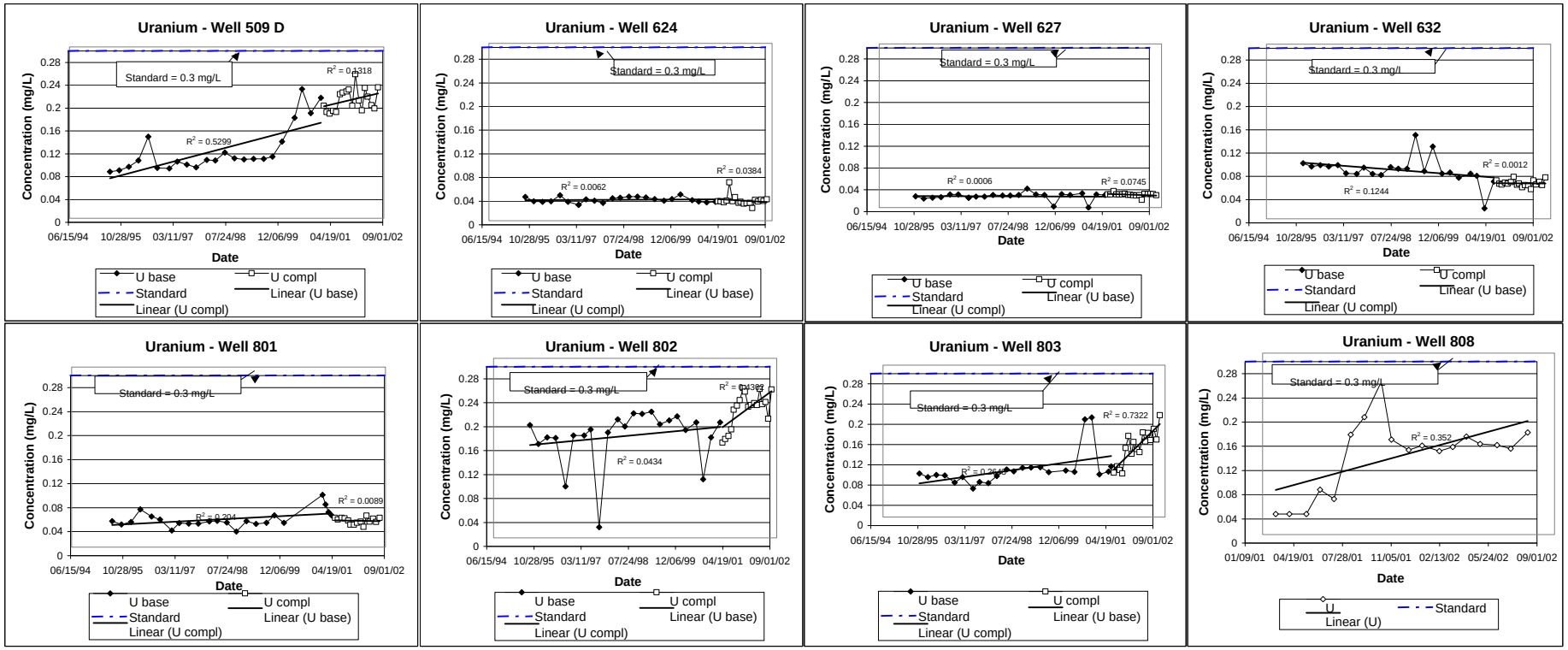
United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

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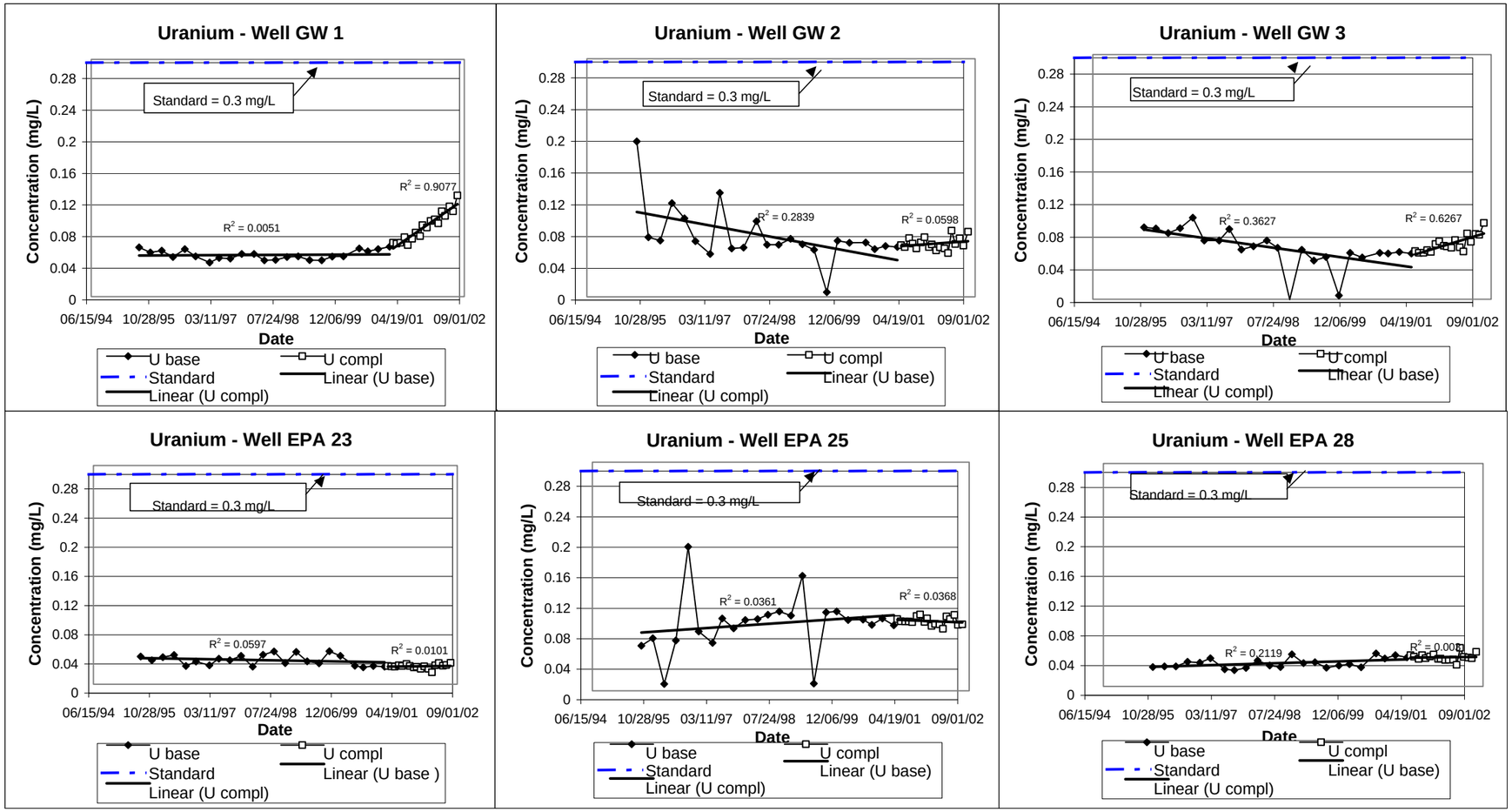
Date: 5/8/2003

FIGURE 6-25
Uranium Trend Graphs from Natural Attenuation Report
(Earth Tech, November 2002)
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

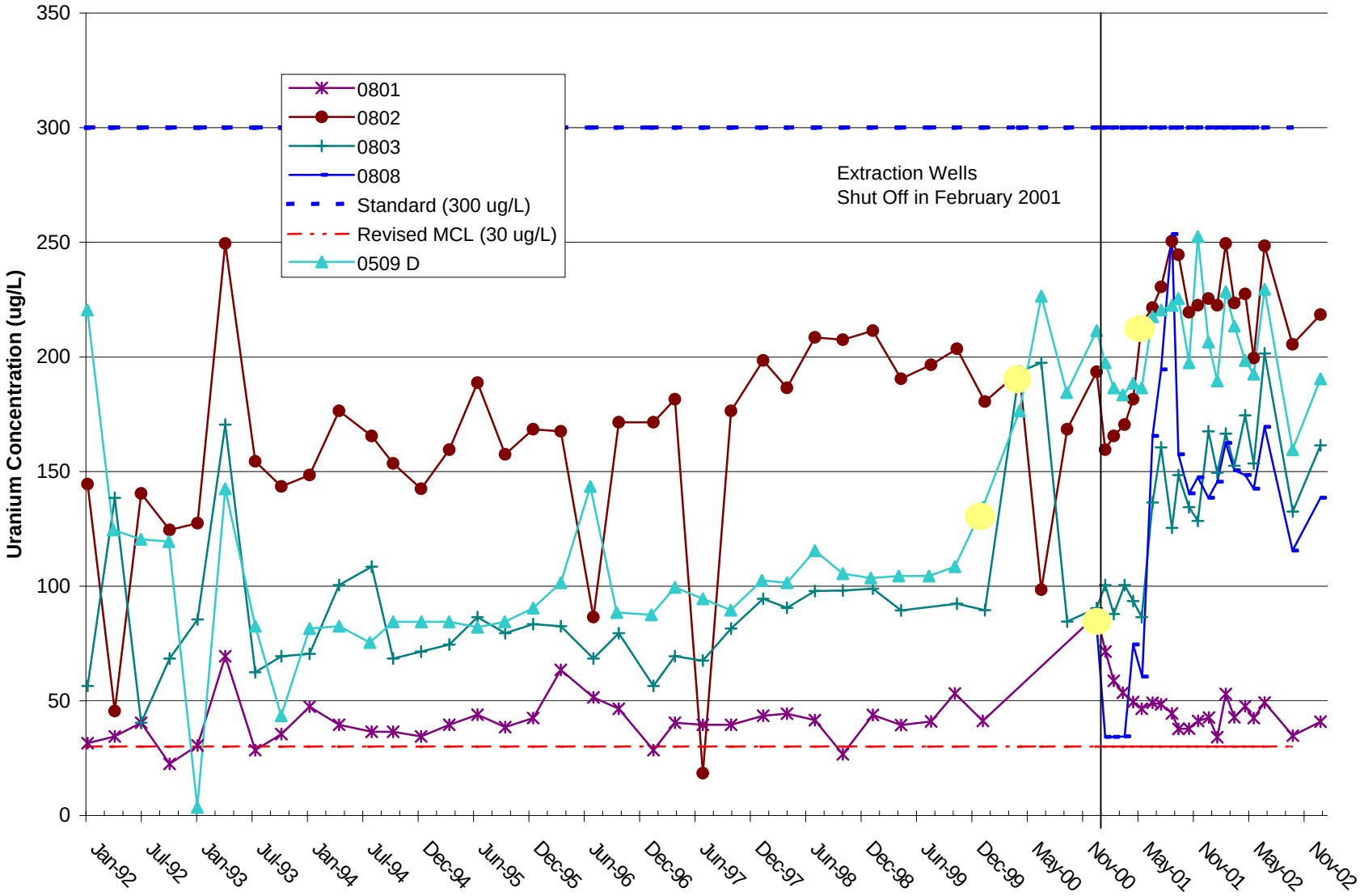


Note: Solid diamonds represent pre-test data and open squares represent test data
Source: Earth Tech, November 2002, Appendix A.

FIGURE 6-25
Uranium Trend Graphs from Natural Attenuation Report
(Earth Tech, November 2002)
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Solid diamonds represent pre-test data and open squares represent test data
Source: Earth Tech, November 2002, Appendix A.



Note: Yellow circles indicate the start of increase in each well.

FIGURE 6-26

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

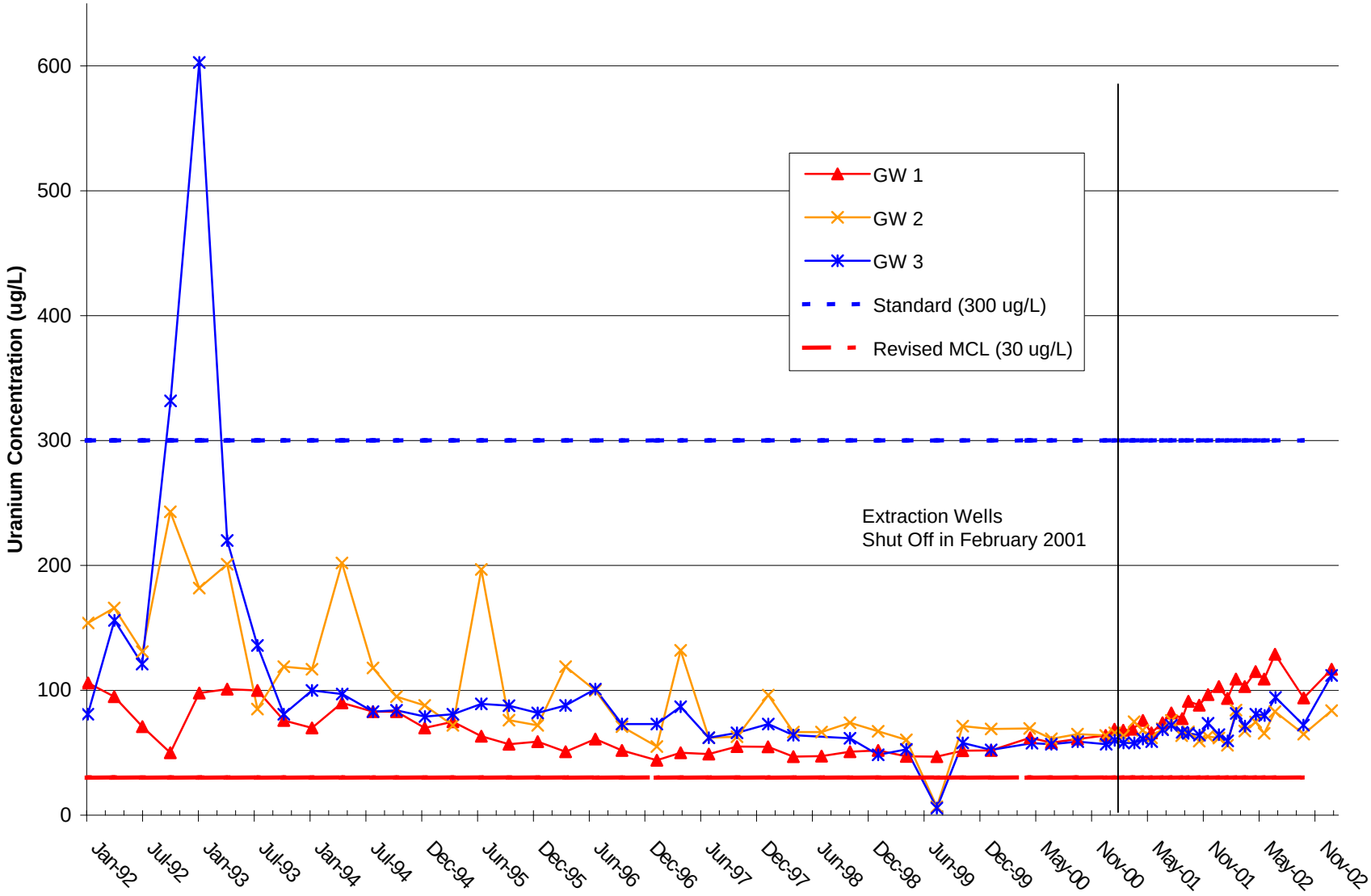
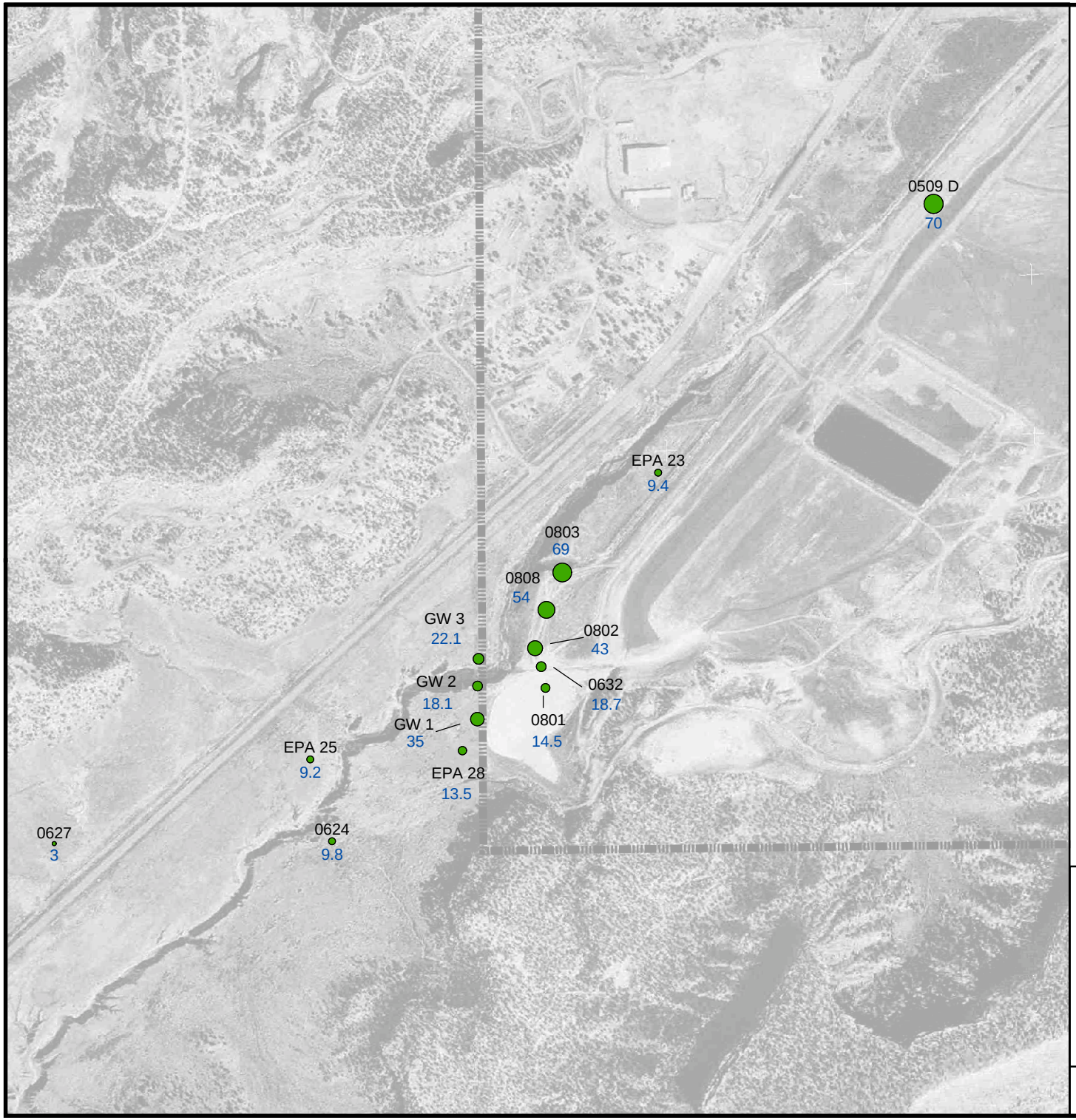


FIGURE 6-27
Graph of Uranium Concentrations in Selected Southwest Alluvium Wells
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



N

LEGEND

Property Boundary

Uranium Decrease (ug/L)

1

10

100

800 400 0 800

Feet

FIGURE 6-28

Decrease in Uranium Concentration Between July 2002 and October 2002

United Nuclear Corporation Church Rock Site
Church Rock, New Mexico

USFilter

Path: Z:\databases\6209_GE_CR\GISDATA\arcmap_doc\sw_alluv_plume\uranium_delta.mxd

Date: 5/8/2003

TABLE 6-1

Zone 3 Performance Monitoring Program 2002 Operating Year

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

Well	Water Level	Water Quality	NRC POC	Purpose
Continue Monitoring				
420	X	X		Postmining-pretailings background, track plume.
711	X	X		Track saturation and plume, replace 502 B based on results of low flow purge testing performed in January 2000.
504 B	X	X		Track saturation and plume, extensive data set.
517	X	X	Y	Track plume, extensive data set.
EPA 9	X			Extent of saturation, water quality not necessary.
EPA 13	X	X		Extent of saturation. Water quality added 2nd quarter 2001.
EPA 14	X	X		Postmining-pretailings background, track plume.
702	X			Water level only, track saturation.
710	X			Water level only.
712	X			Water level only.
713	X			Water level only.
714	X			Water level only.
613	X	X		Extensive data set, track saturation and source.
701	X			Water level only (decommissioned pumper).
706	X			Water level only (decommissioned pumper).
707	X			Water level only (decommissioned pumper).
708	X	X		Added to program 2nd quarter 2001.
717	X	X		Water level. Water quality added 2nd quarter 2001.
719	X	X		Water level. Water quality added 2nd quarter 2001.
Additional Wells, Not Included In Original Performance Monitoring Program				
402	X			Long-term water level for migration path.
424	X			Long-term water level for migration path.
446	X			Long-term water level for migration path.
NBL-01	X	X		Well drilled and installed June 2001. Water level and water quality to track downgradient extent of seepage.
Total	23	11		
Eliminated From Monitoring				**Reason For Elimination**
9 D				Dry
106 D				Dry
411				Oil, cannot get water level or sample.
501 B			Y	Dry
EPA 1				Dry
EPA 3			Y	Dry
EPA 11				Unuseable since 1990 - water level below pump, pump cemented in well.
EPA 12				Dry
EPA 15				Dry
EPA 17				Dry
EPA 18				Dry
126				Dry
502 B				Failed low-flow test, use 711
518			Y	Failed low-flow test, use 517
608				Not needed (formerly water level only)
703				Not needed (formerly water level only)
715				Not needed (formerly water level only)
709				Not needed (decommissioned pumper)
716				Not needed (pumper)
718				Not needed (pumper)
720				Not needed (decommissioned pumper)

Notes:
NRC POC = Nuclear Regulatory Commission Point of Compliance well
Source: Earth Tech, December 2002, Table 3.2

TABLE 6-2

Detected Constituents in Zone 3, October 2002
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	0420	0504 B	0517	0613	0708	0717	0719	EPA 13
ALUMINUM	mg/l	5	< 0.1	0.2	8.9	592	0.9	< 0.1	25	< 0.1
ARSENIC	mg/l	0.05	0.002	0.019	< 0.001	< 0.001	0.002	< 0.001	0.005	0.29
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	0.13	< 0.01	< 0.01	0.05	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	0.006	0.031	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	52.4	26.8	46.6	165	25.1	68.3	33.4	42.3
COBALT	mg/l	0.05	< 0.01	0.27	0.56	1.81	0.29	< 0.01	0.65	0.06
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.85	6.96	6.1	56.5	7.57	1.77	7.89	6.56
MOLYBDENUM	mg/l	1	0.1	6.8	< 0.1	< 0.1	< 0.1	0.2	< 0.1	0.3
NICKEL	mg/l	0.2	< 0.05	0.36	0.5	1.63	0.24	< 0.05	0.9	0.15
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1870	3710	3250	8490	3880	1780	3720	4650
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3080	4980	4260	11800	4840	3130	4630	5770
URANIUM	mg/l	5	0.0779	0.0331	0.066	1.79	0.0118	0.115	0.086	0.0173
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	2.3	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		569	< 0.1	< 0.1	< 0.1	< 0.1	704	< 0.1	86.6
GROSS ALPHA	pci/l	15	2.4	18.7	17.6	52.1	9.8	4.8	11.5	5.7
NITRATE (NO3)	mg/l	190	11.4	< 0.1	1.09	14.2	< 0.1	15.6	< 0.1	< 0.1
PH (FIELD)	pH units		5.88	3.43	4.19	2.85	2.68	6.65	2.85	5.52
PH (LAB)	pH units		7.65	3.8	4.12	3.04	3.23	7.61	3.06	6.7
RADIUM-226	pci/l	5	2.4	12.4	7.6	16.6	8.8	2.2	5.4	4.2
RADIUM-228	pci/l	5	< 1	13.1	9.5	< 1	5.7	3.2	2	4.8
RADIUM 226 and 228	pci/l	5	2.4	12.4	7.6	16.6	8.8	2.2	5.4	4.2
SPECIFIC CONDUCTANCE	umhos/cm		3400	5010	4250	10300	4770	3440	4680	5260
THORIUM-230	pci/l	15	< 0.2	< 0.2	0.5	543	< 0.2	< 0.2	< 0.2	< 0.2

Note:
Shaded cells indicate an exceedance of ROD Cleanup Level, which is shown on Table 2 as the lowest ARAR.

TABLE 6-2

Detected Constituents in Zone 3, October 2002
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	EPA 14	NBL-01	PB-01	PB-02	PB-03	PB-04
ALUMINUM	mg/l	5	21.6	< 0.1				
ARSENIC	mg/l	0.05	< 0.001	0.776				
BERYLLIUM	mg/l	0.017	0.02	< 0.01				
CADMIUM	mg/l	0.01	0.006	< 0.005				
CHLORIDE	mg/l	250	52.2	31.4	31.7	32.4	30.4	30.4
COBALT	mg/l	0.05	0.17	0.06				
LEAD	mg/l	0.05	< 0.05	< 0.05				
MANGANESE	mg/l	2.6	4.78	2.01				
MOLYBDENUM	mg/l	1	< 0.1	2.2				
NICKEL	mg/l	0.2	0.19	0.1				
SELENIUM	mg/l	0.01	< 0.001	< 0.001				
SULFATE (SO4)	mg/l	2125	3080	2070				
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4160	3120		4070	3190	3190
URANIUM	mg/l	5	0.0558	0.251				
VANADIUM	mg/l	0.7	< 0.1	< 0.1				
BICARBONATE (HCO3)	mg/l		130	330	29.2	53.1	356	356
GROSS ALPHA	pci/l	15	7.2	5.6				
NITRATE (NO3)	mg/l	190	13.9	< 0.1				
PH (FIELD)	pH units		6.82	7.18	5.18			
PH (LAB)	pH units		7.3	7.48		7.25	7.84	7.67
RADIUM-226	pci/l	5	4.8	6.4				
RADIUM-228	pci/l	5	5	3.1				
RADIUM 226 and 228	pci/l	5	4.8	6.4				
SPECIFIC CONDUCTANCE	umhos/cm		4230	3160				
THORIUM-230	pci/l	15	< 0.2	< 0.2				

Note:
Shaded cells indicate an exceedance of ROD Cleanup Level, which is shown on Table 2 as the lowest ARAR.

TABLE 6-3

Change in Zone 3 Saturated Thickness Over Time

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

Well Number[1]	Saturated Thickness		Change (feet)[6]	Change[6]
	3rd Quarter 1989	4th Quarter 2002		
402	--	32.1	--	--
411	62.5	--	--	--
420	56.3	21.9	-34.4	-61%
424	--	34.0	--	--
446	--	12.6	--	--
501 B	20.2	0.0	-20.2	-100%
502 B	48.5	--	--	--
504 B	40.1	13.7	-26.4	-66%
517	42.7	14.2	-28.5	-67%
518[2]	37.2	--	--	--
613[3]	67.2	20.9	-46.3	-69%
EPA 01	14.7	0	-14.7	-100%
EPA 03	8.3	0	-8.3	-100%
EPA 09	8.1	4.1	-4.0	-50%
EPA 11	30.8	--	--	--
EPA 12	10.7	0	-10.7	-100%
EPA 13	24.8	11.1	-13.8	-56%
EPA 14	76.3	39.8	-36.5	-48%
EPA 15	60.8	0	-60.8	-100%
EPA 17	1.4	0	-1.4	-100%
EPA 18	2.5	0	-2.5	-100%
701	46.1	17.51	-28.6	-62%
702	24.1	10.71	-13.4	-56%
703	32.6	--	--	--
705	--	--	--	--
706	--	20.26	--	--
707	58.8	23.24	-35.6	-60%
708	49.8	20.55	--	--
709	56.1	--	--	--
710	45.5	17.82	-27.7	-61%
711	43.7	21.49	-22.2	-51%
712	39.1	12.48	-26.6	-68%
713	34.2	12.57	-21.6	-63%
714[4]	50.1	23.08	-27.0	-54%
715[4]	47.6	--	--	--
716[4]	58.3	--	--	--
717[4]	57.6	32.31	-25.3	--
718[4]	51.1	--	--	--
719[4]	39.9	19.55	-20.4	-51%
720[4]	33.1	--	--	--
NBL-01[5]	--	31.15	--	--
Average	37.3	15.6	-23.2	-71%

Notes:

[1] Wells 9 D and 106 D were not included because they appear to be completed above the bottom of Zone 3. Measurements of saturated thickness in these wells may be less than actual conditions. Well 126 was not included because it was completed above the bottom of Zone 3. Measurements of saturated thickness in this well are less than actual conditions. Wells 600, 610 and 672 were not included because they were used solely as pumping wells, therefore no water level data are available. Well 608 was not included because no water level data were available in 1989 and the last water level measurement was in February 2000.

[2] Water level for Well 518 last measured in January 2000.

[3] Water level for Well 613 measured in 1983 before pumping started. Water level data for 1989 are not available because the well was pumping.

[4] Water levels for the Stage II wells were measured June 1991 when wells were installed. Not included in 1989 average saturated thickness calculation.

[5] Well NBL-01 installed in July 2001and first water level measured in August 2001.

[6] Negative value indicates reduction in saturated thickness.

Shading indicates saturated thickness greater than 25 feet.

"--" indicates that no data is available.

Source: Earth Tech, December 2002, Table 3.1

TABLE 6-4

Zone 3 Field Measurements of Sentinel Wells

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

Month		Bicarbonate					Conductivity					pH				
		504B	PB-2	PB-4	PB-3	NBL-01	504B	PB-2	PB-4	PB-3	NBL-01	504B	PB-2	PB-4	PB-3	NBL-01
1	Jun-02	NA	141	270	341	339		3950	3660	3400		4.55	6.18	6.38	6.23	6.65
3	Aug-02		94	211	311		4900	3780	3540	3200	3140		5.93	6.77	6.68	
4	Sep-02		105	178	327			3930	3770	3330			5.95	6.8	6.56	
5	Oct-02	NA	58	194	224	330	5010	4040	3730	3670	3160	5.06	7.09	7.1	7.1	7.18
5.5	Oct-02		53	226	356			4070	3840	3190			7.25	7.67	7.84	
6	Nov-02	NA	41	188	299	285	4930	3080	2860	2510	3120		5.95	6.47	6.6	6.51
7	Dec-02		57	178	283		5040	4120	3950	3330		5.4	5.75	6.4	6.68	
8	Jan-03	NA	34	148	239	311	5180	3930	3716	3460	3300	5.54	4.97	6.92	6.41	6.43
9	Feb-03	NA	58	193	324	328	3620	2910	2660	2570	2300	3.52	5.57	6.96	6.92	6.53

Note:

Month 5.5 represents a laboratory analysis, all other dates are field measurements.

NA indicates not analyzed

TABLE 6-5

Zone 3 Seepage

Migration Travel Time Calculations

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

Well	Measuring Point	Distance From Measuring Point (ft)	Time for		Travel Time (ft/yr)	Basis for Determining Date for "Seepage Impacts At End Point"
			Seepage Impacts at Measuring Point (date)	Seepage Impacts at End Point (date)		
420	North Cell	2100	1980	Oct-02	95	Based on bicarbonate concentration greater than 500 mg/L
504 B	North Cell	2,450	1980	Jul-92	204	Based on bicarbonate concentration less than 100 mg/L
EPA 14	North Cell	1,520	1980	Apr-96	95	Based on bicarbonate concentration greater than 500 mg/L
PB-02	North Cell	3080	1980	Oct-02	140	Based on bicarbonate concentrations first reaching @ 50 mg/L at Well PB-02
PB-02	504 B	630	Jul-92	Oct-02	61	Based on bicarbonate concentrations first reaching @ 50 mg/L at each well
Geometric Mean					110	

Source: Earth Tech, December 2002, Table 3.3

TABLE 6-6

Zone 1 Performance Monitoring Program, 2002 Operating Year
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Well[1]	Water Level[2]	Water Quality[2]	NRC POC	Purpose
Continue Monitoring				
515 A	X	X		Track transition area
604	X	X	Y	Track center of seepage
614	X	X	Y	Track transition area
EPA 2	X	X		Postmining-pretailings background water quality
EPA 4	X	X	Y	Postmining-pretailings background water quality
EPA 5	X	X		Track transition area
EPA 7	X	X	Y	Track transition area, edge of saturation
EPA 8	X			Track edge of saturation
142	X	X		Premining background
143	X			Water level only, use 142
Additional Wells, Not Included In Original Performance Monitoring Program				
505 A	X			Long-term water level for migration path
502 A	X			Long-term water level for migration path
501 A	X			Long-term water level for migration path
504 A	X			Long-term water level for migration path
412	X			Long-term water level for migration path
Total	15	8		
Eliminated From Monitoring				**Reason For Elimination**
141				No longer useable, plugged during arroyo flooding
516 A			Y	Failed low-flow testing
619				Anomalous water quality and water level
615				Decommissioned pumper, not needed - use 515 A
616				Decommissioned pumper, not needed - use 604
617				Decommissioned pumper, not needed

Notes:

[1] No wells within the tailings reclamation cap were included.

[2] Water level and water quality monitored on a quarterly basis.

Source: Earth Tech, December 2002, Table 4.1

TABLE 6-7

Detected Constituents in Zone 1, October 2002
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	0142	0515 A	0604	0614	EPA 02	EPA 04	EPA 05	EPA 07
ALUMINUM	mg/l	5	< 0.1	3.1	14.6	< 0.1	< 0.1	< 0.1	< 0.1	1.7
ARSENIC	mg/l	0.05	0.004	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	17.7	228	56.5	286	21	40	75.1	180
COBALT	mg/l	0.05	< 0.01	0.08	0.26	< 0.01	< 0.01	< 0.01	0.09	0.04
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	13.3	9.67	0.32	1.12	3.4	1.17	5.66
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	0.2	0.3	< 0.05	< 0.05	< 0.05	0.1	0.07
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	536	4270	4380	3080	1700	3260	3580	4420
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	998	6900	5790	5220	2630	4240	4610	6430
URANIUM	mg/l	5	0.0003	0.002	0.0018	0.0439	0.0009	0.0005	0.0026	0.0024
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		237	210	7.3	1440	432	179	168	544
GROSS ALPHA	pci/l	15	< 1	9.3	9.6	1.3	< 1	< 1	2.7	1.3
NITRATE (NO3)	mg/l	190	< 0.1	63	68.6	79.2	< 0.1	< 0.1	12.3	141
PH (FIELD)	pH units		7.09	6.54	5.36	6.05	6.14	6.32	6.3	6.67
PH (LAB)	pH units		8	6.61	4.79	7.66	7.72	7.06	6.77	7.13
RADIUM-226	pci/l	5	0.8	3.5	3.3	0.9	1.7	1.7	1.8	0.9
RADIUM-228	pci/l	5	< 1	3.1	5.6	< 1	3	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.8	6.6	8.9	0.9	4.7	1.7	1.8	0.9
SPECIFIC CONDUCTANCE	umhos/cm		1611	6990	6330	7280	2860	4300	4840	6820
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Note:
Shaded cells indicate an exceedance of ROD Cleanup Level, which is shown on Table 2 as the lowest ARAR.

TABLE 6-8

Predicted Performance of the Zone 1 Natural System
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Constituent	Will Standards Be Met?		Remarks
	Section 1	Section 36	
Manganese	Maybe	Maybe	Dependent on bicarbonate availability
Sulfate	No	No	Limited by calcium availability
TDS	No	No	Governed by sulfate concentration
Metals	Yes	Yes	Attenuated by neutralization and adsorption
Radionuclides	Yes	Yes	Attenuated by neutralization and adsorption

TABLE 6-9

Southwest Alluvium Performance Monitoring Program, Natural Attenuation Test
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Well	Use[1]	Water Level	Water Quality	Time Period of Baseline Data
509 D	Monitor	X	X	7/95 to 1/01
624	Monitor	X	X	7/95 to 1/01
627	Monitor	X	X	7/95 to 1/01
632	Monitor	X	X	7/95 to 1/01
801[2]	Pumping	X	X	7/95 to 1/00 and 1/01
802	Pumping	X	X	7/95 to 1/01
803	Pumping	X	X	7/95 to 1/01
805	Monitor	X		7/95 to 1/01
807	Monitor	X		7/95 to 1/01
808[3]	Pumping	X	X	1/01
EPA 23	Monitor	X	X	7/95 to 1/01
EPA 25	Monitor	X	X	7/95 to 1/01
EPA 28	Monitor	X	X	7/95 to 1/01
GW 1	Monitor	X	X	7/95 to 1/01
GW 2	Monitor	X	X	7/95 to 1/01
GW 3	Monitor	X	X	7/95 to 1/01

Notes:

[1] Pumping wells turned off in January 2001 after final baseline samples were collected. Well 801 is the exception, see Note 2.

[2] Well 801 was turned off at the end of July 1999 because it met decommissioning criteria. Sample collection ceased after the first quarter 2000. Well 801 water quality is included in the test program, therefore sampling recommenced January 2001.

[3] Well 808 was not included in the Performance Monitoring Program prior to the NA Test, therefore no data are available prior to January 2001.

Source: Earth Tech, November 2002, Table 2.1

TABLE 6-10

Detected Constituents in Southwest Alluvium, October 2002

United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	0509 D	0624	0627	0632	0801	0802	0803	0808
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	300	173	50.1	221	206	187	163	168
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.47	0.03	0.09	1.07	5.66	0.65	1.6	0.65
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1750	1810	2160	3150	3260	3060	3060	2630
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4290	5150	4170	7100	6960	5680	5300	5260
URANIUM	mg/l	5	0.159	0.0262	0.0198	0.0521	0.0343	0.205	0.132	0.115
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2100	1490	611	1700	1560	2140	1880	1970
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	26.4	97.1	139	45.7	1.99	95.2	55.2	113
PH (FIELD)	pH units		6.12	6.67	7.1	6.61	6.51	6.33	6.33	6.38
PH (LAB)	pH units		7.82	7.25	7.65	7.29	7.58	7.99	7.44	7.19
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	2.1	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5				2.1				
SPECIFIC CONDUCTANCE	umhos/cm		5400	5280	5310	6710	6510	6920	6430	6540
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Note:

Shaded cells indicate an exceedance of ROD Cleanup Level, which is shown on Table 2 as the lowest ARAR.

TABLE 6-10

Detected Constituents in Southwest Alluvium, October 2002

United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	EPA 23	EPA 25	EPA 28	GW 1	GW 2	GW 3
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	75.6	70	113	170	185	150
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	4.67	1.62	0.44	0.04	0.51	1.95
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2010	1560	2680	2320	2260	2030
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4280	3510	5190	5850	5550	4510
URANIUM	mg/l	5	0.0197	0.0778	0.0329	0.093	0.064	0.0713
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1080	802	675	1300	1690	1620
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.98	82.1	45.3	113	30.1	83.8
PH (FIELD)	pH units		5.92	7.08	6.77	6.75	6.4	6.64
PH (LAB)	pH units		7.59	7.67	7.6	7.72	7.52	7.35
RADIUM-226	pci/l	5	0.8	< 0.2	< 0.2	0.6	2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.8			0.6	2	
SPECIFIC CONDUCTANCE	umhos/cm		4350	4080	4960	5700	5510	5430
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Note:

Shaded cells indicate an exceedance of ROD Cleanup Level, which is shown on Table 2 as the lowest ARAR.

TABLE 6-11
Summary of Operational Data
Southwest Alluvium Extraction Wells
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Well No.	Annual Average Pumping Rate (gpm)												
	1990 (1)	**1991 (2)**	**1992 (3)**	**1993 (4)**	**1994 (5)**	**1995 (6)**	**1996 (7)**	**1997 (8)**	**1998 (9)**	**1999 (10)**	**2000 (11)**	**2001 (12)**	**1990-2001**
801 (13)	1.2	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.08	0.08	0.00	0.00	0.25
802	11.1	12.5	11.9	9.0	9.8	9.7	9.1	10.1	11.02	9.62	9.31	5.80	9.91
803	2.0	2.6	2.5	3.0	3.2	3.5	3.1	2.9	3.84	3.56	3.83	3.68	3.14
808 (14)		10.0	15.5	19.9	15.6	12.3	12.2	7.2	4.34	3.50	2.50	3.35	9.67
Total Pumping Rate	14.3	25.6	30.3	32.1	28.8	25.6	24.5	20.3	19.29	16.76	15.64	11.94	22.98
Volume Pumped (millions of gallons) (15)	7.4	12.4	17.2	18.1	15.7	12.9	12.2	9.2	9.0	7.5	7.7	1.7	131.0

Notes:
1. Average pumping rate calculated for the period between October 13, 1989 and October 12, 1990.
2. Average pumping rate calculated for the period between October 13, 1990 and October 11, 1991, except Well 808, which calculated for the period between June 26, 1991 (i.e., well startup) and October 11, 1991.
3. Average pumping rate calculated for the period between October 12, 1991 and October 8, 1992.
4. Average pumping rate calculated for the period between October 9, 1992 and October 8, 1993.
5. Average pumping rate calculated for the period between October 9, 1993 and October 14, 1994.
6. Average pumping rate calculated for the period between October 15, 1994 and September 29, 1995.
7. Average pumping rate calculated for the period between September 30, 1995 and September 27, 1996.
8. Average pumping rate calculated for the period between September 28, 1996 and September 26, 1997.
9. Average pumping rate calculated for the period between September 27, 1997 and September 25, 1998.
10. Average pumping rate calculated for the period between October 02, 1998 and September 27, 1999.
11. Average pumping rate calculated for the period between September 28, 1999 and September 29, 2000.
12. Average pumping rate calculated for the period between September 30, 2000 and January 12, 2001.
13. Well 801 decommissioned at the end of July 1999.
14. Well 808 began operation on June 26, 1991.
15. Data obtained from system flowmeter.

gpm = gallons per minute

Source: Earth Tech, December 2002, Figure 2.1

TABLE 6-12

Predicted Performance of the Southwest Alluvium Natural System
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Constituent	Will Standards Be Met?		Remarks
	Section 3	Section 10	
Manganese	Yes	Yes	
Sulfate	No	No	Limited by calcium availability
TDS	No	No	Governed by sulfate concentration
Metals	Yes	Yes	Attenuated by neutralization and adsorption
Radionuclides	Yes	Yes	Attenuated by neutralization and adsorption

TABLE 6-13

Summary of Annual Southwest Alluvium Mass Removal
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Average Concentration								
		SO4 (mg/L)	**Cl (mg/L)**	**NO3 as N (mg/L)**	**Mn (mg/L)**	**Ni (mg/L)**	**Chloroform (mg/L)**	**Pb-210 (pCi/l)**
	NRC Standard	NA	NA	NA	NA	0.05	0.001	1.0
	EPA Standard	2,125	250	190	2.6	0.20	NA	NA
Date	**Gallons Extracted**							
1990	7,400,000	2,695	213	105	2.26	0.01	0.0004	0.76
1991	12,400,000	2,713	217	112.6	1.20	0.01	0.0001	1.22
1992	17,200,000	2,698	211	78.5	1.00	0.001	0.00005	0.44
1993	18,100,000	2,897	212	72.3	0.88	0.0004	0.00003	0.24
1994	15,700,000	3,181	196	70.2	0.95	0.0006	0.00003	0.50
1995	12,935,534	3,204	221	67.2	1.00	0.0003	0.00002	1.04
1996	12,172,658	3,251	206	66.9	0.91	0.0000	0.00044	1.08
1997	9,191,166	3,133	239	63.7	1.17	0.0002	0.00002	0.01
1998	9,000,854	3,088	220	71.9	1.38	0.0009	0.00058	0.00
1999	7,533,665	3,189	201	70.6	1.40	0.0000	0.00087	0.00
2000	7,651,231	2,982	181	69.9	1.79	0.0500	0.00156	0.00
2001	1,788,371	3,209	191	68.6	2.14	0.0000	0.00123	0.00
TOTAL 1990-2001	131,073,479	2,821	200	72.5	1.08	0.0019	0.00019	0.51

Mass/Radioactivity Extracted								
Date	**Gallons Extracted**	**SO_4 (lbs)**	**Cl (lbs)**	**NO_3 (lbs)**	**Mn (lbs)**	**Ni (lbs)**	**Chloroform (lbs)**	**Pb-210 (µCi)**
1990	7,400,000	165,524	13,161	6,488	139.1	0.62	0.0247	21.20
1991	12,400,000	280,904	22,468	11,659	124.0	1.04	0.0104	57.40
1992	17,200,000	387,487	30,304	11,274	141.7	0.14	0.0072	28.80
1993	18,100,000	437,838	32,041	10,927	133.7	0.06	0.0045	16.59
1994	15,700,000	417,013	25,743	9,203	124.6	0.08	0.0033	32.30
1995	12,900,000	346,070	23,871	7,258	107.6	0.03	0.0018	51.15
1996	12,300,000	330,457	21,924	6,798	93.5	0.00	0.0440	50.28
1997	9,191,166	240,447	18,343	4,892	90.0	0.01	0.0010	0.32
1998	9,000,854	232,098	16,554	5,400	104.0	0.07	0.0433	0.00
1999	7,533,665	200,616	12,630	4,440	88.2	0.00	0.0548	0.00
2000	7,651,231	190,510	11,565	4,464	114.4	3.19	0.0999	0.00
2001	1,788,371	47,917	2,860	1,025	31.9	0.00	0.0184	0.00
TOTAL 1990-2001	131,073,479	3,277,881	230,463	83,828	1293.6	5.25	0.3141	254.76

Notes:
All averages are weighted averages (i.e., average = mass/volume).
Average concentration is shaded where NRC and/or EPA standard is exceeded.
Conversion factors are 1 mg/L = 8.35 x 10^{-6} lbs/gal and 1 pCi/L = 3.79 x 10-6 µCi/gal.

Source: Earth Tech, January 2002, Table A.9

TABLE 6-14

Summary of Annual Zone 1 Mass Removal
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Average Concentration

System	Time Period		SO_4 (mg/L)	NO_3 as N (mg/L)	Al (mg/L)	Co (mg/L)	Mn (mg/L)	Ni (mg/L)	Chloroform (mg/L)	Pb-210 (pCi/l)	Ra-226+ Ra-228 (pCi/l)
		NRC Standard	**NA**	**NA**	**NA**	**NA**	**NA**	**0.05**	**0.001**	**1.0**	**5.0**
		EPA Standard	**2,125**	**190**	**5**	**0.05**	**2.6**	**0.2**	**NA**	**NA**	**5.0**
		Volume Pumped (million gallons)									
North Cross-Dike	(4/89 - 9/90)	3.40	4,118	34.3	38.3	NDA	13.0	NDA	NDA	NDA	5.85
East System	(4/89 - 9/90)	3.20	4,717	80.4	57.7	0.17	13.4	0.21	0.003	0.83	10.0
ALARA Demonstration	(8/12/91 - 12/2/91)	0.79	4,480	24.8	18.4	0.60	20.9	0.87	0.060	0.80	20.9
Revised East System	(9/90 - 10/91)	0.48	5,350	66.1	38.7	0.23	16.0	0.30	0.017	0.77	15.6
Revised East System	(10/91 - 10/92)	0.39	5,064	40.5	25.6	0.21	16.0	0.28	0.013	0.94	14.2
Revised East System	(10/92 - 10/93)	0.35	4,867	56.9	18.5	0.23	13.5	0.31	0.034	1.40	10.4
Revised East System	(10/93 - 10/94)	0.37	4,925	72.0	10.8	0.17	10.6	0.27	0.081	1.15	9.29
Revised East System	(10/94 - 9/95)	0.25	5,398	89.3	14.3	0.14	8.2	0.28	0.001	1.80	8.93
Revised East System	(10/95 - 9/96)	0.25	5,310	88.8	9.8	0.13	9.5	0.17	0.092	0.60	6.13
Revised East System	(10/96 - 9/97)	0.20	5,220	84.5	7.2	0.14	8.5	0.17	0.076	0.00	7.5
Revised East System	(10/97 - 9/98)	0.32	4,899	73.8	5.3	0.14	11.7	0.19	0.161	0.00	5.65
Revised East System	(10/98 - 7/99)	0.09	5,568	87.1	8.0	0.18	9.2	0.24	0.051	0.00	6.13
All Systems (a)	(4/89 - 7/99)	10.09	4,450	55.1	37.3	0.15	13.2	0.20	0.015	0.55	9.4

Mass/Radioactivity Extracted

System	Time Period	Volume Pumped (million gallons)	SO4 (lb)	NO3 as N (lb)	Al (lb)	Co (lb)	Mn (lb)	N (lb)	Chloroform (lb)	Pb-210 (µCi)	Ra-226+ Ra-228 (µCi)
North Cross-Dike	(4/89 - 9/90)	3.40	116,896	974	1,088.0	NDA	370.0	NDA	NDA	NDA	75.4
East System	(4/89 - 9/90)	3.20	126,046	2,149	1,542.0	4.60	359.0	5.50	0.07	10.1	121.5
ALARA Demonstration	(8/12/91 - 12/2/91)	0.79	29,739	165	122.3	4.00	138.8	5.78	0.40	2.40	63.0
Revised East System	(9/90 - 10/91)	0.48	22,782	282	164.9	1.00	68.0	1.30	0.07	1.50	30.3
Revised East System	(10/91 - 10/92)	0.39	16,619	133	83.9	0.70	52.5	0.90	0.04	1.40	21.1
Revised East System	(10/92 - 10/93)	0.35	14,225	166	54.2	0.67	39.4	0.92	0.10	1.90	13.8
Revised East System	(10/93 - 10/94)	0.37	15,216	222	33.2	0.53	32.8	0.80	0.25	1.60	13.0
Revised East System	(10/94 - 9/95)	0.25	11,078	183	29.3	0.29	16.7	0.60	0.00	1.80	8.30
Revised East System	(10/95 - 9/96)	0.25	11,174	187	20.7	0.26	20.0	0.40	0.19	0.60	5.90
Revised East System	(10/96 - 9/97)	0.20	8,805	143	12.2	0.23	14.3	0.30	0.13	0.00	5.70
Revised East System	(10/97 - 9/98)	0.32	13,232	199	14.2	0.37	31.6	0.55	0.44	0.00	6.90
Revised East System	(10/98 - 7/99)	0.09	3,992	62	5.8	0.13	6.6	0.17	0.04	0.00	1.99
All Systems (a)	(4/89 - 7/99)	10.09	375,109	4,647	3,145	12.25	1,112	16.6	1.30	21.1	357.7

Notes:

a = Average concentrations and mass extracted for Co, Ni, Chloroform, and Pb-210 do not include the North Cross-Dike System from 4/89 - 9/90 because laboratory data were unavailable.

NDA indicates that laboratory analyses are unavailable for these constituents for the indicated system and time period.

All averages are weighted averages (i.e., average = mass/volume).

Conversion factors are 1 mg/L = 8.35 x 10-6 lbs/gal and 1 pCi/l = 3.79 x 10-6 µCi/gal.

Average concentrations are shaded where NRC and/or EPA Standard is exceeded.

Source: Earth Tech, December 1999, Table A.6

TABLE 6-15

Summary of Annual Zone 3 Mass Present, to Calculate Removal
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

Mass Present, 1989															
Well	**SO4 (tons)**	**NO3 as N (lbs)**	**Al (lbs)**	**As (lbs)**	**Be (lbs)**	**Co (lbs)**	**Pb (lbs)**	**Mn (lbs)**	**Mo (lbs)**	**Ni (lbs)**	**U (lbs)**	**Ra-226 + Ra-228 (µCi)**	**Pb-210 (µCi)**	**Gross Alpha (µCi)**	**Chloroform (lbs)**
9 D	118.7	117.3	2,017.8	0.00	0.00	30.50	3.75	656.97	0.00	40.36	0.36	155.49	95.85	374.9	0.00
106 D	22.1	1,010.8	120.7	0.00	0.00	2.26	0.00	181.05	0.00	3.92	0.04	95.19	15.07	154.1	0.00
420	65.2	6,052.8	0.0	1.21	0.00	0.00	0.00	141.23	918.01	0.00	2.96	416.68	73.26	311.4	0.00
501 B	66.6	6.9	3,271.4	7.98	4.25	35.99	2.62	392.57	3.60	58.89	19.96	491.49	0.00	1,429.9	0.00
502 B	143.3	2,607.1	191.2	0.09	0.00	22.60	0.00	599.64	808.21	20.86	4.72	678.46	90.72	1,203.1	0.00
504 B	134.5	4.4	22.2	10.04	0.00	12.44	0.00	222.15	2,132.66	21.33	8.89	1,306.80	0.00	2,666.0	0.00
517	67.5	2,531.8	0.0	0.00	0.00	0.00	0.00	37.65	9.09	0.00	16.36	630.58	61.88	1,299.5	0.07
518	144.8	947.2	18,083.6	0.04	6.89	73.20	4.74	1,765.30	0.00	81.81	36.25	801.26	80.13	2,345.1	1.85
EPA 03	24.3	0.3	0.0	0.04	0.00	0.44	1.02	81.21	0.00	0.00	0.15	9.87	0.00	28.3	0.00
EPA 09	77.7	3.0	9.5	0.00	0.00	5.18	0.00	194.37	0.00	3.89	0.09	131.35	41.17	80.4	0.00
EPA 12	45.7	0.6	0.0	0.03	0.00	3.19	0.00	118.88	220.37	8.70	0.05	109.24	0.00	93.4	0.00
EPA 13	98.7	805.5	12.0	0.40	0.00	26.85	0.00	354.17	85.69	33.70	0.34	230.76	70.01	137.4	0.00
EPA 14	127.0	2,034.1	95.1	0.00	0.00	4.81	0.00	75.83	0.00	6.02	2.00	349.63	0.00	174.8	0.00
EPA 15	104.0	1,847.0	0.0	0.00	0.00	0.00	0.00	181.90	69.96	0.00	5.71	469.97	82.56	139.7	0.00
EPA 17	2.1	0.1	0.2	0.20	0.00	0.07	0.00	6.28	1.09	0.22	0.05	2.81	0.50	6.0	0.00
EPA 18	5.8	0.2	0.0	0.02	0.00	0.55	0.00	19.55	0.15	0.67	0.09	16.68	0.00	10.6	0.00
TOTAL	1,248.2	17,969.2	23,823.7	20.06	11.14	218.08	12.12	5,028.75	4,248.83	280.35	98.01	5,896.25	611.14	10,454.6	1.92

Mass Present, 2000															
Well	**SO4 (tons)**	**NO3 as N (lbs)**	**Al (lbs)**	**As (lbs)**	**Be (lbs)**	**Co (lbs)**	**Pb (lbs)**	**Mn (lbs)**	**Mo (lbs)**	**Ni (lbs)**	**U (lbs)**	**Ra-226 + Ra-228 (µCi)**	**Pb-210 (µCi)**	**Gross Alpha (µCi)**	**Chloroform (lbs)**
420	41.9	1,599.5	2.4	0.02	0.24	0.24	0.00	97.80	10.12	1.20	2.10	72.16	0.00	61.2	0.024
711 [502 B (a)]	158.5	4.5	4.5	0.05	0.45	0.45	1.00	761.85	9.99	2.27	5.57	416.28	1.00	585.3	0.045
504 B	66.0	1.9	8.1	0.96	0.19	11.52	0.00	237.23	514.39	15.74	1.91	595.89	0.00	365.9	0.019
517	132.8	368.1	950.4	0.05	0.47	51.25	0.00	665.29	4.66	34.48	6.16	960.04	0.00	1,129.2	0.475
518															
EPA 09	13.9	0.4	20.2	0.01	0.04	1.22	0.00	35.26	0.36	0.94	0.01	68.92	0.00	44.1	0.004
EPA 13 [(711) (b)]															
EPA 14	123.3	2,215.8	4.8	0.19	0.48	17.34	0.00	420.04	4.82	2.41	5.11	424.16	0.00	236.1	0.048
TOTAL	536.4	4,190.2	990.4	1.28	1.87	82.02	1.00	2,217.48	544.33	57.03	20.85	2,537.45	1.0	2,421.8	0.62
Change	-57%	-77%	-96%	-94%	-83%	-62%	-92%	-56%	-87%	-80%	-79%	-57%	-100%	-77%	-68%

Notes:

a = Well 711 replaced Well 502 B beginning 2nd Quarter 2000. The mass of constituents present in the Well 501 B area of influence is calculated using water quality data from Well 711.

b = Well EPA 13 was changed to water level monitoring only as of 2nd Quarter 2000. The mass of constituents present in the Well EPA 13 area of influence was calculated using the water quality from Well 711 and adding the area of influence of Well EPA 13 to that covered by Well 711.

Source: Earth Tech, December 2000, Table A.3

ATTACHMENT A
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ATTACHMENT A

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ATTACHMENT B

Groundwater Data Summary

Location 0009d
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/21/1992	4/7/1992
ALUMINUM	mg/l	5	55.1	150
ARSENIC	mg/l	0.05	0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.01	0.04
CADMIUM	mg/l	0.01	0.02	< 0.01
CHLORIDE	mg/l	250	108	124
COBALT	mg/l	0.05	0.74	1.35
LEAD	mg/l	0.05	0.26	0.27
MANGANESE	mg/l	2.6	17.1	22
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	1.07	1.78
SELENIUM	mg/l	0.01	0.02	< 0.001
SULFATE (SO4)	mg/l	2125	5648	5628
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8112	8533
URANIUM	mg/l	5	0.009	0.022
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0
GROSS ALPHA	pci/l	15	9.3	15.8
NITRATE (NO3)	mg/l	190	1.24	< 0.1
PH (FIELD)	pH units		4.3	4.3
PH (LAB)	pH units		4.31	4.09
RADIUM-226	pci/l	5	8.5	15.5
RADIUM-228	pci/l	5	< 2	8.6
RADIUM 226 and 228	pci/l	5	8.5	24.1
THORIUM-230	pci/l	15	< 0.2	< 0.2

Location 0411
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/6/1992	1/6/1993	4/6/1993	7/16/1993	10/6/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	0.14	< 0.1
ARSENIC	mg/l	0.05	0.088	0.087	0.044	0.022	0.022	0.011	0.017	0.013
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	23.1	26.1	28.7	27.4	30.4	35.1	39.6	41.3
COBALT	mg/l	0.05	0.06	0.06	0.08	0.09	0.09	0.1	0.12	0.1
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.96	3.95	3.62	4.41	4.65	5.5	4.48	4
MOLYBDENUM	mg/l	1	2.73	3.5	4.11	6.6	5.38	6.41	8.5	8.38
NICKEL	mg/l	0.2	0.09	0.05	0.08	0.11	0.14	0.13	0.14	0.13
SELENIUM	mg/l	0.01	0.002	< 0.001	0.003	0.003	0.004	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1765	1847	2034	2352	2137	2257	2420	2591
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2939	3064	3340	3860	3091	3306	3412	4026
URANIUM	mg/l	5	0.039	0.065	0.02	0.154	0.129	0.205	0.127	0.145
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		255	401	244	259	246	245	321	340
GROSS ALPHA	pci/l	15	5	4.9	6.5	5.3	6.9	6.9	5.2	4
NITRATE (NO3)	mg/l	190	< 0.01	< 0.1	0.1	6.05	4.1	1.8	4.4	14.3
PH (FIELD)	pH units		5.8	5.9	5.6	6	6	6.7	6.6	7.1
PH (LAB)	pH units		7.78	7.82	8.09	8.15	6.79	6.65	6.25	6.81
RADIUM-226	pci/l	5	5.4	4.9	5.9	5.2	6.8	6.7	4.8	3.8
RADIUM-228	pci/l	5	4.7	4.3	3.6	8.4	5.8	9.6	3.5	6.3
RADIUM 226 and 228	pci/l	5	10.1	9.2	9.5	13.6	12.6	16.3	8.3	10.1
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0411
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/14/1994	7/21/1994	7/29/1994	10/5/1994	10/6/1994	1/10/1995	4/11/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	0.12	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.011	0.01	0.008	0.009	0.009	0.008	0.009	0.004
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	45.8	42.1	38.1	43.5	36.9	47.2	40.5	50
COBALT	mg/l	0.05	0.08	0.1	0.13	0.08	0.08	0.09	0.13	0.08
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	4.07	4.07	4.68	3.87	4.42	3.64	3.68	4.38
MOLYBDENUM	mg/l	1	6.9	7.96	9.23	8.49	6.59	8.87	11.5	8.74
NICKEL	mg/l	0.2	0.08	0.1	0.17	0.13	0.13	0.11	0.12	0.08
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.001	0.004	0.006	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2540	2634	2883	2906	2509	2760	2754	2862
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4298	4006	4253	4280	4053	4404	4276	4320
URANIUM	mg/l	5	0.182	0.187	0.186	0.234	0.156	0.258	0.246	0.238
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		303	294	293	300	274	331	295	182
GROSS ALPHA	pci/l	15	11.8	19.3	23.2	16.6	26.5	38.4	18.3	16.3
NITRATE (NO3)	mg/l	190	12.5	8.8	10.8	17.3	5.17	24.7	5.55	5.86
PH (FIELD)	pH units		6.8	7.1	6.8	6.5	6.8	6.3	6.6	6.6
PH (LAB)	pH units		6.69	6.51	6.79	7.3	7.36	7.56	7.65	6.35
RADIUM-226	pci/l	5	6.6	7.4	6.7	9.4	6.7	4.8	9.7	6.4
RADIUM-228	pci/l	5	2.8	7.8	10.9	4.7	13.1	22.3	5.6	6.6
RADIUM 226 and 228	pci/l	5	9.4	15.2	17.6	14.1	19.8	27.1	15.3	13
SPECIFIC CONDUCTANCE	umhos/cm		3300				3200			
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0411
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/11/1995	10/3/1995	1/4/1996	4/2/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.012	0.014	0.006	0.014	0.007	0.012	0.013	0.013
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	49.4	47	45.3	40	52.1	45.6	56	51
COBALT	mg/l	0.05	0.086	0.09	0.09	0.08	0.09	0.07	0.06	0.06
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.48	< 0.01	3.18	3.8	3.39	3.38	3.11	3.04
MOLYBDENUM	mg/l	1	9.6	9.91	10.6	8.8	10	9.97	10.7	10.5
NICKEL	mg/l	0.2	0.08	< 0.05	0.07	0.07	0.06	0.06	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	2471	2684	2655	2666	2730	2542	2726	2610
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4038	4526	4445	4338	4459	4370	4350	4470
URANIUM	mg/l	5	0.215	0.2669	0.287	0.306	0.281	0.164	0.145	0.235
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		379	383	382	366	410	429	468	451
GROSS ALPHA	pci/l	15	10.7	14.7	5.7	4.8	8.2	2.4	4.5	5.8
NITRATE (NO3)	mg/l	190	26.4	27.3	29.2	8.92	28.1	45.4	13.2	29.1
PH (FIELD)	pH units		6.9	6.8	7.1	7	7	6.9	6.8	7.1
PH (LAB)	pH units		7.67	8.06	6.69	7.67	6.8	7.61	7.83	7.77
RADIUM-226	pci/l	5	5.1	8.4	5	4.5	5	3.5	3.6	4.7
RADIUM-228	pci/l	5	2.5	< 1	4.6	3.1	4.7	7.8	< 1	2.5
RADIUM 226 and 228	pci/l	5	7.6	8.4	9.6	7.6	9.7	11.3	3.6	7.2
SPECIFIC CONDUCTANCE	umhos/cm		4500		4200	4000	4300	3600	3700	3800
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	< 0.2

Location 0411
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/15/1997	10/15/1997	1/20/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.014	0.01	0.007
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.005
CHLORIDE	mg/l	250	54.8	62.3	57.5
COBALT	mg/l	0.05	0.08	0.1	0.1
LEAD	mg/l	0.05	< 0.05	0.05	< 0.05
MANGANESE	mg/l	2.6	2.7	2.96	3.33
MOLYBDENUM	mg/l	1	9.8	9.85	11.1
NICKEL	mg/l	0.2	0.05	0.06	0.05
SELENIUM	mg/l	0.01	0.002	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	2750	2620	2700
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4510	4490	4390
URANIUM	mg/l	5	0.212	0.25	0.244
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		437	433	439
GROSS ALPHA	pci/l	15	3.9	4.2	3.1
NITRATE (NO3)	mg/l	190	33.9	30.3	31.2
PH (FIELD)	pH units		6.9	6.8	6.7
PH (LAB)	pH units		7.83	7.93	7.95
RADIUM-226	pci/l	5	4.5	2.9	4.4
RADIUM-228	pci/l	5	2.2	6.4	3.5
RADIUM 226 and 228	pci/l	5	6.7	9.3	7.9
SPECIFIC CONDUCTANCE	umhos/cm		3800	3900	100
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2

Location 0420
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/6/1992	1/6/1993	4/6/1993	7/13/1993	10/6/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	0.13	0.3	< 0.1	< 0.1	< 0.1	0.1
ARSENIC	mg/l	0.05	0.053	0.032	0.036	0.111	0.104	0.044	0.1	0.064
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	17.8	16.2	18.3	23.2	19.3	24.4	21.1	20.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.42	4.98	4.25	4.25	4.17	2.52	4.03	3.94
MOLYBDENUM	mg/l	1	2.45	1.76	2.35	1.6	1.38	2.3	1.81	1.88
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.07
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	0.002	0.004	0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1831	1890	1750	1991	1675	1658	1818	2062
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2806	2962	3097	3098	2512	2505	2704	2947
URANIUM	mg/l	5	0.007	0.026	0.02	< 0.0003	0.027	0.024	0.003	0.005
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		243	265	244	114	119	222	143	84.5
GROSS ALPHA	pci/l	15	2	2.7	3.9	4.7	10.9	2.9	5.7	6
NITRATE (NO3)	mg/l	190	2	< 0.1	0.2	< 0.1	< 0.1	1.9	0.7	0.8
PH (FIELD)	pH units		5.9	5.8	5.7	6	5.9	6.1	6	6
PH (LAB)	pH units		8.17	7.89	7.71	6.83	6.58	6.83	6.26	5.81
RADIUM-226	pci/l	5	2.2	2.7	3.7	4.1	10.7	2.6	3.8	5.9
RADIUM-228	pci/l	5	2.8	9.7	4.8	11.4	< 1	2.2	8.4	3.8
RADIUM 226 and 228	pci/l	5	5	12.4	8.5	15.5	10.7	4.8	12.2	9.7
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	0.8	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0420
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/13/1994	7/20/1994	10/4/1994	1/4/1995	4/4/1995	7/7/1995	10/3/1995
ALUMINUM	mg/l	5	0.11	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.061	0.02	0.012	0.006	< 0.001	0.007	0.002	0.005
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	21.1	22.6	22.6	25.3	25.3	31	25.7	28
COBALT	mg/l	0.05	< 0.01	< 0.01	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.06	4.07	5	5.56	3.42	3.45	0.14	2.08
MOLYBDENUM	mg/l	1	1.44	1.17	1.03	1.2	1.43	1.21	< 0.1	0.76
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1855	2024	2338	2245	2204	2237	1882	1821
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2915	2930	3540	3297	3434	3395	3074	3117
URANIUM	mg/l	5	0.008	0.002	0.006	0.011	0.004	0.008	0.0205	0.0363
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		181	91.2	89.3	133	116	145	207	305
GROSS ALPHA	pci/l	15	7.9	15.4	23.9	8.3	9.6	12.1	7.5	5.7
NITRATE (NO3)	mg/l	190	2.58	0.76	< 0.1	2.26	1.13	2.09	6.35	7.17
PH (FIELD)	pH units		6.2	6.2	6.1	6	6	6.1	6.2	6.4
PH (LAB)	pH units		6.45	6.22	6.28	7.18	6.7	6.36	7.57	7.61
RADIUM-226	pci/l	5	4.1	5	10.7	6	5.4	4.7	3.4	3.8
RADIUM-228	pci/l	5	1.9	6.8	8.7	1.4	2.7	4.8	5.5	4.1
RADIUM 226 and 228	pci/l	5	6	11.8	19.4	7.4	8.1	9.5	8.9	7.9
SPECIFIC CONDUCTANCE	umhos/cm		2200			2500				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.6

Location 0420
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/3/1996	4/2/1996	7/7/1996	10/1/1996	1/21/1997	4/8/1997	7/8/1997	10/7/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	26.4	30.2	30.2	30.4	36.2	34.6	36	38.8
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.88	1.9	1.98	1.9	2.1	2.03	1.97	2.3
MOLYBDENUM	mg/l	1	0.64	0.54	0.59	0.61	0.59	0.52	0.73	0.54
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.003	< 0.001	0.007	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1856	1890	1816	1821	1926	1944	1940	1900
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3084	3165	3225	3250	3120	3250	3360	3450
URANIUM	mg/l	5	0.0392	0.1	0.051	0.044	0.043	0.05	0.053	0.049
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		322	344	332	339	377	359	364	388
GROSS ALPHA	pci/l	15	3.7	3.2	2.1	2.1	1.6	6	2.5	1.9
NITRATE (NO3)	mg/l	190	8.66	18.4	16.7	22.8	24.3	23.8	25.6	31.5
PH (FIELD)	pH units		6.7	6.9	6.7	6.5	5.9	6.8	7.3	6.6
PH (LAB)	pH units		7.14	7.85	7.4	6.97	7.83	7.96	7.92	7.78
RADIUM-226	pci/l	5	2.7	2.2	2.9	2.1	2.2	3.9	2.8	3.3
RADIUM-228	pci/l	5	< 1	2.5	7.3	< 1	< 1	3	< 1	1.9
RADIUM 226 and 228	pci/l	5	2.7	4.7	10.2	2.1	2.2	6.9	2.8	5.2
SPECIFIC CONDUCTANCE	umhos/cm		2400	2500	2400	2500	2600	2600	2600	3700
THORIUM-230	pci/l	15	0.8	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0420
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/16/1998	4/7/1998	7/7/1998	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.005	< 0.005	< 0.005	0.007	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	39.2	34.9	35.5	36.3	34.1	39.5	34.6	38.9
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.6	1.94	1.98	1.89	1.97	2.01	1.98	2.23
MOLYBDENUM	mg/l	1	0.56	0.4	0.4	0.42	0.37	0.56	0.37	0.34
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2000	1800	1900	2000	1830	1870	1840	2100
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3500	3510	3420	3530	3600	3640	3560	3630
URANIUM	mg/l	5	0.0515	0.0495	0.0567	0.0674	0.054	0.0556	0.0578	0.054
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		388	340	415	415	422	388	411	392
GROSS ALPHA	pci/l	15	3.6	4	3.7	3.2	4.7	4.7	2.7	1.9
NITRATE (NO3)	mg/l	190	43.5	36.5	34.7	37.3	32.2	28.5	39.8	47.7
PH (FIELD)	pH units		7	6.5	6.9	6.78	6.8	6.5	6.4	6.72
PH (LAB)	pH units		7.83	7.45	7.58	7.88	7.82	7.96	8.07	7.63
RADIUM-226	pci/l	5	2.4	3.5	2.2	4.8	3.5	3.2	2.2	2.4
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	1.5	2.1	2	4.4
RADIUM 226 and 228	pci/l	5	2.4	3.5	2.2	4.8	5	5.3	4.2	6.8
SPECIFIC CONDUCTANCE	umhos/cm		2600	3410	3560	3470	3810	3840	3610	3850
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.8	< 0.2	< 0.2

Location 0420
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/4/2000	5/1/2000	7/10/2000	10/2/2000	1/15/2001	4/2/2001	7/16/2001	10/8/2001
ALUMINUM	mg/l	5	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.008	< 0.001	0.007	0.023	0.006	0.06	0.008
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	0.15	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	0.051	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	34.6	33.5	35	38.6	42	39.7	54.1	53.1
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.01	2.14	2.03	2.25	2.08	2.28	2.07	1.69
MOLYBDENUM	mg/l	1	0.36	0.2	0.21	0.15	0.24	0.2	0.4	0.11
NICKEL	mg/l	0.2	< 0.05	0.08	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	1870	1840	1740	1750	1920	1800	1580	1680
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3550	3500	3500	3350	3200	3290	3330	3360
URANIUM	mg/l	5	0.0511	0.05	0.0436	0.0392	0.043	0.05	0.054	0.0546
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		414	452	456	467	474	467	474	516
GROSS ALPHA	pci/l	15	3.1	3.3	2.8	3.6	3.2	3	4.6	3.4
NITRATE (NO3)	mg/l	190	50.7	31.3	33.2	18.7	12.7	12.5	13.6	14
PH (FIELD)	pH units		6.6	6.7	7.35	7.03	6.61	6.59	6.2	6.45
PH (LAB)	pH units		7.97	7.69	7.47	7.24	7.23	7.39	7.55	7.2
RADIUM-226	pci/l	5	2.4	3.2	2.8	2.9	2.7	2.5	3.6	2.5
RADIUM-228	pci/l	5	< 1	4.8	4.2	2.2	4	< 1	3.7	2.1
RADIUM 226 and 228	pci/l	5	2.4							
SPECIFIC CONDUCTANCE	umhos/cm		3900	3550	3570	3400	3430	3160	3190	3330
THORIUM-230	pci/l	15	< 0.2	1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0420
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/17/2002	4/8/2002	7/15/2002	10/14/2002
ALUMINUM	mg/l	5	0.13	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.003	0.003	0.001	0.002
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	62	56.8	39.1	52.4
COBALT	mg/l	0.05	0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.04	2.22	1.87	1.85
MOLYBDENUM	mg/l	1	0.16	0.2	0.2	0.1
NICKEL	mg/l	0.2	0.06	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1700	1750	2015	1870
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3360	3410	3480	3080
URANIUM	mg/l	5	0.0534	0.0671	0.0728	0.0779
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		508	565	515	569
GROSS ALPHA	pci/l	15	2.1	4.5	2.7	2.4
NITRATE (NO3)	mg/l	190	13.3	13.3	14.6	11.4
PH (FIELD)	pH units		6.2	6.53	6.36	5.88
PH (LAB)	pH units		7.2	7.2	7.51	7.65
RADIUM-226	pci/l	5	2.9	3.5	3.1	2.4
RADIUM-228	pci/l	5	2.8	3.3	3	< 1
RADIUM 226 and 228	pci/l	5				
SPECIFIC CONDUCTANCE	umhos/cm		3230	3330	3290	3400
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location 0501b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/21/1992	4/14/1992	7/14/1992	10/13/1992	1/21/1993	4/14/1993	7/15/1993
ALUMINUM	mg/l	5	53.2	37.1	35.6	36.1	39.2	42	40.4
ARSENIC	mg/l	0.05	0.073	0.021	0.013	0.025	0.021	0.04	0.018
BERYLLIUM	mg/l	0.017	< 0.01	0.08	0.063	< 0.01	< 0.01	0.08	0.051
CADMIUM	mg/l	0.01	0.02	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	24.5	28	28.6	27.9	21.4	29.7	28
COBALT	mg/l	0.05	0.86	0.82	0.98	0.77	0.63	0.99	0.71
LEAD	mg/l	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	13.9	13.9	13.1	13.6	12.5	13.6	11.6
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	1.15	0.95	1.07	0.85	1.01	1.14	0.75
SELENIUM	mg/l	0.01	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4151	3824	4209	3601	4100	3936	3778
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6099	6113	6203	5832	6118	5140	4976
URANIUM	mg/l	5	0.434	0.379	0.539	0.529	0.225	0.421	0.18
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	< 0	< 0	< 0
GROSS ALPHA	pci/l	15	19	9.2	10.2	15.9	9	7.8	7.5
NITRATE (NO3)	mg/l	190	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		3.4	3.3	3.2	3.6	3.5	3.4	3.5
PH (LAB)	pH units		4.02	3.62	2.99	3.33	3.11	3.01	3.02
RADIUM-226	pci/l	5	18.4	9	10.1	15.8	9	6.5	6.9
RADIUM-228	pci/l	5	12.6	13.1	5.5	12.1	4.9	11.8	5.1
RADIUM 226 and 228	pci/l	5	31	22.1	15.6	27.9	13.9	18.3	12
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0502b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/6/1992	1/6/1993	4/6/1993	7/13/1993	10/6/1993
ALUMINUM	mg/l	5	74.7	89.5	92.2	68.7	96.9	101	87	57.8
ARSENIC	mg/l	0.05	0.023	0.04	0.068	0.036	0.036	0.696	0.018	0.004
BERYLLIUM	mg/l	0.017	0.13	0.14	0.12	0.13	0.13	0.14	< 0.005	0.09
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	114	41.7	20.4	24.4	16.8	43	51.1	35.9
COBALT	mg/l	0.05	0.67	0.71	0.75	0.79	0.77	0.75	0.97	0.74
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	14.6	17.7	15.1	14.3	16	15.23	14.2	12.4
MOLYBDENUM	mg/l	1	2.41	2.3	1.17	1	0.6	1.15	0.74	0.51
NICKEL	mg/l	0.2	0.84	0.74	0.72	0.89	1.02	0.05	1.09	0.93
SELENIUM	mg/l	0.01	0.004	< 0.001	0.001	0.004	< 0.001	0.003	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3470	3407	3424	3695	3594	3579	3741	3706
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4850	5134	5229	5350	4292	4837	4892	4832
URANIUM	mg/l	5	0.344	0.567	0.43	0.552	0.715	0.812	0.478	0.177
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	< 0	< 0	< 0	< 0
GROSS ALPHA	pci/l	15	3	12.7	8.4	10.4	19.9	11.5	8.5	9
NITRATE (NO3)	mg/l	190	2.4	< 0.1	< 0.1	0.24	< 0.1	< 0.1	< 0.1	0.1
PH (FIELD)	pH units		3.7	3.7	3.6	3.8	3.7	3.7	4.1	4.2
PH (LAB)	pH units		4.03	3.44	3.67	3.18	3.41	3.24	4.11	3.94
RADIUM-226	pci/l	5	3	12.9	7.8	10	19.7	10.2	7.3	8.8
RADIUM-228	pci/l	5	1.5	17.8	16.4	16.5	19	24.6	9.7	13
RADIUM 226 and 228	pci/l	5	4.5	30.7	24.2	26.5	38.7	34.8	17	21.8
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0502b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/13/1994	7/21/1994	10/5/1994	1/5/1995	4/5/1995	7/6/1995	10/4/1995
ALUMINUM	mg/l	5	57.1	54.5	44.2	26.7	32.3	27.2	16.9	13.3
ARSENIC	mg/l	0.05	0.007	0.005	0.003	0.004	< 0.001	0.003	0.005	0.001
BERYLLIUM	mg/l	0.017	0.08	0.05	0.04	0.03	0.04	0.03	0.02	0.02
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	45	37.4	29	29.4	33.3	24.2	31	29
COBALT	mg/l	0.05	0.85	0.7	0.82	0.64	0.72	0.81	0.69	0.66
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	12.6	10.5	12	9.18	10.5	11.1	9.65	9.2
MOLYBDENUM	mg/l	1	0.41	0.41	0.35	0.28	0.2	0.19	0.19	0.15
NICKEL	mg/l	0.2	0.78	0.79	0.97	0.7	0.85	0.74	0.77	0.73
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3674	3656	4100	3739	3652	3860	3615	3555
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5012	5054	5603	5017	5078	5106	5090	4852
URANIUM	mg/l	5	0.347	0.332	0.205	0.188	0.211	0.191	0.1321	0.129
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	< 0	< 0	< 0	< 0
GROSS ALPHA	pci/l	15	20.4	18.3	24.3	16.6	19.2	21.3	24	16.6
NITRATE (NO3)	mg/l	190	18.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3
PH (FIELD)	pH units		4.1	4.2	4.3	4.3	4.1	4.2	4.4	4.5
PH (LAB)	pH units		2.89	3.45	3.59	4.23	4.27	3.89	4.18	4.42
RADIUM-226	pci/l	5	9.7	6.9	9.3	7	12.6	8.8	8.4	9.1
RADIUM-228	pci/l	5	6.5	7.5	9.9	6.3	4.3	8.2	6.1	14.5
RADIUM 226 and 228	pci/l	5	16.2	14.4	19.2	13.3	16.9	17	14.5	23.6
SPECIFIC CONDUCTANCE	umhos/cm		3500			3600				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0502b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/4/1996	4/2/1996	7/7/1996	10/1/1996	1/21/1997	4/8/1997	7/8/1997	10/8/1997
ALUMINUM	mg/l	5	16.1	12.1	16.9	13.6	18.3	9.48	15.1	7.71
ARSENIC	mg/l	0.05	0.002	0.001	0.002	0.001	0.002	< 0.001	< 0.001	0.008
BERYLLIUM	mg/l	0.017	0.02	0.02	< 0.01	0.02	0.02	0.01	< 0.01	0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	29.3	31.2	34	29.3	32.1	31.2	32.9	34
COBALT	mg/l	0.05	0.66	0.63	0.68	0.62	0.63	0.54	0.59	0.66
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	10.3	9.08	10.3	9.6	10.7	5.3	10.1	11.4
MOLYBDENUM	mg/l	1	0.12	0.11	0.13	< 0.1	< 0.1	0.67	< 0.1	0.11
NICKEL	mg/l	0.2	0.72	0.66	0.74	0.68	0.67	0.48	0.56	0.63
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3710	3810	3550	3648	3755	3960	4000	3590
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5022	5428	5317	5570	5570	5610	5710	5700
URANIUM	mg/l	5	0.134	0.154	0.148	0.105	0.138	0.12	0.132	0.089
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	< 0	< 0	< 0	< 0.1
GROSS ALPHA	pci/l	15	11.6	11.2	16.2	16.3	8.2	26.1	12.7	10.7
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	0.11	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		4.2	4.8	4.5	4.7	4.8	4.7	5.7	4.3
PH (LAB)	pH units		3.82	4.47	3.4	3.72	4.01	4.39	4.2	3.75
RADIUM-226	pci/l	5	7.6	6	5.9	5.8	6.9	10.5	7	7.7
RADIUM-228	pci/l	5	14.1	13.6	24.7	23.1	22.5	25.3	19.1	18.3
RADIUM 226 and 228	pci/l	5	21.7	19.6	30.6	28.9	29.4	35.8	26.1	26
SPECIFIC CONDUCTANCE	umhos/cm		3700	3600	3700	3700		3600	4500	3600
THORIUM-230	pci/l	15	< 0.2	2.1	0.6	1.1	< 0.2	< 0.2	< 0.2	< 0.2

Location 0502b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/16/1998	4/7/1998	7/7/1998	10/6/1998	1/6/1999	4/6/1999	7/13/1999	10/5/1999
ALUMINUM	mg/l	5	11.8	8.5	8.32	6.74	8.16	6.86	6.14	8.31
ARSENIC	mg/l	0.05	0.003	< 0.001	< 0.001	0.005	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.01	0.01	0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	0.005	0.006	0.006	0.006	0.009	0.006	0.008
CHLORIDE	mg/l	250	33.5	28.6	29.7	28.3	29.6	34.7	24.9	31.2
COBALT	mg/l	0.05	0.58	0.5	0.5	0.5	0.47	0.55	0.42	0.57
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	10.7	9.35	10.2	9.7	9.65	10.5	10.6	12
MOLYBDENUM	mg/l	1	0.11	< 0.1	0.14	0.11	< 0.1	< 0.1	< 0.1	0.14
NICKEL	mg/l	0.2	0.64	0.52	0.53	0.54	0.52	0.54	0.42	0.49
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3700	3570	3500	3720	4000	3730	3800	4050
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5720	5730	5570	5840	5870	5880	5820	5830
URANIUM	mg/l	5	0.13	0.126	0.131	0.121	0.135	0.125	0.12	0.132
VANADIUM	mg/l	0.7	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2.1	0.1	< 0.1	< 0.1	< 0.1	4	< 0.1	< 0.1
GROSS ALPHA	pci/l	15	21.2	11.9	18	15.4	18.1	27.1	14.4	13.1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		4.8	4.3	4.6	4.46	4.2	4.5	4.7	4.25
PH (LAB)	pH units		4.62	3.99	4.11	4.54	4.53	4.79	3.9	3.78
RADIUM-226	pci/l	5	7	10.3	8.9	8.3	7.8	8.7	7.4	9.9
RADIUM-228	pci/l	5	21.7	25.9	28	22.3	19	20.9	18.3	26.1
RADIUM 226 and 228	pci/l	5	28.7	36.2	36.9	30.6	26.8	29.6	25.7	36
SPECIFIC CONDUCTANCE	umhos/cm		3500	4770	4940	5080	4990	5200	4860	4980
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1.4	< 0.2	< 0.2

Location 0502b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/4/2000
ALUMINUM	mg/l	5	7.15
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	0.02
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	28.9
COBALT	mg/l	0.05	0.5
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	11.4
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	0.53
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	3720
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5750
URANIUM	mg/l	5	0.131
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1
GROSS ALPHA	pci/l	15	9.8
NITRATE (NO3)	mg/l	190	< 0.1
PH (FIELD)	pH units		4.3
PH (LAB)	pH units		4.29
RADIUM-226	pci/l	5	11.1
RADIUM-228	pci/l	5	12.9
RADIUM 226 and 228	pci/l	5	24
SPECIFIC CONDUCTANCE	umhos/cm		5040
THORIUM-230	pci/l	15	< 0.2

Location 0504b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/6/1992	1/21/1993	4/14/1993	7/15/1993	10/6/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	1.1	1.3	0.1	1.17	0.17
ARSENIC	mg/l	0.05	0.34	0.035	0.388	0.257	0.181	0.042	0.139	0.014
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	40.3	31.4	41	37.3	43.2	37.6	41.2	33.5
COBALT	mg/l	0.05	0.5	0.53	0.7	0.66	0.57	< 0.01	1	0.52
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.08	7.1	6.66	6.88	7.05	5.94	6.68	4.94
MOLYBDENUM	mg/l	1	43.4	9.6	56.4	49.8	45.4	12.7	12.4	7
NICKEL	mg/l	0.2	0.67	0.63	0.88	0.91	0.9	0.67	1.27	0.7
SELENIUM	mg/l	0.01	< 0.001	0.002	0.001	0.002	< 0.001	< 0.001	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	3119	3372	3249	3278	3194	3373	3430	3129
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5014	5112	5218	5061	4440	4825	4659	4372
URANIUM	mg/l	5	0.029	0.124	0.02	0.042	0.033	0.176	0.064	0.051
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		121	207	50.9	63.4	38.1	82.8	13.2	27.6
GROSS ALPHA	pci/l	15	16	7.6	8.5	12.5	10	10.5	9.9	15
NITRATE (NO3)	mg/l	190	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2
PH (FIELD)	pH units		5.4	5.4	5.1	5.4	5.4	5.6	5.6	5.7
PH (LAB)	pH units		6.06	6.21	7.63	5.85	5.9	6.5	4.91	5.67
RADIUM-226	pci/l	5	17	7.9	8.2	12.6	9.5	9.1	9	13.6
RADIUM-228	pci/l	5	5.2	12.2	4.8	7.8	3.8	11.7	8	7.9
RADIUM 226 and 228	pci/l	5	22.2	20.1	13	20.4	13.3	20.8	17	21.5
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/13/1994	7/21/1994	10/5/1994	1/5/1995	4/5/1995	7/6/1995	10/4/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	0.15	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.041	0.019	0.012	0.01	0.009	0.011	0.01	0.008
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	38.7	37.9	32.3	35.5	35.8	37.1	33.5	33
COBALT	mg/l	0.05	0.46	0.52	0.45	0.36	0.37	0.54	0.47	0.47
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6	6.09	5.8	5.14	4.62	6.2	5.63	5.5
MOLYBDENUM	mg/l	1	3.4	4.97	1.03	5.36	0.85	2.67	2.11	0.77
NICKEL	mg/l	0.2	0.54	0.73	0.6	0.54	0.51	0.56	0.58	0.61
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3491	3448	3467	3421	3232	3710	3298	3315
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5244	5083	4998	5208	4827	5199	4787	4530
URANIUM	mg/l	5	0.085	0.059	0.084	0.081	0.123	0.073	0.0792	0.078
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		58.5	47.9	62.8	68.3	117	35.4	58.7	71.1
GROSS ALPHA	pci/l	15	46.1	29	53.4	35.4	49	39.2	51.9	25.5
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.23
PH (FIELD)	pH units		5.7	5.8	5.9	5.8	5.8	5.8	6.3	6
PH (LAB)	pH units		6.01	6.01	6.25	6.56	6.41	7.46	6.51	6.7
RADIUM-226	pci/l	5	21.1	15.5	18.2	14.4	21.3	16.8	13.7	15.6
RADIUM-228	pci/l	5	16	15.6	23.4	13.9	18.4	14.8	13.3	19.2
RADIUM 226 and 228	pci/l	5	37.1	31.1	41.6	28.3	39.7	31.6	27	34.8
SPECIFIC CONDUCTANCE	umhos/cm		3600			3500				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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

Chemical Name	Unit	ROD Cleanup Level	1/4/1996	4/2/1996	7/7/1996	10/1/1996	1/21/1997	4/8/1997	7/8/1997	10/8/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	0.16	< 0.1	0.17	0.16
ARSENIC	mg/l	0.05	0.005	0.01	0.01	0.005	0.017	< 0.001	0.017	0.02
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	32	37.5	39.2	34.6	34.2	37.5	37.7	37.5
COBALT	mg/l	0.05	0.43	0.5	0.49	0.48	0.41	0.37	0.38	0.45
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	4.79	5.73	6.04	5.68	6	5.3	5.81	6.71
MOLYBDENUM	mg/l	1	0.52	0.41	0.47	0.36	0.64	0.67	1.38	4.69
NICKEL	mg/l	0.2	0.5	0.61	0.63	0.6	0.57	0.48	0.49	0.56
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3116	3630	3440	3427	3530	3640	3850	3430
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4519	5270	5316	5260	5220	5180	5390	5350
URANIUM	mg/l	5	0.119	0.088	0.081	0.072	0.057	0.106	0.068	0.087
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		92	61.5	44	53.7	8.5	76.3	42.6	26
GROSS ALPHA	pci/l	15	27.4	23.3	20.4	25.2	14.1	43.7	17	16.3
NITRATE (NO3)	mg/l	190	1.68	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.15
PH (FIELD)	pH units		6.2	7	6	6.3	6.1	6.1	7.1	5.7
PH (LAB)	pH units		6.44	6.82	6.22	6	5.61	6.92	6.53	6.4
RADIUM-226	pci/l	5	14	15.3	16.9	14.9	16.7	19.9	17.2	16.3
RADIUM-228	pci/l	5	23.1	20.9	30.6	25.2	32.2	24	26	18.4
RADIUM 226 and 228	pci/l	5	37.1	36.2	47.5	40.1	48.9	43.9	43.2	34.7
SPECIFIC CONDUCTANCE	umhos/cm		4000	3600	3600	3700		3500	4500	3500
THORIUM-230	pci/l	15	< 0.2	< 0.2	0.7	0.8	< 0.2	< 0.2	< 0.2	< 0.2

Location 0504b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/16/1998	4/7/1998	7/7/1998	10/6/1998	1/6/1999	4/6/1999	7/13/1999	10/5/1999
ALUMINUM	mg/l	5	1.15	0.22	0.23	0.24	0.33	0.37	0.17	< 0.1
ARSENIC	mg/l	0.05	0.025	0.024	0.013	0.019	0.025	0.015	0.02	0.022
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.005	< 0.005	< 0.005	0.007	< 0.005	< 0.005	0.007
CHLORIDE	mg/l	250	36.4	32.4	33	32.7	33	38.6	32	34
COBALT	mg/l	0.05	0.41	0.32	0.31	0.31	0.3	0.33	0.24	0.33
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.37	5.4	5.78	5.48	5.6	5.8	5.7	6.27
MOLYBDENUM	mg/l	1	6.75	7.43	8.79	9.2	12.4	9.48	14.6	16.3
NICKEL	mg/l	0.2	0.57	0.43	0.44	0.446	0.42	0.43	0.35	0.4
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	3500	3350	3550	3500	3700	3440	3500	3740
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5360	5420	5140	5340	5340	5370	5350	5260
URANIUM	mg/l	5	0.1607	0.0594	0.0359	0.0378	0.0435	0.0531	0.0288	0.0392
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		32.7	19.2	< 0.1	29.7	38	31	28	9
GROSS ALPHA	pci/l	15	42	18.7	20	15.8	32	50	17.3	12.6
NITRATE (NO3)	mg/l	190	0.1	< 0.1	< 0.1	0.29	0.19	< 0.1	0.38	0.26
PH (FIELD)	pH units		5.8	5.7	6	5.7	5.6	5.5	6.5	5.73
PH (LAB)	pH units		6.6	5.91	4.34	6.33	6.36	6.53	6.51	5.53
RADIUM-226	pci/l	5	15.6	18.5	13.7	15.9	15.9	18.8	11.1	13.5
RADIUM-228	pci/l	5	23.6	18.4	20.9	13.2	18.5	17.5	14.6	16.4
RADIUM 226 and 228	pci/l	5	39.2	36.9	34.6	29.1	34.4	36.3	25.7	29.9
SPECIFIC CONDUCTANCE	umhos/cm		3500	4700	4660	4980	4970	5100	4640	4770
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0504b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/4/2000	5/1/2000	7/10/2000	10/2/2000	1/15/2001	4/2/2001	7/16/2001	10/8/2001
ALUMINUM	mg/l	5	< 0.1	0.3	0.21	0.2	0.2	0.3	0.3	0.16
ARSENIC	mg/l	0.05	0.021	0.033	0.025	0.033	0.028	0.026	0.036	0.026
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	0.025	< 0.005	< 0.005	0.008	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	30.2	34	28.4	33	34.6	29.3	44	35.9
COBALT	mg/l	0.05	0.32	0.34	0.3	0.35	0.29	0.31	0.28	0.22
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.02	6.67	6.18	6.23	5.99	6.2	6.2	5.3
MOLYBDENUM	mg/l	1	14.5	15.7	13.4	14.3	12.3	12.9	10.5	7.49
NICKEL	mg/l	0.2	0.48	0.51	0.41	0.36	0.44	0.48	0.43	0.29
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3380	3480	3440	3740	4100	3480	3570	3300
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5220	5500	5510	5650	5590	5590	5810	5920
URANIUM	mg/l	5	0.0454	0.0388	0.0498	0.0226	0.031	0.027	0.028	0.0257
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		31	51	48	44	43	13	< 0.1	26.8
GROSS ALPHA	pci/l	15	12.3	22.6	21	25	18.7	15.5	16.9	23
NITRATE (NO3)	mg/l	190	0.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6	5.6	5.45	6.52	5.02	7.5	3.5	3.55
PH (LAB)	pH units		7.11	6.69	6.2	6.28	5.92	6.02	3.7	5.8
RADIUM-226	pci/l	5	12.8	21.3	13.4	15	15.7	15.5	18.6	16
RADIUM-228	pci/l	5	15.7	16.3	20.8	15.8	17.9	20.8	25.2	20
RADIUM 226 and 228	pci/l	5	28.5	37.6	34.2	30.8	33.6	36.3	43.8	36
SPECIFIC CONDUCTANCE	umhos/cm		4890	4960	5020	5130	5040	4800	4900	4990
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0504b
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/7/2002	4/8/2002	7/15/2002	10/14/2002
ALUMINUM	mg/l	5	0.2	0.2	< 0.1	0.2
ARSENIC	mg/l	0.05	0.023	0.018	0.02	0.019
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	42	33.5	25.6	26.8
COBALT	mg/l	0.05	0.26	0.31	0.26	0.27
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.37	7.84	6.37	6.96
MOLYBDENUM	mg/l	1	7.3	9.9	7.1	6.8
NICKEL	mg/l	0.2	0.41	0.43	0.28	0.36
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3940	3810	4430	3710
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5840	5980	6060	4980
URANIUM	mg/l	5	0.0242	0.0278	0.0296	0.0331
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1	< 0.1	< 0.1	< 0.1
GROSS ALPHA	pci/l	15	16.7	20.4	17.3	18.7
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		5.46	3.3	4.55	3.43
PH (LAB)	pH units		3.5	3.36	3.42	3.8
RADIUM-226	pci/l	5	18.2	13.5	16.3	12.4
RADIUM-228	pci/l	5	23.2	19.5	24.7	13.1
RADIUM 226 and 228	pci/l	5	41.4	33	41	25.5
SPECIFIC CONDUCTANCE	umhos/cm		4990	5000	4900	5010
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location 0517
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/6/1992	1/6/1993	4/6/1993	7/13/1993	10/6/1993
ALUMINUM	mg/l	5	0.13	< 0.1	0.15	0.1	0.1	< 0.1	0.86	11.2
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	0.094	< 0.005	< 0.01	< 0.005	< 0.005	< 0.005
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	76.9	61.7	66.3	62.9	75.8	74.1	77.5	79.6
COBALT	mg/l	0.05	0.13	0.12	0.12	0.13	0.1	0.11	0.2	0.32
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.29	5.69	4.27	3.92	3.38	4.66	7.27	12.2
MOLYBDENUM	mg/l	1	0.11	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.09	0.1	0.07	0.12	0.11	0.11	0.17	0.38
SELENIUM	mg/l	0.01	0.026	0.02	0.001	0.005	0.003	0.002	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3571	3457	3334	3169	2856	3066	3734	3901
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5847	5539	5413	5109	4169	4493	5166	5918
URANIUM	mg/l	5	0.012	0.03	0.006	0.007	0.011	0.007	0.003	0.003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		117	103	85.4	73.2	75.6	71	46.1	1.8
GROSS ALPHA	pci/l	15	14	6.6	6.9	8.9	10.6	6.9	10.9	20.5
NITRATE (NO3)	mg/l	190	36.1	26.7	40.5	41.8	48.1	34.5	38.5	39.3
PH (FIELD)	pH units		5.3	5.3	5.2	5.2	5.3	5.3	5.4	4.8
PH (LAB)	pH units		6.04	7.19	6.91	6.73	6.88	6.08	5.64	4.49
RADIUM-226	pci/l	5	13.6	6.3	6.7	8.8	10.1	6.7	8.5	19.4
RADIUM-228	pci/l	5	6.3	13.5	13.9	27.9	35.8	21.3	20.3	30.7
RADIUM 226 and 228	pci/l	5	19.9	19.8	20.6	36.7	45.9	28	28.8	50.1
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0517
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/13/1994	7/20/1994	10/4/1994	1/4/1995	4/4/1995	7/6/1995	10/3/1995
ALUMINUM	mg/l	5	11.1	96	22.9	67.1	42.4	10.5	14.4	47
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	88.4	108	85.9	82.5	66.2	54	48	12.7
COBALT	mg/l	0.05	0.31	0.67	0.41	0.67	0.28	0.14	0.21	0.16
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	11.6	18.5	12.3	18.1	10.5	5.65	6.21	3
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	0.11	< 0.1	< 0.01	< 0.01	< 0.1
NICKEL	mg/l	0.2	0.27	0.72	0.32	0.51	0.27	0.11	0.17	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.007
SULFATE (SO4)	mg/l	2125	3740	3883	4308	4563	3665	2999	3040	3745
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5674	5770	6115	6218	5507	4608	4312	5058
URANIUM	mg/l	5	0.017	0.068	0.03	0.061	0.05	0.043	0.0684	0.1421
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		5.7	< 0	< 0	< 0	< 0	6.5	1.8	< 0
GROSS ALPHA	pci/l	15	69.8	81.9	69.9	48	69.3	43.8	69.1	94.8
NITRATE (NO3)	mg/l	190	33.8	27.8	32.9	42.5	40.3	44.9	16.4	7.29
PH (FIELD)	pH units		4.9	4.3	5.1	4.8	4.7	5.2	4.7	4.6
PH (LAB)	pH units		4.6	4.29	4.36	4.33	4.46	4.72	4.57	4.39
RADIUM-226	pci/l	5	24.5	20.9	24	20	33	16.8	18.4	31.1
RADIUM-228	pci/l	5	29.6	40.6	30.5	18.6	24.1	17.9	17.8	22.8
RADIUM 226 and 228	pci/l	5	54.1	61.5	54.5	38.6	57.1	34.7	36.2	53.9
SPECIFIC CONDUCTANCE	umhos/cm		4100			4100				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1	1.9

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

Chemical Name	Unit	ROD Cleanup Level	1/3/1996	4/2/1996	7/7/1996	10/1/1996	1/21/1997	1/22/1997	4/8/1997	7/8/1997
ALUMINUM	mg/l	5	40	27.3	21.2	16.6	15.8	15.8	11.2	14.4
ARSENIC	mg/l	0.05	0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.02	0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	61.2	61.9	67	66	68	68	69.5	71.6
COBALT	mg/l	0.05	0.83	0.82	0.78	0.71	0.67	0.67	0.62	0.64
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	13.7	12.2	12.1	10.9	10.5	10.5	9.18	10.5
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.79	0.72	0.71	0.66	0.6	0.6	0.56	0.51
SELENIUM	mg/l	0.01	0.002	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4100	3995	3590	3578	3585	3585	3710	3470
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5807	5804	5635	5520	5210	5210	5260	5350
URANIUM	mg/l	5	0.125	0.149	0.113	0.087	0.076	0.076	0.077	0.082
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	6.3	6.3	4	2.4
GROSS ALPHA	pci/l	15	44.6	34.6	25.5	29.5	12	12	58.5	13.3
NITRATE (NO3)	mg/l	190	1.51	1.38	1.44	1.35	1.47	1.47	1.11	2.58
PH (FIELD)	pH units		4.5	4.6	4.5	4.8	4.5	4.5	5.1	5.1
PH (LAB)	pH units		4.1	4.44	4.33	4.3	4.73	4.73	4.69	4.59
RADIUM-226	pci/l	5	21.1	14.4	10	9.7	10.3	10.3	17.5	8.5
RADIUM-228	pci/l	5	7.9	17.4	23.1	20.9	17.3	17.3	17.5	17.4
RADIUM 226 and 228	pci/l	5	29	31.8	33.1	30.6	27.6	27.6	35	25.9
SPECIFIC CONDUCTANCE	umhos/cm		4000	3700	3600	3700		3600	3600	3700
THORIUM-230	pci/l	15	1.9	1.4	1.3	1.5	< 0.2	< 0.2	< 0.2	< 0.2

Location 0517
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/7/1997	1/15/1998	4/7/1998	7/7/1998	10/6/1998	1/5/1999	4/6/1999	7/13/1999
ALUMINUM	mg/l	5	18.2	14.4	12.7	13.5	12.2	12.3	12.3	9.96
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	0.007	0.008	0.009	0.008	0.01	0.01
CHLORIDE	mg/l	250	74	64.7	58.8	61.8	59.9	57.8	62.5	52.6
COBALT	mg/l	0.05	0.77	0.59	0.55	0.55	0.54	0.55	0.59	0.62
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	11.3	9	8.15	8.64	7.78	8.11	8.2	8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.66	0.54	0.49	0.5	0.44	0.45	0.46	0.5
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3390	3600	3240	3500	3420	3500	3260	3300
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5310	5240	5250	5170	5170	5220	5110	5010
URANIUM	mg/l	5	0.111	0.0932	0.0901	0.0885	0.0936	0.0924	0.0851	0.0758
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1	3.3	2	< 0.1	1.4	2	4	< 0.1
GROSS ALPHA	pci/l	15	10.5	44.3	19.7	23.4	4.4	28.7	61.8	18.8
NITRATE (NO3)	mg/l	190	4.08	4.63	4.23	4.83	5.59	4.12	4.45	4.19
PH (FIELD)	pH units		4.5	4.5	4.5	4.8	4.56	4.6	4.5	4.6
PH (LAB)	pH units		4.35	4.63	4.57	4.45	4.56	4.6	4.72	4.09
RADIUM-226	pci/l	5	9	9.6	16.3	11	11	10.1	20.6	9.9
RADIUM-228	pci/l	5	15.7	14.3	13.1	15.4	13.4	10.9	20.3	10.2
RADIUM 226 and 228	pci/l	5	24.7	23.9	29.4	26.4	24.4	21	40.9	20.1
SPECIFIC CONDUCTANCE	umhos/cm		3800	3500	4700	4650	4680	4780	4870	4580
THORIUM-230	pci/l	15	0.9	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0517
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/5/1999	1/4/2000	5/1/2000	7/18/2000	10/2/2000	1/15/2001	4/9/2001	7/10/2001
ALUMINUM	mg/l	5	11.2	8.59	11.6	10.2	9.8	9	60.2	8.9
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
CADMIUM	mg/l	0.01	0.011	< 0.005	0.056	0.008	0.006	0.005	0.008	0.005
CHLORIDE	mg/l	250	54.7	50.2	54.6	50.6	48.6	53.2	60.5	45
COBALT	mg/l	0.05	0.61	0.63	0.57	0.55	0.51	0.54	0.75	0.52
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	8.82	8.36	7.71	7.14	6.73	6.43	10.7	5.84
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.44	0.54	0.51	0.37	0.4	0.47	0.65	0.46
SELENIUM	mg/l	0.01	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3510	3150	3000	2850	2990	3220	3870	2900
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4970	4830	4750	4800	4720	4640	5180	4670
URANIUM	mg/l	5	0.0731	0.0657	0.0695	0.0661	0.0606	0.0605	0.218	0.064
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.4	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1	3	5	7	6	3	7	3
GROSS ALPHA	pci/l	15	10	7.2	20.8	26.7	26.4	14.5	24.2	9.1
NITRATE (NO3)	mg/l	190	4.42	5.16	3.77	3.95	3.05	3.62	4.15	2.61
PH (FIELD)	pH units		4.5	4.5	4.5	4.55	4.54	4.8	4.9	4.36
PH (LAB)	pH units		4.4	4.67	4.67	4.7	4.78	4.6	4.75	4.65
RADIUM-226	pci/l	5	9.8	8.6	19	9.6	9.8	12.2	7.8	15.7
RADIUM-228	pci/l	5	13.2	12.1	11	13.1	9.4	8.9	10.6	11.4
RADIUM 226 and 228	pci/l	5	23	20.7	30	22.7	19.2	21.1	18.4	27.1
SPECIFIC CONDUCTANCE	umhos/cm		4600	4440	4400	4460	4460	4450	4130	4320
THORIUM-230	pci/l	15	< 0.2	< 0.2	3.2	1.7	< 0.2	< 0.2	46.5	< 0.2

Location 0517
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/8/2001	1/9/2002	4/3/2002	7/15/2002	10/14/2002
ALUMINUM	mg/l	5	7.9	10.1	11	10.4	8.9
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	0.007	0.008	0.007	0.007	0.006
CHLORIDE	mg/l	250	55.1	69	56.4	42.6	46.6
COBALT	mg/l	0.05	0.47	0.55	0.57	0.55	0.56
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.26	6.08	6.5	5.88	6.1
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.37	0.49	0.5	0.48	0.5
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2600	3000	3230	3390	3250
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4690	4620	4660	4710	4260
URANIUM	mg/l	5	0.0614	0.0568	0.0652	0.0647	0.066
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		3.1	1.2	1	< 0.1	< 0.1
GROSS ALPHA	pci/l	15	12.1	15.1	29.6	12.5	17.6
NITRATE (NO3)	mg/l	190	2.9	2.6	2.89	2.49	1.09
PH (FIELD)	pH units		4.5	5.65	4.46	4.93	4.19
PH (LAB)	pH units		4.6	4.6	4.48	4.42	4.12
RADIUM-226	pci/l	5	8.4	11.2	13.1	11.2	7.6
RADIUM-228	pci/l	5	14	15.5	12.2	21.8	9.5
RADIUM 226 and 228	pci/l	5	22.4	26.7	25.3	33	17.1
SPECIFIC CONDUCTANCE	umhos/cm		4100	4180	4180	4130	4250
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	0.5

Location 0518
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/13/1992	1/21/1993	4/14/1993	7/15/1993	10/6/1993
ALUMINUM	mg/l	5	63.1	41.2	161	123	32.5	39.1	51	68
ARSENIC	mg/l	0.05	< 0.001	0.003	< 0.001	< 0.001	0.001	0.001	< 0.001	0.003
BERYLLIUM	mg/l	0.017	0.03	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.053
CADMIUM	mg/l	0.01	0.02	0.03	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	66.8	32.7	47.8	48.2	51.6	53.7	34.1	38.2
COBALT	mg/l	0.05	1.43	0.86	1.13	1.17	0.42	0.93	0.9	0.75
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	14	18.1	20.8	20.3	11.8	13.7	14.4	14.9
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.92	0.66	1.09	1.06	0.93	1.05	0.8	0.92
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4442	4452	5279	5260	4456	3993	3940	4358
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7008	7028	8076	8062	5822	5276	5485	5631
URANIUM	mg/l	5	0.258	0.268	0.86	1.22	0.189	0.252	0.17	0.289
VANADIUM	mg/l	0.7	0.14	< 0.1	0.22	0.4	< 0.1	< 0.1	0.15	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	< 0	< 0	< 0	< 0
GROSS ALPHA	pci/l	15	12	5.9	5.6	6.9	8.5	9.7	4.7	30.5
NITRATE (NO3)	mg/l	190	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		3.6	3.7	3.4	3.5	3.7	4.2	3.6	3.7
PH (LAB)	pH units		3.79	3.44	3.07	2.99	2.97	3	3.06	3.03
RADIUM-226	pci/l	5	12.1	5.8	5.1	6.4	6.3	8.9	4.5	5.4
RADIUM-228	pci/l	5	5.9	16.7	2.1	6.7	4.9	20.5	2	2.6
RADIUM 226 and 228	pci/l	5	18	22.5	7.2	13.1	11.2	29.4	6.5	8
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	16.1	2.2	< 2	< 2	21.2

Location 0518
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/13/1994	7/21/1994	10/5/1994	1/5/1995	4/5/1995	7/6/1995	10/4/1995
ALUMINUM	mg/l	5	65.6	56.7	53.4	37.9	62.2	64	85	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	0.001	< 0.001	0.001	0.002	0.002
BERYLLIUM	mg/l	0.017	0.05	0.03	0.02	< 0.01	< 0.01	0.04	0.05	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
CHLORIDE	mg/l	250	36.3	32	24.6	31.3	33.6	29.6	34.2	28.7
COBALT	mg/l	0.05	0.93	0.77	0.86	1.04	0.96	0.97	0.99	0.14
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	16.8	12.6	14.5	9.65	15	15.4	15.9	0.26
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.8	0.8	0.73	0.54	0.9	0.88	0.91	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.001	0.003
SULFATE (SO4)	mg/l	2125	4350	4246	4218	4296	4462	5113	4765	3064
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6074	5991	5944	5869	5872	7021	6818	4162
URANIUM	mg/l	5	0.331	0.306	0.237	0.302	0.321	0.332	0.5747	0.053
VANADIUM	mg/l	0.7	0.1	0.16	< 0.1	< 0.1	0.15	0.23	0.28	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	< 0	< 0	< 0	< 0
GROSS ALPHA	pci/l	15	18.6	19.7	34.6	35.2	47.9	38.9	38.6	4.3
NITRATE (NO3)	mg/l	190	0.13	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		3.6	3.8	4	4	3.9	3.9	4.4	3.6
PH (LAB)	pH units		2.79	3.08	3.17	3.84	3.84	3.3	3.1	3.08
RADIUM-226	pci/l	5	5.5	5.3	9.1	8.7	10.9	8.8	9.8	1.5
RADIUM-228	pci/l	5	< 1	9.5	16.9	17.6	7.9	14.4	6.7	< 1
RADIUM 226 and 228	pci/l	5	5.5	14.8	26	26.3	18.8	23.2	16.5	1.5
SPECIFIC CONDUCTANCE	umhos/cm		4100			4800				
THORIUM-230	pci/l	15	12.1	< 0.2	< 0.2	< 0.2	25.2	8.6	17.7	< 0.2

Location 0518
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/4/1996	4/2/1996	7/7/1996	10/1/1996	1/21/1997	4/8/1997	7/8/1997	10/8/1997
ALUMINUM	mg/l	5	98.5	97	122	100	100	104	106	110
ARSENIC	mg/l	0.05	0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.05	0.05	< 0.01	0.06	0.06	0.06	0.06	0.07
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	33.4	37.3	42.8	35.8	34.3	38.7	41	39.4
COBALT	mg/l	0.05	1.01	1.02	1.14	1.06	1.09	1.06	1.14	1.28
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	15.5	15.4	17.3	15.9	16.2	17.5	18.5	18.7
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.91	0.87	1.08	0.99	1.01	1.02	0.98	1.17
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	5245	5180	5139	4928	4920	5250	5370	4990
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7039	7408	5648	7580	7340	7480	7630	7460
URANIUM	mg/l	5	0.472	0.587	0.548	0.42	0.356	0.445	0.368	0.367
VANADIUM	mg/l	0.7	0.16	0.13	0.14	< 0.1	0.19	0.16	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	< 0	< 0	< 0	< 0.1
GROSS ALPHA	pci/l	15	17.9	28.3	49.2	31.3	11.7	23.9	18.5	11.9
NITRATE (NO3)	mg/l	190	< 0.1	0.13	1.2	0.25	2.28	1.75	2.46	2.87
PH (FIELD)	pH units		3.2	3.4	3.5	3.8	4	3.3	3.7	3
PH (LAB)	pH units		3.11	3.5	3.24	3.31	3.26	3.55	3.56	3.43
RADIUM-226	pci/l	5	8.6	9.4	7.2	6	6.8	6	8.7	6.6
RADIUM-228	pci/l	5	5.1	6.4	7	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	13.7	15.8	14.2	6	6.8	6	8.7	6.6
SPECIFIC CONDUCTANCE	umhos/cm		4500	4400	4600	4400	4500	4200	5500	4400
THORIUM-230	pci/l	15	25	16.2	23.2	18.6	18.6	< 0.2	16.7	13.1

Location 0518
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/16/1998	4/7/1998	7/7/1998	10/6/1998	1/6/1999	4/6/1999	7/13/1999	10/5/1999
ALUMINUM	mg/l	5	87.3	70.4	75.8	90.4	80.4	76.6	69.5	86.5
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.06	0.06	0.06	0.06	0.06	0.06	0.05	0.06
CADMIUM	mg/l	0.01	< 0.01	0.007	0.009	0.007	0.011	0.01	< 0.005	0.01
CHLORIDE	mg/l	250	39.4	35.9	33.7	35.8	38.7	43.5	31.7	35.4
COBALT	mg/l	0.05	1.19	1.05	1.05	1.16	1.26	1.15	1.11	1.17
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	17.3	15	16.2	17.5	17.2	16.6	16.2	18.4
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	1.16	1.04	1	1.06	1.37	1.15	1.1	1.18
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	5000	4920	4600	4800	5000	4800	5000	5300
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7650	7600	7020	7050	7640	7380	7690	7660
URANIUM	mg/l	5	0.3836	0.372	0.347	0.363	0.345	0.328	0.0198	0.327
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
GROSS ALPHA	pci/l	15	9.6	12	17	16.6	9.5	15.3	14	13.6
NITRATE (NO3)	mg/l	190	1.89	2.84	1.44	1.89	2.26	1.37	0.62	0.98
PH (FIELD)	pH units		3.7	3.7	3.7	3.35	3.3	3.3	3.5	3.48
PH (LAB)	pH units		3.73	3.48	3.64	3.66	3.54	3.75	3.62	3.61
RADIUM-226	pci/l	5	6.8	5	5.6	7.9	7.5	6.4	3.5	6.1
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	1.7	< 1	4.6
RADIUM 226 and 228	pci/l	5	6.8	5	5.6	7.9	7.5	8.1	3.5	10.7
SPECIFIC CONDUCTANCE	umhos/cm		4300	6230	6070	6310	6270	6500	5960	6020
THORIUM-230	pci/l	15	9	12.3	9.2	8	9.4	4.1	7.8	7.1

Location 0518
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/4/2000
ALUMINUM	mg/l	5	55.1
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	0.05
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	37.1
COBALT	mg/l	0.05	1.04
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	17.1
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	1.06
SELENIUM	mg/l	0.01	0.001
SULFATE (SO4)	mg/l	2125	4960
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7540
URANIUM	mg/l	5	0.306
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1
GROSS ALPHA	pci/l	15	12.3
NITRATE (NO3)	mg/l	190	1.5
PH (FIELD)	pH units		3.3
PH (LAB)	pH units		3.58
RADIUM-226	pci/l	5	9.1
RADIUM-228	pci/l	5	< 1
RADIUM 226 and 228	pci/l	5	9.1
SPECIFIC CONDUCTANCE	umhos/cm		6140
THORIUM-230	pci/l	15	8.5

Location 0613
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	5/2/2000	7/11/2000	10/2/2000	1/15/2001	4/9/2001	7/10/2001	10/2/2001	1/14/2002	4/2/2002	7/9/2002
ALUMINUM	mg/l	5	666	662	694	810	738	753	673	670	718	725
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.21	0.22	0.21	0.23	0.2	0.23	0.18	0.22	0.21	0.07
CADMIUM	mg/l	0.01	0.714	0.028	0.03	0.028	0.027	0.028	0.038	0.039	0.038	0.026
CHLORIDE	mg/l	250	177	166	175	183	174	147	160	172	189	167
COBALT	mg/l	0.05	1.8	1.64	1.56	1.77	1.9	1.63	1.74	1.81	1.95	0.62
LEAD	mg/l	0.05	< 0.05	0.23	0.28	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	62.6	63.6	60.1	61	54.8	54.3	59.2	55.3	63.9	69.4
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	1.69	1.88	1.52	1.6	1.7	1.49	1.54	1.62	1.79	1.15
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	9150	8770	8870	10400	8510	9400	8400	9090	9810	8810
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	13900	13700	13800	13800	13100	13900	13600	13800	13800	13300
URANIUM	mg/l	5	1.93	1.98	1.82	2.08	1.85	1.99	1.89	1.99	1.84	2.48
VANADIUM	mg/l	0.7	6	5.8	5.08	5.4	5	4.8	3.62	3	3.1	1.1
BICARBONATE (HCO3)	mg/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
GROSS ALPHA	pci/l	15	19.7	46.6	67.9	44.1	40	30.3	38	20.2	38.5	40.3
NITRATE (NO3)	mg/l	190	22.8	16.8	18	17.2	18	16.5	17.3	16	15.4	15.5
PH (LAB)	pH units		3.11	3.16	3.08	3.08	3.16	3.12	3	3	3.02	3.07
RADIUM-226	pci/l	5	10	11.9	13.5	14.6	11.5	10.5	13	13.2	15.1	19.9
RADIUM-228	pci/l	5	3	< 1	< 1	< 1	1.5	< 1	< 1	3.2	< 1	< 1
RADIUM 226 and 228	pci/l	5	13	11.9	13.5	14.6	13	10.5	13	16.4	15.1	19.9
SPECIFIC CONDUCTANCE	umhos/cm		10970	11010	11000	11340	10520	10810	10530	10510	10420	10250
THORIUM-230	pci/l	15	339	317	249	794	592	556	672	810	575	509

Location 0613
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/8/2002
ALUMINUM	mg/l	5	592
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	0.13
CADMIUM	mg/l	0.01	0.031
CHLORIDE	mg/l	250	165
COBALT	mg/l	0.05	1.81
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	56.5
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	1.63
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	8490
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	11800
URANIUM	mg/l	5	1.79
VANADIUM	mg/l	0.7	2.3
BICARBONATE (HCO3)	mg/l		< 0.1
GROSS ALPHA	pci/l	15	52.1
NITRATE (NO3)	mg/l	190	14.2
PH (LAB)	pH units		3.04
RADIUM-226	pci/l	5	16.6
RADIUM-228	pci/l	5	< 1
RADIUM 226 and 228	pci/l	5	16.6
SPECIFIC CONDUCTANCE	umhos/cm		10300
THORIUM-230	pci/l	15	543

Location 0708
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/2/2001	7/16/2001	10/8/2001	1/14/2002	4/8/2002	7/16/2002	10/14/2002
ALUMINUM	mg/l	5	0.61	0.8	0.82	1	1	0.8	0.9
ARSENIC	mg/l	0.05	0.004	0.002	0.006	0.002	0.001	0.001	0.002
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	31.3	38.4	33.2	28.6	33.4	16.1	25.1
COBALT	mg/l	0.05	0.33	0.29	0.23	0.32	0.34	0.32	0.29
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.87	7.23	5.67	7.78	8.16	8.33	7.57
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.26	0.24	0.18	0.25	0.27	0.24	0.24
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3750	3630	3200	3650	3600	4200	3880
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5520	5740	5700	5670	5670	5760	4840
URANIUM	mg/l	5	0.007	0.009	0.0105	0.0111	0.0104	0.0117	0.0118
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
GROSS ALPHA	pci/l	15	9	12.5	11.3	7.4	8.8	8.3	9.8
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		2.82	2.73	2.67	2.83	2.82	2.68	2.68
RADIUM-226	pci/l	5	7.4	8.1	7.4	8.5	9.1	6.5	8.8
RADIUM-228	pci/l	5	11.7	13.6	12	14.5	13	15.2	5.7
RADIUM 226 and 228	pci/l	5	19.1	21.7	19.4	23	22.1	21.7	14.5
SPECIFIC CONDUCTANCE	umhos/cm		4670	4750	4650	4660	4780	4630	4770
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0717
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/9/2001	7/16/2001	10/8/2001	1/9/2002	4/9/2002	7/15/2002	10/14/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.002	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	54.2	61.7	66.7	75	64.4	48.4	68.3
COBALT	mg/l	0.05	0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.4	1.36	1.08	1.4	1.61	1.6	1.77
MOLYBDENUM	mg/l	1	0.12	0.1	0.08	0.2	0.2	0.2	0.2
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1650	1630	1600	1530	1700	1886	1780
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3300	3350	3300	3230	3320	3420	3130
URANIUM	mg/l	5	0.057	0.065	0.0643	0.0841	0.112	0.118	0.115
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		498	539	588	656	654	740	704
GROSS ALPHA	pci/l	15	4	2.5	4.8	3.5	3.4	3.2	4.8
NITRATE (NO3)	mg/l	190	12.3	12.4	10.6	10.2	12.2	16.2	15.6
PH (FIELD)	pH units		5.65	6.32	7.01	7.76	7.34	6.67	6.65
RADIUM-226	pci/l	5	4.2	3.7	3.5	4.9	3.1	3.1	2.2
RADIUM-228	pci/l	5	4.5	3.7	4.5	7.6	3.8	7.3	3.2
RADIUM 226 and 228	pci/l	5	8.7	7.4	8	12.5	6.9	10.4	5.4
SPECIFIC CONDUCTANCE	umhos/cm		3220	3260	3240	2050	2630	3300	3440
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0719
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/9/2001	7/11/2001	10/8/2001	1/7/2002	4/8/2002	7/15/2002	10/14/2002
ALUMINUM	mg/l	5	78.8	73.2	49.9	47.4	51	35.4	25
ARSENIC	mg/l	0.05	0.016	0.015	0.013	0.01	0.005	0.005	0.005
BERYLLIUM	mg/l	0.017	0.07	0.08	0.04	0.05	0.05	0.04	0.05
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	0.009	0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	32.2	43.8	51.6	57	39.9	33.9	33.4
COBALT	mg/l	0.05	0.8	0.71	0.6	0.68	0.76	0.59	0.65
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	8.7	8.43	6.85	8.21	8.64	6.7	7.89
MOLYBDENUM	mg/l	1	0.34	0.46	0.25	0.2	0.2	< 0.1	< 0.1
NICKEL	mg/l	0.2	1.1	1.01	0.85	0.98	1.08	0.73	0.9
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3750	4000	3300	3760	3470	4020	3720
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5850	6180	5960	5680	5520	5420	4630
URANIUM	mg/l	5	0.397	0.454	0.387	0.27	0.258	0.191	0.086
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
GROSS ALPHA	pci/l	15	55.3	46.6	42.9	29	19.6	14.9	11.5
NITRATE (NO3)	mg/l	190	0.11	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		2.94	2.7	2.75	3	2.9	2.78	2.85
RADIUM-226	pci/l	5	22.1	24	14	15.5	12.2	6.8	5.4
RADIUM-228	pci/l	5	5.9	2.4	1.1	1.9	< 1	4.6	2
RADIUM 226 and 228	pci/l	5	28	26.4	15.1	17.4	12.2	11.4	7.4
SPECIFIC CONDUCTANCE	umhos/cm		5160	5400	5170	4850	4850	4640	4680
THORIUM-230	pci/l	15	30.5	40.9	40.6	28	17.1	9	< 0.2

Location EPA01
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/22/1992	4/2/1992	7/15/1992	10/14/1992	1/13/1993	4/15/1993	7/20/1993	10/12/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	0.12	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.21	0.175	0.176	0.303	0.059	0.06	0.047	0.107
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	0.01	0.01	< 0.01	0.01	< 0.01	< 0.01	0.01
CHLORIDE	mg/l	250	36.2	34.5	36.1	35.5	36	31.2	33	30.2
COBALT	mg/l	0.05	0.03	0.03	0.03	0.02	< 0.01	< 0.01	< 0.01	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	4.43	4.76	4.68	4.45	4.07	4.31	4.31	3.47
MOLYBDENUM	mg/l	1	42.1	41.3	36.9	35	31.2	35.3	31.9	35.5
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2905	2813	2868	3104	2834	2836	2769	2815
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4824	4238	4765	4708	4557	4149	4178	4118
URANIUM	mg/l	5	0.007	0.092	0.007	0.011	0.004	0.016	0.021	0.009
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		452	462	459	425	423	373	421	404
GROSS ALPHA	pci/l	15	1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	0.6	< 0.1	< 0.1
PH (FIELD)	pH units		6.3	6.1	6.2	6.3	6.3	6.3	6.4	6.8
PH (LAB)	pH units		7.31	7.35	7.01	6.93	6.96	8	7.1	6.92
RADIUM-226	pci/l	5	1	< 0.2	0.6	0.5	< 0.2	< 0.2	< 0.2	0.8
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	3.1	2	< 1
RADIUM 226 and 228	pci/l	5	1		0.6	0.5		3.12	2	0.8
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA01
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/20/1994	7/26/1994	10/11/1994	1/10/1995	4/11/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.05	0.071	0.055	0.05	0.069	0.036	0.043	0.037
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	28.4	27.6	27.6	26.6	28.9	31.9	28.7	24.5
COBALT	mg/l	0.05	0.02	< 0.01	0.05	0.05	0.05	0.03	< 0.01	0.04
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.84	3.02	4.13	3.47	3.6	3.58	3.59	3.6
MOLYBDENUM	mg/l	1	39.7	28.1	30	31.5	34.1	26.4	28.1	28.1
NICKEL	mg/l	0.2	0.19	< 0.05	0.14	0.12	0.2	0.05	< 0.05	0.07
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3005	2874	2726	3145	2941	2885	2673	2730
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4656	4260	4000	4596	4626	4431	4039	4065
URANIUM	mg/l	5	0.017	0.008	0.008	0.01	0.009	0.005	0.006	0.012
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		333	345	328	349	309	360	367	334
GROSS ALPHA	pci/l	15	9.1	< 1	4.9	< 1	2.4	< 1	1.1	1.3
NITRATE (NO3)	mg/l	190	0.6	0.16	0.14	0.58	0.44	0.12	0.52	0.24
PH (FIELD)	pH units		6.7	6.6	6.7	6.7	6.6	6.8	7	6.9
PH (LAB)	pH units		7.66	6.67	7.51	7.84	7.6	6.98	7.93	7.81
RADIUM-226	pci/l	5	< 0.2	< 0.2	0.8	< 0.2	0.3	0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	5.4	< 1	2.6	< 1	1.3	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	5.4		3.4		1.6	0.2		
SPECIFIC CONDUCTANCE	umhos/cm		3300			3300			3800	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA01
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/10/1996	4/10/1996	7/17/1996	10/8/1996	7/15/1997	10/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.016	0.017	0.015	0.019	0.009	0.01
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	33	26.1	25.2	24.1	25.2	31.4
COBALT	mg/l	0.05	0.04	0.05	0.1	0.11	0.18	0.28
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.48	3.21	3.54	3.34	4.04	4.73
MOLYBDENUM	mg/l	1	26.9	28.5	24.6	23.8	11.5	10.4
NICKEL	mg/l	0.2	0.08	0.09	0.18	0.2	0.18	0.21
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2935	3000	2925	2926	3000	3050
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4572	4540	4458	4440	4630	4600
URANIUM	mg/l	5	0.0098	0.012	0.0087	0.0078	0.008	0.01
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		276	248	242	248	200	196
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.31	0.22	< 0.1	< 0.1	0.14	0.24
PH (FIELD)	pH units		7.1	7.5	7	7	6.1	
PH (LAB)	pH units		7.34	7.88	7.29	7.43	7.67	7.87
RADIUM-226	pci/l	5	0.6	0.3	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	1.7	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.6	2				
SPECIFIC CONDUCTANCE	umhos/cm		3500		3400	3200	3100	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA09
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/22/1992	4/2/1992	7/15/1992	10/14/1992	1/13/1993	4/15/1993	7/20/1993	10/12/1993
ALUMINUM	mg/l	5	1.01	2.5	1.25	2.36	< 0.1	0.18	< 0.1	1.22
ARSENIC	mg/l	0.05	0.013	0.014	0.01	0.018	0.003	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	27.7	34.4	66.8	51	24.4	27.9	30	27.3
COBALT	mg/l	0.05	0.21	0.02	0.23	0.28	0.04	0.08	0.07	0.14
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.16	7.86	6.61	7.63	2.66	3.16	3.08	4.41
MOLYBDENUM	mg/l	1	< 0.1	0.1	< 0.1	< 0.1	0.14	< 0.1	0.11	< 0.1
NICKEL	mg/l	0.2	0.22	0.29	0.22	0.27	0.1	0.08	< 0.05	0.14
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4132	4137	3956	3996	3403	3487	3250	3399
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6127	5681	6008	6070	5015	4596	4554	4633
URANIUM	mg/l	5	0.007	0.002	0.006	0.002	0.005	0.002	0.006	0.005
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		14.7	60.9	< 0	< 0	105	62.3	54.8	86.4
GROSS ALPHA	pci/l	15	5	0.4	5.9	9.9	4.1	3.4	3.5	10
NITRATE (NO3)	mg/l	190	0.49	< 0.1	0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1
PH (FIELD)	pH units		5.2	5.4	5.8	5.3	5.6	5.3	5.6	5.9
PH (LAB)	pH units		5.29	6.61	3.88	3.9	7.06	6.44	5.94	5.89
RADIUM-226	pci/l	5	5.2	8.1	5.4	9.6	3.8	3.1	3.3	8.8
RADIUM-228	pci/l	5	4	4.1	9	8.9	6.9	2.3	5	7.8
RADIUM 226 and 228	pci/l	5	9.2	12.2	14.4	18.5	10.7	5.4	8.3	16.6
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA09
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/12/1994	4/20/1994	7/26/1994	10/11/1994	1/10/1995	4/11/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	31.1	3.3	0.81	1.1	5.54	0.18	< 0.1	0.15
ARSENIC	mg/l	0.05	0.029	0.021	< 0.001	< 0.001	0.012	0.002	0.003	0.001
BERYLLIUM	mg/l	0.017	0.09	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	55.2	30	28	28.7	28.9	15.7	29.8	27
COBALT	mg/l	0.05	0.6	0.21	0.1	0.15	0.27	0.07	0.022	0.08
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	9.64	6.9	4.29	4.49	7.76	3.59	0.85	3.88
MOLYBDENUM	mg/l	1	0.42	0.19	0.11	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.85	0.24	< 0.05	0.15	0.28	< 0.05	< 0.05	0.07
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4110	4149	3472	4045	4239	3500	3485	3475
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5738	5771	4732	5664	6144	5264	5046	5003
URANIUM	mg/l	5	0.122	0.003	0.001	0.002	0.003	0.001	0.0006	0.0015
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	31.3	< 0	10.3	119	34.1	70.8
GROSS ALPHA	pci/l	15	33.2	26.4	13.1	10.7	28.2	8.5	16.7	11.4
NITRATE (NO3)	mg/l	190	0.13	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		4.4	5.4	5.2	5	5.3	6.2	5.9	5.7
PH (LAB)	pH units		2.87	3.62	6.16	3.63	4.92	6.04	6.06	6.95
RADIUM-226	pci/l	5	15.7	13.6	5.4	8.4	18.9	3.7	5.1	5
RADIUM-228	pci/l	5	11	8.4	5	1.4	6.1	3.2	3	< 1
RADIUM 226 and 228	pci/l	5	26.7	22	10.4	9.8	25	6.9	8.1	5
SPECIFIC CONDUCTANCE	umhos/cm		3900			3900			3700	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.4	< 0.2

Location EPA09
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997	10/15/1997
ALUMINUM	mg/l	5	1.87	0.34	0.56	0.5	0.5	0.81	1.47	2.44
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	0.001	< 0.001	< 0.001	0.003	0.002
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	28.4	28.2	32	29	30.8	31.3	32.5	37.7
COBALT	mg/l	0.05	0.17	0.11	0.15	0.13	0.12	0.15	0.17	0.21
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.15	4.2	4.94	4.61	4.25	5.03	5.22	6.12
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.14	0.09	0.12	0.11	0.09	0.12	0.14	0.16
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	3790	3905	3816	3943	3695	4040	3560	3990
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5085	5494	5615	5590	5510	5740	5780	5860
URANIUM	mg/l	5	0.0024	0.0008	0.0007	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.001
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		52.8	27.5	23.4	< 0	29.3	21.2	7.4	< 0.1
GROSS ALPHA	pci/l	15	8.7	10.2	7.3	9.2	10.7	14.3	13	14.1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		5.6	5.9	5.9	5.7	5.8	5.4	5.2	5.6
PH (LAB)	pH units		5.94	6.2	5.58	4.44	6.07	5.72	5.27	4.49
RADIUM-226	pci/l	5	9	6.6	8	6.6	8.8	10.6	12	10.8
RADIUM-228	pci/l	5	4.9	2.3	3.8	9	8.1	6.6	6.3	14.6
RADIUM 226 and 228	pci/l	5	13.9	8.9	11.8	15.6	16.9	17.2	18.3	25.4
SPECIFIC CONDUCTANCE	umhos/cm		3900		3600	3600	3500	3600	3700	3600
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	2.7	< 0.2	< 0.2	< 0.2

Location EPA09
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/14/1998	7/14/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	1.61	1.8	2.66	2.84	2.9	3.42	2.8	3.44
ARSENIC	mg/l	0.05	< 0.001	0.003	0.004	0.002	0.005	< 0.001	0.002	0.014
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	34.4	30.7	30.1	29.1	28.9	38.9	32.9	32.6
COBALT	mg/l	0.05	0.22	0.18	0.19	0.19	0.19	0.22	0.17	0.17
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.33	5.5	6.28	5.67	5.82	6.28	4.9	5.84
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.15	0.16	0.15	0.15	0.14	0.16	0.13	0.12
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4200	3720	3700	4000	4000	3750	3860	3680
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5570	5840	5820	5820	5870	5860	5930	5860
URANIUM	mg/l	5	0.0008	0.0008	0.0012	0.0008	0.0017	0.0015	0.0013	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		9.27	< 0.1	< 0.1	1.2	< 0.1	< 0.1	< 0.1	< 0.1
GROSS ALPHA	pci/l	15	12.3	15.9	15.1	18.9	10.6	17.4	13.5	17.4
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	0.23	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		4.8	4.9	4.6	3.83	4.3	4.1	3.8	4.9
PH (LAB)	pH units		5.64	4.22	4.45	4.56	4.58	4.45	4.18	4.47
RADIUM-226	pci/l	5	12.6	12.5	12.5	11.8	10.9	11.9	12.7	12.7
RADIUM-228	pci/l	5	9.5	7.2	6.3	8	6.6	12.2	8.4	10.4
RADIUM 226 and 228	pci/l	5	22.1	19.7	18.8	19.8	17.5	24.1	21.1	23.1
SPECIFIC CONDUCTANCE	umhos/cm		900	5140	5140	5300	5200	5040	5210	5070
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA09
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000
ALUMINUM	mg/l	5	4.12
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	0.01
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	31.7
COBALT	mg/l	0.05	0.21
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	6.52
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	0.2
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	3690
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5790
URANIUM	mg/l	5	0.0013
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		< 0.1
GROSS ALPHA	pci/l	15	16.2
NITRATE (NO3)	mg/l	190	< 0.1
PH (FIELD)	pH units		4.2
PH (LAB)	pH units		4.25
RADIUM-226	pci/l	5	12.6
RADIUM-228	pci/l	5	8.5
RADIUM 226 and 228	pci/l	5	21.1
SPECIFIC CONDUCTANCE	umhos/cm		5020
THORIUM-230	pci/l	15	< 0.2

Location EPA12
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/22/1992	4/2/1992	7/15/1992
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.036	0.026	0.013
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	24.8	23.4	23.8
COBALT	mg/l	0.05	0.12	0.14	0.13
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.02	3.31	3.1
MOLYBDENUM	mg/l	1	3.7	2.4	1.9
NICKEL	mg/l	0.2	0.17	0.16	0.14
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3162	3297	3264
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5060	4820	5073
URANIUM	mg/l	5	0.007	< 0.0003	0.007
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		75.4	122	50
GROSS ALPHA	pci/l	15	8	6.5	6.5
NITRATE (NO3)	mg/l	190	< 0.01	< 0.1	< 0.1
PH (FIELD)	pH units		5.9	5.6	5.8
PH (LAB)	pH units		6.24	7.04	7.22
RADIUM-226	pci/l	5	7.7	6.3	6.3
RADIUM-228	pci/l	5	6.8	8	13
RADIUM 226 and 228	pci/l	5	14.5	14.3	19.3
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2

Location EPA13
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/22/1992	4/7/1992	7/15/1992	10/14/1992	1/14/1993	4/15/1993	7/20/1993	10/12/1993
ALUMINUM	mg/l	5	< 0.1	0.2	< 0.1	0.58	0.42	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.077	0.134	0.084	0.175	0.23	0.186	0.265	0.154
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	24.1	26.7	21.6	32.7	30.1	27.6	28.9	30.4
COBALT	mg/l	0.05	0.23	0.21	0.23	0.21	0.15	0.14	0.14	0.11
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.59	6.56	6.33	6.43	6.24	5.81	5.65	5.51
MOLYBDENUM	mg/l	1	0.64	0.8	0.83	0.9	0.78	0.59	0.73	0.6
NICKEL	mg/l	0.2	0.26	0.3	0.22	0.2	0.24	0.2	0.18	0.14
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3733	3924	3862	4186	4391	4315	4790	4387
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5640	5228	5888	6201	6412	5848	6564	6064
URANIUM	mg/l	5	0.004	0.004	0.009	0.002	0.013	0.017	0.017	0.024
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		15.1	59.9	< 0	29.3	92.3	38	28.5	21
GROSS ALPHA	pci/l	15	7	4.3	6.1	4.9	6.5	3.5	5.1	6
NITRATE (NO3)	mg/l	190	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		5.4	5.4	5.6	5.8	5.7	5.8	5.9	6.2
PH (LAB)	pH units		5.48	6.79	4.25	5.25	5.02	5.81	5.89	5.38
RADIUM-226	pci/l	5	6.9	4.2	5.9	4.7	5.8	3	4.5	5.4
RADIUM-228	pci/l	5	3.5	7.5	9.3	8.7	8.6	7.7	5.4	5.5
RADIUM 226 and 228	pci/l	5	10.4	11.7	15.2	13.4	14.4	10.7	9.9	10.9
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA13
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/20/1994	7/26/1994	10/11/1994	1/10/1995	4/11/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	0.66	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.225	0.262	0.199	0.192	0.253	0.23	0.255	0.225
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	30	30.7	33.3	34.7	34	40	37.7	33.6
COBALT	mg/l	0.05	0.07	0.09	0.1	0.11	0.14	0.06	0.016	0.05
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.51	4.69	5.9	5.26	5.88	5.82	1.26	5.91
MOLYBDENUM	mg/l	1	0.67	0.48	0.66	0.57	0.82	0.47	< 0.1	0.38
NICKEL	mg/l	0.2	0.19	0.14	0.13	0.13	0.17	0.1	< 0.05	0.12
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4444	4436	4343	4784	4810	4729	4435	4340
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6208	6116	6088	6762	6748	6718	6107	6119
URANIUM	mg/l	5	0.027	0.023	0.019	0.022	0.024	0.022	0.024	0.026
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		57.2	79.2	67.6	80.5	98.6	94.5	67.1	78.1
GROSS ALPHA	pci/l	15	14.8	20.1	26.2	19.5	20.3	19.1	15.9	11.8
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.1	6	5.9	5.9	6	6.2	6.9	6.2
PH (LAB)	pH units		6.15	6	6.51	6.46	6.57	6.13	6.61	6.85
RADIUM-226	pci/l	5	4.5	5.1	5.3	5.6	7.7	4.8	4.7	4.9
RADIUM-228	pci/l	5	6.2	9.9	13.8	6.5	8.3	9.5	12.3	1.7
RADIUM 226 and 228	pci/l	5	10.7	15	19.1	12.1	16	14.3	17	6.6
SPECIFIC CONDUCTANCE	umhos/cm		4300			4400			4500	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.4	< 0.2

Location EPA13
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997	10/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.227	0.295	0.269	0.301	0.43	0.331	0.464	0.595
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	33.6	35.9	39	36	50.1	39.2	38.7	49.6
COBALT	mg/l	0.05	< 0.01	0.06	0.06	0.06	0.06	0.05	0.05	0.07
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.19	5.65	5.94	5.71	5.96	5.87	5.46	6.21
MOLYBDENUM	mg/l	1	< 0.1	0.35	0.41	0.34	0.4	0.34	0.35	0.45
NICKEL	mg/l	0.2	< 0.05	0.11	0.12	0.12	0.12	0.12	0.1	0.12
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4440	5040	4320	4689	4570	4740	4620	4620
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6144	6642	6694	6670	6570	6750	6740	6670
URANIUM	mg/l	5	0.028	0.029	0.022	0.027	0.019	0.013	0.019	0.03
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		95	85.8	74.5	79.1	101	100	83.7	89.5
GROSS ALPHA	pci/l	15	5.4	7.6	6	4.4	4.7	7.8	4.5	5.4
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.3	6.8	6.2	6.3	6.5	6.3	6.2	6.4
PH (LAB)	pH units		6.47	7.09	6.23	6.32	6.95	6.79	7.02	7.21
RADIUM-226	pci/l	5	5.3	4.3	3.3	3.6	4.4	4.5	4.1	3.5
RADIUM-228	pci/l	5	8.2	10.6	15.4	7.9	10	11	12	11.6
RADIUM 226 and 228	pci/l	5	13.5	14.9	18.7	11.5	14.4	15.5	16.1	15.1
SPECIFIC CONDUCTANCE	umhos/cm		4800		4500	4300	3900	4400	4400	4300
THORIUM-230	pci/l	15	< 0.2	< 0.2	0.7	< 0.2	1.5	< 0.2	< 0.2	< 0.2

Location EPA13
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/14/1998	7/14/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.444	0.563	0.45	0.613	0.514	0.717	< 0.001	0.443
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	0.006	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	43.4	38	35.6	36.1	36.8	46	42	40.7
COBALT	mg/l	0.05	0.08	0.05	0.05	0.05	0.05	0.06	0.06	0.04
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.84	5.6	6.04	5.64	5.6	5.96	4.6	5.63
MOLYBDENUM	mg/l	1	0.39	0.34	0.29	0.32	0.26	0.33	0.26	0.3
NICKEL	mg/l	0.2	0.13	0.11	0.1	0.12	0.08	0.1	0.1	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4700	4560	4100	4520	4450	4200	4260	3890
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6610	6630	6700	6440	6510	6520	6510	6520
URANIUM	mg/l	5	0.027	0.0285	0.0311	0.0244	0.0267	0.0284	0.0242	0.0237
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		84.7	83	76.8	90.2	92	86	77	100
GROSS ALPHA	pci/l	15	6.1	6.3	3.9	6.6	4.3	8.4	8.6	5.1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	0.11	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6	6.3	6	5.93	6.2	6.1	6.2	6.1
PH (LAB)	pH units		7.07	7.12	6.89	7.72	6.99	6.93	6.94	7.16
RADIUM-226	pci/l	5	5	4.4	4.4	4.2	5.3	5.3	4.3	4.5
RADIUM-228	pci/l	5	8.2	4.8	5.3	4.7	6.4	6.8	6.8	6.9
RADIUM 226 and 228	pci/l	5	13.2	9.2	9.7	8.9	11.7	12.1	11.1	11.4
SPECIFIC CONDUCTANCE	umhos/cm		900	5700	5620	5760	5870	5540	5760	5650
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA13
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000	4/9/2001	7/16/2001	10/8/2001	1/15/2002	4/8/2002	7/15/2002	10/14/2002
ALUMINUM	mg/l	5	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.347	0.601	0.386	0.32	0.383	0.322	0.313	0.29
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	37.5	36.5	49.9	48.5	43.7	43.9	30.3	42.3
COBALT	mg/l	0.05	0.06	0.06	0.08	0.04	0.06	0.07	0.06	0.06
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.89	6.33	8.41	4.72	6.42	7.14	5.72	6.56
MOLYBDENUM	mg/l	1	0.32	0.3	0.4	0.19	0.3	0.4	0.3	0.3
NICKEL	mg/l	0.2	0.16	0.15	0.21	0.08	0.16	0.17	0.12	0.15
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4160	4660	3950	3600	4060	3980	4660	4650
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6340	6110	6450	6390	6250	6300	6450	5770
URANIUM	mg/l	5	0.0207	0.023	0.025	0.0159	0.0163	0.018	0.0179	0.0173
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		92	79	81	86	91.5	88.4	85.4	86.6
GROSS ALPHA	pci/l	15	6.3	6.9	5.9	5.8	5.5	6	4.9	5.7
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.1	7.19	5.73	5.96	5.42	5.75	5.23	5.52
PH (LAB)	pH units		7.17	6.43	6.77	6.6	6.5	6.47	6.59	6.7
RADIUM-226	pci/l	5	4.7	4.6	4.5	4.3	4.1	3.9	4.7	4.2
RADIUM-228	pci/l	5	8.5	5.1	5.6	4.7	10.1	8.7	6.6	4.8
RADIUM 226 and 228	pci/l	5	13.2	9.7	10.1	9	14.2	12.6	11.3	9
SPECIFIC CONDUCTANCE	umhos/cm		5520	5260	5360	5320	5400	5350	5200	5260
THORIUM-230	pci/l	15	1.7	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA14
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/23/1992	4/2/1992	7/16/1992	10/15/1992	1/14/1993	4/15/1993	7/20/1993	10/11/1993
ALUMINUM	mg/l	5	1	1	0.45	0.73	0.59	0.4	< 0.1	0.4
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	39.1	33.6	30.5	32.8	35.5	32.2	28.9	29.6
COBALT	mg/l	0.05	0.03	0.04	0.02	0.03	0.04	0.03	0.01	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.81	0.91	0.71	0.87	0.42	0.82	0.55	0.74
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.22	< 0.1
NICKEL	mg/l	0.2	< 0.05	0.06	< 0.05	0.07	0.11	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.015	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	2463	2607	2306	2332	2456	2096	2197	1936
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4045	4058	3186	3753	3728	3401	3350	3272
URANIUM	mg/l	5	0.01	0.007	0.028	0.009	0.009	0.017	0.054	0.023
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		115	126	316	159	142	180	370	220
GROSS ALPHA	pci/l	15	3	1.9	3.8	2.6	3.6	2.1	2.9	6.2
NITRATE (NO3)	mg/l	190	14	27.4	23.3	24.2	26.5	27.1	14.9	25.7
PH (FIELD)	pH units		5.5	5.4	6.2	6.1	5.9	5.9	6.5	6.5
PH (LAB)	pH units		6.16	7.09	6.28	6.38	6.47	6.54	7.46	6.49
RADIUM-226	pci/l	5	2.5	1.6	3.6	2.8	3.3	1.6	2.6	2.9
RADIUM-228	pci/l	5	1.2	< 1	2.9	3.5	3	4.6	3.5	2.2
RADIUM 226 and 228	pci/l	5	3.7	1.6	6.5	6.3	6.3	6.2	6.1	5.1
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA14
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/19/1994	7/26/1994	10/11/1994	1/10/1995	4/10/1995	7/10/1995	10/9/1995
ALUMINUM	mg/l	5	0.88	0.36	0.31	0.53	1.25	1.68	< 0.1	0.18
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	37.9	27.3	25.6	26.9	35.8	43.7	26.2	25.7
COBALT	mg/l	0.05	0.03	0.06	0.02	0.05	0.06	0.07	0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.18	0.92	1.1	1.26	2.34	2.59	1.05	1.33
MOLYBDENUM	mg/l	1	< 0.1	0.16	0.21	0.11	< 0.1	< 0.1	0.19	0.16
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.011	< 0.001	< 0.001	< 0.001	< 0.001	0.003
SULFATE (SO4)	mg/l	2125	2285	1654	1732	1776	2309	2570	1456	1530
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3409	2743	2710	3074	3516	4051	2659	2864
URANIUM	mg/l	5	0.014	0.037	0.036	0.033	0.008	0.005	0.064	0.064
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		96.8	250	284	299	121	104	465	439
GROSS ALPHA	pci/l	15	12.4	7.6	7.3	3.9	10.3	10.4	7.9	8.4
NITRATE (NO3)	mg/l	190	31.9	16.9	9.94	23.5	33	40	18.6	22.4
PH (FIELD)	pH units		5.7	6.2	6.3	6.3	6	6.1	6.2	6.6
PH (LAB)	pH units		6.49	6.54	7.04	7.05	6.6	6.01	7.62	7.44
RADIUM-226	pci/l	5	2.7	2.9	3.1	2.3	4.1	2.6	2.3	3.7
RADIUM-228	pci/l	5	5.8	3	< 1	1	4	5.2	2.6	< 1
RADIUM 226 and 228	pci/l	5	8.5	5.9	3.1	3.3	8.1	7.8	4.9	3.7
SPECIFIC CONDUCTANCE	umhos/cm		2900			2400			3000	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA14
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/8/1996	4/9/1996	7/17/1996	10/8/1996	1/28/1997	4/14/1997	7/14/1997	10/14/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	26	30	35	33	48	42.3	48.9	60.5
COBALT	mg/l	0.05	0.01	< 0.01	0.02	0.02	0.03	< 0.01	< 0.01	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.15	1.26	1.44	1.52	1.87	1.49	1.54	2.05
MOLYBDENUM	mg/l	1	< 0.1	0.18	0.18	0.18	0.13	0.18	0.15	0.2
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1440	1468	1616	1589	1927	1612	1640	1750
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2773	2825	2907	2900	3200	3000	3160	3280
URANIUM	mg/l	5	0.081	0.083	0.09	0.075	0.054	0.09	0.088	0.101
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		490	516	498	511	459	584	627	616
GROSS ALPHA	pci/l	15	2.6	3.9	3.5	1.9	4.2	3.6	3	3.5
NITRATE (NO3)	mg/l	190	24.6	23.9	23.8	23.9	26.7	22.9	25.7	26.2
PH (FIELD)	pH units		6.5	6.8	6.5	6.5	6.5	6.5	6.5	6.6
PH (LAB)	pH units		7.27	7.75	6.91	7.24	7.71	7.45	7.35	7.75
RADIUM-226	pci/l	5	3.2	3.4	3.4	2.5	2.8	6.7	3.1	2.4
RADIUM-228	pci/l	5	2.3	2.5	< 1	8	3.4	5.4	5	5.8
RADIUM 226 and 228	pci/l	5	5.5	5.9	3.4	10.5	6.2	12.1	8.1	8.2
SPECIFIC CONDUCTANCE	umhos/cm		2800		2400	2400	2500	2400	2600	2600
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA14
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/19/1998	4/13/1998	7/13/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.004	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	52.8	53.3	56.9	54.8	56.2	70.2	70	71.2
COBALT	mg/l	0.05	0.07	0.01	< 0.01	0.06	0.02	0.03	0.03	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.21	1.92	2.2	2.86	2.58	2.83	2.24	2.86
MOLYBDENUM	mg/l	1	0.13	0.18	0.16	0.12	0.11	0.15	0.14	0.15
NICKEL	mg/l	0.2	0.06	< 0.05	< 0.05	0.08	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2150	1630	1600	2120	1900	1820	1900	1630
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3720	3310	3560	3810	3690	3690	3730	3700
URANIUM	mg/l	5	0.075	0.121	0.12	0.0906	0.111	0.11	0.114	0.127
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		442	688	715	527	570	647	667	746
GROSS ALPHA	pci/l	15	3.9	6	2.9	4.4	3.6	10.8	6.7	5.2
NITRATE (NO3)	mg/l	190	33.2	26.4	25.2	29.8	28.1	33.9	31.3	32.3
PH (FIELD)	pH units		6.3	6.7	6.7	6.66	6.7	6.6	6.2	6.54
PH (LAB)	pH units		7.66	7.36	7.62	8.17	7.72	7.93	7.94	7.68
RADIUM-226	pci/l	5	5.1	3.8	3.9	3.8	5.2	7.8	5.1	3.5
RADIUM-228	pci/l	5	5	3.4	5.4	4.7	5.6	9.4	6.8	7.1
RADIUM 226 and 228	pci/l	5	10.1	7.2	9.3	8.5	10.8	17.2	11.9	10.6
SPECIFIC CONDUCTANCE	umhos/cm		800	3600	3710	3830	3860	3860	3800	3710
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA14
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000	5/2/2000	7/12/2000	10/9/2000	1/15/2001	4/2/2001	7/10/2001	10/8/2001
ALUMINUM	mg/l	5	0.17	8.3	11.6	8.13	23.7	13	188	16.6
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	0.01	0.01	0.08	< 0.01
CADMIUM	mg/l	0.01	< 0.005	0.014	< 0.005	0.008	0.008	0.008	0.014	0.009
CHLORIDE	mg/l	250	60.9	60.5	53.1	44.2	55.2	52.6	78.7	62
COBALT	mg/l	0.05	0.04	0.05	0.18	0.18	0.23	0.26	0.56	0.2
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.96	3.24	4.36	3.96	4.65	4.68	16.5	3.99
MOLYBDENUM	mg/l	1	0.18	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.08	< 0.05	0.15	0.15	0.24	0.27	0.54	0.2
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1820	1880	2560	3210	3110	2990	4080	2500
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3790	3800	4410	4440	4550	4570	6810	4780
URANIUM	mg/l	5	0.104	0.12	0.053	0.0435	0.049	0.037	0.491	0.0432
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1	< 0.1
BICARBONATE (HCO3)	mg/l		650	627	239	153	113	104	< 0.1	83.6
GROSS ALPHA	pci/l	15	7.6	6.5	5.4	10.3	4.5	5.1	13.3	6.6
NITRATE (NO3)	mg/l	190	32.4	34.4	23	19.3	19.9	18.1	15.7	14
PH (FIELD)	pH units		6.5	6.4	6.94	7.09	6.08	5.9	5.79	6.6
PH (LAB)	pH units		7.73	7.56	7.11	7.26	6.55	6.89	4.1	6.6
RADIUM-226	pci/l	5	5.1	8	3.8	3.9	5.2	4.2	5	3.9
RADIUM-228	pci/l	5	7.8	11.1	5.9	6.9	< 1	6.4	5.3	7
RADIUM 226 and 228	pci/l	5	12.9	19.1	9.7	10.8	5.2	10.6	10.3	10.9
SPECIFIC CONDUCTANCE	umhos/cm		3820	3860	4300	4350	4440	4160	4320	4190
THORIUM-230	pci/l	15	< 0.2	2	< 0.2	< 0.2	< 0.2	< 0.2	150	< 0.2

Location EPA14
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/2002	4/3/2002	7/16/2002	10/14/2002
ALUMINUM	mg/l	5	36.2	18.6	19.2	21.6
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.02	0.01	0.01	0.02
CADMIUM	mg/l	0.01	0.011	0.01	0.008	0.006
CHLORIDE	mg/l	250	74	61.6	50.6	52.2
COBALT	mg/l	0.05	0.23	0.25	0.2	0.17
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	4.84	5.4	4.54	4.78
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.27	0.25	0.22	0.19
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2970	3190	3390	3080
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4680	4800	4830	4160
URANIUM	mg/l	5	0.0598	0.0334	0.0387	0.0558
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		83	79.9	95.8	130
GROSS ALPHA	pci/l	15	5.6	8.1	7.1	7.2
NITRATE (NO3)	mg/l	190	13.6	13.3	14	13.9
PH (FIELD)	pH units		7.36	5.97	5.92	6.82
PH (LAB)	pH units		6.7	7.46	7.04	7.3
RADIUM-226	pci/l	5	5	4.6	4.3	4.8
RADIUM-228	pci/l	5	8.4	7.3	11.7	5
RADIUM 226 and 228	pci/l	5	13.4	11.9	16	9.8
SPECIFIC CONDUCTANCE	umhos/cm		4250	4330	4200	4230
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA15
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/23/1992	4/2/1992	7/16/1992	10/15/1992	1/13/1993	4/15/1993	7/20/1993	10/12/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.002	0.003	< 0.001	0.001	0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	21.2	23.7	32.5	32.6	26.8	23.6	30.8	41.3
COBALT	mg/l	0.05	0.01	0.01	0.02	0.02	0.02	0.03	0.02	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.39	2.24	2.98	3.68	2.56	1.97	2.62	4.18
MOLYBDENUM	mg/l	1	< 0.56	0.58	0.35	0.59	0.72	0.62	1.13	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.001
SULFATE (SO4)	mg/l	2125	1588	1753	2206	2451	1748	1666	2133	2766
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2603	2809	3214	4002	2950	2816	3326	4110
URANIUM	mg/l	5	0.065	0.066	0.034	0.014	0.064	0.099	0.061	0.03
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		292	312	246	237	287	322	287	212
GROSS ALPHA	pci/l	15	2	2.1	4.9	5.2	2.7	2	3.6	8
NITRATE (NO3)	mg/l	190	11.1	15	12.7	17.3	11	13.3	27.5	17
PH (FIELD)	pH units		6.1	6.1	6.1	6	6.2	6.3	6.3	6.4
PH (LAB)	pH units		6.93	7.6	6.84	6.61	6.75	6.94	6.93	6.34
RADIUM-226	pci/l	5	1.6	2	4.6	4.9	2	1.8	3	6.4
RADIUM-228	pci/l	5	1.8	4.1	8.8	3.9	4.5	4.3	4.9	5.5
RADIUM 226 and 228	pci/l	5	3.4	6.1	13.4	8.8	6.5	6.1	7.9	11.9
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA15
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/19/1994	7/26/1994	10/11/1994	1/10/1995	4/11/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	0.3	< 0.1	< 0.1	5.65	5.67
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	28.5	22.6	31	39	36.5	19.9	44.5	40
COBALT	mg/l	0.05	< 0.01	0.05	< 0.01	0.07	0.02	< 0.01	0.2	0.17
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.21	1.16	2.82	4.42	3.08	3.08	7.18	7.13
MOLYBDENUM	mg/l	1	1.21	1.2	0.93	0.75	0.81	0.67	0.65	1.05
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.19	0.16
SELENIUM	mg/l	0.01	< 0.001	0.001	0.009	< 0.001	< 0.001	< 0.001	< 0.001	0.01
SULFATE (SO4)	mg/l	2125	1774	1537	2390	3049	2567	2542	2833	2961
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3001	2537	4123	4502	4144	4187	4169	4153
URANIUM	mg/l	5	0.074	0.121	0.05	0.029	0.045	0.038	0.012	0.0087
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		288	296	265	214	244	262	24.5	23.2
GROSS ALPHA	pci/l	15	12.1	10.8	17.1	14.7	11.9	12.7	29.5	19.8
NITRATE (NO3)	mg/l	190	12.8	9.5	33.2	31.5	37.2	44.4	29.5	24.3
PH (FIELD)	pH units		6.5	6.4	6.2	6.1	6.1	6.4	5.6	5.5
PH (LAB)	pH units		7	6.63	7.43	6.94	7.09	6.51	5.87	5.82
RADIUM-226	pci/l	5	3.3	3.1	4.6	7.7	6	4.3	11.6	12.6
RADIUM-228	pci/l	5	5.2	5	8.2	4.5	3.8	5.6	22.2	8.1
RADIUM 226 and 228	pci/l	5	8.5	8.1	12.8	12.2	9.8	9.9	33.8	20.7
SPECIFIC CONDUCTANCE	umhos/cm		2300			3300			4000	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA15
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/8/1996
ALUMINUM	mg/l	5	
ARSENIC	mg/l	0.05	
BERYLLIUM	mg/l	0.017	
CADMIUM	mg/l	0.01	
CHLORIDE	mg/l	250	
COBALT	mg/l	0.05	
LEAD	mg/l	0.05	
MANGANESE	mg/l	2.6	
MOLYBDENUM	mg/l	1	
NICKEL	mg/l	0.2	
SELENIUM	mg/l	0.01	
SULFATE (SO4)	mg/l	2125	
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	
URANIUM	mg/l	5	
VANADIUM	mg/l	0.7	
BICARBONATE (HCO3)	mg/l		
GROSS ALPHA	pci/l	15	
NITRATE (NO3)	mg/l	190	
PH (FIELD)	pH units		5.3
PH (LAB)	pH units		
RADIUM-226	pci/l	5	
RADIUM-228	pci/l	5	
RADIUM 226 and 228	pci/l	5	
SPECIFIC CONDUCTANCE	umhos/cm		3900
THORIUM-230	pci/l	15	

Location EPA17
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/21/1992	4/14/1992
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.005	0.022
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	37.5	34.3
COBALT	mg/l	0.05	0.08	0.05
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.42	5.08
MOLYBDENUM	mg/l	1	0.1	0.37
NICKEL	mg/l	0.2	0.17	0.15
SELENIUM	mg/l	0.01	0.001	0.002
SULFATE (SO4)	mg/l	2125	4556	3632
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6718	5908
URANIUM	mg/l	5	0.023	0.041
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		159	255
GROSS ALPHA	pci/l	15	1	1.2
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1
PH (FIELD)	pH units		6.3	6.4
PH (LAB)	pH units		6.66	7.72
RADIUM-226	pci/l	5	1.3	1.2
RADIUM-228	pci/l	5	< 1	8.3
RADIUM 226 and 228	pci/l	5	1.3	9.5
THORIUM-230	pci/l	15	< 0.2	< 0.2

Location EPA18
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/22/1992	4/2/1992	7/15/1992	10/14/1992	1/14/1993	4/15/1993	7/20/1993	10/12/1993
ALUMINUM	mg/l	5	0.27	< 0.1	< 0.1	0.18	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.014	0.014	0.003	0.002	< 0.001	0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	29.4	38.3	29.7	30.5	30.9	31.2	31.9	28.9
COBALT	mg/l	0.05	0.1	0.13	0.12	0.15	0.16	0.16	0.18	0.14
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.15	7.16	6.45	5.97	7.66	6.91	6.51	6.57
MOLYBDENUM	mg/l	1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.17	0.26	0.19	0.24	0.32	0.26	0.31	0.24
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4267	4351	4196	4126	4187	3999	4215	4264
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6396	5799	6375	6100	5947	6132	5982	5825
URANIUM	mg/l	5	0.086	0.078	0.064	0.081	0.038	0.058	0.045	0.058
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		36.8	75.1	8	12.2	16.8	18.1	12.3	18
GROSS ALPHA	pci/l	15	8	4.7	5	5.8	6.8	4.5	7.9	7
NITRATE (NO3)	mg/l	190	< 0.01	< 0.01	0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1
PH (FIELD)	pH units		5.6	5.5	5.5	5.3	5.2	5.3	5.3	5.8
PH (LAB)	pH units		6	7.16	6.09	5.38	5.74	5.79	5.75	5.44
RADIUM-226	pci/l	5	7.9	4.9	4.3	5.5	6.6	4.1	6.4	7
RADIUM-228	pci/l	5	6.8	10.3	9.8	10.2	11.5	9	12.6	7.8
RADIUM 226 and 228	pci/l	5	14.7	15.2	14.1	15.7	18.1	13.1	19	14.8
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA18
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/20/1994	7/26/1994	10/11/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	29.5	33	30.7	33.7
COBALT	mg/l	0.05	0.12	0.12	0.15	0.08
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.7	5.69	6.64	5.3
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.28	0.27	0.23	0.16
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4228	4196	4106	4604
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6038	5622	5618	6374
URANIUM	mg/l	5	0.041	0.023	0.012	0.008
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		20.3	15.3	17.7	22.4
GROSS ALPHA	pci/l	15	25.6	15.5	26.4	12.7
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		5.7	5.5	5.7	5.8
PH (LAB)	pH units		6.22	6	6.69	6.55
RADIUM-226	pci/l	5	6.2	5.1	6	5.9
RADIUM-228	pci/l	5	12.3	6.8	13.5	4.4
RADIUM 226 and 228	pci/l	5	18.5	11.9	19.5	10.3
SPECIFIC CONDUCTANCE	umhos/cm		4100			4200
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location NBL01
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	8/15/2001	10/3/2001	1/7/2002	4/17/2002	7/15/2002	10/15/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.57	0.714	0.613	0.768	0.728	0.776
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	36.8	40	36	37.9	26	31.4
COBALT	mg/l	0.05	0.05	0.05	0.05	0.05	0.05	0.06
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.47	1.59	1.59	1.68	1.78	2.01
MOLYBDENUM	mg/l	1	2.62	2.86	3.2	3.2	2.8	2.2
NICKEL	mg/l	0.2	0.19	0.08	0.11	0.09	0.09	0.1
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1730	1680	1840	1780	1810	2070
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3220	3160	3110	3220	3310	3120
URANIUM	mg/l	5	0.294	0.276	0.245	0.287	0.261	0.251
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		343	346	342	336	339	330
GROSS ALPHA	pci/l	15	8.1	6.3	5.8	7.8	5.4	5.6
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.61	6.7	7.25	6.25	6.65	7.18
RADIUM-226	pci/l	5	7.3	7	6	5.8	4.5	6.4
RADIUM-228	pci/l	5	7	5.2	4.5	5.3	4.5	3.1
RADIUM 226 and 228	pci/l	5	14.3	12.2	10.5	11.1	9	9.5
SPECIFIC CONDUCTANCE	umhos/cm		3180	3020	3021	2430	3140	3160
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	0.5	< 0.2	< 0.2

Location PB01
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/18/2002
CHLORIDE	mg/l	250	31.7
BICARBONATE (HCO3)	mg/l		29.2
PH (FIELD)	pH units		5.18

Location PB02
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/16/2002
CHLORIDE	mg/l	250	32.4
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4070
BICARBONATE (HCO3)	mg/l		53.1
PH (LAB)	pH units		7.25

Location PB03
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/16/2002
CHLORIDE	mg/l	250	30.4
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3190
BICARBONATE (HCO3)	mg/l		356
PH (LAB)	pH units		7.84

Location PB04
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/16/2002
CHLORIDE	mg/l	250	30.4
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3190
BICARBONATE (HCO3)	mg/l		356
PH (LAB)	pH units		7.67

Location 0141
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/6/1992	1/5/1993	4/6/1993	7/13/1993	10/6/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	0.002	0.002	0.001	0.002	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	88.2	116	118	108	68.9	91.3	79.1	64
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.13	0.15	0.12	0.2	0.41	0.19	0.16	0.22
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.002	< 0.001	0.001	0.001	0.007	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	525	511	506	525	638	495	575	541
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1042	1123	1175	1141	1370	1100	1071	1105
URANIUM	mg/l	5	0.005	0.002	0.005	0.01	0.011	0.001	0.005	0.006
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		249	326	239	246	248	244	257	257
GROSS ALPHA	pci/l	15	9	< 1	2.5	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.16
PH (FIELD)	pH units		7.4	7.4	7.5	7.6	7.7	7.8	7.7	7.8
PH (LAB)	pH units		7.62	7.46	7.8	7.61	7.93	8.18	7.12	7.31
RADIUM-226	pci/l	5	8.4	< 0.2	2.3	< 0.2	0.4	0.3	< 0.2	0.6
RADIUM-228	pci/l	5	3.7	< 1	1.5	< 1	< 1	< 1	2.5	< 1
RADIUM 226 and 228	pci/l	5	12.1		3.8		0.4	0.3	2.5	0.6
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0141
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/13/1994	7/20/1994	10/4/1994	1/4/1995	4/6/1995	7/6/1995	10/3/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	71	49.4	42.8	43.2	39.8	28.2	30.4	25.9
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.19	0.15	0.2	0.26	0.29	0.15	0.3	0.14
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	550	499	548	537	493	507	528	485
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1101	1017	1010	1076	995	1038	1073	1038
URANIUM	mg/l	5	0.005	0.008	0.004	0.003	0.016	0.004	0.0033	0.0034
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		237	234	240	260	257	254	256	261
GROSS ALPHA	pci/l	15	< 1	< 1	1.7	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.73	< 0.1	0.13	< 0.1	< 0.1	5.19	< 0.1	< 0.1
PH (FIELD)	pH units		7.7	7.7	7.7	7.6	7.5	7.6	7.6	7.2
PH (LAB)	pH units		7.78	7.76	7.34	8.02	7.93	8.15	8.21	8.3
RADIUM-226	pci/l	5	0.4	0.5	1.5	0.5	0.7	0.4	1	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.4	0.5	1.5	0.5	0.7	0.4	1	
SPECIFIC CONDUCTANCE	umhos/cm		1300			1300				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0141
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Chemical Name	Unit	ROD Cleanup Level	1/3/1996	4/2/1996	7/7/1996	10/1/1996	1/21/1997	4/8/1997	7/8/1997	10/7/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.002	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	15.4	29.1	23.2	25.4	22.5	22.4	24.4	22.8
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	< 0.01	0.1	0.13	0.12	0.1	0.08	0.12	0.13
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.007	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	554	526	481	498	500	479	516	504
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1097	1008	1034	1010	903	962	977	997
URANIUM	mg/l	5	0.0006	0.0016	0.0039	< 0.0003	0.002	0.0006	0.002	0.005
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		255	259	254	254	256	256	251	256
GROSS ALPHA	pci/l	15	1.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.32	0.16	< 0.1	< 0.1	< 0.1	0.14	0.13	0.19
PH (FIELD)	pH units		7.2	7.2	8.4	7.3	6.7	7	7.9	7.1
PH (LAB)	pH units		8.24	8.36	7.75	8.07	7.93	8.25	8.33	8.13
RADIUM-226	pci/l	5	0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	1.4	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.7							
SPECIFIC CONDUCTANCE	umhos/cm		1200	1200	1200	1200		1100	1300	1200
THORIUM-230	pci/l	15	0.6	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0141
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Chemical Name	Unit	ROD Cleanup Level	1/15/1998	4/7/1998	7/7/1998	10/6/1998	1/5/1999	4/6/1999	7/13/1999	1/4/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	0.009	0.007	0.002	0.004	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	26.3	20.3	20.9	22.9	25.2	25.2	30.2	176
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.07	0.1	0.09	0.37	0.43	0.24	0.27	0.11
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	0.14	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	0.001
SULFATE (SO4)	mg/l	2125	541	490	469	545	514	516	507	1150
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1000	999	976	1030	1070	1070	968	2280
URANIUM	mg/l	5	0.0031	0.0029	0.0027	0.334	0.014	0.0059	0.0541	0.0183
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		259	259	259	261	253	249	258	228
GROSS ALPHA	pci/l	15	2.8	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.25	< 0.1	< 0.1	0.34	< 0.1	0.21	< 0.1	0.28
PH (FIELD)	pH units		7.8	7.5	8	7.4	7.8	7.6	6.8	7
PH (LAB)	pH units		8.29	8.22	8.28	8.17	8.06	8.13	8.28	8.38
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	1.5	1.5	1	1.1	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5				1.5	1.5	1	1.1	
SPECIFIC CONDUCTANCE	umhos/cm		1100	1370	1386	1472	1520	1496	1352	3440
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0142
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/6/1992	1/5/1993	4/6/1993	7/13/1993	10/6/1993	1/5/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	0.001	0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	16.4	17	16	16.8	17.4	16.1	17.2	15.9	16.4
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	< 0.01	< 0.01	0.01	0.01	0.02	0.02	0.02	0.03
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	0.002	0.001	0.007	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	595	579	588	588	542	560	597	566	563
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1071	1023	1101	1100	1019	1084	1066	1074	1056
URANIUM	mg/l	5	0.002	0.001	0.003	< 0.0003	0.01	0.002	< 0.0003	< 0.0003	0.006
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		259	256	263	260	256	254	264	255	246
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	1.6	< 1	< 1	< 1	1.4
NITRATE (NO3)	mg/l	190	0.37	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.17	0.1
PH (FIELD)	pH units		7.4	7.5	7.6	7.8	7.8	7.8	7.8	7.8	7.8
PH (LAB)	pH units		7.85	8.19	8.17	8.06	8.14	8.08	7.09	7.6	8.03
RADIUM-226	pci/l	5	0.2	< 0.2	0.6	0.4	1.5	0.8	0.3	1.1	0.7
RADIUM-228	pci/l	5	< 1	< 1	3.1	1.1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.2		3.7	1.5	1.5	0.8	0.3	1.1	0.7
SPECIFIC CONDUCTANCE	umhos/cm										1200
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0142
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/13/1994	7/20/1994	10/4/1994	1/4/1995	4/6/1995	7/6/1995	10/3/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	16.5	15.8	16.9	17.4	13.4	16.5	15.3	25.3	17.7
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	< 0.01	< 0.01	0.02	0.03	0.02	0.01	0.14	< 0.01
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	531	538	589	550	714	625	617	492	593
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	989	1088	1032	1036	1327	1230	1222	1018	1074
URANIUM	mg/l	5	< 0.0003	0.001	0.001	0.001	0.001	< 0.0003	< 0.0003	0.0034	0.0004
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		234	242	256	251	277	260	275	253	250
GROSS ALPHA	pci/l	15	3.5	< 1	< 1	3.3	4.5	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.1	0.45	0.32	0.2	0.38	0.1	0.2	0.19	0.25
PH (FIELD)	pH units		7.9	7.7	7.7	7.7	7.8	7.7	7.3	7.8	7.1
PH (LAB)	pH units		7.84	8.05	8.15	8.01	8.11	8.32	8.3	8.05	8.42
RADIUM-226	pci/l	5	0.5	0.8	0.3	0.4	0.6	1.2	0.9	0.4	< 0.2
RADIUM-228	pci/l	5	1.9	< 1	< 1	1.8	2.5	< 1	3.4	< 1	< 1
RADIUM 226 and 228	pci/l	5	2.4	0.8	0.3	2.2	3.1	1.2	4.3	0.4	
SPECIFIC CONDUCTANCE	umhos/cm				1300					1300	1200
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.4	< 0.2	0.6	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/21/1997	4/8/1997	7/8/1997	10/7/1997	1/15/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	23.2	21.3	15.9	16.6	18.6	16.1	20.9	18	17
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.01	0.01	0.04	0.01	0.01	0.02	0.02	0.01	0.01
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	481	540	567	551	575	572	673	546	533
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1075	1060	1020	1040	1030	1070	1170	1100	1070
URANIUM	mg/l	5	0.0007	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.001	0.0006	0.0008	0.0006
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		243	245	240	249	240	248	261	245	245
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.44	0.2	0.15	0.29	0.12	< 0.1	0.2	0.14	0.22
PH (FIELD)	pH units		7.9	7.5	6.5	6.6	8.1	7.4	7.8	7.8	8.1
PH (LAB)	pH units		7.72	8.12	7.86	8.28	8.32	8.19	8.32	8.26	8.27
RADIUM-226	pci/l	5	0.5	0.3	< 0.2	< 0.2	0.5	< 0.2	1.8	0.9	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.5	0.3			0.5		1.8	0.9	
SPECIFIC CONDUCTANCE	umhos/cm		1200	1200		1200	1200	1200	1250	1480	1700
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/10/2000	7/10/2000	10/2/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	1.18	0.75	0.18
ARSENIC	mg/l	0.05	0.002	0.002	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	18.1	18.2	22.7	24.5	21.4	26.6	19.1	19.9	17.7
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.08	0.21	0.01	0.01	0.03	0.1	0.07	0.07	0.39
MOLYBDENUM	mg/l	1	< 0.1	0.14	< 0.1	< 0.1	< 0.1	0.14	< 0.1	< 0.1	0.76
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	640	628	562	498	557	797	613	543	676
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1170	1210	1120	1030	1130	1500	1080	1060	1310
URANIUM	mg/l	5	0.0051	0.004	0.0012	0.0009	0.0008	0.0077	0.0013	0.0011	0.0019
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		267	273	250	262	251	309	242	242	220
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	2.5	< 1	1.4	< 1
NITRATE (NO3)	mg/l	190	0.31	0.24	0.25	0.16	0.13	0.11	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		7.27	8	8	6.8	7.6	7.2	8.4	8.13	8.08
PH (LAB)	pH units		8.29	8.21	8.15	8.27	8.11	8.36	8.27	7.99	7.84
RADIUM-226	pci/l	5	1.1	2.1	< 0.2	< 0.2	0.7	2.4	< 0.2	0.9	0.9
RADIUM-228	pci/l	5	< 1	3	< 1	< 1	< 1	1.5	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.1	5.1			0.7	3.9		0.9	0.9
SPECIFIC CONDUCTANCE	umhos/cm		1750	1730	1395	1620	1660	2120	1918	1558	1603
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/16/2001	4/2/2001	7/16/2001	10/3/2001	1/7/2002	4/8/2002	7/15/2002	10/14/2002
ALUMINUM	mg/l	5	0.2	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.001	0.002	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	21.6	18.8	24.7	24.7	21.3	21.5	18.6	17.7
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.02
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	594	544	550	555	560	556	607	536
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1060	1050	1080	1060	1060	1070	1060	998
URANIUM	mg/l	5	0.0004	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		242	234	233	240	236	239	239	237
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		8.23	8.1	7.96	7.8	8.23	7.59	7.11	7.09
PH (LAB)	pH units		7.97	8.01	8.01	8.1	7.9	7.59	8.06	8
RADIUM-226	pci/l	5	0.4	< 0.2	0.3	0.5	0.6	0.3	0.3	0.8
RADIUM-228	pci/l	5	3	< 1	< 1	< 1	1.9	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	3.4		0.3	0.5	2.5	0.3	0.3	0.8
SPECIFIC CONDUCTANCE	umhos/cm		1572	1514	1560	1521	1555	1246	1536	1611
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/7/1992	7/7/1992	10/6/1992	1/5/1993	4/6/1993	7/13/1993	10/6/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.003	0.001	0.001	0.004	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	17.2	16.9	16.2	15.5	9.5	16.1	16.5	15.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.02
MOLYBDENUM	mg/l	1	0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	0.001	0.007	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	565	523	543	524	558	495	494	525
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1005	964	1019	999	1098	965	932	978
URANIUM	mg/l	5	0.007	0.006	0.008	0.017	0.006	0.004	0.003	0.001
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		237	237	238	236	239	239	243	243
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.18	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.18
PH (FIELD)	pH units		7.4	7.5	7.6	7.8	7.8	7.7	7.7	7.6
PH (LAB)	pH units		7.54	7.18	7.56	7.86	8.14	8.07	7.07	7.62
RADIUM-226	pci/l	5	0.2	< 0.2	< 0.2	0.3	0.4	0.4	0.8	0.7
RADIUM-228	pci/l	5	< 1	1.8	< 1	3.7	< 1	1.6	1.2	< 1
RADIUM 226 and 228	pci/l	5	0.2	1.8		4	0.4	2	2	0.7
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/13/1994	7/20/1994	10/4/1994	1/4/1995	4/6/1995	7/6/1995	10/3/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	18.6	15.8	14.5	16.2	15.2	11.6	15.5	14.2
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.03	0.02	0.03	0.04	< 0.02	< 0.02	< 0.03	0.02
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	517	484	509	525	498	519	495	486
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	953	940	950	927	959	990	995	994
URANIUM	mg/l	5	0.001	< 0.0003	0.002	0.002	0.002	0.002	< 0.0003	0.0018
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		224	223	223	245	243	249	238	241
GROSS ALPHA	pci/l	15	< 1	4.7	1.2	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.1	< 0.1	0.19	0.16	< 0.1	0.24	< 0.1	0.11
PH (FIELD)	pH units		7.7	7.8	7.6	7.6	7.5	7.7	7.6	7.3
PH (LAB)	pH units		7.73	7.81	8.07	8.09	8.05	7.93	8.32	8.35
RADIUM-226	pci/l	5	0.3	0.8	1	0.7	0.8	0.2	0.5	0.3
RADIUM-228	pci/l	5	< 1	2.5	< 1	< 1	< 1	< 1	< 1	1.3
RADIUM 226 and 228	pci/l	5	0.3	3.3	1	0.7	0.8	0.2	0.5	1.6
SPECIFIC CONDUCTANCE	umhos/cm		1100			1200				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/3/1996	4/2/1996	7/7/1996	10/1/1996	1/21/1997	4/8/1997	7/8/1997	10/7/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	13.9	16.9	14.3	17.8	14.4	14.4	16.9	12.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	0.02	0.02	0.02	0.01	0.02	0.02	0.03
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	0.19	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	489	519	468	488	498	484	517	505
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	971	958	964	975	994	938	943	975
URANIUM	mg/l	5	0.0014	< 0.0003	0.002	< 0.0003	0.001	< 0.0003	0.0009	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		244	244	240	240	244	244	238	246
GROSS ALPHA	pci/l	15	2.1	< 1	3.8	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.13	0.14	0.21	0.1	< 0.1	0.15	0.11	0.11
PH (FIELD)	pH units		8	7.5	7.5	7.2	6.5	6.8	8	7.6
PH (LAB)	pH units		8.05	8.41	7.77	8.13	7.89	8.24	8.32	8.15
RADIUM-226	pci/l	5	1	0.5	< 0.2	0.5	0.6	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	2.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	3.5	0.5		0.5	0.6			
SPECIFIC CONDUCTANCE	umhos/cm		1300	1200	1100	1100		1100	1200	1100
THORIUM-230	pci/l	15	0.4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0143
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1998	4/7/1998	7/7/1998	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	0.001	0.006	0.004	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	17.8	14.8	14.5	16	16.1	18.5	13.9	16.4
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	< 0.01	0.02	0.02	0.1	0.09	0.02	0.02	0.03
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	542	486	460	526	509	477	517	457
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	974	980	953	986	979	975	857	953
URANIUM	mg/l	5	0.0013	0.0015	0.0009	0.0081	0.0148	0.0014	0.0011	0.001
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		245	243	226	245	254	240	247	235
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	0.27	0.15	0.11	0.35	0.13	0.15	< 0.1	< 0.1
PH (FIELD)	pH units		7.8	7.8	8	7.51	7.9	8	6.8	7.52
PH (LAB)	pH units		8.3	8.21	8.23	8.41	8.2	8.09	8.24	8.08
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	0.6	< 0.2	< 0.2	< 0.2	0.3
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	1.7	< 1	< 1
RADIUM 226 and 228	pci/l	5				0.6		1.7		0.3
SPECIFIC CONDUCTANCE	umhos/cm		1100	1369	1520	1400	1540	1520	1520	1466
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0143
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Chemical Name	Unit	ROD Cleanup Level	1/4/2000
ALUMINUM	mg/l	5	< 0.1
ARSENIC	mg/l	0.05	0.001
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	22.8
COBALT	mg/l	0.05	< 0.01
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	0.06
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	< 0.05
SELENIUM	mg/l	0.01	0.001
SULFATE (SO4)	mg/l	2125	528
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	998
URANIUM	mg/l	5	0.0047
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		242
GROSS ALPHA	pci/l	15	3.1
NITRATE (NO3)	mg/l	190	0.24
PH (FIELD)	pH units		7.8
PH (LAB)	pH units		8.41
RADIUM-226	pci/l	5	2
RADIUM-228	pci/l	5	< 1
RADIUM 226 and 228	pci/l	5	2
SPECIFIC CONDUCTANCE	umhos/cm		1359
THORIUM-230	pci/l	15	< 0.2

Location 0515A
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Chemical Name	Unit	ROD Cleanup Level	1/15/1992	4/8/1992	7/8/1992	10/7/1992	1/6/1993	4/6/1993	7/13/1993
ALUMINUM	mg/l	5	26.6	16.2	21	48.8	10.2	35.6	5.73
ARSENIC	mg/l	0.05	< 0.001	0.003	0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.02	0.01	< 0.01	< 0.01	0.01	0.013	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	90.3	130	109	78.2	145	150	195
COBALT	mg/l	0.05	0.02	0.19	0.19	0.28	0.21	0.26	0.2
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	15.5	13.6	15.7	18.7	14.2	18.8	14
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.31	0.27	0.26	0.38	0.34	0.37	0.28
SELENIUM	mg/l	0.01	0.01	0.01	0.001	< 0.001	0.004	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	5854	5710	5892	6028	4980	5942	5755
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	9035	9087	8447	8989	7144	8962	8790
URANIUM	mg/l	5	0.012	0.013	0.02	0.02	0.015	0.015	0.012
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		16.8	19.8	5.3	< 0	19.3	2.5	7.1
GROSS ALPHA	pci/l	15	3	3.6	3.7	5.9	5.9	3.6	3.4
NITRATE (NO3)	mg/l	190	26.5	19.2	31	15.1	21.8	27.1	29.3
PH (FIELD)	pH units		4.5	4.3	4.3	4.6	5.3	4.7	5
PH (LAB)	pH units		4.61	5.3	4.78	4.1	4.98	4.55	4.6
RADIUM-226	pci/l	5	2.6	3.4	3.4	5.6	5.7	2.9	2.6
RADIUM-228	pci/l	5	4.4	6.4	10.8	7	6.7	9.5	6.5
RADIUM 226 and 228	pci/l	5	7	9.8	14.2	12.6	12.4	12.4	9.1
SPECIFIC CONDUCTANCE	umhos/cm								
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/6/1993	1/6/1994	4/12/1994	7/20/1994	10/4/1994	1/4/1995	4/4/1995
ALUMINUM	mg/l	5	1.87	2.92	1.51	1.42	2.45	1.7	2.04
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	225	227	223	195	236	212	240
COBALT	mg/l	0.05	0.13	0.15	< 0.01	0.18	0.16	0.11	0.13
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	9.81	12.1	10.6	11.4	15.3	10.2	11
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.27	0.26	0.21	0.25	0.31	0.42	0.15
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	5500	5042	5305	5157	5276	5293	5196
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8235	8633	8306	8197	8173	8234	7657
URANIUM	mg/l	5	0.004	0.004	0.03	0.002	0.003	0.004	0.002
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		554	373	183	206	260	266	185
GROSS ALPHA	pci/l	15	3.9	10.6	5	24.2	12.3	13.4	16.1
NITRATE (NO3)	mg/l	190	38	45.7	51.9	45.6	51.8	49	58.5
PH (FIELD)	pH units		6	5.5	5.7	5.6	5.6	5.5	5.6
PH (LAB)	pH units		6.22	6.13	5.98	6.91	6.62	6.69	5.91
RADIUM-226	pci/l	5	3.5	5.4	4.8	4.2	6.6	6.2	4.7
RADIUM-228	pci/l	5	7	2.8	< 1	9.3	3.7	4.7	7.5
RADIUM 226 and 228	pci/l	5	10.5	8.2	4.8	13.5	10.3	10.9	12.2
SPECIFIC CONDUCTANCE	umhos/cm			6100			6300		
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/6/1995	10/3/1995	1/3/1996	4/2/1996	7/7/1996	10/1/1996	1/21/1997
ALUMINUM	mg/l	5	0.25	0.65	< 0.1	0.6	1.42	0.85	0.97
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	236	253	252	279	250	268	253
COBALT	mg/l	0.05	0.02	0.07	< 0.01	0.08	0.11	0.08	0.07
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.52	11.1	11.4	11.8	12.9	13.2	12.2
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	0.13	0.14	0.14	0.17	0.15	0.14
SELENIUM	mg/l	0.01	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	5060	5042	4830	5360	4670	4834	5140
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8297	8311	8017	8300	8117	8270	8110
URANIUM	mg/l	5	0.0044	0.0057	0.0038	< 0.0003	0.0023	0.0028	0.004
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		315	421	475	392	210	342	428
GROSS ALPHA	pci/l	15	16.1	13.6	7.4	5.4	3.4	3.8	2.5
NITRATE (NO3)	mg/l	190	49.7	53.3	56.9	61	54.7	53.5	46.8
PH (FIELD)	pH units		5.8	5.8	5.8	6	5.3	5.7	5.6
PH (LAB)	pH units		7.09	7.16	6.43	7.53	5.94	6.58	6.77
RADIUM-226	pci/l	5	3	3.6	3.4	2.4	2.6	2.1	2.9
RADIUM-228	pci/l	5	4.2	< 1	3.1	3.9	< 1	5.4	3.6
RADIUM 226 and 228	pci/l	5	7.2	3.6	6.5	6.3	2.6	7.5	6.5
SPECIFIC CONDUCTANCE	umhos/cm				6500	6000	3700	6600	
THORIUM-230	pci/l	15	0.3	< 0.2	0.8	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	4/8/1997	7/8/1997	10/7/1997	1/15/1998	4/7/1998	7/7/1998	10/6/1998
ALUMINUM	mg/l	5	0.75	1.27	0.98	2	0.78	0.87	0.51
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	294	300	255	287	257	291	286
COBALT	mg/l	0.05	0.07	0.09	0.08	0.1	0.08	0.07	0.06
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	12.1	14.6	12.9	15.6	12.1	13.9	11.8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.15	0.15	0.17	0.19	0.17	0.15	0.15
SELENIUM	mg/l	0.01	0.069	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4388	5130	4790	4800	4420	4500	5000
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8220	8260	8200	8040	8190	8170	8170
URANIUM	mg/l	5	0.0019	0.003	0.003	0.0025	0.0034	0.0031	0.0049
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		331	296	254	228	276	291	317
GROSS ALPHA	pci/l	15	13	2.2	3.2	2.4	4.1	3.8	210
NITRATE (NO3)	mg/l	190	58.5	57.9	56.4	64.8	58.9	63.9	70.5
PH (FIELD)	pH units		5.5	6.4	5.5	5.7	5.5	5.8	5.69
PH (LAB)	pH units		7.37	6.75	6.71	6.8	7.14	7.61	7.32
RADIUM-226	pci/l	5	4.9	1.6	2.1	2.3	2.5	2.9	2.3
RADIUM-228	pci/l	5	4.5	3.7	< 1	4.8	3.7	4.2	1.2
RADIUM 226 and 228	pci/l	5	9.4	5.3	2.1	7.1	6.2	7.1	3.5
SPECIFIC CONDUCTANCE	umhos/cm		6000	6000	6000	6000	7500	7560	7760
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/10/2000	7/11/2000
ALUMINUM	mg/l	5	0.69	0.86	0.4	1.02	1.22	2.44	2.11
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	0.011	0.006	0.006	0.008	0.006	< 0.005	< 0.005
CHLORIDE	mg/l	250	287	286	254	272	221	261	239
COBALT	mg/l	0.05	0.05	0.07	0.05	0.07	0.08	0.06	0.09
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	12.3	13.6	13.6	16.6	14	11.8	14.6
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.12	0.15	0.13	0.15	0.22	0.18	0.19
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4900	4600	4800	5440	4150	4440	4460
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8200	8130	7930	7950	7720	8080	7740
URANIUM	mg/l	5	0.0035	0.0029	0.0036	0.0023	0.0025	0.0036	0.0021
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		306	292	272	253	222	356	242
GROSS ALPHA	pci/l	15	2.5	3.1	2	4.7	3.7	12	4.6
NITRATE (NO3)	mg/l	190	57.4	57.8	62.6	55.6	65.1	62.8	86.5
PH (FIELD)	pH units		5.7	5.5	5.7	5.36	5.5	5.5	5.45
PH (LAB)	pH units		7.18	6.59	7.42	7.27	7.14	7.01	6.5
RADIUM-226	pci/l	5	2.2	3.4	2.3	2.4	3.2	4.1	2
RADIUM-228	pci/l	5	3.9	4.8	2.9	< 1	4.2	2.1	3.6
RADIUM 226 and 228	pci/l	5	6.1	8.2	5.2	2.4	7.4	6.2	5.6
SPECIFIC CONDUCTANCE	umhos/cm		7670	7770	7130	7320	7240	7220	7350
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/3/2000	1/10/2001	4/3/2001	7/17/2001	10/2/2001	1/14/2002	4/2/2002
ALUMINUM	mg/l	5	2.08	2.7	2.9	2.89	2.29	3	2.9
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	236	258	247	260	327	305	279
COBALT	mg/l	0.05	0.07	0.08	0.1	0.09	0.07	0.1	0.09
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	11.6	12.5	13.3	13.9	13.4	15.8	15.3
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.15	0.22	0.25	0.24	0.11	0.26	0.23
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	5060	4410	4640	4010	4000	4410	4790
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7550	7610	7580	7770	7780	7680	7670
URANIUM	mg/l	5	0.0019	0.0017	0.0011	0.001	0.0009	0.0011	0.0009
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		228	222	225	225	217	212	214
GROSS ALPHA	pci/l	15	5.1	3.4	3.1	4.1	6.3	3.5	6
NITRATE (NO3)	mg/l	190	70.1	66.4	68.5	70.9	66.5	60.5	61.9
PH (FIELD)	pH units		5.47	5.62	5.85	5.94	5.44	6.56	5.41
PH (LAB)	pH units		6.7	6.61	6.54	5.96	6.6	6.3	6.57
RADIUM-226	pci/l	5	2.8	2.6	2.7	3.1	3.1	3.2	3.4
RADIUM-228	pci/l	5	5.9	6.3	< 1	6	4.5	6.6	2.9
RADIUM 226 and 228	pci/l	5	8.7	8.9	2.7	9.1	7.6	9.8	6.3
SPECIFIC CONDUCTANCE	umhos/cm		7340	7240	6800	7030	6720	6600	6740
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0515A
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/10/2002	10/9/2002
ALUMINUM	mg/l	5	2.4	3.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	250	228
COBALT	mg/l	0.05	0.09	0.08
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	12.4	13.3
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.18	0.2
SELENIUM	mg/l	0.01	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4420	4270
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7750	6900
URANIUM	mg/l	5	0.0013	0.002
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		211	210
GROSS ALPHA	pci/l	15	8	9.3
NITRATE (NO3)	mg/l	190	61.5	63
PH (FIELD)	pH units		7.25	6.54
PH (LAB)	pH units		6.33	6.61
RADIUM-226	pci/l	5	3.6	3.5
RADIUM-228	pci/l	5	6.8	3.1
RADIUM 226 and 228	pci/l	5	10.4	6.6
SPECIFIC CONDUCTANCE	umhos/cm		6830	6990
THORIUM-230	pci/l	15	< 0.2	< 0.2

Location 0516A
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1992	4/8/1992	7/8/1992	10/7/1992	1/6/1993	4/6/1993	7/13/1993	10/7/1993
ALUMINUM	mg/l	5	22.2	11.4	6.56	29.3	7.8	2.9	2	2.4
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.01	0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	241	369	234	229	245	252	241	255
COBALT	mg/l	0.05	0.21	0.2	0.17	0.23	0.41	0.14	0.13	0.18
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	19.2	15.8	16.2	18	16	13	10.3	12.4
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.29	0.22	0.21	0.28	0.37	0.21	0.17	0.22
SELENIUM	mg/l	0.01	0.063	0.001	< 0.001	0.003	0.009	0.001	0.005	0.002
SULFATE (SO4)	mg/l	2125	6079	6152	6065	6244	5252	6106	5879	5596
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	9588	10129	9577	9800	8137	9954	9291	9168
URANIUM	mg/l	5	0.063	0.001	0.002	< 0.0003	0.005	0.004	0.003	0.007
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		21.6	83	117	73.2	168	250	421	348
GROSS ALPHA	pci/l	15	2	2	2.5	4.6	3.9	2	2	4
NITRATE (NO3)	mg/l	190	93.5	97.1	119	15.9	144	141	142	169
PH (FIELD)	pH units		4.9	4.9	4.8	5	5.1	5.4	5.6	5.8
PH (LAB)	pH units		4.7	5.51	6.21	5.19	5.7	6.26	6.48	6.16
RADIUM-226	pci/l	5	2.4	1.8	2.1	4.1	3.5	1.8	1.5	3.7
RADIUM-228	pci/l	5	8.9	9.8	7.2	5.9	3.6	1.4	4.2	4
RADIUM 226 and 228	pci/l	5	11.3	11.6	9.3	10	7.1	3.2	5.7	7.7
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0516A
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/6/1994	4/12/1994	7/20/1994	10/4/1994	1/4/1995	4/5/1995	7/6/1995	10/3/1995
ALUMINUM	mg/l	5	2.87	0.97	0.46	< 0.1	0.24	0.12	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	237	249	246	249	255	255	258	238
COBALT	mg/l	0.05	0.11	0.08	0.05	< 0.01	0.04	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	10.2	7.8	4.95	5.22	4.74	3.74	2.7	2.54
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.15	0.14	0.08	< 0.05	0.08	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.001	< 0.001	0.001	< 0.001	0.001	0.003	0.001
SULFATE (SO4)	mg/l	2125	5747	5815	6286	6371	6901	6510	6259	6394
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	10048	9862	10276	10221	10761	10757	10428	10761
URANIUM	mg/l	5	0.001	0.003	0.011	0.013	0.01	0.016	0.0183	0.0256
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		477	610	953	949	939	1069	1302	1332
GROSS ALPHA	pci/l	15	6.8	11.3	8.6	4.5	5.9	4.9	2	2.5
NITRATE (NO3)	mg/l	190	150	155	157	138	130	133	129	126
PH (FIELD)	pH units		5.7	5.8	6	6.2	6.1	6.1	6.2	6.1
PH (LAB)	pH units		6.26	6.52	6.96	7.37	7.01	6.36	7.21	7.44
RADIUM-226	pci/l	5	3.6	2.9	3.8	4.3	1.4	1.4	0.9	1.3
RADIUM-228	pci/l	5	1.5	5.5	3.1	< 1	2.9	2.2	< 1	< 1
RADIUM 226 and 228	pci/l	5	5.1	8.4	6.9	4.3	4.3	3.6	0.9	1.3
SPECIFIC CONDUCTANCE	umhos/cm		7200			8200				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.2	< 0.2

Location 0516A
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/3/1996	4/2/1996	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	237	259	240	247	241	258	271	258
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.34	2.1	2	2.2	1.79	1.77	1.8	1.83
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.002	< 0.001	0.078	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	6480	7150	6190	6640	6760	6500	7120	6530
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	11314	11345	11529	11500	11200	11500	11700	11600
URANIUM	mg/l	5	0.014	0.014	0.018	0.013	0.016	0.016	0.015	0.015
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1302	1320	1309	1270	1420	1360	1360	1370
GROSS ALPHA	pci/l	15	2.7	1.4	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	142	146	134	128	110	126	124	106
PH (FIELD)	pH units		6.4	6.4	6.1	6.4	6.1	6.3	6.7	6.3
PH (LAB)	pH units		7.03	7.29	7.15	6.93	7.36	7.57	7.61	7.45
RADIUM-226	pci/l	5	1.1	0.8	0.7	0.9	1.2	1	0.8	1.2
RADIUM-228	pci/l	5	1.4	< 1	< 1	< 1	3.2	4.2	< 1	< 1
RADIUM 226 and 228	pci/l	5	2.5	0.8	0.7	0.9	4.4	5.2	0.8	1.2
SPECIFIC CONDUCTANCE	umhos/cm		7500	7800	8000	8000		7500	8500	8500
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0516A
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1998	4/7/1998	7/7/1998	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	293	230	257	256	259	246	254	261
COBALT	mg/l	0.05	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.03	1.61	1.59	1.57	1.66	1.59	1.67	2.11
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	7100	6220	6500	7000	7100	6840	6920	8030
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	11600	11800	11800	11800	11900	11900	11900	11900
URANIUM	mg/l	5	0.023	0.019	0.0181	0.0211	0.0189	0.0197	0.0199	0.0218
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1370	1360	1380	1390	1350	1350	1370	1387
GROSS ALPHA	pci/l	15	< 1	< 1	2.2	< 1	< 1	< 1	< 1	1.4
NITRATE (NO3)	mg/l	190	137	116	117	132	103	118	106	111
PH (FIELD)	pH units		6.4	6.2	6.5	6.25	6.4	6.3	6.5	6.4
PH (LAB)	pH units		7.59	7.39	7.36	7.66	7.57	7.28	7.78	7.71
RADIUM-226	pci/l	5	1.1	1.2	1.1	1.1	0.8	0.7	0.7	0.7
RADIUM-228	pci/l	5	< 1	< 1	< 1	1.6	1.9	3.4	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.1	1.2	1.1	2.7	2.7	4.1	0.7	0.7
SPECIFIC CONDUCTANCE	umhos/cm		8500	8870	11080	11280	11040	1146	1058	1082
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0516A
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/4/2000
ALUMINUM	mg/l	5	< 0.1
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	228
COBALT	mg/l	0.05	0.02
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	2.37
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	< 0.05
SELENIUM	mg/l	0.01	0.001
SULFATE (SO4)	mg/l	2125	6590
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	11700
URANIUM	mg/l	5	0.0178
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		1290
GROSS ALPHA	pci/l	15	1.2
NITRATE (NO3)	mg/l	190	113
PH (FIELD)	pH units		6.3
PH (LAB)	pH units		7.64
RADIUM-226	pci/l	5	1.2
RADIUM-228	pci/l	5	< 1
RADIUM 226 and 228	pci/l	5	1.2
SPECIFIC CONDUCTANCE	umhos/cm		1070
THORIUM-230	pci/l	15	< 0.2

Location 0604
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1992	4/8/1992	7/8/1992	10/7/1992	1/6/1993	4/6/1993	7/13/1993	10/6/1993	1/6/1994
ALUMINUM	mg/l	5	57.1	52.4	73.2	66.2	45.1	45.5	39.1	30	47.8
ARSENIC	mg/l	0.05	< 0.001	0.003	0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.02	0.02	0.029	< 0.01	0.01	0.022	< 0.01	0.017	0.02
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	31.6	40.8	33.3	35.5	56.3	62	62.7	47.6	52.6
COBALT	mg/l	0.05	0.34	0.36	0.37	0.37	0.36	0.37	0.35	0.36	0.37
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	20.5	17.8	21.8	19.9	14.5	14.5	14.2	13.5	13
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.41	0.4	0.5	0.42	0.44	0.49	0.62	0.43	0.43
SELENIUM	mg/l	0.01	0.013	< 0.001	< 0.001	< 0.001	0.006	0.002	0.002	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4554	4691	4669	4860	4042	4639	4973	4744	4543
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6837	7106	6654	7185	5855	7409	7711	6891	7520
URANIUM	mg/l	5	0.0601	0.003	0.005	0.004	0.009	0.006	< 0.0003	0.0059	0.003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	< 0	< 0	< 0	< 0	< 0
GROSS ALPHA	pci/l	15	4	3.8	3.8	6.9	6.1	3.8	3.2	9	18.9
NITRATE (NO3)	mg/l	190	35.4	41.4	49.2	15.7	88.6	89.1	84.4	91.8	97.6
PH (FIELD)	pH units		3.8	3.8	3.7	4.1	4.3	4.4	4.4	4.5	4.3
PH (LAB)	pH units		4.11	4.24	4.22	4.04	4.45	4.36	4.3	4.24	4.32
RADIUM-226	pci/l	5	3.9	3.6	5.6	6.8	5.7	3.3	2.4	5.6	5.7
RADIUM-228	pci/l	5	20.6	15.3	11.7	11.6	7.6	12	6.9	2.3	8.2
RADIUM 226 and 228	pci/l	5	24.5	18.9	17.3	18.4	13.3	15.3	9.3	7.9	13.9
SPECIFIC CONDUCTANCE	umhos/cm										4500
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0604
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/12/1994	7/20/1994	10/4/1994	1/4/1995	4/5/1995	7/6/1995	10/3/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	39.4	27.2	41.8	26.1	30.5	32	25.1	26.2	22
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.02	< 0.01	< 0.01	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	51.6	60.6	60	62.6	53	60.2	58	54.5	64.2
COBALT	mg/l	0.05	0.28	0.3	0.4	0.32	< 0.01	0.35	0.32	0.04	0.32
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	14.1	9.63	12.9	10.4	12	2.61	11.1	12	10.8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.41	0.39	0.57	0.42	0.5	0.4	0.38	< 0.05	0.36
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.031	0.031	< 0.001
SULFATE (SO4)	mg/l	2125	4838	4790	4935	5023	4870	4650	5010	4760	5180
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7215	7069	7504	7621	7614	6741	7616	7223	7638
URANIUM	mg/l	5	0.004	0.003	0.006	0.004	0.004	0.0035	0.0046	0.0034	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	< 0	< 0	< 0	0.5	< 0	< 0	< 0	2.5
GROSS ALPHA	pci/l	15	24.9	29.7	13.5	16.8	16.6	15.3	15.5	9	5.3
NITRATE (NO3)	mg/l	190	90.7	89.2	92.5	86.9	92.5	87.7	87.6	96.1	100
PH (FIELD)	pH units		4.4	4.5	4.5	4.4	4.5	4.5	4.6	4.7	4.7
PH (LAB)	pH units		4.39	4.33	4.38	4.5	4.5	4.42	4.49	4.43	4.58
RADIUM-226	pci/l	5	7.7	10	5.2	5.1	5	3.8	5.3	3.1	2.1
RADIUM-228	pci/l	5	8	13	5.4	7.7	7.6	5.7	17.1	2.2	6.9
RADIUM 226 and 228	pci/l	5	15.7	23	10.6	12.8	12.6	9.5	22.4	5.3	9
SPECIFIC CONDUCTANCE	umhos/cm				5000					5500	5500
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0604
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997	1/15/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	26.3	24.9	21.1	< 0.1	21.4	21.9	18.1	16.9	20.8
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	0.01	< 0.01	0.01	0.01	0.01	0.01	0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.006	0.007	0.006
CHLORIDE	mg/l	250	64.3	57.9	57	45	69.2	62.1	75.1	60.9	61.5
COBALT	mg/l	0.05	0.36	0.35	0.36	< 0.01	0.35	0.4	0.37	0.34	0.36
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	12.7	11.4	11.4	1.87	12.4	12.6	11.8	10.7	12.5
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.41	0.42	0.4	< 0.05	0.38	0.43	0.41	0.39	0.41
SELENIUM	mg/l	0.01	< 0.001	0.002	< 0.001	0.038	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4610	4708	4830	3370	5050	4790	5100	4300	4600
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7742	7690	7560	7650	7740	7590	7530	7570	7600
URANIUM	mg/l	5	0.0034	0.0011	0.004	0.003	0.003	0.004	0.0032	0.0031	0.0031
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		< 0	0.9	3.9	3	3.4	5.1	2.9	7.4	4.1
GROSS ALPHA	pci/l	15	3.1	3.3	4.7	19.8	4	4.6	3.1	4.6	3.7
NITRATE (NO3)	mg/l	190	83.2	88.7	74.9	87.9	83.8	77.3	89.8	87.4	80.7
PH (FIELD)	pH units		4.4	4.8	4.8	4.6	5.5	4.5	4.7	4.5	4.9
PH (LAB)	pH units		4.48	4.52	4.61	4.56	4.6	4.63	4.61	4.73	4.64
RADIUM-226	pci/l	5	2.5	2.3	2.5	5.2	2.3	2.3	2.1	3.3	1.6
RADIUM-228	pci/l	5	< 1	7.4	8.8	6.8	7.2	3.8	6	7	4.3
RADIUM 226 and 228	pci/l	5	2.5	9.7	11.3	12	9.5	6.1	8.1	10.3	5.9
SPECIFIC CONDUCTANCE	umhos/cm		4000	6000		5500	5500	5500	4700	6600	6690
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0604
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/3/2000	7/11/2000
ALUMINUM	mg/l	5	18.7	20.2	20.4	15.7	27	20	6.5	14.5
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	0.01	0.01	0.01	0.01	< 0.01	0.01	< 0.01	0.01
CADMIUM	mg/l	0.01	0.006	0.011	0.015	0.009	0.015	0.01	0.022	0.011
CHLORIDE	mg/l	250	61.6	64.9	62.7	55.3	50.9	41.9	56.5	53.7
COBALT	mg/l	0.05	0.37	0.37	0.41	0.42	0.53	0.38	0.23	0.31
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	12	12.8	12.6	14	16.1	11.2	8.81	10.1
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.45	0.4	0.44	0.62	0.46	0.46	0.26	0.31
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4860	5100	4740	5120	6000	4500	4300	4470
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7760	7830	7980	8030	8150	8180	7500	7380
URANIUM	mg/l	5	0.0078	0.0033	0.0034	0.0071	0.0033	0.0032	0.0027	0.0022
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		3.7	3	5	3	4	4	6	5
GROSS ALPHA	pci/l	15	3.4	4.3	3.2	3.7	4.3	4.7	4.8	4.2
NITRATE (NO3)	mg/l	190	89.3	70.7	92.4	73.2	58.6	67.9	84.6	90.2
PH (FIELD)	pH units		4.55	4.7	4.6	4.6	4.42	4.6	4.6	4.57
PH (LAB)	pH units		4.63	4.6	4.69	4.61	4.64	4.64	4.75	4.67
RADIUM-226	pci/l	5	2.4	2.4	4	3	2.5	2.3	4.3	2.5
RADIUM-228	pci/l	5	4.1	7.4	7.8	5.2	2.9	6	6.6	6
RADIUM 226 and 228	pci/l	5	6.5	9.8	11.8	8.2	5.4	8.3	10.9	8.5
SPECIFIC CONDUCTANCE	umhos/cm		6890	6780	7130	6540	6970	7040	6410	6450
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0604
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/3/2000	1/10/2001	4/3/2001	7/17/2001	10/2/2001	1/14/2002	4/9/2002	7/16/2002
ALUMINUM	mg/l	5	10.5	14	12.8	14.1	12.5	15.3	13.2	11.4
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.006	0.007	< 0.005
CHLORIDE	mg/l	250	48.3	61.7	57.9	66.9	77.8	67.5	58.1	65
COBALT	mg/l	0.05	0.26	0.29	0.32	0.29	0.26	0.32	0.33	0.28
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	8.17	9.38	9.52	9.9	9.45	11	11.2	10.4
MOLYBDENUM	mg/l	1	0.23	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.25	0.35	0.39	0.36	0.35	0.4	0.4	0.28
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4250	4390	4730	4270	4100	4540	4390	4460
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7220	7280	7260	7470	7420	7390	7500	7500
URANIUM	mg/l	5	0.002	0.0019	0.0018	0.002	0.0014	0.0016	0.0016	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		6	7	8	7	4.9	6.7	6.7	6.7
GROSS ALPHA	pci/l	15	4.3	3.2	3.9	4.1	4.3	4.5	3.3	5.3
NITRATE (NO3)	mg/l	190	84.9	75.9	75.8	73.1	70	66	70.1	71.7
PH (FIELD)	pH units		4.68	4.94	4.8	4.89	4.78	4.86	4.7	4.84
PH (LAB)	pH units		4.69	4.74	4.77	4.73	4.7	4.8	4.73	4.78
RADIUM-226	pci/l	5	1.9	2.1	1.9	2.2	3.9	2.9	2.6	2.9
RADIUM-228	pci/l	5	7.5	7.6	7.1	6	7.6	9.3	4.5	3.5
RADIUM 226 and 228	pci/l	5	9.4	9.7	9	8.2	11.5	12.2	7.1	6.4
SPECIFIC CONDUCTANCE	umhos/cm		6430	6420	6160	6320	6040	6040	5060	6120
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/9/2002
ALUMINUM	mg/l	5	14.6
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	56.5
COBALT	mg/l	0.05	0.26
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	9.67
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	0.3
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	4380
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5790
URANIUM	mg/l	5	0.0018
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		7.3
GROSS ALPHA	pci/l	15	9.6
NITRATE (NO3)	mg/l	190	68.6
PH (FIELD)	pH units		5.36
PH (LAB)	pH units		4.79
RADIUM-226	pci/l	5	3.3
RADIUM-228	pci/l	5	5.6
RADIUM 226 and 228	pci/l	5	8.9
SPECIFIC CONDUCTANCE	umhos/cm		6330
THORIUM-230	pci/l	15	< 0.2

Location 0614
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1992	4/8/1992	7/8/1992	10/7/1992	1/6/1993	4/6/1993	7/13/1993	10/6/1993	1/6/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.003	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	287	279	274	273	270	288	262	244	242
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.12	0.14	0.17	0.15	0.19	0.24	0.16	0.17	0.17
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.059	0.004	0.003	0.005	0.012	0.003	0.008	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	3376	3603	3249	3248	3008	3518	3370	3505	3435
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7026	7207	6583	6914	6464	7340	7485	7439	7380
URANIUM	mg/l	5	0.039	0.051	0.05	0.078	0.082	0.072	0.066	0.037	0.048
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1268	1568	1512	803	1459	1620	1454	1431	1221
GROSS ALPHA	pci/l	15	< 1	< 1	1.1	1.8	3.9	2.1	1.9	2.9	2.6
NITRATE (NO3)	mg/l	190	123	70.2	116	15.8	117	47.5	146	166	192
PH (FIELD)	pH units		6.3	6.3	6.2	6.4	6.4	6.5	6.5	6.7	6.7
PH (LAB)	pH units		7.34	7.48	7.51	8.08	7.04	7.26	7.11	6.95	7.14
RADIUM-226	pci/l	5	0.4	0.8	1	1.5	3.7	1.9	1.6	2.8	1.6
RADIUM-228	pci/l	5	< 1	4	3.4	4.1	1.4	5.1	3.2	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.4	4.8	4.4	5.6	5.1	7	4.8	2.8	1.6
SPECIFIC CONDUCTANCE	umhos/cm										6000
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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

Chemical Name	Unit	ROD Cleanup Level	4/12/1994	7/20/1994	10/4/1994	1/4/1995	4/4/1995	7/6/1995	10/3/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	0.002	0.003
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	242	231	246	237	277	241	205	204	221
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.21	0.24	0.41	0.23	0.33	0.3	0.31	0.35	0.32
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.004	0.001	< 0.001	< 0.001	0.001	0.003	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3743	4076	4430	4176	4048	4000	4040	4260	4780
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7496	7490	7700	7528	7731	7816	7857	7886	7896
URANIUM	mg/l	5	0.052	0.054	0.059	0.04	0.044	0.052	0.045	0.047	0.05
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1174	1322	1465	1330	1370	1331	1357	1352	1286
GROSS ALPHA	pci/l	15	1.7	3.8	4.1	5.6	5.7	22.8	6.2	12	3.5
NITRATE (NO3)	mg/l	190	170	140	149	155	171	154	179	179	182
PH (FIELD)	pH units		6.6	6.5	6.6	6.5	6.5	6.5	6.5	6.6	6.5
PH (LAB)	pH units		6.96	7.28	7.54	7.38	6.9	7.93	7.71	7.2	7.92
RADIUM-226	pci/l	5	1.5	2.8	1.2	1.8	1.2	7.2	0.9	6	1.2
RADIUM-228	pci/l	5	< 1	1.9	1.8	2.4	2.9	8.4	1.1	1.2	3.4
RADIUM 226 and 228	pci/l	5	1.5	4.7	3	4.2	4.1	15.6	2	7.2	4.6
SPECIFIC CONDUCTANCE	umhos/cm				7200					7500	7500
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	< 0.2	0.7	< 0.2

Location 0614
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/21/1997	4/8/1997	7/8/1997	10/7/1997	1/15/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	0.6	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	238	223	201	218	233	252	267	218	261
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.37	0.41	0.41	0.39	0.42	0.47	0.44	0.32	0.34
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.002	< 0.001	0.074	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4210	4394	4355	4360	4520	4170	4200	3740	3800
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8045	8120	7850	7970	8100	7930	7980	7930	7990
URANIUM	mg/l	5	0.053	0.044	0.038	0.049	0.043	0.051	0.059	0.06	0.0631
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1313	1320	1272	1280	1290	1320	1330	1440	1490
GROSS ALPHA	pci/l	15	5.3	2.1	< 1	20.4	< 1	7.8	< 1	< 1	2.3
NITRATE (NO3)	mg/l	190	181	189	188	226	223	200	214	162	202
PH (FIELD)	pH units		6.3	6.5	6	6.6	6.8	6.4	6.9	6.8	6.8
PH (LAB)	pH units		6.99	6.89	7.01	7.79	7.81	7.62	8.01	7.72	7.96
RADIUM-226	pci/l	5	4.9	1.6	1.1	8.2	1.5	4.3	1.4	2.2	2.3
RADIUM-228	pci/l	5	< 1	< 1	3.6	3.2	< 1	3.8	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	4.9	1.6	4.7	11.4	1.5	8.1	1.4	2.2	2.3
SPECIFIC CONDUCTANCE	umhos/cm		7000	7800		7500	7500	7000	7000	8690	8340
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0614
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/2/2000	7/11/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	261	262	261	239	248	217	236	229
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.26	0.23	0.26	0.23	0.25	0.24	0.34	0.22
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	0.001	< 0.001	0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4050	4000	3780	4000	4410	3430	3620	3760
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7730	7900	7910	7680	7710	7650	7600	7600
URANIUM	mg/l	5	0.0732	0.0682	0.0641	0.0672	0.001	0.0579	0.0678	0.0542
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1380	1520	1590	1280	1362	1470	1450	1430
GROSS ALPHA	pci/l	15	< 1	< 1	3.3	< 1	6.8	4.3	7	< 1
NITRATE (NO3)	mg/l	190	115	85.5	81.3	90.7	83	97.4	114	109
PH (FIELD)	pH units		7.16	6.9	6.7	7	6.8	6.8	6.5	6.53
PH (LAB)	pH units		7.87	7.86	7.9	7.73	7.84	8.07	7.56	7.53
RADIUM-226	pci/l	5	0.6	0.9	2.9	0.9	4.8	3.8	1.1	0.6
RADIUM-228	pci/l	5	< 1	2.2	3.6	1.2	< 1	1.1	5.7	3.5
RADIUM 226 and 228	pci/l	5	0.6	3.1	6.5	2.1	4.8	4.9	6.8	4.1
SPECIFIC CONDUCTANCE	umhos/cm		8450	8170	8440	7700	7770	7860	7670	7880
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0614
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/3/2000	1/10/2001	4/2/2001	7/16/2001	10/2/2001	1/14/2002	4/2/2002	7/10/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	241	268	248	320	357	332	312	286
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.2	0.24	0.27	0.24	0.22	0.28	0.28	0.23
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.001	0.001	0.001	0.001	0.003	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4250	3720	3880	3300	3300	3460	3780	3360
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7420	7380	7350	7330	7270	7110	7120	6980
URANIUM	mg/l	5	0.053	0.051	0.056	0.052	0.0478	0.0501	0.0467	0.0508
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1420	1440	1420	1430	1500	1490	1460	1430
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	1.5	2.2
NITRATE (NO3)	mg/l	190	104	93.3	101	96.9	93.5	86.7	82.7	82
PH (FIELD)	pH units		6.55	7.1	6.635	6.73	6.61	6.64	6.56	6.45
PH (LAB)	pH units		7.04	7.38	7.28	7.02	7.5	7.3	7.6	7.31
RADIUM-226	pci/l	5	0.7	1.2	0.8	0.6	0.9	1.1	< 0.2	1.1
RADIUM-228	pci/l	5	3.7	3.9	< 1	2.4	3.9	5.4	< 1	2.3
RADIUM 226 and 228	pci/l	5	4.4	5.1	0.8	3	4.8	6.5		3.4
SPECIFIC CONDUCTANCE	umhos/cm		7970	7980	7560	7550	7330	7230	7260	7120
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0614
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/9/2002
ALUMINUM	mg/l	5	< 0.1
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	286
COBALT	mg/l	0.05	< 0.01
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	0.32
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	< 0.05
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	3080
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5220
URANIUM	mg/l	5	0.0439
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		1440
GROSS ALPHA	pci/l	15	1.3
NITRATE (NO3)	mg/l	190	79.2
PH (FIELD)	pH units		6.05
PH (LAB)	pH units		7.66
RADIUM-226	pci/l	5	0.9
RADIUM-228	pci/l	5	< 1
RADIUM 226 and 228	pci/l	5	0.9
SPECIFIC CONDUCTANCE	umhos/cm		7280
THORIUM-230	pci/l	15	< 0.2

Location EPA02
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/23/1992	4/2/1992	7/16/1992	10/15/1992	1/14/1993	4/15/1993	7/21/1993	10/12/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	0.13	< 0.1	< 0.1	< 0.1	< 0.1	0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	32.6	29.5	33.4	36.1	29	30.4	24.3	29.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.77	2.46	2.3	3.23	2.27	2.15	1.59	2.11
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2364	2486	2606	2890	2201	2292	2247	2274
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3478	3799	3885	4554	3380	3534	3321	3692
URANIUM	mg/l	5	0.003	0.009	0.001	< 0.0003	0.001	0.001	< 0.0003	0.002
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		226	282	237	198	276	270	315	300
GROSS ALPHA	pci/l	15	< 1	< 1	1.9	1.3	< 1	< 1	< 1	4.5
NITRATE (NO3)	mg/l	190	< 0.01	< 0.01	0.2	< 0.1	< 0.1	0.2	< 0.1	< 0.1
PH (FIELD)	pH units		6.5	6.4	6.5	6.3	6.6	6.6	6.6	6.7
PH (LAB)	pH units		7.02	7.86	6.71	7.02	7.12	7.68	7.43	6.5
RADIUM-226	pci/l	5	0.3	0.2	1.8	1.2	0.2	0.5	0.7	1.4
RADIUM-228	pci/l	5	< 1	4.4	6.3	6.3	< 1	< 1	2.7	2.1
RADIUM 226 and 228	pci/l	5	0.3	4.6	8.1	7.5	0.2	0.5	3.4	3.5
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA02
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/19/1994	7/26/1994	10/11/1994	1/10/1995	4/6/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	0.13	< 0.1	0.16	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	26.3	24.3	26.6	25.2	27.5	26.5	25.4	24.2
COBALT	mg/l	0.05	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.78	2	1.81	1.52	1.82	1.59	1.47	1.48
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1765	1771	2026	2057	2057	2070	1705	1741
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2674	2781	3353	3036	3316	3267	2674	2782
URANIUM	mg/l	5	< 0.0003	0.001	0.002	0.002	0.002	0.002	0.0012	0.0011
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		300	284	273	304	294	295	325	321
GROSS ALPHA	pci/l	15	8.1	4.1	< 1	1.2	2.8	3.8	3.4	1.1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.7	6.6	6.7	6.7	6.6	6.7	6.8	6.7
PH (LAB)	pH units		7.1	8.05	6.93	7.7	7.16	6.91	7.14	7.43
RADIUM-226	pci/l	5	0.7	0.8	< 0.2	1	1.1	0.6	1	1.2
RADIUM-228	pci/l	5	4.3	2.1	< 1	< 1	< 1	2.4	< 1	< 1
RADIUM 226 and 228	pci/l	5	5	2.9		1	1.1	3	1	1.2
SPECIFIC CONDUCTANCE	umhos/cm		2500			2600			3000	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA02
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997	10/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	24.7	22.7	29	24.5	29.9	26.4	27.7	31.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.48	1.52	1.58	1.53	1.46	1.49	1.42	1.49
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1791	1831	1746	1866	1883	1775	1780	1740
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2801	3018	3042	3150	3000	2970	3090	2920
URANIUM	mg/l	5	0.0026	0.0008	0.0011	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		334	321	312	315	318	325	321	322
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.7	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.8	6.9	6.7	6.7	6.9	6.7	6.5	6.6
PH (LAB)	pH units		7.73	7.7	6.88	7.17	7.75	7.77	7.46	7.64
RADIUM-226	pci/l	5	1	0.7	0.9	0.8	1.8	< 0.2	0.9	0.5
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	2.5	< 1
RADIUM 226 and 228	pci/l	5	1	0.7	0.9	0.8	1.8		3.4	0.5
SPECIFIC CONDUCTANCE	umhos/cm		3000		2500	2400		2300	2500	2400
THORIUM-230	pci/l	15	< 0.2	0.7	0.9	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA02
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/14/1998	7/14/1998	10/6/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	26.8	26.2	22.3	28.6	27.8	31.3	29	45.7
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.75	1.6	1.5	1.94	1.44	1.64	1.35	2.21
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2000	1830	1700	2150	1740	1800	1650	1970
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3060	3130	3120	3390	3060	3110	3080	3640
URANIUM	mg/l	5	0.0009	0.0008	0.0009	0.0007	0.0028	0.0009	0.0012	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		318	316	313	292	311	304	307	268
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	1.8	2.1	1.8
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 1
PH (FIELD)	pH units		6.5	6.4	7	6.6	6.8	6.7	6.7	6.64
PH (LAB)	pH units		7.76	7.47	7.66	7.82	7.65	7.69	7.67	7.65
RADIUM-226	pci/l	5	1	1.1	0.9	1	0.9	1.1	1.2	0.6
RADIUM-228	pci/l	5	< 1	< 1	< 1	2.5	2.5	< 1	2.1	2.2
RADIUM 226 and 228	pci/l	5	1	1.1	0.9	3.5	3.4	1.1	3.3	2.8
SPECIFIC CONDUCTANCE	umhos/cm		900	5740	3410	36900	3290	3360	3220	3600
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA02
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000	5/2/2000	7/10/2000	10/2/2000	1/15/2001	4/2/2001	7/16/2001	10/9/2001
ALUMINUM	mg/l	5	0.12	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	0.004	< 0.001	0.001	< 0.001	0.002
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	28.9	20.2	20.4	21.2	25.8	23.7	28.3	25.1
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.58	1.29	1.27	1.07	1.21	1.14	1.2	1.08
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1700	1490	1540	1740	1690	1600	1630	1420
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3090	2800	2740	2670	2680	2730	2770	2760
URANIUM	mg/l	5	0.0015	0.0016	0.0011	0.0011	0.0015	0.0005	0.0004	0.0005
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		310	296	334	330	350	425	430	371
GROSS ALPHA	pci/l	15	< 1	2.2	1.4	2.6	1.2	2.1	1.6	< 1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.7	6.6	6.67	6.7	6.8	6.87	7.03	6.67
PH (LAB)	pH units		7.63	7.72	7.42	7.49	7.34	7.39	7.57	7.7
RADIUM-226	pci/l	5	0.8	1.7	1.5	1.8	1.2	1.4	1.4	1.3
RADIUM-228	pci/l	5	< 1	< 1	3.9	< 1	2.8	< 1	4.3	2.6
RADIUM 226 and 228	pci/l	5	0.8	1.7	5.4	1.8	4	1.4	5.7	3.9
SPECIFIC CONDUCTANCE	umhos/cm		3330	2880	2940	2960	2980	2800	2840	2880
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA02
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/2002	4/9/2002	7/16/2002	10/15/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	0.002
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	24.8	25.4	24.6	21
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.34	1.28	1.28	1.12
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1550	1570	1510	1700
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2730	2760	2760	2630
URANIUM	mg/l	5	0.001	0.0008	< 0.0003	0.0009
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		355	379	448	432
GROSS ALPHA	pci/l	15	1.3	1.8	1.7	< 1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.96	6.83	6.14	6.14
PH (LAB)	pH units		7.2	7.29	7.54	7.72
RADIUM-226	pci/l	5	1.3	1.1	1.7	1.7
RADIUM-228	pci/l	5	3.3	1.7	< 1	3
RADIUM 226 and 228	pci/l	5	4.6	2.8	1.7	4.7
SPECIFIC CONDUCTANCE	umhos/cm		2830	2240	2770	2860
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA04
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/23/1992	4/2/1992	7/15/1992	10/14/1992	1/13/1993	4/15/1993	7/20/1993	10/12/1993
ALUMINUM	mg/l	5	0.14	< 0.1	< 0.1	0.1	0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	42.4	37.3	41.2	40.2	38.8	39.4	37.4	34.3
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.95	3.34	3.19	3.41	3.47	3.55	2.81	3.08
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2997	2963	3072	3164	3107	3006	3081	2962
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4263	4554	4808	4904	4631	4684	4351	4585
URANIUM	mg/l	5	0.007	0.001	0.004	0.029	< 0.0003	< 0.0003	< 0.0003	0.003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		184	210	173	174	177	175	203	189
GROSS ALPHA	pci/l	15	1	< 1	2	2.1	1.1	1.2	1.5	5.2
NITRATE (NO3)	mg/l	190	< 0.01	< 0.01	0.2	< 0.1	< 0.1	0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.4	6.4	6.6	6.8	6.6	6.6	6.7	7.1
PH (LAB)	pH units		6.52	7.82	7.55	6.87	6.98	7.05	7.11	6.47
RADIUM-226	pci/l	5	1.2	0.5	1.9	1.9	1	1	1.1	1.2
RADIUM-228	pci/l	5	< 1	5.4	5	7.1	13.8	1.1	3.5	2.7
RADIUM 226 and 228	pci/l	5	1.2	5.9	6.9	9	14.8	2.1	4.6	3.9
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA04
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/20/1994	7/26/1994	10/11/1994	1/10/1995	4/6/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	< 0.1	0.15	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	0.001	< 0.001	0.002
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	35.8	37.9	35.7	37.9	38.3	39.3	35.1	33.1
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.59	2.77	3.4	2.95	3.42	3.25	2.76	2.89
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3119	3065	2863	3133	3090	3268	2490	2641
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4530	4612	4420	4528	4598	4715	3894	4004
URANIUM	mg/l	5	0.001	0.001	0.002	0.001	0.001	0.001	< 0.0003	0.0008
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		178	167	172	195	190	189	253	217
GROSS ALPHA	pci/l	15	6.6	6.7	9.7	5.2	5.6	6.1	5	2.2
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.8	6.7	6.7	6.6	6.5	6.6	6.8	6.7
PH (LAB)	pH units		6.88	6.44	6.45	7.42	6.98	6.99	7.44	7.04
RADIUM-226	pci/l	5	1.1	2	1.9	1.6	1.7	1.4	0.7	1.5
RADIUM-228	pci/l	5	3	3	5.1	2.3	2.5	3	3.1	4.2
RADIUM 226 and 228	pci/l	5	4.1	5	7	3.9	4.2	4.4	3.8	5.7
SPECIFIC CONDUCTANCE	umhos/cm		3400			3200			3000	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	0.2	< 0.2	0.4	0.4

Location EPA04
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997	10/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	34.4	36.6	38	35.3	44	39.4	38.9	49.1
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.83	3.2	2.85	2.89	2.82	2.97	2.58	3.06
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2637	3002	2580	2721	2895	2829	2800	2900
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4093	4412	4161	4390	4290	4390	4320	4480
URANIUM	mg/l	5	0.001	< 0.0003	0.0009	< 0.0003	< 0.0003	0.001	0.0009	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		257	223	216	196	222	222	227	209
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	2.1	2.3	< 1	< 1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.8	6.9	6.8	6.6	6.8	6.4	6.5	6.4
PH (LAB)	pH units		7.89	7.63	6.76	7.12	7.51	7.38	7.22	7.6
RADIUM-226	pci/l	5	1.1	1.2	0.5	1.2	1.5	0.9	1	0.6
RADIUM-228	pci/l	5	2.4	3.3	< 1	< 1	< 1	1.2	4.1	< 1
RADIUM 226 and 228	pci/l	5	3.5	4.5	0.5	1.2	1.5	2.1	5.1	0.6
SPECIFIC CONDUCTANCE	umhos/cm		3300		3200	3300		3100	3400	3300
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA04
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/14/1998	7/14/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	41.9	35.1	36.7	36.1	37.2	43.8	40	39
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.25	2.88	2.98	2.87	2.78	3	2.33	2.93
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3100	3010	3000	3000	3000	2860	2550	2780
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4480	4480	4620	4520	4590	4590	4790	4830
URANIUM	mg/l	5	0.0011	0.0011	0.0009	0.001	0.0033	0.0017	0.0013	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		212	209	200	218	214	208	207	641
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	2.2	1.5	1.4
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.11	< 0.1	< 0.1
PH (FIELD)	pH units		6.6	6.7	6.6	6.41	6.6	6.5	6.5	6.6
PH (LAB)	pH units		7.85	7.08	7.25	7.84	7.53	7.46	7.11	7.94
RADIUM-226	pci/l	5	1	1.5	0.6	1.2	1.5	2.2	0.9	1.2
RADIUM-228	pci/l	5	< 1	< 1	3.7	3.9	4.2	3.5	1.5	3.3
RADIUM 226 and 228	pci/l	5	1	1.5	4.3	5.1	5.7	5.7	2.4	4.5
SPECIFIC CONDUCTANCE	umhos/cm		725	4580	4430	4570	4430	4410	4460	4360
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA04
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000	5/15/2000	7/11/2000	10/3/2000	1/9/2001	4/3/2001	7/17/2001	10/9/2001
ALUMINUM	mg/l	5	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	0.007	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	36.2	37.5	38.8	36.5	43.4	42.1	48.3	46.3
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.1	4.15	3.37	2.66	3.28	3.37	3.22	2.65
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2730	3000	2910	2770	2890	3230	2690	2700
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4680	4810	4790	4740	4680	4620	4780	4770
URANIUM	mg/l	5	0.0021	0.0006	0.0006	0.0005	0.0004	< 0.0003	< 0.0003	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		204	173	171	175	174	177	172	174
GROSS ALPHA	pci/l	15	< 1	1.3	1.8	1.4	2.2	1.8	2.2	< 1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.5	6.7	6.54	6.61	6.73	6.7	6.94	6.55
PH (LAB)	pH units		7.51	7.42	7.07	7.21	7.3	7.06	7.02	6.8
RADIUM-226	pci/l	5	1	1.9	< 2	1.3	1.5	1.2	1.1	1.5
RADIUM-228	pci/l	5	< 1	3.8	2.4	3.5	5	3.8	5.8	3.7
RADIUM 226 and 228	pci/l	5	1	5.7	2.4	4.8	6.5	5	6.9	5.2
SPECIFIC CONDUCTANCE	umhos/cm		4380	4260	4500	4580	4560	4270	4430	4350
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA04
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/2002	4/9/2002	7/16/2002	10/15/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	46.2	39.5	43.1	40
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.59	3.53	3.37	3.4
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2980	2880	2870	3260
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4730	4790	4740	4240
URANIUM	mg/l	5	< 0.0003	< 0.0003	< 0.0003	0.0005
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		178	167	163	179
GROSS ALPHA	pci/l	15	< 1	1.3	< 1	< 1
NITRATE (NO3)	mg/l	190	0.16	0.31	< 0.1	< 0.1
PH (FIELD)	pH units		6.75	6.54	6.52	6.32
PH (LAB)	pH units		6.9	7.27	7.53	7.06
RADIUM-226	pci/l	5	1.5	1.3	1.4	1.7
RADIUM-228	pci/l	5	5.4	2	< 1	< 1
RADIUM 226 and 228	pci/l	5	6.9	3.3	1.4	1.7
SPECIFIC CONDUCTANCE	umhos/cm		4280	3470	4210	4300
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA05
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/23/1992	4/2/1992	7/15/1992	10/15/1992	1/12/1993	4/15/1993	7/20/1993	10/12/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	183	289	192	215	214	179	224	197
COBALT	mg/l	0.05	0.06	0.05	0.06	0.1	0.12	0.05	0.07	0.08
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3	2.56	2.31	1.96	1.65	1.95	1.36	1.39
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.08	< 0.05	0.07	0.12	0.06	0.08	0.09	0.08
SELENIUM	mg/l	0.01	< 0.001	0.013	0.003	0.005	0.03	0.003	0.005	0.004
SULFATE (SO4)	mg/l	2125	3679	4080	3934	4186	4407	4024	3990	4387
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6207	7719	7158	7824	8011	7246	6893	7441
URANIUM	mg/l	5	0.064	0.002	0.005	0.105	0.077	0.036	0.073	0.084
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		312	1091	878	857	880	926	1000	1177
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.9	1.5	< 1	1.8	5.3
NITRATE (NO3)	mg/l	190	26.3	28.9	29.6	67.4	93.5	118	91.6	72
PH (FIELD)	pH units		6.1	5.9	6.2	6.2	6.1	6.1	6.2	6.5
PH (LAB)	pH units		6.81	7.21	7.18	6.85	6.78	7.01	7.14	6.76
RADIUM-226	pci/l	5	0.7	0.2	0.9	1.3	1	0.3	1.5	1.9
RADIUM-228	pci/l	5	1	2.8	4.5	< 1	2.2	< 1	2.7	2.3
RADIUM 226 and 228	pci/l	5	1.7	3	5.4	1.3	3.2	0.3	4.2	4.2
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA05
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/19/1994	7/26/1994	10/11/1994	1/11/1995	4/11/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	0.16	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	208	121	209	204	192	245	205	201
COBALT	mg/l	0.05	0.07	0.12	0.07	0.09	0.06	< 0.01	0.065	0.05
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.45	1.19	1.27	1.02	1.11	0.85	0.6	0.53
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.09	< 0.05	0.05	0.14	0.09	< 0.05	0.06	0.05
SELENIUM	mg/l	0.01	0.002	0.003	0.002	0.002	0.003	0.004	0.004	0.012
SULFATE (SO4)	mg/l	2125	4491	4651	4492	4448	4533	4895	4604	4529
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8037	8035	7684	7630	8106	8693	8075	8070
URANIUM	mg/l	5	0.1	0.101	0.102	0.095	0.109	0.102	0.09	0.1132
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1109	693	1116	1077	1032	1168	1150	1258
GROSS ALPHA	pci/l	15	3.6	10.6	12.8	2.3	6.4	3.6	5.6	2.1
NITRATE (NO3)	mg/l	190	95.2	91	91.9	99.8	87.3	96	82.9	86.6
PH (FIELD)	pH units		6.5	6.3	6.3	6.3	6.3	6.5	6.5	6.5
PH (LAB)	pH units		7.19	7.72	7.32	7.41	7.02	6.85	7.41	7.56
RADIUM-226	pci/l	5	0.8	1.9	1.1	2.1	1.1	0.7	1.1	1.4
RADIUM-228	pci/l	5	1.2	5.7	7.7	< 1	3.4	1.9	< 1	4.8
RADIUM 226 and 228	pci/l	5	2	7.6	8.8	2.1	4.5	2.6	1.1	6.2
SPECIFIC CONDUCTANCE	umhos/cm		6500			6000			6500	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.7

Location EPA05
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997	10/21/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.11
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	198	211	221	211	246	221	216	254
COBALT	mg/l	0.05	0.06	0.05	0.06	0.06	0.06	0.05	< 0.01	0.07
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.49	0.47	0.49	0.51	0.48	0.47	0.41	0.53
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.5
NICKEL	mg/l	0.2	< 0.05	0.05	0.06	0.06	0.05	0.06	0.05	0.06
SELENIUM	mg/l	0.01	0.018	0.001	0.004	0.002	0.003	0.024	0.006	0.018
SULFATE (SO4)	mg/l	2125	4420	5200	4404	4869	4620	4740	4570	4840
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7693	8569	8522	8870	8450	8670	8720	8610
URANIUM	mg/l	5	0.124	0.126	0.125	0.117	0.086	0.107	0.097	0.121
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1182	1221	1275	1294	1208	1220	1180	1240
GROSS ALPHA	pci/l	15	1.5	< 1	< 1	< 1	1.6	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	94	89.2	100	93.1	86.7	77.1	78.1	90.3
PH (FIELD)	pH units		6.6	6.7	6.4	6.4	6.5	6.4	6.3	6.7
PH (LAB)	pH units		7.52	7.54	6.87	7.29	7.81	7.65	7.43	7.7
RADIUM-226	pci/l	5	1.3	0.8	0.9	0.6	1.7	1.8	0.9	0.9
RADIUM-228	pci/l	5	1.2	2.7	< 1	< 1	< 1	< 1	< 1	3.3
RADIUM 226 and 228	pci/l	5	2.5	3.5	0.9	0.6	1.7	1.8	0.9	4.2
SPECIFIC CONDUCTANCE	umhos/cm		6400		7000	6500		6000	6000	6000
THORIUM-230	pci/l	15	< 0.2	0.7	< 0.2	< 0.2	2	< 0.2	< 0.2	< 0.2

Location EPA05
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/14/1998	7/14/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	223	195	201	198	192	191	198	191
COBALT	mg/l	0.05	0.07	0.06	0.06	0.05	0.04	0.06	0.05	0.04
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.63	0.57	0.54	0.53	0.53	0.53	0.49	0.59
MOLYBDENUM	mg/l	1	3.1	0.53	0.5	0.55	0.43	0.44	0.36	0.35
NICKEL	mg/l	0.2	< 0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.005	0.005	0.005	< 0.001	0.004	0.004	0.001
SULFATE (SO4)	mg/l	2125	5000	4720	4200	4680	4600	4160	4580	4180
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8290	8500	8620	8240	8160	8100	8130	7960
URANIUM	mg/l	5	0.239	0.147	0.173	0.139	0.149	0.13	0.127	0.124
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1100	1220	1210	1190	1140	1100	1090	1086
GROSS ALPHA	pci/l	15	5	< 1	< 1	2.2	< 1	3.5	2.2	< 1
NITRATE (NO3)	mg/l	190	81.2	83.7	67.7	80	71.2	76.4	73.9	64.2
PH (FIELD)	pH units		6.4	6.6	6.6	6.45	6.5	6.5	6.5	6.45
PH (LAB)	pH units		7.75	7.16	7.69	7.75	7.75	7.71	7.55	7.75
RADIUM-226	pci/l	5	2.4	1.4	1.3	1.4	1.1	1	1.6	1.2
RADIUM-228	pci/l	5	1.5	< 1	< 1	3.1	3.8	2.1	< 1	< 1
RADIUM 226 and 228	pci/l	5	3.9	1.4	1.3	4.5	4.9	3.1	1.6	1.2
SPECIFIC CONDUCTANCE	umhos/cm		1075	8060	7620	7800	7550	7320	7350	7290
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA05
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000	5/3/2000	7/11/2000	10/3/2000	1/9/2001	4/3/2001	7/17/2001	10/9/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	166	94	92.7	85.4	102	96.3	108	95.2
COBALT	mg/l	0.05	0.06	0.08	0.08	0.08	0.09	0.1	0.1	0.08
LEAD	mg/l	0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.51	1.23	1.16	1.09	1.24	1.39	1.26	0.98
MOLYBDENUM	mg/l	1	0.37	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.07	0.1	< 0.05	0.08	0.11	0.12	0.09	0.07
SELENIUM	mg/l	0.01	0.005	0.003	< 0.001	0.001	0.003	0.003	0.002	0.002
SULFATE (SO4)	mg/l	2125	3980	3160	3310	3060	3220	3460	2950	3000
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7920	5780	5720	5500	5560	5510	5520	5520
URANIUM	mg/l	5	0.111	0.0365	0.0219	0.015	0.016	0.015	0.007	0.007
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1050	458	415	354	362	353	267	240
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.4	1.5	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	53.2	42.3	42.5	37.5	35.2	36.3	37.8	35.8
PH (FIELD)	pH units		6.5	6.2	6.06	6.14	6.32	6.3	6.65	5.99
PH (LAB)	pH units		7.78	7.56	7.09	6.99	6.81	7.22	6.71	6.5
RADIUM-226	pci/l	5	0.9	0.7	0.7	0.8	1.3	1.2	1.4	1.7
RADIUM-228	pci/l	5	< 1	2	2.3	2.7	< 1	< 1	4.1	2.3
RADIUM 226 and 228	pci/l	5	0.9	2.7	3	3.5	1.3	1.2	5.5	4
SPECIFIC CONDUCTANCE	umhos/cm		7000	5480	5410	5370	5320	5000	5040	4940
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA05
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/2002	4/9/2002	7/16/2002	10/15/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	97.8	88.8	77.3	75.1
COBALT	mg/l	0.05	0.11	0.1	0.1	0.09
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.28	1.23	1.25	1.17
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.13	0.11	0.09	0.1
SELENIUM	mg/l	0.01	0.002	0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3290	3150	3170	3580
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5430	5450	5410	4610
URANIUM	mg/l	5	0.0061	0.0046	< 0.0003	0.0026
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		230	199	179	168
GROSS ALPHA	pci/l	15	1.2	1.5	2.7	2.7
NITRATE (NO3)	mg/l	190	31	29.8	30.7	12.3
PH (FIELD)	pH units		6.73	6.05	6.58	6.3
PH (LAB)	pH units		6.6	6.8	7.16	6.77
RADIUM-226	pci/l	5	1.7	0.8	1.5	1.8
RADIUM-228	pci/l	5	4.8	1.5	< 1	< 1
RADIUM 226 and 228	pci/l	5	6.5	2.3	1.5	1.8
SPECIFIC CONDUCTANCE	umhos/cm		4800	4010	4750	4840
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA07
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/16/1992	4/13/1992	7/15/1992	10/7/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993
ALUMINUM	mg/l	5	1.91	0.6	0.72	0.8	0.6	1.4	0.53	0.62
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	113	116	94.4	90.8	98.4	115	65.9	106
COBALT	mg/l	0.05	0.13	0.13	0.1	0.1	0.12	0.17	0.13	0.12
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	13.6	13.3	10.5	11	11.3	11.6	10.2	7.99
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.19	0.16	0.13	0.15	0.21	0.17	0.19	0.21
SELENIUM	mg/l	0.01	0.018	0.014	< 0.001	< 0.001	< 0.01	< 0.001	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	4409	4167	4088	4150	3675	4101	4208	4049
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6893	6768	6446	6406	5654	5787	6729	5989
URANIUM	mg/l	5	0.005	0.001	0.003	< 0.0003	0.007	< 0.0003	< 0.0003	0.006
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		43.8	68.6	95	112	134	108	144	142
GROSS ALPHA	pci/l	15	3	2.4	3	2.6	2.1	1.5	2.8	13
NITRATE (NO3)	mg/l	190	29.8	25.1	30.6	15.3	45.6	35.9	27.8	41.4
PH (FIELD)	pH units		5.1	5.2	5.5	5.6	5.6	5.6	5.7	5.6
PH (LAB)	pH units		6.31	6.25	6.37	6.14	6.79	6.32	6.08	6.07
RADIUM-226	pci/l	5	2.6	2.4	2.6	2.2	2	1.3	2.1	1.5
RADIUM-228	pci/l	5	6.6	7.4	12.2	7.9	7.2	9	5.9	7.7
RADIUM 226 and 228	pci/l	5	9.2	9.8	14.8	10.1	9.2	10.3	8	9.2
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA07
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/6/1994	4/12/1994	7/26/1994	10/4/1994	1/11/1995	4/11/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	0.84	0.63	0.59	0.74	0.5	0.41	< 0.1	0.22
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	126	121	120	141	215	244	235	200
COBALT	mg/l	0.05	0.13	0.12	0.16	0.1	0.06	< 0.01	< 0.01	0.04
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	9.79	9.59	9.72	8.52	4.44	3.81	4.02	4.84
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.22	0.21	0.21	0.15	0.1	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001	0.04
SULFATE (SO4)	mg/l	2125	4312	4378	4144	4647	4737	4566	4475	4368
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6870	6573	6463	7011	8136	7549	7971	7558
URANIUM	mg/l	5	< 0.0003	0.001	0.002	0.003	0.001	0.001	0.002	0.0023
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		135	140	139	160	326	397	426	403
GROSS ALPHA	pci/l	15	4.1	8.2	4.6	9.8	11.1	9	16.3	5.4
NITRATE (NO3)	mg/l	190	39.6	35.7	37.4	46.2	131	139	145	137
PH (FIELD)	pH units		5.7	5.8	5.9	5.8	5.8	5.9	6	6
PH (LAB)	pH units		6.27	6.33	6.87	7.16	6.45	6.35	6.96	7.5
RADIUM-226	pci/l	5	3.1	2.8	2.2	3.1	1.6	1.9	3	2.3
RADIUM-228	pci/l	5	< 1	3.5	1.5	4.5	6.2	4.7	< 1	6.7
RADIUM 226 and 228	pci/l	5	3.1	6.3	3.7	7.6	7.8	6.6	3	9
SPECIFIC CONDUCTANCE	umhos/cm		4500			5100			6100	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	< 0.2

Location EPA07
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997	10/15/1997
ALUMINUM	mg/l	5	0.17	0.22	0.25	0.27	0.27	0.38	0.19	0.25
ARSENIC	mg/l	0.05	0.003	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	200	214	222	206	239	215	209	238
COBALT	mg/l	0.05	0.04	0.06	0.08	0.08	0.07	0.09	< 0.01	0.13
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.35	6.6	9.71	10.5	11.2	12.4	12.5	15.2
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	0.08	0.09	0.09	0.12	0.11	0.13
SELENIUM	mg/l	0.01	0.067	< 0.001	< 0.001	< 0.001	< 0.001	0.06	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4400	5070	4529	4920	4555	4820	4780	5010
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7349	8204	8403	8440	8280	8440	8390	8410
URANIUM	mg/l	5	0.0038	0.0024	0.0032	0.0003	0.0003	0.001	0.001	0.002
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		438	428	392	400	389	386	372	349
GROSS ALPHA	pci/l	15	2.4	3.1	4.3	< 1	2	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	141	147	156	142	137	132	137	130
PH (FIELD)	pH units		6.1	6.3	6.2	6.1	6.2	6.1	5.9	5.9
PH (LAB)	pH units		7.36	7.26	6.36	6.97	7.61	7.26	7.15	7.64
RADIUM-226	pci/l	5	3.4	0.9	1.2	1.3	2.3	1	1.1	< 0.2
RADIUM-228	pci/l	5	1.3	2.4	< 1	< 1	< 1	1.8	3.4	< 1
RADIUM 226 and 228	pci/l	5	4.7	3.3	1.2	1.3	2.3	2.8	4.5	
SPECIFIC CONDUCTANCE	umhos/cm		6100		6000	6000		6000	6500	6000
THORIUM-230	pci/l	15	< 0.2	0.8	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA07
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/14/1998	7/14/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	0.8	0.48	0.18	0.24	0.13	0.29	< 0.1	0.18
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	0.007	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	217	184	186	183	189	186	166	187
COBALT	mg/l	0.05	0.14	0.1	0.1	0.1	0.09	0.09	0.1	0.07
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	17.6	12.5	15.1	13.4	12.6	12.5	9.3	11.8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.16	0.1	0.12	0.14	0.08	0.11	< 0.05	0.08
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	5100	4870	4300	4730	4750	4320	4500	4370
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8340	8310	8460	8150	8180	8020	8120	7940
URANIUM	mg/l	5	0.0021	0.002	0.0023	0.0019	0.011	0.0017	0.0019	0.0009
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		340	333	342	325	345	355	361	366
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	4.9	< 1	3.8	5.2	1.1
NITRATE (NO3)	mg/l	190	139	138	133	139	137	140	130	134
PH (FIELD)	pH units		5.9	6	6.1	6.1	6	6	6.06	6.01
PH (LAB)	pH units		7.48	6.75	7.3	8.09	7.7	7.26	7.2	7.5
RADIUM-226	pci/l	5	1	1.5	1.1	1.7	3.2	1.2	3	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	2.1	1.8	3.7	2.1	< 1	3.3
RADIUM 226 and 228	pci/l	5	1	1.5	3.2	3.5	6.9	3.3	3	3.3
SPECIFIC CONDUCTANCE	umhos/cm		1000	7600	7510	7620	7530	7350	7350	7010
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA07
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000	5/3/2000	7/11/2000	10/3/2000	1/9/2001	4/3/2001	7/17/2001	10/9/2001
ALUMINUM	mg/l	5	0.29	2.9	3.57	4.37	4.61	2.81	2.6	1.77
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	171	168	167	169	180	177	233	216
COBALT	mg/l	0.05	0.08	0.08	0.07	0.06	0.06	0.06	0.05	0.03
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	9.94	11.4	9.69	8.27	7.44	6.63	6.92	5.43
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.13	0.1	< 0.05	< 0.05	0.09	0.09	0.07	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4000	3870	4160	3970	4040	4410	3660	3800
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7890	7750	7630	7540	7580	7590	7670	7670
URANIUM	mg/l	5	0.0021	0.0032	0.0026	0.0024	0.0021	0.002	0.002	0.0015
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		367	362	399	444	453	456	498	515
GROSS ALPHA	pci/l	15	2.3	2.6	2.8	1.9	< 1	1.7	< 1	< 1
NITRATE (NO3)	mg/l	190	122	138	150	135	124	133	130	132
PH (FIELD)	pH units		6.1	5.9	5.8	5.88	6.06	6.1	6.33	5.9
PH (LAB)	pH units		7.73	7.28	7.28	6.66	6.83	7.14	6.68	6.6
RADIUM-226	pci/l	5	1.2	1.5	1.4	0.8	0.9	1.1	1.4	1
RADIUM-228	pci/l	5	< 1	1.6	3.4	1.8	2.9	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.2	3.1	4.8	2.6	3.8	1.1	1.4	1
SPECIFIC CONDUCTANCE	umhos/cm		7220	6980	7050	7170	7140	6710	6900	6730
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA07
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/2002	4/9/2002	7/16/2002	10/15/2002
ALUMINUM	mg/l	5	2.3	1.5	1.3	1.7
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	217	192	208	180
COBALT	mg/l	0.05	0.05	0.05	0.04	0.04
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.51	6.09	5.32	5.66
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.08	0.08	< 0.05	0.07
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4050	3950	3950	4420
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7670	7720	7720	6430
URANIUM	mg/l	5	0.0022	0.002	< 0.0003	0.0024
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		526	537	542	544
GROSS ALPHA	pci/l	15	1.3	1.7	2.7	1.3
NITRATE (NO3)	mg/l	190	121	124	131	141
PH (FIELD)	pH units		6.09	6.01	6.22	6.67
PH (LAB)	pH units		6.6	6.85	7.17	7.13
RADIUM-226	pci/l	5	1.1	0.5	1	0.9
RADIUM-228	pci/l	5	4.4	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	5.5	0.5	1	0.9
SPECIFIC CONDUCTANCE	umhos/cm		6560	5370	6680	6820
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA08
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/22/1992	4/2/1992	7/15/1992	10/14/1992	1/13/1993	4/15/1993	7/20/1993	10/12/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	0.21	0.2	< 0.1	< 0.1	0.16
ARSENIC	mg/l	0.05	< 0.001	0.001	0.002	0.001	< 0.001	0.001	0.002	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	73.4	36.4	39.6	39.3	37.7	40.8	39.6	36.9
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02
LEAD	mg/l	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.88	3.43	3.17	3.09	3.46	3.05	2.78	2.8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3014	3034	3120	3158	3159	3019	2956	3110
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4311	4704	4809	4762	4739	4910	4144	4366
URANIUM	mg/l	5	0.001	0.001	0.003	< 0.0003	< 0.0003	0.006	< 0.003	0.002
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		128	165	126	132	147	125	134	117
GROSS ALPHA	pci/l	15	5	< 1	1.5	1.9	< 1	< 1	1.4	2
NITRATE (NO3)	mg/l	190	< 0.01	< 0.01	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.4	6.3	6.4	6.6	6.6	6.6	6.6	6.7
PH (LAB)	pH units		6.51	7.65	6.64	6.47	6.63	6.53	7.1	6.19
RADIUM-226	pci/l	5	5.4	0.5	1.2	1.7	0.4	0.5	1	1.5
RADIUM-228	pci/l	5	< 1	3.8	5.6	1.7	10.7	3.8	3.4	5.5
RADIUM 226 and 228	pci/l	5	5.4	4.3	6.8	3.4	11.1	4.3	4.4	7
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA08
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/20/1994	7/26/1994	10/11/1994	1/10/1995	4/6/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	< 0.1	0.1	0.12	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	39.4	39.6	38.7	41.5	42	40.2	42	38.4
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.07	2.49	3.12	2.46	2.95	3.15	2.92	2.99
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.27	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3197	3154	3049	3367	3277	3364	2906	2965
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4765	4532	4389	4809	4848	4867	4212	4348
URANIUM	mg/l	5	0.006	0.001	< 0.0003	0.001	0.001	0.001	0.0016	0.0017
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		111	116	109	119	139	108	127	127
GROSS ALPHA	pci/l	15	9.6	6.7	7.2	4.1	6.4	5.3	6.6	1.8
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.7	6.5	6.5	6.5	6.4	6.5	6.9	6.6
PH (LAB)	pH units		6.46	6.22	7.13	6.9	6.62	6.48	7.05	7.13
RADIUM-226	pci/l	5	1.1	1.3	1.9	1.2	2.3	1.1	0.7	1.7
RADIUM-228	pci/l	5	5	3.5	3.4	1.8	2.6	2.7	2.2	2.2
RADIUM 226 and 228	pci/l	5	6.1	4.8	5.3	3	4.9	3.8	2.9	3.9
SPECIFIC CONDUCTANCE	umhos/cm		3400			3500			3500	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	< 0.2

Location EPA08
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997	10/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	37.6	41.8	37.6	39	51	42	45.2	53.7
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.8	2.96	3.21	3	3.07	3.01	2.82	3.24
MOLYBDENUM	mg/l	1	0.13	0.14	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2863	3460	3085	3061	3130	3330	3200	3190
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4185	4857	4876	4880	4870	4890	4860	4850
URANIUM	mg/l	5	0.001	0.0006	0.0016	0.0005	0.001	< 0.0003	< 0.0003	0.001
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		162	149	165	148	143	156	138	133
GROSS ALPHA	pci/l	15	< 1	1.2	< 1	< 1	1.1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.7	6.9	6.8	6.6	6.9	6.6	6.6	6.5
PH (LAB)	pH units		7.29	7.24	6.63	6.98	7.31	7.1	7.11	7.49
RADIUM-226	pci/l	5	1	1.2	0.7	0.9	1.1	1.1	0.7	0.7
RADIUM-228	pci/l	5	1.5	1.3	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	2.5	2.5	0.7	0.9	1.1	1.1	0.7	0.7
SPECIFIC CONDUCTANCE	umhos/cm		3600		3400	3300		3300	3400	3300
THORIUM-230	pci/l	15	< 0.2	0.7	0.8	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA08
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/14/1998	7/14/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	45.3	39.6	39.7	38.5	41	45.7	47	42.9
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.42	2.99	2.84	3.05	2.98	2.98	2.4	3.08
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3400	3300	3000	3150	3200	3000	2710	3000
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4840	4850	4820	4780	4840	4630	4780	4790
URANIUM	mg/l	5	0.001	0.0009	0.0009	0.001	0.0038	0.0011	0.0016	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		133	159	132	134	130	131	119	121
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	2.3	< 1	3	1.8	1.6
NITRATE (NO3)	mg/l	190	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PH (FIELD)	pH units		6.6	6.7	6.6	6.47	6.6	6.6	6.36	6.45
PH (LAB)	pH units		7.53	6.93	7.17	7.58	7.2	7.35	7.18	7.44
RADIUM-226	pci/l	5	1.1	1	0.9	1.4	1	2	1.4	0.9
RADIUM-228	pci/l	5	< 1	< 1	< 1	3.8	2.3	3.4	1.5	4.2
RADIUM 226 and 228	pci/l	5	1.1	1	0.9	5.2	3.3	5.4	2.9	5.1
SPECIFIC CONDUCTANCE	umhos/cm		900	4610	4450	4640	4450	4420	4250	4380
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA08
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000
ALUMINUM	mg/l	5	< 0.1
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	39.3
COBALT	mg/l	0.05	< 0.01
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	2.99
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	< 0.05
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	2750
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4720
URANIUM	mg/l	5	0.0016
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		125
GROSS ALPHA	pci/l	15	< 1
NITRATE (NO3)	mg/l	190	< 0.1
PH (FIELD)	pH units		6.6
PH (LAB)	pH units		7.29
RADIUM-226	pci/l	5	0.9
RADIUM-228	pci/l	5	2.6
RADIUM 226 and 228	pci/l	5	3.5
SPECIFIC CONDUCTANCE	umhos/cm		4290
THORIUM-230	pci/l	15	< 0.2

Location 0029A
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/9/1992	7/14/1992	10/13/1992	1/12/1993	4/14/1993	7/15/1993	10/7/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	0.01	0.03	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	36.4	39	37.7	36.5	36.7	39.8	37.1	35.9
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.01	0.03	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.01	< 0.01	0.02	0.01	< 0.01	0.02	0.01	0.04
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.021	0.002	< 0.001	0.011	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2110	2421	2358	2568	2520	2349	2195	2120
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4512	4656	4599	4147	4274	4349	4135	4425
URANIUM	mg/l	5	0.032	0.039	0.04	0.027	0.034	0.053	0.158	0.04
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		607	531	518	588	558	568	589	549
GROSS ALPHA	pci/l	15	< 1	2.4	9.5	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	125	70.2	129	105	91.8	96.6	81.6	120
PH (FIELD)	pH units		6.8	6.8	6.5	6.9	7	7	7.1	7.1
PH (LAB)	pH units		7.38	7.26	7.58	7.55	7.6	7.62	6.93	7.7
RADIUM-226	pci/l	5	< 0.2	2.1	9.4	3.1	< 0.2	0.4	0.3	0.8
RADIUM-228	pci/l	5	< 1	4.7	1.5	< 1	< 1	< 1	< 1	2.9
RADIUM 226 and 228	pci/l	5		2.1	9.4	3.1		0.4	0.3	0.8
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0029A
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/6/1994	4/14/1994	7/21/1994	10/5/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	35.8	36	33	36.2
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	0.02	0.03	0.03
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	2376	2339	2625	2365
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4264	4070	4233	4347
URANIUM	mg/l	5	0.035	0.043	0.043	0.04
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		544	576	630	593
GROSS ALPHA	pci/l	15	< 1	3.4	< 1	6.2
NITRATE (NO3)	mg/l	190	51.8	72.8	70.5	86
PH (FIELD)	pH units		7.1	7.2	7	6.9
PH (LAB)	pH units		7.57	7.26	7.56	7.81
RADIUM-226	pci/l	5	0.6	1	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	1.5	< 1	3.9
RADIUM 226 and 228	pci/l	5	0.6	1		3.9
SPECIFIC CONDUCTANCE	umhos/cm		3000			3500
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location 0509D
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1992	4/8/1992	7/7/1992	10/6/1992	1/6/1993	4/7/1993	7/14/1993	10/6/1993	1/6/1994
ALUMINUM	mg/l	5	0.26	< 0.1	0.12	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	215	227	182	230	262	251	257	231	240
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	0.07	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.7	0.61	0.72	0.66	1.86	0.68	0.74	0.75	0.81
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.002	0.004	0.002	0.005	0.005	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2226	2392	2379	2358	2878	2393	2101	2476	2583
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4832	5122	5151	5913	5281	5254	5055	5090	5480
URANIUM	mg/l	5	0.22	0.124	0.12	0.119	0.003	0.142	0.082	0.043	0.081
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1206	1763	1253	1946	2013	1797	1961	1787	1726
GROSS ALPHA	pci/l	15	< 1	< 1	1.2	< 1	1.7	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	42.3	33.3	55.6	62.5	84	51.6	47.4	56.9	39.6
PH (FIELD)	pH units		6.1	6.1	6	6.2	6.3	6.3	6.3	6.5	6.5
PH (LAB)	pH units		7.16	7.41	7.8	8.15	7.26	7	7.04	7	6.83
RADIUM-226	pci/l	5	< 0.2	< 0.2	1	0.7	1.5	0.3	0.5	0.9	0.4
RADIUM-228	pci/l	5	< 1	1.1	< 1	2.2	4.9	1.9	2	< 1	< 1
RADIUM 226 and 228	pci/l	5		1.1	1	0.7	1.5	0.3	0.5	0.9	0.4
SPECIFIC CONDUCTANCE	umhos/cm										4400
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	4/12/1994	7/21/1994	10/5/1994	1/5/1995	4/5/1995	7/6/1995	10/3/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	256	246	259	271	302	299	292	227	342
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.81	0.88	0.88	0.85	0.44	0.91	0.82	0.79	0.86
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.004	< 0.001	< 0.001	< 0.001	0.001	0.002	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	2729	3043	2749	2693	2766	2602	2825	2229	3030
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5766	6216	6177	6296	6165	6186	6534	5314	6804
URANIUM	mg/l	5	0.082	0.075	0.084	0.084	0.084	0.0816	0.084	0.09	0.101
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1660	1817	1800	1898	1856	1841	1928	1903	1979
GROSS ALPHA	pci/l	15	< 1	5.5	3.4	3.2	2.8	< 1	1.7	2	< 1
NITRATE (NO3)	mg/l	190	59.3	54.1	54.8	49.7	63	46.5	50.5	50.4	53.6
PH (FIELD)	pH units		6.5	6.4	6.2	6.4	6.5	6.4	6.3	6.5	6.5
PH (LAB)	pH units		6.75	7.34	7.59	7.12	6.92	7.6	7.41	6.96	7.67
RADIUM-226	pci/l	5	< 0.2	0.4	0.5	0.6	0.2	< 0.2	0.8	0.4	< 0.2
RADIUM-228	pci/l	5	< 1	4.7	1.8	1.6	1.6	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5		0.4	0.5	0.6	0.2		0.8	0.4	
SPECIFIC CONDUCTANCE	umhos/cm				4900					5500	5800
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.4	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997	1/16/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	255	297	337	345	337	350	343	274	322
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.97	0.9	0.85	0.97	0.84	1.21	1.2	0.8	0.98
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.007	< 0.001	0.028	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2580	2795	2789	2869	2650	2850	3000	2950	2500
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6283	6440	6140	6430	6640	6530	6640	6390	6320
URANIUM	mg/l	5	0.143	0.088	0.087	0.099	0.094	0.089	0.102	0.101	0.115
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1769	1900	1900	1910	1900	1920	1930	1910	1890
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	1	2.5	< 1	< 1
NITRATE (NO3)	mg/l	190	44.5	86.1	43.2	48.4	44.8	44.5	47.3	46	42.3
PH (FIELD)	pH units		6.2	6.4	6.3	6.5	6.8	6.2	6.6	6.4	6.7
PH (LAB)	pH units		7.04	6.8	7.21	7.64	7.61	7.42	7.75	7.24	7.64
RADIUM-226	pci/l	5	0.5	0.6	< 0.2	0.5	1.6	< 0.2	0.7	0.6	0.6
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.5	0.6		0.5	1.6		0.7	0.6	0.6
SPECIFIC CONDUCTANCE	umhos/cm		2500	5500	5000	5300	5000	5500	4700	6480	6470
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/3/2000	7/12/2000	10/3/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	0.008	< 0.005	0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	312	317	345	312	317	278	293	324	350
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.07
MANGANESE	mg/l	2.6	0.83	0.78	0.89	0.56	1.05	1.09	1.6	1.89	2.05
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.003	< 0.001	0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3050	3100	2830	3000	3070	2520	1570	1380	1990
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6960	6830	3780	6620	6290	6090	4990	4920	5090
URANIUM	mg/l	5	0.105	0.103	0.104	0.104	0.108	0.134	0.176	0.226	0.184
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1910	1970	1950	1540	1990	1980	2010	2110	2050
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	9.3	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	44.4	41.1	9.53	36.6	35.4	36.6	32.7	31.3	31.2
PH (FIELD)	pH units		6.6	6.6	6.5	6.5	6.56	6.7	6.3	6.31	6.21
PH (LAB)	pH units		7.78	7.76	7.6	7.72	7.4	7.59	7.12	7.18	7.14
RADIUM-226	pci/l	5	0.6	1	1.1	1.9	0.5	0.5	< 0.2	0.6	0.7
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	2.6	2.8	< 1
RADIUM 226 and 228	pci/l	5	0.6	1	1.1	1.9	0.5	0.5	2.6	0.6	0.7
SPECIFIC CONDUCTANCE	umhos/cm		7230	6990	7320	6880	6670	6530	5730	5650	5930
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/8/2001	2/5/2001	3/5/2001	4/3/2001	5/7/2001	6/4/2001	7/9/2001	8/6/2001	9/10/2001
ALUMINUM	mg/l	5	< 0.1	0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	317	365	279	311	322	318	326	370	297
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.08	2.2	2.51	2.53	2.5	2.42	2.71	2.8	2.7
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1610	1860	1850	1800	1700	1760	1730	1500	1600
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5010	5090	5110	5120	5240	4860	5210	5210	5130
URANIUM	mg/l	5	0.211	0.197	0.186	0.183	0.188	0.186	0.217	0.22	0.222
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2200	2090	2100	2080	2060	2070	2180	2130	2210
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	30.6	29.5	28.4	31.8	27.3	30.2	29.2	26.6	26
PH (FIELD)	pH units		6.46	6.5	6.65	6.42	6.46	6.46	6.36	6.36	6.38
PH (LAB)	pH units		7.47	7.03	7.41	6.76	7.01	6.97	6.84	7.3	7.2
RADIUM-226	pci/l	5	0.5	0.6	< 0.2	0.5	0.4	0.9	< 0.2	0.7	0.5
RADIUM-228	pci/l	5	< 1	< 1	2.3	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.5	0.6	2.3	0.5	0.4	0.9		0.7	0.5
SPECIFIC CONDUCTANCE	umhos/cm		5850	5850	5540	5430	5070	5570	5440	5500	5400
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/1/2001	11/5/2001	12/3/2001	1/7/2002	2/4/2002	3/4/2002	4/1/2002	5/6/2002	6/3/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.007	< 0.005	< 0.005
CHLORIDE	mg/l	250	411	401	357	383	362	376	380	344	318
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.46	2.41	2.33	2.49	2.41	2.91	2.95	2.48	2.99
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1570	1770	1590	1840	1760	1790	1750	1850	1500
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5190	5300	5370	5220	5290	5220	5260	5390	5200
URANIUM	mg/l	5	0.225	0.197	0.252	0.206	0.189	0.228	0.213	0.198	0.192
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2250	2300	2280	2290	2170	2240	2250	2120	2240
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	25	26.4	29	23	23.9	24.4	23.5	27.3	24.5
PH (FIELD)	pH units		6.43	6.47	6.44	6.41	6.48	6.45	6.36	6.38	6.36
PH (LAB)	pH units		7.2	7.4	7.3	6.8	7.1	6.9	7.69	7.74	7.87
RADIUM-226	pci/l	5	0.5	< 0.2	< 0.2	1.2	0.4	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	3.9	< 1	< 1	< 1	< 1	< 1	< 1	2.7
RADIUM 226 and 228	pci/l	5	0.5	3.9		1.2	0.4				2.7
SPECIFIC CONDUCTANCE	umhos/cm		5490	5550	5620	5500	5450	5630	5590	4390	4490
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/8/2002	10/7/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	308	300
COBALT	mg/l	0.05	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.34	2.47
MOLYBDENUM	mg/l	1	0.3	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1900	1750
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5470	4290
URANIUM	mg/l	5	0.229	0.159
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2160	2100
GROSS ALPHA	pci/l	15	< 1	< 1
NITRATE (NO3)	mg/l	190	25	26.4
PH (FIELD)	pH units		6.57	6.12
PH (LAB)	pH units		7.83	7.82
RADIUM-226	pci/l	5	0.3	< 0.2
RADIUM-228	pci/l	5	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3	
SPECIFIC CONDUCTANCE	umhos/cm		5660	5400
THORIUM-230	pci/l	15	< 0.2	< 0.2

Location 0624
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1992	4/8/1992	7/8/1992	10/6/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993	1/6/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	113	118	125	112	122	129	138	128	129
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	0.07	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.01	< 0.01	< 0.01	0.02	0.02	0.02	0.02	0.02	0.02
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.002	0.002	0.002	0.006	0.008	0.002	0.003	0.003	< 0.001
SULFATE (SO4)	mg/l	2125	2296	2276	2259	2304	2245	2172	2307	2107	2241
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4267	4279	4323	4704	4698	4111	4803	4371	4425
URANIUM	mg/l	5	0.029	0.034	0.03	0.048	0.043	0.033	0.019	0.023	0.027
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		539	597	432	593	586	581	748	700	694
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	4.8	< 1	< 1	9.9
NITRATE (NO3)	mg/l	190	82	83.2	106	120	105	107	106	117	89.4
PH (FIELD)	pH units		6.9	6.9	6.8	7	7	7	7	7.1	7.2
PH (LAB)	pH units		7.57	7.73	7.43	7.56	7.71	7.5	7.11	7.62	7.41
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	4.6	< 0.2	0.6	1.3
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	4.2	< 1	< 1	< 1	5.1
RADIUM 226 and 228	pci/l	5					4.2	4.6		0.6	1.3
SPECIFIC CONDUCTANCE	umhos/cm										3500
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	4/12/1994	7/21/1994	10/5/1994	1/4/1995	4/5/1995	7/6/1995	10/3/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	118	118	137	137	155	157	154	123	150
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.01	< 0.01	< 0.01	0.02	0.02	0.01	0.01	0.01	0.02
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.013	0.007	< 0.001
SULFATE (SO4)	mg/l	2125	2324	2203	2160	2303	2383	2201	2247	1879	2310
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4779	4592	4815	4803	4661	4358	4950	4553	4942
URANIUM	mg/l	5	0.043	0.029	0.035	0.033	0.037	0.0405	0.0331	0.032	0.033
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		625	649	843	814	475	766	972	1182	1048
GROSS ALPHA	pci/l	15	11.3	1.8	< 1	2.7	6.5	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	124	115	97.3	92.8	101	93.5	94.3	97	100
PH (FIELD)	pH units		7.1	7.1	6.8	6.9	7	7.1	7	7	6.8
PH (LAB)	pH units		7.45	7.54	7.64	7.63	7.44	7.63	7.83	7.43	7.92
RADIUM-226	pci/l	5	7.5	< 0.2	< 0.2	0.6	3.9	< 0.2	0.3	0.6	< 0.2
RADIUM-228	pci/l	5	2.4	1.1	< 1	1.3	1.6	< 1	< 1	1.3	< 1
RADIUM 226 and 228	pci/l	5	7.5	1.1		0.6	3.9		0.3	0.6	
SPECIFIC CONDUCTANCE	umhos/cm				3700					4000	4800
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.6	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997	1/16/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	145	161	161	169	181	166	194	153	174
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	0.02	0.01	0.02	0.02	0.12	0.11	0.02	0.02
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.003	< 0.001	0.014	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2190	2179	2146	2227	2260	2160	2350	2400	2400
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4946	5050	4920	5000	5040	5140	5140	5190	5050
URANIUM	mg/l	5	0.043	0.032	0.027	0.036	0.034	0.03	0.0379	0.039	0.0409
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1158	1180	1070	1030	1060	1310	1300	1180	1080
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	84.4	93	84.6	103	92.6	86.3	101	98.7	92.2
PH (FIELD)	pH units		6.6	6.8	6.7	6.9	7.1	6.5	7	6.9	7.2
PH (LAB)	pH units		7.45	7.25	7.69	7.89	7.54	7.66	7.78	7.6	7.79
RADIUM-226	pci/l	5	0.3	< 0.2	0.6	0.8	< 0.2	< 0.2	< 0.2	< 0.2	0.7
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3		0.6	0.8					0.7
SPECIFIC CONDUCTANCE	umhos/cm		4000	3900	3800	4700	4500	4500	3700	5270	5220
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/9/2000	7/17/2000	10/9/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	175	172	180	181	179	155	177	184	147
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.03	0.02	0.03	0.02	0.02	0.05	0.02	0.02	0.01
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2220	2030	2000	2070	1860	2080	1970	1790	1530
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5210	5140	5150	5020	4900	4840	5130	5170	5090
URANIUM	mg/l	5	0.0409	0.0395	0.0366	0.0339	0.0366	0.0443	0.0348	0.0325	0.031
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1230	1160	1230	1070	1350	1160	1470	1480	1440
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	101	94.2	94.5	88.7	88.3	49.2	93.6	85.1	98.5
PH (FIELD)	pH units		7.01	6.8	6.8	6.7	6.78	6.8	6.5	6.55	6.7
PH (LAB)	pH units		7.88	7.85	7.89	7.85	7.59	7.76	7.67	7.62	7.59
RADIUM-226	pci/l	5	0.7	< 0.2	< 0.2	< 0.2	0.5	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	2	1.5	< 1
RADIUM 226 and 228	pci/l	5	0.7				0.5		2	1.5	
SPECIFIC CONDUCTANCE	umhos/cm		5480	5450	5520	5240	5300	5380	5170	5540	5640
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/8/2001	2/5/2001	3/5/2001	4/10/2001	5/8/2001	6/5/2001	7/10/2001	8/7/2001	9/11/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.13	0.11
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	177	170	154	176	187	182	172	180	217
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	0.02	0.02	0.03	0.02	0.05	0.03	0.03	0.03
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.009	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1810	2320	2190	2250	1880	2000	2050	1900	1930
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5100	5110	4740	4910	5150	5050	5290	5230	5200
URANIUM	mg/l	5	0.032	0.033	0.0327	0.031	0.034	0.065	0.0329	0.04	0.03
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1480	1480	1450	1470	1450	1470	1480	1470	1490
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	104	93.9	101	103	99.3	101	101	88	118
PH (FIELD)	pH units		6.65	6.72	7.03	7.24	6.62	6.62	6.62	6.59	6.52
PH (LAB)	pH units		7.4	7.31	7.47	7.33	7.54	7.02	7.4	7.4	7.3
RADIUM-226	pci/l	5	0.4	0.3	< 0.2	0.3	< 0.2	< 0.2	< 0.2	0.4	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	4	< 1	< 1	< 1	< 1	2.3	2.9
RADIUM 226 and 228	pci/l	5	0.4	0.3	4	0.3				0.4	2.9
SPECIFIC CONDUCTANCE	umhos/cm		5460	5530	5270	5200	5500	5330	5310	5080	5160
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/2/2001	11/6/2001	12/4/2001	1/8/2002	2/5/2002	3/5/2002	4/2/2002	5/7/2002	6/4/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	240	232	197	208	219	207	203	186	181
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	0.03	0.03	0.03	0.03	0.03	0.04	0.03	0.03
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1850	2100	1750	2270	2120	2190	2180	2100	1830
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5210	5210	5250	5190	5190	5170	5270	5220	5220
URANIUM	mg/l	5	0.0319	0.0288	0.0295	0.0301	0.0212	0.0351	0.0326	0.0355	0.0333
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1500	1490	1500	1490	1470	1530	1500	1480	1480
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	100	104	101	91.5	90.5	95.1	95.5	104	96.3
PH (FIELD)	pH units		6.65	6.6	6.62	6.95	6.78	6.61	6.54	6.59	6.52
PH (LAB)	pH units		7.8	7.2	7.3	7.3	7.3	7.2	7.45	7.61	7.66
RADIUM-226	pci/l	5	0.2	< 0.2	< 0.2	0.4	0.4	< 0.2	< 0.2	0.5	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	2	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.2			0.4	0.4			0.5	
SPECIFIC CONDUCTANCE	umhos/cm		5260	5210	5260	5240	5260	5230	5290	4160	4280
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/9/2002	10/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	200	173
COBALT	mg/l	0.05	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.03	0.03
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2150	1810
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5300	5150
URANIUM	mg/l	5	0.036	0.0262
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1500	1490
GROSS ALPHA	pci/l	15	< 1	< 1
NITRATE (NO3)	mg/l	190	92.4	97.1
PH (FIELD)	pH units		6.67	6.67
PH (LAB)	pH units		7.42	7.25
RADIUM-226	pci/l	5	0.3	< 0.2
RADIUM-228	pci/l	5	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3	
SPECIFIC CONDUCTANCE	umhos/cm		5250	5280
THORIUM-230	pci/l	15	< 0.2	< 0.2

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

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/9/1992	7/7/1992	10/7/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993	1/6/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	54.7	52.3	59.2	56.3	57.4	61	72.5	62.4	63.1
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.07	0.03	0.05	0.06	0.06	0.08	0.08	0.08	0.08
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.002	0.003	0.001	0.003	0.014	0.004	0.018	0.009	0.003
SULFATE (SO4)	mg/l	2125	2317	2346	2403	2402	2324	2341	2476	2548	2693
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4614	4671	4811	4696	4615	4751	5045	5187	4941
URANIUM	mg/l	5	0.017	0.019	0.02	0.025	0.018	0.033	0.016	0.012	0.015
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		619	605	588	593	576	553	570	532	512
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	101	68.4	108	125	116	100	99.3	133	61
PH (FIELD)	pH units		6.6	6.6	6.5	6.8	6.8	6.8	6.9	6.9	6.9
PH (LAB)	pH units		7.12	7.91	8	7.45	7.88	7.59	7.21	7.57	7.51
RADIUM-226	pci/l	5	0.9	< 0.2	0.7	0.7	0.5	< 0.2	0.6	0.6	0.9
RADIUM-228	pci/l	5	1.2	2.9	< 1	2.1	1.5	< 1	2.3	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.9	2.9	0.7	0.7	0.5		0.6	0.6	0.9
SPECIFIC CONDUCTANCE	umhos/cm										3900
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	4/13/1994	7/21/1994	10/5/1994	1/5/1995	4/5/1995	7/6/1995	10/3/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	58.5	54.6	62.6	58.9	66	61	58	60	65.1
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.09	0.09	0.08	0.09	0.07	0.07	0.09	0.07	0.07
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.002	0.003	0.001	< 0.001	< 0.001	0.003	0.019	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2428	2908	2719	2650	2682	2555	2760	2995	2740
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4787	4899	5024	5292	5324	5112	5241	5293	5230
URANIUM	mg/l	5	0.015	0.017	0.016	0.016	0.016	0.0205	0.0168	0.018	0.019
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		510	529	549	540	542	560	544	542	558
GROSS ALPHA	pci/l	15	< 1	4.6	< 1	< 1	1.4	1.4	2	1.2	< 1
NITRATE (NO3)	mg/l	190	107	108	137	105	125	90.5	126	131	129
PH (FIELD)	pH units		7	6.9	6.9	6.9	6.9	6.9	6.9	7.1	7.1
PH (LAB)	pH units		7.15	7.53	7.86	7.49	7.22	7.91	7.65	7.52	8.06
RADIUM-226	pci/l	5	0.8	0.8	0.4	0.3	1.2	0.8	< 0.2	0.7	0.5
RADIUM-228	pci/l	5	< 1	2.4	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.8	0.8	0.4	0.3	1.2	0.8		0.7	0.5
SPECIFIC CONDUCTANCE	umhos/cm				4100					5000	4100
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.3	< 0.2	1.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997	1/16/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	64	54	63.3	56.6	64.1	66	70.6	54.6	59.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.13	0.09	0.11	0.1	0.1	0.12	1.47	0.12	0.1
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.002	< 0.001	0.195	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2725	2468	2673	2524	2570	2440	2850	2400	2500
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5403	4980	5020	5240	5600	4960	5260	5200	5210
URANIUM	mg/l	5	0.024	0.024	0.018	0.02	0.02	0.023	0.0222	0.0221	0.0233
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		534	575	577	564	560	599	682	590	588
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	113	119	121	153	190	122	107	141	133
PH (FIELD)	pH units		6.8	6.8	6.8	6.9	7.4	6.6	7.3	6.9	7.2
PH (LAB)	pH units		7.56	7.23	7.85	7.59	7.75	7.69	7.91	7.74	7.8
RADIUM-226	pci/l	5	0.3	0.5	1	0.9	0.4	0.8	0.9	0.7	1.6
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.6
RADIUM 226 and 228	pci/l	5	0.3	0.5	1	0.9	0.4	0.8	0.9	0.7	1.6
SPECIFIC CONDUCTANCE	umhos/cm		4400	4800	4000	4800	5000	4500	4000	5430	5360
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/6/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/10/2000	7/18/2000	10/10/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	0.006	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	61.5	60	68	67.7	58.5	57.2	55.3	53.3	44.8
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.02	< 0.01	0.06	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.14	0.22	0.18	0.08	0.73	0.86	0.1	0.11	0.08
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.002	< 0.001	0.002	0.003	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2670	2740	2660	2620	2320	2430	2370	2390	2160
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5380	5340	5650	5320	5320	5150	5200	5320	5100
URANIUM	mg/l	5	0.0345	0.0239	0.0233	0.002	0.0247	0.0233	0.0259	< 0.0003	0.024
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		579	586	580	594	594	597	588	590	580
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	2.9	< 1	5.5	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	109	142	131	126	127	144	144	149	150
PH (FIELD)	pH units		6.97	7.7	7.1	7	7.09	7	7	6.96	7.03
PH (LAB)	pH units		7.85	8.02	7.84	8.21	7.7	8.1	7.65	7.91	7.78
RADIUM-226	pci/l	5	1.2	< 0.2	1	0.8	1.3	4.1	0.4	0.6	0.5
RADIUM-228	pci/l	5	< 1	< 1	2.5	< 1	< 1	2	6.3	2.5	< 1
RADIUM 226 and 228	pci/l	5	1.2		1	0.8	1.3	4.1	0.4	0.6	0.5
SPECIFIC CONDUCTANCE	umhos/cm		5760	5660	5910	5390	5500	5520	5310	5500	5630
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/9/2001	2/6/2001	3/6/2001	4/10/2001	5/8/2001	6/5/2001	7/10/2001	8/8/2001	9/11/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.006	< 0.005
CHLORIDE	mg/l	250	57.9	52.5	53	57.3	60.2	55.1	55.9	64	64.4
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.11	0.11	0.12	0.14	0.13	0.12	0.12	0.1	0.12
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.002	0.001	0.001	0.001	0.003	0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	2460	2780	2680	2840	2320	2660	2450	2300	2380
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5170	5040	4770	5020	5190	4950	5270	5220	4190
URANIUM	mg/l	5	0.023	0.0239	0.024	0.03	0.024	0.024	0.024	0.025	0.023
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		595	592	586	590	577	580	600	596	600
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	160	158	156	149	154	142	149	140	158
PH (FIELD)	pH units		7.23	7.53	7.31	7.52	7.08	7.14	7.48	7.09	6.99
PH (LAB)	pH units		8.03	7.48	7.69	7.47	7.68	7.67	7.45	7.6	7.8
RADIUM-226	pci/l	5	0.4	0.5	0.4	0.4	< 0.2	< 0.2	< 0.2	< 0.2	0.6
RADIUM-228	pci/l	5	2.5	1.5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.4	0.5	0.4	0.4					0.6
SPECIFIC CONDUCTANCE	umhos/cm		5580	5490	5310	5300	5530	5430	5500	5270	5160
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/2/2001	11/6/2001	12/4/2001	1/8/2002	2/5/2002	3/5/2002	4/9/2002	5/7/2002	6/4/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	74	69	65.2	73.6	70.8	64.3	74.1	59.7	53.8
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.1	0.11	0.08	0.11	0.11	0.12	0.11	0.13	0.13
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2300	2600	2290	2290	2560	2670	2440	2500	2550
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5230	5310	5190	5150	5190	5160	5250	5180	5190
URANIUM	mg/l	5	0.0235	0.0224	0.0223	0.0228	0.014	0.0251	0.0244	0.0249	0.0246
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		609	602	610	603	601	611	612	601	602
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	152	142	148	134	133	133	142	137	122
PH (FIELD)	pH units		7.08	7.13	7.3	7.27	7.34	7.17	7.08	7.09	7.17
PH (LAB)	pH units		7.7	7.9	7.8	7.7	7.7	7.8	7.64	7.84	7.71
RADIUM-226	pci/l	5	0.7	0.6	0.8	0.8	0.5	0.4	< 0.2	< 0.2	0.7
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.7	0.6	0.8	0.8	0.5	0.4			0.7
SPECIFIC CONDUCTANCE	umhos/cm		5260	5250	5240	5230	5280	5290	4050	4400	4230
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/9/2002	10/7/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	76	50.1
COBALT	mg/l	0.05	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.11	0.09
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2590	2160
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5350	4170
URANIUM	mg/l	5	0.0228	0.0198
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		608	611
GROSS ALPHA	pci/l	15	< 1	< 1
NITRATE (NO3)	mg/l	190	133	139
PH (FIELD)	pH units		7.13	7.1
PH (LAB)	pH units		7.9	7.65
RADIUM-226	pci/l	5	0.3	< 0.2
RADIUM-228	pci/l	5	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3	
SPECIFIC CONDUCTANCE	umhos/cm		5230	5310
THORIUM-230	pci/l	15	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/21/1992	4/14/1992	7/14/1992	10/13/1992	1/12/1993	4/14/1993	7/15/1993	10/7/1993	1/6/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	261	263	265	269	265	269	264	255	252
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.25	0.28	0.16	0.16	1.85	0.32	0.18	0.27	0.34
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.004	0.008	0.003	0.003	0.004	0.002	0.005	0.003	< 0.001
SULFATE (SO4)	mg/l	2125	3200	3126	2948	2903	3037	2962	3107	2392	2705
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7030	7706	6323	6472	5933	6925	6303	5715	6091
URANIUM	mg/l	5	0.072	0.08	0.095	0.147	0.068	0.113	0.082	0.093	0.082
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2211	2184	1568	2495	1220	2113	2098	2240	1984
GROSS ALPHA	pci/l	15	1	< 1	2.5	1.5	1.5	8.1	1.5	1.8	7.7
NITRATE (NO3)	mg/l	190	76.1	75.7	119	89.5	92.7	95.3	62.1	56.6	36.5
PH (FIELD)	pH units		6.2	6.1	6	6.4	6.4	6.4	6.4	6.5	6.5
PH (LAB)	pH units		6.95	7.56	8.05	7.02	7.02	7.11	6.72	7.1	7.51
RADIUM-226	pci/l	5	1.2	0.9	2.2	1.3	1.1	6.4	1.2	1.8	1.6
RADIUM-228	pci/l	5	2.6	3.7	1.1	6.4	4.5	2	< 1	1.1	3.4
RADIUM 226 and 228	pci/l	5	1.2	0.9	2.2	1.3	1.1	6.4	1.2	1.8	1.6
SPECIFIC CONDUCTANCE	umhos/cm										4800
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1.3	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	4/14/1994	7/21/1994	10/5/1994	1/10/1995	4/5/1995	7/6/1995	10/3/1995	1/4/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.003	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	251	246	255	250	250	285	250	250	278
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.37	0.39	0.42	0.43	0.52	0.5	0.11	0.74	0.55
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.002	< 0.001	< 0.001	0.002	0.002	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2807	3080	2689	2857	2905	2647	2745	2595	2715
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5930	6160	6288	6458	6453	6335	6319	6294	5940
URANIUM	mg/l	5	0.088	0.09	0.08	0.086	0.077	0.0954	0.0899	0.092	0.09
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2063	2123	2200	2184	2119	2281	2247	2239	1807
GROSS ALPHA	pci/l	15	5.5	8.7	1.2	3.7	6	4.2	2.6	1.8	5.8
NITRATE (NO3)	mg/l	190	25.9	30.3	20.9	21.9	23.9	24.1	16.8	16.4	17.4
PH (FIELD)	pH units		6.4	6.4	6.3	6.4	6.5	6.4	6.3	6.5	6.6
PH (LAB)	pH units		6.74	7.19	7.47	7.45	6.93	7.52	7.52	7.59	7.82
RADIUM-226	pci/l	5	1.7	0.9	1	2	1.2	1.6	1.1	1	1.7
RADIUM-228	pci/l	5	2.4	5.1	< 1	< 1	3.1	< 1	< 1	1.1	< 1
RADIUM 226 and 228	pci/l	5	1.7	0.9	1	2	1.2	1.6	1.1	1	1.7
SPECIFIC CONDUCTANCE	umhos/cm				4900					5800	5700
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.4	< 0.2	0.3	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997	1/16/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.014	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	233	255	285	287	264	290	288	234	264
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.61	0.57	0.63	0.63	0.57	0.82	0.75	0.71	0.72
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.012	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.005	< 0.001
SULFATE (SO4)	mg/l	2125	2749	2758	2740	2694	2560	2740	2900	2500	2600
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6258	6280	6120	6180	6330	6170	6170	5970	6250
URANIUM	mg/l	5	0.092	0.078	0.077	0.088	0.077	0.075	0.089	0.086	0.0859
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2035	2050	2130	2010	2020	2020	2020	2030	1880
GROSS ALPHA	pci/l	15	< 1	3.4	< 1	< 1	< 1	< 1	2	< 1	< 1
NITRATE (NO3)	mg/l	190	10.9	11.5	10	9.8	8.15	6.37	7.24	7.95	5
PH (FIELD)	pH units		6.4	6.5	6.5	6.5	6.8	6.4	6.6	6.5	6.7
PH (LAB)	pH units		7.4	6.92	7.49	7.75	7.64	7.63	7.68	7.39	7.81
RADIUM-226	pci/l	5	0.8	0.8	1.4	1	0.8	0.7	0.9	1.6	1.7
RADIUM-228	pci/l	5	< 1	< 1	< 1	3.2	5	< 1	< 1	< 1	3.4
RADIUM 226 and 228	pci/l	5	0.8	0.8	1.4	1	0.8	0.7	0.9	1.6	1.7
SPECIFIC CONDUCTANCE	umhos/cm		2600	5800	4800	4700	5500	5500	4450	6430	5850
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/8/2000	7/12/2000	10/3/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	0.008	< 0.005	0.006	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	279	242	251	244	235	217	238	239	230
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.06
MANGANESE	mg/l	2.6	0.74	0.66	0.7	0.72	0.85	0.87	1.04	0.79	0.73
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	2730	2440	2720	2830	3140	2610	2640	2510	2820
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6200	6200	6320	6140	6060	6210	6020	6070	6020
URANIUM	mg/l	5	0.144	0.0817	0.124	0.0775	0.0795	0.0704	0.0774	0.0739	0.018
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1820	1930	1890	1910	1850	1790	1800	1810	1780
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	3.5	1.6	2.1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	7.89	5.94	6.37	5.72	6.03	4.44	2.44	2.92	3.17
PH (FIELD)	pH units		6.58	6.7	6.6	6.3	6.6	6.6	6.3	6.25	6.28
PH (LAB)	pH units		7.71	7.82	7.9	7.78	7.75	7.93	7.6	6.98	7.18
RADIUM-226	pci/l	5	1.3	< 0.2	1.7	0.5	2.1	1.3	0.5	0.9	0.8
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.1	< 1
RADIUM 226 and 228	pci/l	5	1.3		1.7	0.5	2.1	1.3	0.5	0.9	0.8
SPECIFIC CONDUCTANCE	umhos/cm		6590	6450	6700	6120	6270	3270	5870	6200	6220
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/8/2001	2/5/2001	3/6/2001	4/3/2001	5/7/2001	6/4/2001	7/9/2001	8/6/2001	9/10/2001	10/1/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	223	233	199	228	244	246	253	300	273	311
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.85	0.85	0.92	0.87	0.95	0.98	0.97	1.1	0.91	0.85
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3020	3420	3400	3370	3000	3180	3260	3000	3100	2900
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6180	6410	6100	6800	6860	6620	6990	7000	7020	7080
URANIUM	mg/l	5	0.064	0.066	0.0601	0.059	0.062	0.06	0.0632	0.072	0.0582	0.0608
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1740	1660	1640	1600	1600	1580	1680	1670	1700	1730
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.7	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	2.69	5.9	12.7	21.6	26.5	32.7	35.9	34.2	45.3	40.2
PH (FIELD)	pH units		6.38	6.55	6.51	6.45	6.3	6.36	6.84	6.27	6.25	6.35
PH (LAB)	pH units		7.38	7.04	7.31	7.17	7.41	7.22	7.08	7.2	7	7.4
RADIUM-226	pci/l	5	0.7	1.2	1	1.1	< 0.2	1.4	1.1	0.7	1	1.1
RADIUM-228	pci/l	5	1.9	2.4	< 1	< 1	< 1	3.1	< 1	2.2	2.7	< 1
RADIUM 226 and 228	pci/l	5	0.7	1.2	1	1.1		1.4	1.1	0.7	1	1.1
SPECIFIC CONDUCTANCE	umhos/cm		6350	6430	6530	6360	6740	6590	6400	6430	6450	6550
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	11/5/2001	12/3/2001	1/8/2002	2/4/2002	3/4/2002	4/2/2002	5/6/2002	6/3/2002	7/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	293	272	294	292	278	280	260	240	229
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.97	0.87	0.95	0.92	1.08	1.13	1.12	1	0.96
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3390	3000	3530	3330	3460	3530	3270	3290	3490
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7060	7100	7020	7070	7080	7140	7130	7150	7200
URANIUM	mg/l	5	0.0542	0.0577	0.0575	0.051	0.066	0.059	0.0636	0.058	0.0708
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1680	1740	1700	1720	1690	1730	1720	1710	1710
GROSS ALPHA	pci/l	15	< 1	< 1	3.2	< 1	1.8	< 1	2.1	< 1	< 1
NITRATE (NO3)	mg/l	190	43.2	46	40.2	41.1	44	42.5	43.7	45.1	43.3
PH (FIELD)	pH units		6.34	6.37	6.45	6.37	6.36	6.32	6.22	6.24	6.47
PH (LAB)	pH units		7.5	6.8	7	7	7.1	7.04	7.16	7.3	7.75
RADIUM-226	pci/l	5	1	0.9	1.2	1.3	0.6	1.3	0.8	0.6	1
RADIUM-228	pci/l	5	< 1	3.4	1.2	1.8	< 1	2.9	2.2	< 1	< 1
RADIUM 226 and 228	pci/l	5	1	0.9	1.2	1.3	0.6	1.3	0.8	0.6	1
SPECIFIC CONDUCTANCE	umhos/cm		6360	6510	6620	6530	6670	6670	5590	5570	6700
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0632
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/8/2002
ALUMINUM	mg/l	5	< 0.1
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	221
COBALT	mg/l	0.05	< 0.01
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	1.07
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	< 0.05
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	3150
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7100
URANIUM	mg/l	5	0.0521
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		1700
GROSS ALPHA	pci/l	15	< 1
NITRATE (NO3)	mg/l	190	45.7
PH (FIELD)	pH units		6.61
PH (LAB)	pH units		7.29
RADIUM-226	pci/l	5	2.1
RADIUM-228	pci/l	5	< 1
RADIUM 226 and 228	pci/l	5	2.1
SPECIFIC CONDUCTANCE	umhos/cm		6710
THORIUM-230	pci/l	15	< 0.2

Location 0639
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/21/1992	4/13/1992	7/14/1992	10/13/1992	1/21/1993	4/14/1993	7/15/1993	10/6/1993	1/5/1994	4/13/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	29.4	33.5	28	27	23.3	18.6	19.2	16.8	17	15.8
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.27	1.59	1.41	1.51	0.07	1.67	1.44	1.15	1.71	1.18
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.002	0.006	0.002	0.003	0.002	0.003	0.009	0.003	< 0.001	0.002
SULFATE (SO4)	mg/l	2125	2792	2922	2845	2801	2359	1988	1959	1862	1781	1862
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4330	5005	4857	4661	3924	3417	3046	3060	3018	3058
URANIUM	mg/l	5	0.17	0.367	0.245	0.223	0.094	0.08	0.109	0.071	0.107	0.11
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		620	618	616	619	570	561	576	539	559	458
GROSS ALPHA	pci/l	15	< 1	2.2	< 1	< 1	< 1	6.4	< 1	5.8	4.8	< 1
NITRATE (NO3)	mg/l	190	2.93	3.31	3.74	2.1	2	2	1.63	2.3	1.38	1.31
PH (FIELD)	pH units		6.4	6.3	6.3	6.4	6.5	6.6	6.6	6.6	6.5	6.7
PH (LAB)	pH units		7.2	7.54	7.36	7.55	7.09	7.85	6.91	6.76	7.38	7.1
RADIUM-226	pci/l	5	0.7	2.1	0.3	0.8	< 0.2	6	0.2	3	3.8	0.3
RADIUM-228	pci/l	5	1.8	2.8	1.6	3.5	4.1	6	< 1	1.9	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.7	2.1	0.3	0.8	4.1	6	0.2	3	3.8	0.3
SPECIFIC CONDUCTANCE	umhos/cm										2600	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0639
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/5/1994
ALUMINUM	mg/l	5	< 0.1
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.01
CHLORIDE	mg/l	250	16.3
COBALT	mg/l	0.05	< 0.01
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	0.8
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	< 0.05
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	2142
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3396
URANIUM	mg/l	5	0.07
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		373
GROSS ALPHA	pci/l	15	10.8
NITRATE (NO3)	mg/l	190	1.61
PH (FIELD)	pH units		6.6
PH (LAB)	pH units		7.99
RADIUM-226	pci/l	5	< 0.2
RADIUM-228	pci/l	5	7
RADIUM 226 and 228	pci/l	5	7
SPECIFIC CONDUCTANCE	umhos/cm		2800
THORIUM-230	pci/l	15	< 0.2

Location 0642
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/21/1992	4/13/1992	7/14/1992	10/13/1992	1/21/1993	4/14/1993	7/15/1993	10/6/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.001	0.001	0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	75	31.5	28.4	29	31.6	30.4	33	28.6
COBALT	mg/l	0.05	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	< 0.01	0.04	0.05	0.03	0.05	0.16	0.1	0.02
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.002	0.002	0.003	0.001	0.003	0.001	0.003	< 0.001
SULFATE (SO4)	mg/l	2125	2307	1851	2518	2721	2575	2621	2657	2849
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4133	4096	4196	3909	4295	4460	4023	4659
URANIUM	mg/l	5	0.029	0.108	0.05	0.055	0.046	0.06	0.051	0.036
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		425	399	405	422	422	453	478	432
CYANIDE	mg/l		< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	1.3	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	38.1	29	46	45.9	32.8	35.1	2.2	29.5
NPL	mg/l		< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
PH (FIELD)	pH units		6.8	6.7	6.4	6.8	6.9	7	7	7.1
PH (LAB)	pH units		7.35	7.43	7.72	7.59	7.52	7.95	7.02	7.1
RADIUM-226	pci/l	5	0.5	0.5	0.4	0.3	0.4	0.7	0.5	0.5
RADIUM-228	pci/l	5	< 1	< 1	1.1	3	< 1	< 1	< 1	1.3
RADIUM 226 and 228	pci/l	5	0.5	0.5	0.4	0.3	0.4	0.7	0.5	0.5
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0642
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/5/1994	4/13/1994	7/21/1994	10/5/1994	1/5/1995	4/5/1995	7/6/1995	10/4/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
CHLORIDE	mg/l	250	29.5	30	27.3	29.8	30.7	30	29	
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
MANGANESE	mg/l	2.6	0.05	0.07	0.12	0.08	0.08	0.09	0.14	
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
SELENIUM	mg/l	0.01	< 0.001	0.003	0.006	< 0.001	< 0.001	0.002	0.003	
SULFATE (SO4)	mg/l	2125	2709	2782	3117	2863	2823	2869	2781	
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4362	4446	4667	4699	4800	4804	4613	
URANIUM	mg/l	5	0.046	0.043	0.038	0.039	0.038	0.042	0.0549	
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
BICARBONATE (HCO3)	mg/l		450	442	471	490	505	519	527	
CYANIDE	mg/l									
GROSS ALPHA	pci/l	15	< 1	< 1	5.3	3.4	1.5	7.9	4.8	
NITRATE (NO3)	mg/l	190	22.3	21.2	21.3	20.6	18.2	17	20.7	
NPL	mg/l									
PH (FIELD)	pH units		7.1	7.1	7.1	7	7	7	7	7
PH (LAB)	pH units		7.68	7.33	7.37	7.7	7.57	7.44	7.99	
RADIUM-226	pci/l	5	0.4	0.9	0.8	0.7	1.3	3.4	0.6	
RADIUM-228	pci/l	5	< 1	< 1	4.6	1.7	< 1	2.9	< 1	
RADIUM 226 and 228	pci/l	5	0.4	0.9	0.8	0.7	1.3	3.4	0.6	
SPECIFIC CONDUCTANCE	umhos/cm		3100			3400				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	

Location 0644
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/21/1992	4/13/1992	7/14/1992	10/13/1992
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	98	103	92.1	97.5
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.08	0.12	0.15	0.15
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.004	0.008	0.005	0.012
SULFATE (SO4)	mg/l	2125	1896	1851	1884	2121
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4715	5318	5770	5731
URANIUM	mg/l	5	0.042	0.043	0.08	0.109
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		591	539	464	488
CYANIDE	mg/l		< 0.005	< 0.005	< 0.005	< 0.005
GROSS ALPHA	pci/l	15	2	1.8	< 1	2.3
NITRATE (NO3)	mg/l	190	234	244	338	250
NPL	mg/l		< 1	< 1	< 1	< 1
PH (FIELD)	pH units		6.7	6.6	6.3	6.7
PH (LAB)	pH units		7.4	7.4	7.38	7.34
RADIUM-226	pci/l	5	1.8	1.6	0.8	2.2
RADIUM-228	pci/l	5	3	< 1	3.1	< 1
RADIUM 226 and 228	pci/l	5	1.8	1.6	0.8	2.2
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location 0801
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/16/1992	4/13/1992	7/8/1992	10/8/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993
ALUMINUM	mg/l	5	< 0.1	0.18	0.23	0.3	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.001	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	247	255	246	229	249	247	247	229
COBALT	mg/l	0.05	0.11	0.09	0.03	0.06	0.12	0.11	0.08	0.09
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	32.5	31.3	24.3	37	45.3	45.1	30	31.9
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.12	0.1	< 0.05	0.07	< 0.05	0.16	0.1	< 0.05
SELENIUM	mg/l	0.01	0.005	0.005	0.001	< 0.001	0.006	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4891	4650	4512	5132	4709	4867	4887	4231
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8346	9240	8276	9244	8060	8253	8158	7688
URANIUM	mg/l	5	0.031	0.034	0.04	0.022	0.03	0.069	0.028	0.035
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1825	1869	1915	1832	1575	1603	1709	1641
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.9	< 1	< 1	< 1	2
NITRATE (NO3)	mg/l	190	13.6	12.8	38.1	14.7	9.9	10.2	14.7	19
PH (FIELD)	pH units		6.2	6.2	6.1	6.4	6.3	6.4	6.4	6.3
PH (LAB)	pH units		7.28	7.11	7.38	7.72	7.28	7.19	6.93	7.08
RADIUM-226	pci/l	5	0.3	0.5	0.9	1.7	0.7	0.4	0.7	1.5
RADIUM-228	pci/l	5	3.7	1	< 1	< 1	< 1	< 1	3.8	3.3
RADIUM 226 and 228	pci/l	5	0.3	0.5	0.9	1.7	0.7	0.4	0.7	1.5
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0801
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/6/1994	4/12/1994	7/27/1994	10/5/1994	1/4/1995	4/6/1995	7/6/1995	10/4/1995
ALUMINUM	mg/l	5	0.7	0.36	< 0.1	0.44	0.51	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	230	233	222	236	226	258	230	212
COBALT	mg/l	0.05	0.09	0.12	0.1	< 0.01	0.06	< 0.01	0.03	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	33.4	34.3	20.5	20.4	31.5	23.4	23	18.1
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.09	0.15	0.09	0.07	0.09	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4519	5061	4930	4544	4925	4455	4335	4668
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7788	8786	8502	8093	8714	8297	8028	8115
URANIUM	mg/l	5	0.047	0.039	0.036	0.036	0.034	0.039	0.0435	0.038
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1540	1454	1530	1619	1599	1652	1627	1619
GROSS ALPHA	pci/l	15	3.9	< 1	5.5	3.5	2.9	5.4	4.8	1.1
NITRATE (NO3)	mg/l	190	28.6	9.9	25.2	10.7	9.57	10.2	8.82	11
PH (FIELD)	pH units		6.4	6.4	6.4	6.2	6.2	6.2	6.3	6.3
PH (LAB)	pH units		6.82	6.8	7.24	7.29	6.97	6.7	7.64	7.29
RADIUM-226	pci/l	5	1.3	0.9	1.1	0.8	1.2	1.6	1.5	1.3
RADIUM-228	pci/l	5	1	< 1	5.2	1.7	< 1	2.4	1.5	< 1
RADIUM 226 and 228	pci/l	5	1.3	0.9	1.1	0.8	1.2	1.6	1.5	1.3
SPECIFIC CONDUCTANCE	umhos/cm		6500			7000				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.3	0.6

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Chemical Name	Unit	ROD Cleanup Level	1/3/1996	4/2/1996	7/17/1996	10/8/1996	1/28/1997	4/8/1997	7/8/1997	10/8/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	242	224	241	233	324	232	243	273
COBALT	mg/l	0.05	< 0.01	< 0.01	0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	18.6	17	19.5	17.1	19.4	20.2	17	21.8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4640	4370	4100	4325	4460	4500	4480	4350
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7962	8061	8133	8130	8340	8190	8240	8100
URANIUM	mg/l	5	0.042	0.063	0.051	0.046	0.028	0.04	0.039	0.039
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1620	1623	1532	1520	1678	1520	1520	1520
GROSS ALPHA	pci/l	15	2	3	1.2	< 1	1.2	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	9.91	9.08	8.22	4.46	3.75	6.33	6.43	5.06
PH (FIELD)	pH units		6.5	6.5	6.3	6.3	6.5	6.4	6.6	6.2
PH (LAB)	pH units		7.18	7.31	6.79	6.97	7.73	7.57	7.43	7.51
RADIUM-226	pci/l	5	1.3	0.3	0.9	1.3	2.4	0.9	1.2	1
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	3.3	< 1
RADIUM 226 and 228	pci/l	5	1.3	0.3	0.9	1.3	2.4	0.9	1.2	1
SPECIFIC CONDUCTANCE	umhos/cm		6500	6400	6500	5900	6100	6500	6500	6500
THORIUM-230	pci/l	15	< 0.2	< 0.2	1.1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/7/1998	7/7/1998	10/6/1998	1/12/1999	4/13/1999	7/20/1999	10/5/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	0.005	< 0.005	0.006	< 0.006	0.006
CHLORIDE	mg/l	250	269	214	233	250	222	221	220	227
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	19.7	16.5	20.8	17.3	16.2	17	12.6	16.1
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	0.75	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4400	4260	4200	4300	4450	4060	4240	4300
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8090	8140	8250	8040	8010	7940	7950	7500
URANIUM	mg/l	5	0.043	0.0439	0.0411	0.0262	0.0433	0.0389	0.0405	0.0527
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1500	1480	1450	1440	1390	1410	1420	1450
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.3	< 1	< 1	1	1.4
NITRATE (NO3)	mg/l	190	7.07	7.42	4.86	6.56	6.05	6.37	5.51	25.1
PH (FIELD)	pH units		6.2	6.5	6.6	6.4	6.5	6.4	6.5	6.37
PH (LAB)	pH units		7.72	7.42	7.42	7.58	7.49	7.65	7.63	7.53
RADIUM-226	pci/l	5	1.3	1.2	1.6	1.2	0.8	< 0.2	0.9	1.1
RADIUM-228	pci/l	5	< 1	< 1	1.7	< 1	< 1	2.5	3.7	< 1
RADIUM 226 and 228	pci/l	5	1.3	1.2	1.6	1.2	0.8	2.5	0.9	1.1
SPECIFIC CONDUCTANCE	umhos/cm		700	6400	7720	7830	7780	7480	7570	7070
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/4/2000	1/8/2001	2/6/2001	3/5/2001	4/3/2001	5/7/2001	6/4/2001	7/9/2001	8/6/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	205	240	226	203	214	229	225	237	240
COBALT	mg/l	0.05	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	23.6	6.52	7.28	7.98	7.02	8.7	8.24	8.34	7.7
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	4670	3700	3970	3660	3580	3120	3380	3320	3300
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	8450	7330	7200	6610	6930	7090	6680	6900	6890
URANIUM	mg/l	5	0.0408	0.087	0.071	0.0582	0.053	0.049	0.046	0.0486	0.048
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1400	1570	1570	1580	1570	1560	1560	1610	1580
GROSS ALPHA	pci/l	15	1.3	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	11.9	48.9	29.9	21.9	17.5	13.3	8.45	6.25	4.4
PH (FIELD)	pH units		6.5	6.67	6.9	6.92	6.59	6.47	6.47	7.02	6.76
PH (LAB)	pH units		7.94	7.7	7.42	7.19	7.37	7.53	7.33	7.11	7.4
RADIUM-226	pci/l	5	0.7	< 0.2	0.5	< 0.2	0.4	0.4	< 0.2	0.8	0.4
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.7		0.5		0.4	0.4		0.8	0.4
SPECIFIC CONDUCTANCE	umhos/cm		7760	6950	7220	6700	6510	6700	6520	6290	6180
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	9/10/2001	10/1/2001	11/5/2001	12/4/2001	1/8/2002	2/4/2002	3/4/2002	4/1/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	248	253	272	229	274	264	259	249
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.24	6.87	7.36	6.57	6.61	6.69	7.89	7.42
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3300	3200	3670	3240	3840	3640	3720	3730
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6860	7060	7070	7090	7100	7120	7070	7120
URANIUM	mg/l	5	0.044	0.0373	0.0374	0.0407	0.0422	0.0336	0.0525	0.0423
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1600	1600	1590	1590	1570	1600	1590	1600
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	< 0.1	2.9	3.3	3	2.34	2.08	2.41	2.35
PH (FIELD)	pH units		6.38	6.45	6.46	6.56	6.58	6.45	6.41	6.36
PH (LAB)	pH units		7	7.5	7	7	7.2	7.1	7.2	7.33
RADIUM-226	pci/l	5	0.3	0.7	0.4	< 0.2	0.3	0.7	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3	0.7	0.4		0.3	0.7		
SPECIFIC CONDUCTANCE	umhos/cm		6240	6470	6370	6530	6450	6530	6510	6470
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	5/6/2002	6/3/2002	7/8/2002	10/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	242	208	194	206
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	6.84	6.36	5.85	5.66
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3520	3460	3570	3260
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7030	7070	7050	6960
URANIUM	mg/l	5	0.0472	0.042	0.0488	0.0343
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1570	1570	1570	1560
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	2.34	2.13	2.04	1.99
PH (FIELD)	pH units		6.35	6.33	6.62	6.51
PH (LAB)	pH units		7.38	7.43	7.69	7.58
RADIUM-226	pci/l	5	< 0.2	< 0.2	0.3	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5			0.3	
SPECIFIC CONDUCTANCE	umhos/cm		5470	5360	6410	6510
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2

Location 0802
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Chemical Name	Unit	ROD Cleanup Level	1/16/1992	4/13/1992	7/8/1992	10/8/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993	1/6/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	235	234	235	228	236	237	241	218	224
COBALT	mg/l	0.05	0.02	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.35	0.44	0.4	0.4	0.44	0.57	0.53	0.52	0.55
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.004	0.001	0.002	0.006	0.001	0.003	0.004	< 0.001
SULFATE (SO4)	mg/l	2125	2916	2730	2615	3057	2980	3023	3183	2935	3228
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6541	7383	5929	7274	6306	6486	7413	6416	6614
URANIUM	mg/l	5	0.144	0.045	0.14	0.124	0.127	0.249	0.154	0.143	0.148
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1662	2404	1777	2245	2150	2223	2208	1972	2125
GROSS ALPHA	pci/l	15	< 1	< 1	1.5	< 1	< 1	< 1	< 1	< 1	3.9
NITRATE (NO3)	mg/l	190	117	81.3	100	136	105	93.9	78.3	110	80.3
PH (FIELD)	pH units		6.3	6.2	6.2	6.8	6.8	6.5	6.4	6.4	6.4
PH (LAB)	pH units		7.1	6.84	7.32	7.21	7.46	7.15	7	6.98	6.75
RADIUM-226	pci/l	5	0.5	0.2	1.2	0.8	< 0.2	< 0.2	0.5	0.7	0.5
RADIUM-228	pci/l	5	< 1	< 1	4.4	< 1	< 1	< 1	< 1	4.1	1.6
RADIUM 226 and 228	pci/l	5	0.5	0.2	1.2	0.8			0.5	0.7	0.5
SPECIFIC CONDUCTANCE	umhos/cm										6100
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	4/12/1994	7/27/1994	10/5/1994	1/4/1995	4/6/1995	7/6/1995	10/4/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	184	217	225	240	268	236	190	222	227
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.72	0.57	0.57	0.78	0.76	0.69	0.73	0.09	0.8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.003	< 0.001	< 0.001	< 0.001	0.002	0.024	0.022	< 0.001
SULFATE (SO4)	mg/l	2125	3596	3484	3277	3436	3551	3310	3301	3530	3560
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7568	7680	7578	7845	7761	7216	7003	7477	7595
URANIUM	mg/l	5	0.176	0.165	0.153	0.142	0.159	0.1883	0.157	0.168	0.167
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2047	2237	2288	2323	2269	2257	2208	2166	2250
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	3.9	< 1	1.5	1.4	< 1	1.2
NITRATE (NO3)	mg/l	190	96.2	106	97.3	86.1	93	84.6	88.4	85.8	88.4
PH (FIELD)	pH units		6.3	6.4	6.3	6.6	6.5	6.4	6.5	6.4	6.4
PH (LAB)	pH units		6.99	7.35	7.45	7.29	6.75	7.43	7.56	7.92	7.37
RADIUM-226	pci/l	5	< 0.2	0.8	0.8	0.4	< 0.2	0.3	0.3	0.4	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	2.2	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5		0.8	0.8	0.4		0.3	0.3	0.4	
SPECIFIC CONDUCTANCE	umhos/cm				6500					6500	6200
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/17/1996	10/8/1996	1/28/1997	4/8/1997	7/8/1997	10/8/1997	1/20/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	236	220	317	240	236	252	242	212	224
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.81	1.06	0.93	0.98	0.97	1.26	1.25	1.18	1.19
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.021	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3164	3291	3215	3190	2930	3050	3350	3010	2900
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7488	7600	7350	7270	7430	7330	7320	7310	7350
URANIUM	mg/l	5	0.086	0.171	0.171	0.181	0.018	0.176	0.198	0.186	0.208
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2196	2200	2142	2090	2140	2160	2120	2120	2180
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.9	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	91.2	76.5	79.1	80.1	82	82.8	83.3	90.8	86.6
PH (FIELD)	pH units		6.3	6.7	6.5	6.4	6.7	6.5	6.2	6.6	6.8
PH (LAB)	pH units		6.96	7.25	7.84	7.44	7.38	7.45	7.72	7.3	7.42
RADIUM-226	pci/l	5	< 0.2	0.5	< 0.2	1.4	0.6	< 0.2	< 0.2	< 0.2	0.6
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5		0.5		1.4	0.6				0.6
SPECIFIC CONDUCTANCE	umhos/cm		5100	5600	6000	6000	6000	6000	725	7020	7210
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999	1/11/2000	5/2/2000	7/12/2000	10/4/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.12	0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	210	207	205	207	194	195	174	174	201
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.2	1.29	1.48	1.13	1.37	1.83	2.27	1.52	1.97
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3230	3260	3060	3160	2920	3120	2920	2870	3170
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7340	7190	7320	7350	7360	7350	7170	7030	7250
URANIUM	mg/l	5	0.207	0.211	0.19	0.196	0.203	0.18	0.193	0.098	0.168
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2110	2110	2090	2120	2120	2100	2047	2020	2050
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	85.4	88.1	86.2	76.2	76.9	119	81.2	42	79.7
PH (FIELD)	pH units		6.43	6.6	6.4	6.5	6.62	6.5	6.7	6.55	6.37
PH (LAB)	pH units		7.64	7.55	7.65	7.58	7.66	7.73	7.55	7.33	7.01
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	0.5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	2.1	< 1	< 1
RADIUM 226 and 228	pci/l	5				0.5			2.1		
SPECIFIC CONDUCTANCE	umhos/cm		7390	7510	7080	7270	6880	7090	7040	7290	7560
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/8/2001	2/5/2001	3/5/2001	4/9/2001	5/7/2001	6/4/2001	7/9/2001	8/6/2001	9/10/2001	10/1/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	203	200	158	180	193	190	216	240	216	225
COBALT	mg/l	0.05	0.01	0.01	0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.73	3.34	0.96	0.64	0.6	0.62	0.6	0.65	0.68	0.57
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.004	0.001	0.001	< 0.001	0.001	0.011	0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3190	3160	2850	2840	2420	2520	2520	2500	2400	2400
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7360	6910	6120	6400	6660	6200	6580	6630	6400	6620
URANIUM	mg/l	5	0.193	0.159	0.165	0.17	0.181	0.214	0.221	0.23	0.25	0.244
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2180	2050	2000	2050	2020	1960	2060	2050	2100	2080
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	89.3	93.8	103	111	102	101	114	97.5	100	97.5
PH (FIELD)	pH units		6.43	6.49	6.64	6.86	6.42	6.46	7.07	6.43	6.37	6.44
PH (LAB)	pH units		7.69	7.1	7.17	7.24	7.23	7.16	7.06	7.2	6.9	7.4
RADIUM-226	pci/l	5	< 0.2	0.4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.3	0.6
RADIUM-228	pci/l	5	3.6	< 1	2.9	< 1	< 1	< 1	< 1	< 1	2.7	1.2
RADIUM 226 and 228	pci/l	5	3.6	0.4	2.9						0.3	0.6
SPECIFIC CONDUCTANCE	umhos/cm		7690	7010	6530	6310	6650	6330	6280	6300	6190	6360
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	11/5/2001	12/3/2001	1/7/2002	2/4/2002	3/4/2002	4/1/2002	5/6/2002	6/3/2002	7/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	227	214	232	239	217	212	215	196	227
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.62	0.55	0.58	0.63	0.71	0.7	0.7	0.53	0.55
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2640	2450	2850	2750	2880	2980	2790	3090	3150
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6660	6710	6750	6820	6800	6900	7050	7430	7470
URANIUM	mg/l	5	0.219	0.222	0.225	0.222	0.249	0.223	0.227	0.199	0.248
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2050	2060	2030	2070	2030	2080	2090	2160	2190
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	114	121	98	100	108	98.1	107	103	99.1
PH (FIELD)	pH units		6.44	6.56	6.56	6.5	6.48	6.38	6.36	6.34	6.41
PH (LAB)	pH units		7.5	7.5	7.1	7.2	7.1	7.08	7.24	7.94	7.84
RADIUM-226	pci/l	5	0.3	< 0.2	0.4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5
RADIUM-228	pci/l	5	< 1	1.6	< 1	< 1	1.7	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3	1.6	0.4		1.7				0.5
SPECIFIC CONDUCTANCE	umhos/cm		6310	6420	6430	6440	6540	6530	5450	5720	6910
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0802
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Chemical Name	Unit	ROD Cleanup Level	10/7/2002
ALUMINUM	mg/l	5	< 0.1
ARSENIC	mg/l	0.05	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.005
CHLORIDE	mg/l	250	187
COBALT	mg/l	0.05	< 0.01
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	0.65
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	< 0.05
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	3060
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5680
URANIUM	mg/l	5	0.205
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		2140
GROSS ALPHA	pci/l	15	< 1
NITRATE (NO3)	mg/l	190	95.2
PH (FIELD)	pH units		6.33
PH (LAB)	pH units		7.99
RADIUM-226	pci/l	5	< 0.2
RADIUM-228	pci/l	5	< 1
RADIUM 226 and 228	pci/l	5	
SPECIFIC CONDUCTANCE	umhos/cm		6920
THORIUM-230	pci/l	15	< 0.2

Location 0803
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/16/1992	4/13/1992	7/8/1992	10/8/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993	1/6/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	160	180	137	185	185	176	178	174	170
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.47	1.43	1.3	0.61	0.64	0.98	1.03	1.12	0.92
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.003	0.002	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2451	2346	2192	2661	2522	2666	2833	2482	2754
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5155	5265	4617	5982	5851	5631	5726	5445	5648
URANIUM	mg/l	5	0.056	0.138	0.04	0.068	0.085	0.17	0.062	0.069	0.07
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1375	1571	1611	1952	1879	1806	1878	2000	1656
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	51.8	19.1	25.4	15.7	38.8	45.3	21.7	33.4	31.6
PH (FIELD)	pH units		6.5	6.3	6.2	6.5	6.3	6.4	6.6	6.5	6.7
PH (LAB)	pH units		7.19	7.01	7.46	7.79	7.32	7.14	7.24	7.2	7.12
RADIUM-226	pci/l	5	0.3	< 0.2	0.3	0.8	< 0.2	0.3	< 0.2	0.3	0.5
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	1.4	7.9	< 1
RADIUM 226 and 228	pci/l	5	0.3		0.3	0.8		0.3	1.4	0.3	0.5
SPECIFIC CONDUCTANCE	umhos/cm										4600
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	4/12/1994	7/27/1994	10/5/1994	1/4/1995	4/6/1995	7/6/1995	10/4/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	175	172	163	184	196	198	180	174	198
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.72	1.17	1.34	1.08	1.1	1.16	1.07	1.17	1.14
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.004	< 0.001	< 0.001	< 0.001	0.001	0.002	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	3205	2956	2713	2885	3018	2870	2840	3160	3160
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6510	6003	5943	6350	6220	6150	6000	6427	6557
URANIUM	mg/l	5	0.1	0.108	0.068	0.071	0.074	0.086	0.079	0.083	0.082
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1743	1890	1845	1948	1935	1848	2017	1929	2014
GROSS ALPHA	pci/l	15	< 1	1.4	< 1	< 1	< 1	1.3	< 1	1	< 1
NITRATE (NO3)	mg/l	190	28	24	31.3	34.3	22.7	30.7	33.6	30.6	32.5
PH (FIELD)	pH units		6.5	6.5	6.3	6.4	6.4	6.5	6.8	6.5	6.6
PH (LAB)	pH units		7.1	7.41	7.49	7.16	6.73	7.41	7.36	7.16	7.43
RADIUM-226	pci/l	5	0.6	0.9	< 0.2	0.8	< 0.2	< 0.2	< 0.2	0.2	< 0.2
RADIUM-228	pci/l	5	< 1	5.4	< 1	< 1	< 1	< 1	< 1	1	< 1
RADIUM 226 and 228	pci/l	5	0.6	0.9		0.8				0.2	
SPECIFIC CONDUCTANCE	umhos/cm				4800					6000	5800
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.3	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	7/17/1996	10/8/1996	1/28/1997	4/8/1997	7/8/1997	10/8/1997	1/20/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	184	173	229	181	236	168	218	181	198
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.52	1.14	1.53	1.7	0.97	1.38	1.59	1.43	1.52
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2869	3202	3178	2914	2930	2970	3400	3010	3000
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6277	6930	6250	6130	6240	6760	6840	6870	6940
URANIUM	mg/l	5	0.068	0.079	0.056	0.069	0.067	0.081	0.094	0.0901	0.0974
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1967	2022	1847	1800	1790	1990	2000	1990	2020
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	29	33.2	25.6	25.4	24.9	33.9	38.7	35.8	51.8
PH (FIELD)	pH units		6.3	6.4	6.5	6.4	6.6	6.3	6.3	6.5	6.4
PH (LAB)	pH units		6.7	7.03	7.87	7.52	7.39	7.6	7.75	7.4	7.4
RADIUM-226	pci/l	5	0.4	< 0.2	< 0.2	< 0.2	0.9	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.4				0.9				
SPECIFIC CONDUCTANCE	umhos/cm		5800	5200	5000	5500	5500	5500	750	5710	6350
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/12/1999	4/13/1999	10/12/1999	1/11/2000	5/2/2000	7/12/2000	10/4/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	0.12	0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	193	184	178	175	176	161	184	175
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.42	1.47	1.55	1.62	1.69	2.27	1.95	1.76
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3200	3300	3100	3040	3180	3030	2890	3260
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6880	6980	6910	6990	7020	7050	7250	7060
URANIUM	mg/l	5	0.0976	0.0984	0.0889	0.0919	0.0891	0.193	0.197	0.0841
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1980	1990	1960	2000	2000	2000	2050	2010
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	39.4	39.1	40.9	37.5	35.7	42.8	77.5	45.6
PH (FIELD)	pH units		6.44	6.6	6.5	6.58	6.6	6.7	6.71	6.65
PH (LAB)	pH units		7.56	7.63	7.65	7.78	7.66	7.58	7.4	7.31
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	0.6	0.6	0.4	0.5
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	2.5	< 1	1.3
RADIUM 226 and 228	pci/l	5					0.6	0.6	0.4	0.5
SPECIFIC CONDUCTANCE	umhos/cm		7000	6940	6760	6770	6660	6890	7200	7240
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	1/8/2001	2/5/2001	3/5/2001	4/9/2001	5/7/2001	6/4/2001	7/9/2001	8/6/2001	9/10/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	178	163	129	149	159	164	190	200	186
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.91	2.37	2.75	2.29	2.13	2.34	1.69	2.1	1.8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.001	0.001	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3240	3380	3320	3460	2980	3280	3160	3000	3100
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7010	6820	6810	6630	7040	6750	6980	6950	6910
URANIUM	mg/l	5	0.09	0.1	0.0874	0.1	0.093	0.086	0.136	0.16	0.125
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1970	1830	1770	1790	1760	1790	1820	1820	1900
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	46.3	40.7	39.1	43.9	46.9	47.8	66	57.6	57.4
PH (FIELD)	pH units		6.5	6.38	6.67	6.4	6.43	6.45	6.95	6.38	6.49
PH (LAB)	pH units		7.78	7.11	7.14	7.01	7.3	7.17	6.96	7.2	7.3
RADIUM-226	pci/l	5	< 0.2	0.6	< 0.2	< 0.2	< 0.2	0.4	< 0.2	< 0.2	0.3
RADIUM-228	pci/l	5	2.8	< 1	2.2	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	2.8	0.6	2.2			0.4			0.3
SPECIFIC CONDUCTANCE	umhos/cm		7350	6650	6330	6290	6640	6510	6310	6230	6330
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Chemical Name	Unit	ROD Cleanup Level	10/1/2001	11/5/2001	12/3/2001	1/7/2002	2/4/2002	3/4/2002	4/1/2002	5/6/2002	6/3/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	215	218	191	181	191	190	197	182	165
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.6	1.61	1.4	1.57	1.63	1.97	1.77	1.87	1.8
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2800	3310	3020	3350	3250	3390	3480	3140	3250
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6940	7030	7120	6920	7000	7030	7070	7010	7130
URANIUM	mg/l	5	0.148	0.134	0.128	0.167	0.149	0.166	0.152	0.174	0.153
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1880	1830	1870	1830	1900	1880	1880	1890	1910
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	56.4	64	62	53.5	51.1	55.3	51.2	55.4	52.7
PH (FIELD)	pH units		6.4	6.4	6.41	6.46	6.46	6.42	6.34	6.37	6.32
PH (LAB)	pH units		7.2	7.4	7.4	7	7.3	7.2	7.85	7.13	7.44
RADIUM-226	pci/l	5	0.8	< 0.2	< 0.2	1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	2.5	2.2	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.8			1		2.5	2.2		
SPECIFIC CONDUCTANCE	umhos/cm		6360	6330	6390	6320	6280	6470	6380	5240	5480
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0803
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/8/2002	10/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	148	163
COBALT	mg/l	0.05	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.77	1.6
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3150	3060
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7110	5300
URANIUM	mg/l	5	0.201	0.132
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1890	1880
GROSS ALPHA	pci/l	15	< 1	< 1
NITRATE (NO3)	mg/l	190	51.3	55.2
PH (FIELD)	pH units		6.38	6.33
PH (LAB)	pH units		7.6	7.44
RADIUM-226	pci/l	5	0.4	< 0.2
RADIUM-228	pci/l	5	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.4	
SPECIFIC CONDUCTANCE	umhos/cm		6450	6430
THORIUM-230	pci/l	15	< 0.2	< 0.2

Location 0804
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/7/1995
ALUMINUM	mg/l	5	< 0.1
ARSENIC	mg/l	0.05	0.002
BERYLLIUM	mg/l	0.017	< 0.01
CADMIUM	mg/l	0.01	< 0.01
CHLORIDE	mg/l	250	277
COBALT	mg/l	0.05	< 0.01
LEAD	mg/l	0.05	< 0.05
MANGANESE	mg/l	2.6	0.48
MOLYBDENUM	mg/l	1	< 0.1
NICKEL	mg/l	0.2	< 0.05
SELENIUM	mg/l	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	2673
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6096
URANIUM	mg/l	5	0.0916
VANADIUM	mg/l	0.7	< 0.1
BICARBONATE (HCO3)	mg/l		1715
GROSS ALPHA	pci/l	15	5.3
NITRATE (NO3)	mg/l	190	34.8
PH (LAB)	pH units		7.3
RADIUM-226	pci/l	5	2.7
RADIUM-228	pci/l	5	< 1
RADIUM 226 and 228	pci/l	5	2.7
THORIUM-230	pci/l	15	< 0.2

Location 0808
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/8/2001	2/5/2001	3/5/2001	4/9/2001	5/7/2001	6/5/2001	6/5/2001	7/9/2001
ALUMINUM	mg/l	5	6.02	0.11	< 0.1	0.11	< 0.1	0.2	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	233	185	213	247	216	238	244	246
COBALT	mg/l	0.05	0.13	0.02	0.02	0.03	0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	18.1	2.61	3.18	4	1.91	1.47	1.49	0.69
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.09	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	3400	2740	2580	2480	2540	2790	2780	2800
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	7470	5820	5480	6030	6600	6680	6900	6870
URANIUM	mg/l	5	0.082	0.0338	0.0338	0.034	0.074	0.059	0.06	0.165
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		2080	2040	2100	2130	2210	2280	2270	1940
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	26	< 0.1	< 0.1	< 0.1	60.2	32.4	34.6	119
PH (FIELD)	pH units		6.34	6.46	6.65	6.65	6.44	6.54	6.46	7.05
PH (LAB)	pH units		7.14	7.04	7.43	7.04	7.4	6.95	6.9	7.17
RADIUM-226	pci/l	5	< 0.2	0.4	< 0.2	0.4	< 0.2	< 0.2	0.4	< 0.2
RADIUM-228	pci/l	5	< 1	2.1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5		0.4		0.4			0.4	
SPECIFIC CONDUCTANCE	umhos/cm		7800	6100	5910	6160	6710	6700	6690	6460
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0808
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	8/6/2001	9/10/2001	10/1/2001	11/5/2001	12/3/2001	1/7/2002	2/4/2002	3/4/2002
ALUMINUM	mg/l	5	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	210	150	165	237	212	230	226	207
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.71	0.97	0.55	0.61	0.56	0.59	0.64	0.69
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2500	2500	2400	2750	2460	2870	2750	2890
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6860	6750	6780	6800	6780	6810	6830	6710
URANIUM	mg/l	5	0.194	0.253	0.157	0.14	0.147	0.138	0.145	0.162
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1950	1960	1970	1900	1940	1910	1960	1920
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	116	140	122	142	147	117	118	122
PH (FIELD)	pH units		6.4	6.4	6.47	6.48	6.53	6.53	6.52	6.49
PH (LAB)	pH units		7.2	7.2	7.4	7.5	7.5	7.2	7.3	7.3
RADIUM-226	pci/l	5	< 0.2	0.9	0.3	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	2.8	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5		0.9	0.3					
SPECIFIC CONDUCTANCE	umhos/cm		6420	6310	6470	6410	6490	6460	6430	6530
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location 0808
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/1/2002	5/6/2002	6/3/2002	7/8/2002	10/7/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	207	208	173	173	168
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.7	0.71	0.65	0.64	0.65
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2930	2690	2750	2850	2630
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6820	6900	6810	6950	5260
URANIUM	mg/l	5	0.15	0.148	0.142	0.169	0.115
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1930	1950	1960	1960	1970
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	117	125	120	115	113
PH (FIELD)	pH units		6.36	6.39	6.35	6.46	6.38
PH (LAB)	pH units		7.84	7.15	7.36	7.63	7.19
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	0.3	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5				0.3	
SPECIFIC CONDUCTANCE	umhos/cm		6410	5300	5510	6470	6540
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA22a
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/23/1992	4/2/1992	7/16/1992	10/15/1992	1/13/1993	4/15/1993	7/21/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.1	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	11.4	11	12.2	11.4	15.9	12.5	11.8
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.11	0.11	0.11	0.11	0.11	0.12	0.11
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	676	727	714	744	746	777	859
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1416	1453	1456	1603	1497	1631	1635
URANIUM	mg/l	5	0.036	0.01	0.028	0.009	0.041	0.039	0.039
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		540	556	538	548	545	548	558
GROSS ALPHA	pci/l	15	2	< 1	< 1	< 1	< 1	1.5	< 1
NITRATE (NO3)	mg/l	190	< 0.01	< 0.1	0.7	< 0.1	< 0.1	0.6	0.33
PH (FIELD)	pH units		6.8	6.8	6.9	6.9	7	7	7
PH (LAB)	pH units		7.76	7.7	7.43	7.51	7.47	7.52	7.83
RADIUM-226	pci/l	5	2	0.3	0.5	0.9	< 0.2	1	0.6
RADIUM-228	pci/l	5	2.3	1.5	1.4	2.8	2.6	< 1	< 1
RADIUM 226 and 228	pci/l	5	2	0.3	0.5	0.9	2.6	1	0.6
SPECIFIC CONDUCTANCE	umhos/cm								
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA22a
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/12/1993	1/11/1994	4/19/1994	7/27/1994	10/11/1994	1/11/1995	4/11/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	11.2	11.4	11.8	9.8	11	12.3	10.5
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.12	0.13	0.12	0.1	0.11	0.13	0.1
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	847	938	815	877	829	828	751
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1699	1748	1595	1548	1611	1726	1585
URANIUM	mg/l	5	0.045	0.045	0.034	0.035	0.036	0.051	0.031
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		551	492	483	510	538	534	547
GROSS ALPHA	pci/l	15	< 1	< 1	2.8	13.7	< 1	4.4	2.7
NITRATE (NO3)	mg/l	190	0.33	0.91	0.68	0.46	0.99	0.92	1.09
PH (FIELD)	pH units		7	7	6.7	6.8	6.9	6.9	6.9
PH (LAB)	pH units		7.4	7.92	7.77	7.68	7.71	8	7.62
RADIUM-226	pci/l	5	0.6	< 0.2	0.5	4.4	0.8	0.8	0.3
RADIUM-228	pci/l	5	< 1	< 1	1.4	6.1	< 1	2.3	1.6
RADIUM 226 and 228	pci/l	5	0.6		0.5	4.4	0.8	0.8	0.3
SPECIFIC CONDUCTANCE	umhos/cm			1500			1500		
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA22a
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/11/1995	10/10/1995	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.003	< 0.001	< 0.001	< 0.001	0.002	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	14.3	12	11.5	12.4	12.1	16.7	20.4
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.15	0.11	0.1	0.09	0.15	0.17	0.15
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	974	724	824	881	816	1041	1178
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	1820	1553	1724	1782	1815	2040	2070
URANIUM	mg/l	5	0.042	0.036	0.038	0.048	0.048	0.051	0.032
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		503	549	549	550	548	543	538
GROSS ALPHA	pci/l	15	1.5	2.3	< 1	1.4	< 1	2.2	1.2
NITRATE (NO3)	mg/l	190	1.92	1.12	1.73	1.85	1.29	1.44	4.07
PH (FIELD)	pH units		7	7.2	7.3	7.2	7	6.9	7
PH (LAB)	pH units		7.84	8.22	7.49	7.93	7.52	7.48	7.97
RADIUM-226	pci/l	5	0.4	1.3	0.4	0.5	0.7	2.1	1.1
RADIUM-228	pci/l	5	< 1	3.8	< 1	2	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.4	1.3	0.4	0.5	0.7	2.1	1.1
SPECIFIC CONDUCTANCE	umhos/cm		2000		2100		1600	1800	1700
THORIUM-230	pci/l	15	< 0.2	< 0.2	0.8	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA22a
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/14/1997	7/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	16.2	17.2
COBALT	mg/l	0.05	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.18	0.27
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.003
SULFATE (SO4)	mg/l	2125	1074	955
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	2050	1940
URANIUM	mg/l	5	0.043	0.032
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		537	521
GROSS ALPHA	pci/l	15	3.7	< 1
NITRATE (NO3)	mg/l	190	4.27	3.79
PH (FIELD)	pH units		6.8	6.9
PH (LAB)	pH units		7.95	8.15
RADIUM-226	pci/l	5	1.5	0.8
RADIUM-228	pci/l	5	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.5	0.8
SPECIFIC CONDUCTANCE	umhos/cm		1800	1800
THORIUM-230	pci/l	15	< 0.2	< 0.2

Location EPA23
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/16/1992	4/2/1992	7/16/1992	10/15/1992	1/14/1993	4/15/1993	7/21/1993	10/11/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
CHLORIDE	mg/l	250	100	89.3	93.4	88.2	78.6	93.1	87.8	79.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.28	2.27	2.23	2.69	2.68	2.61	2.89	2.74
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.013	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	2376	2408	2390	2373	2404	2361	2207	2225
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4916	4901	5173	4866	4647	4777	4450	4749
URANIUM	mg/l	5	0.032	0.031	0.032	0.038	0.035	0.028	0.036	0.028
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		979	1096	1093	1091	1054	1094	1137	1059
GROSS ALPHA	pci/l	15	< 1	< 1	1.3	1.8	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	94.3	94.3	74.4	48.4	39.5	56.6	53	52.4
PH (FIELD)	pH units		6.4	6.3	6.5	6.6	6.6	6.7	6.7	6.7
PH (LAB)	pH units		7.42	7.27	7.08	7.11	7.3	7.08	7.48	7.06
RADIUM-226	pci/l	5	0.3	< 0.2	1.2	1.6	< 0.2	0.3	0.2	< 0.2
RADIUM-228	pci/l	5	< 1	3.6	3.1	1.4	1.8	< 1	< 1	1.4
RADIUM 226 and 228	pci/l	5	0.3	3.6	1.2	1.6	1.8	0.3	0.2	1.4
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA23
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/10/1994	4/19/1994	7/27/1994	10/10/1994	1/11/1995	4/11/1995	7/10/1995	10/9/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	85.2	84.9	88.4	92.2	96.7	108	113	83.3
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	2.95	2.63	2.75	2.82	2.75	3	3.03	3.52
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	0.002	0.004
SULFATE (SO4)	mg/l	2125	2547	2460	2369	2599	2333	2414	2303	2194
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4712	4823	4720	4891	4852	4914	4865	4379
URANIUM	mg/l	5	0.035	0.039	0.032	0.036	0.046	0.034	0.038	0.033
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1007	997	1061	1175	1142	1152	1227	1122
GROSS ALPHA	pci/l	15	6.7	< 1	5.4	< 1	4.5	< 1	3.3	< 1
NITRATE (NO3)	mg/l	190	41.5	49.5	52.1	54.4	56.3	53.4	61.4	32.7
PH (FIELD)	pH units		6.6	6.4	6.5	6.7	6.6	6.5	6.6	6.5
PH (LAB)	pH units		7.42	7.63	7.4	7.45	7.21	7.21	7.5	7.66
RADIUM-226	pci/l	5	< 0.2	< 0.2	1.5	0.3	0.3	< 0.2	0.3	0.6
RADIUM-228	pci/l	5	3.7	< 1	2.5	< 1	2.8	< 1	< 1	3
RADIUM 226 and 228	pci/l	5	3.7		1.5	0.3	0.3		0.3	0.6
SPECIFIC CONDUCTANCE	umhos/cm		3500			3800			3600	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA23
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/8/1996	4/9/1996	7/17/1996	10/8/1996	1/27/1997	4/14/1997	7/14/1997	10/14/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	0.003	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	86	95.3	68	81.1	99	116	99	113
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.4	3.29	4.2	3.65	3.41	3.39	3.45	3.69
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.003	< 0.001	< 0.001	< 0.001	0.005	0.005	0.001	0.003
SULFATE (SO4)	mg/l	2125	2267	2440	2368	2269	2403	2351	2190	2450
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4421	4880	4518	4670	4720	4980	4810	4840
URANIUM	mg/l	5	0.037	0.04	0.025	0.031	0.026	0.035	0.033	0.039
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1114	1172	1048	1094	1138	1210	1130	1180
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	42.5	45	8.94	25.8	32.9	34.5	33.4	40
PH (FIELD)	pH units		6.4	6.7	6.5	6.5	6.6	6.5	6.5	6.5
PH (LAB)	pH units		7.35	7.67	7.07	7.18	7.83	7.71	7.56	7.71
RADIUM-226	pci/l	5	0.2	< 0.2	< 0.2	0.3	< 0.2	< 0.2	0.5	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.2			0.3			0.5	
SPECIFIC CONDUCTANCE	umhos/cm		4000		3400	3400	3500	3500	3500	3600
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA23
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/19/1998	4/13/1998	7/13/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	0.005	0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	71.4	90.8	98.9	78.2	95.6	92.2	86	111
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	4.63	3.53	3.69	2.83	2.75	2.96	2.33	3.23
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2730	2250	2200	2300	2100	2290	2300	2270
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4490	4840	5060	4620	4740	4670	4640	4910
URANIUM	mg/l	5	0.024	0.0405	0.0448	0.0288	0.0443	0.0313	0.0286	0.0452
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1050	1180	1190	1110	1180	1140	1120	1240
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	1.93	49.3	46	59.2	61.6	29.2	56.5	63.4
PH (FIELD)	pH units		6.6	6.7	6.7	6.63	6.7	6.6	6.7	6.62
PH (LAB)	pH units		7.64	7.37	7.73	7.95	7.72	7.68	7.67	7.69
RADIUM-226	pci/l	5	0.8	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.8							
SPECIFIC CONDUCTANCE	umhos/cm		800	4970	4940	5030	5033	5000	4960	4700
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA23
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000	5/9/2000	7/17/2000	10/9/2000	1/9/2001	2/6/2001	3/6/2001	4/4/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	92.6	68.7	71.1	57.4	67.7	68.5	65.6	71
COBALT	mg/l	0.05	< 0.01	0.01	< 0.01	< 0.01	0.01	0.01	0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	3.17	7.09	4.76	4.03	4.77	4.77	5	4.29
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1840	2130	1980	1770	2150	2510	2410	2310
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4730	4380	4450	4390	4340	4380	4070	4400
URANIUM	mg/l	5	0.0388	0.0254	0.0231	0.025	0.024	0.025	0.0245	0.024
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1190	1040	1060	1060	1050	1060	1030	1040
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	60.5	1.41	1.51	1.03	1.14	1.25	1.25	1.41
PH (FIELD)	pH units		6.6	6.6	6.55	6.54	6.75	6.8	6.93	6.87
PH (LAB)	pH units		7.73	7.81	7.66	7.45	7.68	7.56	7.61	7.49
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.3	< 0.2	0.3
RADIUM-228	pci/l	5	< 1	2.1	< 1	< 1	2.3	2.2	< 1	< 1
RADIUM 226 and 228	pci/l	5		2.1			2.3	0.3		0.3
SPECIFIC CONDUCTANCE	umhos/cm		4900	4183	4460	4460	4470	4500	4320	4310
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA23
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	5/7/2001	6/4/2001	7/9/2001	8/6/2001	9/10/2001	10/1/2001	11/5/2001	12/3/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	78.6	75.4	86	86	75.6	87.9	87	83.6
COBALT	mg/l	0.05	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	5.74	5.11	5.1	5.4	4.68	4.38	4.79	4.48
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003
SULFATE (SO4)	mg/l	2125	2070	2210	2250	2300	2200	2100	2360	2020
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4460	4360	4470	4500	4490	4500	4540	4480
URANIUM	mg/l	5	0.026	0.025	0.0276	0.025	0.0229	0.0239	0.0212	0.0243
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1040	1040	1060	1060	1100	1080	1050	1070
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	1.25	1.67	1.36	1.28	1.2	1	1.2	3.6
PH (FIELD)	pH units		6.97	6.67	6.6	6.58	6.56	6.68	6.74	6.68
PH (LAB)	pH units		7.14	7.22	7.12	7.2	7.5	7.3	7.6	7.6
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5	0.6	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	3.8	< 1
RADIUM 226 and 228	pci/l	5						0.5	0.6	
SPECIFIC CONDUCTANCE	umhos/cm		4100	4300	4230	4220	4180	4260	4170	4240
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA23
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/7/2002	2/4/2002	3/4/2002	4/1/2002	5/6/2002	6/3/2002	7/8/2002	10/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	94.4	88.2	82.7	83	77.7	73.5	78.2	75.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	4.59	4.69	5.48	5.12	5.41	5.43	4.62	4.67
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2430	2350	2340	2400	2240	2270	2320	2010
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4500	4470	4430	4490	4500	4480	4520	4280
URANIUM	mg/l	5	0.0211	0.0164	0.0259	0.029	0.0252	0.0262	0.0291	0.0197
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1070	1060	1080	1070	1080	1060	1070	1080
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	1.02	0.95	1.16	1.14	1.09	1.05	0.91	0.98
PH (FIELD)	pH units		6.7	6.8	6.73	6.57	6.62	6.61	6.62	5.92
PH (LAB)	pH units		7.1	7.3	7.2	7.83	7.17	7.37	7.55	7.59
RADIUM-226	pci/l	5	0.5	0.4	< 0.2	< 0.2	< 0.2	< 0.2	0.6	0.8
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.5	0.4					0.6	0.8
SPECIFIC CONDUCTANCE	umhos/cm		4250	4200	4300	4250	3420	3420	4200	4350
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/24/1992	4/3/1992	7/16/1992	10/15/1992	1/12/1993	4/15/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	0.007	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	45.7	45.4	49.3	51.6	52.6	59.4
COBALT	mg/l	0.05	< 0.01	< 0.01	0.02	< 0.01	< 0.01	0.02
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.24	0.22	0.35	0.23	0.22	0.23
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	0.003	< 0.001	0.01	< 0.001
SULFATE (SO4)	mg/l	2125	1669	1781	1804	1725	1631	1818
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3123	3414	3076	3529	3591	3674
URANIUM	mg/l	5	0.027	0.039	0.041	0.022	0.018	0.025
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		691	752	740	769	766	1049
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.9	< 1	< 1
NITRATE (NO3)	mg/l	190	23.5	43.9	44.9	38.9	50.7	41.1
PH (FIELD)	pH units		6.5	6.4	6.5	6.7	6.7	6.7
PH (LAB)	pH units		7.51	7.51	7.48	7.03	7.36	7.65
RADIUM-226	pci/l	5	0.7	< 0.2	< 0.2	1.7	< 0.2	0.2
RADIUM-228	pci/l	5	< 1	5.4	< 1	1.1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.7	5.4		2.8		0.2
SPECIFIC CONDUCTANCE	umhos/cm							
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/20/1993	10/11/1993	1/10/1994	4/20/1994	7/26/1994	10/10/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	62.7	59.3	67.8	67	70.4	73.9
COBALT	mg/l	0.05	0.03	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.24	0.21	0.29	0.21	0.26	0.25
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1709	1699	1771	1672	1681	1909
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3503	3584	3639	3486	3663	3704
URANIUM	mg/l	5	0.025	0.023	0.062	0.04	0.052	0.046
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		817	805	790	791	822	907
GROSS ALPHA	pci/l	15	< 1	< 1	5.2	1.9	< 1	< 1
NITRATE (NO3)	mg/l	190	38.7	40.8	38.6	47.1	54.7	47.1
PH (FIELD)	pH units		6.7	6.8	6.8	6.8	6.7	6.7
PH (LAB)	pH units		7.52	7.26	7.59	7.07	7.6	7.6
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	1.7	< 0.2	0.3
RADIUM-228	pci/l	5	< 1	< 1	2.8	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5			2.8	1.7		0.3
SPECIFIC CONDUCTANCE	umhos/cm				2900			3100
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/10/1995	4/11/1995	7/10/1995	10/9/1995	1/8/1996	4/9/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	78.7	91	88	80	71	87.4
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.29	0.46	0.37	0.51	1.25	0.46
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1779	1849	1716	1696	1826	1766
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3734	3686	3576	3789	3963	3942
URANIUM	mg/l	5	0.051	0.052	0.059	0.069	0.009	0.066
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		889	915	697	791	841	937
GROSS ALPHA	pci/l	15	< 1	2	6.6	3.2	< 1	< 1
NITRATE (NO3)	mg/l	190	47.1	50.1	58.9	62.9	86.4	62.6
PH (FIELD)	pH units		6.8	6.1	6.9	6.9	6.8	6.9
PH (LAB)	pH units		7.5	7.35	7.53	7.8	7.36	7.76
RADIUM-226	pci/l	5	< 0.2	2.1	1.5	3.5	< 0.2	0.4
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5		2.1	1.5	3.5		0.4
SPECIFIC CONDUCTANCE	umhos/cm				3800		3600	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	1.4	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/17/1996	10/8/1996	1/27/1997	4/14/1997	7/14/1997	10/14/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	95	89	117	100	101	115
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.39	0.41	0.51	0.29	0.32	0.44
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.006	0.001	0.001
SULFATE (SO4)	mg/l	2125	1816	1742	1939	1777	1670	1800
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3928	4000	3960	4020	4070	4010
URANIUM	mg/l	5	0.189	0.078	0.063	0.095	0.082	0.093
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		964	981	952	981	986	933
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	67.2	59.6	60.8	78.9	71.5	77.7
PH (FIELD)	pH units		6.7	6.7	6.7	6.5	6.7	6.6
PH (LAB)	pH units		7.1	7.09	7.99	7.96	7.7	7.71
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	1.1
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5						1.1
SPECIFIC CONDUCTANCE	umhos/cm		3100	3200	3100	3300	3300	3200
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/13/1998	7/13/1998	10/13/1998	1/12/1999	4/13/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	96.4	87.3	92.6	89.3	89.5	93.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.36	0.35	0.31	0.61	0.76	0.55
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1930	1700	1680	1730	1600	1620
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4080	4060	4210	3950	4060	4040
URANIUM	mg/l	5	0.094	0.0999	0.104	0.0987	0.151	0.0096
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		952	1020	1040	886	930	969
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	75.3	76.9	78.4	69.7	78.5	75
PH (FIELD)	pH units		6.5	6.9	6.9	6.77	6.8	6.8
PH (LAB)	pH units		7.83	7.33	7.64	8.14	7.86	7.97
RADIUM-226	pci/l	5	0.7	< 0.2	< 0.2	0.4	0.8	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	1.6
RADIUM 226 and 228	pci/l	5	0.7			0.4	0.8	1.6
SPECIFIC CONDUCTANCE	umhos/cm		600	4320	4310	4370	4210	4260
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/20/1999	10/12/1999	1/11/2000	5/9/2000	7/18/2000	10/10/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	84	87.7	79.6	75.3	67.7	53
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.3	0.33	0.3	0.96	0.96	1.11
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1740	1520	1500	1670	1600	1240
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4040	4090	4060	4030	4120	3990
URANIUM	mg/l	5	0.103	0.104	0.0928	0.0935	0.0865	0.095
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		941	959	934	813	778	761
GROSS ALPHA	pci/l	15	2.2	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	72.4	85.7	90.8	105	112	121
PH (FIELD)	pH units		6.8	6.83	6.8	6.8	6.88	6.89
PH (LAB)	pH units		7.85	7.75	7.97	7.77	7.7	7.75
RADIUM-226	pci/l	5	1.5	< 0.2	0.5	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	1.4	< 1	< 1	2.9	2	1.3
RADIUM 226 and 228	pci/l	5	2.9		0.5	2.9	2	1.3
SPECIFIC CONDUCTANCE	umhos/cm		4230	4210	4130	3920	4400	4390
THORIUM-230	pci/l	15	< 0.2	< 0.2	0.7	< 0.2	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/2001	2/6/2001	3/6/2001	4/10/2001	5/8/2001	6/5/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	63.4	64.3	58.7	71.7	74.2	71.2
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.25	1.33	1.35	1.45	1.42	1.53
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.002	0.002	0.001	0.001	0.001	0.001
SULFATE (SO4)	mg/l	2125	1760	1930	1840	1910	1570	1780
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3910	3970	3710	3940	3990	3920
URANIUM	mg/l	5	0.086	0.094	0.0911	0.091	0.091	0.09
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		761	783	757	782	715	785
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	106	106	105	101	108	94.7
PH (FIELD)	pH units		7.12	7.33	7.27	7.41	7.02	7.03
PH (LAB)	pH units		7.89	7.34	7.87	7.34	7.67	7.57
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	2.7	< 1	2.4	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	2.7		2.4			
SPECIFIC CONDUCTANCE	umhos/cm		4340	4240	4140	4120	4250	4120
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/10/2001	8/7/2001	9/11/2001	10/2/2001	11/6/2001	12/4/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	75.8	82	85.9	100	96	86.6
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.58	1.4	1.5	1.42	1.46	1.21
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1720	1600	1630	1700	1800	1580
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4060	4060	4130	4090	4040	4020
URANIUM	mg/l	5	0.0981	0.1	0.0904	0.0949	0.0852	0.0877
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		817	819	841	883	841	852
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	103	94	111	97	92	93
PH (FIELD)	pH units		7.29	7.26	6.81	6.96	6.95	7.09
PH (LAB)	pH units		7.39	7.5	7.8	7.6	7.7	7.7
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	0.3	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5					0.3	
SPECIFIC CONDUCTANCE	umhos/cm		4220	4130	4030	4130	4040	4120
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/8/2002	2/5/2002	3/5/2002	4/2/2002	5/7/2002	6/4/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	97.5	92.4	89.3	87.3	88.3	79.9
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.45	1.61	1.69	1.6	1.77	1.49
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1870	1760	1800	1800	1720	1780
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4030	4010	3980	4070	4030	4050
URANIUM	mg/l	5	0.0872	0.0814	0.0975	0.0939	0.0994	0.0864
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		783	778	827	854	828	831
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	91.5	92.4	91.6	91.8	91.5	85.6
PH (FIELD)	pH units		7.09	7.08	6.98	6.89	6.95	6.9
PH (LAB)	pH units		7.7	7.6	7.7	7.84	7.68	7.7
RADIUM-226	pci/l	5	< 0.2	0.4	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	2.4	1.9	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5		2.8	1.9			
SPECIFIC CONDUCTANCE	umhos/cm		4100	4120	4130	4100	3340	3360
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

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Location EPA25
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/9/2002	10/7/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	106	70
COBALT	mg/l	0.05	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.45	1.62
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1760	1560
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4130	3510
URANIUM	mg/l	5	0.087	0.0778
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		850	802
GROSS ALPHA	pci/l	15	< 1	< 1
NITRATE (NO3)	mg/l	190	92.5	82.1
PH (FIELD)	pH units		6.9	7.08
PH (LAB)	pH units		7.84	7.67
RADIUM-226	pci/l	5	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1
RADIUM 226 and 228	pci/l	5		
SPECIFIC CONDUCTANCE	umhos/cm		4090	4080
THORIUM-230	pci/l	15	< 0.2	< 0.2

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Location EPA27
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/23/1992	4/3/1992	7/16/1992	10/15/1992	1/12/1993	4/15/1993	7/21/1993	10/12/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	92.1	82.5	99	99.1	98.9	111	104	101
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.02	0.02	< 0.01	0.01	< 0.01	0.02	0.02	0.01
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.096	0.006	0.007	0.031	0.011	0.015	0.011
SULFATE (SO4)	mg/l	2125	2103	2443	2224	2302	2386	2260	2195	2175
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4570	4087	4239	4534	4496	4612	4408	3844
URANIUM	mg/l	5	0.039	0.014	0.024	0.029	0.011	0.023	0.018	0.019
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		129	208	73.4	75.4	116	96.3	81.6	74.7
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	125	194	150	147	195	150	141	92.5
PH (FIELD)	pH units		7.8	7.3	8.2	7.9	7.9	7.9	8.5	8.1
PH (LAB)	pH units		7.47	7.87	7.76	7.76	7.85	7.86	7.87	6.79
RADIUM-226	pci/l	5	0.5	< 0.2	0.6	0.9	< 0.2	< 0.2	< 0.2	0.5
RADIUM-228	pci/l	5	1	< 1	2.5	5.1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.5		3.1	6				0.5
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA27
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/19/1994	7/27/1994	10/11/1994	1/11/1995	4/11/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	97.8	107	108	108	113	118	118	108
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	0.01	< 0.01
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.01	0.009	0.007	0.008	0.011	0.011	0.012	0.035
SULFATE (SO4)	mg/l	2125	2181	2073	2060	2245	2066	2054	1872	1796
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4266	4020	3954	4264	4030	4125	3897	3760
URANIUM	mg/l	5	0.023	0.019	0.014	0.021	0.017	0.014	0.011	0.0094
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		103	80.6	58.6	67.8	74.8	63.1	64.6	54.2
GROSS ALPHA	pci/l	15	3.5	< 1	6.8	< 1	4.3	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	122	143	148	141	190	149	129	121
PH (FIELD)	pH units		8.1	6.5	8	8	8.3	7.5	7.9	7.9
PH (LAB)	pH units		7.75	8.12	7.77	7.83	7.54	8.02	7.9	8.18
RADIUM-226	pci/l	5	< 0.2	< 0.2	0.9	0.3	< 0.2	< 0.2	< 0.2	0.2
RADIUM-228	pci/l	5	1.7	< 1	3.8	< 1	2.6	< 1	< 1	1.5
RADIUM 226 and 228	pci/l	5	1.7		4.7	0.3	2.6			1.7
SPECIFIC CONDUCTANCE	umhos/cm		3300			3300			8000	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA27
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	116	126	124	112	156	120	123
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	< 0.01	0.01	< 0.01	< 0.01	0.08	< 0.01	< 0.01
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.038	0.009	< 0.001	0.009	0.015	0.042	0.019
SULFATE (SO4)	mg/l	2125	1929	2080	2009	1865	1910	1876	1790
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	3743	3875	3730	3720	3720	3660	3710
URANIUM	mg/l	5	0.011	0.013	0.01	0.012	0.006	0.003	0.006
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		62.2	57.6	45.5	40.4	39.8	31.1	31
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	132	123	143	121	113	139	116
PH (FIELD)	pH units		7.9	8.4	7.8	7.7	7.7	7.1	7.5
PH (LAB)	pH units		7.9	7.97	7.82	8.04	7.64	7.65	7.58
RADIUM-226	pci/l	5	< 0.2	< 0.2	2.1	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5			2.1				
SPECIFIC CONDUCTANCE	umhos/cm		4000		3200	3200	3000	3000	3200
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA28
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/23/1992	4/3/1992	7/16/1992	10/15/1992	1/12/1993	4/15/1993	7/21/1993	10/12/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	111	110	110	106	110	122	98.9	109
COBALT	mg/l	0.05	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.23	0.23	0.23	0.21	0.24	0.24	0.25	0.24
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.008	0.001	< 0.001	0.016	< 0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	2786	2934	2916	3015	2973	2981	2968	2913
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5268	4613	5042	5249	5095	5230	4999	5002
URANIUM	mg/l	5	0.024	0.019	0.023	0.029	0.026	0.028	0.029	0.038
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		583	612	561	550	584	744	561	603
GROSS ALPHA	pci/l	15	< 1	< 1	1.9	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	40.6	72.1	35.4	55.5	77.9	63	49.5	48.6
PH (FIELD)	pH units		6.4	6.5	6.6	6.7	6.6	6.7	6.7	7
PH (LAB)	pH units		7.37	7.46	7.2	7.21	7.16	7.49	7.49	7.18
RADIUM-226	pci/l	5	0.8	0.2	1.7	0.9	0.4	0.6	0.5	1
RADIUM-228	pci/l	5	3.5	1.4	< 1	< 1	3.3	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	4.3	1.6	1.7	0.9	3.7	0.6	0.5	1
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA28
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/1994	4/19/1994	7/27/1994	10/11/1994	1/11/1995	4/11/1995	7/11/1995	10/10/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	101	108	102	97.5	96.7	124	115	101
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.27	0.32	0.25	0.26	0.3	0.27	0.25	0.23
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001	0.002	0.002
SULFATE (SO4)	mg/l	2125	3132	2901	3177	3325	3257	3028	2850	2802
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5378	5077	5476	5491	5614	5089	4851	4825
URANIUM	mg/l	5	0.027	0.026	0.019	0.024	0.026	0.025	0.026	0.027
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		562	527	559	614	586	601	554	549
GROSS ALPHA	pci/l	15	7.7	7.2	< 1	3.9	6.9	< 1	6.9	1.5
NITRATE (NO3)	mg/l	190	52.8	56.2	59.2	38.6	48.2	28.6	51.7	47.2
PH (FIELD)	pH units		7	6.7	6.7	6.7	6.7	6.7	6.9	6.9
PH (LAB)	pH units		7.73	7.71	7.45	7.69	7.65	7.39	7.85	7.94
RADIUM-226	pci/l	5	0.3	7	0.05	3.7	1.3	0.4	1.3	0.8
RADIUM-228	pci/l	5	4.3	< 1	< 1	< 1	3.6	< 1	< 1	1.2
RADIUM 226 and 228	pci/l	5	4.6	7	0.05	3.7	4.9	0.4	1.3	2
SPECIFIC CONDUCTANCE	umhos/cm		3600			4000			5000	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5

Location EPA28
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/1996	4/10/1996	7/17/1996	10/8/1996	1/28/1997	4/15/1997	7/15/1997	10/15/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	112	124	112	108	157	116	119	145
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.29	0.27	0.22	0.27	0.27	0.24	0.19	0.23
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.005	< 0.001	< 0.001	< 0.001	< 0.001	0.005	0.001	0.002
SULFATE (SO4)	mg/l	2125	2979	3165	3045	2849	2935	3280	2810	3010
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5029	5273	5267	5260	5270	5350	5360	5290
URANIUM	mg/l	5	0.027	0.033	0.032	0.038	0.023	0.022	0.025	0.035
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		528	556	531	360	642	544	531	667
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	55.3	48.5	125	47.3	47.2	52.6	44.6	49.5
PH (FIELD)	pH units		7	7.1	7	7	7	7	6.8	6.7
PH (LAB)	pH units		7.29	7.73	7.08	7.23	7.73	7.61	7.83	7.83
RADIUM-226	pci/l	5	0.6	< 0.2	1.8	1	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	4.9
RADIUM 226 and 228	pci/l	5	0.6		1.8	1				4.9
SPECIFIC CONDUCTANCE	umhos/cm		4500		3900	3900	3700	3900	4100	3800
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA28
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/20/1998	4/14/1998	7/14/1998	10/13/1998	1/12/1999	4/13/1999	7/20/1999	10/12/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	121	95.4	101	104	101	106	106	108
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.23	0.31	0.31	0.18	0.3	0.32	0.26	0.17
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3250	2990	2900	3050	3100	2930	3010	2930
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5330	5430	5630	5230	5380	5360	5390	5210
URANIUM	mg/l	5	0.028	0.0261	0.0431	0.0315	0.0324	0.0251	0.0282	0.03
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		540	539	544	535	538	533	557	542
GROSS ALPHA	pci/l	15	< 1	2.9	< 1	< 1	< 1	< 1	1.6	< 1
NITRATE (NO3)	mg/l	190	51.4	44.5	41.7	39.5	43.7	45.1	40	40.4
PH (FIELD)	pH units		6.7	7	7	6.82	6.9	6.8	6.9	6.9
PH (LAB)	pH units		8.07	7.41	7.88	7.94	8.02	8.05	7.94	7.98
RADIUM-226	pci/l	5	0.7	1.6	0.7	< 0.2	0.6	< 0.2	0.6	0.7
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.7	1.6	0.7		0.6		0.6	0.7
SPECIFIC CONDUCTANCE	umhos/cm		1100	5160	5090	5200	5200	5080	5080	5060
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA28
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/11/2000	5/9/2000	7/17/2000	10/9/2000	1/8/2001	2/5/2001	3/5/2001	4/10/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.6	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	99.6	115	119	110	116	107	103	117
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.31	0.5	0.39	0.37	0.42	0.42	0.45	0.43
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2820	2600	2570	2500	2850	3060	2910	3010
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5280	5080	5190	5110	5110	5090	4670	4950
URANIUM	mg/l	5	0.0256	0.0445	0.0375	0.042	0.039	0.042	0.0398	0.037
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		534	635	636	637	633	636	644	650
GROSS ALPHA	pci/l	15	3	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	39.1	49.5	46.1	52.3	51	47.6	49.4	50.1
PH (FIELD)	pH units		6.8	6.6	6.66	6.9	6.88	7.01	7.56	7.13
PH (LAB)	pH units		8.07	7.77	7.7	7.7	7.66	7.56	7.53	7.42
RADIUM-226	pci/l	5	1.8	0.5	< 0.2	< 0.2	< 0.2	0.5	< 0.2	0.5
RADIUM-228	pci/l	5	3.4	2	1.8	1.3	< 1	< 1	< 1	2
RADIUM 226 and 228	pci/l	5	5.2	2.5	1.8	1.3		0.5		2.5
SPECIFIC CONDUCTANCE	umhos/cm		4870	4140	4920	5110	5020	5081	4840	4870
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA28
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	5/8/2001	6/5/2001	7/10/2001	8/7/2001	9/11/2001	10/1/2001	11/6/2001	12/4/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	118	113	97	120	143	148	143	123
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.47	0.47	0.48	0.48	0.42	0.4	0.44	0.42
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2480	2870	2690	2600	2600	2500	2820	2560
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5120	4510	5220	5220	5100	5210	5190	5190
URANIUM	mg/l	5	0.042	0.038	0.0403	0.043	0.037	0.0374	0.0354	0.0358
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		647	635	628	625	649	652	644	645
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	53.6	42.3	48.3	42	55	48.8	50	48
PH (FIELD)	pH units		6.81	6.84	6.94	6.72	6.74	6.86	6.75	6.91
PH (LAB)	pH units		7.62	7.35	7.33	7.7	7.5	7.4	7.6	7.5
RADIUM-226	pci/l	5	< 0.2	0.4	0.7	0.4	0.3	0.7	0.6	0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	2.4	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5		0.4	0.7	2.8	0.3	0.7	0.6	0.2
SPECIFIC CONDUCTANCE	umhos/cm		5040	4910	4900	4730	4740	4800	4780	4810
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location EPA28
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/8/2002	2/5/2002	3/5/2002	4/2/2002	5/7/2002	6/4/2002	7/9/2002	10/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	150	136	137	134	119	116	120	113
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.43	0.44	0.59	0.46	0.47	0.5	0.41	0.44
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	3010	2830	2870	2960	2780	2660	2850	2680
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5170	5230	5160	5140	5200	5150	5250	5190
URANIUM	mg/l	5	0.036	0.0291	0.0519	0.0397	0.0388	0.0378	0.0464	0.0329
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		658	652	682	675	652	656	683	675
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	44.8	43.1	45.9	42.1	43.9	44.9	43.4	45.3
PH (FIELD)	pH units		6.96	7.01	6.81	6.74	6.8	6.74	6.8	6.77
PH (LAB)	pH units		7.5	7.5	7.6	7.65	7.58	7.83	7.58	7.6
RADIUM-226	pci/l	5	0.6	0.7	< 0.2	0.7	0.9	< 0.2	0.8	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	2.2	< 1	2.5	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.6	0.7		2.9	0.9	2.5	0.8	
SPECIFIC CONDUCTANCE	umhos/cm		4820	4820	4890	4850	3940	4010	4810	4960
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW1
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1992	4/8/1992	7/8/1992	10/6/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	239	217	231	220	234	199	211	228
COBALT	mg/l	0.05	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.13	0.12	0.11	0.13	0.11	0.14	0.14	0.13
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	0.001	0.007	0.007	0.002	0.004	0.005
SULFATE (SO4)	mg/l	2125	2445	2538	2493	2370	2206	2269	2370	1952
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5446	4775	4964	6008	5223	5681	5630	5196
URANIUM	mg/l	5	0.105	0.094	0.07	0.049	0.097	0.1	0.099	0.075
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1617	1813	1610	1809	1807	1579	1610	1792
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	3.9	< 1	< 1
NITRATE (NO3)	mg/l	190	78.2	75.8	115	110	117	119	118	124
PH (FIELD)	pH units		6.3	6.2	6	6.3	6.4	6.4	6.4	6.7
PH (LAB)	pH units		7.05	7.43	7.37	6.9	7.73	7.22	7.23	7.29
RADIUM-226	pci/l	5	0.3	< 0.2	0.2	0.8	0.3	3.5	< 0.2	0.7
RADIUM-228	pci/l	5	< 1	1.1	1.8	< 1	2.6	< 1	1.7	3.7
RADIUM 226 and 228	pci/l	5	0.3	1.1	2	0.8	2.9	3.5	1.7	4.4
SPECIFIC CONDUCTANCE	umhos/cm									
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW1
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/6/1994	4/12/1994	7/21/1994	10/5/1994	1/4/1995	4/5/1995	7/6/1995	10/3/1995
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	218	175	185	177	166	186	170	137
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.11	0.1	0.12	0.09	0.11	0.09	0.01	0.02
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.001	0.001	0.001	< 0.001	< 0.001	0.002	0.019
SULFATE (SO4)	mg/l	2125	2075	2256	2371	2250	2483	2400	2255	2265
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5051	5216	5415	5567	5732	5397	5180	5292
URANIUM	mg/l	5	0.069	0.089	0.082	0.082	0.069	0.074	0.0623	0.0559
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1635	1485	1519	13.55	1364	1443	1183	1218
GROSS ALPHA	pci/l	15	9.5	2.8	1.4	< 1	4.6	4.9	< 1	< 1
NITRATE (NO3)	mg/l	190	101	115	118	111	104	110	99.4	105
PH (FIELD)	pH units		6.8	6.7	6.7	6.5	6.5	6.6	6.5	6.6
PH (LAB)	pH units		7.38	7.15	6.97	7.45	7.39	7.03	7.65	7.53
RADIUM-226	pci/l	5	3.3	0.4	1.2	0.2	1	2.2	0.4	< 0.2
RADIUM-228	pci/l	5	3.5	1.5	< 1	< 1	2.3	1.7	< 1	< 1
RADIUM 226 and 228	pci/l	5	6.8	1.9	1.2	0.2	3.3	3.9	0.4	
SPECIFIC CONDUCTANCE	umhos/cm		4200			4300				
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW1
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/3/1996	4/2/1996	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.002	< 0.001	0.002	0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	135	140	160	158	148	173	173	145
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.07	< 0.01	0.07	0.07	0.04	0.06	0.05	0.05
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.027	< 0.001	0.006	0.002	< 0.001	0.015	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2079	2162	2155	2063	2003	2047	2050	1980
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5086	5078	5119	5080	4790	4830	4800	4750
URANIUM	mg/l	5	0.058	0.05	0.06	0.051	0.043	0.049	0.048	0.054
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1211	1160	1169	1170	1130	1080	1040	1070
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	115	116	109	116	107	117	116	114
PH (FIELD)	pH units		6.6	6.6	6.3	6.5	6.4	6.6	6.9	6.3
PH (LAB)	pH units		6.8	7.55	7.08	6.99	7.36	7.9	7.68	7.35
RADIUM-226	pci/l	5	< 0.2	< 0.2	0.3	< 0.2	< 0.2	< 0.2	0.4	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5			0.3				0.4	
SPECIFIC CONDUCTANCE	umhos/cm		5000	4900	2800	4600	4500	4600	4000	4000
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW1
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1998	4/7/1998	7/7/1998	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	157	121	132	125	124	115	125	120
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.07	0.03	0.03	0.03	0.03	0.02	0.02	0.02
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2100	2000	1800	2020	1830	1820	1900	1670
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4650	4440	4350	4370	4450	4300	4190	4230
URANIUM	mg/l	5	0.0539	0.046	0.0464	0.05	0.0509	0.0461	0.046	0.0507
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1020	872	815	801	853	738	770	788
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.2	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	112	97.9	122	95.9	91.5	91.8	82.4	91
PH (FIELD)	pH units		6.8	6.6	6.8	6.72	6.7	6.7	6.7	6.75
PH (LAB)	pH units		7.9	7.48	7.7	7.88	7.75	7.65	7.8	7.53
RADIUM-226	pci/l	5	1	< 0.2	< 0.2	< 0.2	1.2	< 0.2	< 0.2	0.4
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	1				1.2			0.4
SPECIFIC CONDUCTANCE	umhos/cm		3500	4430	4520	4760	4590	4450	4240	4380
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW1
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/4/2000	5/9/2000	7/17/2000	10/9/2000	1/8/2001	2/5/2001	3/5/2001	4/4/2001	5/8/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	114	122	125	95.1	112	114	104	116	124
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.03	0.04	0.04	0.03	0.04	0.05	0.05	0.05	0.05
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1790	1870	1720	1520	1830	2110	2070	2070	1830
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4160	4410	4370	4260	4290	4270	4080	4360	4500
URANIUM	mg/l	5	0.051	0.061	0.0572	0.06	0.063	0.068	0.0671	0.068	0.075
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		742	919	915	905	944	960	975	946	944
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	94.2	87	77.5	75.7	79.9	73.7	74.2	84.7	78.2
PH (FIELD)	pH units		6.7	6.6	6.63	6.88	6.73	6.91	7.15	7	6.72
PH (LAB)	pH units		7.72	7.69	7.58	7.53	7.75	7.44	7.4	7.5	7.51
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.3	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	5.1	< 1	3.9	< 1	< 1
RADIUM 226 and 228	pci/l	5					5.1	0.3	3.9		
SPECIFIC CONDUCTANCE	umhos/cm		4350	4380	4520	4640	4510	4600	4410	4410	4600
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW1
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	6/4/2001	7/10/2001	8/7/2001	9/11/2001	10/1/2001	11/5/2001	12/4/2001	1/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	119	134	140	140	170	150	145	157
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.05	0.05	0.05	0.04	0.04	0.04	0.04	0.04
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.009	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1980	2110	2100	2200	2200	2540	2270	2650
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4420	4680	4910	4960	5190	5260	5300	5310
URANIUM	mg/l	5	0.065	0.0731	0.081	0.0764	0.0903	0.0872	0.0957	0.0976
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		944	892	878	899	913	950	984	991
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	76.4	86.7	84	101	91.5	95	96	82
PH (FIELD)	pH units		6.67	7.12	6.61	6.64	6.73	6.68	6.83	6.89
PH (LAB)	pH units		6.98	7.47	7.5	7.4	7.8	7.2	7.3	7.2
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	0.2	0.4	< 0.2	0.3
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5					0.2	0.4		0.3
SPECIFIC CONDUCTANCE	umhos/cm		4580	4520	4710	4720	4910	5000	5150	5150
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW1
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	2/4/2002	3/4/2002	4/1/2002	5/6/2002	6/3/2002	7/8/2002	10/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	167	151	162	160	150	140	170
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.04	0.05	0.05	0.05	0.05	0.04	0.04
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2530	2630	2620	2450	2400	2500	2320
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5360	5360	5470	5490	5530	5630	5850
URANIUM	mg/l	5	0.0926	0.108	0.102	0.114	0.108	0.128	0.093
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1010	1080	1100	1110	1150	1200	1300
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	80.5	92.2	83.2	91	96	99.9	113
PH (FIELD)	pH units		6.87	6.7	6.65	6.63	6.58	6.65	6.75
PH (LAB)	pH units		7.4	7.3	7.38	7.56	7.61	7.8	7.72
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.6
RADIUM-228	pci/l	5	1.8	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.8						0.6
SPECIFIC CONDUCTANCE	umhos/cm		5150	5240	5250	4460	4510	5400	5700
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW2
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/15/1992	4/8/1992	7/8/1992	10/6/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993	1/6/1994
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	187	177	171	166	177	173	178	159	170
COBALT	mg/l	0.05	0.03	< 0.01	< 0.01	< 0.01	0.02	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.48	0.46	0.4	0.15	0.25	0.12	0.22	0.06	0.11
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.006	0.001	0.002	0.005	0.001	0.001	0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2285	2613	3194	2256	2584	2250	2501	2107	2444
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5127	5275	6313	5590	5795	5140	5500	4812	5185
URANIUM	mg/l	5	0.153	0.165	0.13	0.242	0.181	0.2	0.084	0.118	0.116
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1278	1687	1931	1563	1763	1529	1612	1386	1556
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	8.5
NITRATE (NO3)	mg/l	190	51.6	22.9	54	100	64	79.8	79.8	111	68.1
PH (FIELD)	pH units		6.2	6.2	6.1	6.4	6.4	6.5	6.7	6.8	6.8
PH (LAB)	pH units		7.11	7.53	7.24	7.26	7.62	7.24	7.18	7.44	7.14
RADIUM-226	pci/l	5	< 0.2	< 0.2	0.2	0.5	0.8	0.4	< 0.2	0.6	0.3
RADIUM-228	pci/l	5	1.3	< 1	< 1	1.6	7.9	4.4	3.1	2.2	4.8
RADIUM 226 and 228	pci/l	5	1.3		0.2	2.1	8.7	4.8	3.1	2.8	5.1
SPECIFIC CONDUCTANCE	umhos/cm										4000
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW2
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/12/1994	7/21/1994	10/5/1994	1/4/1995	4/5/1995	7/6/1995	10/3/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	165	170	177	174	170	194	178	133	167
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.29	0.13	0.32	0.35	0.42	0.14	0.39	0.39	0.44
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.002	< 0.001	< 0.001	< 0.001	0.002	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2238	2859	2683	2866	2955	2404	2841	2409	2936
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5006	5402	5969	6044	6020	5305	5826	5302	6059
URANIUM	mg/l	5	0.201	0.117	0.094	0.087	0.071	0.1959	0.0751	0.071	0.118
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1536	1614	1707	1703	1745	1409	1791	1802	1732
GROSS ALPHA	pci/l	15	1.4	12.5	< 1	5.7	2.2	2.8	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	80.5	52	29.9	25.3	23.1	48.1	17.7	16.7	24.1
PH (FIELD)	pH units		6.7	6.7	6.4	6.4	6.5	6.5	6.3	6.4	6.5
PH (LAB)	pH units		7.03	7.35	7.51	7.16	6.91	7.49	7.45	6.91	7.64
RADIUM-226	pci/l	5	1.2	< 0.2	0.4	1.8	0.4	1.7	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	8.1	< 1	2.5	1.1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.2	8.1	0.4	4.3	1.5	1.7			
SPECIFIC CONDUCTANCE	umhos/cm				4200					5000	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW2
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997	1/16/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.003	< 0.001	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	155	166	177	193	182	170	188	174	174
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.49	0.43	0.35	0.41	0.29	0.38	0.38	0.3	0.3
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.002	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2870	2955	2945	2851	2720	3050	3000	2700	2700
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	6246	6280	6100	5910	6090	6090	5990	5880	5880
URANIUM	mg/l	5	0.099	0.07	0.054	0.131	0.061	0.062	0.0953	0.0656	0.0656
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1643	1670	1690	1630	1640	1630	1640	1500	1500
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	20.5	12.9	10.2	19.8	10.7	10.7	16	8.96	8.96
PH (FIELD)	pH units		6.3	6.4	6.3	6.6	6.8	6.2	6.5	6.4	6.1
PH (LAB)	pH units		7.19	6.99	7.43	7.77	7.33	7.21	7.52	7.8	7.8
RADIUM-226	pci/l	5	0.2	< 0.2	< 0.2	< 0.2	0.6	< 0.2	< 0.2	0.7	0.7
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.2				0.6			0.7	0.7
SPECIFIC CONDUCTANCE	umhos/cm		4200	4500		5000	4600	4500	4000	5740	5550
THORIUM-230	pci/l	15	< 0.2	1	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW2
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/8/2000	7/17/2000	10/9/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	165	168	162	166	164	143	155	158	130
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.33	0.35	0.34	0.4	0.49	0.44	0.46	0.44	0.34
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	2770	2900	2500	2660	2380	2610	2590	2400	1930
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5800	5780	5710	5530	5510	5440	5410	5440	5310
URANIUM	mg/l	5	0.0732	0.0662	0.0594	0.0057	0.0705	0.0681	0.0685	0.0602	0.064
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1500	1460	1410	1350	1420	1430	1410	1400	1370
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	2.3	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	8.73	7.04	6.12	5.95	5.5	4.05	2.74	2.95	4.09
PH (FIELD)	pH units		6.48	6.7	6.4	6.6	6.52	6.6	6.4	6.37	6.35
PH (LAB)	pH units		7.59	7.88	7.57	7.9	7.39	7.76	7.64	7.65	7.54
RADIUM-226	pci/l	5	0.6	2.3	< 0.2	< 0.2	0.3	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.6	2.3			0.3				
SPECIFIC CONDUCTANCE	umhos/cm		5820	5660	5760	5320	5270	5400	5000	5330	5340
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW2
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/8/2001	2/6/2001	3/6/2001	4/9/2001	5/7/2001	6/4/2001	7/9/2001	8/7/2001	9/10/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	0.15	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	159	153	140	152	168	164	166	170	177
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.49	0.5	0.5	0.54	0.59	0.51	0.53	0.5	0.48
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.004	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2620	2800	2680	2730	2390	2460	2450	2300	2400
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5270	5290	5150	5200	5330	4490	5340	5320	5270
URANIUM	mg/l	5	0.063	0.065	0.0626	0.074	0.067	0.061	0.0683	0.075	0.0627
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1420	1410	1400	1420	1420	1390	1450	1460	1500
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	4.04	3.84	3.36	3.68	3.49	3.8	4.4	4.4	6.3
PH (FIELD)	pH units		6.51	6.79	6.86	6.92	6.46	6.47	7.09	6.43	6.38
PH (LAB)	pH units		7.23	7.37	7.54	7.26	7.57	7.33	7.12	7.2	7.1
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	2.2	< 1
RADIUM 226 and 228	pci/l	5								2.2	
SPECIFIC CONDUCTANCE	umhos/cm		5210	5420	5220	5050	5360	5170	4940	5030	4990
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW2
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/1/2001	11/5/2001	12/3/2001	1/8/2002	2/4/2002	3/4/2002	4/1/2002	5/6/2002	6/3/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	202	200	182	199	205	203	196	199	178
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.45	0.5	0.45	0.47	0.48	0.58	0.52	0.52	0.52
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2200	2550	2270	2640	2490	2540	2590	2410	2360
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5330	5340	5320	5300	5310	5290	5350	5340	5390
URANIUM	mg/l	5	0.0659	0.0584	0.0622	0.0609	0.0551	0.0833	0.0664	0.0738	0.0646
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1480	1460	1480	1460	1470	1470	1520	1530	1560
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	6	7.6	8.6	9	11.4	15.9	17	20.4	22
PH (FIELD)	pH units		6.48	6.5	6.47	6.54	6.57	6.49	6.38	6.38	6.36
PH (LAB)	pH units		7.6	7.1	7.1	7	7.2	7.3	7.15	7.36	7.38
RADIUM-226	pci/l	5	0.3	0.4	< 0.2	0.4	< 0.2	0.4	0.4	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	1.2	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3	0.4		1.6		0.4	0.4		
SPECIFIC CONDUCTANCE	umhos/cm		5110	5020	5100	5110	5180	5160	5150	4330	4380
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW2
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/8/2002	10/8/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	208	185
COBALT	mg/l	0.05	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	0.48	0.51
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2430	2260
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5470	5550
URANIUM	mg/l	5	0.0821	0.064
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1600	1690
GROSS ALPHA	pci/l	15	< 1	< 1
NITRATE (NO3)	mg/l	190	22.5	30.1
PH (FIELD)	pH units		6.25	6.4
PH (LAB)	pH units		7.67	7.52
RADIUM-226	pci/l	5	< 0.2	2
RADIUM-228	pci/l	5	< 1	< 1
RADIUM 226 and 228	pci/l	5		2
SPECIFIC CONDUCTANCE	umhos/cm		5250	5510
THORIUM-230	pci/l	15	< 0.2	< 0.2

Location GW3
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/14/1992	4/9/1992	7/7/1992	10/7/1992	1/7/1993	4/7/1993	7/14/1993	10/7/1993	1/6/1994
ALUMINUM	mg/l	5	0.16	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	172	179	111	182	188	183	201	71.8	177
COBALT	mg/l	0.05	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.61	1.21	1.25	0.92	1.71	1.64	1.81	1.79	1.92
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	0.11	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.024	0.002	0.002	0.005	0.001	0.001	0.002	< 0.001
SULFATE (SO4)	mg/l	2125	1762	1874	1907	1932	1968	1879	1913	1813	1836
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4589	4757	4877	4766	5105	4791	4780	4614	4960
URANIUM	mg/l	5	0.08	0.155	0.12	0.331	0.602	0.219	0.135	0.08	0.099
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1345	1114	964	1537	1610	1419	1745	1540	1573
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	3.3	< 1	< 1	1.8	< 1	< 1
NITRATE (NO3)	mg/l	190	90.1	86.8	112	120	134	112	94.7	119	107
PH (FIELD)	pH units		6.4	6.5	6.3	6.5	6.4	6.4	6.4	6.6	6.5
PH (LAB)	pH units		7.01	7.32	7.42	7.32	7.48	7.07	7.09	7.22	7.04
RADIUM-226	pci/l	5	< 0.2	0.8	< 0.2	0.8	0.4	0.6	1.6	0.6	0.8
RADIUM-228	pci/l	5	< 1	3.4	2.7	< 1	3.3	< 1	3	< 1	< 1
RADIUM 226 and 228	pci/l	5		4.2	2.7	0.8	3.7	0.6	4.6	0.6	0.8
SPECIFIC CONDUCTANCE	umhos/cm										4000
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW3
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	4/13/1994	7/21/1994	10/5/1994	1/5/1995	4/5/1995	7/6/1995	10/3/1995	1/3/1996	4/2/1996
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.003	0.002	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CHLORIDE	mg/l	250	167	160	165	152	210	171	174	138	155
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.89	2.26	1.87	1.97	1.91	1.92	1.93	1.74	1.82
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.002	0.012	0.014	< 0.001
SULFATE (SO4)	mg/l	2125	1825	1943	1938	1938	2090	1858	1905	1650	1915
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4709	4790	4949	5101	4978	4792	5055	4495	5010
URANIUM	mg/l	5	0.096	0.082	0.083	0.078	0.08	0.0882	0.0868	0.081	0.087
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1525	1512	1481	1532	1519	1519	1512	1521	1510
GROSS ALPHA	pci/l	15	1.9	< 1	1.5	4.8	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	113	105	117	95.4	104	96.4	99.1	106	111
PH (FIELD)	pH units		6.6	6.5	6.3	6.4	6.5	6.4	6.5	6.5	6.4
PH (LAB)	pH units		6.86	7.16	7.59	7.34	7.07	7.5	7.41	6.96	7.64
RADIUM-226	pci/l	5	1.7	0.4	< 0.2	0.9	0.5	< 0.2	0.3	0.4	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	1.1	2.5	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	1.7	0.4	1.1	3.4	0.5		0.3	0.4	
SPECIFIC CONDUCTANCE	umhos/cm				4000					4800	
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.4	< 0.2

Location GW3
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	7/7/1996	10/1/1996	1/22/1997	4/8/1997	7/8/1997	10/7/1997	1/16/1998	4/7/1998	7/7/1998
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	150	141	166	171	158	155	154	128	139
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.99	1.92	1.92	1.93	1.7	2.19	2	1.79	1.69
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	0.001	< 0.001	0.02	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1860	1884	1937	1994	1810	1870	2000	1800	2100
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4844	4970	4770	4990	5060	5010	4980	4980	4930
URANIUM	mg/l	5	0.1	0.072	0.072	0.086	0.061	0.065	0.0721	0.0632	< 0.0003
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1434	1480	1480	1430	1390	1370	1330	1300	1200
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	3.8	< 1	< 1
NITRATE (NO3)	mg/l	190	102	115	114	117	121	114	128	130	117
PH (FIELD)	pH units		6.3	6.4	6.4	6.5	6.8	6.2	6.7	6.6	6.8
PH (LAB)	pH units		7.13	6.99	7.51	7.59	7.53	7.44	7.72	7.51	7.74
RADIUM-226	pci/l	5	0.3	< 0.2	0.6	< 0.2	0.4	< 0.2	1.3	< 0.2	0.5
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3		0.6		0.4		1.3		0.5
SPECIFIC CONDUCTANCE	umhos/cm		2600	4900		4100	4500	4000	3700	5050	5120
THORIUM-230	pci/l	15	1.2	0.4	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW3
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/6/1998	1/5/1999	4/6/1999	7/13/1999	10/5/1999	1/4/2000	5/15/2000	7/17/2000	10/10/2000
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	0.007	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	134	95.2	131	126	123	106	127	125	96.4
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.76	1.41	1.82	1.69	2.03	1.78	1.87	1.78	1.57
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	0.001	0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1980	1400	1710	1830	1680	1760	1830	1710	1320
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4850	3810	4600	4610	4660	4680	4780	4800	4680
URANIUM	mg/l	5	0.0607	0.0475	0.0518	0.0047	0.0569	0.0513	0.0568	0.056	0.058
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1220	987	1170	1170	1170	1170	1174	1190	1170
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	220	85.9	103	119	99	113	119	117	118
PH (FIELD)	pH units		6.66	6.8	6.7	6.7	6.68	6.6	6.6	6.48	6.56
PH (LAB)	pH units		7.75	7.85	7.64	7.9	7.34	7.83	7.71	7.51	7.6
RADIUM-226	pci/l	5	0.7	< 0.2	< 0.2	< 0.2	0.6	0.5	< 0.2	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.1
RADIUM 226 and 228	pci/l	5	0.7				0.6	0.5			1.1
SPECIFIC CONDUCTANCE	umhos/cm		5330	4140	5040	4770	4840	4840	4810	5040	5060
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW3
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	1/9/2001	2/6/2001	3/6/2001	4/10/2001	5/8/2001	6/5/2001	7/10/2001	8/7/2001	9/11/2001
ALUMINUM	mg/l	5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1	0.13
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	125	123	120	128	146	136	125	160	154
COBALT	mg/l	0.05	0.01	< 0.01	< 0.01	0.01	< 0.01	0.01	0.01	< 0.01	0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.9	1.91	1.87	1.91	1.96	2.06	2.22	2	1.99
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	0.002	0.001	0.001	0.001	0.005	0.001	< 0.001	0.001
SULFATE (SO4)	mg/l	2125	1850	2120	2040	2070	1730	1940	1880	1800	1810
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	4660	4720	4380	4680	4850	4230	4980	5010	4980
URANIUM	mg/l	5	0.056	0.059	0.0569	0.057	0.06	0.058	0.0676	0.071	0.0655
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1210	1220	1180	1250	1250	1280	1350	1390	1400
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	1.3	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	115	110	112	108	107	97.5	98	90.5	104
PH (FIELD)	pH units		6.82	6.99	7	7.26	6.72	6.76	6.87	6.59	6.65
PH (LAB)	pH units		7.62	7.12	7.63	7.2	7.49	7.25	7.1	7.2	7.5
RADIUM-226	pci/l	5	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.4	< 0.2
RADIUM-228	pci/l	5	3.6	< 1	< 1	2.4	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	3.6			2.4				0.4	
SPECIFIC CONDUCTANCE	umhos/cm		5200	5020	4840	4910	5070	4960	5070	4920	4880
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW3
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

Chemical Name	Unit	ROD Cleanup Level	10/1/2001	11/6/2001	12/4/2001	1/8/2002	2/5/2002	3/5/2002	4/2/2002	5/7/2002	6/4/2002
ALUMINUM	mg/l	5	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
CHLORIDE	mg/l	250	169	173	148	171	165	160	168	159	148
COBALT	mg/l	0.05	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	0.01	0.01
LEAD	mg/l	0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.78	1.91	1.93	1.79	1.89	2.34	2.08	2.18	1.97
MOLYBDENUM	mg/l	1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
SELENIUM	mg/l	0.01	0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	1950	2050	1720	2200	2080	2160	2110	2120	2110
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5010	5020	5020	5050	5110	5090	5240	5320	5330
URANIUM	mg/l	5	0.0646	0.0632	0.0726	0.0635	0.0586	0.0805	0.0704	0.08	0.0789
VANADIUM	mg/l	0.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.1	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1450	1420	1440	1440	1440	1490	1480	1510	1520
GROSS ALPHA	pci/l	15	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
NITRATE (NO3)	mg/l	190	92	88	91	86.5	82.3	84.3	83.6	82.4	83.4
PH (FIELD)	pH units		6.83	6.79	6.95	6.9	6.91	6.77	6.76	6.51	6.68
PH (LAB)	pH units		7.4	7.6	7.4	7.2	7.2	7.4	7.59	7.44	7.67
RADIUM-226	pci/l	5	0.3	0.4	< 0.2	0.3	< 0.2	0.5	< 0.2	< 0.2	0.4
RADIUM-228	pci/l	5	< 1	< 1	< 1	1.5	< 1	< 1	< 1	< 1	< 1
RADIUM 226 and 228	pci/l	5	0.3	0.4		1.8		0.5			0.4
SPECIFIC CONDUCTANCE	umhos/cm		4960	4990	4910	4960	5030	5180	5120	4330	4510
THORIUM-230	pci/l	15	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2

Location GW3
United Nuclear Corporation, Church Rock Site, Church Rock, New Mexico

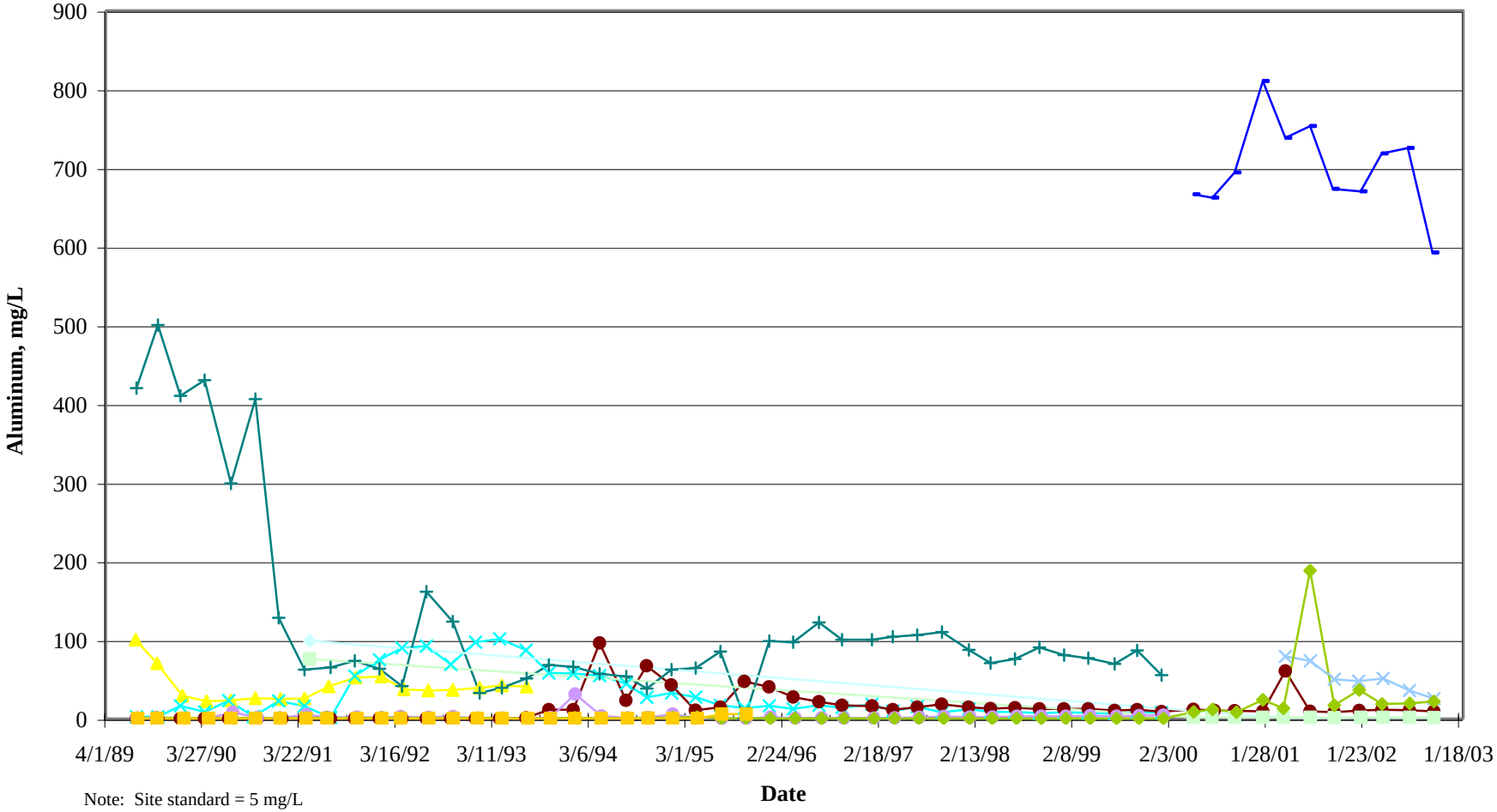
Chemical Name	Unit	ROD Cleanup Level	7/9/2002	10/7/2002
ALUMINUM	mg/l	5	< 0.1	< 0.1
ARSENIC	mg/l	0.05	< 0.001	< 0.001
BERYLLIUM	mg/l	0.017	< 0.01	< 0.01
CADMIUM	mg/l	0.01	< 0.005	< 0.005
CHLORIDE	mg/l	250	127	150
COBALT	mg/l	0.05	< 0.01	< 0.01
LEAD	mg/l	0.05	< 0.05	< 0.05
MANGANESE	mg/l	2.6	1.79	1.95
MOLYBDENUM	mg/l	1	< 0.1	< 0.1
NICKEL	mg/l	0.2	< 0.05	< 0.05
SELENIUM	mg/l	0.01	< 0.001	< 0.001
SULFATE (SO4)	mg/l	2125	2170	2030
TOTAL DISSOLVED SOLIDS (LAB)	mg/l	4800	5430	4510
URANIUM	mg/l	5	0.0934	0.0713
VANADIUM	mg/l	0.7	< 0.1	< 0.1
BICARBONATE (HCO3)	mg/l		1560	1620
GROSS ALPHA	pci/l	15	< 1	< 1
NITRATE (NO3)	mg/l	190	93.2	83.8
PH (FIELD)	pH units		6.71	6.64
PH (LAB)	pH units		7.38	7.35
RADIUM-226	pci/l	5	< 0.2	< 0.2
RADIUM-228	pci/l	5	< 1	< 1
RADIUM 226 and 228	pci/l	5		
SPECIFIC CONDUCTANCE	umhos/cm		5250	5430
THORIUM-230	pci/l	15	< 0.2	< 0.2

ATTACHMENT C

Constituent Graphs for Zone 3, Zone 1, and Southwest Alluvium

GRAPH 1

Zone 3 Aluminum Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



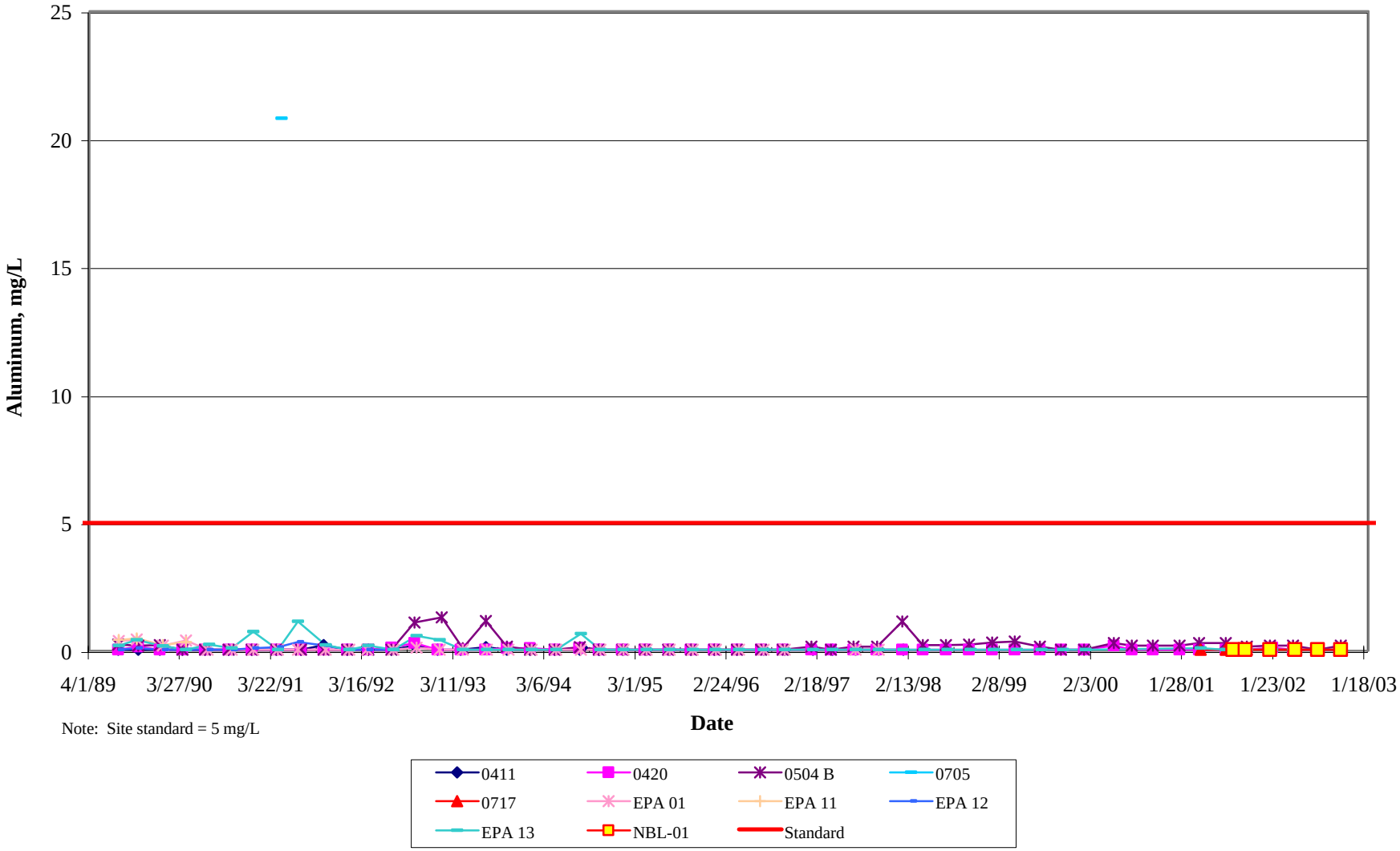
Note: Site standard = 5 mg/L

GRAPH 2

Zone 3 Aluminum Concentrations

United Nuclear Corporation, Church Rock Site

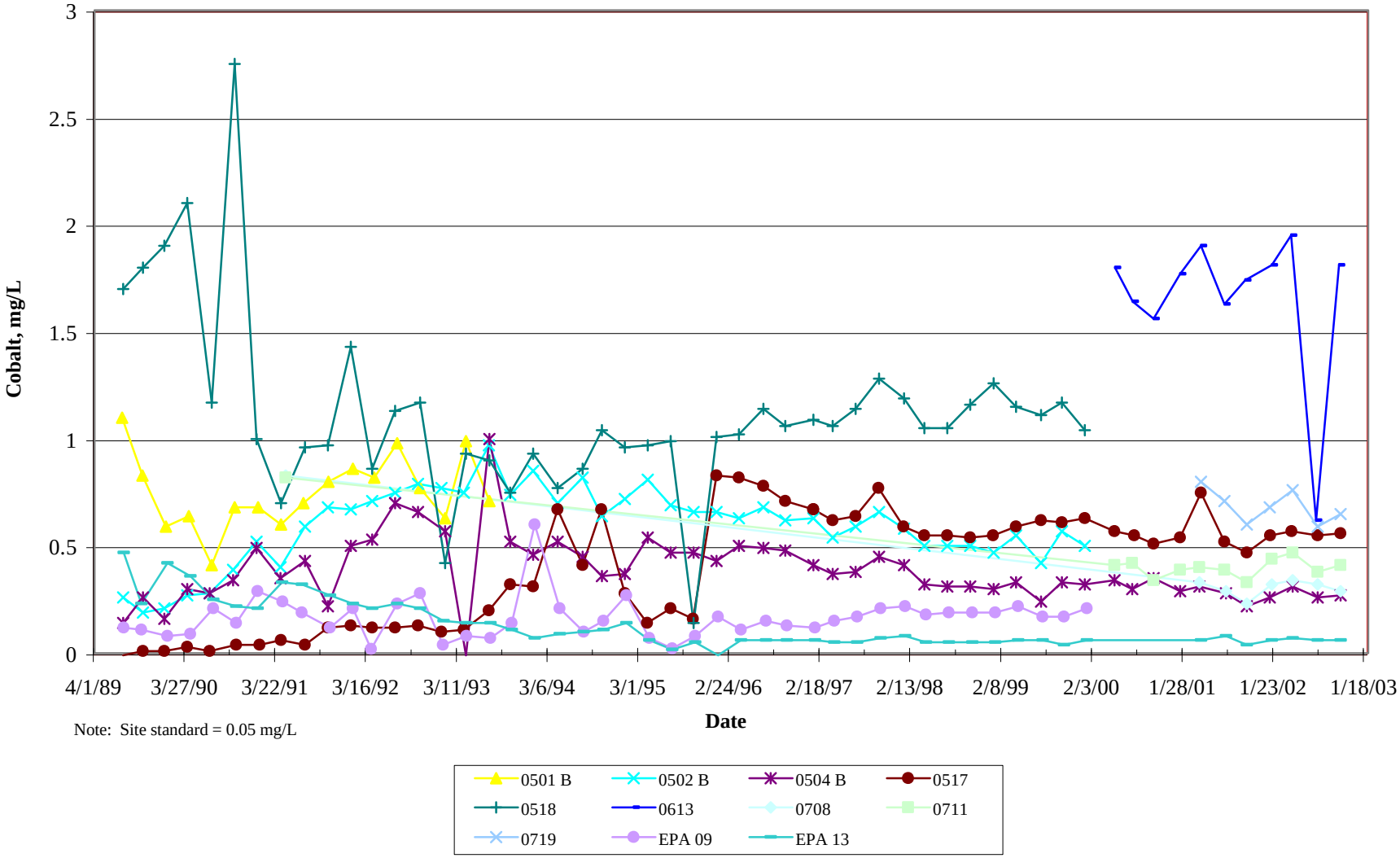
Church Rock, New Mexico



Note: Site standard = 5 mg/L

GRAPH 3

Zone 3 Cobalt Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



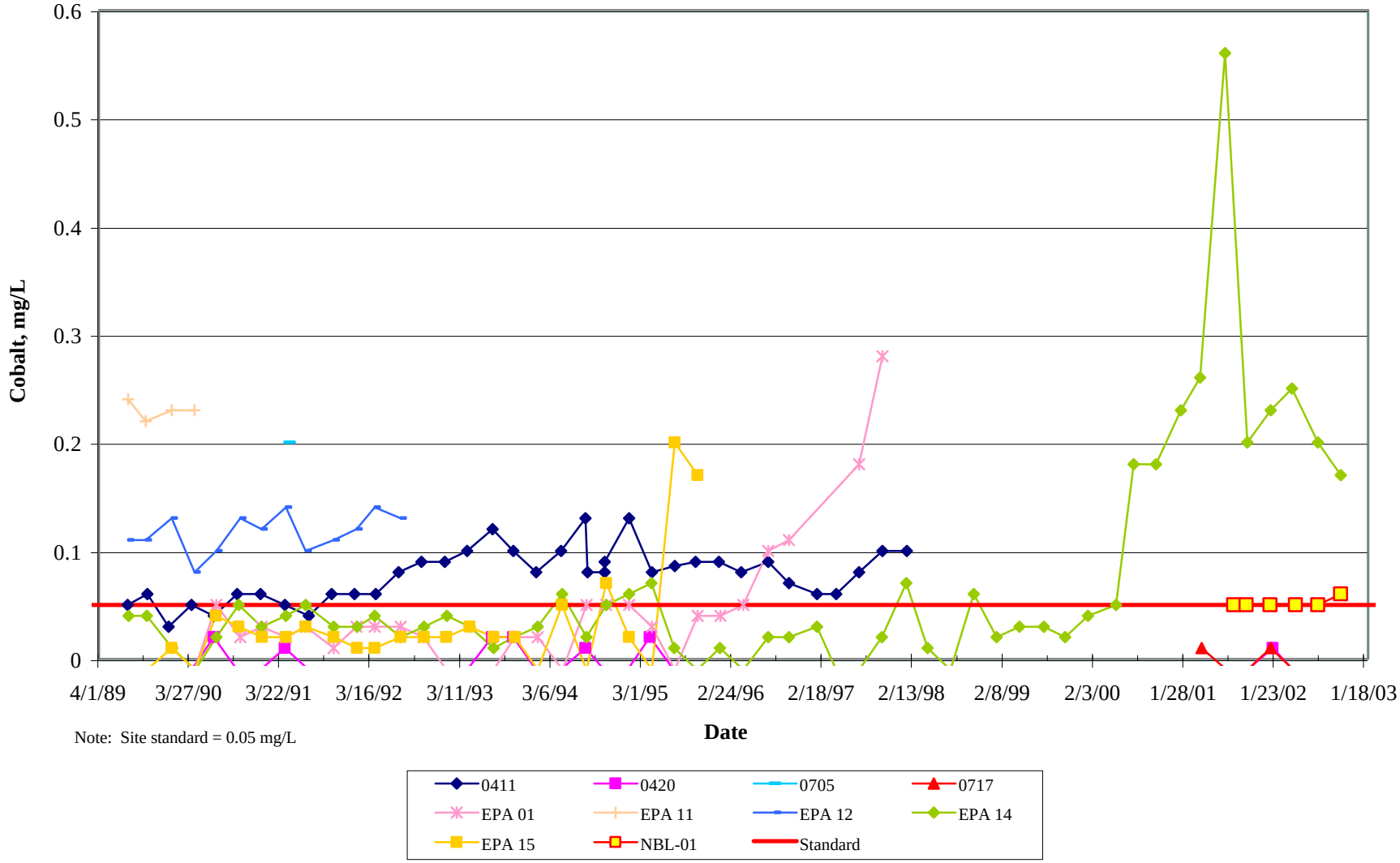
Note: Site standard = 0.05 mg/L

GRAPH 4

Zone 3 Cobalt Concentrations

United Nuclear Corporation, Church Rock Site

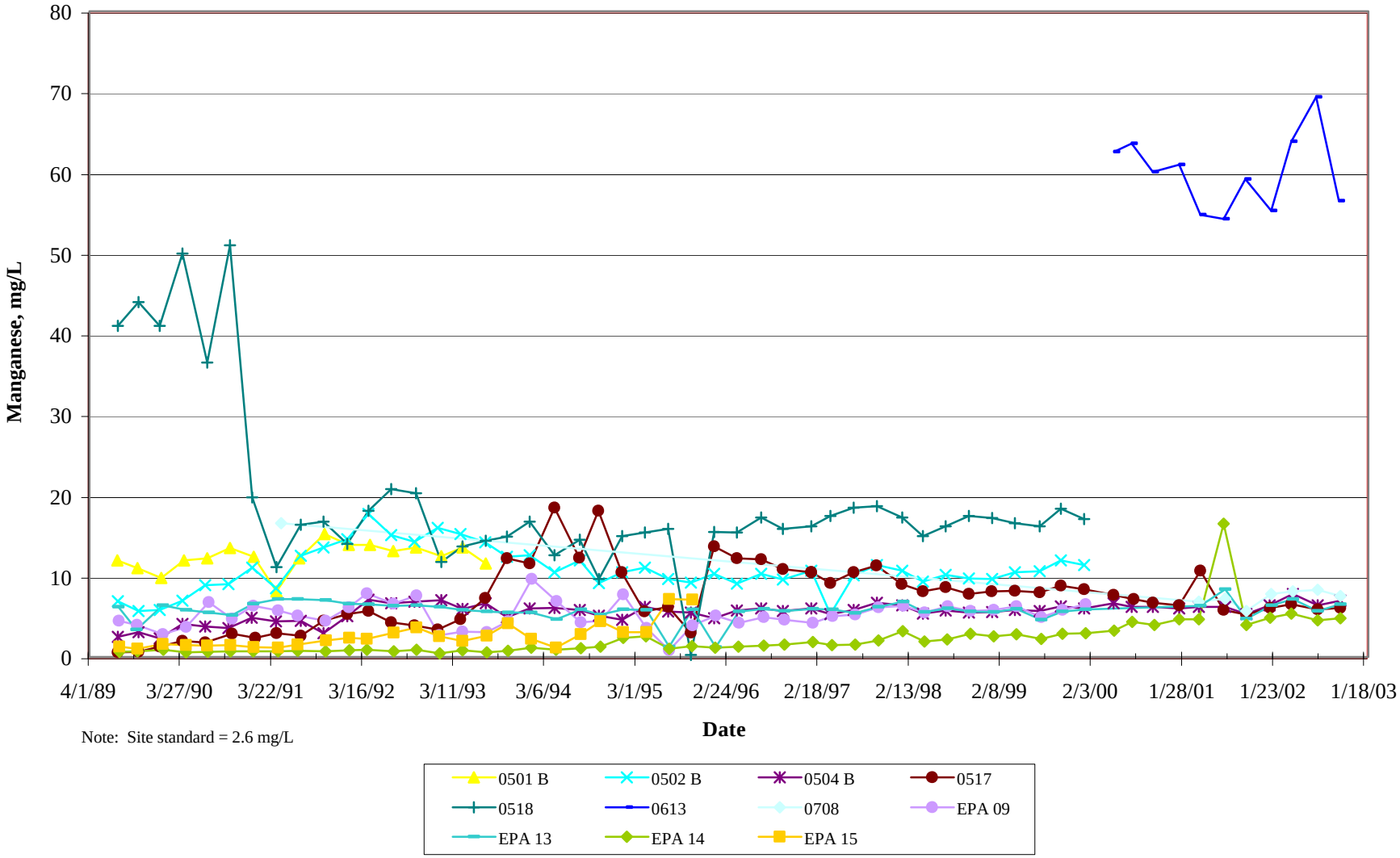
Church Rock, New Mexico



Note: Site standard = 0.05 mg/L

GRAPH 5

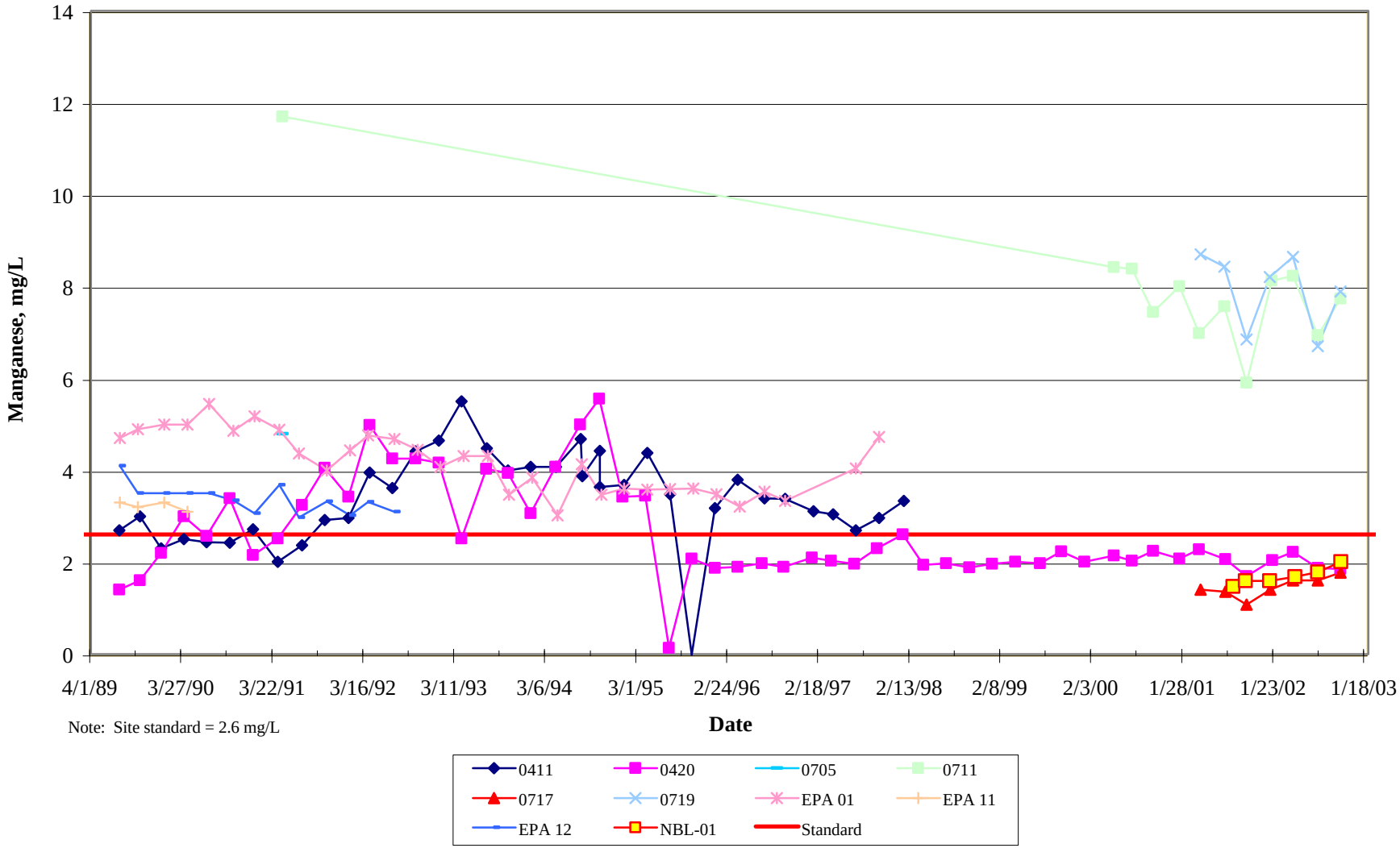
Zone 3 Manganese Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 2.6 mg/L

GRAPH 6

Zone 3 Manganese Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



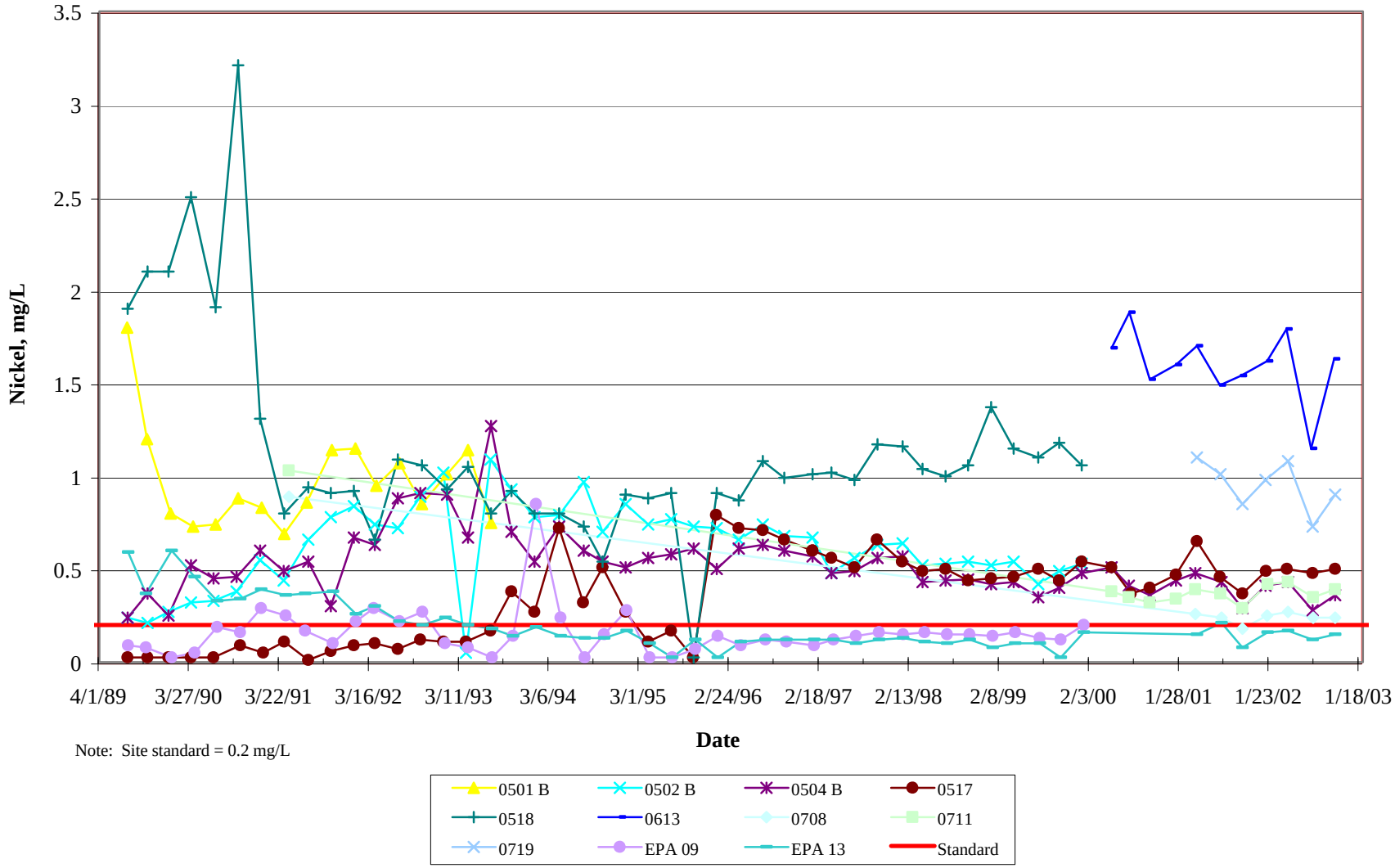
Note: Site standard = 2.6 mg/L

GRAPH 7

Zone 3 Nickel Concentrations

United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico



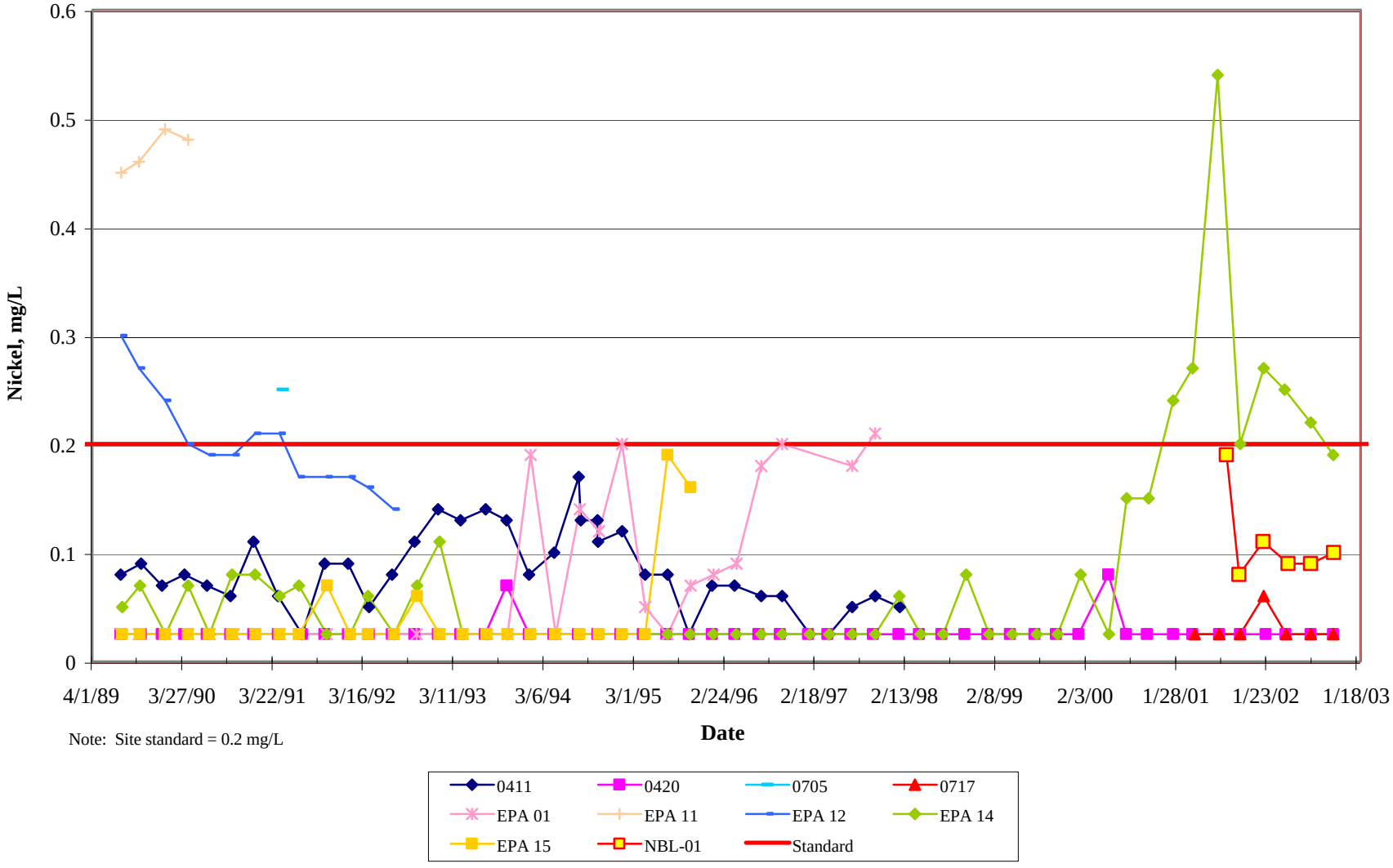
Note: Site standard = 0.2 mg/L

GRAPH 8

Zone 3 Nickel Concentrations

United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico



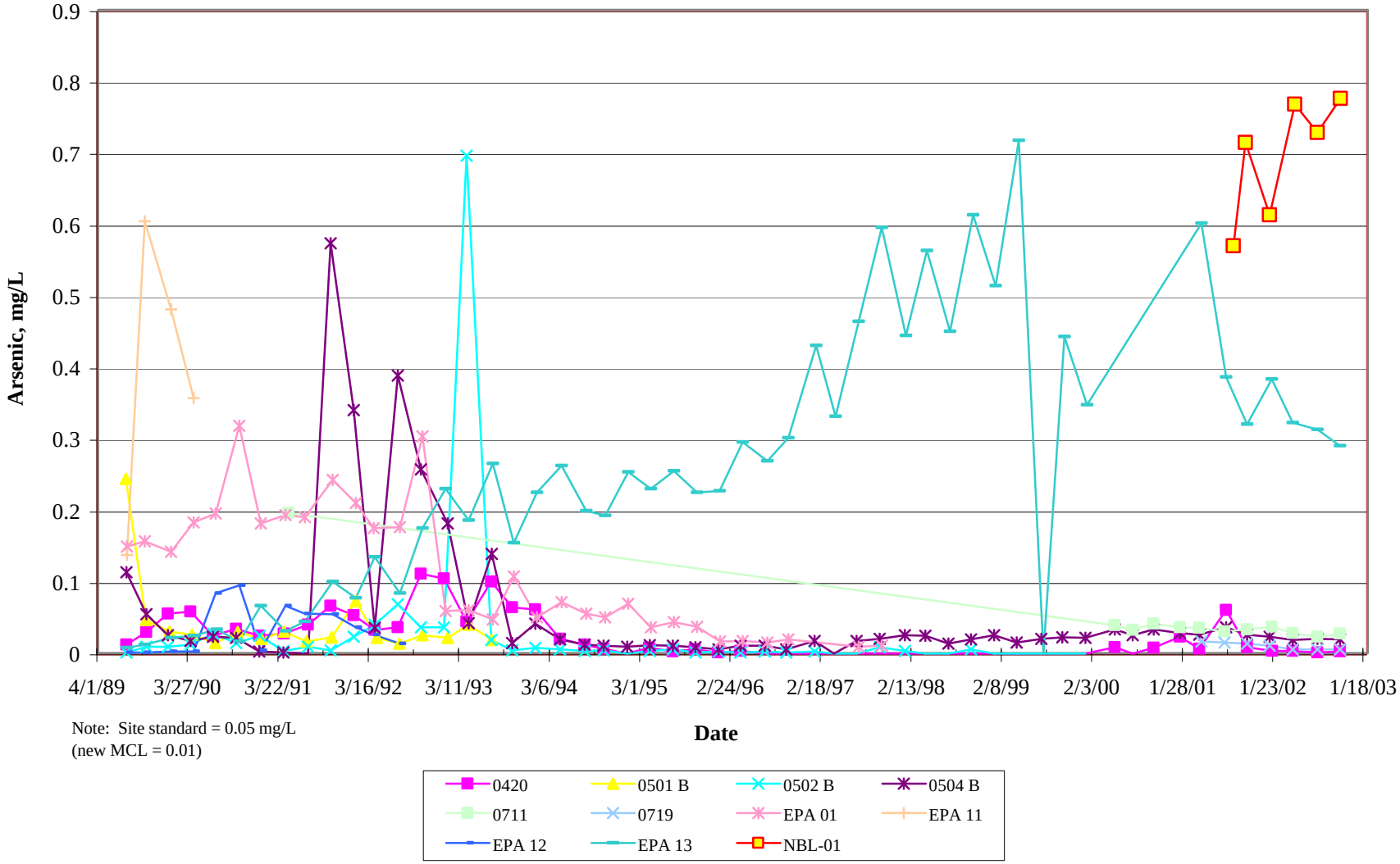
Note: Site standard = 0.2 mg/L

GRAPH 9

Zone 3 Arsenic Concentrations

United Nuclear Corporation, Church Rock Site

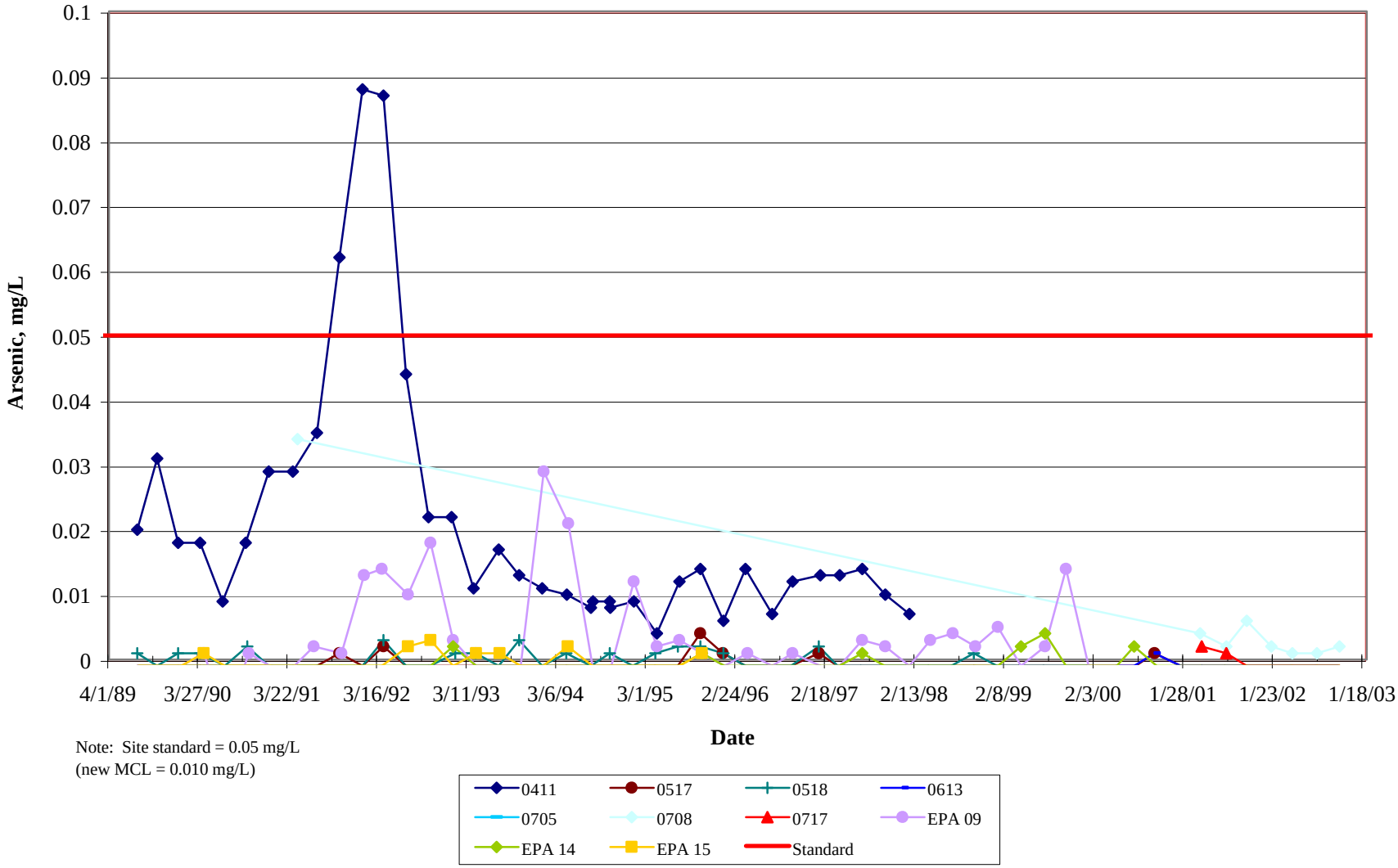
Church Rock, New Mexico



Note: Site standard = 0.05 mg/L
(new MCL = 0.01)

GRAPH 10

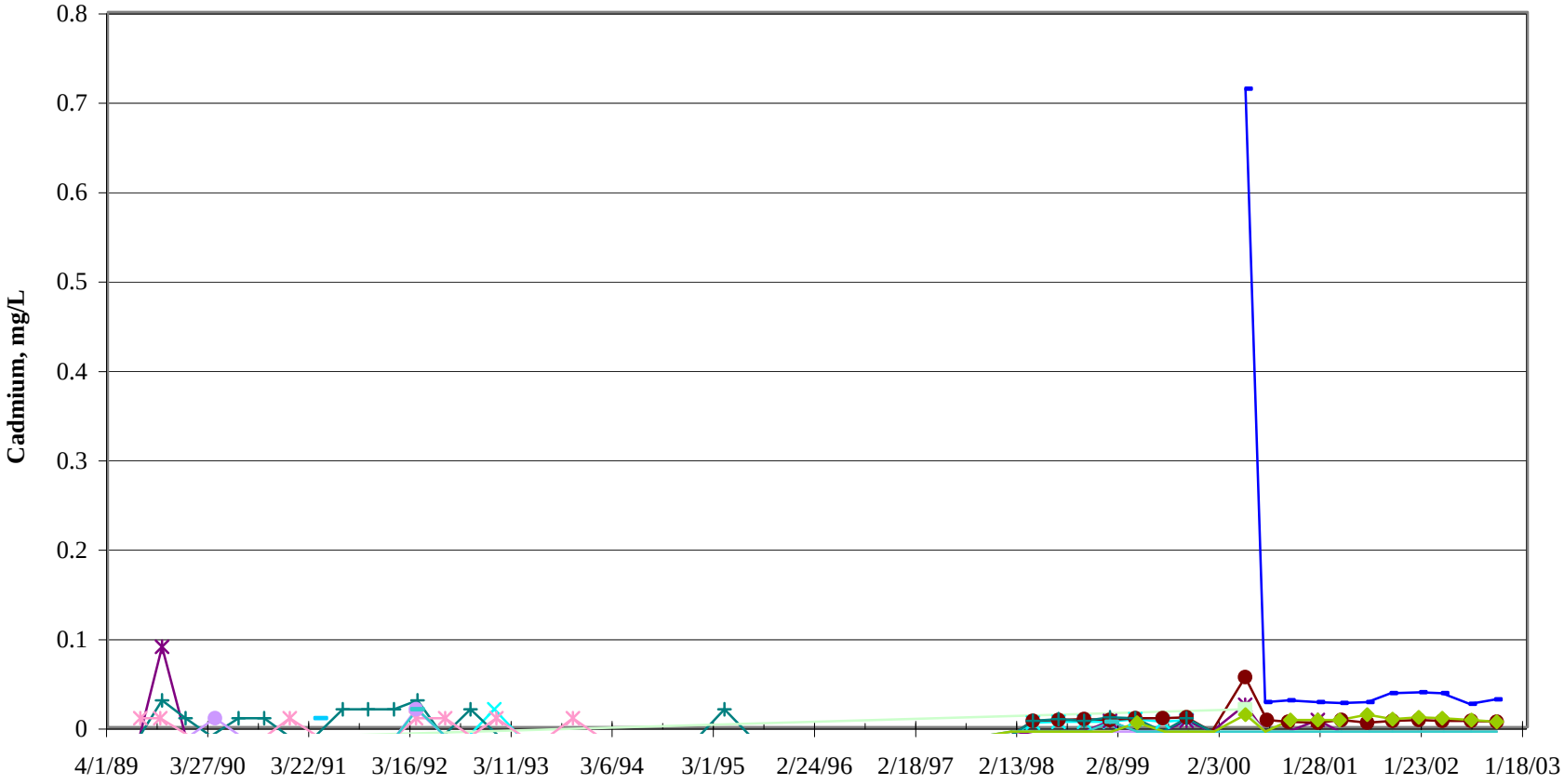
Zone 3 Arsenic Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 0.05 mg/L
(new MCL = 0.010 mg/L)

GRAPH 11

Zone 3 Cadmium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



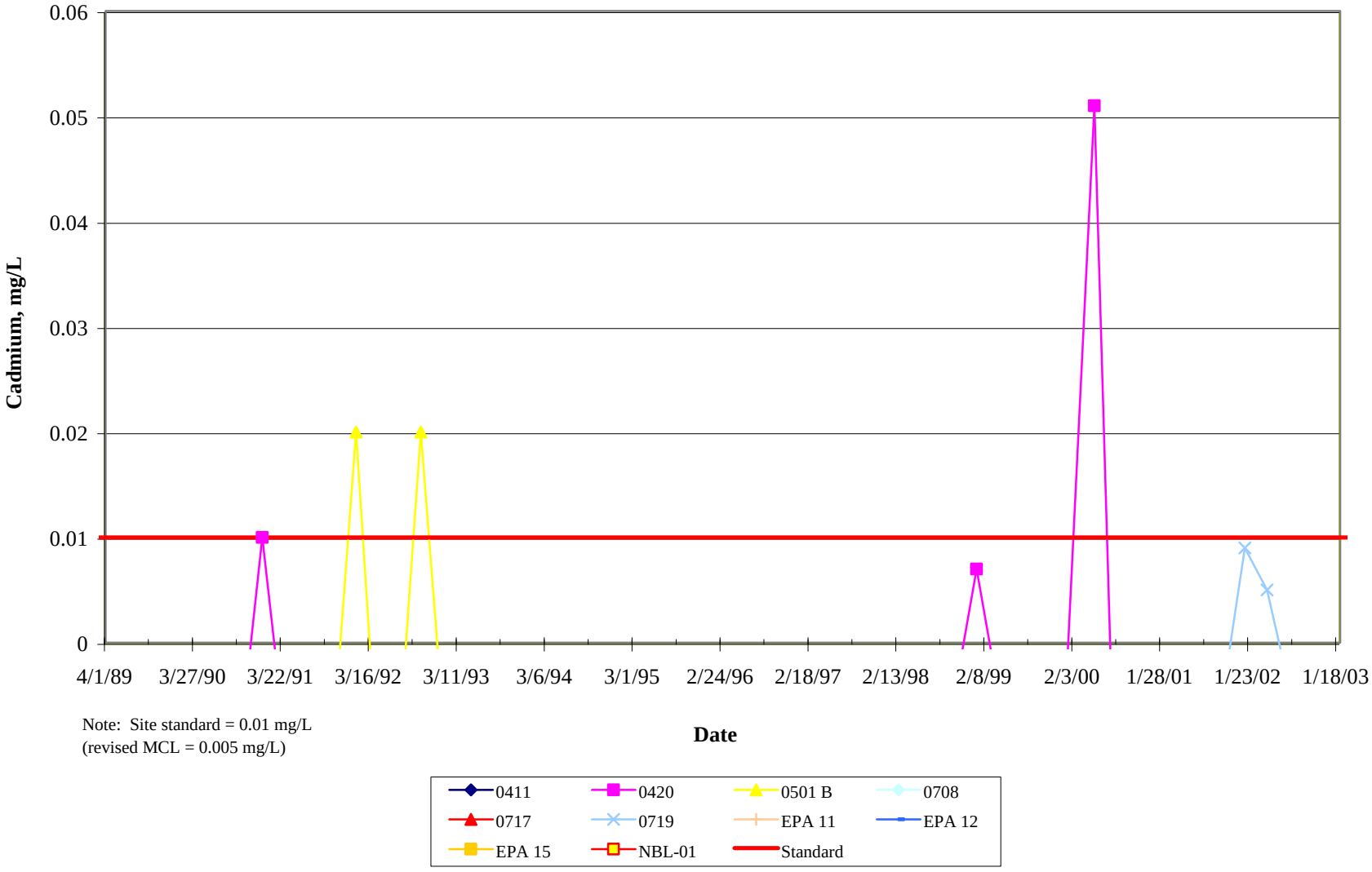
Note: Site standard = 0.01 mg/L
(revised MCL = 0.005 mg/L)

GRAPH 12

Zone 3 Cadmium Concentrations

United Nuclear Corporation, Church Rock Site

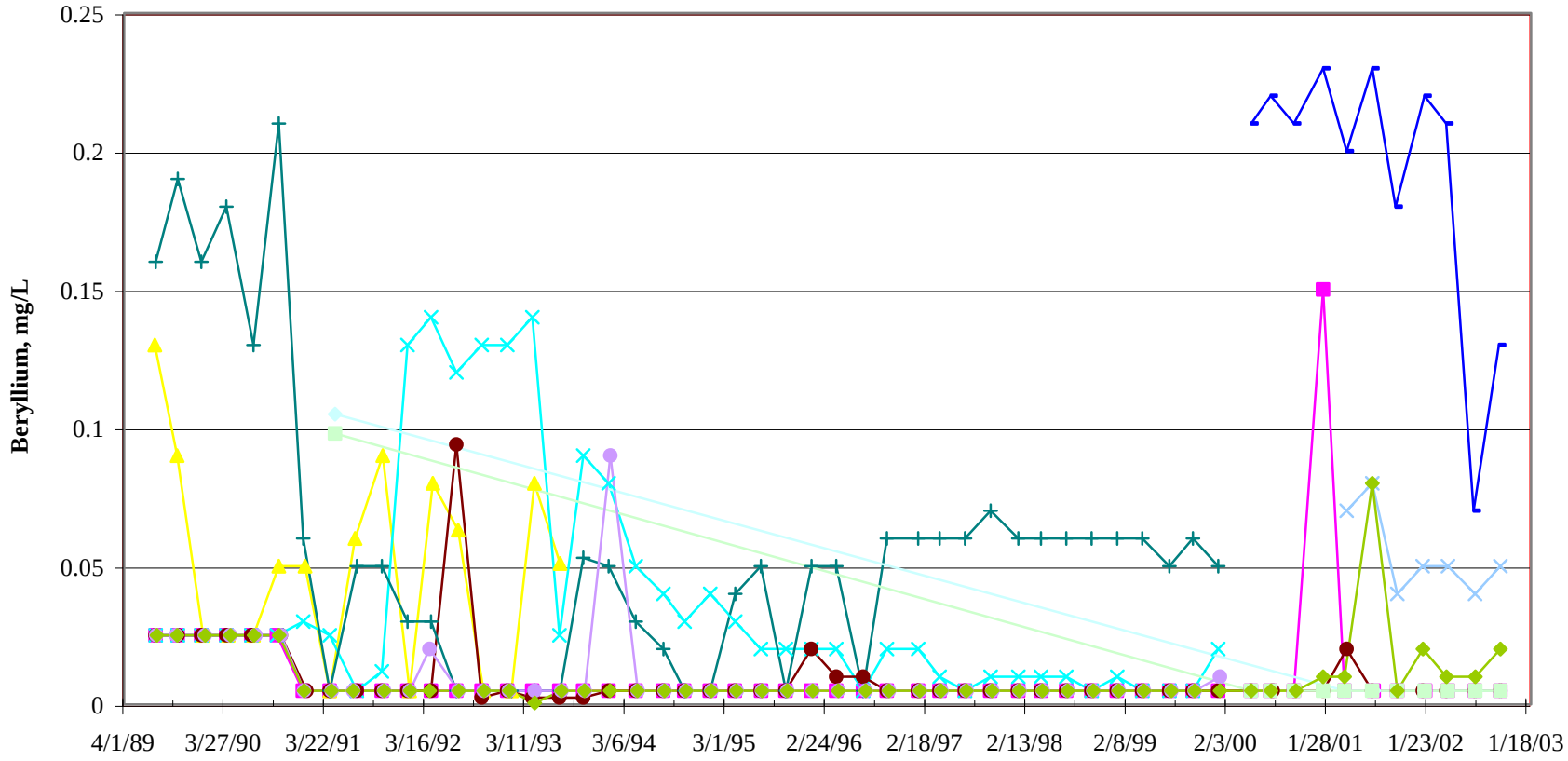
Church Rock, New Mexico



Note: Site standard = 0.01 mg/L
(revised MCL = 0.005 mg/L)

GRAPH 13

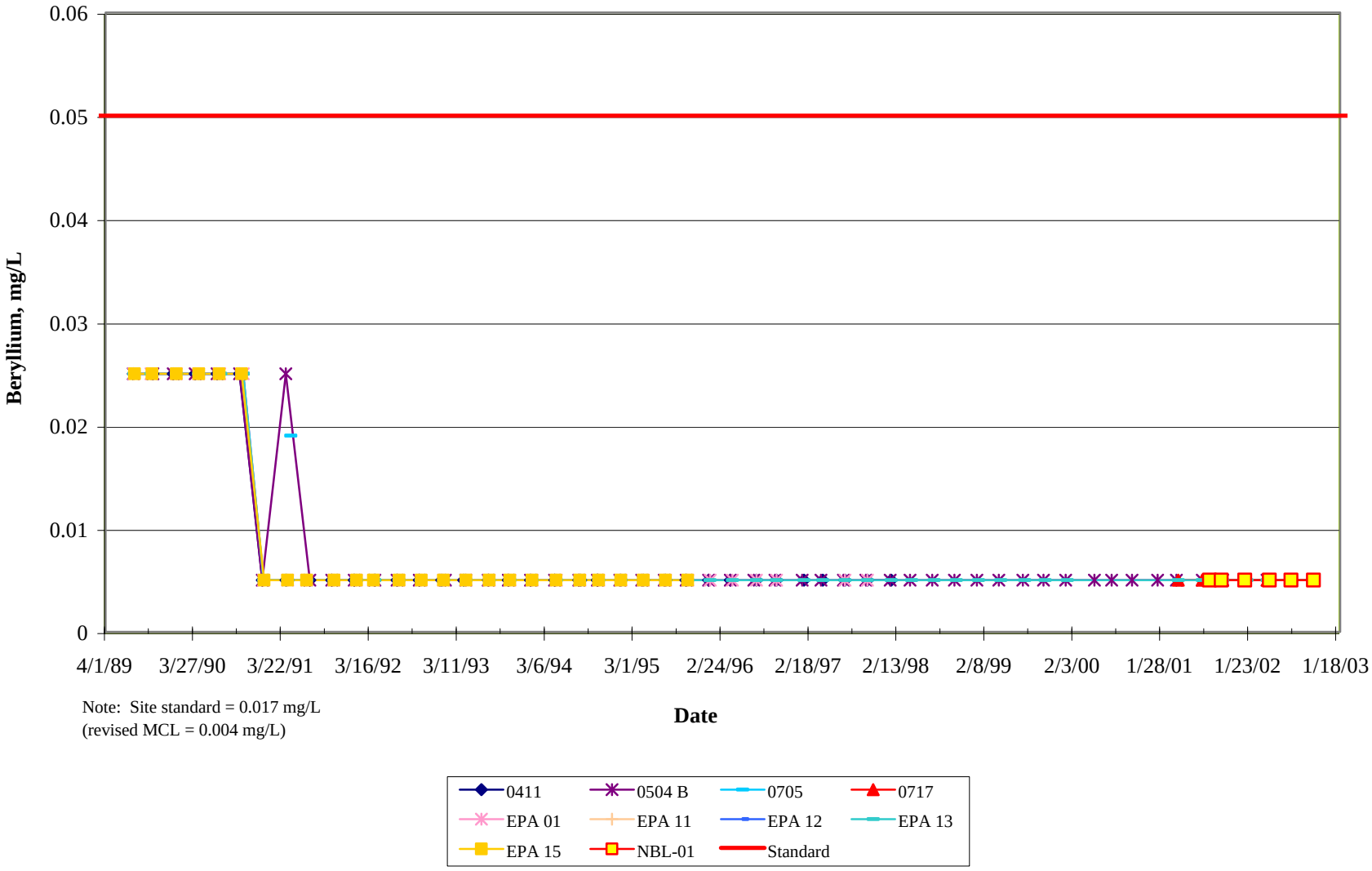
Zone 3 Beryllium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 0.017 mg/L
(revised MCL = 0.004 mg/L)

GRAPH 14

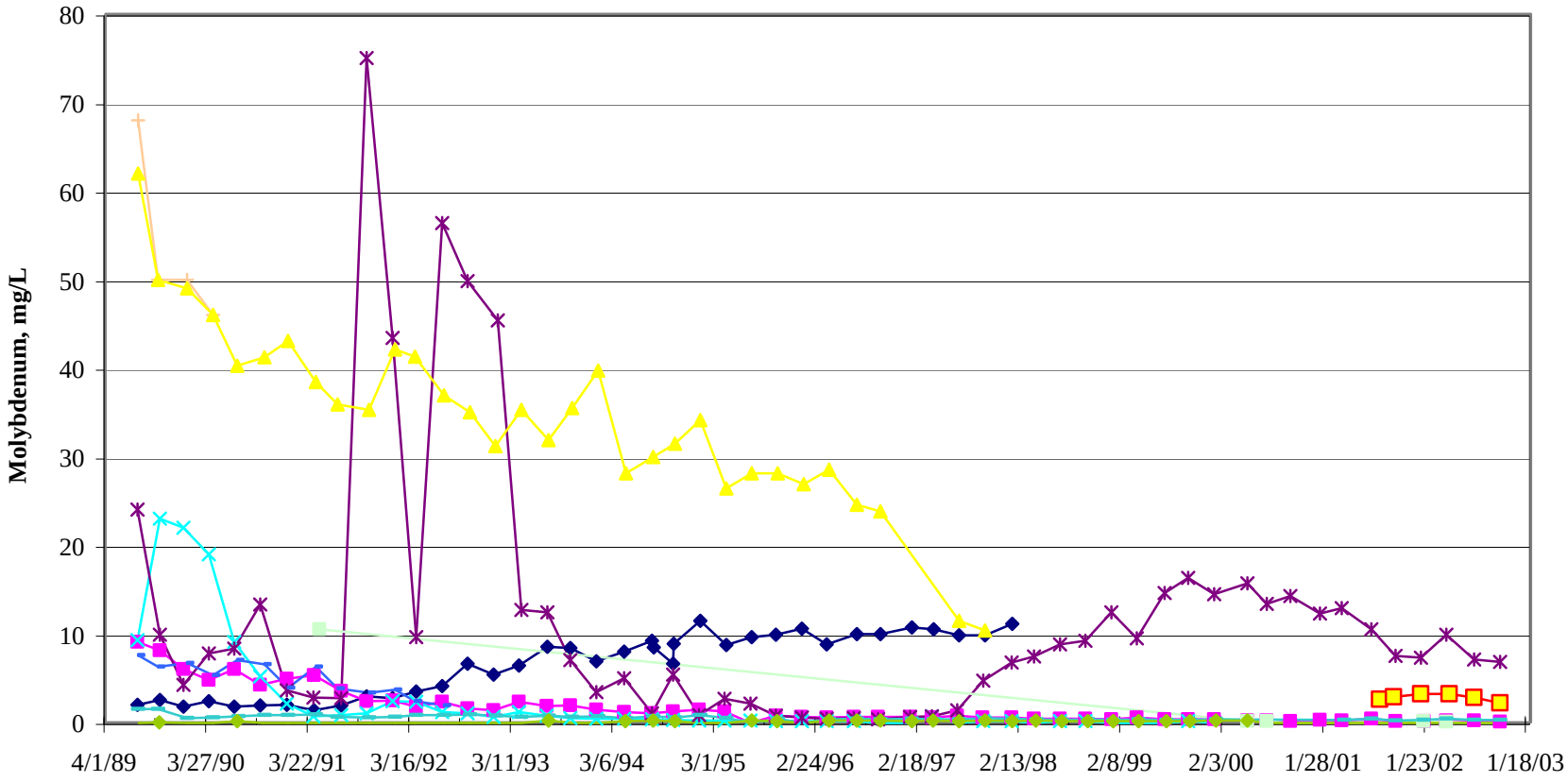
Zone 3 Beryllium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 0.017 mg/L
(revised MCL = 0.004 mg/L)

GRAPH 15

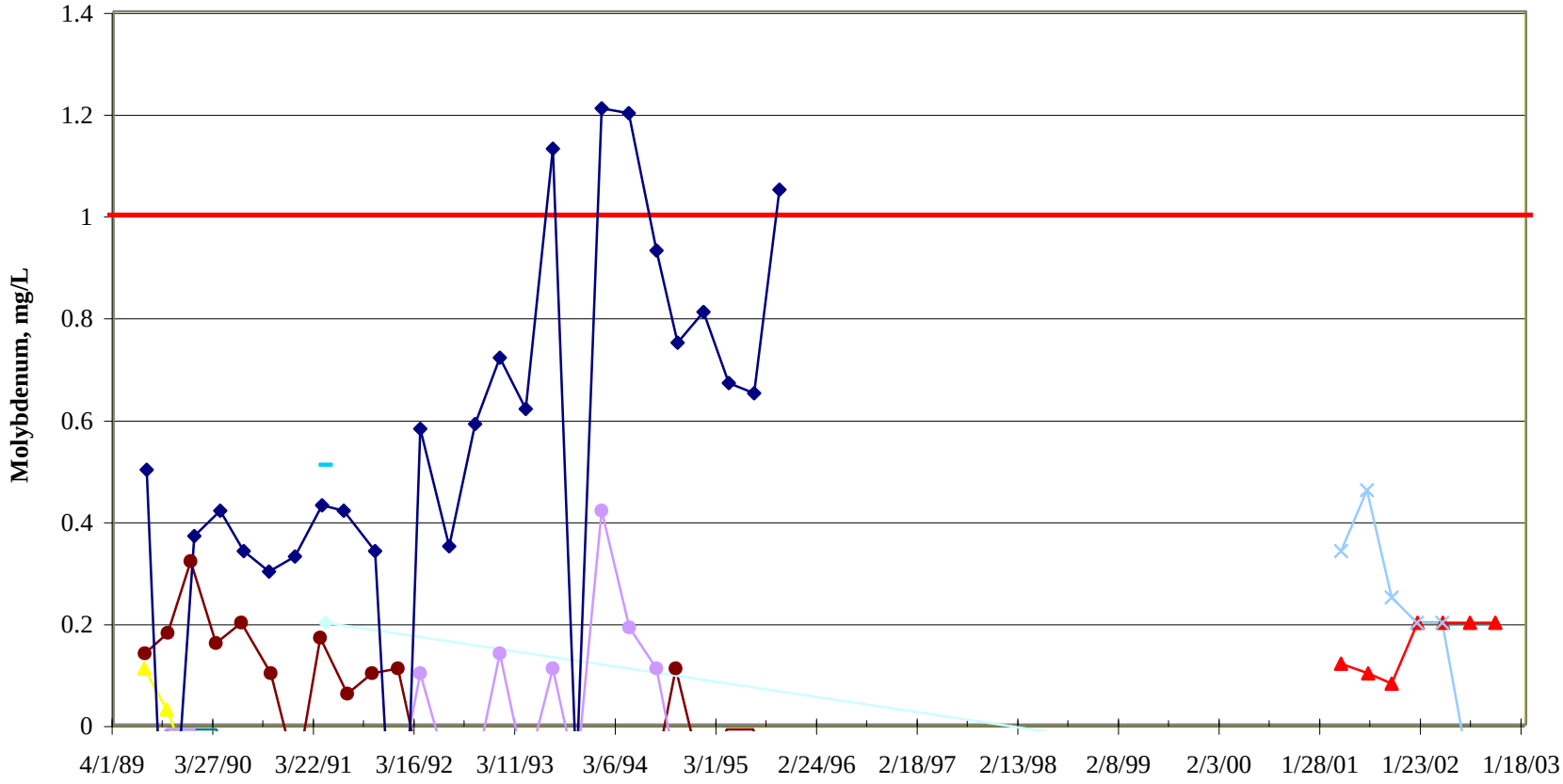
Zone 3 Molybdenum Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 1.0 mg/L

GRAPH 16

Zone 3 Molybdenum Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



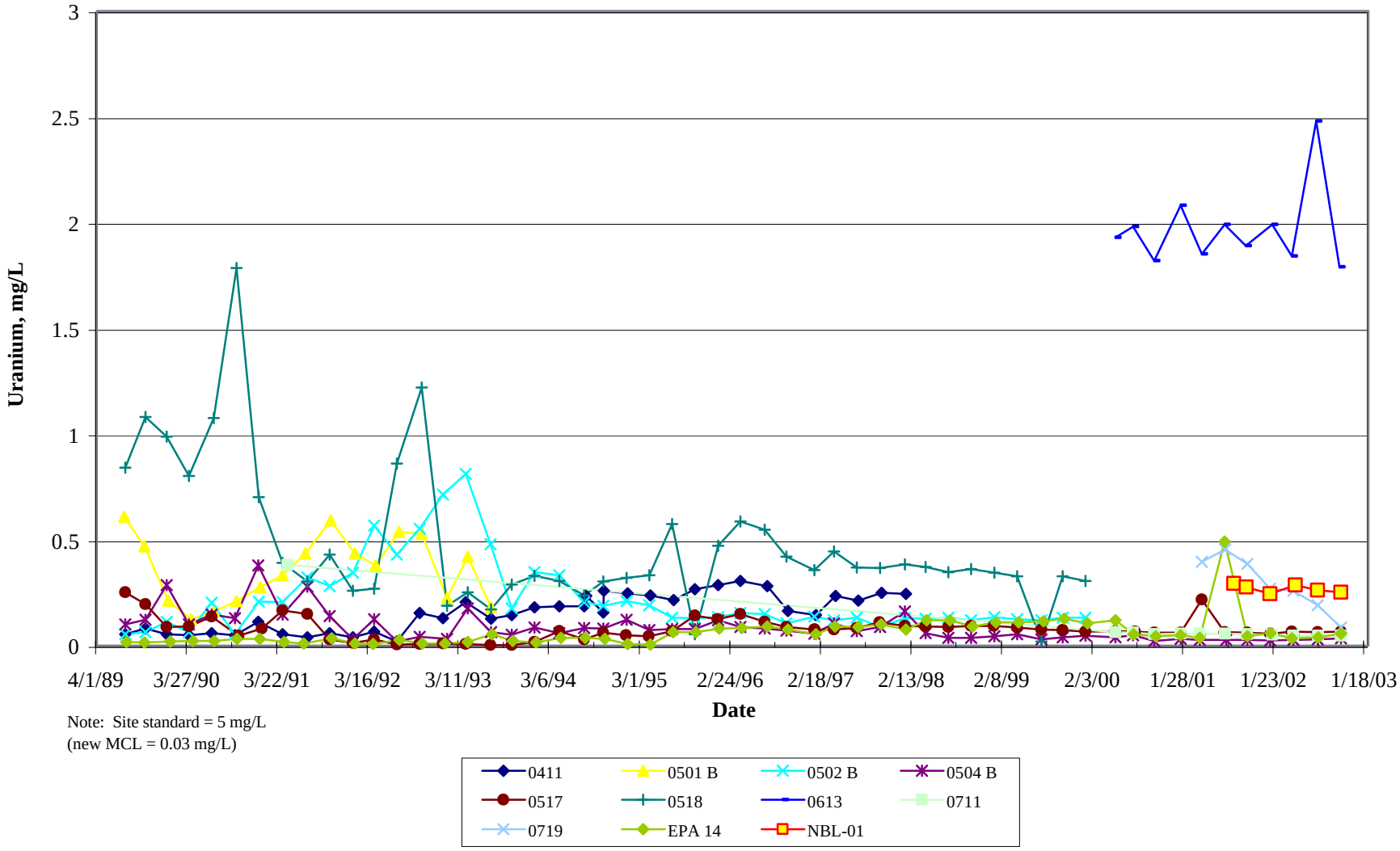
Note: Site standard = 1 mg/L

GRAPH 17

Zone 3 Uranium Concentrations

United Nuclear Corporation, Church Rock Site

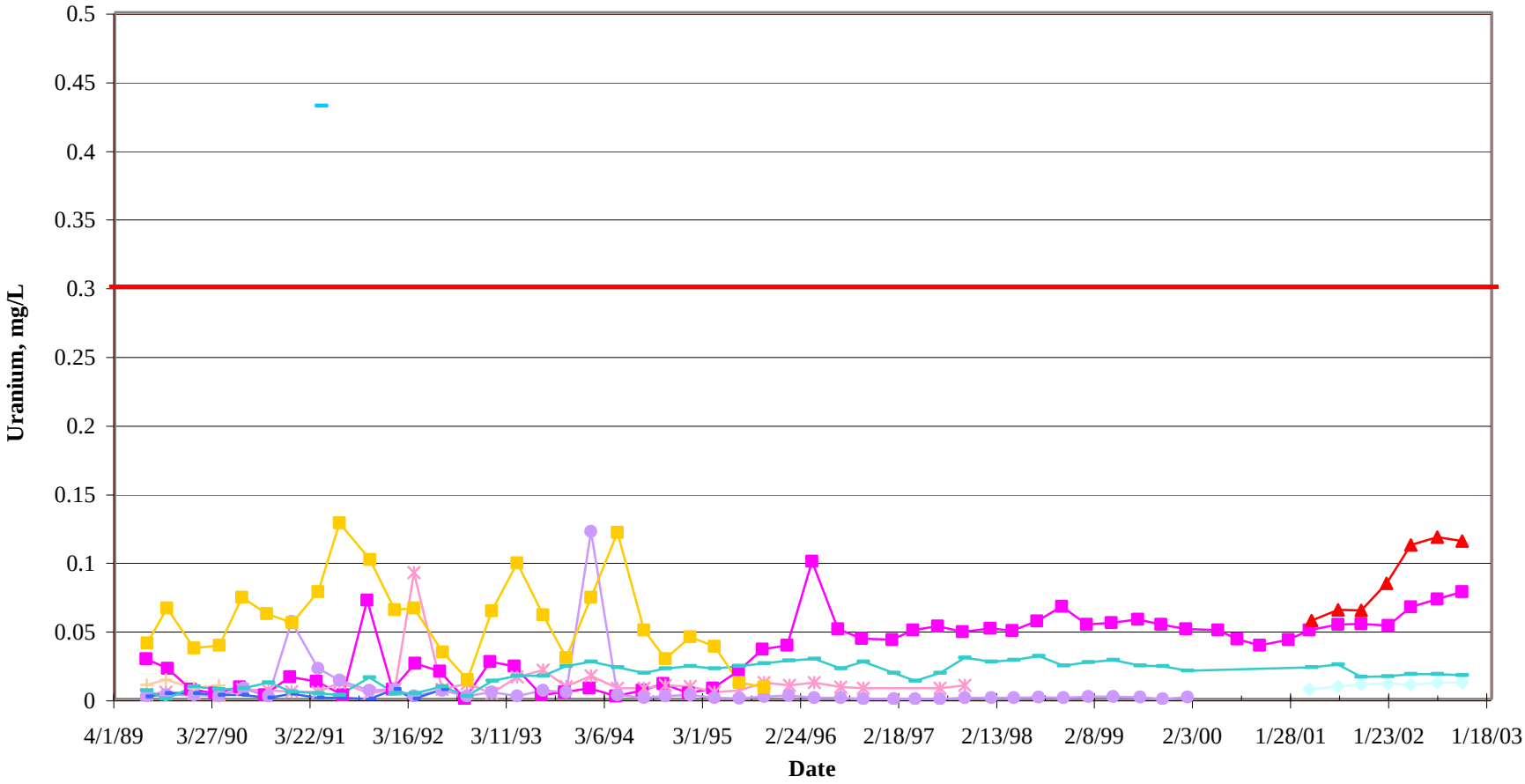
Church Rock, New Mexico



Note: Site standard = 5 mg/L
(new MCL = 0.03 mg/L)

GRAPH 18

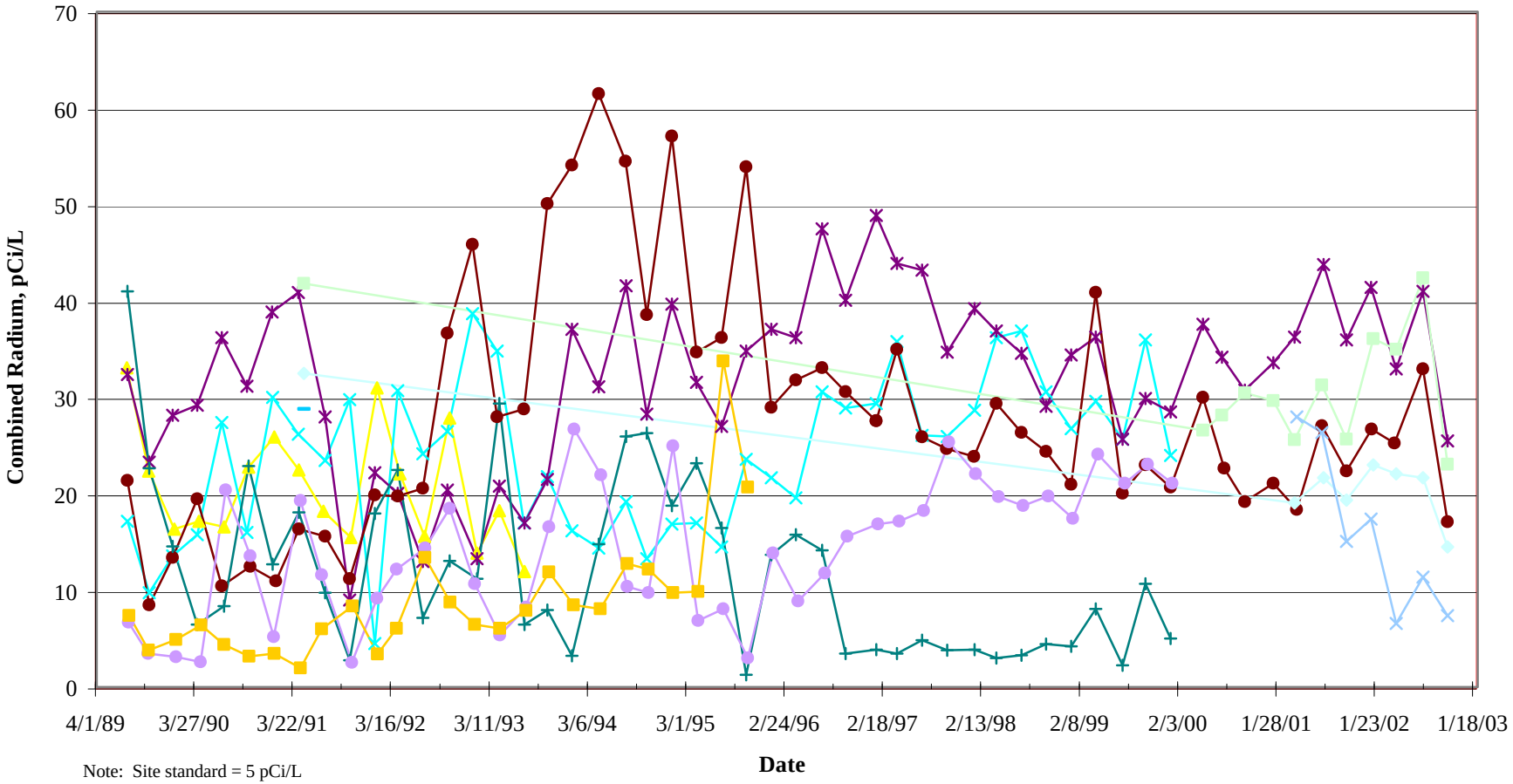
Zone 3 Uranium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 5 mg/L
(new MCL = 0.03 mg/L)

GRAPH 19

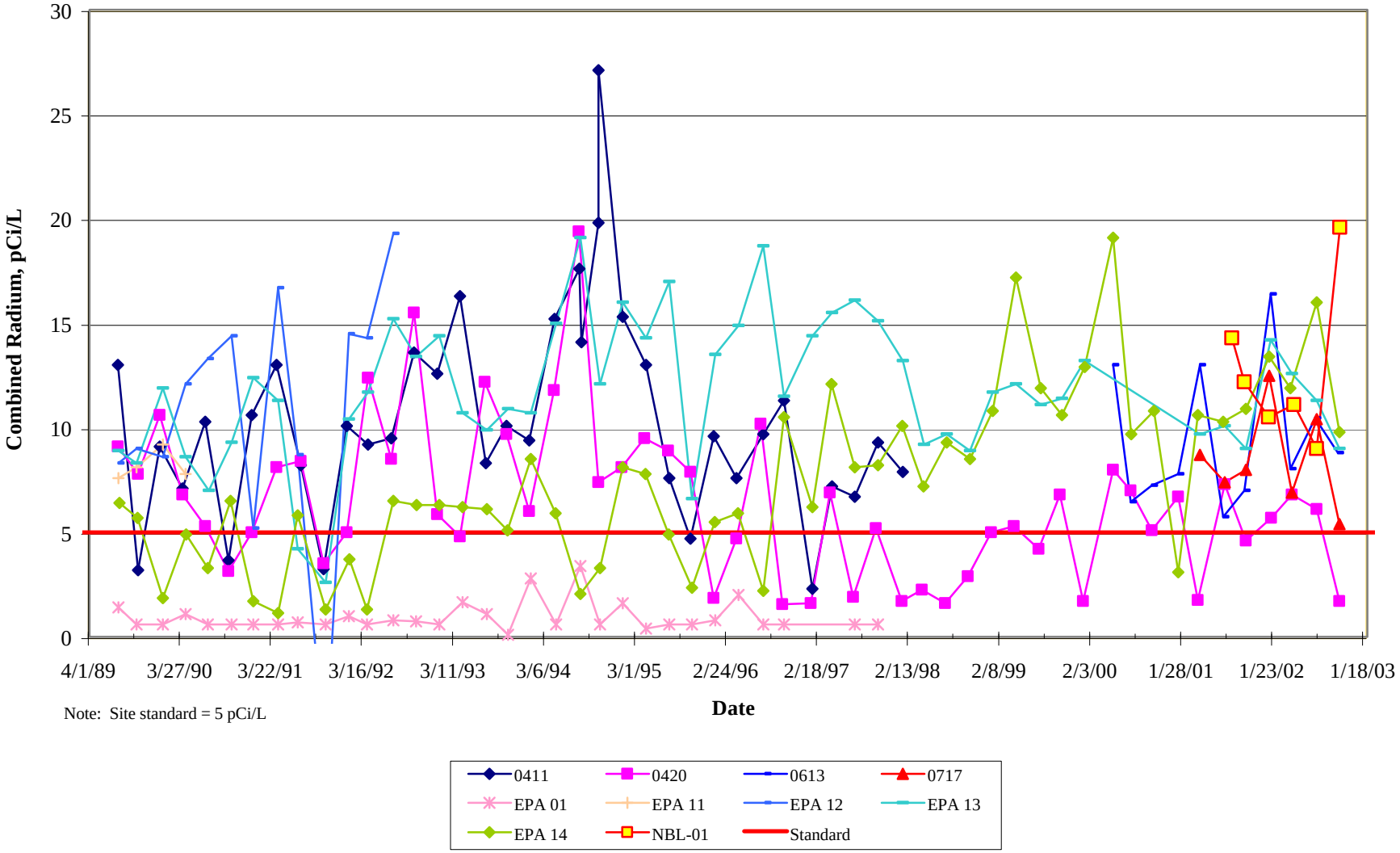
Zone 3 Combined Radium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 5 pCi/L

GRAPH 20

Zone 3 Combined Radium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



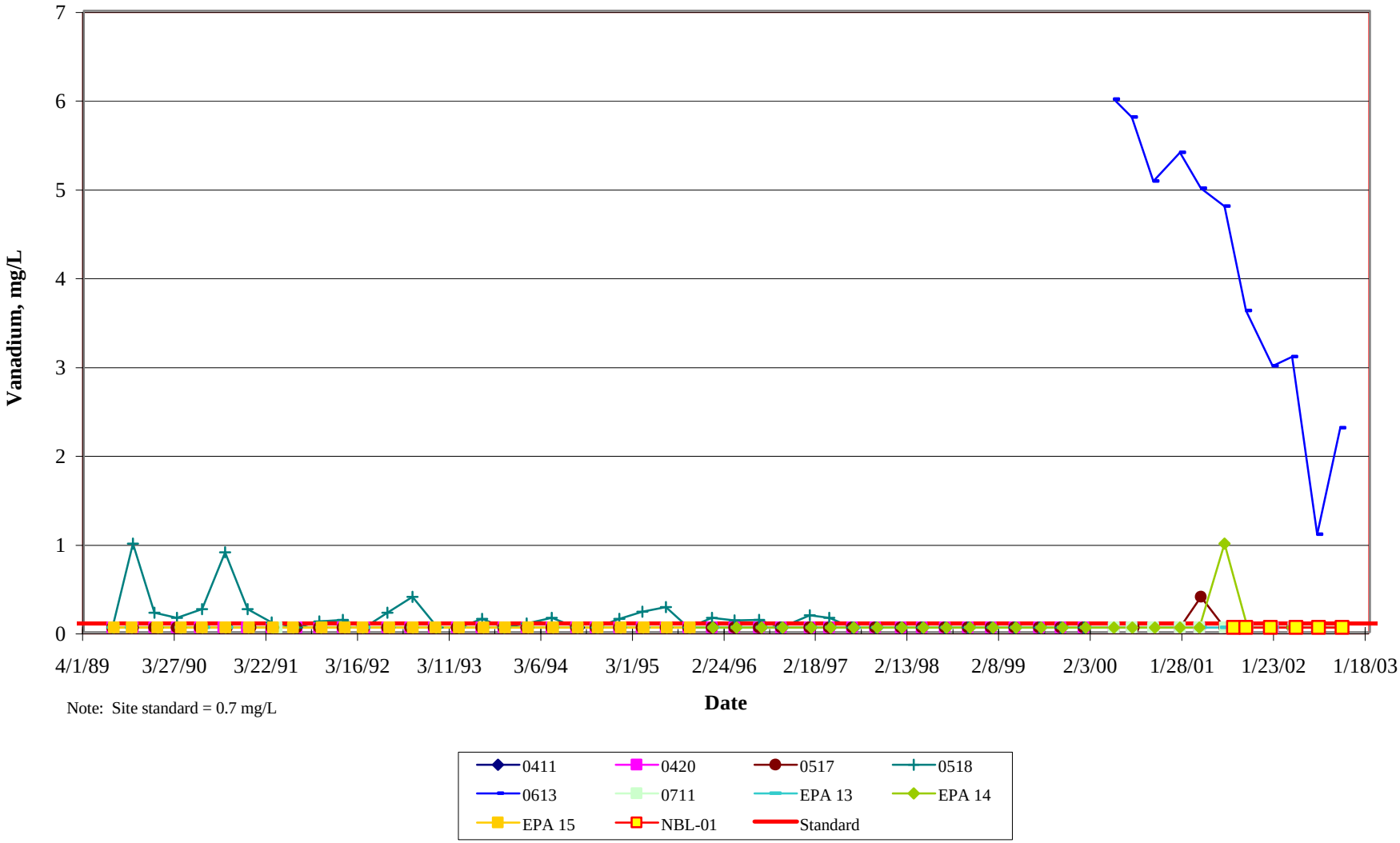
Note: Site standard = 5 pCi/L

GRAPH 21

Zone 3 Vanadium Concentrations

United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico



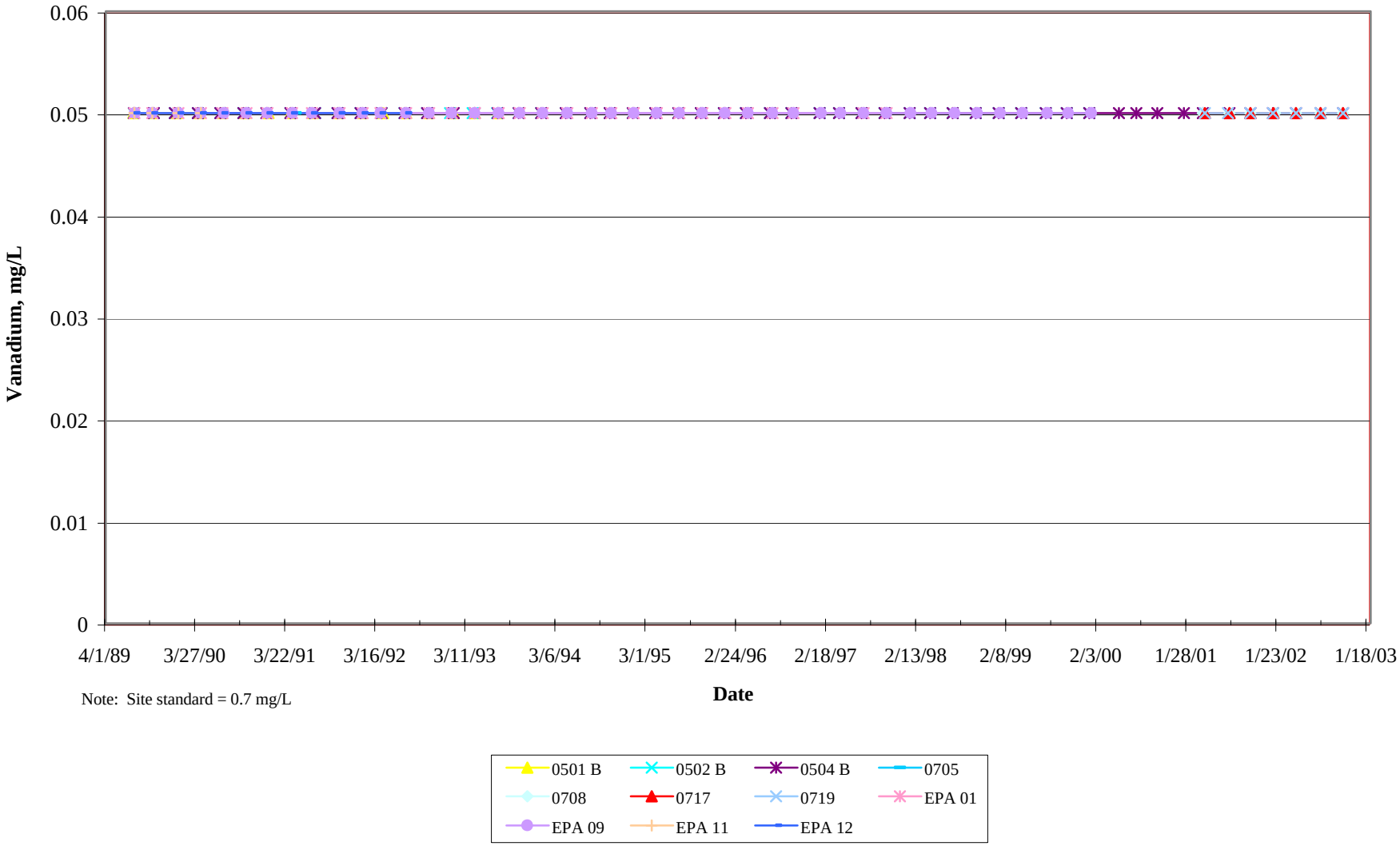
Note: Site standard = 0.7 mg/L

GRAPH 22

Zone 3 Vanadium Concentrations

United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico



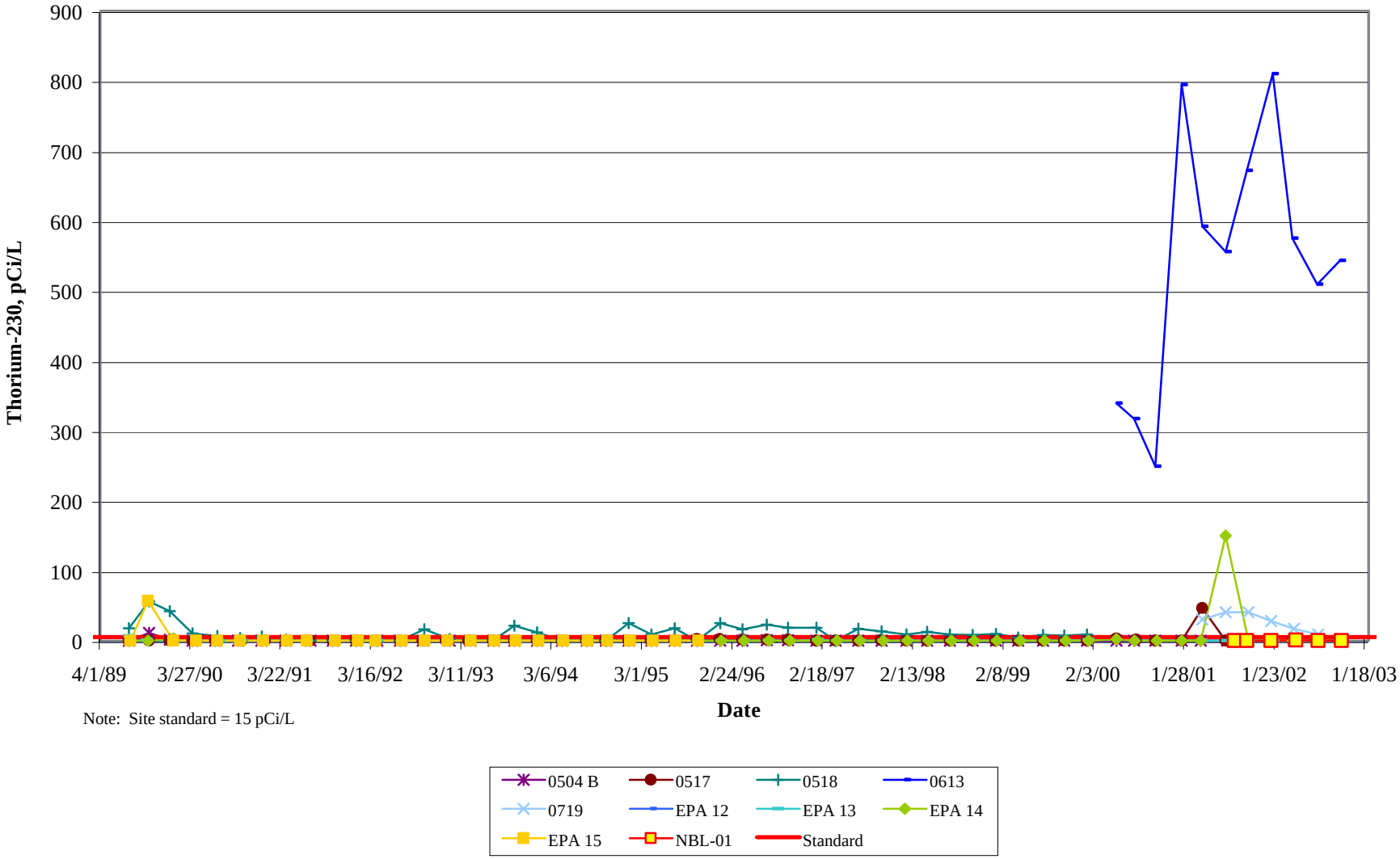
Note: Site standard = 0.7 mg/L

GRAPH 23

Zone 3 Thorium-230 Concentrations

United Nuclear Corporation, Church Rock Site

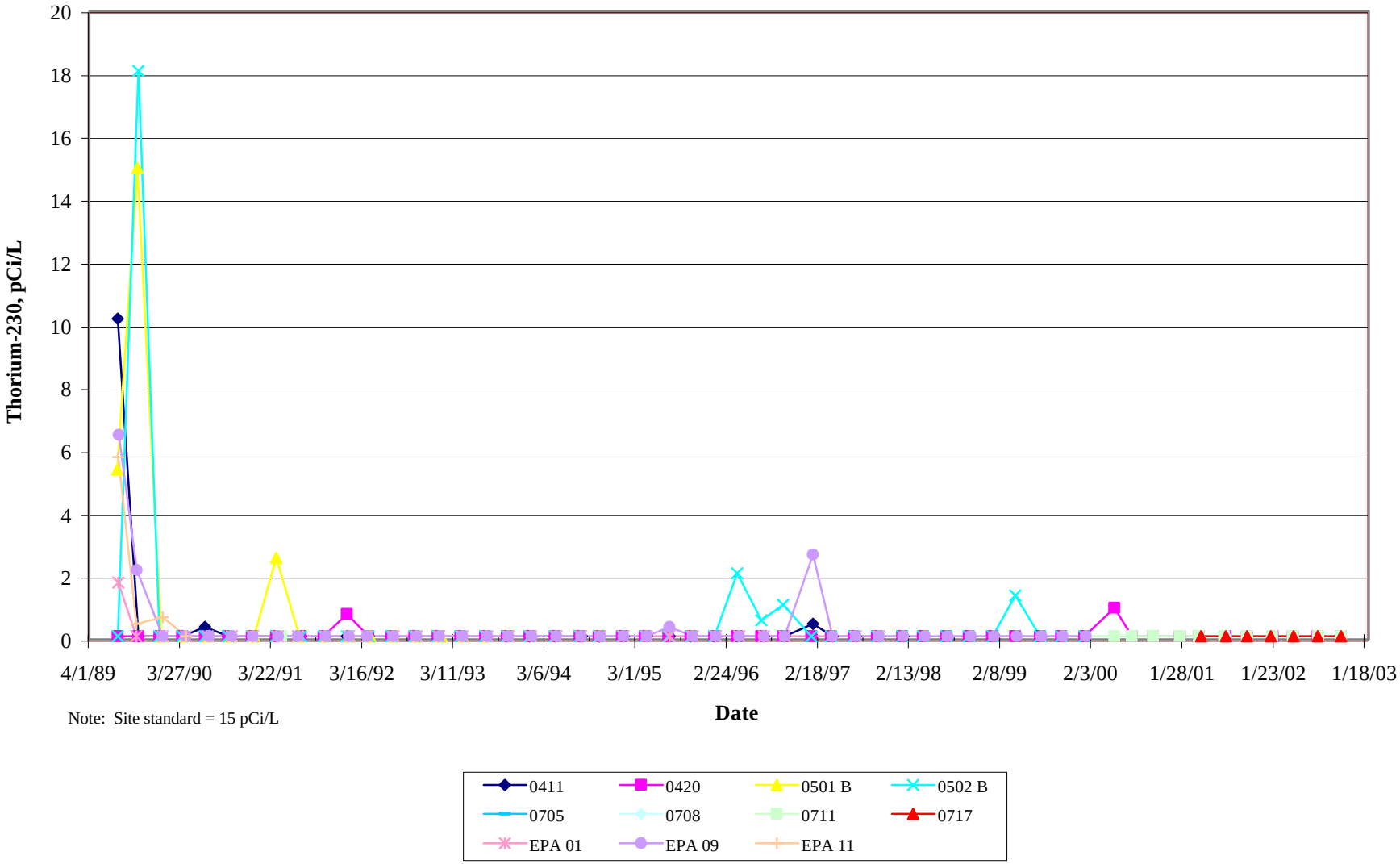
Church Rock, New Mexico



Note: Site standard = 15 pCi/L

GRAPH 24

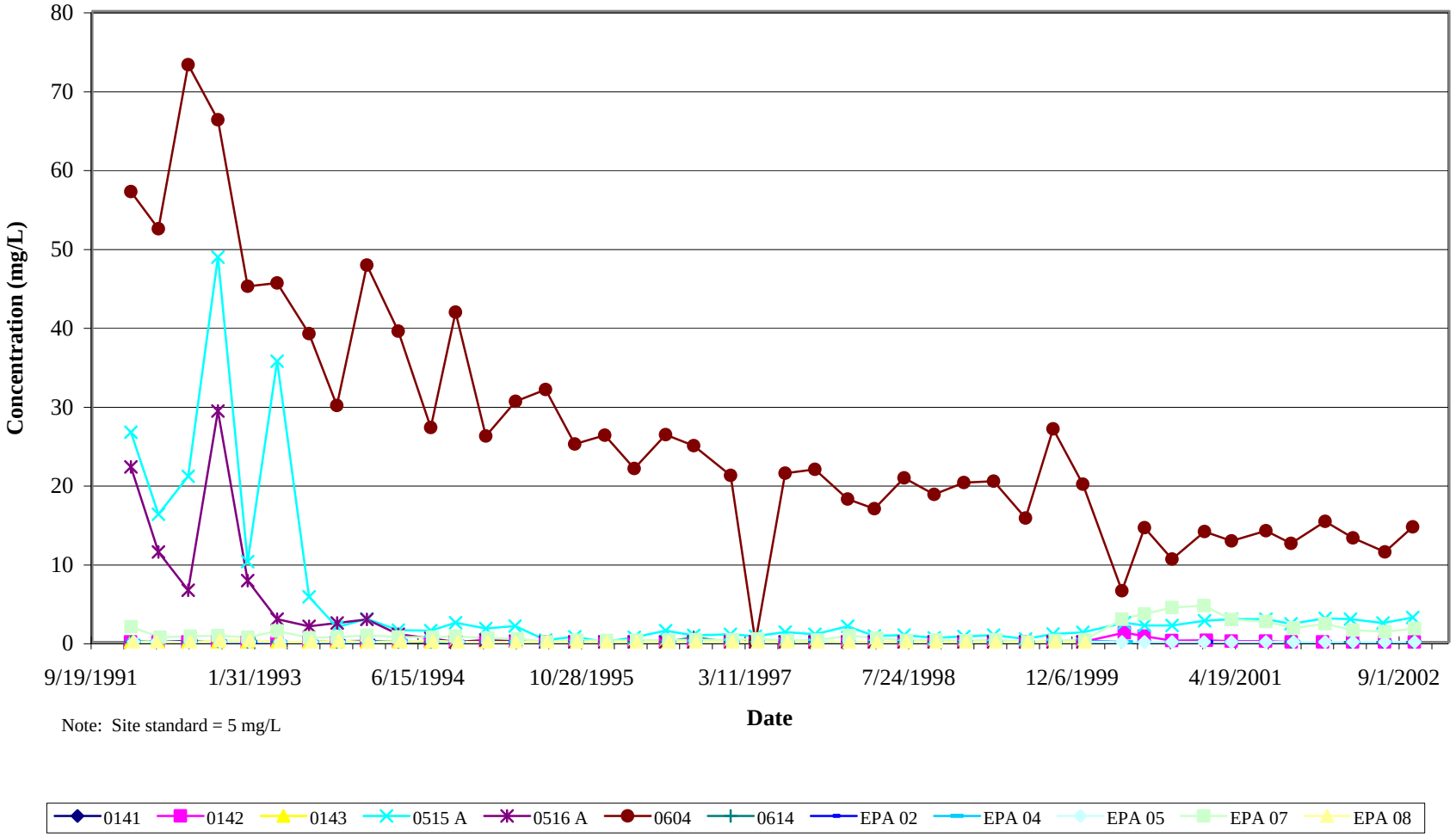
Zone 3 Thorium-230 Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 15 pCi/L

GRAPH 46

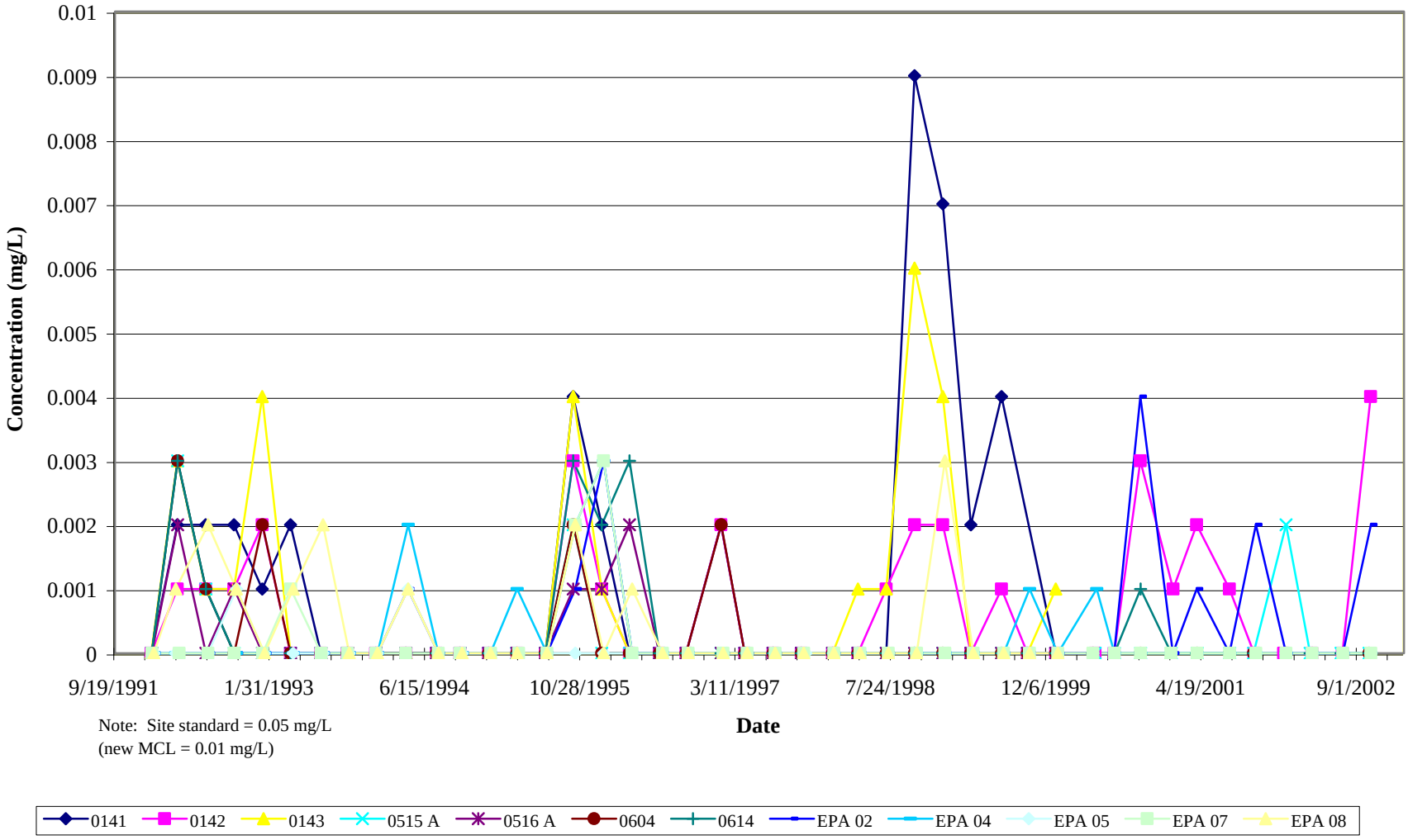
Zone 1 Aluminum Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 5 mg/L

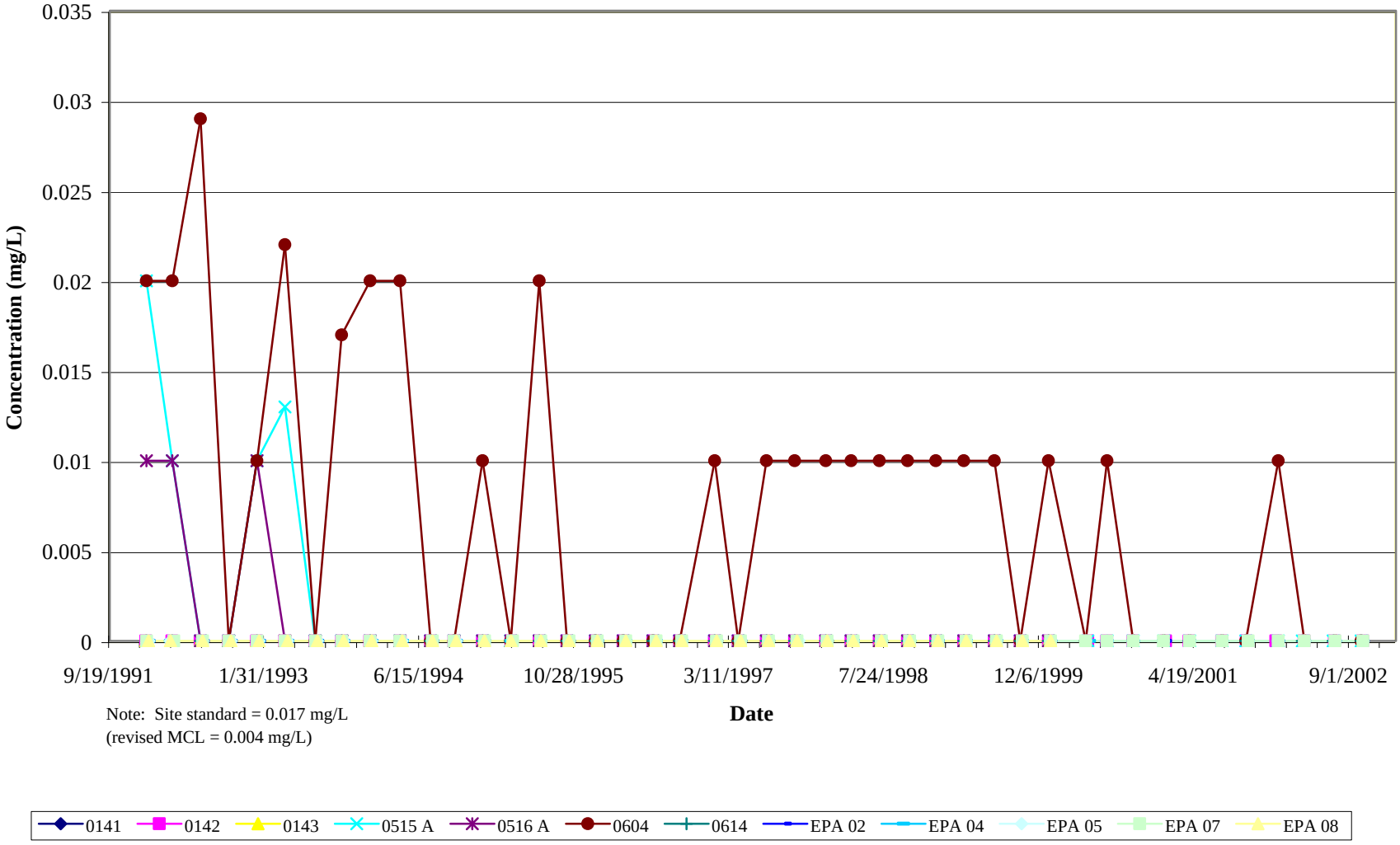
GRAPH 47

Zone 1 Arsenic Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



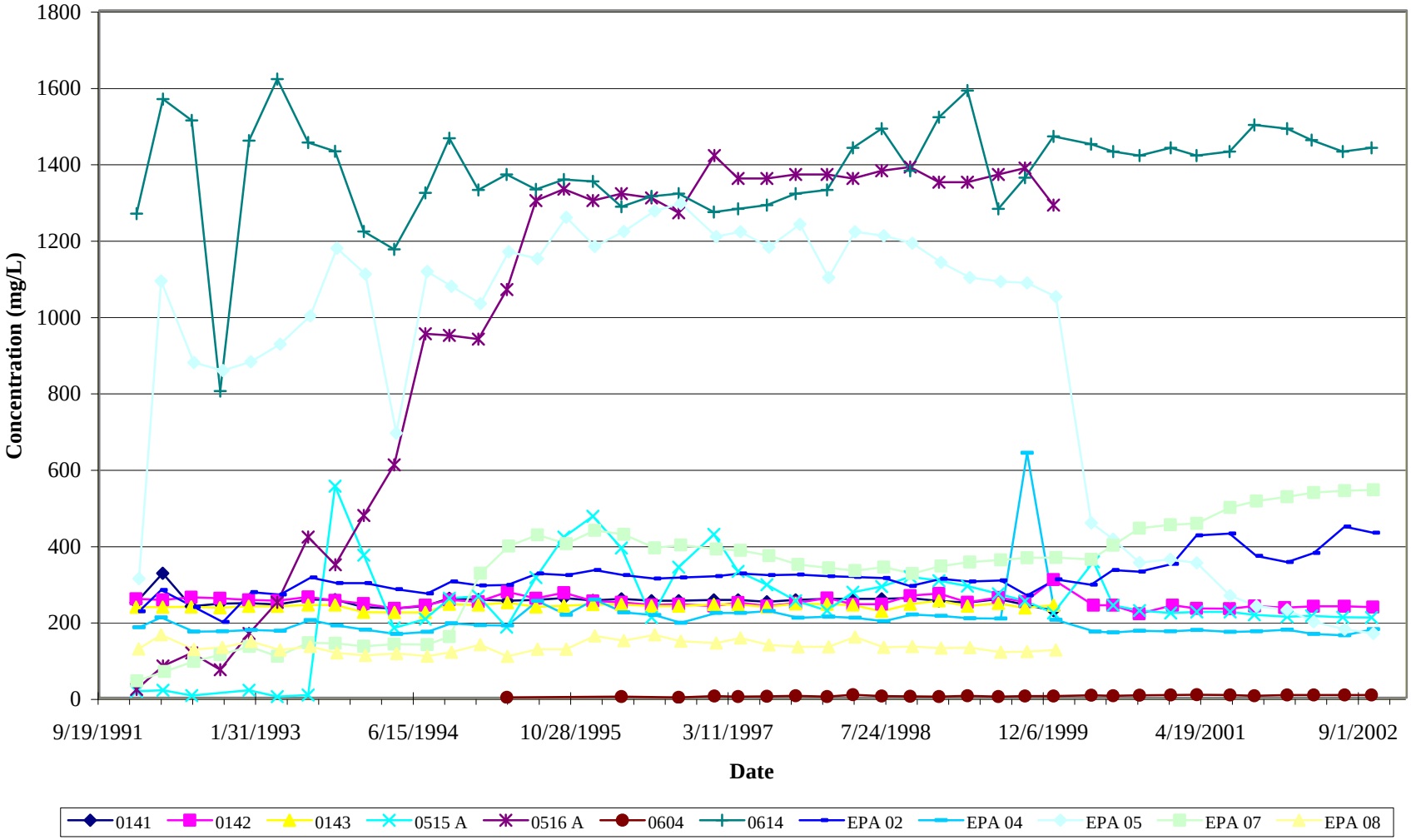
GRAPH 48

Zone 1 Beryllium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



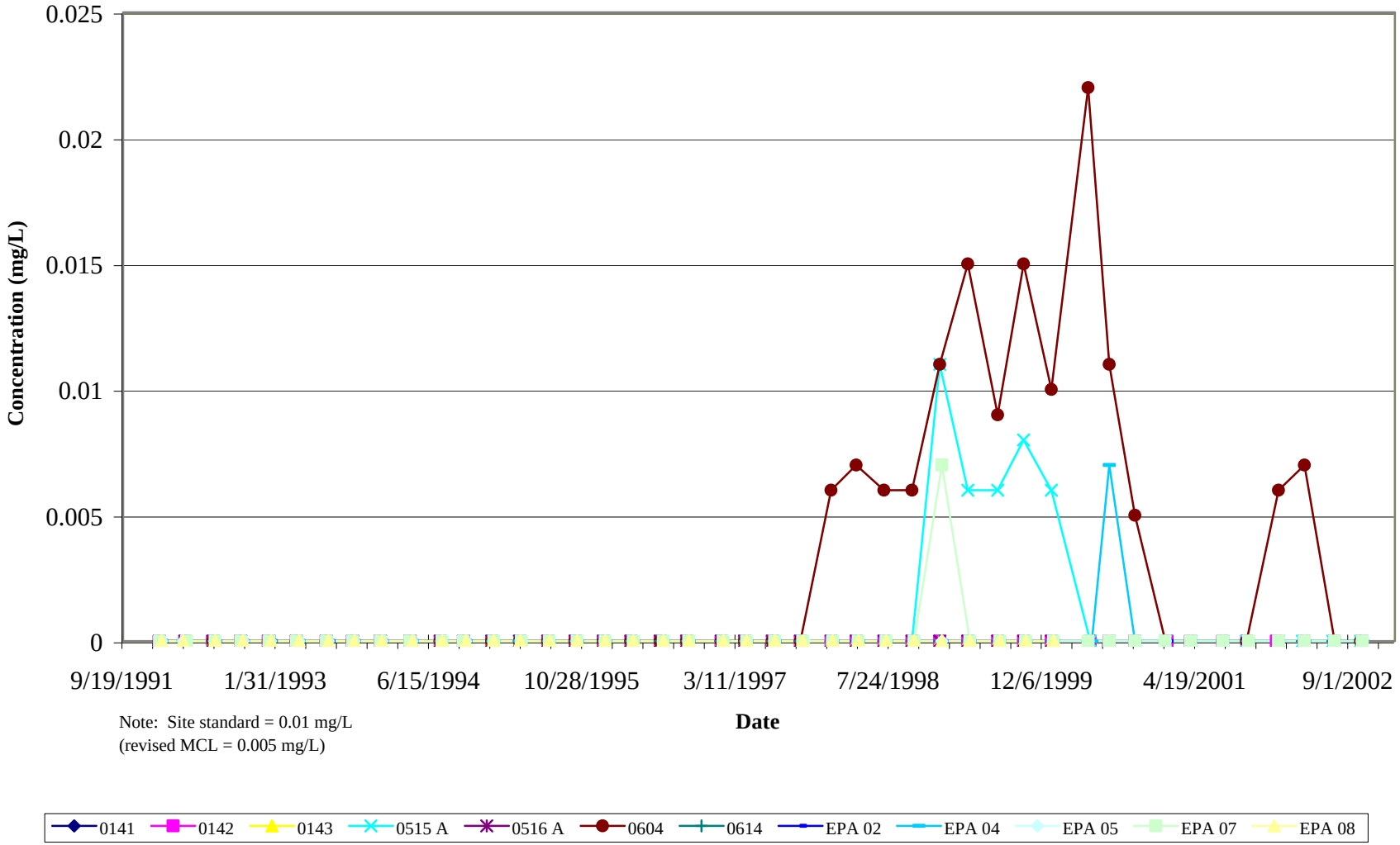
GRAPH 49

Zone 1 Bicarbonate Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 50

Zone 1 Cadmium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

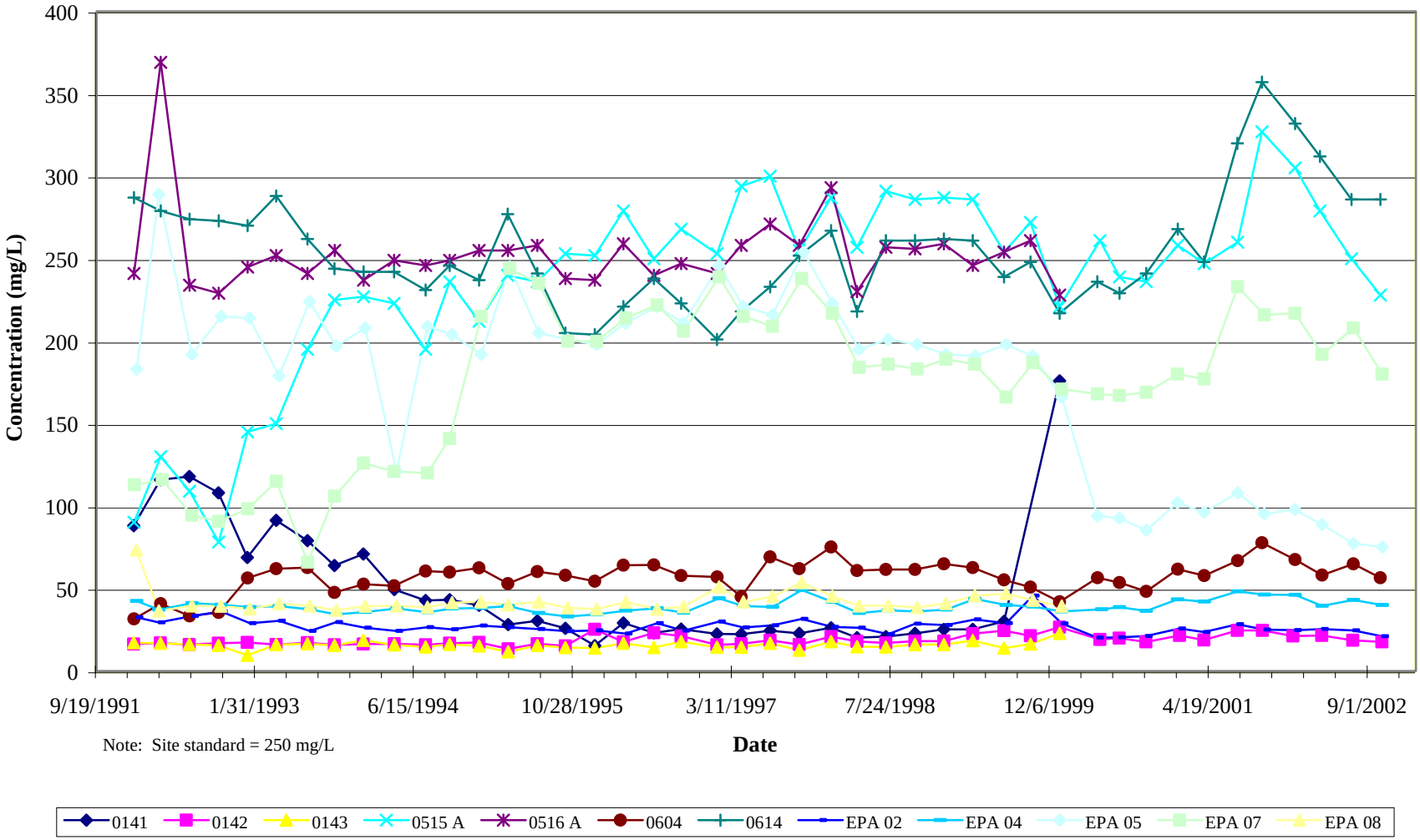


GRAPH 51

Zone 1 Chloride Concentrations

United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico



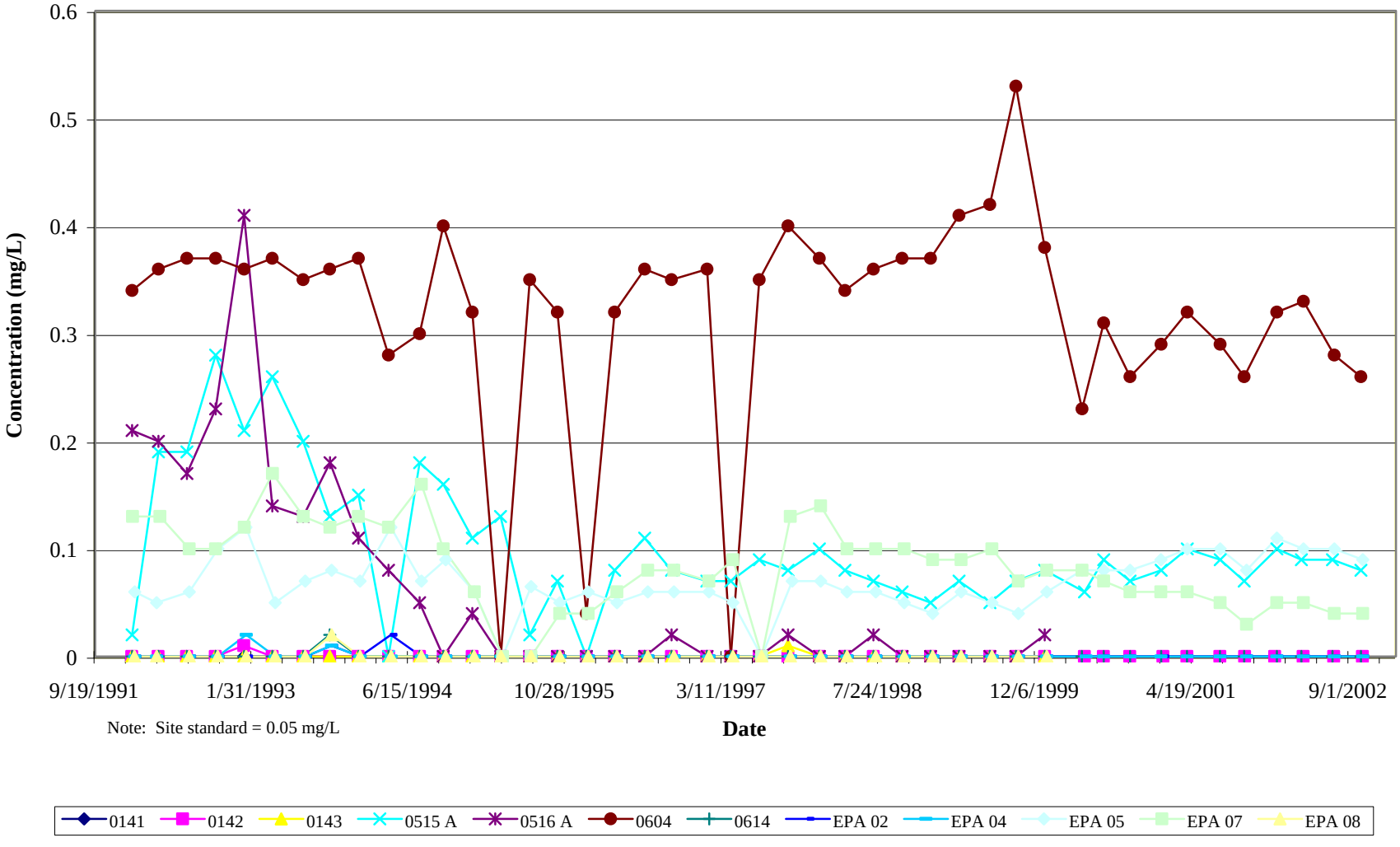
Note: Site standard = 250 mg/L

GRAPH 52

Zone 1 Cobalt Concentrations

United Nuclear Corporation, Church Rock Site

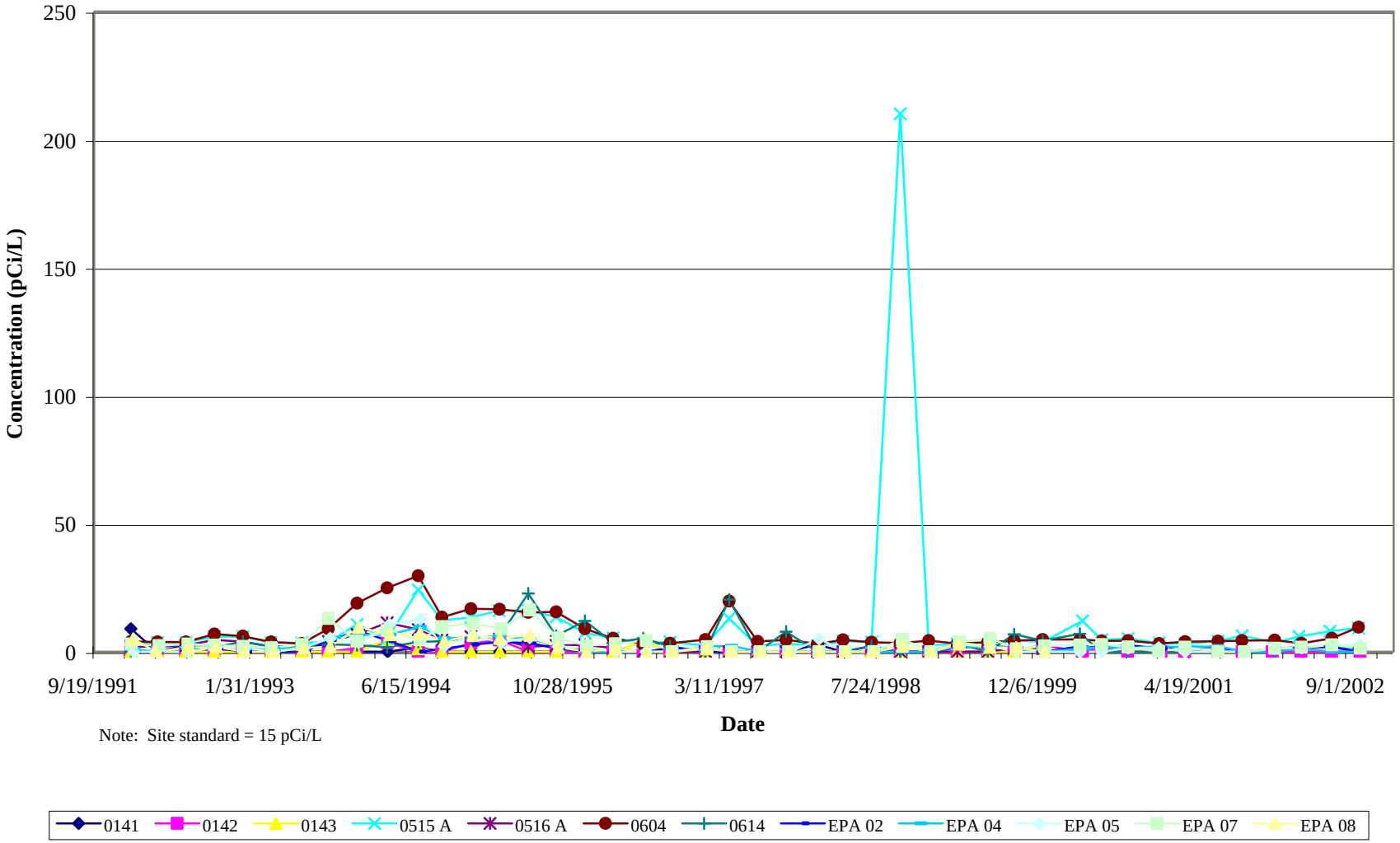
Church Rock, New Mexico



Note: Site standard = 0.05 mg/L

GRAPH 53

Zone 1 Gross Alpha Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 54

Zone 1 Lead Concentrations

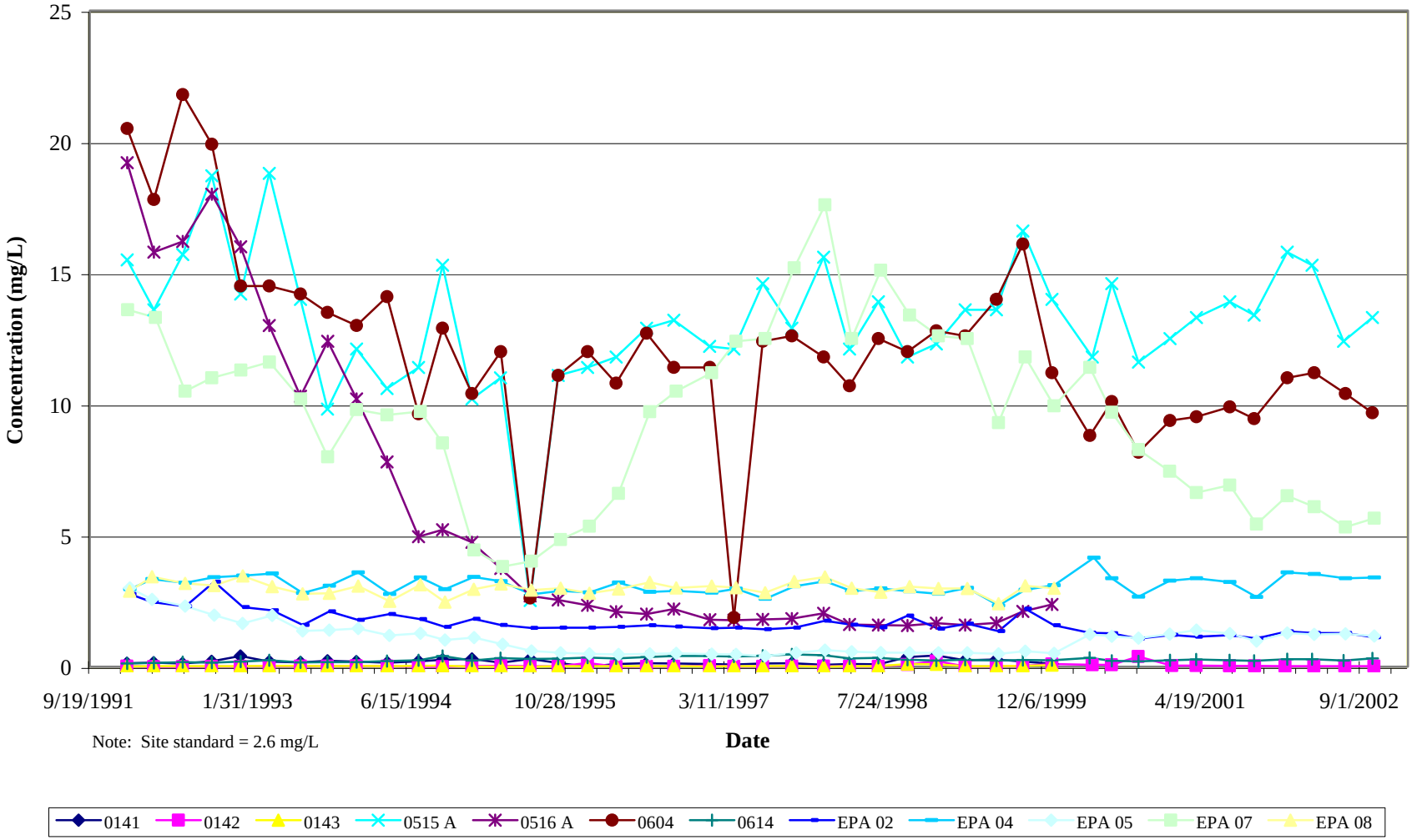
United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico



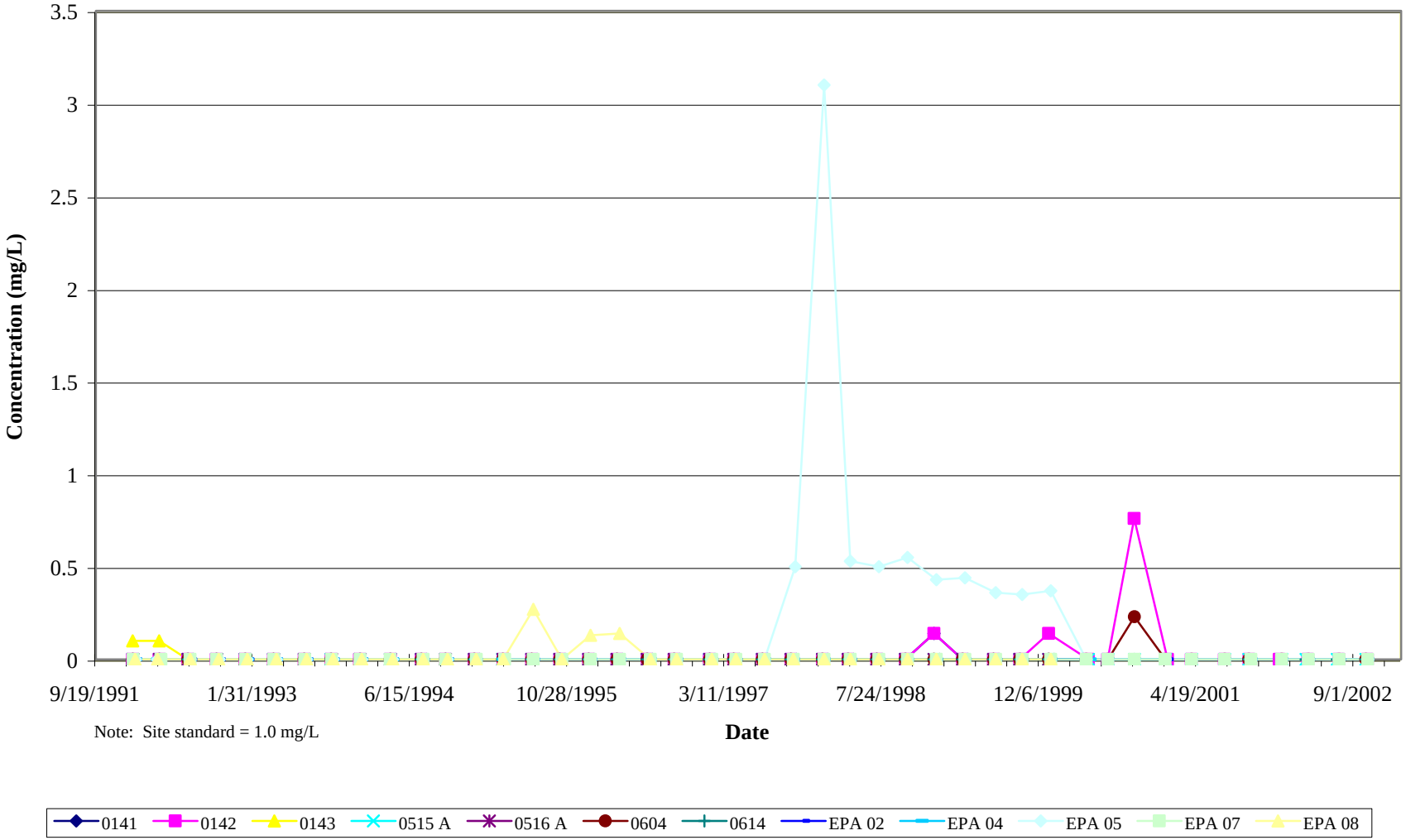
GRAPH 55

Zone 1 Manganese Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 56

Zone 1 Molybdenum Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

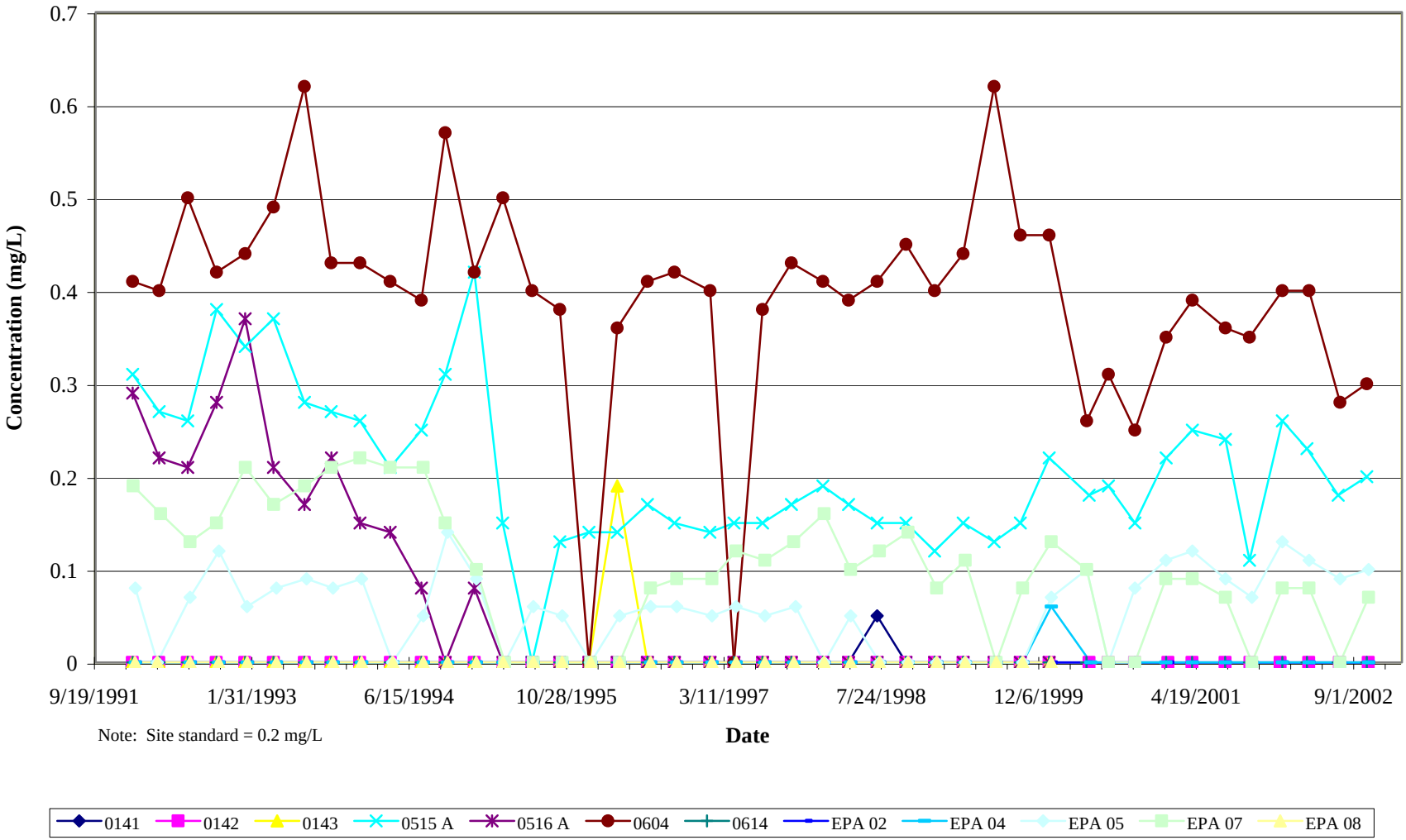


GRAPH 57

Zone 1 Nickel Concentrations

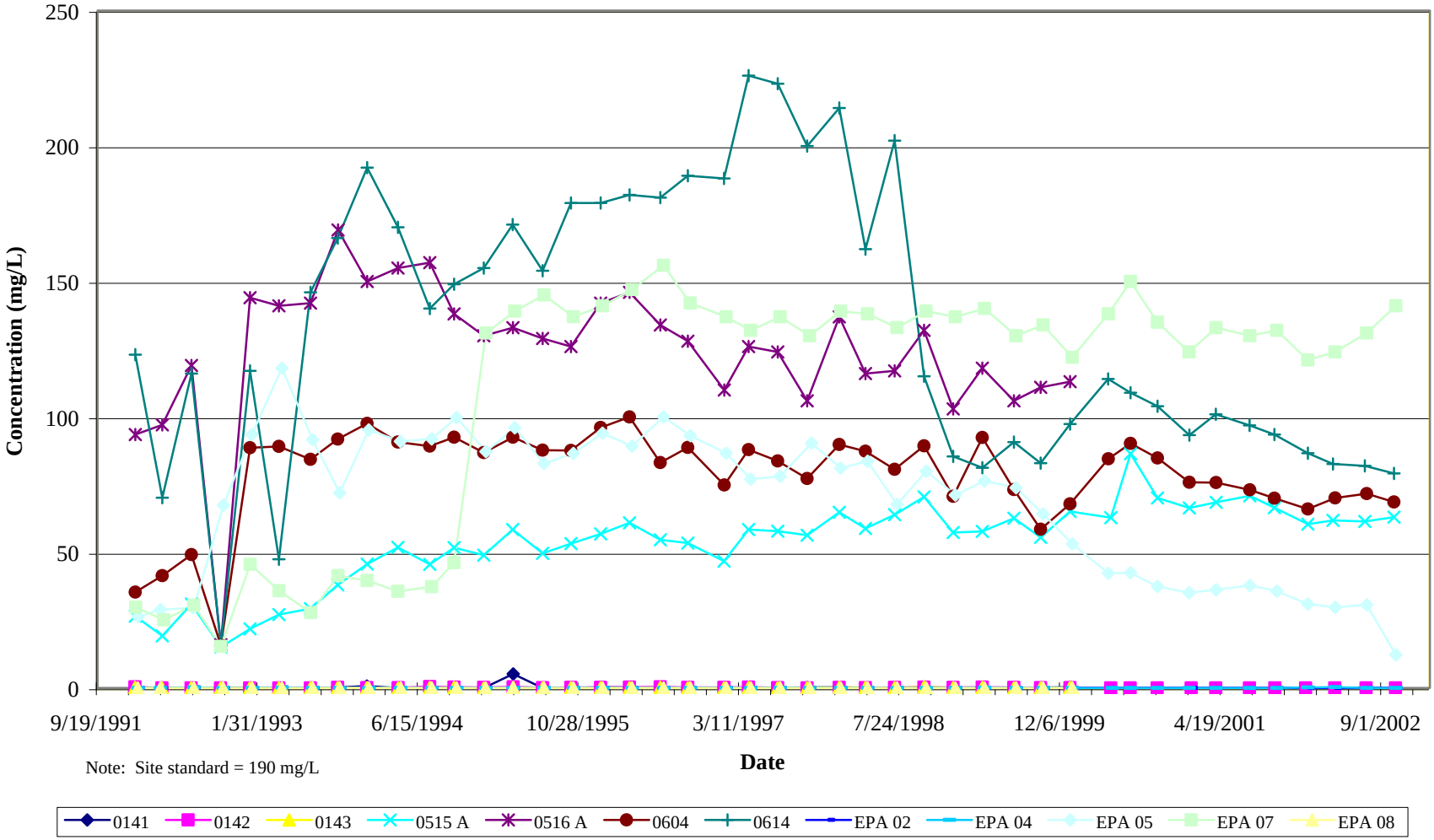
United Nuclear Corporation, Church Rock Site

Church Rock, New Mexico



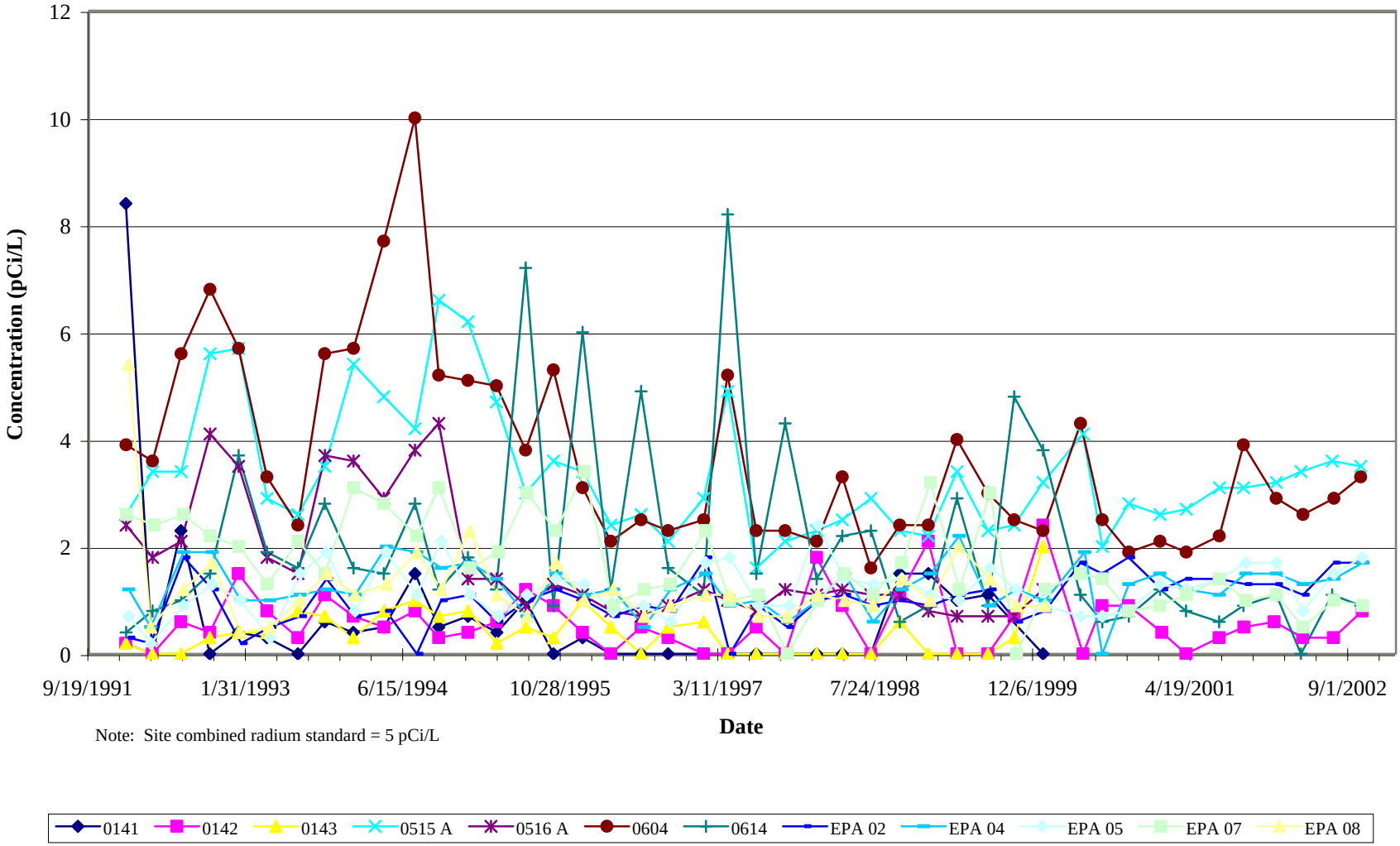
GRAPH 58

Zone 1 Nitrate Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



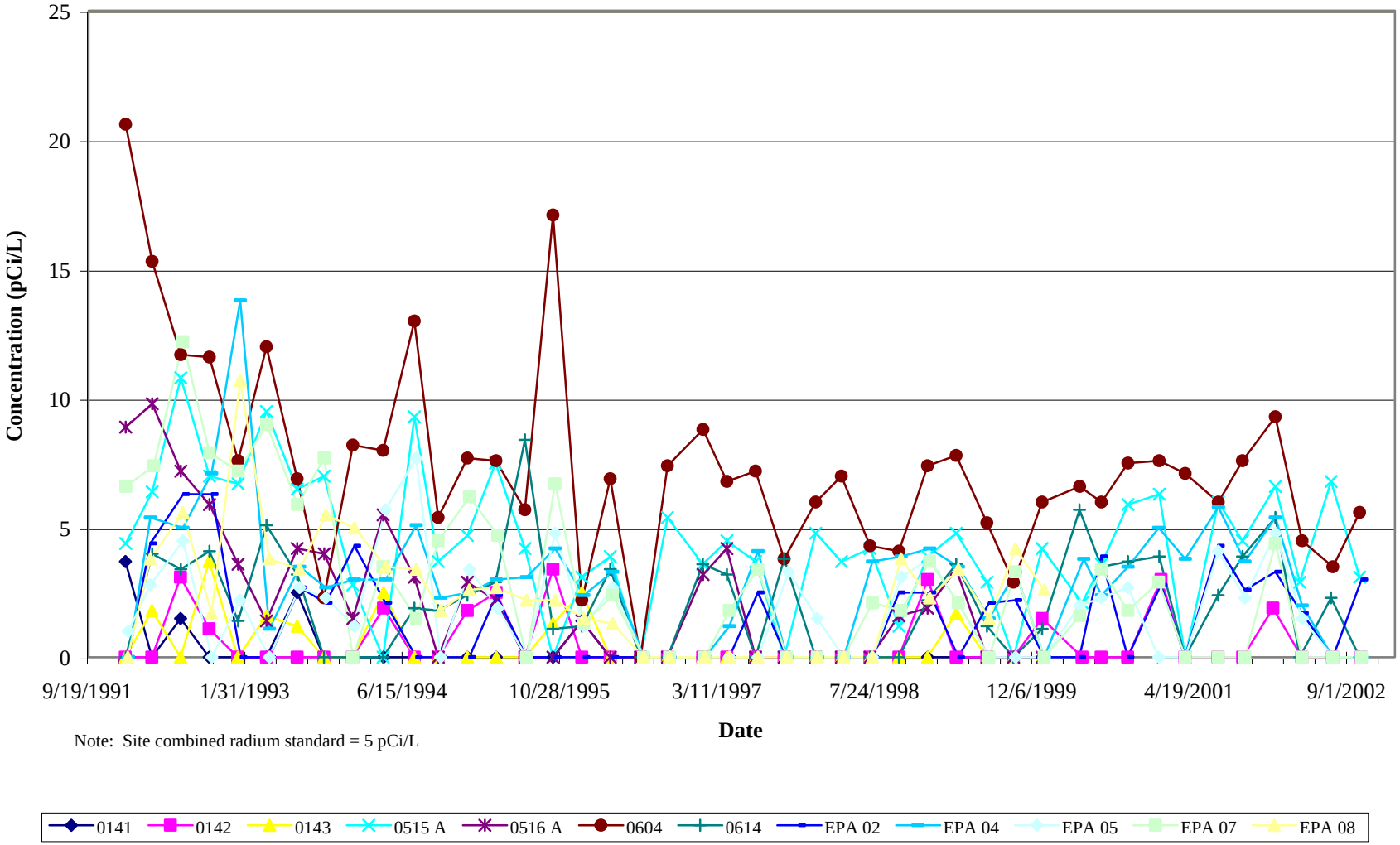
GRAPH 59

Zone 1 Radium-226 Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 60

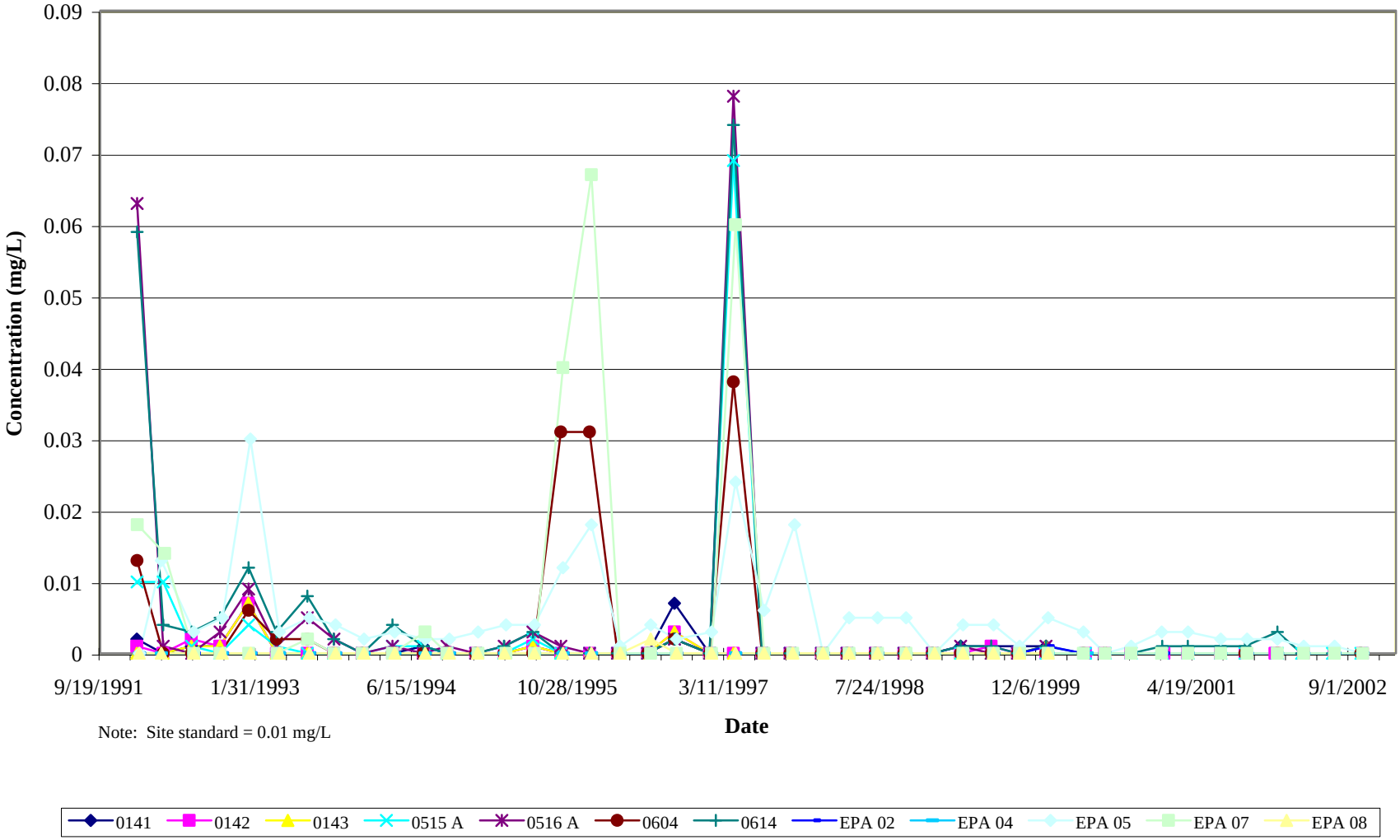
Zone 1 Radium-228 Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site combined radium standard = 5 pCi/L

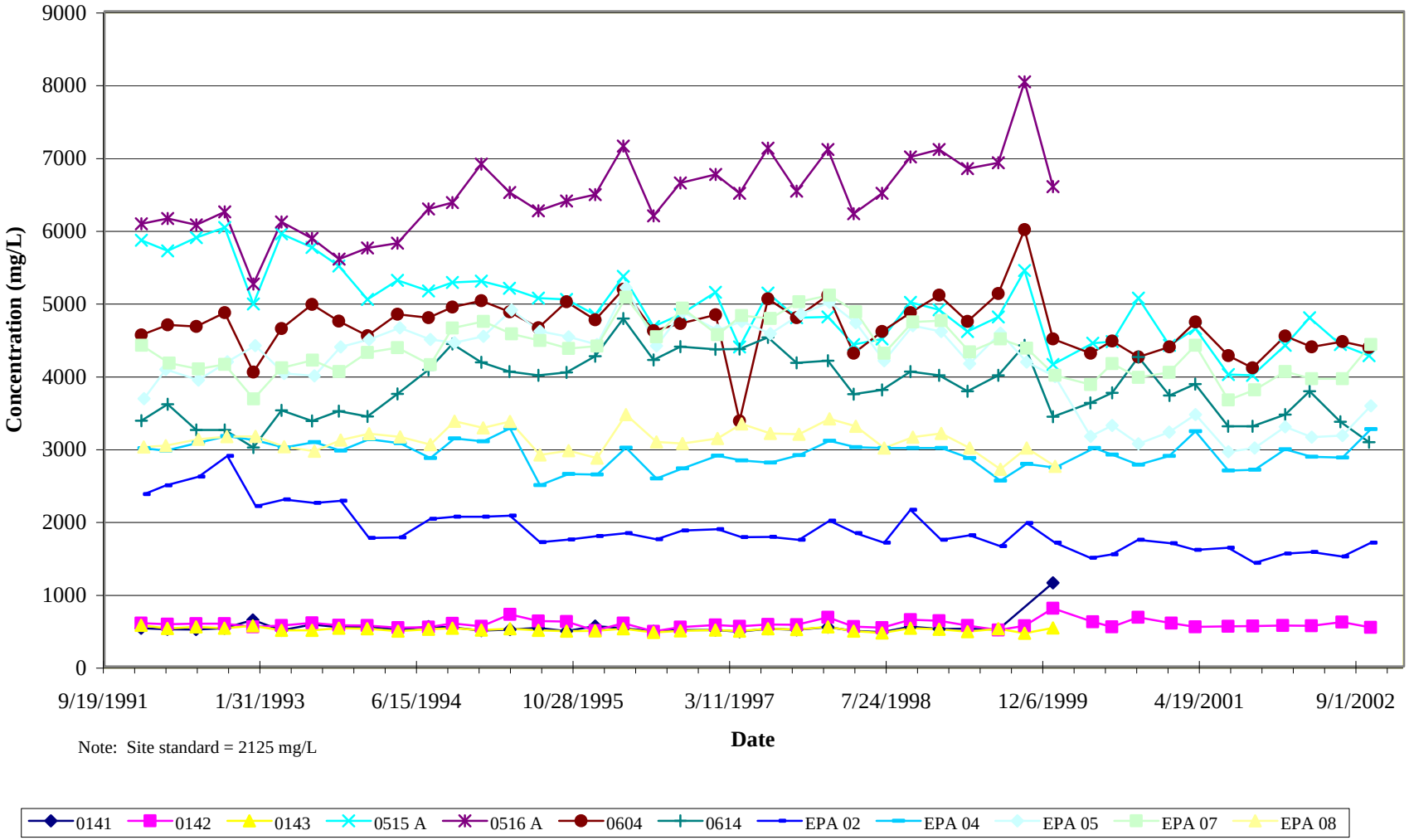
GRAPH 61

Zone 1 Selenium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



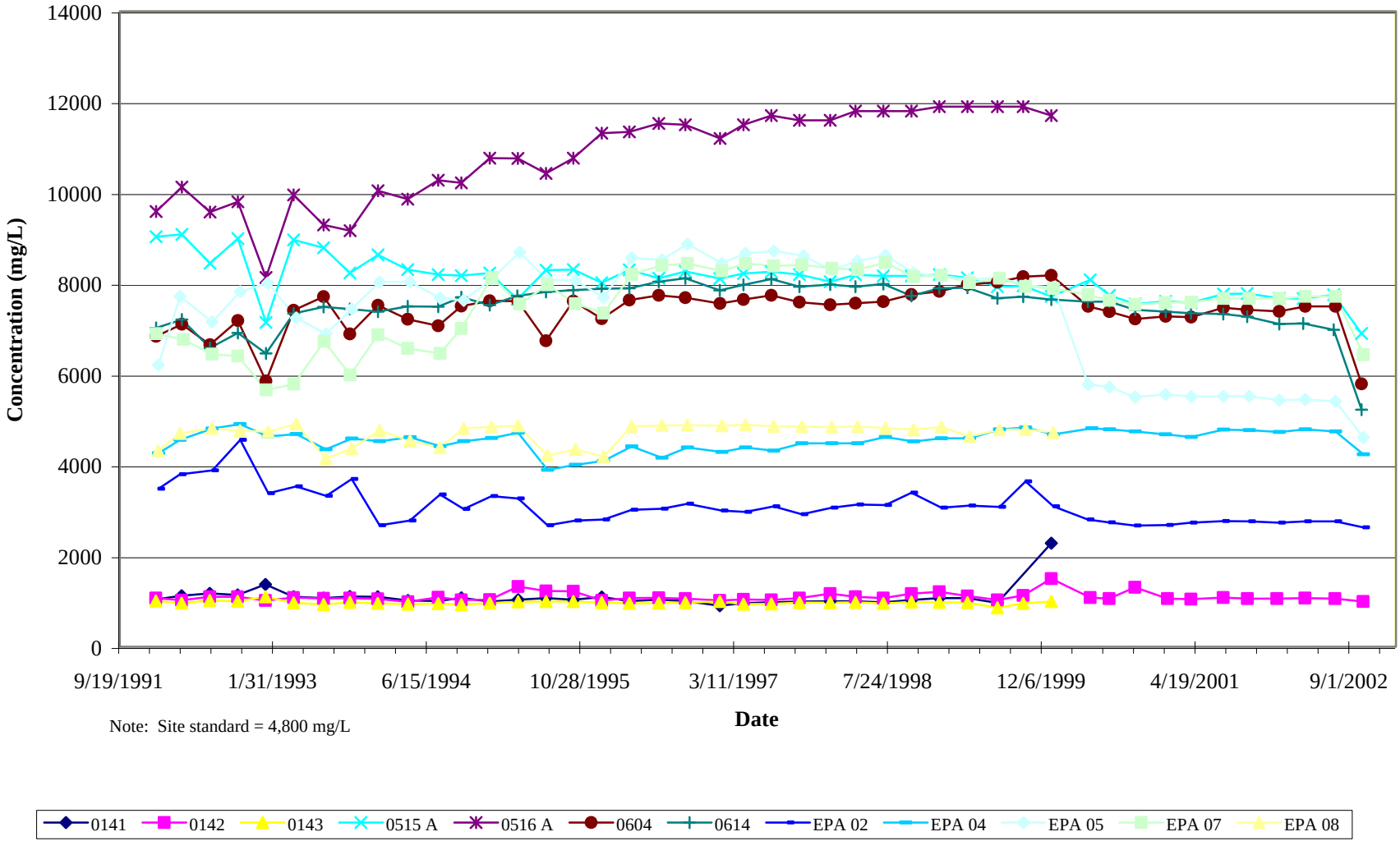
GRAPH 62

Zone 1 Sulfate Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



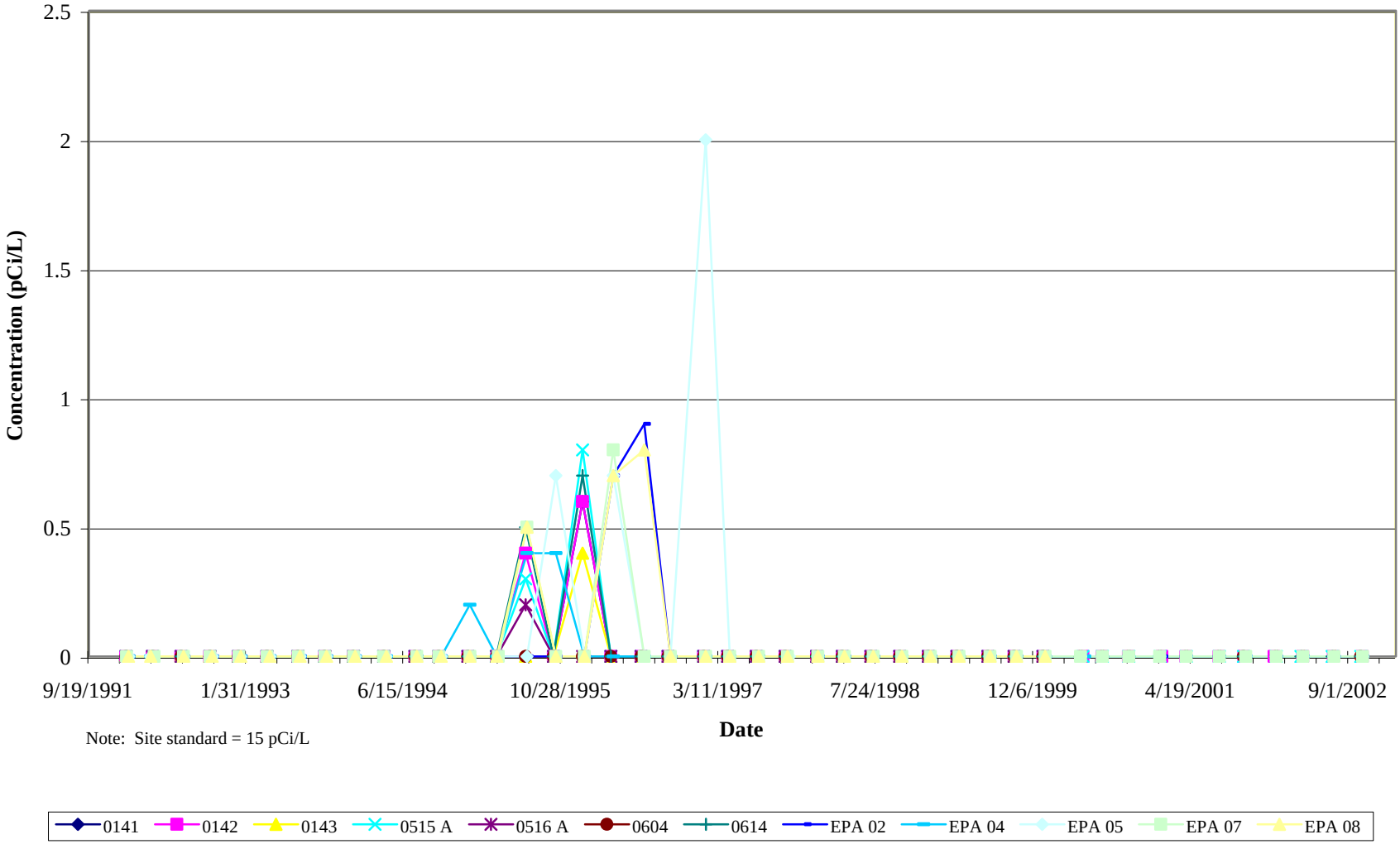
GRAPH 63

Zone 1 Total Dissolved Solids Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



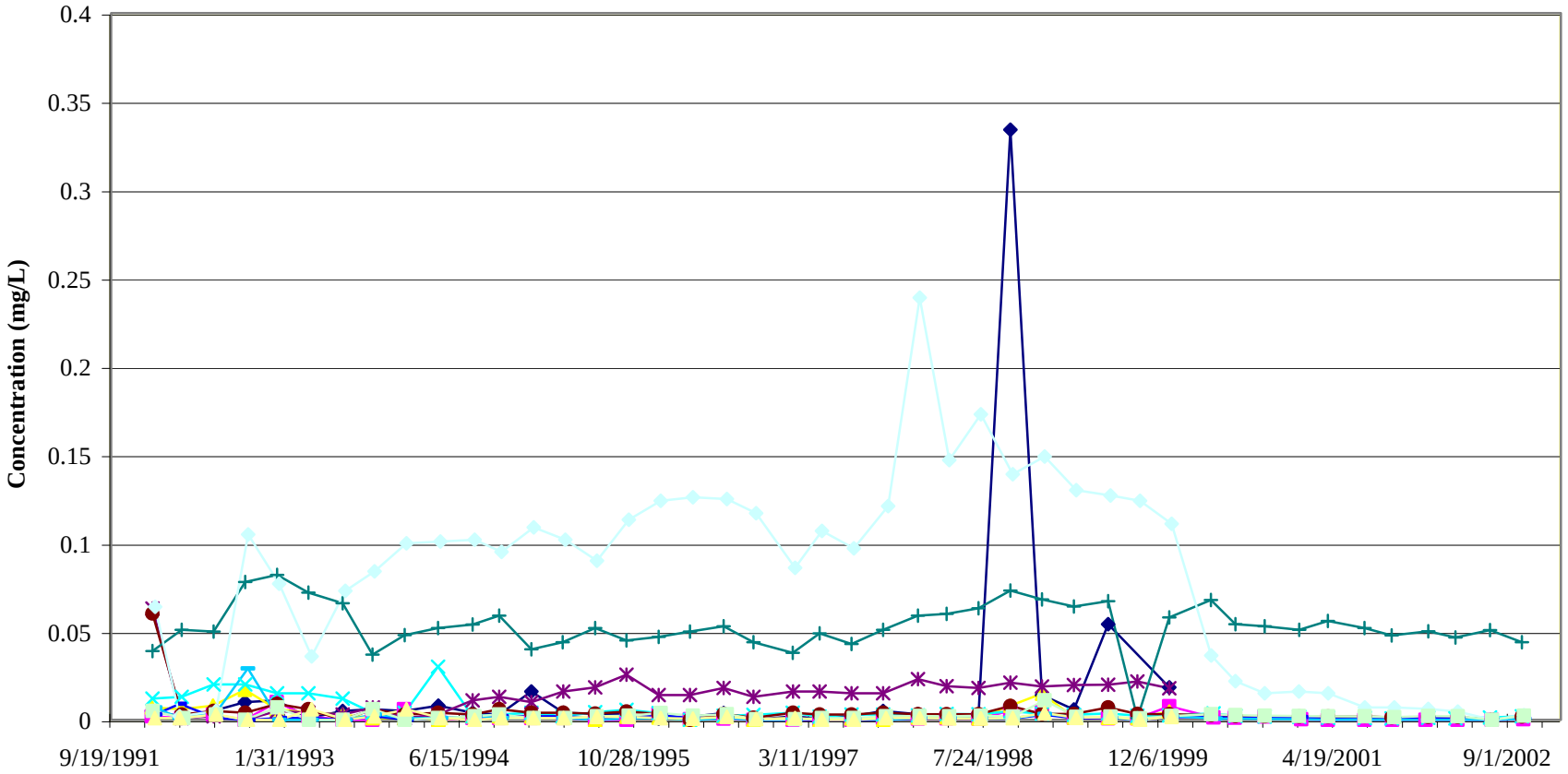
GRAPH 64

Zone 1 Thorium-230 Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 65

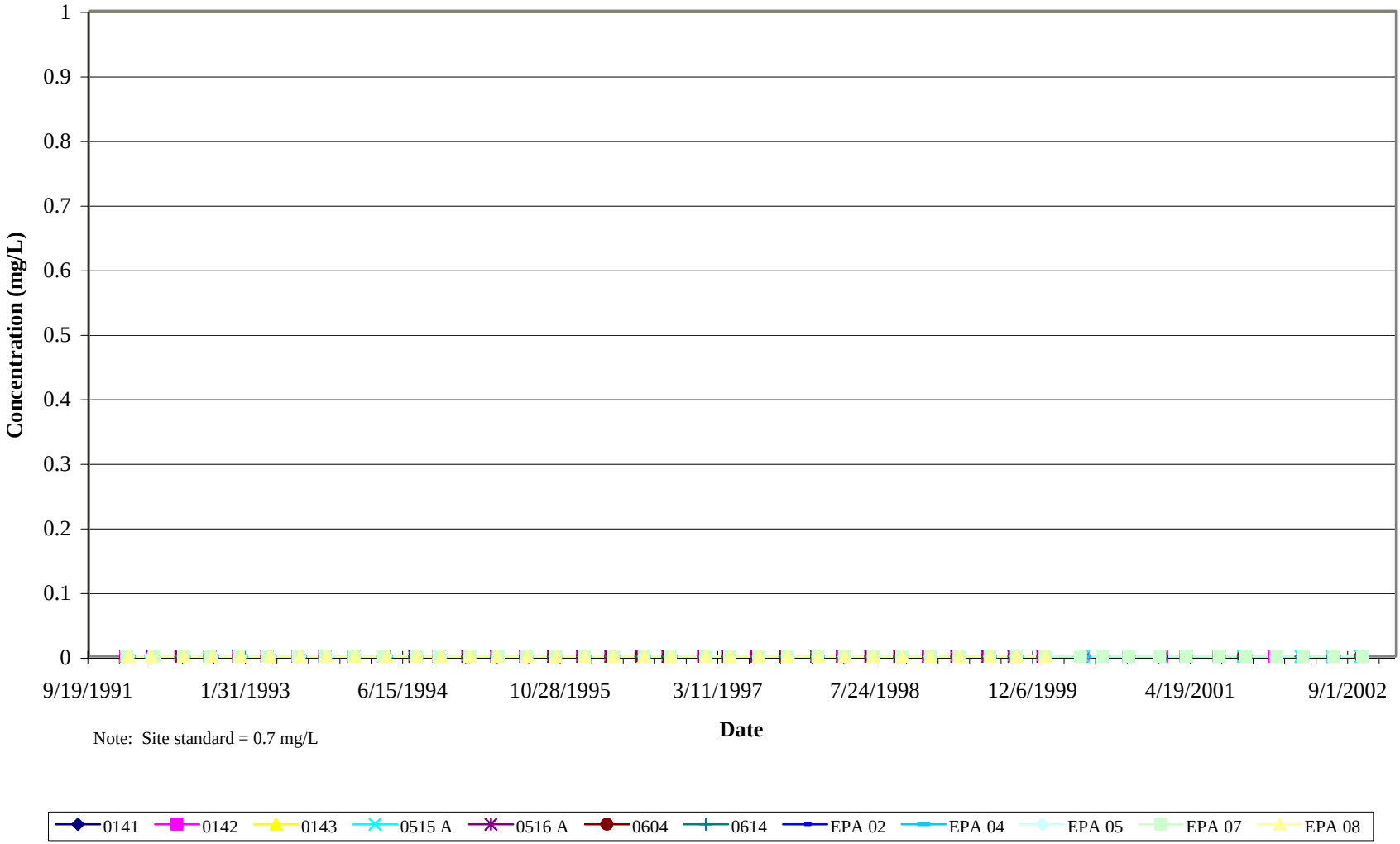
Zone 1 Uranium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 5 mg/L
(new MCL = 0.03 mg/L)

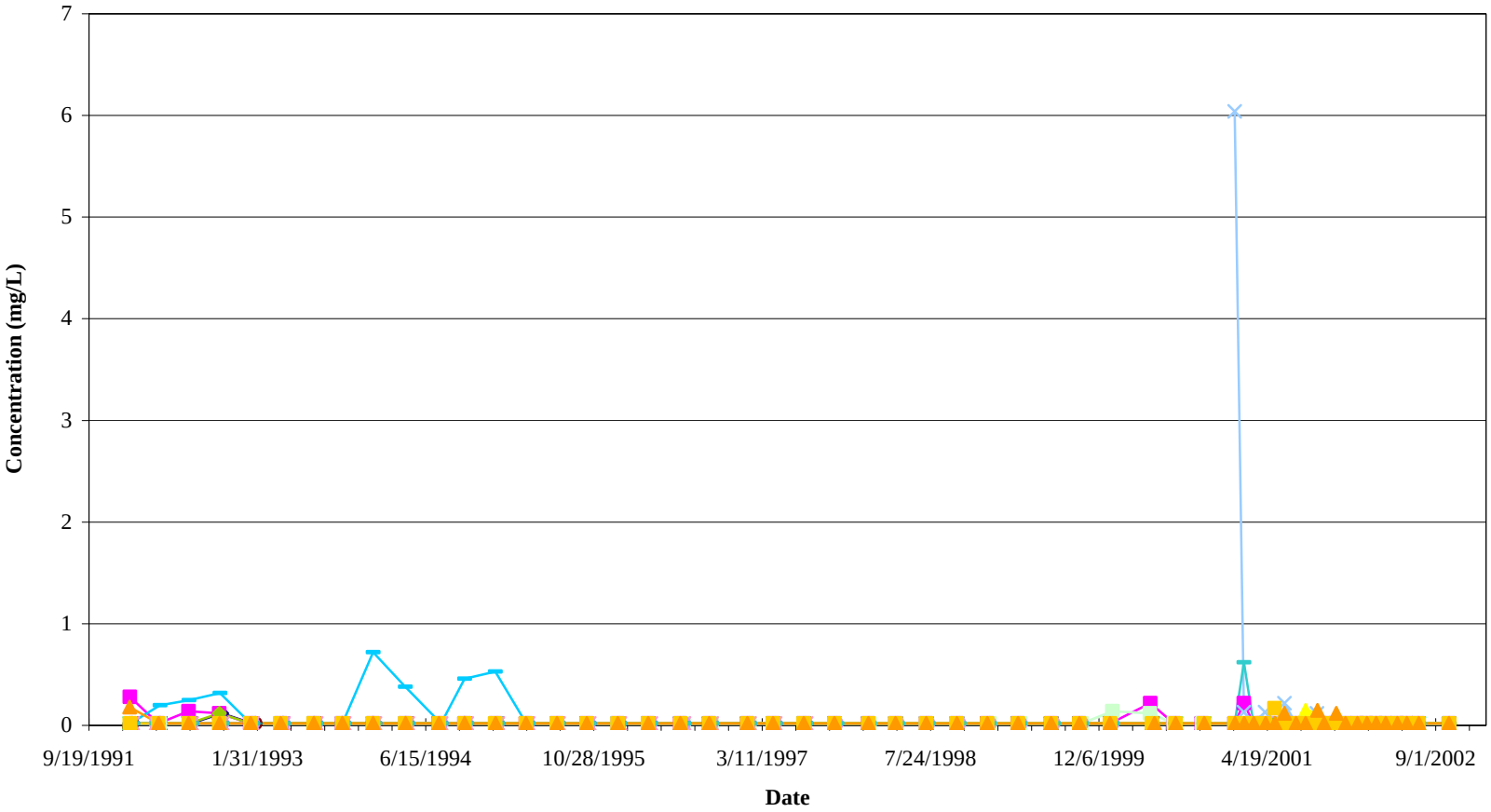
GRAPH 66

Zone 1 Vanadium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 25

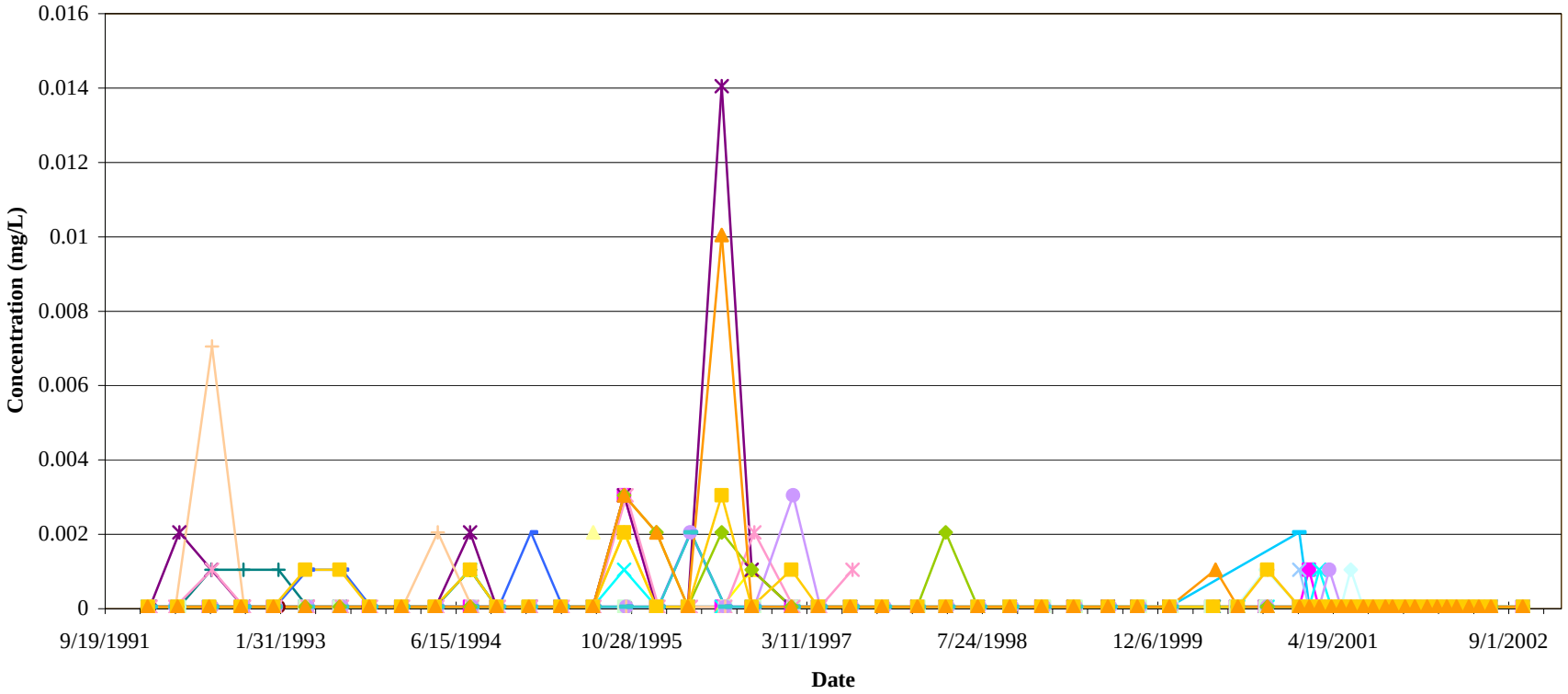
Southwest Alluvium Aluminum Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



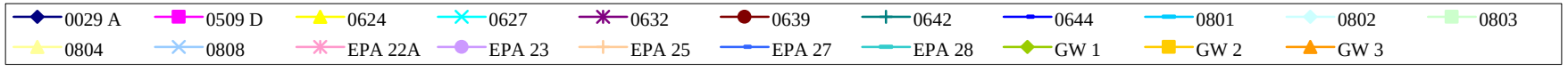
Note: Site standard = 5 mg/L

GRAPH 26

Southwest Alluvium Arsenic Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

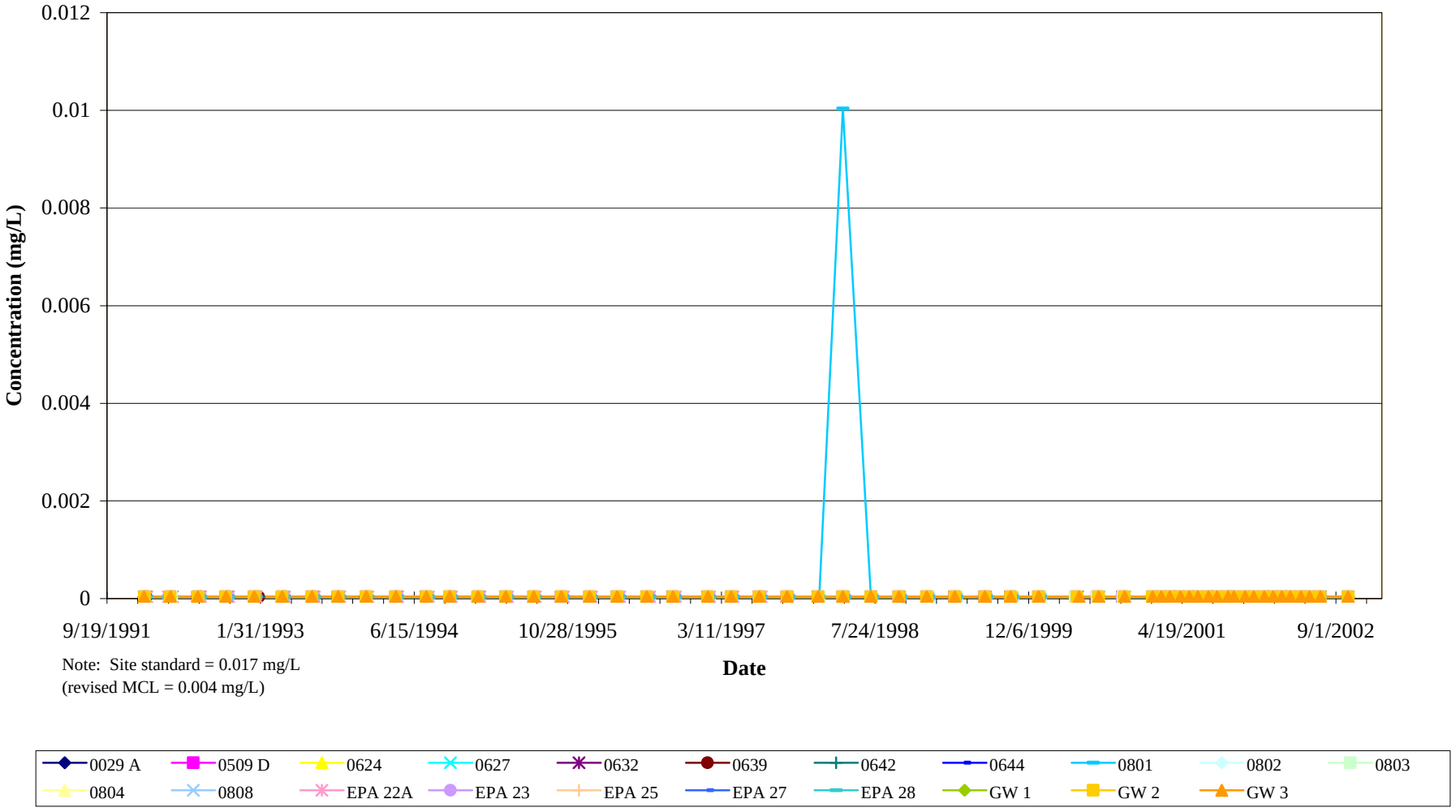


Note: Site standard = 0.05 mg/L
(new MCL = 0.01)



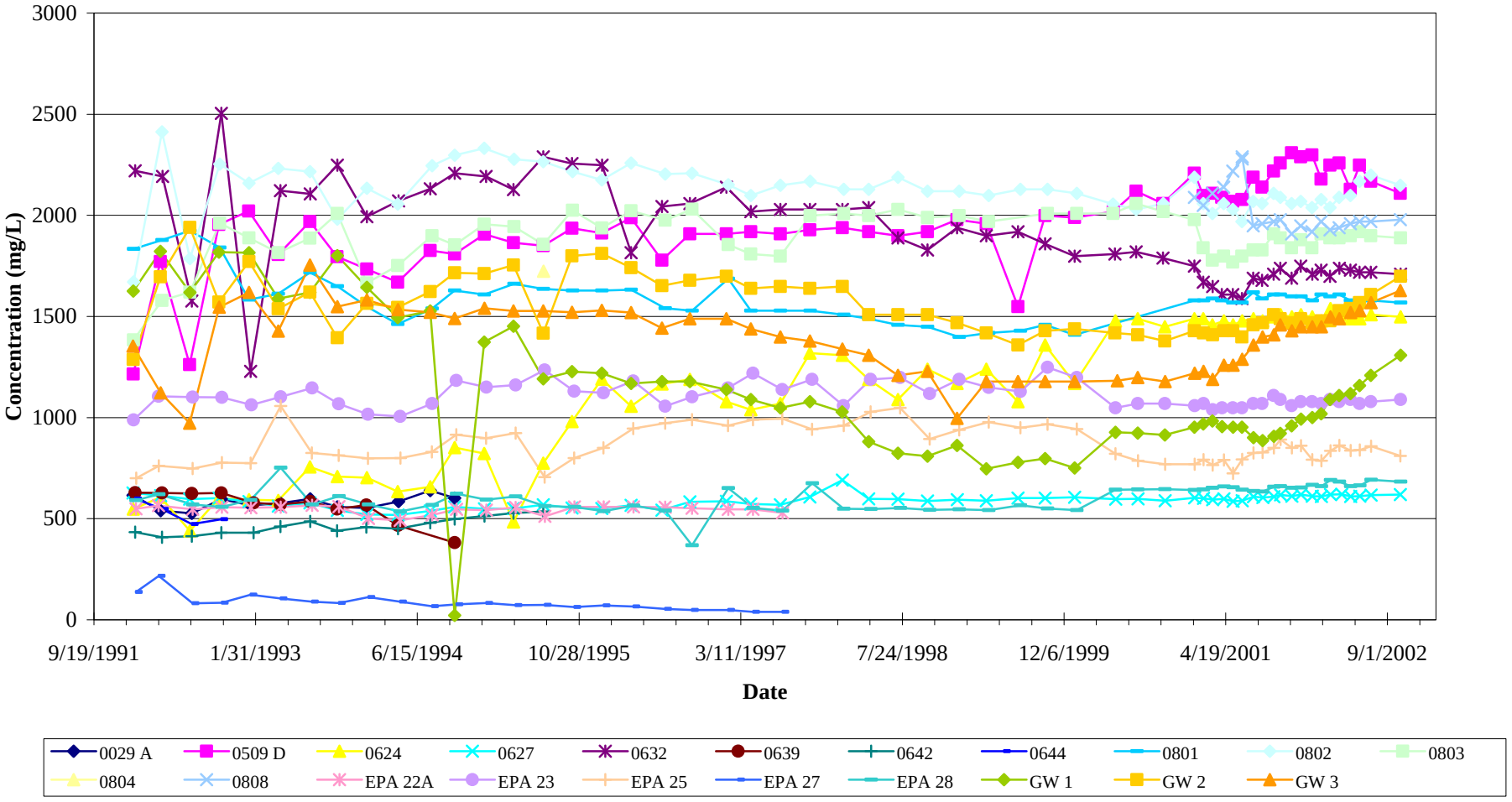
GRAPH 27

Southwest Alluvium Beryllium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



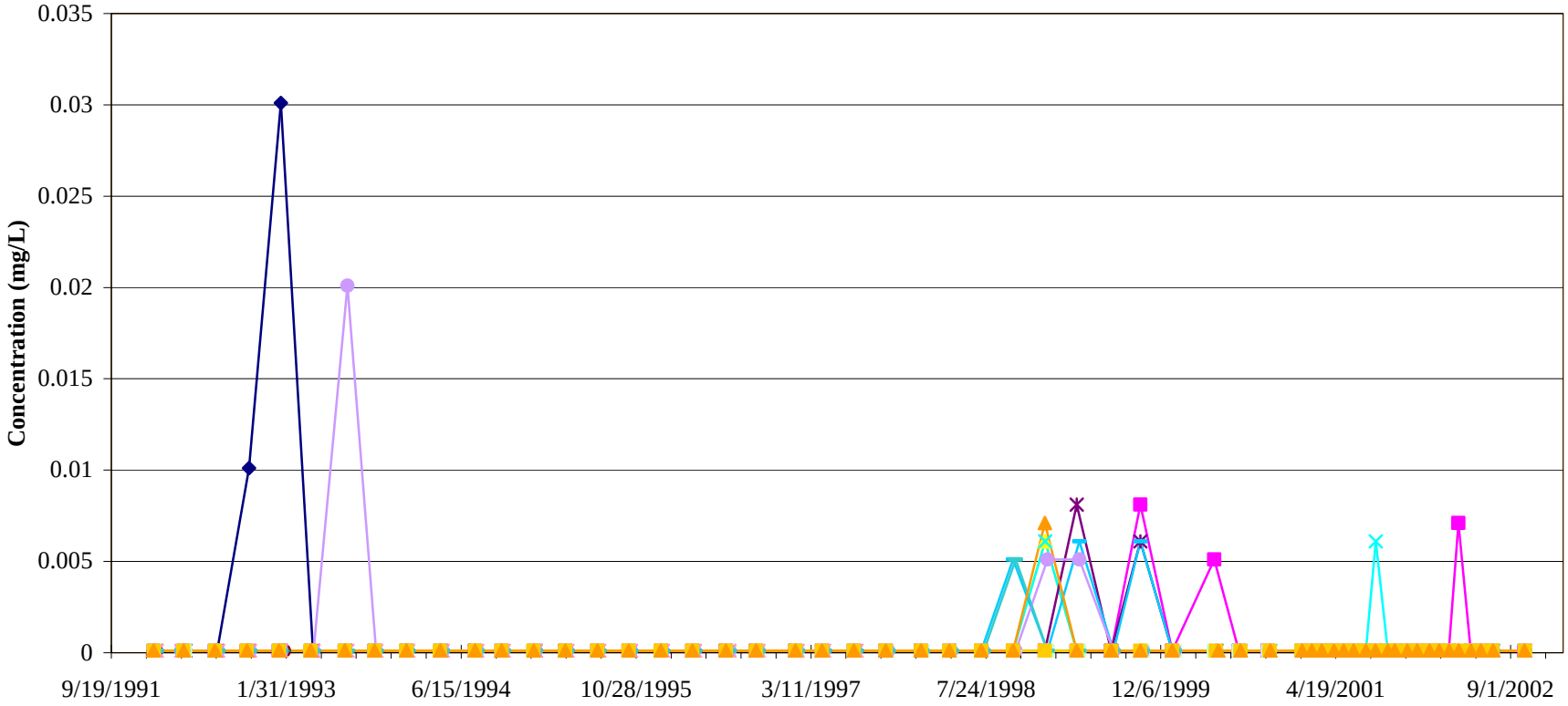
GRAPH 28

Southwest Alluvium Bicarbonate Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

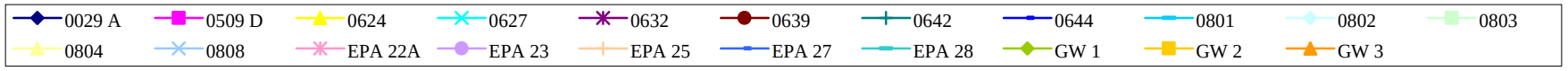


GRAPH 29

Southwest Alluvium Cadmium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

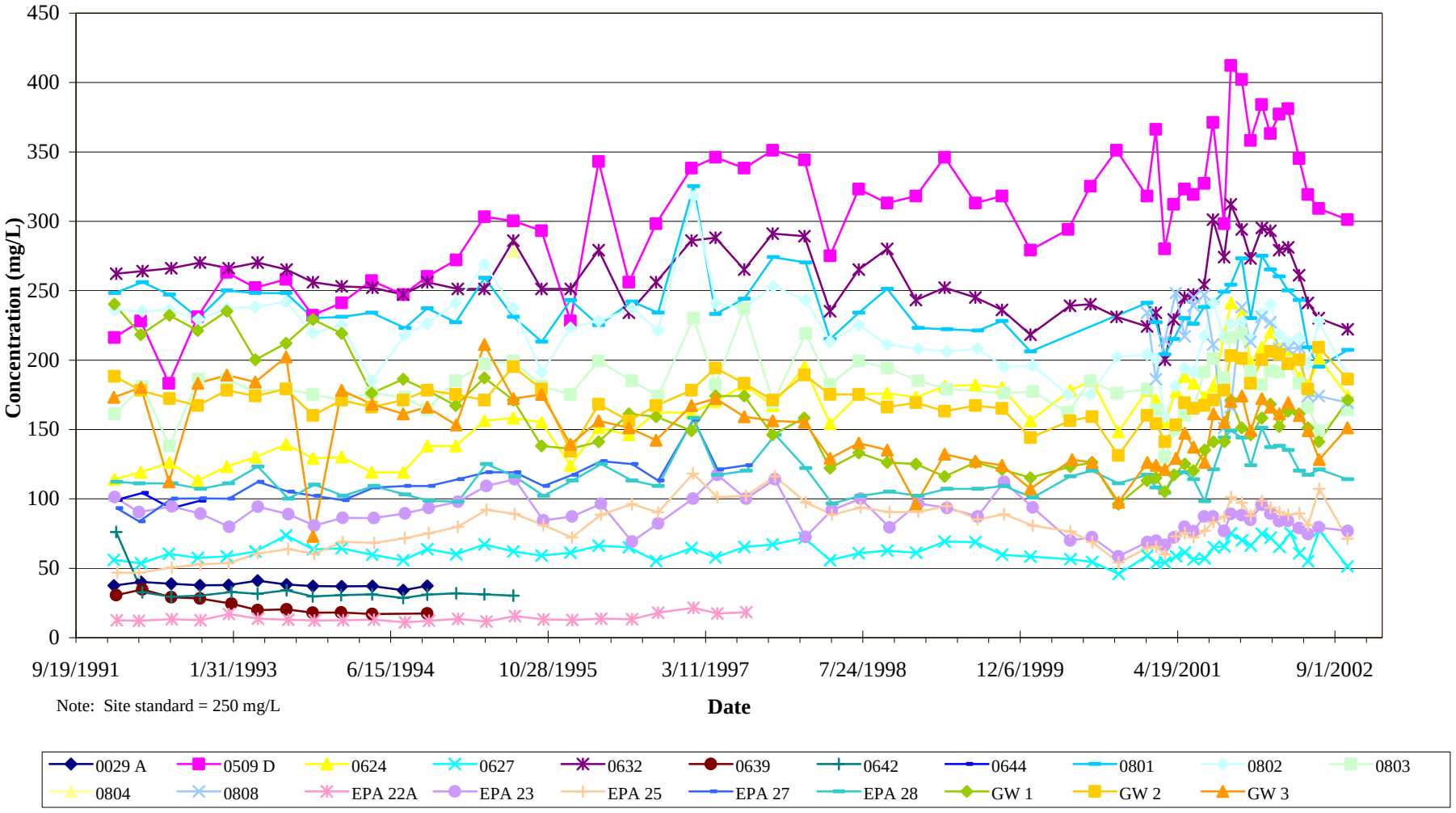


Note: Site standard = 0.01 mg/L
(revised MCL = 0.005 mg/L)



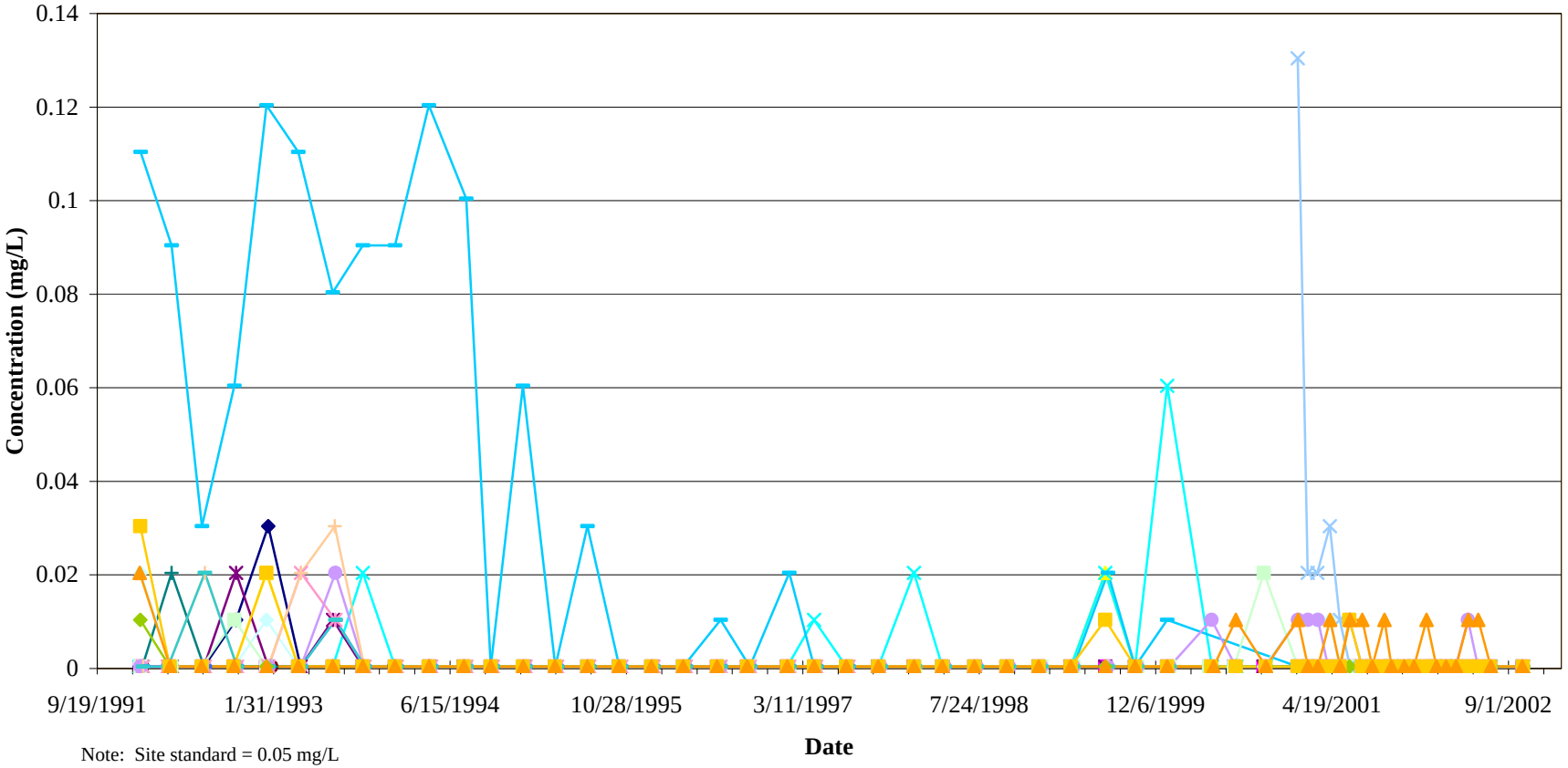
GRAPH 30

Southwest Alluvium Chloride Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 31

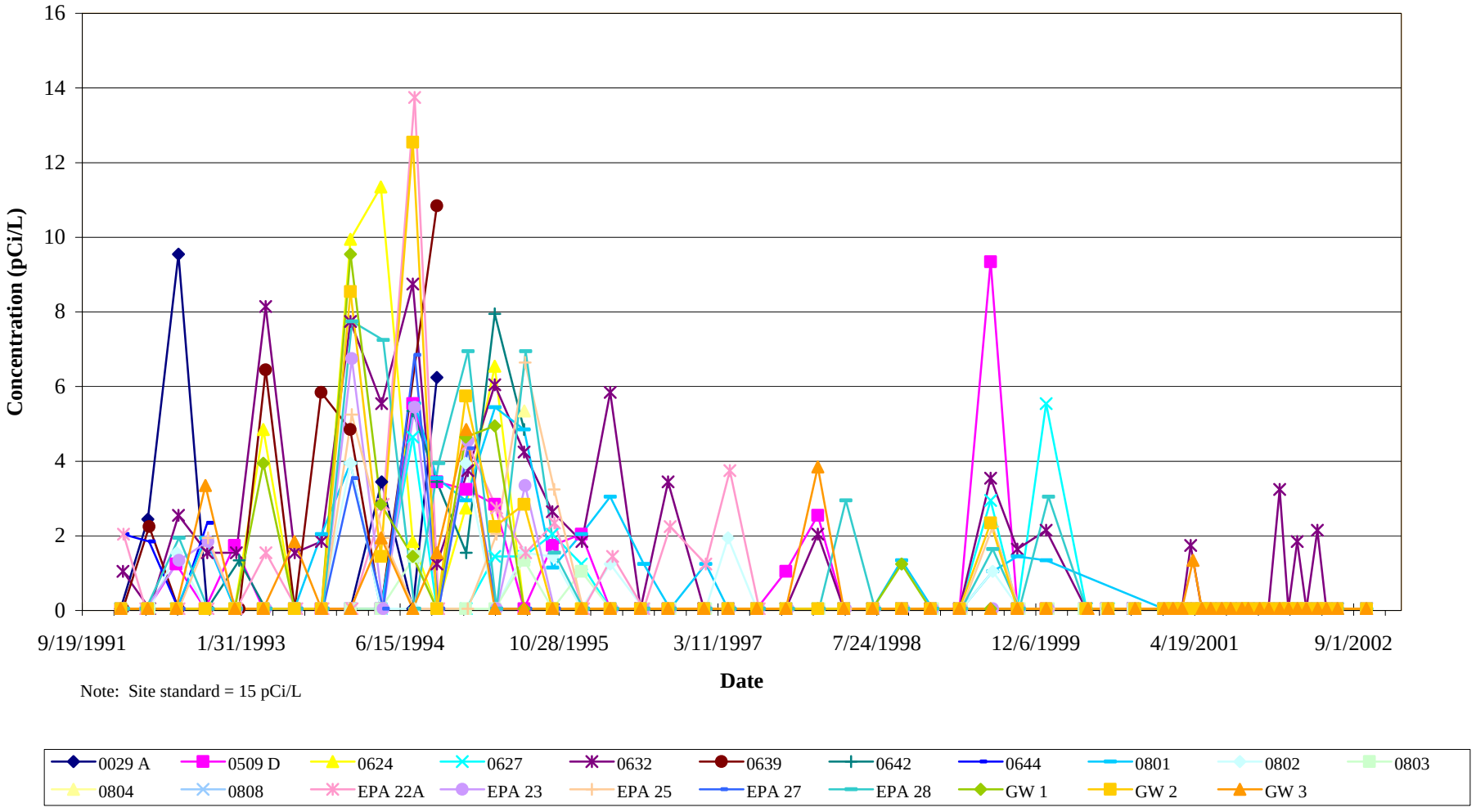
Southwest Alluvium Cobalt Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 0.05 mg/L

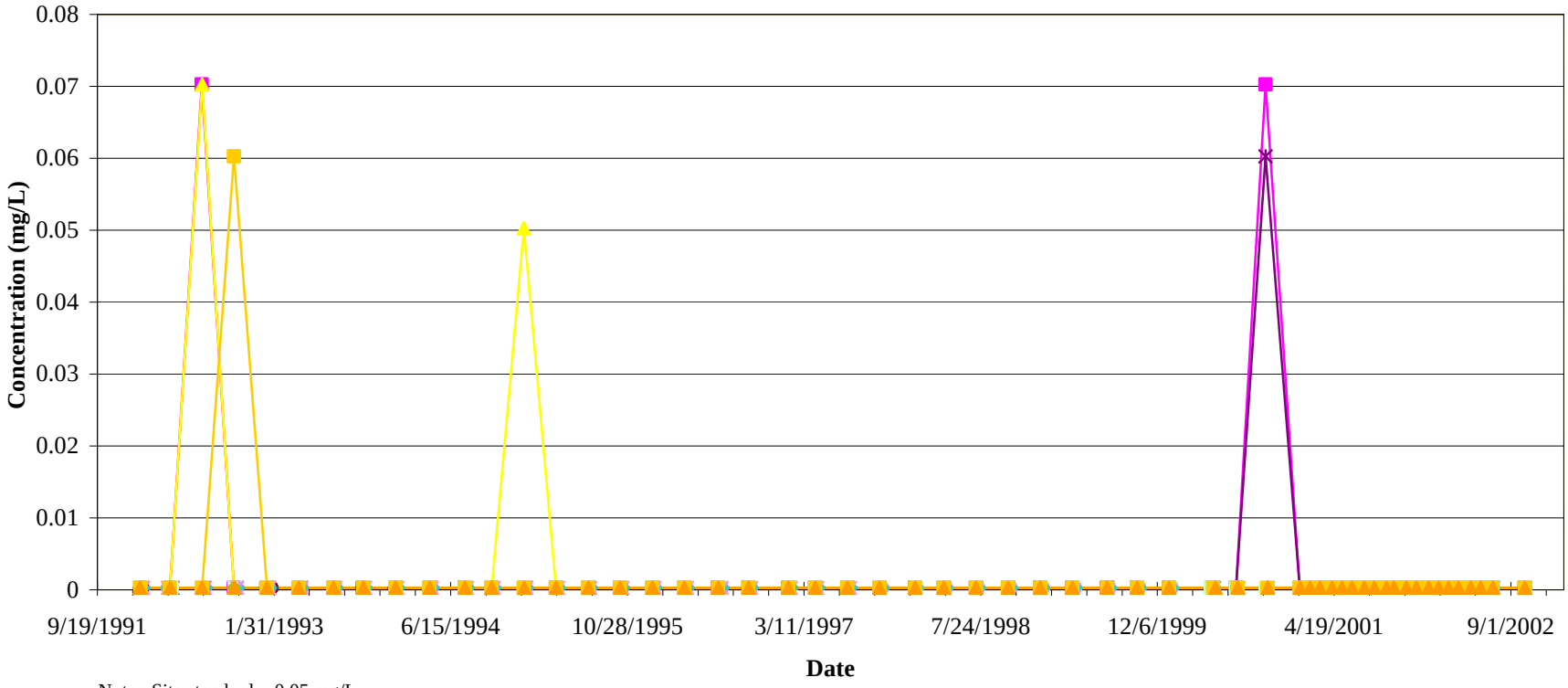
GRAPH 32

Southwest Alluvium Gross Alpha Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

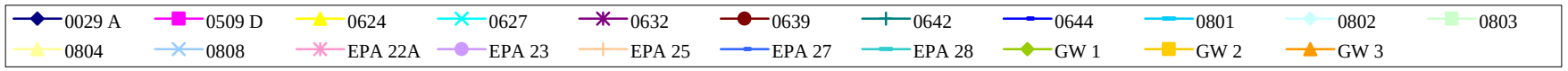


GRAPH 33

Southwest Alluvium Lead Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

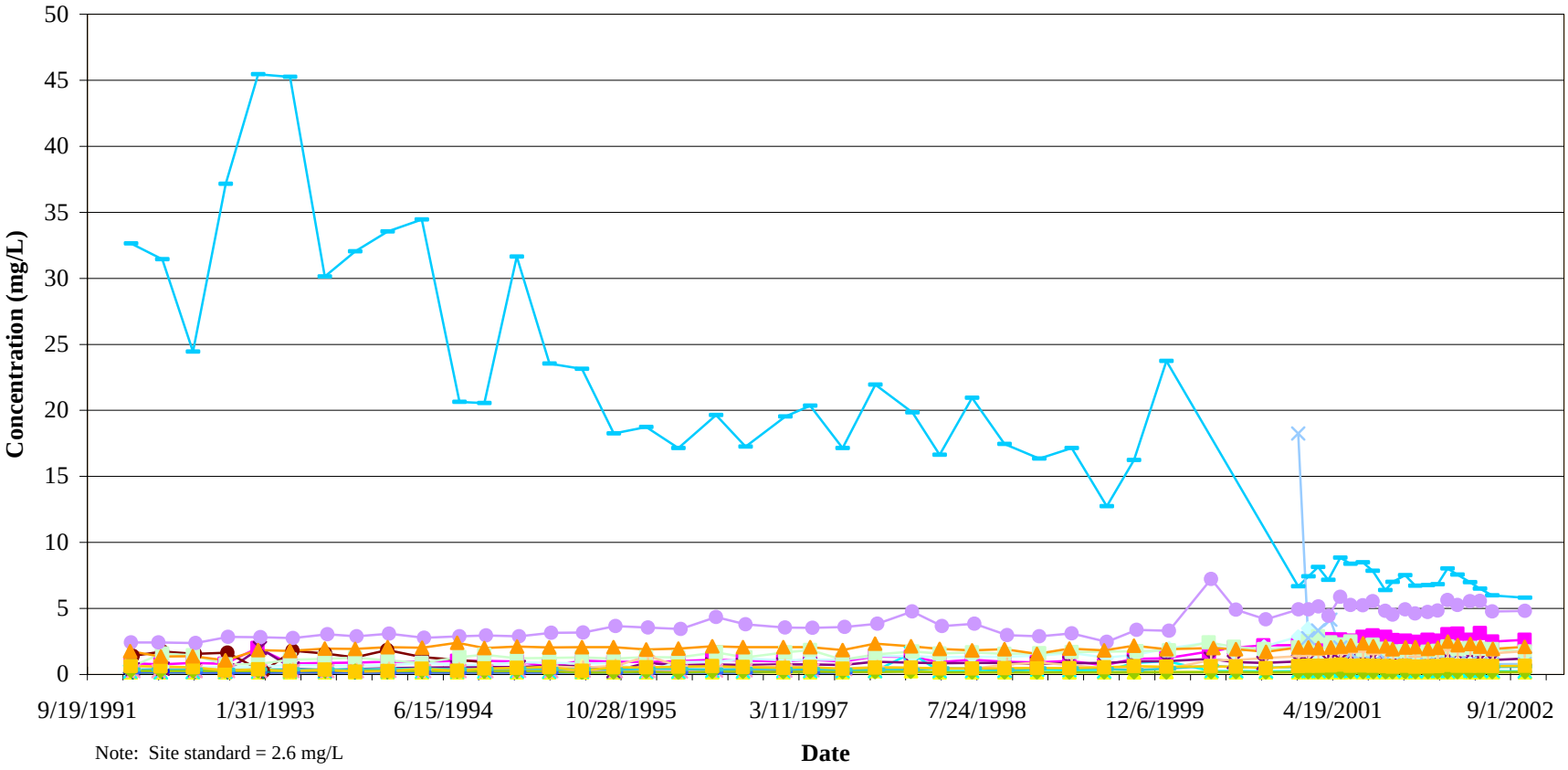


Note: Site standard = 0.05 mg/L



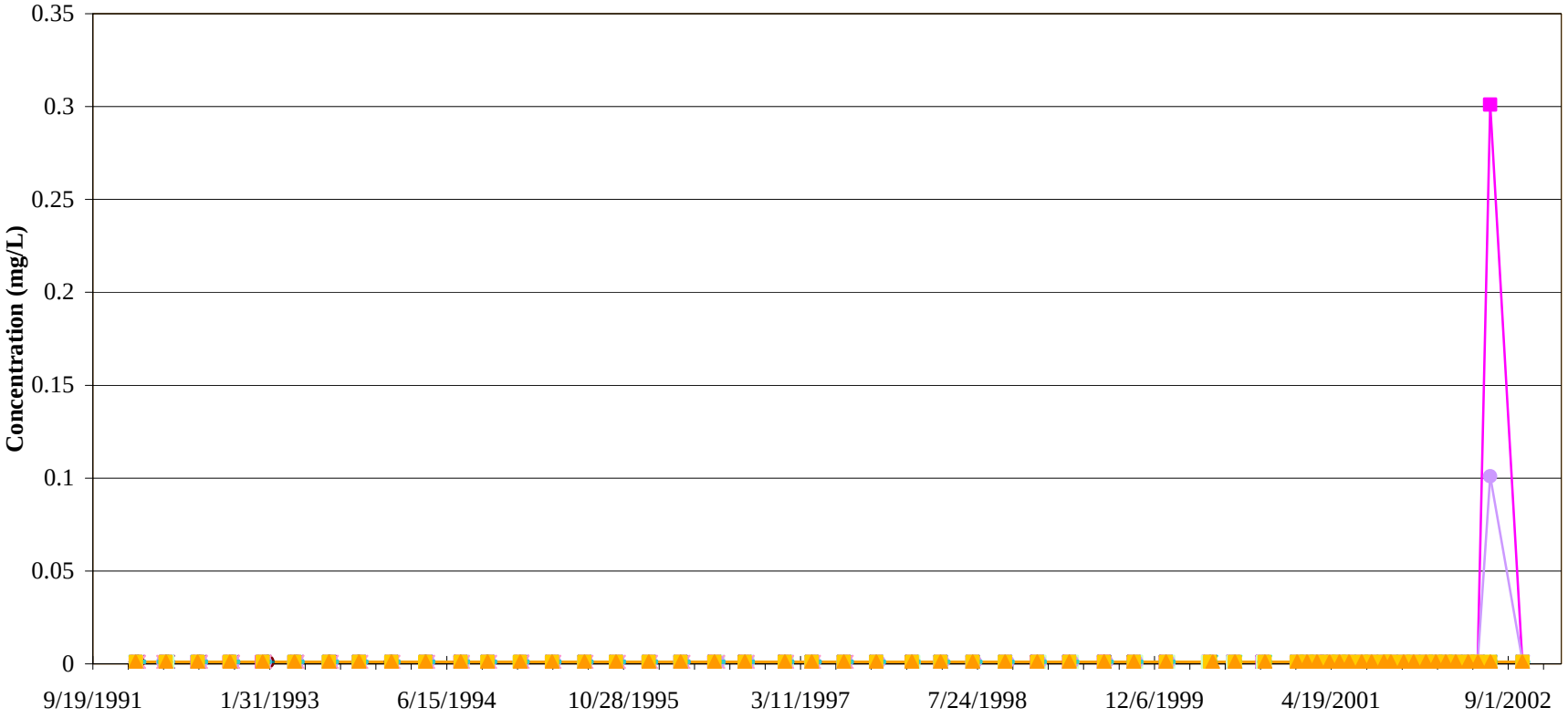
GRAPH 34

Southwest Alluvium Manganese Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

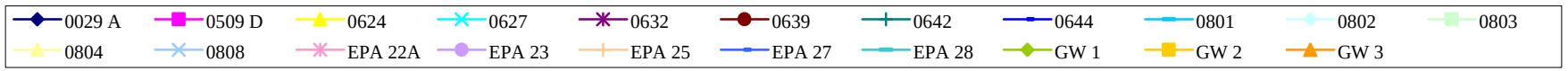


GRAPH 35

Southwest Alluvium Molybdenum Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

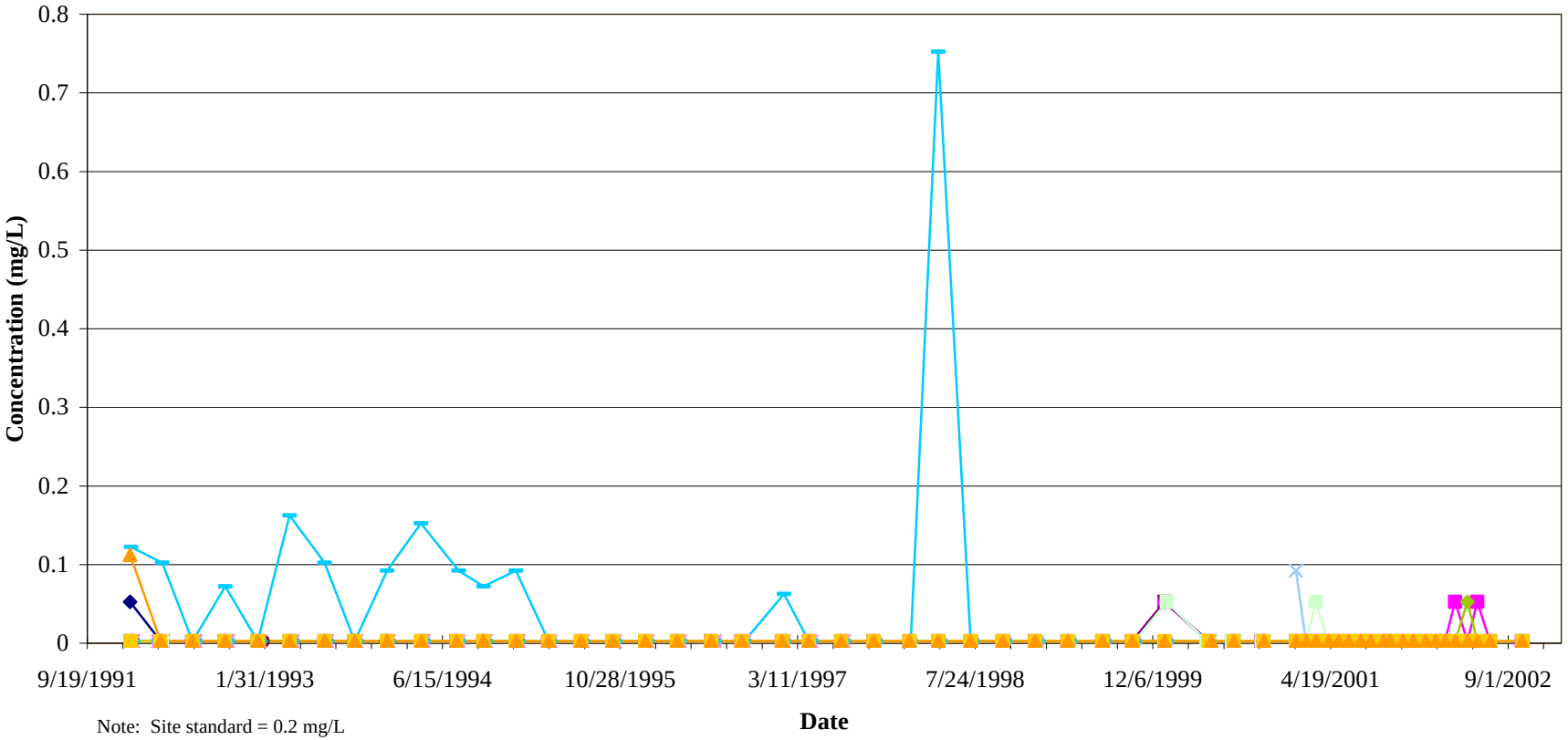


Note: Site standard = 1.0 mg/L



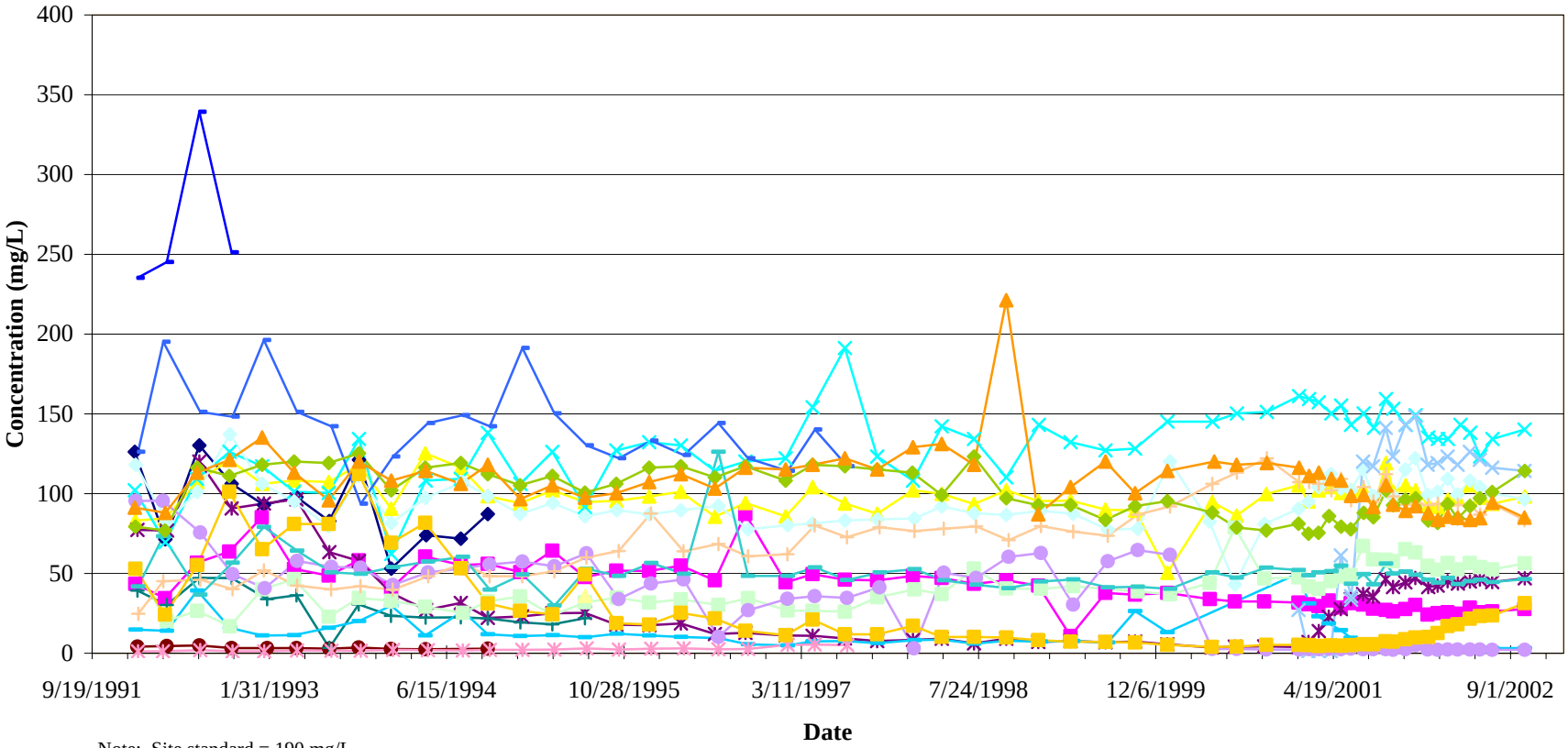
GRAPH 36

Southwest Alluvium Nickel Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 37

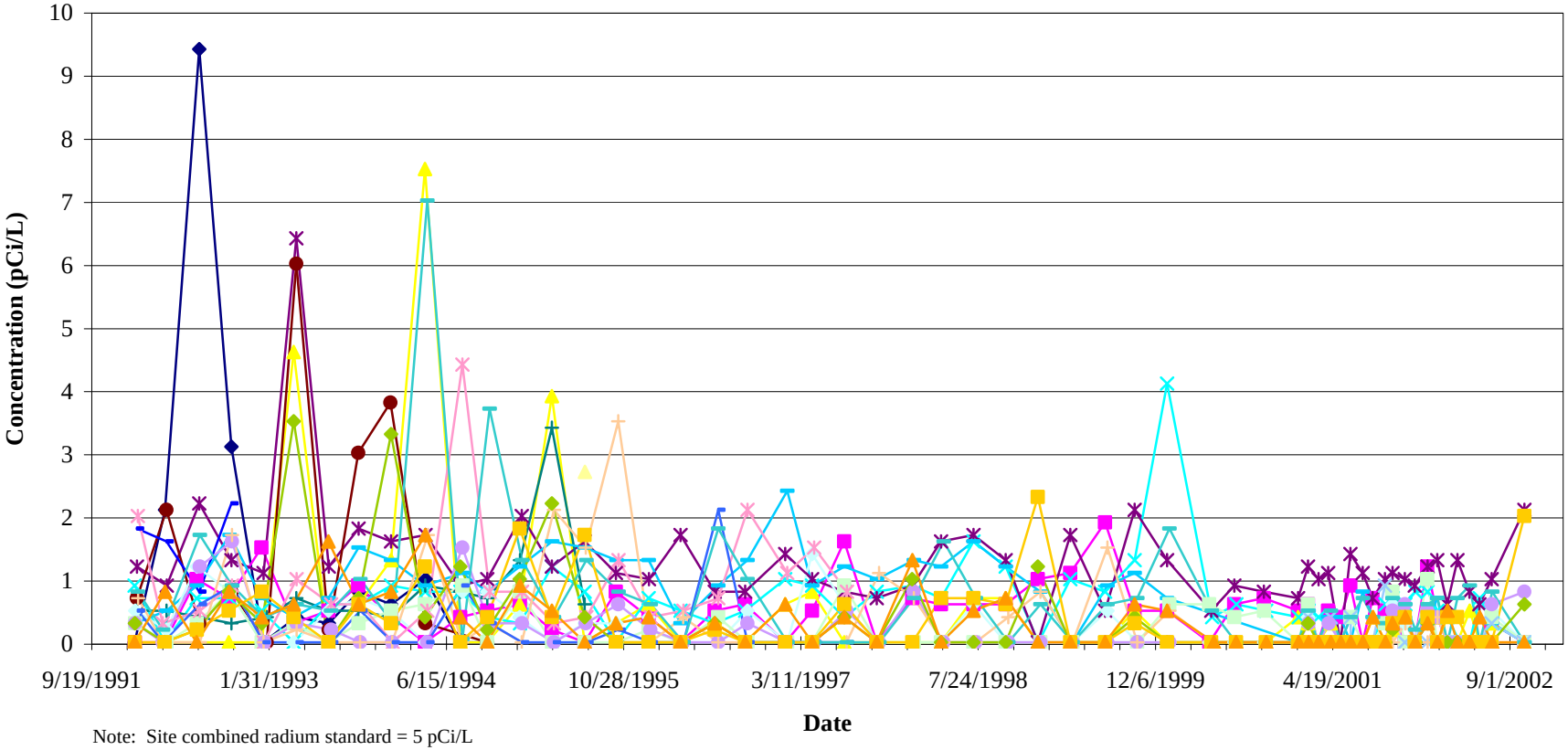
Southwest Alluvium Nitrate Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



Note: Site standard = 190 mg/L

GRAPH 38

Southwest Alluvium Radium-226 Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

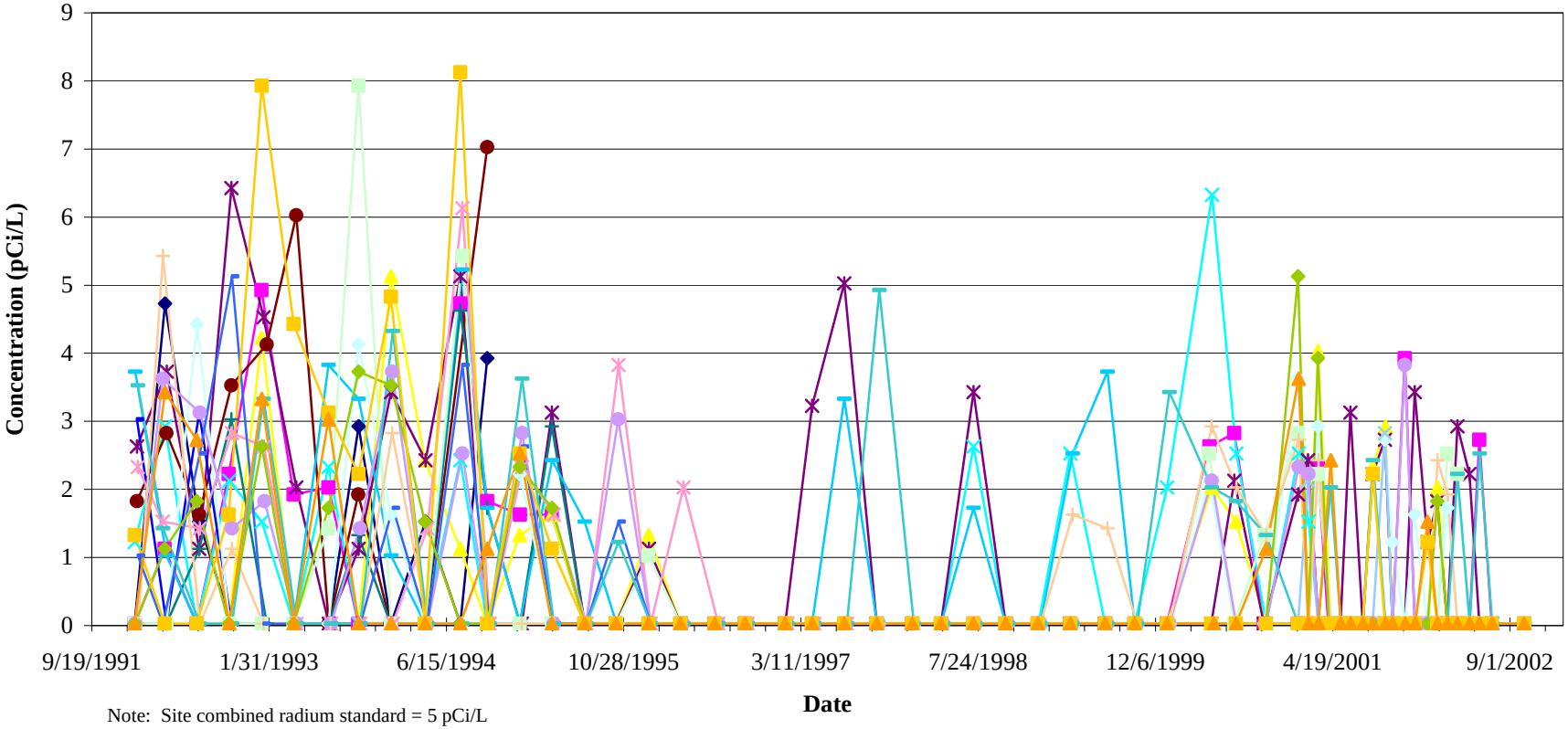


Note: Site combined radium standard = 5 pCi/L

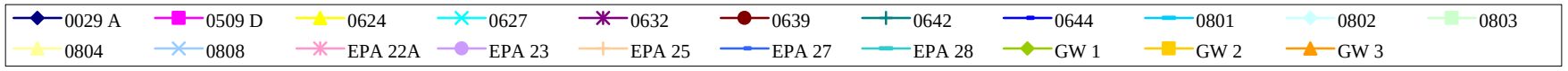
0029 A, 0509 D, 0624, 0627, 0632, 0639, 0642, 0644, 0801, 0802, 0803, 0804, 0808, EPA 22A, EPA 23, EPA 25, EPA 27, EPA 28, GW 1, GW 2, GW 3

GRAPH 39

Southwest Alluvium Radium-228 Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

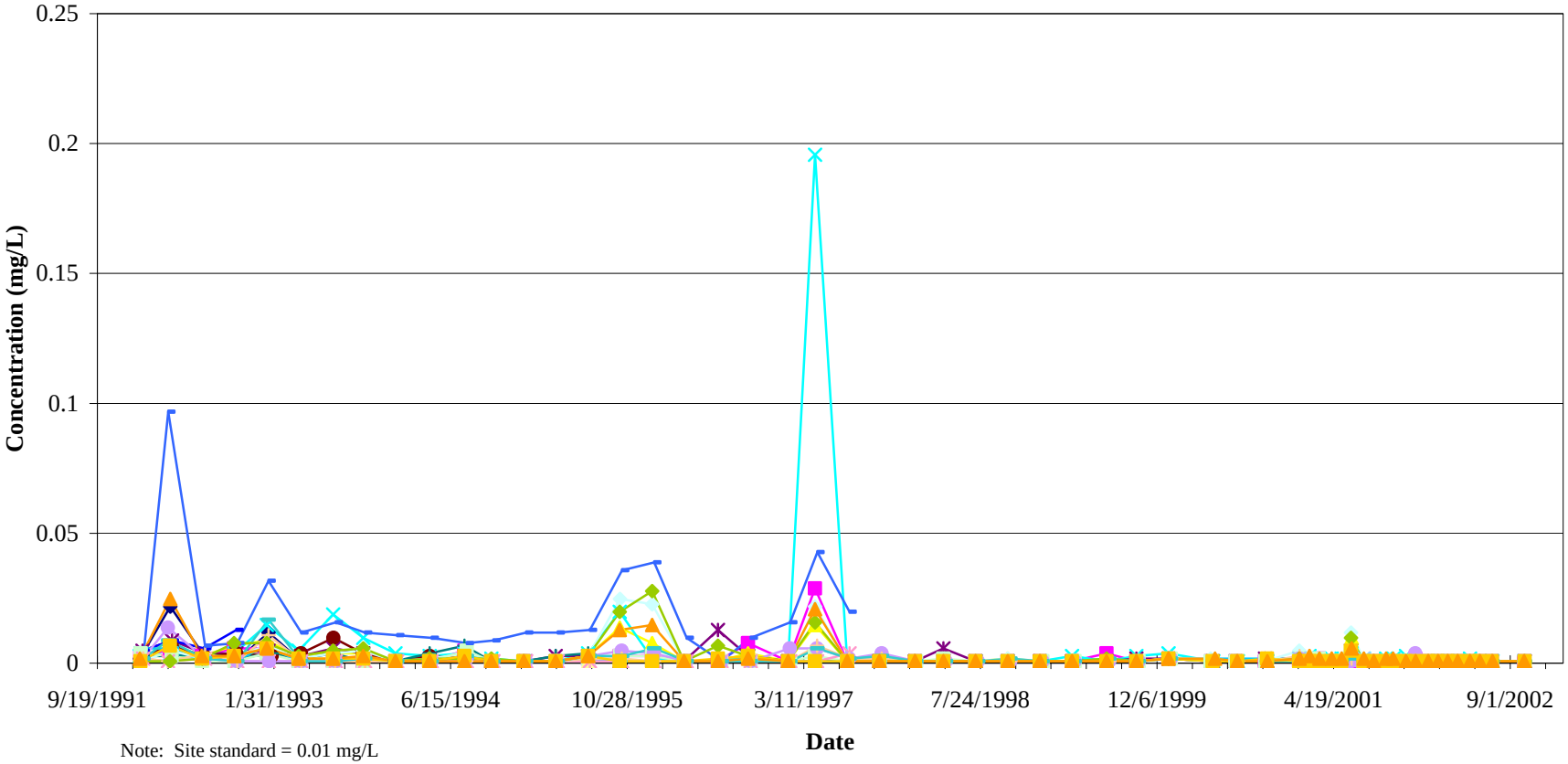


Note: Site combined radium standard = 5 pCi/L



GRAPH 40

Southwest Alluvium Selenium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

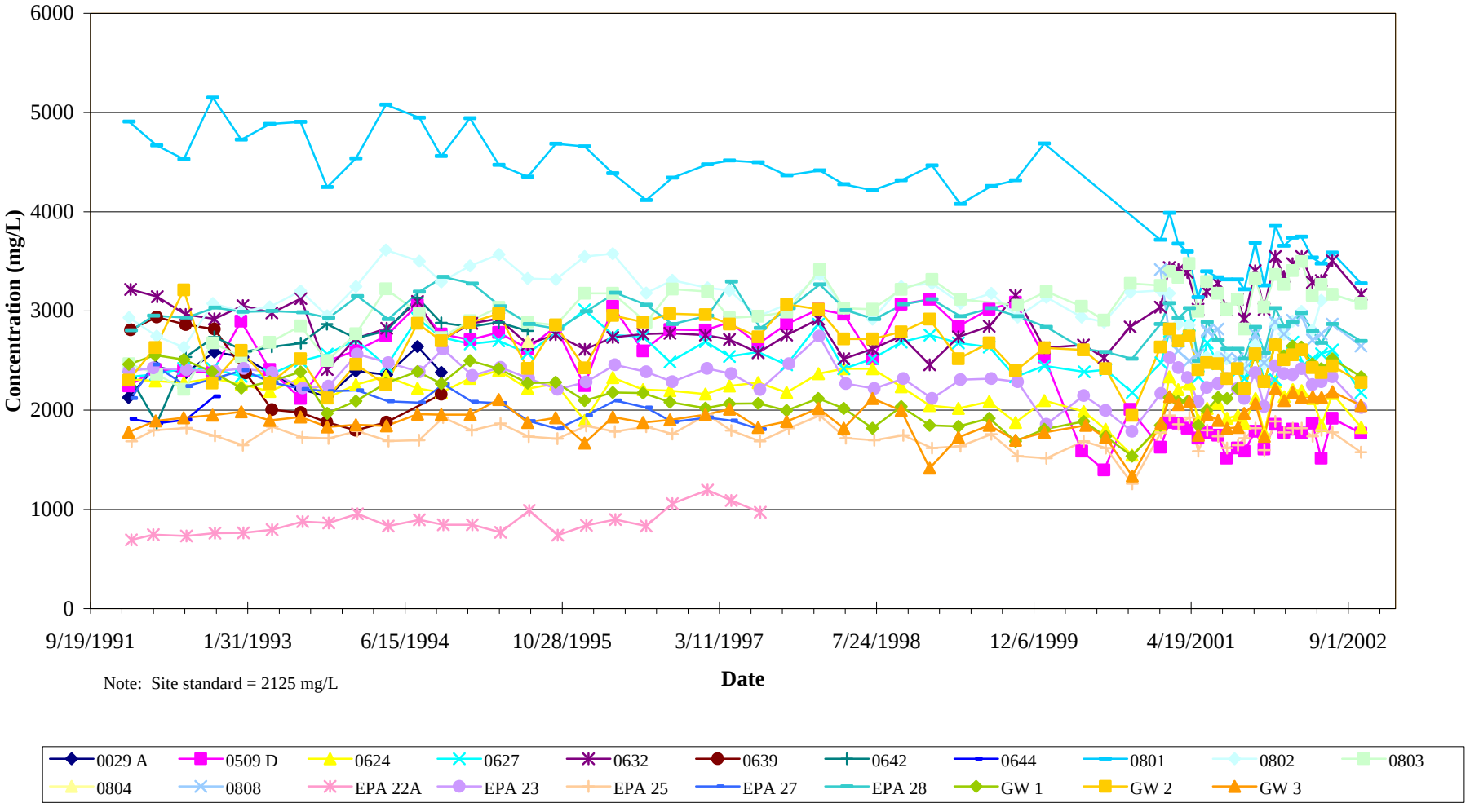


Note: Site standard = 0.01 mg/L

0029 A, 0509 D, 0624, 0627, 0632, 0639, 0642, 0644, 0801, 0802, 0803, 0804, 0808, EPA 22A, EPA 23, EPA 25, EPA 27, EPA 28, GW 1, GW 2, GW 3

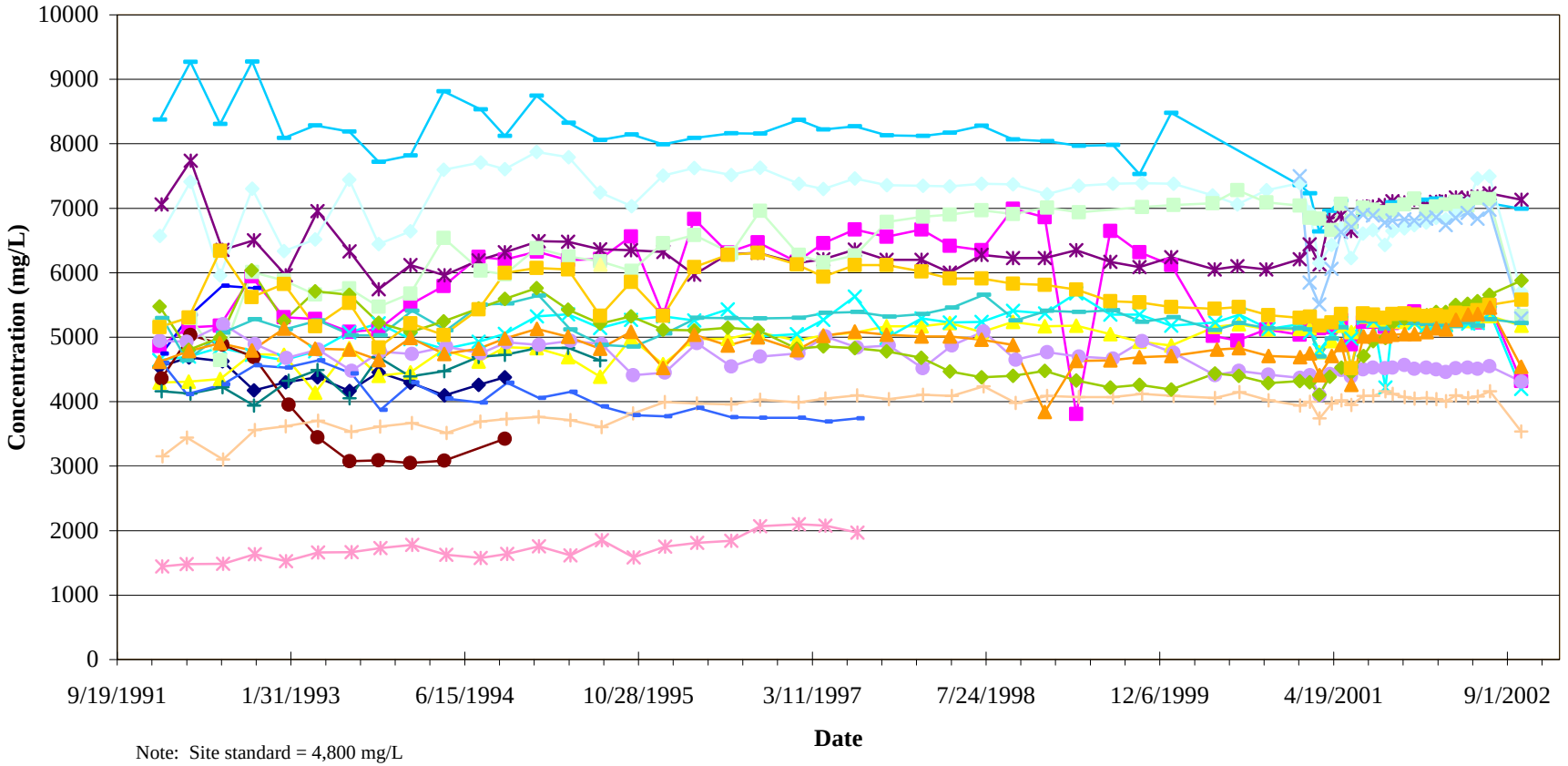
GRAPH 41

Southwest Alluvium Sulfate Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



GRAPH 42

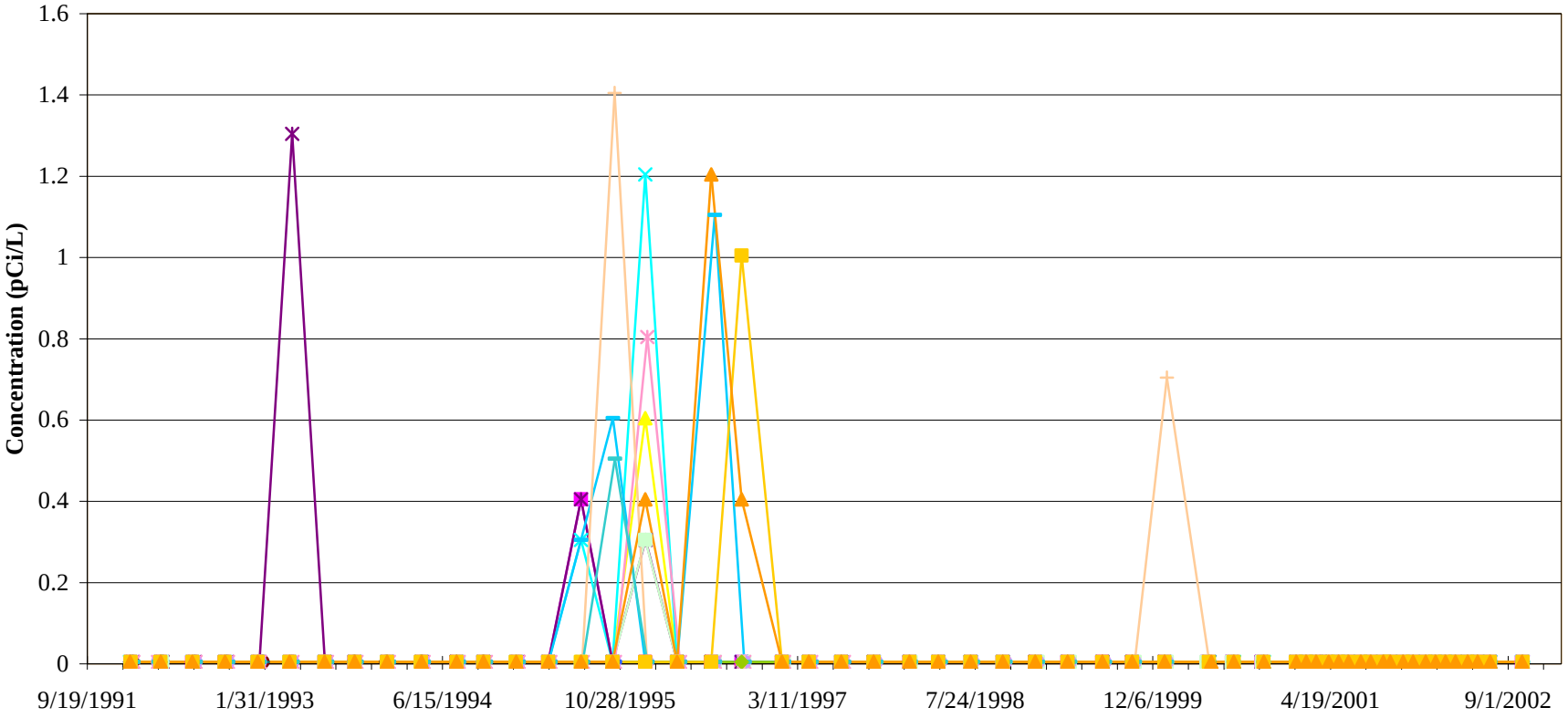
Southwest Alluvium Total Dissolved Solids (Lab) Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



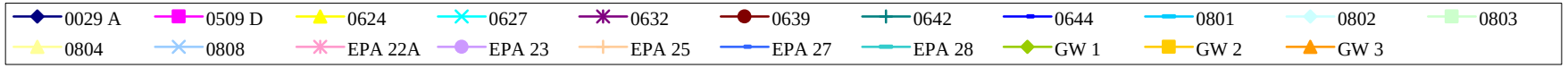
Note: Site standard = 4,800 mg/L

GRAPH 43

Southwest Alluvium Thorium-230 Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

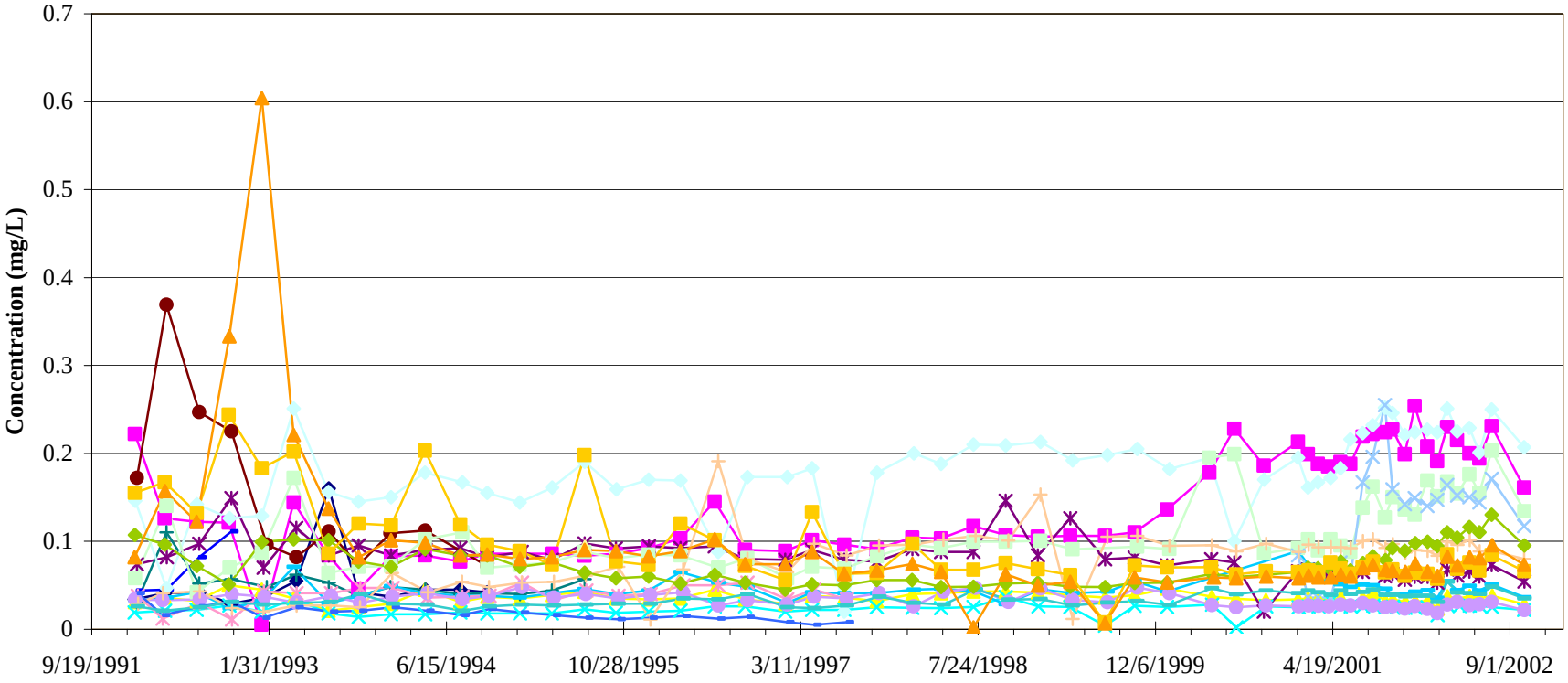


Note: Site standard = 15 pCi/L

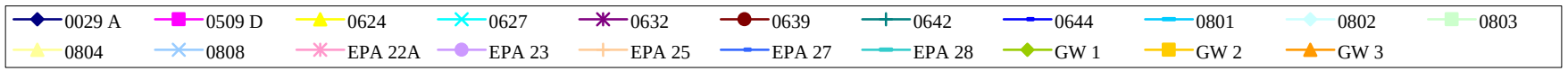


GRAPH 44

Southwest Alluvium Uranium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico

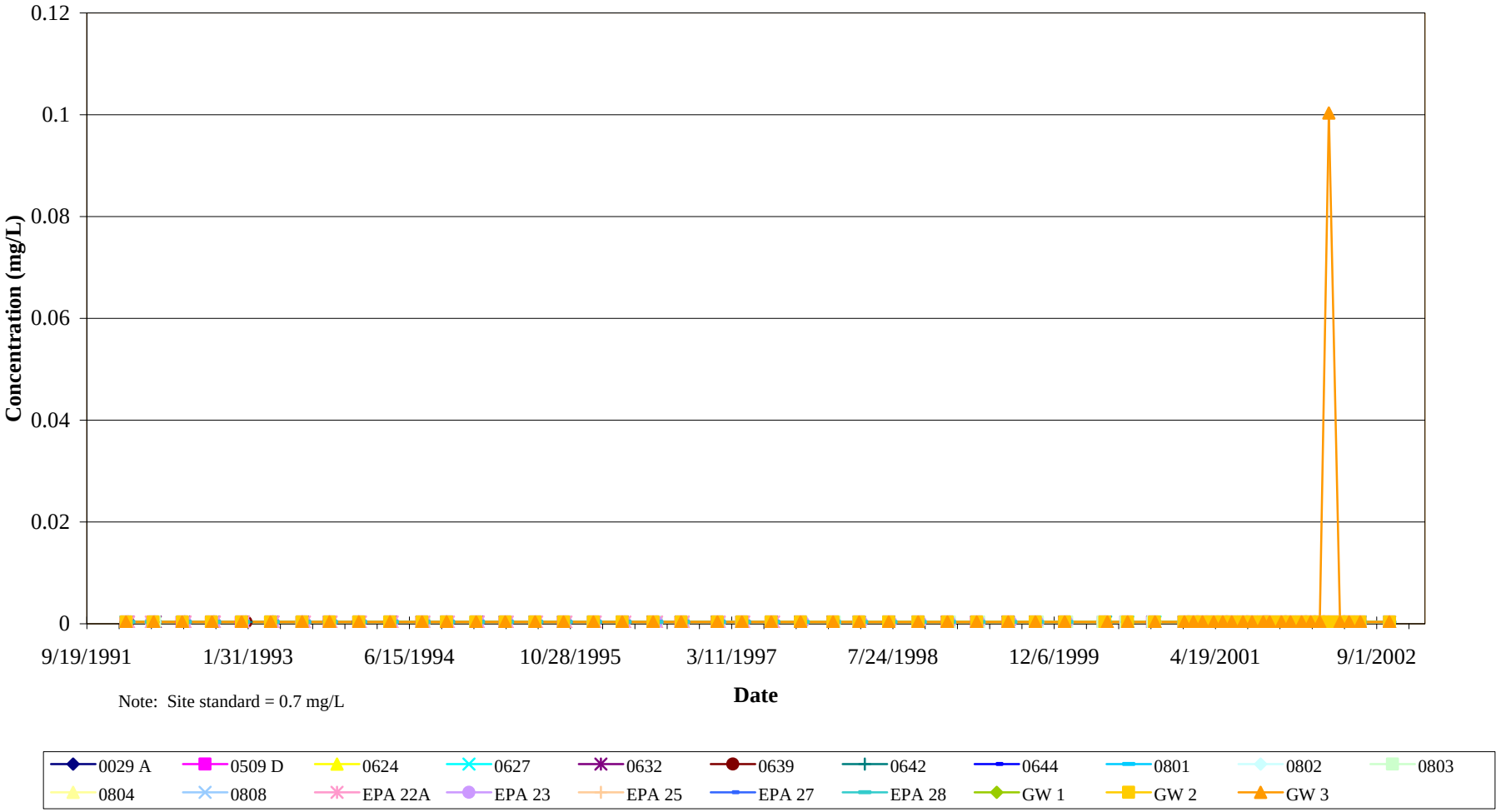


Note: Site standard = 5 mg/L
(new MCL = 0.03 mg/L)



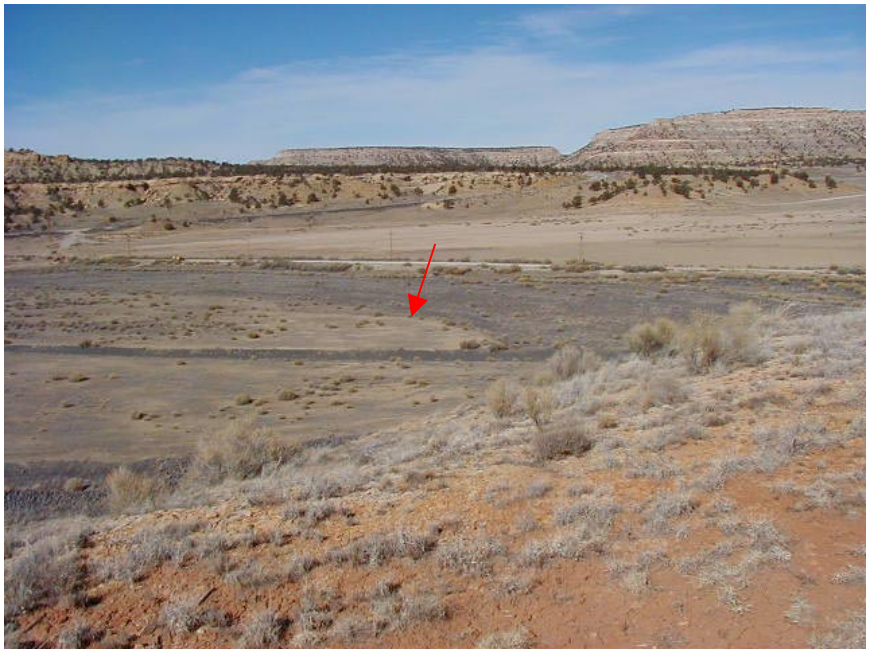
GRAPH 45

Southwest Alluvium Vanadium Concentrations
United Nuclear Corporation, Church Rock Site
Church Rock, New Mexico



ATTACHMENT D

Site Inspection Photographs



Photograph No. 1
Photo of the North Cell, looking northwest
Note the contact between the grass and rock represents the extent of tailings
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 2
Area overlying Zone 3 plume, looking northeast
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 3
Area overlying Zone 3 Plume, looking northeast
Plume boundary is just past telephone poles, as noted
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 4
Borrow pit that contributed to the Zone 1 plume, looking southwest
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 5
Burrow pit and area overlying Zone 1 plume, looking southwest
Note the fence is the property line
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003

USFilter



Photograph Nos. 6 - 8
Tailings ponds (photographed from the east)
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003

USFilter



Photograph No. 9
Area overlying Zone 1 plume, arrow shows direction of groundwater flow, looking east
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 10
Area overlying Zone 1 plume, looking east
Note fence is property line
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 11
Southern extent of area overlying Zone 1 plume, looking southeast
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 12
Zone 1 extraction well, looking east
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 13
Southwest Alluvium pump back well number 807, looking west
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 14
Southwest Alluvium pump back well number 802, looking west
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 15
Southwest Alluvium pump back well number 801, looking south
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 16
Southwest Alluvium pump back well number 802
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 17
Monitoring well 632
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 18
Monitoring well GW 2 at edge of arroyo, looking north
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 19
View north in arroyo from GW 2
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 20
Monitoring well GW 3, looking west
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 21
Monitoring well GW 2, looking north
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 22
View looking south at area overlying Southwest Alluvium plume
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 23
Area underlying Southwest Alluvium plume, looking south toward location of new monitoring well
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 24
Area overlying Zone 3 plume, looking northeast
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 25
Zone 3 plume boundary wells. Plume boundary is approximately located under the center well
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 26
Area overlying Zone 3 plume, looking north
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 27
Nickpoint in the Gallup Sandstone, looking north
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 28
Arroyo looking south in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 29
Gallup Zones 1, 2, and 3 observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 30
Gallup Sandstone, Zone 1, in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 31
Gallup Sandstone Zone 1, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 32
Gallup Sandstone Zone 1, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



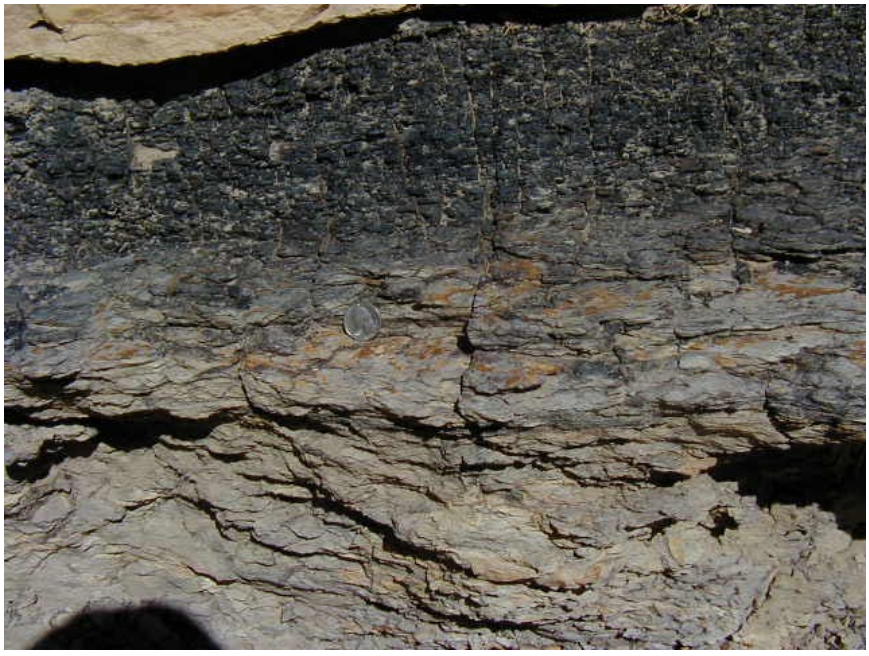
Photograph No. 33
Gallup Sandstone Zone 1, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 34
Gallup Sandstone Zone 1, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 35
Gallup Zone 2 observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 36
Gallup Zone 2 observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 37
Gallup Sandstone, Zone 3, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 38
Gallup Sandstone, Zone 3, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 39
Gallup Sandstone, Zone 3, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 40
Gallup Sandstone, Zone 3, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 41
Gallup Sandstone, Zone 3, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 42
Gallup Sandstone, Zone 3, observed in nickpoint,
arrow indicates closeup in previous photo
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 43
Gallup Sandstone, Zone 3, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 44
Dilco Coal Member overlying Gallup Sandstone, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003



Photograph No. 45
Dilco Coal Member overlying Gallup Sandstone, observed in nickpoint
UNC Church Rock Site, New Mexico
Photograph taken on January 29, 2003

ATTACHMENT E

Interview Records

FIVE-YEAR REVIEW INTERVIEW QUESTIONS
FOR LARRY BUSH, UNC

1. What is your overall impression of the project? (general sentiment)

The project has accomplished its anticipated results.

2. What is the current status of the ground-water remediation?

All recovery wells have been shut off with NRC approval as continued operation no longer offers any advantage over natural attenuation processes.

3. Is ground-water monitoring being performed? If so, please describe what activities are performed. How often are samples collected for analysis and what laboratory(ies) perform the analyses?

Yes. The wells indicated in SUA-1475 are sampled once per quarter, using low flow criteria and corresponding SOP's. The samples are shipped to Energy Laboratories Casper, Wyoming for analysis.

4. Have any problems or difficulties been encountered which have impacted implementability of the ground-water remedy or monitoring programs (*e.g.*, access issues for well installation)? If so, please describe in detail.

None, which have affected the remedy or monitoring plan.

5. Is there a continuous on-Site O&M presence? If so, please describe staff and activities. If there is not a continuous on-Site presence, describe staff and frequency of Site inspections and activities.

Yes the Site RSO and Administrative Assistant are generally present at the site during regular work hours for much of the week. TheSite Manager lives on the site and is generally available for operations and security 24 hours a day, 7 days per week.

In addition, the NRC conducts periodic inspections for radiation and health compliance. For over 15 years there have been no concerns raised as the result these inspections nor have there ever been any concerns that resulted in fines for radiation or health noncompliance.

6. Have there been any significant changes in the O&M requirements, maintenance schedules, or sampling routines since the last five-year review? If so, do they affect the protectiveness or effectiveness of the remedy? Please describe changes and impacts.

The EPA required the site to totally change their SOP for well sampling procedures and sample preparation in 1999. The entire site converted to low flow sampling pumps and procedures. A great deal of work was performed to first determine, if all the wells at that time would meet the low flow criteria and, if not, find suitable replacement wells. The new system was installed and proved to be very reliable, and also affirmed the data obtained by the previous EPA directed SOP. The new system was then submitted and approved as a license amendment to meet the intent of Part 30.
The practice of filtering samples prior to the various stabilization processes needed as a condition of sample preservation was also discontinued due to a general policy change by Region 6 of the EPA. A parallel set of samples was conducted during the initial onset of this policy to see the effect it might have on the older data sets and was found to yield virtually the same results, once again confirming the previous sampling and testing SOP's. Neither of these required changes have materially affected the protectiveness or effectiveness of the remedy.

7. Have there been unexpected O&M difficulties or costs at the Site in the last five years. If so, please give details.

Yes. The cost of converting all well to low flow sampling was expensive and required a great deal of time. This was an unexpected expense, since the original SOP being followed was the mandated EPA procedures.
However, sampling has become more efficient due to the new system and in the long term may eventually prove more cost effective.

8. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

Some procedures and methods have improved, but mainly as time saving changes. The change to the low flow system has been detailed in previous questions. The constant improvement in instrumentation and better reliability from improved electronic meters may prove a continued optimizing area. As new pumps or other items are developed and accepted they will be considered for the site to address issues at that time.

UNC has petitioned for a reduction in ground water sampling frequency in the past. Because we have a long history of monitoring that shows very slow changes in water quality through time, we believe that the sampling frequency should be reduced. We are also sampling more wells than are needed to characterize the seepage-impacts.

9. What effects have Site operations had on the surrounding community?

Site operations have had little or no effects on the area in general. Because there was no natural shallow ground water system in the area prior to the site activities, there was no ground water use by the community to be impacted. The daily presence of site personnel for O&M activities have had some beneficial impact to the community , since we try to assist the surrounding community by clearing roads in harsh weather, proving some

services, and being a source of information about utilities and repairs. Examples are snow and mud removal during storm events, grave digging services to assist the Chapter, and helping the utility service representatives find and access problem areas.

10. Are you aware of any community concerns regarding the Site or its operation and administration? If so, please give details.

No.

11. Are you aware of any events, incidents, or activities at the Site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

The area around the site is mainly used for grazing and rural home sites. Due to the poor range management practices and extreme drought over the last several years, the site has become very attractive to free ranging livestock from miles around. Some of the non-permitted local livestock owners have intentionally cut fences to allow their livestock into the ungrazed parts of Section 2 and have at times encouraged the herding of sheep and goats to the ponds for watering.

Operations spends 50-60% of their field time repairing fences, herding animals off of the site, and managing animals around the site. The true grazing allottees have worked to help us identify owners, indicate sources of animal infiltration, and deny access to their allotments from the non-permitted livestock owners.

The task of keeping the animals off the site is made more difficult due to lack of livestock quota control from both Tribal and State Agencies.

Vandalism and theft of materials such as fencing, posts, wood, and resalable items is another on going issue. In general these problems occur away from the restricted areas and are on the fringes of the Section 2 and are mainly conducted in Section 36.

12. If any events, incidents, or activities have occurred at the Site, did they require a response from you or your staff? Please explain.

As stated above the animal incursions require frequent responses by staff.

13. Do you have and comments, suggestions, or recommendations regarding the project?

The projects main intent, to protect the public from exposure tohazardous constituents in tailings-impacted ground water, has been accomplished. Because the ground water is not naturally occurring and will eventually dissipate, because water quality is not acceptable for use due to subsurface chemistry regardless of the presence of the tailings, and because the ground water system does not produce acceptable well yields, future exposure is also

highly unlikely. Future project activities should focus on developing a process to wind up site activities and turn the site over to DOE.

FIVE-YEAR REVIEW INTERVIEW QUESTIONS
FOR ROY BIICKWEDEL, GE

1. What is your overall impression of the project? (general sentiment)

Remediation has generally been effective and it has been protective of human health and the environment.

2. What is the current status of ground-water remediation at the Site?

The Nuclear Regulator Commission (NRC) has authorized discontinuance of the active groundwater pumping systems in each of the three water-saturated strata impacted by tailings seepage migration. Zone 1 was discontinued in July 1999 because the decommissioning criteria were achieved.

Zone 3 pumping was discontinued in December 2000 following EPA's recognition during the Five-Year Review of 1998 that Zone 3 pumping was not effective and perhaps detrimental to the containment of seepage-impacted water in Zone 3. Approval to cease pumping was granted in December 2000, pending the installation of a sentinel monitoring well and the evaluation of other remedial alternatives. The well was installed (it is not impacted by tailings seepage) and the evaluation of additional alternatives is continuing.

In the Southwest Alluvial system, active pumping was discontinued when the NRC approved an 18-month natural attenuation test. The attenuation test report, submitted in November 2002, recommended the replacement of the current remedy with a natural attenuation remedy for metals and radionuclides, and a Technical Impracticability Waiver for sulfate and TDS.

3. Did the ground-water remedy function as expected? How well did the ground-water remedy perform?

The groundwater pumping remedy has achieved significant desaturation of the impacted ground water in each area. As anticipated in the ROD and as substantiated in the various technical reports referred to above, the groundwater pumping remedy has reached the limit of its effectiveness. In all three areas of the site the

current remedy will have no additional, appreciable, beneficial effect on achieving cleanup goals beyond the natural processes that are occurring. As a practical matter, EPA expected that it would be necessary to re-evaluate the performance goals that were established in the ROD, and in achieving significant desaturation of tailings impacted groundwater and contaminant removal, the remedy has functioned as well as was expected when EPA chose it in the June 1988 Record of Decision (ROD).

In fact, because the impacted media have a high natural capacity to neutralize the effects of tailings seepage, in some respects remedy performance has exceeded expectations. At this stage of the process, further improvements in the groundwater quality in Zone 1 and the Southwest Alluvium will only be realized through natural geochemical processes. For Zone 3, it is not as clear that the contaminant plumes are stable or receding, and so, other approaches to address the impacted groundwater are under consideration.

4. What does the monitoring data show? During the operation of the remedial systems, were there any trends that showed contaminant levels were decreasing?

Descriptions of contaminant trends depend on the compound considered and whether one is discussing Zone 1, Zone 3, or the Southwest Alluvium, and so the various technical reports should be consulted for detailed answers to this question. In general, the trends for hazardous constituents, such as some metals and radionuclides have diminished both with distance from the tailings disposal area and through time.

Some other constituents, such as sulfate, are controlled solely by equilibration with naturally occurring minerals in the formation through which water moves. As a consequence, the monitoring data for sulfate are remarkably stable through time.

5. From the General Electric Corporation's perspective, have any of the remedial systems for ground water reached their limit of effectiveness? If so, please explain.

First, let me explain the General Electric Company's (GE's) role on this project. United Nuclear Corporation (UNC), is the owner and operator of this site and is performing the remedial activities under its license with the NRC. Since September 1997, UNC has been a

wholly-owned, indirect subsidiary of GE. UNC has retained GE Corporate Environmental Programs through a separate administrative services agreement to assist UNC both technically and administratively with environmental issues at Church Rock. Consequently, all statements or views contained herein or elsewhere are those of UNC.

As to UNC's perspective, the current remedy has reached the limit of its effectiveness and monitored natural attenuation in Zone 1 and the Southwest Alluvium will continue to be effective for certain constituents. Water quality has remained stable or improved since the cessation of pumping operations in all three units.

6. What did the Natural Attenuation Test for the Southwest Alluvium show? Are there any trends that show contaminant levels are increasing since shut down? Please explain.

The natural attenuation test showed that the pumping remedy is no longer of benefit toward achieving remediation goals, and that the only way to achieve completion is via monitored natural attenuation for metals and radionuclides, and a Technical Impracticability Waiver for sulfate and Total Dissolved Solids. There are no concentration trends that have increased since shutdown with the exception of bicarbonate, which is a harmless common anion that dissolves from the formation as tailings acidity is neutralized. The observation that bicarbonate increases while no hazardous or nonhazardous, regulated constituent is increasing above historical levels, attests to the immobility of the regulated constituents.

7. From the General Electric Corporation's perspective, have any of the changes in the Site operations affected the protectiveness or effectiveness of the ground-water remedy? Please explain.

It is UNC's perspective that the cessation of pumping in Zone 3 has slowed the rate at which seepage-impacted water can migrate. This is beneficial because it allows natural restorative processes to be more effective. Cessation of pumping in the other zones and the corresponding stability or reductions in concentrations of regulated constituents supports the conclusion that natural goechemical processes are as or more effective than the former pumping remedy.

8. What is the status of GE's evaluation of remedial alternatives for Zone 3?

GE is not evaluating remedial options for Zone 3. UNC is exploring the feasibility of additional measures to contain or remove contaminated groundwater from Zone 3. The main reason for doing this is that the seepage-impacted tailings have not yet reached equilibrium in Zone 3 as they have in Zone 1 and the Southwest Alluvium.

The supplemental measures being considered by UNC for Zone 3 are hydraulic in nature. Essentially UNC is evaluating methods to better collect groundwater than the wells which have been used previously. Technologies that have been retained for further consideration include enhancing the formation hydraulic conductivity via fracturing or simply containing the plume via a line of cut-off wells. A pilot test of the fracturing technique is currently in the planning stage.

9. Do you have and comments, suggestions, or recommendations regarding the project?

The USEPA maintains that institutional controls would be a useful part of any natural attenuation remedy or Technical Impracticability Waivers for the Church Rock site. Even though the formations became saturated artificially via mine dewatering, and the water is unusable for any domestic or irrigation purpose, UNC has been working with the Navajo Nation to develop an institutional control plan to prevent any groundwater use. To UNC's knowledge, neither the Tribal Resolution or environmental right-of-way have been formally accepted or adopted by the authorities since they were first proposed over two years ago in March 2001.

UNC is also awaiting the USEPA's review of the Southwest Alluvium Natural Attenuation Test.

INTERVIEW RECORD

Site Name: United Nuclear Corporation Location: McKinley County - Church Rock, NM		EPA ID No: NMD030443303
Subject: EPA Five-Year Review Interview		Date of Interview: 04-16-03

Type: ■ Telephone ☐ Visit ☐ Other
Location of Visit:
Description of Other:

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Interview Questions

1. *What is your overall impression of the project (general sentiment)?*

All of the agencies are working together to find the appropriate remedy. However, if the site remedy is going to change, changing it may take a long time because there are a lot of entities involved in the decision and because some of the considered remedy changes (technical impracticability or alternate abatement standards) may require hearings or administrative approval from the agencies or the Water Quality Control Commission.

Also, there has been a lack of continuity with the regulatory staff. The site managers for the U.S. Nuclear Regulatory Commission (NRC), EPA and the New Mexico Environment Department (NMED) are all relatively new (1-2 years) to the project. This makes it difficult to understand the Site history, the individual perspectives and what direction or actions should be considered.

2. *From your perspective, what effects have site operations had on the surrounding community?*

Livestock does get onto the Site to graze and drink water from the evaporation pond, so they could be exposed.

3. *Are you aware of any community concerns regarding the site or its operation and administration? If so, please provide details.*

I did have the opportunity to give a presentation to the community at a meeting held at the Pinedale Chapter House on April 9, 2003. The issues raised at the meeting included the following:

- The Southwest Research Center (SRC) out of Albuquerque, NM, in working with the community on a project to assess how abandoned uranium mines (AUM) have impacted Navajo lands, is concerned that the background levels used to establish ground water cleanup standards are too high. The SRC believes that ground water concentrations after clean up will be above health-based benchmarks and wants something done about it. It also mentioned an interest in pursuing natural resource damage claims.

- Diana Malone of the Navajo EPA also stated that her agency was concerned about the background levels, the loss of a ground water resource and the need to prevent ground water contamination from leaving the Site. *See also* Five-Year Interview with Diana Malone, Navajo EPA.

4. *Have there been routine communications or activities (e.g., site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please describe purpose and results.*

NMED has been given the opportunity to review and comment on reports associated with the ground water remediation at the Site. NMED approved changes in the Site ground water cleanup standard for sulfate, nitrate and total dissolved solids (TDS) to better reflect background conditions. Although NMED agreed to such changes, it is noted that the level for nitrate is so high, it does not appear to reflect natural conditions.

NMED has conducted Site visits. During one of those visits, NMED commented on the sampling procedures, which resulted in the United Nuclear Corporation (UNC) changing its procedures. Those comments reflected changes in what is recorded during sample collection. NMED also has commented on the sloppy sampling procedures related to health and safety and the possible contamination of samples. UNC has not changed these procedures.

5. *Have there been any complaints, violations, or other incidents related to the site that require a response by your office? If so, please describe the events and results of the responses.*

None that I am aware of over the last five years.

6. *Is the ground-water remedy progressing in accordance with NMED's expectations for the site? Please explain.*

NMED recognizes that UNC has tried for many years to clean up the Site. However, there appears to be movement by several parties to permanently stop active remediation, at least for the Southwest Alluvium and Zone 1.

Southwest Alluvium: NMED has looked at the trend data over time and believes that pumping is still effective for some wells in some areas. **NMED also believes that unless active remediation is again implemented in this ground water zone, then everything that could be done to clean up the ground water (i.e., the goals for ground water remediation as defined in the EPA's Record of Decision) is not being done.**

NMED has noted that contaminant concentrations from samples taken in a few monitoring wells located near to, and downgradient of, designated pumping wells are trending either upward or downward and are different from trends of wells that are not affected by the tailing leachate. This indicates that pumping is having an effect. NMED has also noted that some contaminant levels, including sulfate and uranium, are rising in some of the wells since pumping stopped (*see also* Response to Question No. 10, below). Uranium is still below the standard in these wells.

Zone 1: NMED has not looked at data trends for Zone 1, but since we cannot pump water from the Zone, there is not much else we can do to clean it up. We should continue to watch data trends in samples collected from this zone.

Zone 3: NMED supports continuing active remediation in Zone 3. NMED believes that the pumping of wells in different configurations than we have now should be considered.

Pump and Evaporation System: Water cannons are currently used to spray water onto the tailing cover for evaporation. NMED is concerned that some of the water could infiltrate downward into the tailing pile and promote leachate formation, which then could move downward into the ground water. UNC has completed calculations to evaluate this concern, but has not performed any actual field testing for verification of its calculations.

Evaporation Ponds: It is NMED's understanding that UNC has not verified that leaching is not occurring from the ponds thru the tailing pile and into the ground water.

Institutional Controls: The Superfund Oversight Section of NMED is uncertain about the mechanisms that are available to enforce institutional controls (ICs). Further, the State of New Mexico has very limited ability to enforce ICs and it cannot implement restrictions that run with the land.

6. (Continued)

Technical Impracticability: If it is determined that the existing NM cleanup standards are not achievable, either the EPA can issue a Technical Impracticability (TI) waiver or the State can approve of Alternate Abatement Standards (AASs). If AASs are selected, the EPA would not need to issue a TI waiver and, hence, our understanding is that a ROD amendment would not be required. EPA would need to check to determine if this is correct. The selected AASs would then be considered new applicable or relevant and appropriate requirements (ARARs). This applies to analytes such as sulfate that do not have EPA drinking water standards.

7. *From NMED's perspective, have any of the changes in site operations had an affect on the protectiveness or effectiveness of the ground-water remedy? Please explain.*

Site Operations - Southwest Alluvium: The temporary shutdown of pumping operations for the Southwest Alluvium seems to have had an effect on contaminant levels at some of the wells (i.e., levels are increasing). If the operational shutdown continues, it may have a detrimental effect by allowing the contaminant plume to spread. Also, some constituents which now are below cleanup standards may rise to levels which exceed those standards.

Site Operations - Zone 1: Ground water pumping was not effective because the volume of water recovered was so low.

Site Operations - Zone 3: Shutting down the pumping operations was a good decision by the EPA because pumping was contributing to the spreading of the contaminant plume; however, a revised extraction well pattern should still be considered.

8. *Are you aware of any changes in state environmental standards since the time the remedial approach was delineated which may call into question the protectiveness or effectiveness of the remedial approach?*

I am not aware of any changes. It is noted that the EPA's Maximum Contaminant Level (MCL) for uranium in drinking water is 30 micrograms per liter (µg/L) (Effective in December, 2003) or 0.03 parts per million (ppm). The current NM ground water standard for uranium is 5.0 ppm. However, NMED is currently considering revising the uranium standard to 7 µg/L or 0.007 ppm.

9. *Do you feel well informed about the site's activities and progress?*

With regards to the ground water remediation, we receive copies of all documents. For the reclamation and closure activities being performed under the NRC's regulatory authority, NMED has not received all the documents. NRC does provide some documents and correspondence to NMED, and they are trying to keep NMED informed about the activities at the Site. However, it is noted that the NRC is not required to submit copies of all the documentation to NMED.

Sometimes UNC acts or performs tests without informing the regulatory agencies. For example, last year UNC installed several Zone 3 monitoring wells to further delineate the downgradient limit of the contaminant plume and its flow velocity. NMED was not informed about those wells until after they were installed. UNC should prepare draft work plans for the regulatory agencies to review and approve before implementing them.

10. *Do you have and comments, suggestions, or recommendations regarding the site's management or operation?*

- NMED is concerned with the uranium and sulfate levels in the Southwest Alluvium. UNC should be monitoring uranium levels closely. For example, the monitoring wells showing an upward trend in uranium levels need to be reported on more than semi-annually, while remedy remains inactive. UNC also needs to evaluate and explain why such trends are occurring. If there is a possibility that the uranium standard will be exceeded, then UNC needs to propose appropriate actions to prevent such a condition from occurring.

  UNC should evaluate if rebound is occurring or if different permeability zones are affecting the plume.

  NMED does not currently support a technical impracticability waiver (under EPA) for sulfate or TDS in the southwest alluvium because trends for these constituents were decreasing for many downgradient wells and changing (either up or down) for many pumping wells while remediation was active and because trends in most of the downgradient wells changed after pumping stopped. These factors indicate that more could still be done to achieve the ROD cleanup goals in this ground water zone. If UNC can show statistically that trends in wells affected by the plume during active remediation are similar to trends in wells not affected by the Site, then they may have a case to support technical impracticability because this would indicate that pumping is not having an effect.

10. (Continued)

If AASs under the State of New Mexico are pursued at this Site instead of technical impracticability under EPA, then UNC needs to show that projected levels of contaminant will not decrease more than 20% in 20 years. At this time, we believe that AASs for sulfate in the southwest alluvium is not supportable because sulfate levels in pumping wells and downgradient wells continued to decrease while the wells were pumping.

NMED would like to point out that in the "approval to stop pumping" that EPA issued on November 15, a statement was made that "If there are any statistically significant increases is constituent concentrations in the monitoring wells, the southwest alluvium extraction system will be turned back on immediately." Concentrations of several constituents (including bicarbonate, chloride, sulfate, TDS, and uranium) have increased in downgradient monitoring wells (GW-1, GW-2, GW-3, and EPA28). These data trends are shown in Table B.6 of the Final Report and Technical Impracticability Evaluation, Southwest Alluvium Natural Attenuation Test Church Rock Site, dated November 2002.

- For Zone 3, UNC should resume active remediation after analyzing the zone to determine what approach would be best and getting approval from the agencies.
- Independent samples need to be collected (split) and sent to independent laboratory for analyses.
- Pond liners should be monitored for effectiveness.
- Perform a reliable check that moisture is not moving through tailing pile cover.
- Keep track of how the weather is affecting the system, particularly since there have been several dry years since pumping operations were shut down.
- For any zone for which monitored natural attenuation (MNA) is proposed, UNC should explain why it will work. The MNA process should be explained and NMED suggests modeling be performed to show that MNA will work.
- NMED does not see any effort to keep the state natural resource trustee(s) informed on Site activities. The New Mexico Office of Natural Resources Trustees stated that they wanted to be informed if the Site was not going to be cleaned up to established cleanup standards.

INTERVIEW RECORD

Site Name: United Nuclear Corporation Location: McKinley County - Church Rock, NM		EPA ID No: NMD030443303
Subject: EPA Five-Year Review Interview		Date of Interview: April 7, 2003

Type: ■ Telephone ☐ Visit ☐ Other
Location of Visit:
Description of Other:

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Interview Questions

1. *What is your overall impression of the project? (general sentiment)*

When the cleanup began in 1992 there was little or no coordination and communication between the EPA, the Responsible Party and the Navajo EPA, which resulted in very little community input. The Navajo EPA was given no opportunity for providing comments on Site-related activities and documents. However, since 1998 the effort by the EPA and the Responsible Party to involve the community and coordinate information has improved.

2. *What is the Navajo EPA's role in this project?*

The Navajo EPA oversees Site-related activities being conducted and acts as a liaison between the Responsible Party, the EPA and the community. The Navajo EPA ensures that documents are received for review and comment. It also conducts community outreach meetings to hear about citizen's concerns, although there has been no meeting as yet for the Site. Concerned citizens have filed a lawsuit against the United Nuclear Corporation (UNC) and the U.S. Nuclear Regulatory Commission (NRC) under the Uranium Mine Impacts to Uranium Miners Compensation Act. Since there are a lot of miners that have died from cancer, some surviving miners might be eligible for compensation.

3. *From the Navajo EPA's perspective, what effects have Site operations had on the surrounding community?*

The presence of the Site has resulted in a high profile for several uranium issues. The Navajo EPA believe that the sources of contamination being addressed should have included the abandoned uranium mines and the area of the 1979 spill, which occurred when the dam of the south cell failed resulting in a release of approximately 93 million gallons of tailings and pond water to the Rio Puerco. Additionally, there is a concern with the EPA's approach used for establishing background levels in ground water. Rather than using the background conditions after mine dewatering and discharge, maybe an analogous area not impacted by mining could have been used to establish background levels. The Navajo EPA believe that the current cleanup levels for ground water, which were established based on background levels, are too high. Finally, the Navajo EPA are still interested in seeking restoration of natural resource damages to ground water. UNC has complained that the statute of limitations for natural resource damage assessment and restoration has expired.

4. *Are you aware of any community concerns regarding the Site or its operation and administration? If so, please provide details.*

Yes. There is a concern about livestock getting though the fence and going into the Site to graze and drink water from the evaporation pond. The Navajo EPA has recommended that UNC put up a chain-link fence, rather than barb wire. However, UNC indicated that the fence would probably be cut or stolen. There was another issue about seven years ago when a resident north of the Site wanted water service, which would have required that a water line be extended northward along the highway from south of the Site. UNC did not want the line through the Site because of the potential liability for digging of the line. The resident now receives water service from the Standing Rock Chapter.

5. *Are you aware of any events, incidents, or activities at the Site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.*

As stated above, I am aware of the issue with livestock on the Site. I am also aware of vandalism related to the livestock issue. Apparently, ranchers are cutting the barb wire fence on the east side to drive their cattle onto the Site for grazing.

6. *Have there been any complaints, violations, or other incidents related to the Site that required a response by your office? If so, please describe the events and results of the response.*

Yes. The livestock issue required a response by our office. The Navajo EPA brought out the Navajo Nation Ranger to the Site when this occurred. The Ranger informed the rancher of the trespassing violation and wrote up a notice with pending fines for continued violations.

7. *Have there been routine communications or activities (Site visits, inspections, reporting activities, etc.) conducted by your office regarding the Site? If so, please describe purpose and results.*

Yes. We have conducted site inspections, including the EPA's inspection as part of the Five-Year Review. We have also visited the site to observe the Responsible Party's ground water sampling activities. We have received copies of site-related correspondence from the EPA, the NRC, and the Responsible Party and we have reviewed and commented on draft technical reports related to ground water remediation. Finally, we plan to conduct community outreach meetings at the local Navajo chapter houses, including the Pinedale Chapter House.

8.	*Is the ground-water remedy progressing in accordance with the Navajo EPA's expectations for the Site? Please explain.* We disagree with EPA's decision to use post-mining background levels for ground water to establish cleanup levels. Therefore, the remedy will never meet the Navajo EPA's expectations for the level of cleanup.
9.	*From the Navajo EPA's perspective, have any of the changes in the Site operations affected the protectiveness or effectiveness of the ground-water remedy? Please explain.* We believe that this question is not applicable, since the Navajo EPA never believed that the remedy would be protective.
10.	*Do you feel well informed about the Site's ground-water cleanup activities and progress?* Over the last five (5) years, yes.
11.	*Do you have any comments, suggestions, or recommendations regarding the Site's management or operation?* There still needs to be some improvement on community outreach. It is difficult for the Navajo EPA to explain or defend the EPA's remedy to the local community, especially when the chapter houses bring in their own consultants. The EPA, NRC and the Responsible Party need to address those concerns directly.

INTERVIEW RECORD

Site Name: United Nuclear Corporation Location: McKinley County - Church Rock, NM		EPA ID No: NMD030443303
Subject: EPA Five-Year Review Interview		Date of Interview: 03-26-03

Type: ■ Telephone ☐ Visit ☐ Other
Location of Visit:
Description of Other:

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Interview Questions

1. *What is the U.S. Nuclear Regulatory Commission's (NRC's) role on this project.*

The NRC's role is to assure that the Licensee (UNC) is in compliance with NRC regulations, policy and License conditions. In addition, the NRC's role under the Memorandum of Understanding with the EPA is to work cooperatively with the EPA, state and the Navajo EPA to assure that adequate ground water remediation is undertaken to protect human health and the environment.

2. *What is your overall impression of the ground-water remediation effort at the site?*

At this point, additional information is needed to establish the correct remedial strategy in all three zones. General Electric (GE) is pursuing this in an acceptable step-by-step manner, but there is still work to do.

3.	*From your perspective, what effects have site operations had on the surrounding community?* I am not aware of any health effect on the community from groundwater remedial actions because the ground water is not used as a drinking water source and due to the remedial efforts at the site.
4.	*Are you aware of any community concerns regarding the site or its operation and administration? If so, please provide details.* I am aware that the local Navajo community has concerns about the project. However, the regulatory agencies are making an effort to educated the community about the Site and Site activities. The meeting with the Pinedale Chapter elders on January 29, 2003 as part of the 5-Year Review was a good step in continuing that effort.
5.	*Have there been any complaints, violations, or other incidents related to the site that require a response by your office? If so, please describe the events and results of the responses.* Since I've been working on the Site over the last two years, I am not aware of any complaints, violations, or other incidents that required a response from my office, other than the U.S. Department of Energy's concerns about erosion control issues related to surface reclamation. The erosion control issues did require a response. However, those issues are not related to the EPA's ground water cleanup.
6.	*Have there been routine communications or activities (site visits, inspections, reporting activities, etc) conducted by your office regarding the site? If so, please describe purpose and results.* There have been routine Site visits and meetings with the Licensee (United Nuclear Corporation), its consultants, the EPA, state, and Navajo EPA for coordinating remedial activities at the Site as they relate to the ground water remediation. In addition, we've had Site visits related to erosional control issues for surface reclamation and scheduled inspections from our regional officer located in Arlington, TX.
7.	*Is the ground-water remedy progressing in accordance with the NRC's expectations for the site? Please explain.* The NRC is satisfied that UNC is proceeding with appropriate strategy towards achieving the ground water remediation objectives established for the Site

8.	*Are you aware of opportunities to optimize the operation, maintenance, or sampling efforts at the site?* I am aware of nothing additional to the previous actions taken to optimize sampling efforts beyond the low flow sampling.
9.	*From the NRC's perspective, have any of the changes in the site operations affected the protectiveness or effectiveness of the ground-water remedy? Please explain.* Information is still being collected to characterize the effectiveness of active remediation at the Site and develop further actions for compliance of ground water standards.
10.	*Have there been any changes in NRC standards since the time the remedial approach was delineated which may call into question the protectiveness or effectiveness of the ground-water remedy?* There have been no changes in the last five years to the NRC's ground water standards established in 10 CFR Part 40, Appendix A.
11.	*What is the status of the NRC license for the site?* The License is active under NRC oversight at this time.
12.	*Do you feel well informed about the site's ground-water cleanup activities and progress?* Yes.
13.	*Do you have and comments, suggestions, or recommendations regarding the site's management or operation?* I have no suggestions at this time.

ATTACHMENT F

EPA Information Bulletin – January 2003