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HSWA LANL 6/m/01

Date: February 15, 2001
Refer to: ER2001-0121

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Mr. John Young, Corrective Action Project Leader
Permits Management Program
NMED – Hazardous Waste Bureau
2044 A Galisteo
Santa Fe, NM 87502

SUBJECT: QUARTERLY TECHNICAL REPORT FOR OCTOBER THROUGH DECEMBER 2000

Dear Mr. Young:

Enclosed are three copies of the Environmental Restoration Project's Quarterly Technical Report, October Through December 2000. The Quarterly Technical Report presents information from each focus area on the quarter's activities, including regulatory meetings, sampling, cleanups, report writing, and fire recovery activities. Also enclosed is a certification statement signed by the designee owner and operator for the Los Alamos National Laboratory.

If you have questions regarding this report, please contact Dave McInroy at (505) 667–0819 or Gene Turner at (505) 667–5794.

Sincerely,

Julie A. Canepa, Program Manager
Los Alamos National Laboratory
Environmental Restoration

Sincerely,

Theodore J. Taylor, Project Manager
Department of Energy
Los Alamos Area Office

8192

JC/TT/MB/vn

Enclosures: (1) Quarterly Technical Report, October Through December 2000 (ER2000-0067)
(2) Certification

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Document Title: Quarterly Technical Report, October through December 2000

Name: Julie A. Canepa Date: 2/15/01

Julie A. Canepa, Program Manager
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environmental restoration project

A Department of Energy
Environmental Cleanup Program

LA-UR-01-0547
February 15, 2001
ER2001-0067

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Quarterly Technical Report October-December 2000

Los Alamos
NATIONAL LABORATORY
Los Alamos, NM 87545

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LIST OF ACRONYMS AND ABBREVIATIONS

BMP	best management practice
CERCLA	Comprehensive Environmental Response, Compensation, and Recovery Act
CMS	corrective measures study
DOE	US Department of Energy
DOE-AL	US Department of Energy-Albuquerque Operations Office
DOE-HQ	US Department of Energy-Headquarters
DX	Dynamic Experimentation (Division)
EES	Earth and Environmental Sciences (Division)
EES-1	Geology and Geochemistry Group
EPA	US Environmental Protection Agency
ER	environmental restoration
ERDB	Environmental Restoration Database
ESH	Environment, Safety, and Health (Division)
ESH-18	Water Quality and Hydrology Group
ESH-19	Hazardous and Solid Waste Group
FIMAD	Facility for Information Management, Analysis, and Display
FWO	Facilities and Waste Operations (Division)
FY	fiscal year
HE	high explosives
HWB	Hazardous Waste Bureau
HSWA	Hazardous and Solid Waste Amendments
IFRAT	Interagency Flood Risk Assessment Team
IM	interim measure
JCNNM	Johnson Controls Northern New Mexico
LANL	Los Alamos National Laboratory
MDA	material disposal area
NCB	NEPA, Cultural, Biological Resources
NEPA	National Environmental Policy Act
NFA	no further action
NMED	New Mexico Environment Department
NNMCAB	Northern New Mexico Citizens Advisory Board
NTISV	nontraditional in situ vitrification
PCB	polychlorinated biphenyl
PM-1	Site Planning and Development Group
PRG	preliminary remediation goal
PRS	potential release site
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
RSI	request for supplemental information
SAL	screening action level
SAP	sampling and analysis plan

SOP	standard operating procedure
SWMU	solid waste management unit
TA	technical area
VCA	voluntary corrective action
VCM	voluntary corrective measure

QUARTERLY TECHNICAL REPORT

OCTOBER–DECEMBER 2000

LOS ALAMOS NATIONAL LABORATORY

ENVIRONMENTAL RESTORATION PROJECT

ALBUQUERQUE OPERATIONS OFFICE

CONTRACTOR: University of California

PROJECT MANAGER: Julie Canepa

NUMBER OF POTENTIAL RELEASE SITES: Approximately 2,000

POTENTIAL WASTE: Radionuclides, High Explosives, Metals, Organics

1.0 INTRODUCTION

This quarterly report describes the technical status of activities in the Los Alamos National Laboratory (the Laboratory) Environmental Restoration (ER) Project. The activities are divided according to the current focus area structure and then, when applicable, by the technical area (TA) where the specific activity is located. The Hazardous and Solid Waste Amendments (HSWA) portion of the Laboratory's Hazardous Waste Facility Permit (Module VIII, Section P, Task V, C) requires the submission of a technical progress report on a quarterly basis. This report, submitted to fulfill the permit's requirement, summarizes much of the fieldwork, report-writing, and Cerro Grande fire recovery activities performed this quarter in the ER Project.

2.0 FOCUS AREAS

2.1 Canyon Investigations — Focus Area Leader: Allyn Pratt

2.1.1 Ongoing Reach Investigations

2.1.1.1 Acid Canyon (within the Pueblo Canyon watershed)

Receipt of Phase II analytical data from Acid Canyon sediment samples has been delayed by backlogs at analytical laboratories; however, most data have been received, and editing and validation are in progress. Following validation, these data will be assessed to provide revised estimates of contaminant distribution and inventories and to revise estimates of potential human health and ecological risk.

An as-low-as-reasonably-achievable (ALARA) cost-benefit analysis was prepared for the US Department of Energy (DOE) to aid in decisions of potential sediment removal in the South Fork of Acid Canyon. This analysis indicated that, from a cost-benefit standpoint, the optimal solution is the "no action" alternative. However, DOE guidelines indicate that social and political factors should also be considered in remediation decisions, and DOE, the New Mexico Environment Department (NMED), and the Northern

New Mexico Citizens Advisory Board have all expressed support for removal of sediment deposits with the highest level of plutonium-239, 240.

2.1.1.2 Cañada del Buey (White Rock Land Transfer Parcel)

A report on possible sediment contamination in Cañada del Buey reach CDB-4, within the proposed White Rock land transfer parcel, was completed and submitted to DOE. This report concluded that no analytes are present above background levels, and therefore there is no need for additional assessment or remediation before land transfer. DOE accepted this report, thus completing this task.

2.1.1.3 Los Alamos Canyon

Phase I field investigations were conducted in Los Alamos Canyon between reaches LA-2 and LA-3 to reduce uncertainties concerning the nature and extent of sediment contamination and potential human health risk. Aerial flyovers indicated anomalously high levels of gamma radiation in this area, and field-based gross gamma radiation walkover surveys conducted in the summer of 2000 confirmed these findings. Fieldwork in the fall of 2000 included detailed geomorphic mapping of a 1500-m length of canyon that includes the confluence with a tributary canyon draining the TA-53 lagoons. The mapping was followed by characterization that included fixed-point gamma radiation measurements at 10-cm-depth increments in numerous locations, in order to identify vertical variations in cesium-137 concentration. Fieldwork was halted because of snow and frozen ground and will be resumed in the spring of 2001.

2.1.1.4 Post-Cerro Grande Fire-Related Characterization

The sampling program to characterize flood impacts following the Cerro Grande fire continued. The purpose of the sampling is to obtain data necessary to evaluate the impacts of floods on sediments, surface water, and alluvial groundwater and to support the assessment of human health and ecological risk for areas that are affected by the floods. Sampling continued during the quarter because of precipitation and minor flooding that occurred in October. The sampling was focused in Los Alamos, Pueblo, and Pajarito Canyons, including areas in Los Alamos Canyon on San Ildefonso Pueblo land. The sampling approach is driven by the potential for changes in the spatial distribution and concentration of contaminants relative to pre-fire conditions.

The watersheds affected by the fire are prioritized for this work based on known or suspected concentrations and inventory of contaminants. The three highest-priority watersheds are Pueblo, Los Alamos, and Pajarito, although other watersheds are affected and are being addressed.

Data validation for samples collected to date is ongoing, and summary reports are being uploaded to the ER Project web site as they become available.

2.1.2 Canyons Work Plans

2.1.2.1 Northern Canyons Work Plan

Development of a work plan for future Canyons Focus Area investigations was begun. The work plan will include plans for the investigation of potential contamination in sediment, surface water, and alluvial groundwater in Bayo, Guaje, and Rendija Canyons. These canyons are considered low priority relative to canyons that are located within Laboratory boundaries (e.g., Los Alamos, Pueblo, and Mortandad Canyons) because relatively little Laboratory activity was conducted in the low-priority canyons and no

immediate environmental risks are known or suspected. Fieldwork in the low-priority canyons is currently scheduled to begin in several years.

2.2 Material Disposal Areas — Focus Area Leader: John Hopkins

2.2.1 General Information for Material Disposal Areas Focus Area

A draft of the mesa-top Material Disposal Area (MDA) Focus Area implementation plan was prepared and distributed to members of the MDA high-performing team for review. The team consists of representatives from the DOE-Albuquerque Operations Office (DOE-AL), the Laboratory, and the NMED Hazardous Waste Bureau (NMED-HWB). The implementation plan will streamline the corrective action process at the Laboratory's largest MDAs. The implementation plan evolved from the draft MDA core document and tiers to the ER Project installation work plan.

In September, DOE, Laboratory, and NMED-HWB management directed the MDA team to plan the work and resource needs for completing one MDA corrective measure study (CMS) and public meetings on a remedy selection by December 2002. In response to this directive, DOE-Headquarters (DOE-HQ) and the National Environmental Training Office sponsored a two-day facilitated session for the MDA team to select an MDA for the CMS, frame the alternatives assessment, and identify milestones toward completion. The MDA team selected MDA H and determined that excavation, stabilization, and in situ containment and long-term monitoring would be considered as remediation alternatives.

2.2.2 Technical Area Activities

2.2.2.1 TA-21

PRS 21-027(d)-99, NTISV Cold Demonstration VCM. The draft voluntary corrective measure (VCM) report proposing no further action (NFA) for Potential Release Site (PRS) 21-027(d)-99, the nontraditional in situ vitrification (NTISV) cold demonstration, was reviewed and comments are being incorporated. The NMED underground storage tank regulations risk approach was followed to address residual hydrocarbon contamination at the site. Results show no unacceptable risk for industrial or residential land use.

PRS 21-018(a)-99, NTISV Hot Demonstration at MDA V. The field phase of the hot demonstration was completed on April 28, 2000. To determine the success of the demonstration, glass samples will be collected from the vitrified product and analyzed. However, sample collection will not be attempted until surface temperatures of the glass have cooled to near ambient temperatures. Periodic temperature monitoring indicated that the current surface temperature of the vitrified product is approximately 500° F.

PRS 21-011(k), VCM Activities. An in situ gamma spectroscopy survey and subsequent confirmation sampling were conducted at the PRS 21-011(k) outfall during November and December. These data are currently being processed and will be used to guide the removal action scheduled for later in FY 2001. Research of historical information regarding the outfall pipe at the site has also been conducted in anticipation of removing the pipe during FY 2001.

PRS 21-024(i), VCM Activities. Some site preparation activities were initiated this quarter in anticipation of the removal of the septic tank and its contents and outlet line early next quarter. Removal of a portion of the inlet line and any contaminated soils is anticipated for later in FY 2001.

PRS 21-029, DP Tank Farm. Monthly site inspections of the two hydrocarbon sheen areas in DP Canyon were conducted in October, November, and December. Copies of these inspection reports are attached

as Appendixes A through C of this report. Fieldwork to complete the Resource Conservation and Recovery Act (RCRA) facility investigation (RFI) of DP Tank Farm continued through October and involved the collection of surface, near-surface, and subsurface soil; sediment; and tuff samples in accordance with the RFI Phase II sampling and analysis plan (SAP) and the approved response to the request for supplemental information (RSI). The draft field summary report is currently in review. Fixed-laboratory analytical results are undergoing baseline validation and subsequent population of the Facility for Information Management, Analysis, and Display (FIMAD).

2.2.2.2 TA-49

PRSs 49-001(b,c,d,g), MDA AB, Areas 2, 2A, and 2B. Monthly moisture monitoring was conducted at these PRSs this quarter. An annual review of the data is presented in Appendix D of this report. Erosion control best management practices (BMPs) were inspected following rain events.

2.2.2.3 TA-50

Quarterly pore-gas monitoring was conducted in existing borehole 50-9100 in order to monitor the vertical extent of a potential volatile organic compound plume at MDA C. The field-screening results for the first quarter of FY 2001 are presented in Appendix E of this report.

2.2.2.4 TA-54

A team with representatives from DOE-AL, NMED-HWB, and the Laboratory continued reviewing the TA-54 RFI report. This report is a pilot implementation of the Laboratory's proposed approach for expediting corrective actions described in the draft mesa-top MDA implementation plan.

The quarterly pore-gas monitoring at MDAs G and L was completed as required by Module VIII of the Laboratory's Hazardous Waste Facility Permit. The field-screening results for the first quarter of FY 2001 are provided in Appendix E of this report. The TA-54 team is nearing completion of a web-based presentation describing the 15-year pore-gas sampling program and results. The presentation will be used as a basis for proposing a reduction in sampling frequency from quarterly to annually, believing that the resources can be better spent on other activities.

PRSs 54-007(c,d,e) and 51-001. DOE and NMED-HMB approved the voluntary corrective action (VCA) plans for PRS 51-001 and PRSs 54-007(c,d,e). Characterization of one drainfield was completed in December. Septic tank removal and the remainder of the characterization activities are scheduled to begin in January 2001.

2.3 RCRA Corrective Actions — Focus Area Leader: Warren Neff

2.3.1 High Explosives Production Sites Team

The High Explosives Production Sites Team continued fieldwork, interim measure (IM) cleanup work, and report-writing activities in support of the PRS 16-021(c) (the 260 outfall) CMS. The team continued the work outlined in the IM plan for the 260 outfall and the deep drilling at well CdV-R-15-3. Hydrogeology studies, including stream profiles, were completed. High-performing team activities continued.

The team continued fire recovery activities. In particular, accelerated ER activities were continued at PRS 16-019 (MDA R) and at PRS 16-020 (the silver outfall).

2.3.1.1 TA-16

Hydrogeology. The field team continued to monitor water levels in the Cañon de Valle alluvial wells and in the intermediate-depth wells. All five of the alluvial wells in Cañon de Valle contained water this quarter. The intermediate-depth borehole at the head of Martin Spring Canyon and all three alluvial wells in Martin Spring Canyon contained water. Because of the high levels of precipitation in September and October, all of the water levels were elevated during October and then subsided. Quarterly sampling locations that were not sampled in September, because they were dry, were sampled this quarter. Total dissolved solids (as measured via conductivity) were elevated in alluvial waters and surface waters in Cañon de Valle, presumably caused by the effects of the fire.

Stable isotope samples were collected at precipitation events. Every-other-day water samples (bromide tracer) collected from the TA-16 springs showed no bromide tracer breakthrough. These samples were also archived for eventual stable isotope analysis. Flow-integrated samples were collected in SWSC, Burning Ground, and Martin Springs. A stream profile that included analytical laboratory sampling was completed during November. All first-quarter results are pending.

Site restoration and waste disposal activities were completed at deep groundwater well CdV-R-15-3. Laboratory analysis of cuttings and core was continued. Modifications were made to the well completion report and well summary sheet.

The fieldwork subcontractor completed the field summary report for the FY 2000 hydrogeology sampling.

PRS 16-021(c) CMS. High-explosives (HE) composting and bioremediation tests (W.R. Grace process) using contaminated soil were continued as a backup to the partially successful zero-valent iron tests. A key focus this quarter was to solve the problem posed by diurnal temperature variations. This was accomplished by deploying the tests in a bunker at TA-11. Composting tests were successful at reducing HE levels by more than a factor of 100 in the soils. All compost mixes reduced HE levels, although to varying degrees. The W.R. Grace process was not successful at greatly reducing HE levels in the tests. Phytoremediation and stabilization studies were continued. A design for the stormwater management deployment was finalized and the stormwater management units were purchased.

A draft sampling design for ecological risk sampling at PRS 16-021(c) was completed.

PRS 16-021(c) IM. Verification and waste sampling for the IM project were finalized, except for samples that will be collected from the material currently stored in roll-off bins (the D003 wastes), which will be sampled prior to shipping or before and after on-site treatment. Site surveying was completed. Most of the analytical results are still pending. Site restoration activities were completed except for the final stabilization of the zero-discharge dam. The fieldwork subcontractor completed the field summary report. Extensive discussions of waste treatment and disposal options took place in high-performing team meetings.

MDA R. Most of the soils generated at MDA R as a result of Cerro Grande fire suppression activities were disposed off-site in December. The approved RFI work plan sampling and site surveying were completed for MDA R. The sampling included more than 100 screening samples, fixed analytical laboratory surface samples, and laboratory samples from eight boreholes that were drilled into Bandelier Tuff. Results are pending. The fieldwork contractor completed the field summary report.

Silver Outfall. The silver outfall (PRS 16-020) was burned in the Cerro Grande fire, and much of the PRS lies within the floodplain of Cañon de Valle. Hence, an accelerated ER activity was completed at the site to remove high levels of silver, chromium, and polyaromatic hydrocarbons known to be present at the

PRS. Approximately 250 yd^3 of soil was excavated and staged for disposal. Both verification and waste characterization sampling were finalized, and sample locations were surveyed during this quarter; results are pending. Waste disposal is pending receipt of the remainder of the results from the waste samples.

Surface Water. BMPs were inspected and maintained.

2.3.2 Firing Sites Team

2.3.2.1 TA-15

Firing Site R-44. Waste disposal was completed in December 2000 for the post-fire shrapnel and surface debris pickup conducted at this firing site in July 2000 [PRSs 15-006(c) and 15-008(b)]. The waste included approximately 20 yd^3 of low-level radioactive waste, 7 yd^3 of scrap metal, and 0.5 yd^3 of mixed waste.

2.3.2.2 TA-36

C-36-003. Waste disposal was completed in December 2000 for last quarter's post-fire debris pickup project at this site. The waste included approximately 5 yd^3 of industrial waste.

2.3.3 Industrial Sites Team

This quarter team members worked with Regulatory Compliance Focus Area personnel to build new PRS boundaries for consolidated PRSs.

2.3.3.1 TA-3

PRS 03-010(a). An addendum to the RFI report for PRS 03-010(a), a systematic release from a vacuum pump repair shop, was completed. It describes the development of a monitoring well at the site and reports data for samples collected from groundwater, surface water, and sediment at the site. The work was conducted in response to an RSI from NMED requiring the Laboratory to develop and sample the monitoring well, as well as conduct additional sampling at the site. DOE comments on the addendum report have been incorporated, and the addendum was submitted to NMED in October 2000.

PRS 03-056(c). VCA activities continued at PRS 03-056(c), a transformer storage area. The purpose of the VCA was to remove from the site any soil that contains greater than 1 ppm polychlorinated biphenyls (PCBs). At the end of September, approximately 1100 yd^3 of soil were removed from the site. Based on sampling and analysis conducted to determine whether all contaminated materials had been removed, personnel determined that the area with contaminated material was greater than initially projected. Contaminated materials were found in bank deposits of the stream running through the site; therefore, work was briefly stopped to modify the contract to include work on the stream banks. Also, a dredge and fill (401/404) permit was requested for excavation in and around the stream; excavation activities were re-started on December 1, 2000. Modifications were made to the Storm Water Pollution Prevention Plan and to the Site-Specific Health and Safety Plan to include excavation activities on the stream bank.

An additional 1200 yd^3 of PCB-contaminated soils were excavated at PRS 03-056(c) in December. This included removing all sediments from the stream banks on the west slope area. The west slope, mesa top, and north slope have been excavated down to bedrock. An additional 72 roll-off bins have been filled with PCB-contaminated soil and sediment. Seventy of those bins were sampled and submitted for

analysis in December for characterization of the waste. Erosion controls (or BMPs) have been implemented during this quarter to prevent run-on/run-off of stormwater from potentially transporting contaminated soils off-site. Following sediment removal, approximately 1 ac of jute matting as well as high (water) velocity geo-textile was installed on the banks of the stream.

During screen sampling using the EnSys test kits, PCB contamination greater than 1 ppm was found around a Johnson Controls Northern New Mexico (JCNNM) storage shed containing electrical equipment. The team worked closely with Facility and Waste Operations (FWO) Division and JCNNM personnel to have the shed removed. All soil (down to tuff) was removed from beneath the shed. Approximately 500 EnSys test kit analyses have been completed to date.

Analytical results were received for samples collected from 70 roll-off bins that were filled with PCB - contaminated soil in the last quarter. Each roll-off bin was profiled. Eleven of the bins contained PCBs at concentrations greater than 50 ppm and therefore required shipping to an approved Toxic Substances Control Act facility. Seven of the containers also contained listed volatile organic compounds. A "no longer contained in" determination was requested from NMED. Meetings were held with NMED personnel to discuss issues associated with the waste. An NMED letter approving a "no longer contained in determination" was received on December 6, 2000. All 70 waste containers packed last quarter were manifested and shipped to the appropriate disposal facility.

2.3.3.2 TA-35

The completion of the TA-35 integrated SAP was delayed by to the Cerro Grande fire. This work is scheduled to start in January 2001. Key personnel needed to complete the integrated SAP were reassigned to fire recovery activities.

2.3.3.3 TA-53

PRS 53-002(a)-99, Northern and Southern Surface Impoundments. During the first quarter of FY 2001, focused validation and data assessment activities were started for the northern and southern surface impoundments at TA-53. The purposes of the assessment are to

- determine if nature and extent has been defined for contaminants within the lagoons at PRS 53-002(a)-99,
- identify contaminants of potential concern located within the two northern lagoons at PRS 53-002(a) that will be carried further to a risk assessment phase, and
- determine the need for a second round of borehole sampling currently proposed in the Sandia Watershed baseline.

The focused validation and data assessment process included pulling all available data for PRS 53-002(a) and 53-002(b), including the 1994/1995 and 1998/1999 field campaigns. The data were cleaned up by standardizing the units and eliminating duplicated and rejected data. A chemist established the final qualifiers on the data. New media codes were given to the samples. Samples were separated into 13 decision sets as determined by their location (e.g., samples in northwest lagoon were designated Decision Set 1). Frequency detect tables were created for each decision set. Maps from FIMAD were used to ensure the location IDs corresponded with the data sets. Microsoft Excel charts were plotted for data point concentrations at each location ID. Each analyte was plotted and evaluated separately. The data were first screened against residential preliminary remediation goals (PRGs) or screening action

levels (SALs) for radionuclide data. Analytes with no data points above the residential PRG or SAL were not evaluated further. The second screening process involved comparing the plotted data with the appropriate background data, if available. Analytes with no data points above background were not evaluated further. A list of analytes was then compiled, which will then be compared with industrial PRGs; a risk assessment may be conducted if necessary.

PRSs 53-006(a,b,c,d,e) Tanks. ER Project and Los Alamos Neutron Science Center facility management personnel worked together to sample the sludge in the tanks at the Weapons Neutron Research Facility and Area A [PRSs 53-006(a–d)]. The sampling activity was in response to a notice of deficiency from NMED. The facility prepared a sampling plan, with ER Project personnel input. The tanks [PRSs 53-006(a–d)] were emptied and sampled. Analytical results were received, and data validation is in progress. A response letter to NMED summarizing the data is in progress.

2.3.4 Townsites Team

The Townsites Team worked to resolve issues related to land transfer, Los Alamos community development, post Cerro Grande community rebuilding, and other non-DOE property this quarter.

Fundamental changes to the TA-73 Aggregate 1 work strategy, resulting from the formation of a high-performing team, are expected to yield significant savings in resources.

2.3.4.1 TA-0

PRS 00-003-99 [00-003, 00-012, and 00-030(i)]. The VCA completion report for this PRS, the DOE Los Alamos Area Office land transfer parcel, has been drafted and is in review.

PRSs 00-004, 00-010(a,b), 00-027, 00-030(a,b,l,m), 00-033. Preliminary planning and contracting work began at these PRSs (the DP Road land transfer parcel); however, baseline budget constraints have delayed the continuation of the project until later in the fiscal year.

PRS 00-019. Supplemental nature and extent samples were collected at PRS 00-019, the Central Wastewater Treatment Plant, to strengthen the data set supporting the ecotoxicological risk assessment. Approximately 1 yd^3 of additional soil was removed from the western outfall area to remove an isolated, anomalous detect of DDT. The VCA completion report for this PRS is in review.

PRS 00-030(g). The RFI report for PRS 00-030(g) (the old Catholic Church parking lot) is in preparation. Internal Laboratory review comments have been resolved and are being incorporated in preparation for submission to DOE.

2.3.4.2 TA-1

PRS 01-001(m). A reported septic system associated with a warehouse building that served the Manhattan Project at TA-1 was believed to exist on private property slated for further development. A solution has been negotiated with the NMED to receive a no further action determination for this PRS. The archival work has been performed, photographic documentation has been collected, and a letter has been submitted to satisfy the NMED agreement and allow the development to proceed unimpeded.

2.3.4.3 TA-73

PRSs 73-001(a,b)-99 [73-001(a–d) and 73-004(d)]. The high-performing team has made and documented fundamental decisions regarding the progress toward a final remedy for these airport landfill PRSs.

PRS 73-005-99 [73-005, 73-007, C-73-005(a–f)]. The fee assessment for RFI report for PRS 73-005-99, Contractor's Row (work plan PRS aggregate 73-2) has been received, indicating that administrative review of the report is under way.

2.3.5 MDA P Closure

The MDA P closure project continued in Phase I (excavation and disposal) this quarter. Non-remote excavation of soil and debris was completed. Some excavation of material remaining under waste storage pads and access roads will be required. This excavation will be completed as waste is shipped off-site during the next quarter.

Approximately 274 yd^3 of soil and debris were excavated from both lobes of the MDA-P landfill this quarter. To date approximately 50,000 yd^3 of soil and debris have been evacuated from the landfill. Waste disposal for the quarter included 820 yd^3 of hazardous waste containing residual radioactive contamination, which was disposed under an Authorized Limits Exemption. Waste volumes for the quarter are as follows:

- hazardous waste 3,960 yd^3
- solid waste 3,020 yd^3
- "residual activity" waste 820 yd^3
- fill soil (MDA J) 320 yd^3

2.4 Groundwater Investigations — Focus Area Leader: Deba Daymon

2.4.1 General Information for Groundwater Investigations Focus Area

The drilling schedule for regional and intermediate depth wells was revised this quarter. The wells currently planned are R-5, R-7, and MCOBT-1 and/or -2.

Sampling was completed at single-completion wells R-9 and R-15 and at multiple-completion wells R-9i, R-12, and R-19. This represents the first round of samples collected from R-9i, R-12, and R-19 and the second round of samples from R-9 and R-15. Sample results are included in Appendix F of this report.

2.4.2 Regional Well Activities

2.4.2.1 Regional Well R-7

Drill rig access to Los Alamos Canyon is permitted in the winter months, as the potential for flooding is extremely low and there are no threatened and endangered species concerns during this time period. A readiness review was conducted on November 15, 2000, and site preparation work began on November 16, 2000. The drill pad was constructed and a jack cellar was installed; the same surface casing that was

originally installed and backfilled with cement when the boring was abandoned earlier in the year was used for the new boring.

Drilling began on December 10, 2000; the concrete was drilled out of the surface casing and the boring was advanced to a depth of 342 ft into the Guaje Pumice Bed.

2.4.2.2 Regional Well R-15

The second round of quarterly sampling was conducted during the first week of October. This was the first sampling event using the dedicated submersible pump that was installed in September.

2.4.2.3 Regional Well R-19

The first round of quarterly sampling was finished on October 10, 2000. Three of the five zones that were sampled were completed during this reporting period.

2.4.2.4 Regional Well R-22

The boring was advanced to a total depth of 1489 ft on October 11, 2000. Schlumberger Oilfield Services ran borehole geophysics in the cased borehole. Upon review of the processed data, the well was designed as a multi-screen well completion. The well was constructed from October 17 to November 3, 2000. Based on data collected during drilling and analysis of the borehole geophysics, five intervals were selected for screen placement: (1) 872.3 to 914.3 ft, (2) 947.0 to 988.9 ft, (3) 1272.2 to 1278.9 ft, (4) 1378.2 to 1384.9 ft, and (5) 1447.3 to 1452.3 ft. The well was developed and tested from November 4 to November 21, 2000, and the Westbay DP system was installed from December 6 to December 10, 2000. The concrete surface pad was in place at the end of the quarter.

2.4.2.5 Regional Well R-25

The first round of quarterly sampling was conducted from November 28 to December 12, 2000. Eight zones were sampled during this sampling effort.

2.4.2.6 Regional Well R-31

The first round of quarterly sampling was conducted from December 14 to December 16, 2000. Four zones were sampled during this sampling effort.

2.5 Information Management — Focus Area Leader: Steve Bolivar

2.5.1 Team Activities

2.5.1.1 Information Management

Team members worked with the Laboratory's Water Quality and Hydrology Group (ESH-18) to develop a data-sharing agreement, which is now in review. The Information Management Focus Area placed organizational and other information on the ER web site this quarter.

Computer support personnel received more than 100 computer service requests this quarter. The majority of the requests have been completed.

2.5.1.2 ER Database

Reengineering of the ER database continues. The new version consists of several modules that are being designed and reviewed in a prioritized sequence. Personnel are working with users to ensure the necessary fields (i.e., information) are captured within each module. This effort is being completed in concert with ESH-18 to ensure that data from the hydrogeologic work plan (LANL 1998, 59599) are captured and accessible to the ER Project as well as ESH-18. The necessary servers have been installed; the database design has been completed and frozen; the Results, Sample, Planning, Borehole, PRS, and Location modules have been completed and integrated; and more than 1.5 million records have been integrated into new table structures. Team members are now preparing a pilot set of data for demonstration and testing of the new database.

2.5.1.3 Sample Management Office

Personnel from the Sample Management Office continued to accept field samples, create the necessary paperwork, contact the appropriate laboratories, ship the samples, and ensure the requested information is received. The Sample Management Office issued 113 field data groups (number of samples), and had 364 customers this quarter. Personnel handled 2840 containers (this is above the normal work load for the last 5 years, which averaged 1500 containers). Centralized data management personnel prepared approximately 683 sample-collection logs for sampling events and issued corresponding sets of chains of custody and electronic followers.

2.5.1.4 Facility for Information Management, Analysis, and Display

Personnel from FIMAD continued to maintain the present ER database, as well as the spatial data (such as elevation, orthophotographs, etc.). The Cartographic Laboratory completed 156 requests from the ER Project this quarter. Personnel produced 533 new maps and 362 copies of existing maps. Geographic Information System personnel are still producing fire recovery maps for the ER Project and Laboratory management. Data for the flyover flights (photogrammetry, high- and low-resolution LIDAR, and AVIRIS) are being processed.

2.6 Analysis and Assessment — Focus Area Leader: Alison Dorries

2.6.1 Team Activities

2.6.1.1 Data Analysis and Assessment Team

Data Quality. Revisions to the data validation standard operating procedures (SOPs), LANL-ER-SOPs-15.01 through 15.07, were made during this quarter. The revisions were based on the experience gained from the implementation of the data validation SOPs and included incorporation of data quality checks that were previously performed in the focused data validation process. In addition, the Data Quality Task leader and members of the Data Quality Team assisted with the revisions and responses to comments on the Statement of Work for Analytical Services.

Document preparation activities continued this quarter. Three technical documents are currently in preparation for publication.

Data Stewardship.

Integrated Information Management System. The Data Stewardship Team continues to support and work with the Information Management Focus Area to design and implement the Integrated Information Management System. The integrated system consists in part of software tools intended to ensure consistency and accuracy in data and information management and to allow tracking and traceability of work products such as regulatory reports. In the first quarter of FY 2001, the Data Stewardship Team participated in the following activities.

- Review of draft software requirements specifications for the Mapping and Reporting Tool. The Mapping and Reporting Tool allows ER Project users to create and track "lists" of data types (e. g., PRSs, locations, samples, and/or results) using a Geographical Information System interface. These lists are stored and become the basis for data reporting in regulatory deliverables for a particular site or groups of sites. Test data were provided to the information management subcontractor for testing the Mapping and Reporting Tool.

- Review of the project plan and schedule for deployment of the Mapping and Reporting Tool, Sample Planning Tool, and Results Tracking Tool. The Sample Planning Tool provides software tools that interface with the new ER database (ERDB) Planning Module. The Sample Planning Tool provides tracking of the sample planning and analysis process, including planning and initiation of a sampling event, generating field paperwork, ordering sample analytics, sample check-in at the Sample Management Office, sample shipping to analytical laboratories, and completion of a sampling event. The Results Tracking Tool interfaces with the ERDB Results Module and provides tracking of data receipt from the analytical laboratory, validation and authentication status of technical data, and data release status.

- Meetings with Risk Assessment Team members to discuss special data types associated with risk assessment processes, with the High-Explosives Production Site Team leader to discuss nonroutine data types associated with the TA-16 investigations, and with the physical modelers to discuss work procedures and data types.

- Development of preliminary specifications for a Field Data Tool to replace the aging 4D database. The new Field Data Tool will support sample planning and field paperwork generation and is intended as an interim measure until deployment of the Sample Planning Tool.

Database Design and Implementation. First quarter activities related to the design and implementation of the new ERDB included the following.

- Review of the ERDB design model for the Subject Module, which includes functionality to link technical data to spatial coverages.
- Final review of the ERDB design model for the Planning Module, which includes functionality for planning sampling events, ordering sample analytics, and checking-in and shipping samples.
- Meetings with ESH-18 to discuss a draft data-sharing agreement. Changes to the Borehole Module were also discussed and agreed upon.

- The eight new lookup tables associated with the Results Module were populated with values.

Legacy Data Cleanup and Migration. In order to fully implement the new database model, existing legacy data must undergo cleanup so the database can be fully constrained and then migrated to the new table structures. Migration strategies were developed to allow these two activities to occur in a complementary, parallel fashion.

Legacy chemistry data were migrated from the old data structure to the new Results Module tables in the new ERDB. The data were reviewed and made consistent during the process and mapped to existing values. Approximately 1.5 million legacy records were migrated into the new Results Module.

In preparation for migration to the Results Module, more than 1 million legacy data records have been migrated from the analytical stage table to the analytical production table on the UNIX Oracle system. Prior to migration, the validation status of each request number was verified by manually checking the hardcopy records. Legacy request numbers that had not been validated were validated and the qualifier flags were entered into the database. Sixty-eight legacy request number/suite combinations were validated during the first quarter of FY 2001. Only 30 legacy request number/suite legacy combinations remain in the stage table.

Data Stewardship and Reporting. The data stewards prepared 51 electronic data sets, 28 of which were fire recovery data sets and 23 of which were ER Project data sets, during first quarter FY 2001. The 51 data sets represent data for 343 PRSs with 13,455 associated Sample IDs, for a total of approximately 521,945 electronic records. The fire recovery data represent 82 PRSs, 4595 Sample IDs, and 224,867 electronic records. The ER data sets represent 261 PRSs, 8860 samples, and 297,078 records. For this quarter, approximately one-half of the electronic records processed were associated with fire recovery work.

The data stewards for the Groundwater Investigations Focus Area are working to transfer data for the existing regional wells to the Borehole Module of the new ERDB. Data categories include, but are not limited to, drilling, well construction, water levels, geology, field and laboratory hydrologic tests, field and analytical data for groundwater and geologic media, geophysics, and geodetic surveys. The data stewards participated in the following activities related to the monitoring well installation program.

- Regional well R-22 geophysical logging data capture. The R-22 geophysical log header data were created in Access (in preparation for upload to the ERDB). R-22 curve data were migrated into ERDB-compliant files in preparation for upload into the geophysics submodule of the Borehole Module.

- Regional well R-12 geophysical log and log header data were edited, correlated with both paper records and electronic files, and entered into an Access database (in preparation for upload to the ERDB). Queries were written and executed to move the R-12 edited Schlumberger Oilfield Services files to ERDB-compliant data files. Twenty-three tables were populated using data provided in the R-12 well completion report.

- Legacy geophysical log header data were edited, verified, and correlated with hardcopy records. This effort is ongoing.

- The wet chemistry screening electronic data file recently delivered by the Laboratory's Geology and Geochemistry Group (EES-1) was reformatted to be compliant with the future ERDB tables for geochemistry screening data. The electronic data deliverable format for regional well EES-1 wet chemistry screening data was established.

- Work was begun to migrate the legacy regional well EES-1 mineralogy data into the Borehole Module.

- Work was begun to define Access input forms for the tables in the Borehole Module.

- Attendance at the Groundwater Integration Team quarterly meeting and weekly Groundwater Investigations Focus Area meetings.

The data stewards are also working closely with Groundwater Investigations Focus Area personnel to develop data capture and management procedures for the monitoring well installation program to ensure timely and complete uploads of technical data to the new ERDB. The R-7 well installation is being used as a test case. Nine hardcopy input forms were developed for gathering drilling and hydrogeological data at R-7.

Data Validation. In order to handle the post-Cerro Grande fire environmental data, a core validation team was developed in the fourth quarter of FY 2000 and trained to the seven new data validation SOPs (see Data Quality section of this report). The validation team performed 515 routine validations (request numbers) between October 1 and December 31. The validation team also increased the scope of the routine validation procedures to account for data quality problems that were not being captured using the historic validation procedures. The validation team updated the ER routine validation SOPs to incorporate the new data quality checks. The validation team continues to work with the Sample Management Office to improve analytical laboratory deliverables.

The data authentication process (comparison of electronic records with hardcopy records) underwent review in the fourth quarter of FY 2000 and was reengineered to be more efficient. The reengineered process accurately tracks the authentication status so data can be migrated from the stage table to the production table immediately after it is authenticated. This process is now fully implemented and working smoothly. A total of 841 request number/suite combinations were authenticated and migrated into the ER production table in the first quarter of FY 2001.

Integrated Data Sets. The electronic data set was prepared for the additional Pajarito Plateau baseline groundwater samples collected in March and April 2000 (which were delayed by the Cerro Grande fire). Statistical analysis of the data is in process. Work is progressing on a technical report summarizing the results of the baseline groundwater sampling effort.

2.6.1.2 Risk Assessment and Review Team

Native American Risk Team. Because this task was unfunded for the majority of the first quarter of FY 2001, activity was minimal. Team members met with the Santa Clara Environment Department staff to discuss ER Project monitoring data and activities related to recovery from the Cerro Grande fire. In addition, team members provided feedback on the proposed agenda for the Accord tribe risk assessment workshop to be sponsored by DOE-Defense Programs on February 6–8, 2001.

Risk Assessment Team. Team members continued to update and maintain the ECORISK database during the quarter. Activities included some additional reviews, parameter quality assurance, inclusion of a database default engine, and validation of the calculation engine.

Risk team members continue to support and interact with the Interagency Flood Risk Assessment Team (IFRAT) as part of the institutional response to the Cerro Grande fire. The risk assessment subteam has finalized the conceptual site model for exposure to residuals left after floods occur. Team members attended the IFRAT public open house to discuss the status of the flood risk assessment.

Team members have assisted the MDA Focus Area in the writing and organization of the MDA H RFI report. Activities have included review of the conceptual model and risk assessment chapters and meetings with NMED to determine information needed in the report.

Members of the Risk Assessment Team met with the East Jemez Natural Resource Council to discuss natural resource management and ecological risk assessment.

The risk assessment team met twice to discuss issues and share information on projects. The team has also been charged with documenting the methodology for calculating radiological SALs. A draft of this methodology was produced in November.

Peer Review Team. Thirteen statements of work were reviewed this quarter, and the following read reviews were held.

- ER QP 5.3, Readiness Planning and Reviews
- Programmatic Assumptions Document
- Basis for Watershed Prioritization
- Acid Canyon ALARA Analysis
- Radiological screening action level methodology papers:
  - Ectoparasites of Two Cavity-Nesting Passerines
  - The Ecological and Physiological Costs of Lead Shot and Immunological Challenge to Developing Western Bluebirds
  - Eggshell Quality, Clutch Size, Hatching Success, and Sex Ratio of Western Bluebirds and Ash-Throated Flycatchers
  - Psysiological, Growth, and Immune Responses of Japanese Quail Chicks to the Multiple Stresses of Immunological Challenge and Lead Shot

2.6.1.3 Strategic Decision Analysis Team

The Strategic Decision Analysis Team spent the first quarter of FY 2001 prioritizing, planning, and initiating decision-support and modeling work to support the needs of the field investigations being undertaken by the operational focus areas of the ER Project. These programmatic support activities include the following: top-down probabilistic risk assessment modeling for the Material Disposal Area Focus Area; data-worth analysis and conceptual model development for the RCRA Corrective Actions Focus Area; first-order groundwater pathway analysis, data-worth analysis, geologic data modeling and conceptual model development for the Groundwater Investigations Focus Area; and remote-sensing pilot investigations for non-invasive geophysical characterization of subsurface structural, geologic, and hydrologic features at multiple scales, including drainages, mesas, and individual PRSs.

2.7 Regulatory Compliance — Focus Area Leader: Dave McInroy

2.7.1 General Information for Regulatory Compliance Focus Area

Monthly meetings with NMED continued this quarter, as well as meetings regarding special topics such as permit modification, IMs, VCAs/VCMs, RFI reports, and RSI responses.

In the aftermath of the Cerro Grande fire, team members continued to work with other ER Project focus areas to determine the current regulatory status as well as sampling and waste characterization needs to ensure the success of accelerated ER activities implemented at PRSs and related sites located in flood plains. Team members also participated in public meetings of the Laboratory's Emergency Response Team, the final meeting of which was held December 18, 2000. Team members also participated in meetings and other activities of the IFRAT.

Team members performed the following miscellaneous tasks:

- participated as members of high-performing teams for the TA-54 MDA H CMS, permit modification/Annual Unit Audit, Airport remedial actions, and the 260 outfall;
- prepared a template and submitted draft reports to address DOE's procedure for the release of real property containing residual radioactive material for PRSs proposed for NFA with a radionuclide component;
- provided additional information on the status of ER Project activities on land parcels proposed by Los Alamos County for temporary access as of February 2001;
- continued reviewing and revising information in the PRS database;
- provided regulatory support for planning final cleanup of several PRSs at TA-21 and TA-54 West;
- conducted operations and waste management audits of ER field operations;
- participated in the US Environmental Protection Agency (EPA)/NMED Environmental Indicators training in Albuquerque, New Mexico, on November 14, 2000; and
- participated in the DOE Assets Management Forum (conference on land transfer issues) in Albuquerque on November 28, 2000.

2.7.2 Team Activities

2.7.2.1 Communications and Outreach Team

Staff produced a document highlighting ER Project major accomplishments in FY 2000 for the Year-End Review to DOE-HQ and DOE-AL. Staff also produced a Year-End Review video/movie on the accomplishments of the ER Project. The video/movie was used for the Year-End Review.

Staff coordinated all the logistical support for the National Environmental Training Office risk assessment training that took place in Santa Fe in October 2000. NMED, DOE, and Laboratory staff attended this meeting.

Outreach Activities. The Communications and Outreach staff created two new substantial pages for the ER Project external web site regarding the Cerro Grande fire: (1) Post-Fire Accelerated Actions and

(2) Post-Fire Environmental Sampling Data. Additionally, staff added new ER documents to the Virtual Library on the web site.

Staff worked extensively in the preparation of the IFRAT open house and public meeting that took place on December 18, 2000. The IFRAT is an interagency team established after the Cerro Grande fire to inform the public of flood and contaminant transport risk resulting from the Cerro Grande fire. IFRAT is composed of environmental professionals from the NMED, University of New Mexico, Los Alamos National Laboratory, DOE, New Mexico Department of Health, US Environmental Protection Agency (EPA), and the US Forest Service.

Northern New Mexico Citizens Advisory Board Activities. Staff members provided assistance to the NNMCAB as needed on various issues this quarter. Staff continued to attend the NNMCAB monthly meetings and subcommittee meetings. Staff prepared a poster and presentation materials for the NNMCAB ER Subcommittee chairperson who attended the national stewardship conference in Denver (October 12). Staff also prepared a slide presentation for the December 2, 2000, NNMCAB risk assessment training session that was held in Santa Fe.

2.7.2.2 Tracking, Contracts, and Training Team

Training. Team members continued working on the formal automated system to track all ER Project staff and subcontractor training on a database tied to the Laboratory-wide Employee Development System. The following activities were completed this quarter:

- completed database programming,
- finalized draft training matrices for peer review comment, and
- completed the training database prototype and began beta testing.

PRS Database. In October of 2000, a concentrated effort was begun to update and validate information in the PRS database and to populate a new database "container" (information holder) with current and accurate PRS information. This effort will consist of a team of individuals reading through all relevant documentation on a PRS, and when gaps in information are identified, obtaining the missing documents and completing the file to the extent possible. This effort will be coordinated with the ER Project's Records Processing Facility. A tracking system was developed to track progress on the completion of PRS hard copy files. While this exercise has been in progress, personnel have focused on various PRSs as required (e.g., HSWA PRSs for the 2000 permit renewal exercise and non-HSWA PRSs with radiological components for a DOE data call on such PRSs). To date, 70 hard-copy support files have been completed for TA-16; 792 work-offs have been screened for radiological components; and 28 unit descriptions have been completed for the radiological component project. Team members coordinated with the Analysis and Assessment Focus Area to provide risk analysis for the identified PRSs with radiological components and held weekly meetings with DOE on the topic. Approximately 50 HSWA unit descriptions, dates of operation, and structure numbers were updated in the database. Migration of information from the land transfer and consolidation projects into PRS Database was completed. A quality review of current PRS information in the database was completed for the majority of PRSs in the database.

Work continued on the redesign of the PRS Container, which included the development of a new container for the database, identification and implementation of modifications necessary for the PRS database web site application, and identification of updates needed for the main PRS standard query

language (SQL) table for all FY 1999 and FY 2000 consolidated units. New boundaries were drawn for over 100 PRSs in the FIMAD system to reflect the FY 1999 and FY2000 consolidation exercises.

Team members reviewed the DOE procedure for the release of residual radioactive material from real property.

2.7.2.3 Regulatory Compliance and Facility Integration Team

Team members continued to provide assistance with regulatory compliance issues for activities within the ER Project this quarter. Personnel provided regulatory reviews of documents prepared by the ER Project and participated in peer reviews. Deployed personnel from the Laboratory's Hazardous and Solid Waste Group (ESH-19) and ESH-18 participated in the reviews as subject matter experts regarding hazardous and solid waste issues and water issues, respectively.

Clean Water Compliance. Team members participated in various meetings addressing clean water compliance issues.

- Monthly Solid Waste Management Unit (SWMU) Working Group meetings held with representatives from Los Alamos County, DOE, NMED and the ER Project. Issues discussed included an update on proposed fieldwork and "sign posting" in Acid Canyon and land transfer concerns.
- Hydrogeologic Work Plan Quarterly Meeting in Pojoaque, New Mexico, to discuss the "basics" of RCRA/HSWA regarding monitoring well installation, construction guidance, and the Laboratory's proposed permit language for the HSWA module.
- Surface Water Assessment Team meeting to discuss 1999 ER Project memo that summarizes existing PCB information at PRSs. The assessment team reviewed new data tables, SOP 2.01 Part A forms, and compared the list of sites with existing erosion matrix scores. A new set of deliverables is expected by late January 2001.
- Watershed Integration Team meeting to complete discussions on the development of revision 2 of the Watershed Management Plan. Additional topics included new gaging station installations, year-end flow data summary, modeling team updates and data-release procedures. Meetings were also held with the Pajarito Plateau Watershed Partnership and included field trips sponsored by the Santa Fe National Forest and Bandelier National Monument staffs.

The Storm Water Pollution Prevention Plan for SWMUs was updated to reflect the Cerro Grande fire impacts. A team member and a representative from ESH-18 updated EPA Region 6 in Dallas, Texas, on the post-fire mitigation efforts. EPA personnel liked the approach taken by the Laboratory to provide coverage for over 1,000 SWMUs under one Storm Water Pollution Prevention Plan. A new Storm Water General Permit was released by EPA and was applied for by the Laboratory.

A team member provided initial support for the post-Cerro Grande fire independent risk assessment to be completed by the Risk Assessment Corporation. A majority of the information to be provided to the corporation will come from the Laboratory's Environment, Safety, and Health (ESH) Division and the ER Project.

BMPs were installed at several locations within Dynamic Experimentation (DX) Division Technical Areas 15, 36, and 39. Run-on diversion, sediment retention, and flow dissipation controls were placed at both active and inactive firing site PRSs.

Fieldwork began for PCB cleanup at PRS 03-056(c). A dredge and fill permit was obtained, and contaminated sediments were removed from the watercourse below the site. Water discharges from the TA-3 Power Plant were reduced, and a small dam was built to temporarily retain water to pump around the area to be excavated. The soil was removed and the flows resumed.

Internal discussion began regarding proposed fieldwork at PRS 21-011(k). Dredge and fill permit issues need to be addressed and a permit acquired before beginning fieldwork at this site.

Waste Management Activities. Team members reviewed and provided comments on six waste characterization strategy forms. Team members coordinated on-site waste management, characterization, transportation, and disposal for wastes generated at DP Tank Farm (PRS 21-029) and the NTISV site at TA-21 [PRS 21-027(d)-99]. Team members completed waste characterization strategies and 20 waste profiles for corrective actions under way at PRSs 21-011(k), 21-024(f,) 21-024(i), 51-001, and 54-007(c,d,e). Regulatory support continued for the MDA P project.

Land Transfer Activities. The team provided updated information on the status of ER Project activities on land parcels proposed by Los Alamos County for temporary access as of February 2001, specifically for numerous PRSs that are included in the Airport, DP Road, and TA-21 land transfer parcels. ER Project inputs for the White Rock Parcel Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 120(h) report were completed and delivered to DOE and the Laboratory's Site-Wide Issues Office.

2.7.2.4 Special Projects and Deployed Generalist Team

Team members continued to review and prioritize 16 PRSs proposed for NFA in previous permit modification requests, where NMED is requiring one additional sample before approving the NFA proposals for public comment and subsequent removal from Module VIII of the Laboratory's Hazardous Waste Facility Permit.

Team members continued drafting sampling plans for the approximately 40 PRSs requiring between two and five confirmation samples to confirm the NFA proposal for those sites.

Natural Resource Management Activities. A team representative attended the East Jemez Resource Council meeting, which focused on wildfire implications for environmental protection and included discussions the Council's goal to maintain and enhance the natural and cultural resources of the east Jemez Mountains, including the DOE lands within the Laboratory boundary. Future natural resource management initiatives could influence environmental restoration activity.

The team representative continued to participate in meetings of the Pajarito Plateau Watershed Partnership to discuss a number of issues, including the Cerro Grande fire, watershed assessment, future projects to promote revegetation of burned forest lands, a process to formalize a partnership, and application for 501(c)(3) status with the Internal Revenue Service. The finalized version of EPA's Section 319 grant application was submitted for funding to plant seedling trees and to encourage herbaceous cover using seedballs, to thin unburned ponderosa and piñon pine forest, and to involve community outreach and input. The representative participated in a field trip to the proposed research sites.

As the authorized NEPA, Cultural, Biological Resources (NCB) reviewer for the ER Project, the representative completed NCB screening checklists/reviews for two PRSs in TA-21 and for regional monitoring wells R-7 and R-27. The team member continues to be the ER Project point of contact for the Interagency Wildfire Management Team working to mitigate wildfire on Laboratory property. This quarter

the interagency team hosted representatives from DOE-HQ interested in how our interagency interactions function and in lessons learned regarding the Cerro Grande fire. The representative attended the Hydrogeologic Work Plan Quarterly Meeting in Pojoaque and the Jemez Mountains biological resources meetings hosted by the New Mexico State Land Office in Santa Fe, New Mexico.

This quarter the team member was asked to represent ER at the subject matter experts working group organized by the Laboratory's Site Planning and Development Group (PM-1) as a forum for discussion and decision-making regarding long-range land use at the Laboratory.

Closeout for PRSs. Team members continued progress on a quality review for existing PRS closeout files, developed new PRS closeout files, and coordinated with the ER Project's Records Processing Facility on closeout issues and submittal of closeout information.

Support to Focus Areas. Personnel from the Special Projects and Deployed Generalist Team are deployed to the operational focus areas to provide support regarding regulatory issues. In addition to providing general regulatory compliance assistance this quarter, such as reviewing documents, attending operational focus area meetings, and participating in peer reviews for operational focus area documents, the deployed members of the team assisted with the following tasks in the operational focus areas.

Canyons Investigations Activities. The deployed regulatory generalist assigned to the Canyons Focus Area provided support for several Cerro Grande fire recovery activities. The generalist provided support for planning sampling and excavation activities at TA-2 during accelerated ER activities following the fire and also reviewed and approved for the ER project several Laboratory emergency projects being performed in the canyons in response to flood concerns following the fire.

Groundwater Investigations Activities. The deployed regulatory generalist assigned to the Groundwater Investigations Focus Area provided support for notice-of-intent discharges from deep well R-22. The generalist also provided waste management support for seventeen 55-gal. drums of contaminated soil and sorbents, and for characterization of drill cuttings for well R-22. The generalist submitted notices of intent to discharge for deep well R-22 and sampling notifications for deep wells R-25, R-31, and CdV-R-15-3.

MDA Activities. The deployed regulatory generalist assigned to the MDA Focus Area participated in several meetings and site tours with NMED, DOE, and MDA Focus Area staff and assisted with numerous MDA projects, including the following:

- Provided comments on the draft VCM report for PRS 21-027(d)-99 and continued to work closely with NMED-HWB on the results and content of this report.
- Provided oversight support of final waste management and site restoration (including BMPs) activities and regulatory compliance issues following completion of the NTISV hot demonstration at MDA V [PRS 21-018(a)-99].
- Provided review of data and contractor reports documenting the Phase II investigation of DP Tank Farm (PRS 21-029). The team member continued to work closely with NMED staff, sharing investigation results, status of data and contractor activity reports, RFI report content, and issues regarding the proposed land transfer by Los Alamos County.
- Provided review comments on the completed sections of the draft VCM plan for PRS 21-024(i); reviewed and revised the corresponding waste characterization strategy and waste profiles; coordinated waste disposal options and treatment, storage, and disposal facility requirements

with TA-54 personnel; and continued to update NMED-HWB staff regarding the status and approach of this VCM.

- Provided review comments on the completed sections of the draft VCM plan for PRS 21-011(k), reviewed and revised the corresponding waste characterization strategy and waste profiles, coordinated waste disposal options with TA-54, conducted a site visit to determine applicability of 401/404 dredge and fill permit requirements during the VCM, reviewed preliminary results of the in situ gamma survey of the site, and continued to update NMED-HWB staff regarding the status and approach of this VCM.

- Provided additional information regarding the status of characterization/remediation and waste characterization of PRSs 21-013(d,e), 21-015 (MDA B), 21-024(f), 21-029, and, C-21-015 included in the Accelerated Los Alamos County Land Transfer Proposal and regarding resources required to complete remaining activities to ensure transfer by early 2001.

- Inspected erosion control BMPs in and around PRS 49-001(g) and the earthen cover of MDA AB at TA-49 and reviewed monthly moisture-monitoring reports for the earthen cover on MDA AB.

- Met with NMED-HWB to discuss the Laboratory's approach to remediating four abandoned septic systems at TA-51 and TA-54 West. The VCA plan for non-HSWA PRSs 51-001 and 54-007(d) was submitted to, and approved by, DOE. The VCA plan for HSWA PRSs 54-007(c, e), now known as PRS 54-007(c)-99, was submitted to, and approved by, DOE and NMED-HWB. The team member coordinated waste characterization and management activities for the VCAs of all four septic systems.

In support of field activities, the team member completed waste management and stormwater inspections at TA-21 and TA-49.

The deployed team member continued to participate in the MDA/TA-54 High-Performing Team meetings and assisted in the facilitation of a two-day meeting with NMED-HWB and DOE representatives on the preparation of a CMS plan and report for MDA H.

The deployed generalist provided additional support to the focus area by preparing, reviewing, and/or resolving comments on various sampling notifications, documents, and other submittals. Sampling notifications were prepared for accelerated ER activities at PRSs 51-001, 54-007(c,d,e) (four abandoned septic systems); the in situ gamma survey at PRS 21-011(k); and the VCM for PRS 21-024(i), an abandoned septic system at TA-21.

The deployed generalist assisted with other activities, including filling information gaps for sites to be included in a future permit modification request and the ER Project's response to NMED's Administrative Completeness Determination letter regarding the Laboratory's Hazardous Waste Facility Permit.

RCRA Corrective Actions Activities. The deployed regulatory generalist assigned to the RCRA Corrective Actions Focus Area assisted with preparation, review, and/or comment resolution of several documents, conducted site visits of field activities, attended various meetings, and participated in a variety of miscellaneous support activities.

The deployed generalist provided support to the focus area for the following document activities this quarter. Sampling notifications were prepared for confirmation samples at PRS 03-056(c), the former PCB transformer storage area, and quarterly spring and alluvial well samples associated with RFI and CMS activities at PRS 16-021(c)-99, the 260 outfall. After reviewing waste characterization data, letters to

NMED were drafted to request "no longer contained in" determinations for wastes generated during VCA activities at PRS 03-056(c) and during closure activities at the TA-16-394 burn tray. The deployed generalist also drafted a letter to NMED outlining modifications to the regulatorily approved approach agreed to by the high-performing team for proposed fieldwork and subsequent reporting for the Airport Landfill. Review was conducted for the RFI report for PRS 00-019, the Central Wastewater Treatment Plant (the report was withdrawn from the review process pending additional modifications), for the SOP outlining the readiness review process, and for accelerated TA-18 fieldwork (to identify potential waste management issues). The deployed generalist accompanied regulators on site visits to PRS 03-056(c) and to MDA P.

The deployed generalist provided additional support by attending meetings to discuss the following topics:

- Phase II sampling strategies at MDA P,
- the closure report for the TA-16-394 burn tray,
- information gaps for sites to be included in future permit modification requests,
- determination of PRS boundaries for consolidated units, and
- potential approaches/strategies for information requests for PRSs located on non-DOE property.

To address the last of these meeting topics, the generalist established the database framework to support non-DOE property PRS information requests.

3.0 REFERENCE

LANL (Los Alamos National Laboratory), 1998. "Hydrogeologic Workplan," Los Alamos National Laboratory report, Los Alamos, New Mexico. (LANL 1998, 59599)

Appendix A

DP Tank Farm Site Inspection,
October 6, 2000

DP Tank Farm Localized Hydrocarbon Sheen Area Site Inspection

1. Date and time of visit

The site was visited on Friday, October 6, 2000, at 2:05 P.M. by Rick Kelley and David Davenport. Conditions were partly sunny, breezy, dry, and mild (60°F).

2. Presence of standing or running water

Some standing water was present at both the original location and at the downstream location; however, the water pools were smaller than those observed during the last visit. Slight water flow was observed in the canyon and from the culverts at the head of the canyon. Based on data from the weather station at TA-53, at least 0.21 in. of precipitation had fallen since last month's visit. However, the actual amount at this location may be different because of the spotty nature of recent rain showers.

3. Location and intensity of odors, staining, or sheens

Original location. Little or no hydrocarbon odors were detected in the air at the canyon bottom. Sheens were observed on the water and sediments (gravels) and on rocks in water pools in the area of previous sampling. Little or no odors were associated with the upstream sheens, and what odor was present more closely resembled motor oil than weathered diesel.

Downstream location. No odor was detected in the ambient air or in disturbed soils. Sheens and stains were observed on the rocks and soil near standing water.

4. Medium in which stains or sheens are observed

Stains were observed in loose soil and gravel in the stream channel, and sheens were observed on standing water. Sheens were also observed on rock surfaces in the stream channel.

5. How odors were identified

No hydrocarbon odor was detected in the ambient air near the stream channel. Little or no hydrocarbon odors were identified in loose sediment held to the nose.

6. Photographs

The following photographs were taken during the site visit.

Photo 1. Culverts at the head of DP Canyon, showing slight water drip

Photo 2. Small pool of water with submerged, clay-filled fracture in stream channel

Photo 3. Close-up of stream channel in the area of soil staining showing oil

Photo 4. Area of previous sample locations, looking upstream, showing no water flows

Photo 5. Stream channel in the area of previous sample locations, looking downstream. Flags indicate new sample locations.

Photo 6. Small water pool at downstream location, showing significant sheen

Photo 7. Small water pool at downstream location, showing sheen

Photo 8. Larger water pool at downstream location

Appendix B

DP Tank Farm Site Inspection,
November 6, 2000

DP Tank Farm Localized Hydrocarbon Sheen Area Site Inspection

1. Date and time of visit

The site was visited on Monday, November 6, 2000, at 2:00 P.M. by Rick Kelley and David Davenport. Conditions were cold (32°F), cloudy, and calm. A mix of rain and snow had fallen during the previous three days.

2. Presence of standing or running water

A large amount of standing water was present at both the original location and at the downstream location. The water pools were larger than those observed during the last visit. Slight water flow was observed in the canyon and from the culverts at the head of the canyon. Four to five inches of precipitation had fallen since last month's visit.

3. Location and intensity of odors, staining, or sheens

Original location. No hydrocarbon odors were detected in the air or in the soils at the canyon bottom. No sheens were observed on undisturbed soil or water. A slight sheen was observed on water after the soil in the stream channel at the area of previous sampling was agitated.

Downstream location. No odors were detected in the ambient air or in disturbed soils. No sheens or stains were observed on the rocks and soil near standing water or on the water.

4. Medium in which stains or sheens are observed

No stains were observed in loose soil and gravel in the stream channel or on standing water. A slight sheen on standing water at the upstream location was observed after nearby soils were agitated.

5. How odors were identified

No hydrocarbon odors were detected in the ambient air or in soils near the stream channel in either location.

6. Photographs

The following photographs were made during the site visit.

Photo 1. Culverts at head of DP Canyon, showing slight water flow

Photo 2. Small pool of water with submerged, clay-filled fracture in stream channel

Photo 3. Area of previous sample locations, looking upstream, showing standing water

Photo 4. Area of previous sample locations, looking downstream, showing standing water

Photo 5. Stream channel in the area of previous sample locations, looking upstream. Flag indicates new sample location.

Photo 6. Stream channel in the area of previous sample locations, looking downstream. Flags indicate new sample locations.

Photo 7. Small water pool at downstream location

Photo 8. Larger water pool at downstream location

Photo 9. Looking downstream from downstream location

Appendix C

DP Tank Farm Site Inspection,
December 8, 2000

DP Tank Farm Localized Hydrocarbon Sheen Area Site Inspection

1. Date and time of visit

The site was visited on Friday, December 8, 2000, at 2:00 P.M. by Rick Kelley and Robert Trujillo. Conditions were cool (40°F), partly cloudy, and calm. Snow flurries were falling over the mountains.

2. Presence of standing or running water

A large amount of standing water and some ice were present at both the original location and at the downstream location. Very slight water flow was observed in the canyon and from the culverts at the head of the canyon. There had been 0.84 in. of precipitation in the form of snow since last month's visit. A considerable amount of snow remains on the ground.

3. Location and intensity of odors, staining, or sheens

Original Location. No hydrocarbon odors were detected in the air or in the soils at the canyon bottom. No sheens were observed on undisturbed soil or water. A slight sheen was observed on water after the soil in the stream channel at the area of previous sampling was agitated.

Downstream Location. No odor was detected in the ambient air or in disturbed soils. No sheens or stains were observed on the rocks and soil near standing water or on the water.

4. Medium in which stains or sheens are observed

No stains were observed in loose soil and gravel in the stream channel or on standing water. A slight sheen on standing water at the upstream location was observed after nearby soils were agitated.

5. How odors were identified

No hydrocarbon odors were detected in the ambient air or in soils near the streambed in either location.

6. Photographs

The following photographs were made during the site visit.

Photo 1. Culverts at the head of DP Canyon, showing slight water flow

Photo 2. Small pool of water with submerged clay-filled fracture in stream channel

Photo 3. Area of previous sample locations, looking upstream, showing standing water and snow

Photo 4. Area of previous sample locations, looking downstream, showing standing water and snow

Photo 5. Stream channel in the area of previous sample locations, looking upstream. Flag indicates new sample location.

Photo 6. Small water pool at downstream location, showing snow and ice

Photo 7. Larger water pool at downstream location, showing snow accumulation

Photo 8. Looking downstream from downstream location, showing ice and snow

Appendix D

Quarterly Moisture-Monitoring Report
First Quarter, Fiscal Year 2001
Technical Area 49, Material Disposal Area AB

QUARTERLY MOISTURE-MONITORING REPORT

FIRST QUARTER, FISCAL YEAR 2001

TECHNICAL AREA 49

MATERIAL DISPOSAL AREA AB

MDA Focus Area
Environmental Restoration Project
Los Alamos National Laboratory

February 2001

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1.0 INTRODUCTION

This report documents the results of moisture monitoring at Material Disposal Area (MDA) AB, Technical Area 49 (TA-49), at Los Alamos National Laboratory (the Laboratory) during the first quarter of fiscal year (FY) 2001. The moisture-monitoring project utilizes three neutron access holes (49-10046, 49-10047, and 49-10048), eight boreholes (TH-1, TH-2, TH-3, TH-4, TH-5, 2A-O, 2A-Y, and 2B-Y), four TDR probes (TDR1, TDR2, TDR3, and TDR4), and a rain gauge to evaluate changes in moisture beneath an evapotranspirative cover at the site (Figure 1). The eight boreholes are four inches in diameter; the three access holes have a 2-in. aluminum casing that extends to the bottom of the access hole. Adjacent to each of two access holes (49-10046 and 49-10048) are two TDR arrays consisting of a shallow horizontal TDR probe positioned horizontally just beneath the surface soil (approximately 6 in.) and a TDR probe positioned vertically beneath the cover materials at 10 ft and 6 ft. A rain gauge was located at the surface of the cover near access hole 49-10046 to monitor levels of precipitation at the site. Figure 1 gives locations of access holes, boreholes, TDR probes, the rain gauge, the cover, and the silt fence. Table 1 gives the depths of the TDR probes.

Neutron moisture measurements were taken at the boreholes and access holes in October and November of 2000 and January of 2001. December's monitoring was performed in January because the Laboratory was closed during the holidays. TDR measurements and precipitation quantities were continuously recorded twice a day to a Campbell Scientific datalogger over the same period. This report will show moisture trends over time and a comparison of moisture results from the neutron probes and the TDR instruments and will include a discussion of the relationship between precipitation and moisture content.

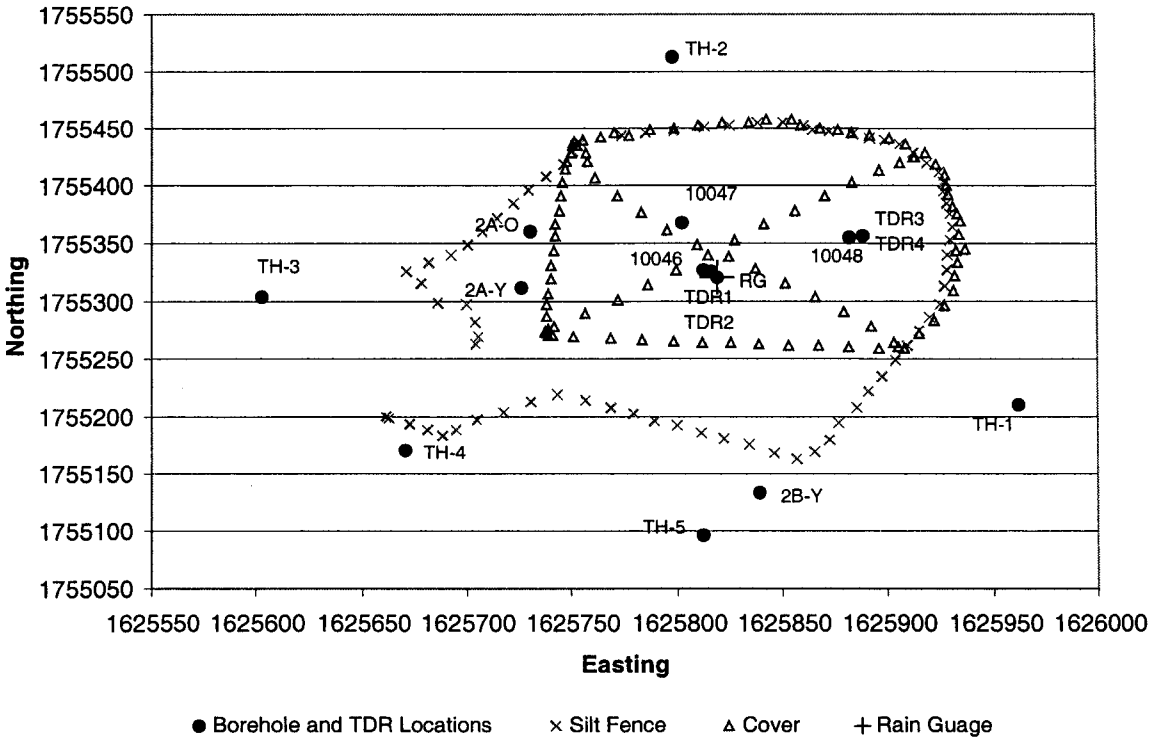

Figure 1. Location of instrumentation and monitoring holes on XY plane at TA-49

Table 1
TDR Array Descriptions

TDR Number	Array Type	Depth (ft)
TDR1	Vertical, within soil overlaying Bandelier Tuff	6
TDR2	Horizontal, at bottom of topsoil	0.5
TDR3	Vertical, within El Cajete pumice	10
TDR4	Horizontal, at bottom of topsoil	0.5

2.0 MOISTURE-MONITORING RESULTS

2.1 Neutron Logging

During the first quarter of FY 2001, neutron logging was performed on October 30 and 31, on November 29 and 30, and on January 4 and 5. The neutron counts from each of the eleven monitoring holes were recorded into a spreadsheet, and a corresponding volumetric moisture content was calculated for each. Figures 2 through 7 display moisture versus depth over time for each of the monitoring holes.

2.2 TDR and Precipitation Measurements

The Campbell Scientific datalogger was programmed to record a timestamp, temperature, TDR raw frequencies, and precipitation (in.). The program converts raw frequency to volumetric moisture content and then records the data (both raw and converted) to a *.dat file. The *.dat file is then routinely downloaded for analysis and reporting.

Figures 8 and 9 display moisture measurements versus precipitation. The cumulative precipitation was calculated from the Laboratory TA-49 weather station. The rain gauge data from the site are not reported because of damage to the gauge during the Cerro Grande fire. The on-site rain gauge was repaired in mid-August, and subsequent data are compared to the Laboratory TA-49 weather station for accuracy. It is anticipated that future reports will document on-site rain gauge data.

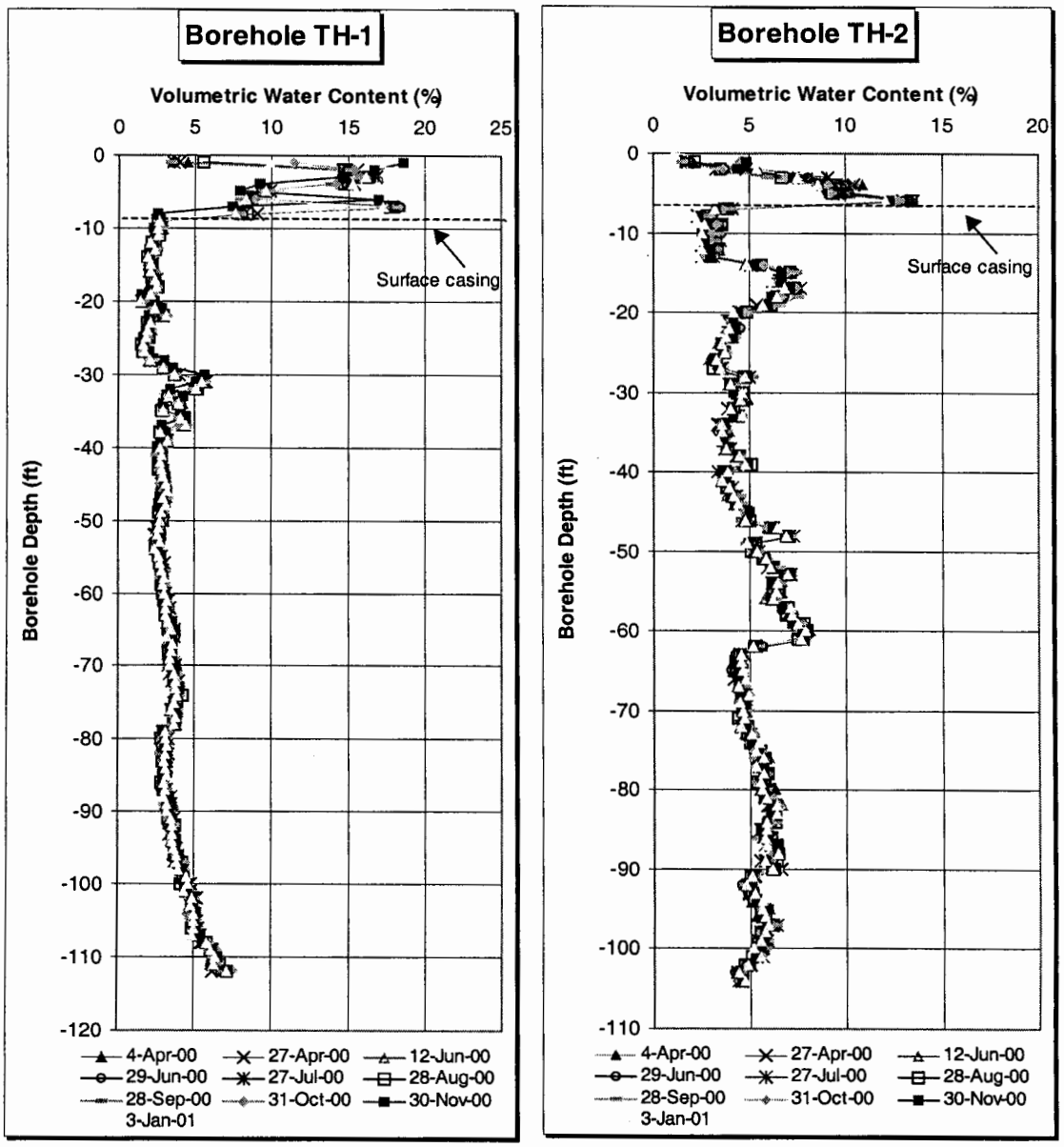

Figure 2. Neutron probe moisture measurements for monitoring holes TH-1 and TH-2

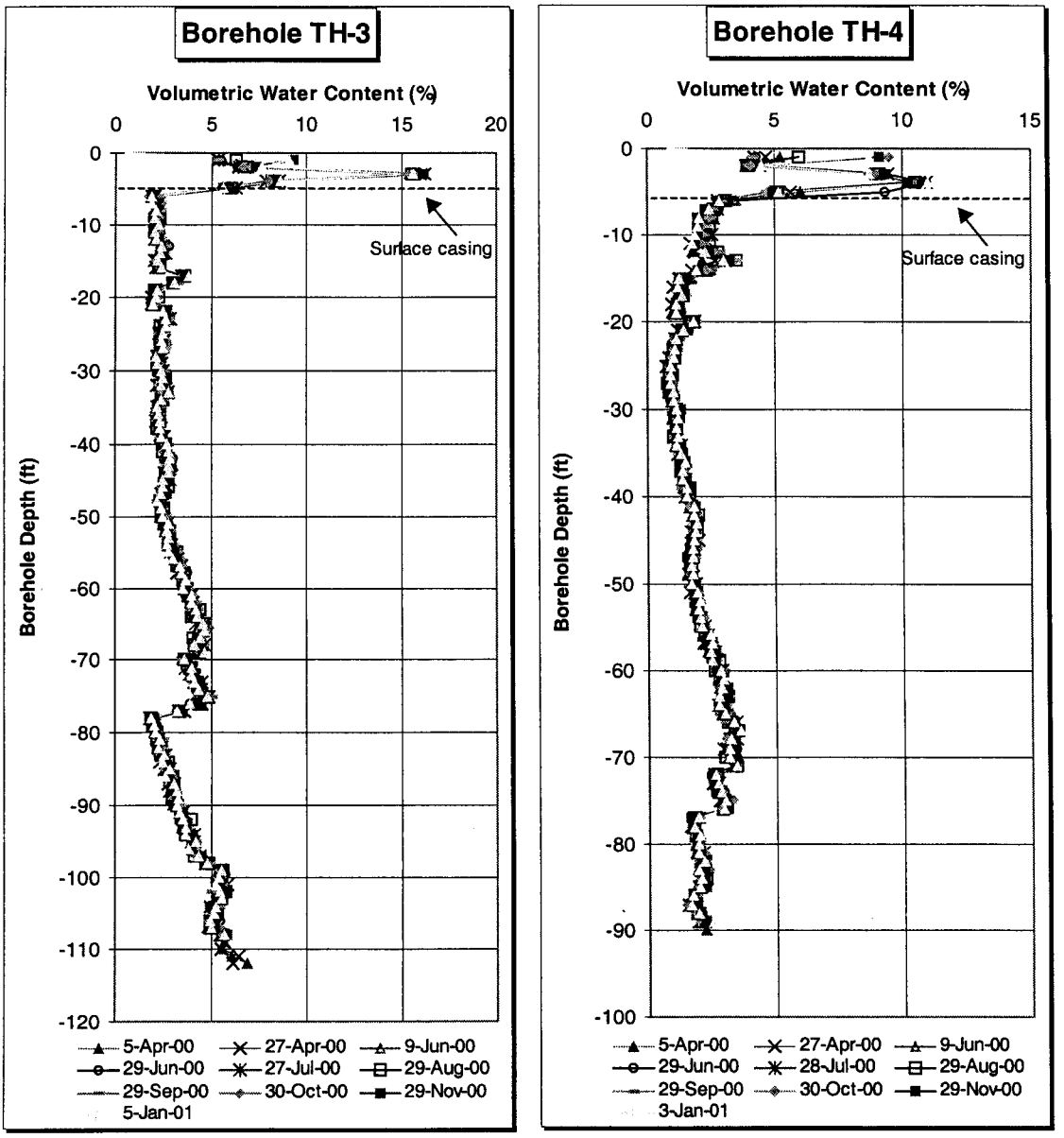

Figure 3. Neutron probe moisture measurements for monitoring holes TH-3 and TH-4

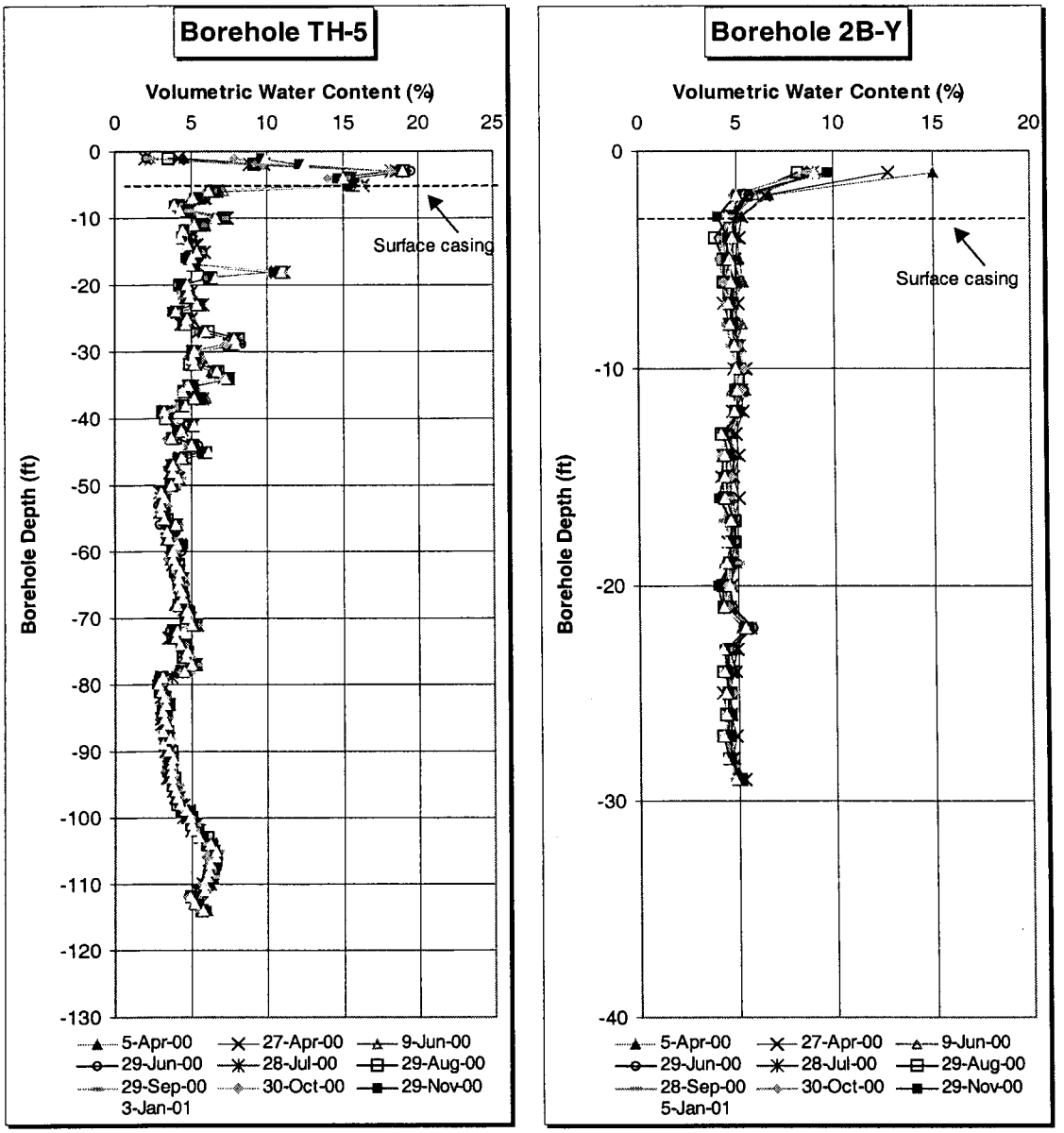

Figure 4. Neutron probe moisture measurements for monitoring holes TH-5 and 2B-Y

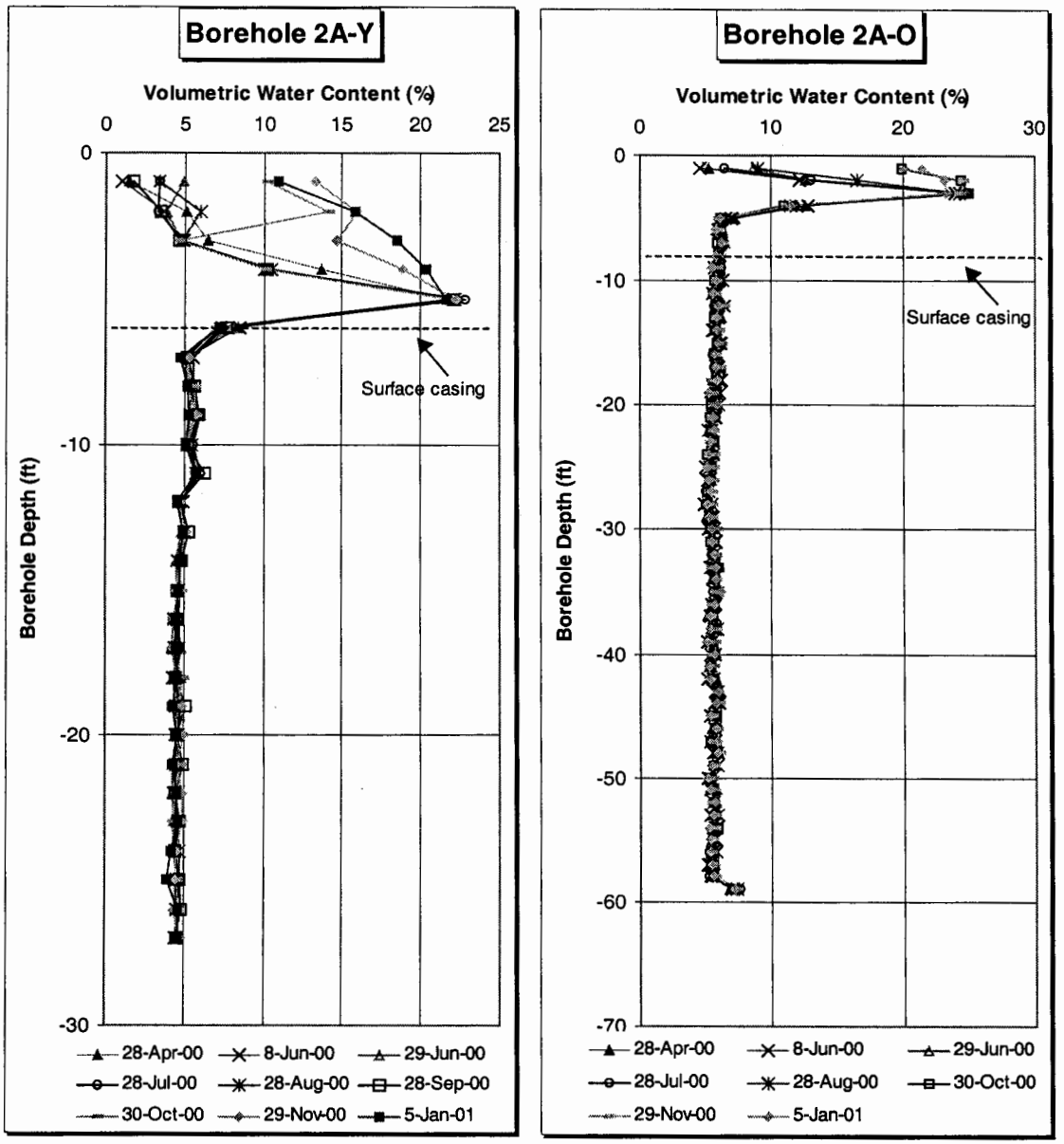

Figure 5. Neutron probe moisture measurements for monitoring holes 2A-Y and 2A-O

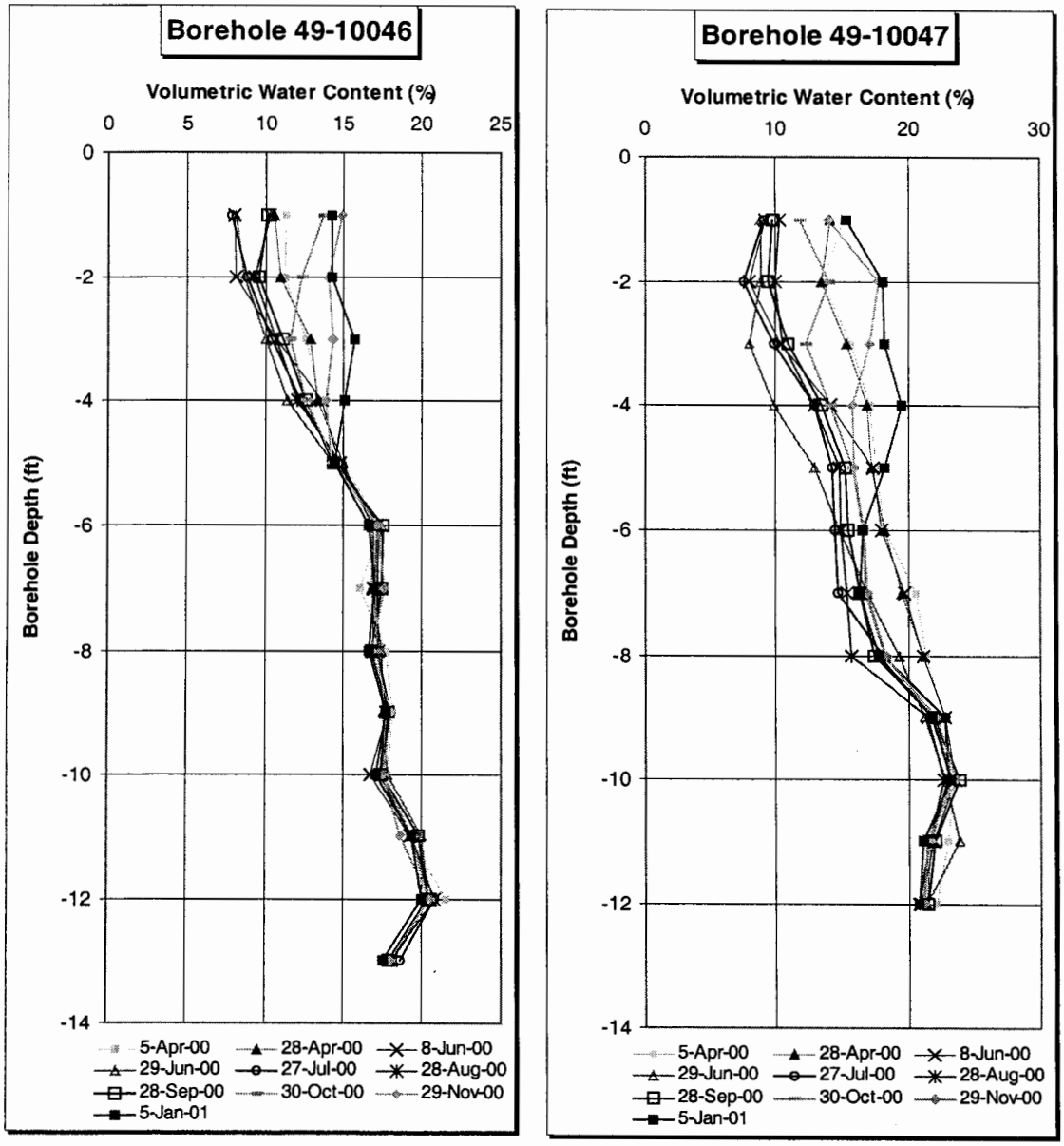

Figure 6. Neutron probe moisture measurements for monitoring holes 49-10046 and 49-10047

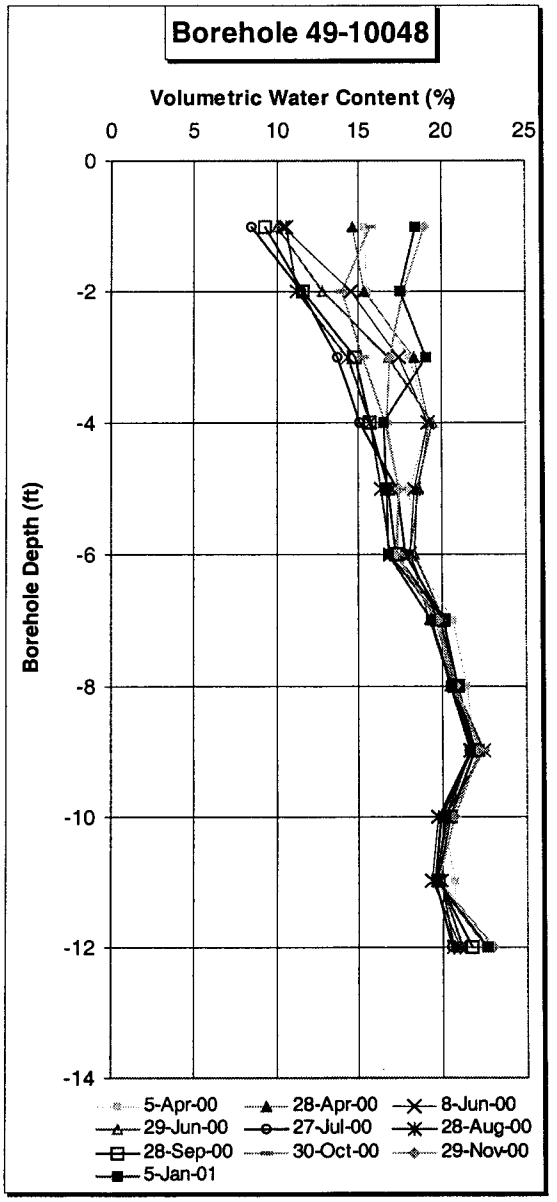

Figure 7. Neutron probe moisture measurements for monitoring hole 49-10048

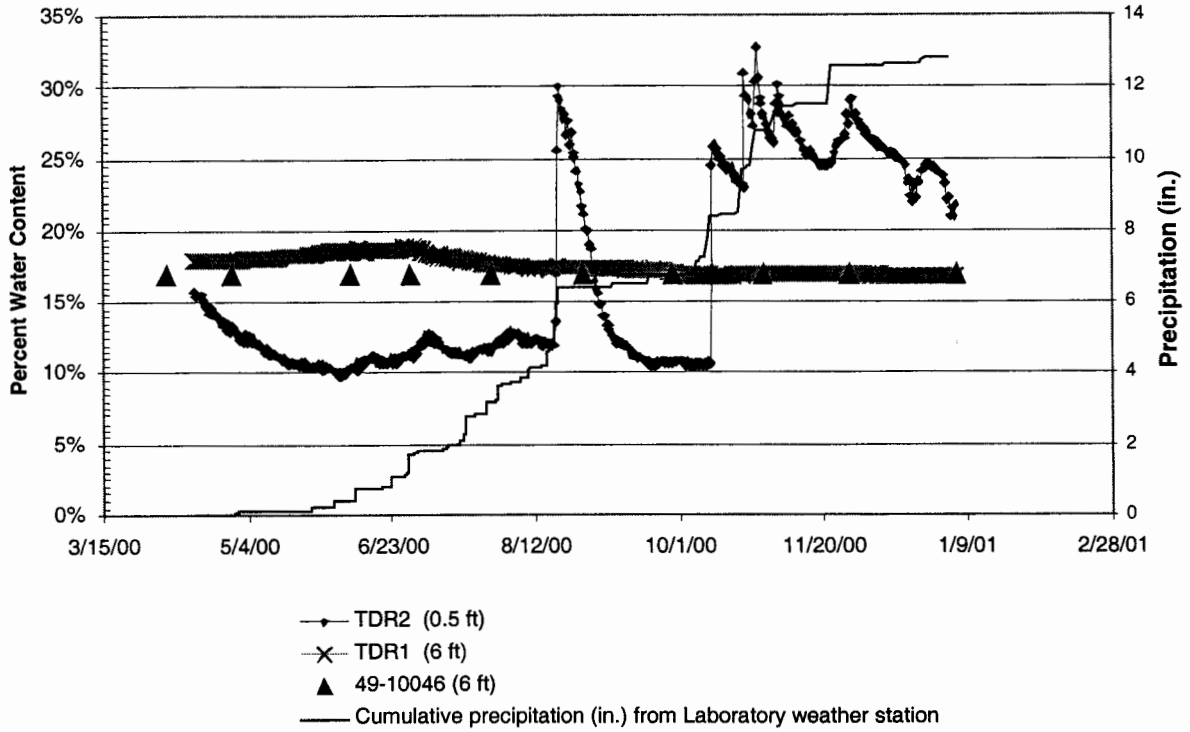

Figure 8. TDR measurements compared with neutron measurements at monitoring hole 49-10046, which is in close proximity and at the same corresponding depths as TDR1

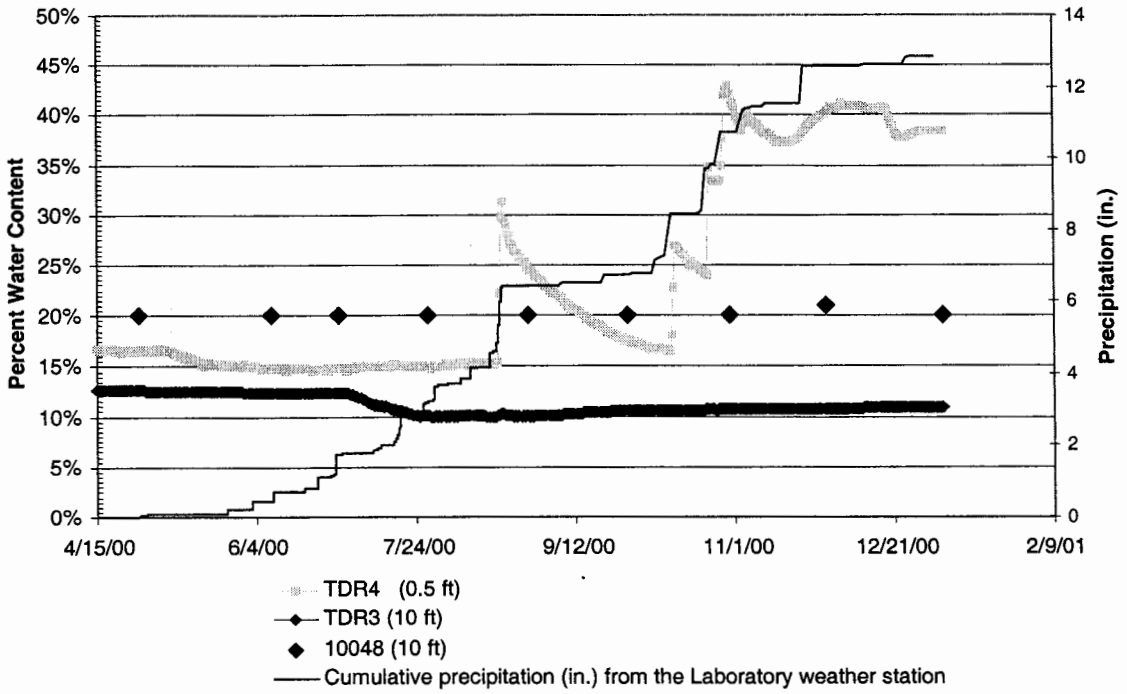

Figure 9. TDR measurements compared with neutron measurements at monitoring hole 49-10048, which is in close proximity and at the same corresponding depth as TDR3

3.0 DATA ANALYSIS

3.1 Student T-test of Neutron Data

A student t-test analysis was set up to trend changes in moisture over time for each of the neutron access holes. The trending analysis will only be performed on data collected using the new neutron probe, which was purchased for this project in late March of 2000. As of November, eight to nine data events are available for statistical analysis. When there are 10 data events for each borehole, the results from the trend analysis will be reported.

3.2 Correlation Between TDR Measurements and Precipitation Events

From October 2000 to January 2001, several intense rain/snow storms occurred. The TDR instruments responded with high correlation to periods of precipitation and to periods of dry weather. The weather station showed several intense precipitation events from October 7 through October 15 and October 22 through October 28 and on November 24 and December 25. The shallow TDRs displayed moderate (1% to 5%) and occasionally large (5% to 10%) increases in moisture content. To date, this effect has not been detected by the two deep TDR probes. The deep TDR moisture levels remained relatively constant through this period.

3.3 TDR and Neutron Comparisons

The moisture-monitoring system is performing as expected with consistent results from TDR arrays and neutron logging. Figures 8 and 9 display the deep TDR data associated with access holes 49-10046 and 49-10048. The neutron probe data from the same depth as the deep TDR probes are also shown. As previously stated, no statistically significant trends have been identified in the neutron data. The neutron probe data differs from the TDR results by no more than 2% volumetric moisture content at 49-10046. At 49-10048, the TDR and neutron probe differ on the order of 7% to 10%, with the neutron probe reading lower than the TDR probe. The greater difference in 49-10048 is likely due to the placement of the TDR probe within the El Cajete pumice. The neutron probe calibration is based on materials with densities closer to crushed tuff; the El Cajete pumice has a much lower bulk density. The correlation between the two moisture-monitoring methods will become more meaningful as further data are collected and significant seasonal inputs occur.

Appendix E

Quarterly Pore-Gas Sampling at Technical Area 54
Material Disposal Areas L and G,
and Technical Area 50, Borehole 50-9100
First Quarter, FY 2001

QUARTERLY PORE-GAS SAMPLING AT TECHNICAL AREA 54, MATERIAL DISPOSAL AREAS L AND G, AND TECHNICAL AREA 50, BOREHOLE 50-9100 FIRST QUARTER FISCAL YEAR 2001

MDA Focus Area
Environmental Restoration Project
Los Alamos National Laboratory

February 2001

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1.0 INTRODUCTION

This report discusses first-quarter subsurface pore-gas sampling at Los Alamos National Laboratory (the Laboratory), Technical Area 54 (TA-54), and TA-50. Monitoring at TA-54 is required by Module VIII of the Laboratory's Hazardous Waste Facility Permit in Section C.5, "Unsaturated Zone Monitoring" (EPA 1990). The approved plan (Davis 1993) for pore-gas sampling at TA-54 is described in the Laboratory's response (Glatzmaier 1993) to an Environmental Protection Agency notice of deficiency (Driscoll 1992) addressing the Laboratory's Resource Conservation and Recovery Act facility investigation (RFI) work plan for TA-54 (LANL 1992). Monitoring at TA-50 is being performed to gather RFI data.

The purpose of the pore-gas sampling at TA-54 Material Disposal Areas (MDAs) L and G is two-fold:

- to identify changes in contaminant concentrations at the perimeter of the relatively well-characterized plume at MDA L as an indicator of outward plume expansion (i.e., extent) and
- to monitor for contaminants and changes in contaminant concentration distributions within the plumes at MDAs L and G as an indicator of changes warranting further attention (i.e., nature).

The purpose of pore-gas sampling at TA-50 is to gather data on the nature and extent of a potential volatile organic compound (VOC) plume.

2.0 SAMPLING EVENT

During the first quarter of fiscal year (FY) 2001 (October through December 2000), 28 Environmental Restoration (ER) Project boreholes were available for pore-gas monitoring at TA-54. Additionally, three Performance Assessment Management Group (PAMG) boreholes were provided by the TA-54 Area G Performance Assessment Maintenance Team for the first-quarter monitoring. Borehole 50-9100 at TA-50, MDA C, was also monitored during the first quarter. Sampling was conducted in December 2000 and met the schedule in the FY00 annual pore-gas report.

All ports in all available boreholes (ER Project and PAMG boreholes) were screened with the Brüel and Kjaer (B&K) multigas monitor, Type 1302, for 1,1,1-trichloroethane (TCA), trichloroethene (TCE), Freon-11, and tetrachloroethylene (PCE). Screening identified the ports with the highest contaminant concentrations in each borehole.

Fourteen SUMMA canister samples were drawn from the sampling ports with the highest concentrations for laboratory analyses. In accordance with the approved sampling plan, 12 boreholes at TA-54 were sampled. These included eight at MDA L (seven were from the defined list in the sampling plan), two at MDA G, and two from the PAMG boreholes. The remaining two samples were taken at borehole 50-9100. Table 1 identifies the boreholes and ports sampled (from the list of all boreholes available) and indicates the reasons for sampling. Each port was purged and monitored with field instruments until CO2 levels stabilized at values representative of subsurface pore-gas conditions; the port was then sampled.

Three types of field quality assurance samples were also collected; these included a duplicate sample, an equipment blank of zero grade air (zero grade air is a common term for air that is certified to be free from VOC contamination) or nitrogen drawn through the sampling apparatus in the working area, and a performance evaluation sample taken from a tank of a certified gas mixture.

Table 1
Summa Sampling for First Quarter of Fiscal Year 2001

Borehole	Site	Port Depths (ft)	Reasoning
54-2009	MDA G	62	Nature
54-2010	MDA G	53	Permit
54-2002	MDA L	100	Source
54-2029	MDA L	100	Perimeter
54-1015	MDA L	385	Basalt
54-2021	MDA L	100	Permit
54-2023	MDA L	159	Permit
54-2030	MDA L	100	Permit
54-2034	MDA L	60	Permit
54-2026	MDA L	160	Data Gap
54-1111	PAMG	78	Nature
54-1117	PAMG	32	Nature
50-9100	MDA C	90	Nature
50-9100	MDA C	200	Nature
Duplicate	n/a*	n/a	Precision
Cal Gas	n/a	n/a	Accuracy
Blank	n/a	n/a	Laboratory contamination

* n/a = not applicable.

3.0 SAMPLING RESULTS

Field-screening data for the first quarter are available upon request. Because a different contract analytical laboratory was used for TO-14 analyses, the first-quarter sampling did not occur until December. Analytical results for the first quarter will be reported in the second-quarter pore-gas report.

Tables 1 and 2 in the November 2000 annual report on pore-gas sampling included only three quarters of data because of late receipt of analytical data for the fourth quarter. These tables have been updated to include all four quarters of the data and are included in this report as Tables 2 and 3.

Table 2
Summary of Detected Analytes at MDA L for FY 2000

Analyte	Frequency of Detection	Concentration Range (ppmv)
Dichlorodifluoromethane*	28//41	0.0031 to 0.64
Trichlorofluoromethane*	32/41	0.0036 to 81
Dichloroethene[1,1-]	40/41	0.0051 to 49
Trichloro-1,2,2-trifluoroethane[1,1,2-]*	40/41	0.0036 to 400
Dichloroethane[1,1-]	33/41	0.00029 to 140
TCA	41/41	0.0039 to 3500
TCE	40/41	0.012 to 2600
Tetrachloroethene	35/41	0.0031 to 160
Methylene chloride	27/41	0.0028 to 270
Acetone	2/41	0.0031 to 0.0037
Carbon tetrachloride	12/41	0.00047 to 17
Toluene	7/41	0.00041 to 9.4
Trichloroethane[1,1,2-]	1/41	22
Benzene	4/41	0.0026 to 2.5
n-Butane	2/41	0.00071 to 0.00095
Pentane	1/41	0.00073
n-Hexane	1/41	0.0018
Xylene (total)	1/41	2.4

* This chemical is one of the Freons.

Table 3
Summary of Detected Analytes at MDA G for FY 2000

Analyte	Frequency of Detection	Concentration Range (ppmv)
Dichlorodifluoromethane*	7/12	0.006 to 0.34
Chlorodifluoromethane*	3/12	0.0019 to 0.0049
Trichlorofluoromethane*	5/12	0.014 to 0.89
Dichloroethene[1,1-]	11/12	0.0021 to 7.7
Trichloro-1,2,2-trifluoroethane[1,1,2-]*	8/12	0.0037 to 2.5
Dichloroethane[1,1-]	11/12	0.00026 to 5
TCA	12/12	0.0075 to 140
TCE	10/12	0.00037 to 19
Tetrachloroethene	11/12	0.00041 to 1.2
Dichloroethene[1,2- cis]	1/12	0.0004
Acetone	2/12	0.0075
Vinyl acetate	1/12	0.00081
2-Butanone	1/12	0.0014 to 0.0064
Methylene chloride	4/12	0.014 to 11
Benzene	1/12	0.7
n-Heptane	1/12	0.58
Dibromomethane	1/12	0.51
Bromodichloromethane	1/12	0.64
Toluene	1/12	0.87
Dibromochloromethane	1/12	0.57
1,2-Dibromoethane	1/12	0.47
Hexachlorobutadiene	1/12	0.7
1-Butanol	1/12	0.0033

* This chemical is one of the Freons.

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Appendix F

Groundwater Sampling Results,
Regional Wells R-9, R-9i, R-12, R-15, and R-19
September and October 2000

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Table F-1
Regional Well R-9 Screen 1 Second Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Aluminum	1	683	10/02/00	F[e]	1	0	—[f]	[7.9]	50	0/1	5000	0/1
Aluminum	1	683	10/02/00	NF[g]	1	0	—	[7.9]	—	—	—	—
Ammonia (expressed as N)	1	683	10/02/00	F	1	0	—	[500]	—	—	—	—
Ammonia (expressed as N)	1	683	10/02/00	NF	1	0	—	[500]	—	—	—	—
Antimony	1	683	10/02/00	F	1	0	—	[0.173]	6	0/1	—	—
Antimony	1	683	10/02/00	NF	1	0	—	[0.174]	—	—	—	—
Arsenic	1	683	10/02/00	F	1	0	—	[3.4]	50	0/1	100	0/1
Arsenic	1	683	10/02/00	NF	1	0	—	[3.4]	—	—	—	—
Barium	1	683	10/02/00	F	1	1	130	—	2000	0/1	1000	0/1
Barium	1	683	10/02/00	NF	1	1	130	—	—	—	—	—
Beryllium	1	683	10/02/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	1	683	10/02/00	NF	1	0	—	[0.01]	—	—	—	—
Bicarbonate (as $CaCO_3$)	1	683	10/02/00	F	1	1	120000	—	—	—	—	—
Bicarbonate (as $CaCO_3$)	1	683	10/02/00	NF	1	1	120000	—	—	—	—	—
Boron	1	683	10/02/00	F	1	1	43	—	—	—	750	0/1
Boron	1	683	10/02/00	NF	1	1	50	—	—	—	—	—
Bromide	1	683	10/02/00	F	1	0	—	[200]	—	—	—	—
Bromide	1	683	10/02/00	NF	1	0	—	[200]	—	—	—	—
Cadmium	1	683	10/02/00	F	1	0	—	[0.059]	5	0/1	10	0/1
Cadmium	1	683	10/02/00	NF	1	0	—	[0.059]	—	—	—	—

Table F-1 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Calcium	1	683	10/02/00	F	1	1	25000	—	—	—	—	—
Calcium	1	683	10/02/00	NF	1	1	25000	—	—	—	—	—
Carbonate (as $CaCO_3$)	1	683	10/02/00	F	1	0	—	[20000]	—	—	—	—
Carbonate (as $CaCO_3$)	1	683	10/02/00	NF	1	0	—	[20000]	—	—	—	—
Chloride	1	683	10/02/00	F	1	1	7100	—	250000	0/1	250000	0/1
Chloride	1	683	10/02/00	NF	1	1	7200	—	—	—	—	—
Chromium	1	683	10/02/00	F	1	1	2.1	—	100	0/1	50	0/1
Chromium	1	683	10/02/00	NF	1	1	3.1	—	—	—	—	—
Cobalt	1	683	10/02/00	F	1	0	—	[0.66]	—	—	50	0/1
Cobalt	1	683	10/02/00	NF	1	0	—	[0.6]	—	—	—	—
Copper	1	683	10/02/00	F	1	1	0.88	—	1300	0/1	1000	0/1
Copper	1	683	10/02/00	NF	1	1	5.5	—	—	—	—	—
Cyanide (total)	1	683	10/02/00	NF	1	0	—	[10]	—	—	—	—
Fluoride	1	683	10/02/00	F	1	1	300	—	4000	0/1	1600	0/1
Fluoride	1	683	10/02/00	NF	1	1	300	—	—	—	—	—
Iron	1	683	10/02/00	F	1	0	—	[27]	300	0/1	1000	0/1
Iron	1	683	10/02/00	NF	1	1	290	—	—	—	—	—
Lead	1	683	10/02/00	F	1	0	—	[0.065]	15	0/1	50	0/1
Lead	1	683	10/02/00	NF	1	1	1.76	—	—	—	—	—
Magnesium	1	683	10/02/00	F	1	1	5900	—	—	—	—	—
Magnesium	1	683	10/02/00	NF	1	1	5900	—	—	—	—	—

Table F-1 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (μg/L)	Non-detected Value (μg/L)	Drinking Water MCL[b] (μg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (μg/L)	Frequency of Detects >NMED Groundwater Standard
Manganese	1	683	10/02/00	F	1	1	71	—	50	1/1	200	0/1
Manganese	1	683	10/02/00	NF	1	1	75	—	—	—	—	—
Mercury	1	683	10/02/00	F	1	0	—	[0.0092]	2	0/1	—	—
Mercury	1	683	10/02/00	NF	1	0	—	[0.0092]	—	—	2	0/1
Molybdenum	1	683	10/02/00	F	1	0	—	[3.1]	—	—	—	—
Molybdenum	1	683	10/02/00	NF	1	0	—	[3.1]	—	—	—	—
Nickel	1	683	10/02/00	F	1	1	0.95	—	100	0/1	200	0/1
Nickel	1	683	10/02/00	NF	1	1	1.4	—	—	—	—	—
Nitrate + Nitrite (expressed as N)	1	683	10/02/00	F	1	1	650	—	10000	0/1	—	—
Nitrate + Nitrite (expressed as N)	1	683	10/02/00	NF	1	1	660	—	—	—	—	—
Oxalate	1	683	10/02/00	F	1	0	—	[113]	—	—	—	—
Oxalate	1	683	10/02/00	NF	1	0	—	[113]	—	—	—	—
Phosphorus (total)	1	683	10/02/00	F	1	0	—	[50]	—	—	—	—
Phosphorus (total)	1	683	10/02/00	NF	1	0	—	[50]	—	—	—	—
Potassium	1	683	10/02/00	F	1	1	3600	—	—	—	—	—
Potassium	1	683	10/02/00	NF	1	1	3600	—	—	—	—	—
Selenium	1	683	10/02/00	F	1	0	—	[2.6]	50	0/1	50	0/1
Selenium	1	683	10/02/00	NF	1	0	—	[2.6]	—	—	—	—
Silicon Dioxide	1	683	10/02/00	F	1	1	74550	—	—	—	—	—
Silicon Dioxide	1	683	10/02/00	NF	1	1	74550	—	—	—	—	—

Table F-1 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Silver	1	683	10/02/00	F	1	0	—	[0.45]	100	0/1	50	0/1
Silver	1	683	10/02/00	NF	1	0	—	[0.45]	—	—	—	—
Sodium	1	683	10/02/00	F	1	1	16000	—	—	—	—	—
Sodium	1	683	10/02/00	NF	1	1	16000	—	—	—	—	—
Strontium	1	683	10/02/00	F	1	1	160	—	—	—	—	—
Strontium	1	683	10/02/00	NF	1	1	160	—	—	—	—	—
Sulfate	1	683	10/02/00	F	1	1	6300	—	250000	0/1	600000	0/1
Sulfate	1	683	10/02/00	NF	1	1	6300	—	—	—	—	—
Thallium	1	683	10/02/00	F	1	1	0.454	—	2	0/1	—	—
Thallium	1	683	10/02/00	NF	1	1	0.404	—	—	—	—	—
Total Kjeldahl Nitrogen	1	683	10/02/00	F	1	1	350	—	—	—	—	—
Total Kjeldahl Nitrogen	1	683	10/02/00	NF	1	1	750	—	—	—	—	—
Uranium by ICPMS[h]	1	683	10/02/00	F	1	1	1.75	—	—	—	—	—
Uranium by ICPMS	1	683	10/02/00	NF	1	1	1.71	—	—	—	—	—
Uranium by KPA[i]	1	683	10/02/00	F	1	1	1.85	—	—	—	—	—
Uranium by KPA	1	683	10/02/00	NF	1	1	1.87	—	—	—	—	—
Vanadium	1	683	10/02/00	F	1	1	11	—	—	—	—	—
Vanadium	1	683	10/02/00	NF	1	1	11	—	—	—	—	—
Zinc	1	683	10/02/00	F	1	0	—	[7.5]	5000	0/1	10000	0/1
Zinc	1	683	10/02/00	NF	1	0	—	[12]	—	—	—	—
Stable Isotopes (‰)												
δ 15N/14N	1	683	10/02/00	NF	1	1	+4.6	—	—	—	—	—
δ 18O/16O	1	683	10/02/00	NF	1	1	-10.4	—	—	—	—	—
δ D/H	1	683	10/02/00	NF	1	1	-75	—	—	—	—	—

Table F-1 (continued)

[a] The static water level for the regional aquifer at R-9 is 688 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] NF = Nonfiltered.

[h] ICPMS = Inductively coupled plasma mass spectrometry.

[i] KPA = Kinetic phosphorescence analysis.

Table F-2
Regional Well R-9 Screen 1 Second Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Toluene	1	683	10/02/00	NF[e]	1	1	12	1000	0/1	750	0/1
Total Organic Carbon	1	683	10/02/00	NF	1	1	2700	—[f]	—	—	—

[a] The static water level for the regional aquifer at R-9 is 688 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

Table F-3
Regional Well R-9 Screen 1 Second Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	1	683	10/02/00	F[c]	1	0	—[d]	[0.009]	15[e]	0/1
Americium-241	1	683	10/02/00	NF[f]	1	0	—	[0.032]	—	—
Gross Alpha Radiation	1	683	10/02/00	F	1	0	—	[1.2]	15	0/1
Gross Alpha Radiation	1	683	10/02/00	NF	1	0	—	[1.9]	—	—
Gross Beta Radiation	1	683	10/02/00	F	1	1	2.9	—	—	—
Gross Beta Radiation	1	683	10/02/00	NF	1	1	3.2	—	—	—
Gross Gamma Radiation	1	683	10/02/00	F	1	1	132	—	—	—
Gross Gamma Radiation	1	683	10/02/00	NF	1	1	192	—	—	—
Plutonium-238	1	683	10/02/00	F	1	0	—	[0.019]	15[e]	0/1
Plutonium-238	1	683	10/02/00	NF	1	0	—	[0.001]	—	—
Plutonium-239	1	683	10/02/00	F	1	0	—	[0.017]	15[e]	0/1
Plutonium-239	1	683	10/02/00	NF	1	0	—	[0.02]	—	—
Strontium-90	1	683	10/02/00	F	1	0	—	[0.19]	8	0/1
Strontium-90	1	683	10/02/00	NF	1	0	—	[0.28]	—	—
Tritium	1	683	10/02/00	NF	1	1	4.84	—	20000	0/1
Uranium-234	1	683	10/02/00	F	1	1	1.26	—	—	—
Uranium-234	1	683	10/02/00	NF	1	1	1.24	—	—	—
Uranium-235	1	683	10/02/00	F	1	0	—	[0.021]	—	—
Uranium-235	1	683	10/02/00	NF	1	1	0.1	—	—	—
Uranium-238	1	683	10/02/00	F	1	1	0.56	—	—	—
Uranium-238	1	683	10/02/00	NF	1	1	0.62	—	—	—

Table F-3 (continued)

[a] The static water level for the regional aquifer at R-9 is 688 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

Table F-4
Regional Well R-9i Screen 1 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Antimony	1	199	9/18/00	F[e]	1	0	—[f]	[0.683]	6	0/1	—	—
Antimony	1	199	9/18/00	NF[g]	1	0	—	[0.683]	—	—	—	—
Beryllium	1	199	9/18/00	F	1	1	0.012	—	4	0/1	—	—
Beryllium	1	199	9/18/00	NF	1	0	—	[0.01]	—	—	—	—
Cadmium	1	199	9/18/00	F	1	0	—	[0.13]	5	0/1	10	0/1
Cadmium	1	199	9/18/00	NF	1	0	—	[0.13]	—	—	—	—
Lead	1	199	9/18/00	F	1	1	0.137	—	15	0/1	50	0/1
Lead	1	199	9/18/00	NF	1	0	—	[0.01]	—	—	—	—
Thallium	1	199	9/18/00	F	1	0	—	[0.073]	2	0/1	—	—
Thallium	1	199	9/18/00	NF	1	0	—	[0.066]	—	—	—	—
Total Kjeldahl Nitrogen	1	199	9/18/00	F	1	1	400	—	—	—	—	—
Total Kjeldahl Nitrogen	1	199	9/18/00	NF	1	1	310	—	—	—	—	—
Uranium by ICPMS[h]	1	199	9/18/00	F	1	1	0.588	—	—	—	—	—
Uranium by ICPMS	1	199	9/18/00	NF	1	1	0.641	—	—	—	—	—
Stable Isotopes (‰)												
Delta 18O/16O	1	199	9/18/00	NF	1	1	-10.9	—	—	—	—	—
Delta D/H	1	199	9/18/00	NF	1	1	-79	—	—	—	—	—

Note: Some analytical results are still pending.

Table F-4 (continued)

[a] R-9i does not extend to the regional aquifer.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] NF = Nonfiltered.

[h] ICPMS = Inductively coupled plasma mass spectrometry.

Table F-5
Regional Well R-9i Screen 2 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Antimony	2	279	9/18/00	F[e]	1	0	—[f]	[0.683]	6	0/1	—	—
Antimony	2	279	9/18/00	NF[g]	1	0	—	[0.683]	—	—	—	—
Beryllium	2	279	9/18/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	2	279	9/18/00	NF	1	0	—	[0.01]	—	—	—	—
Cadmium	2	279	9/18/00	F	1	0	—	[0.13]	5	0/1	10	0/1
Cadmium	2	279	9/18/00	NF	1	1	0.148	—	—	—	—	—
Lead	2	279	9/18/00	F	1	0	—	[0.01]	15	0/1	50	0/1
Lead	2	279	9/18/00	NF	1	1	0.211	—	—	—	—	—
Thallium	2	279	9/18/00	F	1	1	0.103	—	2	0/1	—	—
Thallium	2	279	9/18/00	NF	1	1	0.125	—	—	—	—	—
Total Kjeldahl Nitrogen	2	279	9/18/00	F	1	0	—	[100]	—	—	—	—
Total Kjeldahl Nitrogen	2	279	9/18/00	NF	1	0	—	[100]	—	—	—	—
Uranium by ICPMS[h]	2	279	9/18/00	F	1	1	0.068	—	—	—	—	—
Uranium by ICPMS	2	279	9/18/00	NF	1	1	0.06	—	—	—	—	—
Stable Isotopes (‰)												
δ 18O/16O	2	279	9/18/00	NF	1	1	-10.9	—	—	—	—	—
δ D/H	2	279	9/18/00	NF	1	1	-77	—	—	—	—	—

Note: Some results are still pending.

Table F-5 (continued)

[a] R-9i does not extend to the regional aquifer.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or applicable.

[g] NF = Nonfiltered.

[h] ICPMS = Inductively coupled plasma mass spectrometry.

Table F-6
Regional Well R-9i Screen 1 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Dissolved Organic Carbon	1	199	9/18/00	F[e]	1	1	7200	—[f]	—	—	—
Humic Substances, Hydrophilic Acids	1	199	9/18/00	F	1	1	2800	—	—	—	—
Humic Substances, Hydrophilic Bases	1	199	9/18/00	F	1	1	600	—	—	—	—
Humic Substances, Hydrophilic Neutrals	1	199	9/18/00	F	1	1	300	—	—	—	—
Humic Substances, Hydrophilic Total	1	199	9/18/00	F	1	1	3700	—	—	—	—
Humic Substances, Hydrophobic Acids	1	199	9/18/00	F	1	1	1600	—	—	—	—
Humic Substances, Hydrophobic Bases	1	199	9/18/00	F	1	1	0	—	—	—	—
Humic Substances, Hydrophobic Neutrals	1	199	9/18/00	F	1	1	1900	—	—	—	—
Humic Substances, Hydrophobic Total	1	199	9/18/00	F	1	1	3500	—	—	—	—
Nitrotoluene[3-]	1	199	9/18/00	NF[g]	1	1	0.15	—	—	—	—
Total Organic Carbon	1	199	9/18/00	NF	1	1	3000	—	—	—	—

[a] R-9i does not extend to the regional aquifer.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] NF = Nonfiltered.

Table F-7
Regional Well R-9i Screen 2 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Amino-4,6-dinitrotoluene[2-]	2	279	9/18/00	NF[e]	1	1	0.15	—[f]	—	—	—
Dinitrotoluene[2,4-]	2	279	9/18/00	NF	1	1	0.5	—	—	—	—
Dissolved Organic Carbon	2	279	9/18/00	F[g]	1	1	3000	—	—	—	—
Humic Substances, Hydrophilic Acids	2	279	9/18/00	F	1	1	800	—	—	—	—
Humic Substances, Hydrophilic Bases	2	279	9/18/00	F	1	1	0	—	—	—	—
Humic Substances, Hydrophilic Neutrals	2	279	9/18/00	F	1	1	100	—	—	—	—
Humic Substances, Hydrophilic Total	2	279	9/18/00	F	1	1	1000	—	—	—	—
Humic Substances, Hydrophobic Acids	2	279	9/18/00	F	1	1	500	—	—	—	—
Humic Substances, Hydrophobic Bases	2	279	9/18/00	F	1	1	0	—	—	—	—
Humic Substances, Hydrophobic Neutrals	2	279	9/18/00	F	1	1	1500	—	—	—	—
Humic Substances, Hydrophobic Total	2	279	9/18/00	F	1	1	2000	—	—	—	—
RDX	2	279	9/18/00	NF	1	1	0.49	—	—	—	—

Note: Results for pesticides/PCBs, total organic carbon, semivolatile organic compounds, and volatile organic compounds are pending.

[a] R-9i does not extend to the regional aquifer.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

[g] F = Filtered.

Table F-8
Regional Well R-9i Screen 1 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	1	199	9/18/00	F[c]	1	0	—[d]	[0.032]	15[e]	0/1
Americium-241	1	199	9/18/00	NF[f]	1	0	—	[0.016]	—	—
Gross Alpha Radiation	1	199	9/18/00	F	1	0	—	[-0.1]	15	0/1
Gross Alpha Radiation	1	199	9/18/00	NF	1	0	—	[1]	—	—
Gross Beta Radiation	1	199	9/18/00	F	1	1	3.2	—	—	—
Gross Beta Radiation	1	199	9/18/00	NF	1	1	3.8	—	—	—
Gross Gamma Radiation	1	199	9/18/00	F	1	1	159	—	—	—
Gross Gamma Radiation	1	199	9/18/00	NF	1	1	188	—	—	—
Plutonium-238	1	199	9/18/00	F	1	0	—	[-0.005]	15[e]	0/1
Plutonium-238	1	199	9/18/00	NF	1	0	—	[0.01]	—	—
Plutonium-239	1	199	9/18/00	F	1	0	—	[0]	15[e]	0/1
Plutonium-239	1	199	9/18/00	NF	1	0	—	[0.004]	—	—
Strontium-90	1	199	9/18/00	F	1	0	—	[0.16]	8	0/1
Strontium-90	1	199	9/18/00	NF	1	0	—	[0.44]	—	—
Tritium	1	199	9/18/00	NF	1	1	81.4	—	20000	0/1
Uranium-234	1	199	9/18/00	F	1	1	0.28	—	—	—
Uranium-234	1	199	9/18/00	NF	1	1	0.47	—	—	—
Uranium-235	1	199	9/18/00	F	1	0	—	[0.045]	—	—
Uranium-235	1	199	9/18/00	NF	1	1	0.109	—	—	—
Uranium-238	1	199	9/18/00	F	1	1	0.208	—	—	—
Uranium-238	1	199	9/18/00	NF	1	1	0.238	—	—	—

Table F-8 (continued)

[a] R-9i does not extend to the regional aquifer.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

Table F-9
Regional Well R-9i Screen 2 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	2	279	9/18/00	F[c]	1	1	0.049	—[d]	15[e]	0/1
Americium-241	2	279	9/18/00	NF[f]	1	0	—	[0.03]	—	—
Gross Alpha Radiation	2	279	9/18/00	F	1	0	—	[0.1]	15	0/1
Gross Alpha Radiation	2	279	9/18/00	NF	1	0	—	[0.25]	—	—
Gross Beta Radiation	2	279	9/18/00	F	1	1	3.6	—	—	—
Gross Beta Radiation	2	279	9/18/00	NF	1	1	3.32	—	—	—
Gross Gamma Radiation	2	279	9/18/00	F	1	1	21	—	—	—
Gross Gamma Radiation	2	279	9/18/00	NF	1	1	144	—	—	—
Plutonium-238	2	279	9/18/00	F	1	0	—	[0.006]	15[e]	0/1
Plutonium-238	2	279	9/18/00	NF	1	0	—	[0.002]	—	—
Plutonium-239	2	279	9/18/00	F	1	0	—	[0]	15[e]	0/1
Plutonium-239	2	279	9/18/00	NF	1	0	—	[0]	—	—
Strontium-90	2	279	9/18/00	F	1	0	—	[0.01]	8	0/1
Strontium-90	2	279	9/18/00	NF	1	0	—	[0.23]	—	—
Tritium	2	279	9/18/00	NF	1	1	69.4	—	20000	0/1
Uranium-234	2	279	9/18/00	F	1	1	0.1	—	—	—
Uranium-234	2	279	9/18/00	NF	1	1	0.125	—	—	—
Uranium-235	2	279	9/18/00	F	1	0	—	[0.053]	—	—
Uranium-235	2	279	9/18/00	NF	1	0	—	[0.025]	—	—
Uranium-238	2	279	9/18/00	F	1	0	—	[0.041]	—	—
Uranium-238	2	279	9/18/00	NF	1	0	—	[0.052]	—	—

Table F-9 (continued)

[a] R-9i does not extend to the regional aquifer.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

Table F-10
Regional Well R-12 Screen 1 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Aluminum	1	468	9/20/00	F[e]	1	0	—[f]	[7.9]	50	0/1	5000	0/1
Aluminum	1	468	9/20/00	NF[g]	1	0	—	[7.9]	—	—	—	—
Ammonia (expressed as N)	1	468	9/20/00	F	1	1	1100	—	—	—	—	—
Ammonia (expressed as N)	1	468	9/20/00	NF	1	1	950	—	—	—	—	—
Antimony	1	468	9/20/00	F	1	1	1.28	—	6	0/1	—	—
Antimony	1	468	9/20/00	NF	1	0	—	[0.683]	—	—	—	—
Arsenic	1	468	9/20/00	F	1	0	—	[3.4]	50	0/1	100	0/1
Arsenic	1	468	9/20/00	NF	1	0	—	[3.4]	—	—	—	—
Barium	1	468	9/20/00	F	1	1	38	—	2000	0/1	1000	0/1
Barium	1	468	9/20/00	NF	1	1	42	—	—	—	—	—
Beryllium	1	468	9/20/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	1	468	9/20/00	NF	1	0	—	[0.01]	—	—	—	—
Bicarbonate (as $CaCO_3$)	1	468	9/20/00	F	1	1	170000	—	—	—	—	—
Bicarbonate (as $CaCO_3$)	1	468	9/20/00	NF	1	1	170000	—	—	—	—	—
Boron	1	468	9/20/00	F	1	1	96	—	—	—	750	0/1
Boron	1	468	9/20/00	NF	1	1	99	—	—	—	—	—
Bromide	1	468	9/20/00	F	1	0	—	[200]	—	—	—	—
Bromide	1	468	9/20/00	NF	1	0	—	[200]	—	—	—	—
Cadmium	1	468	9/20/00	F	1	0	—	[0.13]	5	0/1	10	0/1
Cadmium	1	468	9/20/00	NF	1	0	—	[0.13]	—	—	—	—
Calcium	1	468	9/20/00	F	1	1	30000	—	—	—	—	—
Calcium	1	468	9/20/00	NF	1	1	30000	—	—	—	—	—
Carbonate (as $CaCO_3$)	1	468	9/20/00	F	1	0	—	[20000]	—	—	—	—
Carbonate (as $CaCO_3$)	1	468	9/20/00	NF	1	0	—	[20000]	—	—	—	—

Table F-10 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Chloride	1	468	9/20/00	F	1	1	16000	—	250000	0/1	250000	0/1
Chloride	1	468	9/20/00	NF	1	1	16000	—	—	—	—	—
Chromium	1	468	9/20/00	F	1	0	—	[0.33]	100	0/1	50	0/1
Chromium	1	468	9/20/00	NF	1	0	—	[0.33]	—	—	—	—
Cobalt	1	468	9/20/00	F	1	1	0.46	—	—	—	50	0/1
Cobalt	1	468	9/20/00	NF	1	1	0.79	—	—	—	—	—
Copper	1	468	9/20/00	F	1	0	—	[0.3]	1300	0/1	1000	0/1
Copper	1	468	9/20/00	NF	1	0	—	[2.6]	—	—	—	—
Cyanide (total)	1	468	9/20/00	NF	1	0	—	[10]	—	—	—	—
Fluoride	1	468	9/20/00	F	1	1	520	—	4000	0/1	1600	0/1
Fluoride	1	468	9/20/00	NF	1	1	550	—	—	—	—	—
Iron	1	468	9/20/00	F	1	0	—	[160]	300	0/1	1000	0/1
Iron	1	468	9/20/00	NF	1	1	1200	—	—	—	—	—
Lead	1	468	9/20/00	NF	1	1	0.748	—	—	—	—	—
Lead	1	468	9/20/00	F	1	0	—	[0.01]	15	0/1	50	0/1
Magnesium	1	468	9/20/00	F	1	1	9000	—	—	—	—	—
Magnesium	1	468	9/20/00	NF	1	1	9000	—	—	—	—	—
Manganese	1	468	9/20/00	F	1	1	860	—	50	1/1	200	1/1
Manganese	1	468	9/20/00	NF	1	1	890	—	—	—	—	—
Mercury	1	468	9/20/00	F	1	0	—	[0.0092]	2	0/1	—	—
Mercury	1	468	9/20/00	NF	1	0	—	[0.0092]	—	—	2	0/1
Molybdenum	1	468	9/20/00	F	1	1	21	—	—	—	—	—
Molybdenum	1	468	9/20/00	NF	1	1	23	—	—	—	—	—
Nickel	1	468	9/20/00	F	1	1	5.1	—	100	0/1	200	0/1
Nickel	1	468	9/20/00	NF	1	1	5.6	—	—	—	—	—

Table F-10 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Nitrate + Nitrite (expressed as N)	1	468	9/20/00	F	1	0	—	[100]	10000	0/1	—	—
Nitrate + Nitrite (expressed as N)	1	468	9/20/00	NF	1	0	—	[100]	—	—	—	—
Perchlorate	1	468	9/20/00	F	1	0	—	[1.04]	—	—	—	—
Perchlorate	1	468	9/20/00	NF	1	0	—	[1.04]	—	—	—	—
Phosphorus (total)	1	468	9/20/00	F	1	0	—	[50]	—	—	—	—
Phosphorus (total)	1	468	9/20/00	NF	1	1	100	—	—	—	—	—
Potassium	1	468	9/20/00	F	1	1	4500	—	—	—	—	—
Potassium	1	468	9/20/00	NF	1	1	4500	—	—	—	—	—
Selenium	1	468	9/20/00	F	1	0	—	[2.6]	50	0/1	50	0/1
Selenium	1	468	9/20/00	NF	1	0	—	[2.6]	—	—	—	—
Silicon Dioxide	1	468	9/20/00	F	1	1	34080	—	—	—	—	—
Silicon Dioxide	1	468	9/20/00	NF	1	1	34080	—	—	—	—	—
Silver	1	468	9/20/00	F	1	0	—	[0.45]	100	0/1	50	0/1
Silver	1	468	9/20/00	NF	1	0	—	[0.45]	—	—	—	—
Sodium	1	468	9/20/00	F	1	1	26000	—	—	—	—	—
Sodium	1	468	9/20/00	NF	1	1	26000	—	—	—	—	—
Strontium	1	468	9/20/00	F	1	1	130	—	—	—	—	—
Strontium	1	468	9/20/00	NF	1	1	130	—	—	—	—	—
Sulfate	1	468	9/20/00	F	1	1	3600	—	250000	0/1	600000	0/1
Sulfate	1	468	9/20/00	NF	1	1	3600	—	—	—	—	—
Thallium	1	468	9/20/00	F	1	0	—	[0.026]	2	0/1	—	—
Thallium	1	468	9/20/00	NF	1	0	—	[0.093]	—	—	—	—
Total Kjeldahl Nitrogen	1	468	9/20/00	F	1	1	910	—	—	—	—	—
Total Kjeldahl Nitrogen	1	468	9/20/00	NF	1	1	760	—	—	—	—	—

Table F-10 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Uranium by ICPMS[h]	1	468	9/20/00	F	1	1	0.927	—	—	—	—	—
Uranium by ICPMS	1	468	9/20/00	NF	1	1	0.919	—	—	—	—	—
Uranium by KPA[i]	1	468	9/20/00	F	1	1	0.86	—	—	—	—	—
Uranium by KPA	1	468	9/20/00	NF	1	1	0.86	—	—	—	—	—
Vanadium	1	468	9/20/00	F	1	0	—	[0.33]	—	—	—	—
Vanadium	1	468	9/20/00	NF	1	0	—	[0.33]	—	—	—	—
Zinc	1	468	9/20/00	F	1	0	—	[9.3]	5000	0/1	10000	0/1
Zinc	1	468	9/20/00	NF	1	0	—	[7.8]	—	—	—	—
Stable Isotopes (‰)												
δ 18O/16O	1	468	9/20/00	NF	1	1	-11.4	—	—	—	—	—
δ D/H	1	468	9/20/00	NF	1	1	-84	—	—	—	—	—

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] NF = Nonfiltered.

[h] ICPMS = Inductively coupled plasma mass spectrometry.

[i] KPA = Kinetic phosphorescence analysis.

Table F-11
Regional Well R-12 Screen 2 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Aluminum	2	507	9/21/00	F[e]	1	0	—[f]	[7.9]	50	0/1	5000	0/1
Aluminum	2	507	9/21/00	NF[g]	1	0	—	[7.9]	—	—	—	—
Ammonia (expressed as N)	2	507	9/21/00	F	1	0	—	[500]	—	—	—	—
Ammonia (expressed as N)	2	507	9/21/00	NF	1	0	—	[500]	—	—	—	—
Antimony	2	507	9/21/00	F	1	0	—	[0.683]	6	0/1	—	—
Antimony	2	507	9/21/00	NF	1	0	—	[0.683]	—	—	—	—
Arsenic	2	507	9/21/00	F	1	0	—	[3.4]	50	0/1	100	0/1
Arsenic	2	507	9/21/00	NF	1	0	—	[3.4]	—	—	—	—
Barium	2	507	9/21/00	F	1	1	16	—	2000	0/1	1000	0/1
Barium	2	507	9/21/00	NF	1	1	16	—	—	—	—	—
Beryllium	2	507	9/21/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	2	507	9/21/00	NF	1	0	—	[0.01]	—	—	—	—
Bicarbonate (as $CaCO_3$)	2	507	9/21/00	F	1	1	50000	—	—	—	—	—
Bicarbonate (as $CaCO_3$)	2	507	9/21/00	NF	1	1	48000	—	—	—	—	—
Boron	2	507	9/21/00	F	1	0	—	[38]	—	—	750	0/1
Boron	2	507	9/21/00	NF	1	0	—	[42]	—	—	—	—
Bromide	2	507	9/21/00	F	1	0	—	[200]	—	—	—	—
Bromide	2	507	9/21/00	NF	1	0	—	[200]	—	—	—	—
Cadmium (as $CaCO_3$)	2	507	9/21/00	F	1	0	—	[0.13]	5	0/1	10	0/1
Cadmium (as $CaCO_3$)	2	507	9/21/00	NF	1	0	—	[0.13]	—	—	—	—

Table F-11 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Calcium	2	507	9/21/00	F	1	1	15000	—	—	—	—	—
Calcium	2	507	9/21/00	NF	1	1	15000	—	—	—	—	—
Carbonate (as $CaCO_3$)	2	507	9/21/00	F	1	1	14000	—	—	—	—	—
Carbonate (as $CaCO_3$)	2	507	9/21/00	NF	1	1	15000	—	—	—	—	—
Chloride	2	507	9/21/00	F	1	1	6700	—	250000	0/1	250000	0/1
Chloride	2	507	9/21/00	NF	1	1	6600	—	—	—	—	—
Chromium	2	507	9/21/00	F	1	0	—	[0.33]	100	0/1	50	0/1
Chromium	2	507	9/21/00	NF	1	0	—	[0.33]	—	—	—	—
Cobalt	2	507	9/21/00	F	1	1	0.34	—	—	—	50	0/1
Cobalt	2	507	9/21/00	NF	1	0	—	[0.3]	—	—	—	—
Copper	2	507	9/21/00	F	1	0	—	[0.7]	1300	0/1	1000	0/1
Copper	2	507	9/21/00	NF	1	1	2.8	—	—	—	—	—
Cyanide (total)	2	507	9/21/00	NF	1	0	—	[10]	—	—	—	—
Fluoride	2	507	9/21/00	F	1	1	430	—	4000	0/1	1600	0/1
Fluoride	2	507	9/21/00	NF	1	1	430	—	—	—	—	—
Iron	2	507	9/21/00	F	1	0	—	[25]	300	0/1	1000	0/1
Iron	2	507	9/21/00	NF	1	0	—	[84]	—	—	—	—
Lead	2	507	9/21/00	F	1	0	—	[0.102]	15	0/1	50	0/1
Lead	2	507	9/21/00	NF	1	1	0.448	—	—	—	—	—
Magnesium	2	507	9/21/00	F	1	1	3000	—	—	—	—	—
Magnesium	2	507	9/21/00	NF	1	1	3000	—	—	—	—	—
Manganese	2	507	9/21/00	F	1	1	180	—	50	1/1	200	0/1
Manganese	2	507	9/21/00	NF	1	1	180	—	—	—	—	—

Table F-11 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Mercury	2	507	9/21/00	F	1	0	—	[0.0092]	2	0/1	—	—
Mercury	2	507	9/21/00	NF	1	0	—	[0.0092]	—	—	2	0/1
Molybdenum	2	507	9/21/00	F	1	1	11	—	—	—	—	—
Molybdenum	2	507	9/21/00	NF	1	1	12	—	—	—	—	—
Nickel	2	507	9/21/00	F	1	0	—	[1.7]	100	0/1	200	0/1
Nickel	2	507	9/21/00	NF	1	0	—	[2.1]	—	—	—	—
Nitrate + Nitrite (expressed as N)	2	507	9/21/00	F	1	1	130	—	10000	0/1	—	—
Nitrate + Nitrite (expressed as N)	2	507	9/21/00	NF	1	0	—	[100]	—	—	—	—
Perchlorate	2	507	9/21/00	F	1	0	—	[1.04]	—	—	—	—
Perchlorate	2	507	9/21/00	NF	1	0	—	[1.04]	—	—	—	—
Phosphorus (total)	2	507	9/21/00	F	1	1	293.4	—	—	—	—	—
Phosphorus (total)	2	507	9/21/00	NF	1	1	32.6	—	—	—	—	—
Potassium	2	507	9/21/00	F	1	1	2100	—	—	—	—	—
Potassium	2	507	9/21/00	NF	1	1	2100	—	—	—	—	—
Selenium	2	507	9/21/00	F	1	0	—	[2.6]	50	0/1	50	0/1
Selenium	2	507	9/21/00	NF	1	0	—	[2.6]	—	—	—	—
Silicon Dioxide	2	507	9/21/00	F	1	1	29820	—	—	—	—	—
Silicon Dioxide	2	507	9/21/00	NF	1	1	29820	—	—	—	—	—
Silver	2	507	9/21/00	F	1	0	—	[0.45]	100	0/1	50	0/1
Silver	2	507	9/21/00	NF	1	0	—	[0.45]	—	—	—	—

Table F-11 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Sodium	2	507	9/21/00	F	1	1	9400	—	—	—	—	—
Sodium	2	507	9/21/00	NF	1	1	9500	—	—	—	—	—
Strontium	2	507	9/21/00	F	1	1	68	—	—	—	—	—
Strontium	2	507	9/21/00	NF	1	1	68	—	—	—	—	—
Sulfate	2	507	9/21/00	F	1	1	7700	—	250000	0/1	600000	0/1
Sulfate	2	507	9/21/00	NF	1	1	7400	—	—	—	—	—
Thallium	2	507	9/21/00	F	1	0		[0.166]	2	0/1	—	—
Thallium	2	507	9/21/00	NF	1	1	0.486	—	—	—	—	—
Total Kjeldahl Nitrogen	2	507	9/21/00	F	1	1	570	—	—	—	—	—
Total Kjeldahl Nitrogen	2	507	9/21/00	NF	1	1	470	—	—	—	—	—
Uranium by ICPMS[h]	2	507	9/21/00	F	1	1	0.463	—	—	—	—	—
Uranium by ICPMS	2	507	9/21/00	NF	1	1	0.507	—	—	—	—	—
Uranium by KPA[i]	2	507	9/21/00	F	1	1	0.43	—	—	—	—	—
Uranium by KPA	2	507	9/21/00	NF	1	1	0.52	—	—	—	—	—
Vanadium	2	507	9/21/00	F	1	1	0.48	—	—	—	—	—
Vanadium	2	507	9/21/00	NF	1	1	0.87	—	—	—	—	—
Zinc	2	507	9/21/00	F	1	0	—	[11]	5000	0/1	10000	0/1
Zinc	2	507	9/21/00	NF	1	0	—	[7.8]	—	—	—	—
Stable Isotopes (‰)												
δ 15N/14N	2	507	9/21/00	NF	1	1	-3.7	—	—	—	—	—
δ 18O/16O	2	507	9/21/00	NF	1	1	-11.5	—	—	—	—	—
δ D/H	2	507	9/21/00	NF	1	1	-85	—	—	—	—	—

Table F-11 (continued)

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] NF = Nonfiltered.

[h] ICPMS = Inductively coupled plasma mass spectrometry.

[i] KPA = Kinetic phosphorescence analysis.

Table F-12
Regional Well R-12 Screen 3 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Aluminum	3	812	9/25/00	F[e]	1	0	—[f]	[7.9]	50	0/1	5000	0/1
Aluminum	3	812	9/25/00	NF[g]	1	0	—	[7.9]	—	—	—	—
Ammonia (expressed as N)	3	812	9/25/00	F	1	0	—	[500]	—	—	—	—
Ammonia (expressed as N)	3	812	9/25/00	NF	1	0	—	[500]	—	—	—	—
Antimony	3	812	9/25/00	F	1	0	—	[0.683]	6	0/1	—	—
Antimony	3	812	9/25/00	NF	1	0	—	[0.683]	—	—	—	—
Arsenic	3	812	9/25/00	F	1	0	—	[3.4]	50	0/1	100	0/1
Arsenic	3	812	9/25/00	NF	1	0	—	[3.4]	—	—	—	—
Barium	3	812	9/25/00	F	1	1	110	—	2000	0/1	1000	0/1
Barium	3	812	9/25/00	NF	1	1	110	—	—	—	—	—
Beryllium	3	812	9/25/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	3	812	9/25/00	NF	1	0	—	[0.01]	—	—	—	—
Bicarbonate (as $CaCO_3$)	3	812	9/25/00	F	1	1	170000	—	—	—	—	—
Bicarbonate (as $CaCO_3$)	3	812	9/25/00	NF	1	1	160000	—	—	—	—	—
Boron	3	812	9/25/00	F	1	1	110	—	—	—	750	0/1
Boron	3	812	9/25/00	NF	1	1	100	—	—	—	—	—
Bromide	3	812	9/25/00	F	1	0	—	[200]	—	—	—	—
Bromide	3	812	9/25/00	NF	1	0	—	[200]	—	—	—	—
Cadmium	3	812	9/25/00	F	1	0	—	[0.13]	5	0/1	10	0/1
Cadmium	3	812	9/25/00	NF	1	0	—	[0.13]	—	—	—	—

Table F-12 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Calcium	3	812	9/25/00	F	1	1	41000	—	—	—	—	—
Calcium	3	812	9/25/00	NF	1	1	40000	—	—	—	—	—
Carbonate (as $CaCO_3$)	3	812	9/25/00	F	1	0	—	[20000]	—	—	—	—
Carbonate (as $CaCO_3$)	3	812	9/25/00	NF	1	0	—	[20000]	—	—	—	—
Chloride	3	812	9/25/00	F	1	1	10000	—	250000	0/1	250000	0/1
Chloride	3	812	9/25/00	NF	1	1	10000	—	—	—	—	—
Chromium	3	812	9/25/00	F	1	0	—	[0.33]	100	0/1	50	0/1
Chromium	3	812	9/25/00	NF	1	1	2.1	—	—	—	—	—
Cobalt	3	812	9/25/00	F	1	1	3.1	—	—	—	50	0/1
Cobalt	3	812	9/25/00	NF	1	1	2.6	—	—	—	—	—
Copper	3	812	9/25/00	NF	1	0	—	[1.1]	—	—	—	—
Copper	3	812	9/25/00	F	1	0	—	[0.46]	1300	0/1	1000	0/1
Cyanide (total)	3	812	9/25/00	NF	1	0	—	[10]	—	—	—	—
Fluoride	3	812	9/25/00	F	1	1	270	—	4000	0/1	1600	0/1
Fluoride	3	812	9/25/00	NF	1	1	270	—	—	—	—	—
Iron	3	812	9/25/00	F	1	1	740	—	300	1/1	1000	0/1
Iron	3	812	9/25/00	NF	1	1	1100	—	—	—	—	—
Lead	3	812	9/25/00	F	1	0	—	[0.01]	15	0/1	50	0/1
Lead	3	812	9/25/00	NF	1	0	—	[0.01]	—	—	—	—
Magnesium	3	812	9/25/00	F	1	1	9900	—	—	—	—	—
Magnesium	3	812	9/25/00	NF	1	1	9700	—	—	—	—	—

Table F-12 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Manganese	3	812	9/25/00	F	1	1	1100	—	50	1/1	200	1/1
Manganese	3	812	9/25/00	NF	1	1	1100	—	—	—	—	—
Mercury	3	812	9/25/00	F	1	0	—	[0.0092]	2	0/1	—	—
Mercury	3	812	9/25/00	NF	1	0	—	[0.0092]	—	—	2	0/1
Molybdenum	3	812	9/25/00	F	1	1	8.3	—	—	—	—	—
Molybdenum	3	812	9/25/00	NF	1	1	11	—	—	—	—	—
Nickel	3	812	9/25/00	F	1	1	49	—	100	0/1	200	0/1
Nickel	3	812	9/25/00	NF	1	1	53	—	—	—	—	—
Nitrate + Nitrite (expressed as N)	3	812	9/25/00	F	1	0	—	[100]	10000	0/1	—	—
Nitrate + Nitrite (expressed as N)	3	812	9/25/00	NF	1	0	—	[100]	—	—	—	—
Perchlorate	3	812	9/25/00	F	1	0	—	[1.04]	—	—	—	—
Perchlorate	3	812	9/25/00	NF	1	0	—	[1.04]	—	—	—	—
Phosphorus (total)	3	812	9/25/00	F	1	0	—	[50]	—	—	—	—
Phosphorus (total)	3	812	9/25/00	NF	1	0	—	[50]	—	—	—	—
Potassium	3	812	9/25/00	F	1	1	4400	—	—	—	—	—
Potassium	3	812	9/25/00	NF	1	1	4300	—	—	—	—	—
Selenium	3	812	9/25/00	F	1	0	—	[2.6]	50	0/1	50	0/1
Selenium	3	812	9/25/00	NF	1	0	—	[2.6]	—	—	—	—
Silicon Dioxide	3	812	9/25/00	F	1	1	55380	—	—	—	—	—
Silicon Dioxide	3	812	9/25/00	NF	1	1	55380	—	—	—	—	—

Table F-12 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Silver	3	812	9/25/00	F	1	0	—	[0.45]	100	0/1	50	0/1
Silver	3	812	9/25/00	NF	1	0	—	[0.45]	—	—	—	—
Sodium	3	812	9/25/00	F	1	1	18000	—	—	—	—	—
Sodium	3	812	9/25/00	NF	1	1	18000	—	—	—	—	—
Strontium	3	812	9/25/00	F	1	1	210	—	—	—	—	—
Strontium	3	812	9/25/00	NF	1	1	200	—	—	—	—	—
Sulfate	3	812	9/25/00	F	1	1	16000	—	250000	0/1	600000	0/1
Sulfate	3	812	9/25/00	NF	1	1	16000	—	—	—	—	—
Thallium	3	812	9/25/00	F	1	0	—	[0.026]	2	0/1	—	—
Thallium	3	812	9/25/00	NF	1	0	—	[0.026]	—	—	—	—
Total Kjeldahl Nitrogen	3	812	9/25/00	F	1	1	250	—	—	—	—	—
Total Kjeldahl Nitrogen	3	812	9/25/00	NF	1	1	280	—	—	—	—	—
Uranium by ICPMS[h]	3	812	9/25/00	F	1	1	0.333	—	—	—	—	—
Uranium by ICPMS	3	812	9/25/00	NF	1	1	0.896	—	—	—	—	—
Uranium by KPA[i]	3	812	9/25/00	F	1	1	0.31	—	—	—	—	—
Uranium by KPA	3	812	9/25/00	NF	1	1	0.81	—	—	—	—	—
Vanadium	3	812	9/25/00	F	1	1	1.7	—	—	—	—	—
Vanadium	3	812	9/25/00	NF	1	1	1	—	—	—	—	—

Table F-12 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Zinc	3	812	9/25/00	F	1	0	—	[22]	5000	0/1	10000	0/1
Zinc	3	812	9/25/00	NF	1	0	—	[9.7]	—	—	—	—
Stable Isotopes (‰)												
δ 18O/16O	3	812	9/25/00	NF	1	1	-11.3	—	—	—	—	—
δ D/H	3	812	9/25/00	NF	1	1	-81	—	—	—	—	—

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] NF = Nonfiltered.

[h] ICPMS = Inductively coupled plasma mass spectrometry.

[i] KPA = Kinetic phosphorescence analysis.

Table F-13
Regional Well R-12 Screen 1 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Bis(2-ethylhexyl)phthalate	1	468	9/20/00	NF[e]	1	1	3.2	6	0/1	—[f]	—
Total Organic Carbon	1	468	9/20/00	NF	1	1	7700	—	—	—	—

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

Table F-14
Regional Well R-12 Screen 2 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Carbon Disulfide	2	507	9/21/00	NF[e]	1	1	1.7	—[f]	—	—	—
Total Organic Carbon	2	507	9/21/00	NF	1	1	16000	—	—	—	—

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

Table F-15
Regional Well R-12 Screen 3 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Total Organic Carbon	3	811	9/25/00	NF[e]	1	1	45000	—[f]	—	—	—

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

Table F-16
Regional Well R-12 Screen 1 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	1	468	9/20/00	F[c]	1	0	—[d]	[0.00255]	15[e]	0/1
Americium-241	1	468	9/20/00	NF[f]	1	0	—	[0.000282]	—	—
Gross Alpha Radiation	1	468	9/20/00	F	1	0	—	[0.921]	15	0/1
Gross Alpha Radiation	1	468	9/20/00	NF	1	0	—	[0.884]	—	—
Gross Beta Radiation	1	468	9/20/00	F	1	1	5.23	—	—	—
Gross Beta Radiation	1	468	9/20/00	NF	1	1	6.35	—	—	—
Plutonium-238	1	468	9/20/00	F	1	0	—	[-0.00159]	15[e]	0/1
Plutonium-238	1	468	9/20/00	NF	1	0	—	[0.000406]	—	—
Plutonium-239	1	468	9/20/00	F	1	0	—	[0.00397]	15[e]	0/1
Plutonium-239	1	468	9/20/00	NF	1	0	—	[0.00202]	—	—
Strontium-90	1	468	9/20/00	F	1	0	—	[0.178]	8	0/1
Strontium-90	1	468	9/20/00	NF	1	0	—	[0.494]	—	—
Tritium	1	468	9/20/00	NF	1	1	60.3	—	20000	0/1
Uranium-234	1	468	9/20/00	F	1	1	0.399	—	—	—
Uranium-234	1	468	9/20/00	NF	1	1	0.431	—	—	—
Uranium-235	1	468	9/20/00	F	1	0	—	[0.00765]	—	—
Uranium-235	1	468	9/20/00	NF	1	0	—	[0.0173]	—	—
Uranium-238	1	468	9/20/00	F	1	1	0.248	—	—	—
Uranium-238	1	468	9/20/00	NF	1	1	0.26	—	—	—

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

Table F-17
Regional Well R-12 Screen 2 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Tritium	2	507	9/21/00	NF [c]	1	1	30.1	—[d]	20000	0/1

Note: Some results are still pending.

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NF = Nonfiltered.

[d] — = Not available or not applicable.

Table F-18
Regional Well R-12 Screen 3 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	3	811	9/25/00	F[c]	1	0	—[d]	[0.012]	15[e]	0/1
Americium-241	3	811	9/25/00	NF[f]	1	0	—	[0.027]	—	—
Cesium-134	3	811	9/25/00	F	1	0	—	[-0.2]	—	—
Cesium-134	3	811	9/25/00	NF	1	0	—	[0.3]	—	—
Cesium-137	3	811	9/25/00	F	1	0	—	[-0.7]	—	—
Cesium-137	3	811	9/25/00	NF	1	0	—	[-0.7]	—	—
Cobalt-60	3	811	9/25/00	F	1	0	—	[-0.2]	—	—
Cobalt-60	3	811	9/25/00	NF	1	0	—	[0.6]	—	—
Europium-152	3	811	9/25/00	F	1	0	—	[1.7]	—	—
Europium-152	3	811	9/25/00	NF	1	0	—	[1.1]	—	—
Gross Alpha Radiation	3	811	9/25/00	F	1	0	—	[1.2]	15	0/1
Gross Alpha Radiation	3	811	9/25/00	NF	1	0	—	[-0.21]	—	—
Gross Beta Radiation	3	811	9/25/00	F	1	1	4.9	—	—	—
Gross Beta Radiation	3	811	9/25/00	NF	1	1	3.8	—	—	—
Gross Gamma Radiation	3	811	9/25/00	F	1	0	—	[346]	—	—
Gross Gamma Radiation	3	811	9/25/00	NF	1	0	—	[330]	—	—
Neptunium-237	3	811	9/25/00	F	1	0	—	[-3]	—	—
Neptunium-237	3	811	9/25/00	NF	1	0	—	[5]	—	—
Plutonium-238	3	811	9/25/00	F	1	0	—	[0.033]	15[e]	0/1
Plutonium-238	3	811	9/25/00	NF	1	0	—	[-0.007]	—	—
Plutonium-239	3	811	9/25/00	F	1	0	—	[0.006]	15[e]	0/1
Plutonium-239	3	811	9/25/00	NF	1	0	—	[0]	—	—
Ruthenium-106	3	811	9/25/00	F	1	0	—	[5]	—	—

Table F-18 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Ruthenium-106	3	811	9/25/00	NF	1	0	—	[0]	—	—
Sodium-22	3	811	9/25/00	F	1	0	—	[-0.4]	—	—
Sodium-22	3	811	9/25/00	NF	1	0	—	[-0.8]	—	—
Strontium-90	3	811	9/25/00	F	1	0	—	[0.25]	8	0/1
Strontium-90	3	811	9/25/00	NF	1	0	—	[0.11]	—	—
Tritium	3	811	9/25/00	NF	1	1	25.9	—	20000	0/1
Uranium-234	3	811	9/25/00	F	1	1	0.236	—	—	—
Uranium-234	3	811	9/25/00	NF	1	1	0.261	—	—	—
Uranium-235	3	811	9/25/00	F	1	0	—	[0.055]	—	—
Uranium-235	3	811	9/25/00	NF	1	0	—	[0.043]	—	—
Uranium-238	3	811	9/25/00	F	1	1	0.108	—	—	—
Uranium-238	3	811	9/25/00	NF	1	1	0.163	—	—	—

[a] The static water level for the regional aquifer at R-12 is 805 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

Table F-19
Regional Well R-15 Screen 1 Second Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Aluminum	1	1015	10/11/00	F[e]	1	0	—[f]	[49.5]	50	0/1	5000	0/1
Aluminum	1	1015	10/11/00	NF[g]	1	0	—	[53]	—	—	—	—
Ammonia (expressed as N)	1	1015	10/11/00	F	1	1	160	—	—	—	—	—
Ammonia (expressed as N)	1	1015	10/11/00	NF	1	1	110	—	—	—	—	—
Antimony	1	1015	10/11/00	F	1	0	—	[0.485]	6	0/1	—	—
Antimony	1	1015	10/11/00	NF	1	0	—	[0.431]	—	—	—	—
Arsenic	1	1015	10/11/00	F	1	0	—	[1.8]	50	0/1	100	0/1
Arsenic	1	1015	10/11/00	NF	1	0	—	[1.3]	—	—	—	—
Barium	1	1015	10/11/00	F	1	1	22	—	2000	0/1	1000	0/1
Barium	1	1015	10/11/00	NF	1	1	22	—	—	—	—	—
Beryllium	1	1015	10/11/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	1	1015	10/11/00	NF	1	0	—	[0.035]	—	—	—	—
Bicarbonate (as $CaCO_3$)	1	1015	10/11/00	F	1	1	44000	—	—	—	—	—
Bicarbonate (as $CaCO_3$)	1	1015	10/11/00	NF	1	1	45000	—	—	—	—	—
Boron	1	1015	10/11/00	F	1	0	—	[11]	—	—	750	0/1
Boron	1	1015	10/11/00	NF	1	0	—	[21]	—	—	—	—
Bromide	1	1015	10/11/00	F	1	0	—	[20000]	—	—	—	—
Bromide	1	1015	10/11/00	NF	1	1	21000	—	—	—	—	—
Cadmium	1	1015	10/11/00	F	1	0	—	[0.059]	5	0/1	10	0/1
Cadmium	1	1015	10/11/00	NF	1	0	—	[0.059]	—	—	—	—

Table F-19 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Calcium	1	1015	10/11/00	F	1	1	12000	—	—	—	—	—
Calcium	1	1015	10/11/00	NF	1	1	12000	—	—	—	—	—
Carbonate (as $CaCO_3$)	1	1015	10/11/00	F	1	0	—	[10000]	—	—	—	—
Carbonate (as $CaCO_3$)	1	1015	10/11/00	NF	1	0	—	[10000]	—	—	—	—
Chloride	1	1015	10/11/00	F	1	1	4000	—	250000	0/1	250000	0/1
Chloride	1	1015	10/11/00	NF	1	1	4300	—	—	—	—	—
Chromium	1	1015	10/11/00	F	1	1	5.3	—	100	0/1	50	0/1
Chromium	1	1015	10/11/00	NF	1	1	5.2	—	—	—	—	—
Cobalt	1	1015	10/11/00	F	1	0	—	[0.2]	—	—	50	0/1
Cobalt	1	1015	10/11/00	NF	1	0	—	[0.2]	—	—	—	—
Copper	1	1015	10/11/00	F	1	0	—	[2]	1300	0/1	1000	0/1
Copper	1	1015	10/11/00	NF	1	0	—	[3.7]	—	—	—	—
Cyanide (total)	1	1015	10/11/00	NF	1	0	—	[10]	—	—	—	—
Fluoride	1	1015	10/11/00	F	1	1	220	—	4000	0/1	1600	0/1
Fluoride	1	1015	10/11/00	NF	1	1	250	—	—	—	—	—
Iron	1	1015	10/11/00	F	1	1	20	—	300	0/1	1000	0/1
Iron	1	1015	10/11/00	NF	1	1	49	—	—	—	—	—
Lead	1	1015	10/11/00	F	1	0	—	[0.014]	15	0/1	50	0/1
Lead	1	1015	10/11/00	NF	1	1	0.654	—	—	—	—	—
Magnesium	1	1015	10/11/00	F	1	1	3200	—	—	—	—	—
Magnesium	1	1015	10/11/00	NF	1	1	3100	—	—	—	—	—

Table F-19 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Manganese	1	1015	10/11/00	F	1	1	1.2	—	50	0/1	200	0/1
Manganese	1	1015	10/11/00	NF	1	1	1.7	—	—	—	—	—
Mercury	1	1015	10/11/00	F	1	0	—	[0.05]	2	0/1	—	—
Mercury	1	1015	10/11/00	NF	1	0	—	[0.05]	—	—	2	0/1
Molybdenum	1	1015	10/11/00	F	1	0	—	[10.2]	—	—	—	—
Molybdenum	1	1015	10/11/00	NF	1	0	—	[10.2]	—	—	—	—
Nickel	1	1015	10/11/00	F	1	0	—	[1]	100	0/1	200	0/1
Nickel	1	1015	10/11/00	NF	1	0	—	[1]	—	—	—	—
Nitrate + Nitrite (expressed as N)	1	1015	10/11/00	F	1	1	2300	—	10000	0/1	—	—
Nitrate + Nitrite (expressed as N)	1	1015	10/11/00	NF	1	1	2400	—	—	—	—	—
Perchlorate	1	1015	10/11/00	F	1	0	—	[2.8]	—	—	—	—
Phosphorus (total)	1	1015	10/11/00	F	1	0	—	[100]	—	—	—	—
Phosphorus (total)	1	1015	10/11/00	NF	1	0	—	[100]	—	—	—	—
Potassium	1	1015	10/11/00	F	1	1	1600	—	—	—	—	—
Potassium	1	1015	10/11/00	NF	1	1	1200	—	—	—	—	—
Selenium	1	1015	10/11/00	F	1	1	0.956	—	50	0/1	50	0/1
Selenium	1	1015	10/11/00	NF	1	1	0.889	—	—	—	—	—
Silicon Dioxide	1	1015	10/11/00	F	1	1	63900	—	—	—	—	—
Silicon Dioxide	1	1015	10/11/00	NF	1	1	66030	—	—	—	—	—
Silver	1	1015	10/11/00	F	1	0	—	[1.2]	100	0/1	50	0/1
Silver	1	1015	10/11/00	NF	1	0	—	[0.03]	—	—	—	—

Table F-19 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Sodium	1	1015	10/11/00	F	1	1	6800	—	—	—	—	—
Sodium	1	1015	10/11/00	NF	1	1	6800	—	—	—	—	—
Strontium	1	1015	10/11/00	F	1	1	51	—	—	—	—	—
Strontium	1	1015	10/11/00	NF	1	1	52	—	—	—	—	—
Sulfate	1	1015	10/11/00	F	1	1	4800	—	250000	0/1	600000	0/1
Sulfate	1	1015	10/11/00	NF	1	1	4800	—	—	—	—	—
Thallium	1	1015	10/11/00	F	1	1	0.355	—	2	0/1	—	—
Thallium	1	1015	10/11/00	NF	1	1	0.337	—	—	—	—	—
Total Kjeldahl Nitrogen	1	1015	10/11/00	F	1	1	550	—	—	—	—	—
Total Kjeldahl Nitrogen	1	1015	10/11/00	NF	1	1	3700	—	—	—	—	—
Uranium by KPA[h]	1	1015	10/11/00	F	1	1	0.33	—	—	—	—	—
Uranium by KPA	1	1015	10/11/00	NF	1	1	0.33	—	—	—	—	—
Vanadium	1	1015	10/11/00	F	1	1	6.4	—	—	—	—	—
Vanadium	1	1015	10/11/00	NF	1	1	6.4	—	—	—	—	—
Zinc	1	1015	10/11/00	F	1	0	—	[6.9]	5000	0/1	10000	0/1
Zinc	1	1015	10/11/00	NF	1	0	—	[15]	—	—	—	—
Stable Isotopes (‰)												
δ 15N/14N	1	1015	10/11/00	NF	1	1	+0.9	—	—	—	—	—
δ 18O/16O	1	1015	10/11/00	NF	1	1	-10.9	—	—	—	—	—
δ D/H	1	1015	10/11/00	NF	1	1	-79	—	—	—	—	—

Table F-19 (continued)

[a] The static water level for the regional aquifer at R-15 is 964 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not applicable or not available.

[g] NF = Nonfiltered.

[h] KPA = Kinetic phosphorescence analysis.

Table F-20
Regional Well R-15 Screen 1 Second Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Bis(2-ethylhexyl)phthalate	1	1015	10/11/00	NF[e]	1	1	5.9	6	0/1	—[f]	—
Toluene	1	1015	10/11/00	NF	1	1	0.69	1000	0/1	750	0/1
Dissolved Organic Carbon	1	1015	10/11/00	F[g]	1	1	6100	—	—	—	—
Humic Substances, Hydrophilic Acids	1	1015	10/11/00	F	1	1	1000	—	—	—	—
Humic Substances, Hydrophilic Bases	1	1015	10/11/00	F	1	1	0	—	—	—	—
Humic Substances, Hydrophilic Neutrals	1	1015	10/11/00	F	1	1	300	—	—	—	—
Humic Substances, Hydrophilic Total	1	1015	10/11/00	F	1	1	1400	—	—	—	—
Humic Substances, Hydrophobic Acids	1	1015	10/11/00	F	1	1	1200	—	—	—	—
Humic Substances, Hydrophobic Bases	1	1015	10/11/00	F	1	1	0	—	—	—	—
Humic Substances, Hydrophobic Neutrals	1	1015	10/11/00	F	1	1	3500	—	—	—	—
Humic Substances, Hydrophobic Total	1	1015	10/11/00	F	1	1	4700	—	—	—	—

[a] The static water level for the regional aquifer at R-15 is 964 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not applicable or not available.

[g] F = Filtered.

Table F-21
Regional Well R-15 Screen 1 Second Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	1	1015	10/11/00	F[c]	1	0	—[d]	[0.00585]	15[e]	0/1
Americium-241	1	1015	10/11/00	NF[f]	1	0	—	[0.00236]	—	—
Gross Alpha Radiation	1	1015	10/11/00	F	1	0	—	[2.28]	15	0/1
Gross Alpha Radiation	1	1015	10/11/00	NF	1	0	—	[1.02]	—	—
Gross Beta Radiation	1	1015	10/11/00	F	1	0	—	[2.25]	—	—
Gross Beta Radiation	1	1015	10/11/00	NF	1	0	—	[1.57]	—	—
Gross Gamma Radiation[g]	1	1015	10/11/00	NF	1	0	—	—	—	—
Plutonium-238	1	1015	10/11/00	F	1	0	—	[0.00315]	15[e]	0/1
Plutonium-238	1	1015	10/11/00	NF	1	0	—	[-0.00129]	—	—
Plutonium-239	1	1015	10/11/00	F	1	0	—	[0]	15[e]	0/1
Plutonium-239	1	1015	10/11/00	NF	1	0	—	[0.00515]	—	—
Strontium-90	1	1015	10/11/00	F	1	0	—	[-0.026]	8	0/1
Strontium-90	1	1015	10/11/00	NF	1	0	—	[0.1]	—	—
Tritium	1	1015	10/11/00	NF	1	1	0.77	—	20000	0/1
Uranium-234	1	1015	10/11/00	F	1	1	0.2	—	—	—
Uranium-234	1	1015	10/11/00	NF	1	1	0.234	—	—	—
Uranium-235	1	1015	10/11/00	F	1	0	—	[0.00925]	—	—
Uranium-235	1	1015	10/11/00	NF	1	0	—	[0.00253]	—	—
Uranium-238	1	1015	10/11/00	F	1	1	0.104	—	—	—
Uranium-238	1	1015	10/11/00	NF	1	0	—	[0.113]	—	—

[a] The static water level for the regional aquifer at R-15 is 964 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not applicable or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

[g] The results for gross gamma radiation are still pending.

Table F-22
Regional Well R-19 Screen 2 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Aluminum	2	909	9/25/00	F[e]	1	0	—[f]	[7.9]	50	0/1	5000	0/1
Aluminum	2	909	9/25/00	NF[g]	1	0	—	[7.9]	—	—	—	—
Ammonia (expressed as N)	2	909	9/25/00	F	1	0	—	[50]	—	—	—	—
Antimony	2	909	9/25/00	F	1	0	—	[0.683]	6	0/1	—	—
Antimony	2	909	9/25/00	NF	1	0	—	[0.683]	—	—	—	—
Arsenic	2	909	9/25/00	F	1	0	—	[3.4]	50	0/1	100	0/1
Arsenic	2	909	9/25/00	NF	1	0	—	[3.4]	—	—	—	—
Barium	2	909	9/25/00	F	1	1	32	—	2000	0/1	1000	0/1
Barium	2	909	9/25/00	NF	1	1	33	—	—	—	—	—
Beryllium	2	909	9/25/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	2	909	9/25/00	NF	1	0	—	[0.01]	—	—	—	—
Bicarbonate (as $CaCO_3$)	2	909	9/25/00	F	1	1	82000	—	—	—	—	—
Bicarbonate (as $CaCO_3$)	2	909	9/25/00	NF	1	1	81000	—	—	—	—	—
Boron	2	909	9/25/00	F	1	0	—	[26]	—	—	750	0/1
Boron	2	909	9/25/00	NF	1	0	—	[24]	—	—	—	—
Bromide	2	909	9/25/00	F	1	0	—	[200]	—	—	—	—
Bromide	2	909	9/25/00	NF	1	0	—	[200]	—	—	—	—
Cadmium	2	909	9/25/00	F	1	0	—	[0.13]	5	0/1	10	0/1
Cadmium	2	909	9/25/00	NF	1	0	—	[0.13]	—	—	—	—
Calcium	2	909	9/25/00	F	1	1	16000	—	—	—	—	—
Calcium	2	909	9/25/00	NF	1	1	16000	—	—	—	—	—

Table F-22 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Carbonate (as $CaCO_3$)	2	909	9/25/00	F	1	0	—	[20000]	—	—	—	—
Carbonate (as $CaCO_3$)	2	909	9/25/00	NF	1	0	—	[20000]	—	—	—	—
Chloride	2	909	9/25/00	F	1	1	2800	—	250000	0/1	250000	0/1
Chloride	2	909	9/25/00	NF	1	1	2800	—	—	—	—	—
Chromium	2	909	9/25/00	F	1	0	—	[0.33]	100	0/1	50	0/1
Chromium	2	909	9/25/00	NF	1	1	1.4	—	—	—	—	—
Cobalt	2	909	9/25/00	F	1	1	0.69	—	—	—	50	0/1
Cobalt	2	909	9/25/00	NF	1	1	0.77	—	—	—	—	—
Copper	2	909	9/25/00	F	1	1	10	—	1300	0/1	1000	0/1
Copper	2	909	9/25/00	NF	1	1	14	—	—	—	—	—
Fluoride	2	909	9/25/00	F	1	1	490	—	4000	0/1	1600	0/1
Fluoride	2	909	9/25/00	NF	1	1	500	—	—	—	—	—
Iron	2	909	9/25/00	F	1	1	260	—	300	0/1	1000	0/1
Iron	2	909	9/25/00	NF	1	1	480	—	—	—	—	—
Lead	2	909	9/25/00	F	1	1	0.448	—	15	0/1	50	0/1
Lead	2	909	9/25/00	NF	1	1	1.73	—	—	—	—	—
Magnesium	2	909	9/25/00	F	1	1	3000	—	—	—	—	—
Magnesium	2	909	9/25/00	NF	1	1	2900	—	—	—	—	—
Manganese	2	909	9/25/00	F	1	1	160	—	50	1/1	200	0/1
Manganese	2	909	9/25/00	NF	1	1	150	—	—	—	—	—
Mercury	2	909	9/25/00	F	1	0	—	[0.0092]	2	0/1	—	—
Mercury	2	909	9/25/00	NF	1	0	—	[0.0092]	—	—	2	0/1

Table F-22 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Molybdenum	2	909	9/25/00	F	1	0	—	[4.2]	—	—	—	—
Molybdenum	2	909	9/25/00	NF	1	0	—	[4.2]	—	—	—	—
Nickel	2	909	9/25/00	F	1	1	10	—	100	0/1	200	0/1
Nickel	2	909	9/25/00	NF	1	1	12	—	—	—	—	—
Nitrate + Nitrite (expressed as N)	2	909	9/25/00	F	1	1	690	—	10000	0/1	—	—
Perchlorate	2	909	9/25/00	F	1	0	—	[1.04]	—	—	—	—
Phosphorus (total)	2	909	9/25/00	F	1	1	52	—	—	—	—	—
Phosphorus (total)	2	909	9/25/00	NF	1	0	—	[65.2]	—	—	—	—
Potassium	2	909	9/25/00	F	1	0	—	[1300]	—	—	—	—
Potassium	2	909	9/25/00	NF	1	0	—	[1300]	—	—	—	—
Selenium	2	909	9/25/00	F	1	0	—	[2.6]	50	0/1	50	0/1
Selenium	2	909	9/25/00	NF	1	0	—	[2.6]	—	—	—	—
Silicon Dioxide	2	909	9/25/00	F	1	1	72420	—	—	—	—	—
Silicon Dioxide	2	909	9/25/00	NF	1	1	74550	—	—	—	—	—
Silver	2	909	9/25/00	F	1	0	—	[0.45]	100	0/1	50	0/1
Silver	2	909	9/25/00	NF	1	0	—	[0.45]	—	—	—	—
Sodium	2	909	9/25/00	F	1	1	13000	—	—	—	—	—
Sodium	2	909	9/25/00	NF	1	1	13000	—	—	—	—	—
Strontium	2	909	9/25/00	F	1	1	80	—	—	—	—	—
Strontium	2	909	9/25/00	NF	1	0	—	[77]	—	—	—	—
Sulfate	2	909	9/25/00	F	1	1	3300	—	250000	0/1	600000	0/1
Sulfate	2	909	9/25/00	NF	1	0	—	[3300]	—	—	—	—

Table F-22 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Thallium	2	909	9/25/00	F	1	0	—	[0.026]	2	0/1	—	—
Thallium	2	909	9/25/00	NF	1	0	—	[0.026]	—	—	—	—
Total Kjeldahl Nitrogen	2	909	9/25/00	F	1	1	280	—	—	—	—	—
Uranium by ICPMS[h]	2	909	9/25/00	NF	1	1	0.184	—	—	—	—	—
Uranium by KPA[i]	2	909	9/25/00	F	1	1	0.23	—	—	—	—	—
Uranium by KPA	2	909	9/25/00	NF	1	1	0.2	—	—	—	—	—
Vanadium	2	909	9/25/00	F	1	1	0.64	—	—	—	—	—
Vanadium	2	909	9/25/00	NF	1	1	0.56	—	—	—	—	—
Zinc	2	909	9/25/00	F	1	1	87	—	5000	0/1	10000	0/1
Zinc	2	909	9/25/00	NF	1	1	82	—	—	—	—	—
Stable Isotopes (‰)												
δ 15N/14N	2	909	9/25/00	F	1	1	+6.6	—	—	—	—	—
δ 18O/16O	2	909	9/25/00	NF	1	1	-10.5	—	—	—	—	—
δ D/H	2	909	9/25/00	NF	1	1	-73	—	—	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not applicable or not available.

[g] NF = Nonfiltered.

[h] ICPMS = Inductively coupled plasma mass spectrometry.

[i] KPA = Kinetic phosphorescence analysis.

Table F-23
Regional Well R-19 Screen 3 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Aluminum	3	1191	9/28/00	F[e]	1	0	—[f]	[7.9]	50	0/1	5000	0/1
Aluminum	3	1191	9/28/00	NF[g]	1	0	—	[7.9]	—	—	—	—
Ammonia (expressed as N)	3	1191	9/28/00	F	1	0	—	[50]	—	—	—	—
Ammonia (expressed as N)	3	1191	9/28/00	NF	1	0	—	[50]	—	—	—	—
Antimony	3	1191	9/28/00	F	1	1	5.67	—	6	0/1	—	—
Antimony	3	1191	9/28/00	NF	1	0	—	[0.683]	—	—	—	—
Arsenic	3	1191	9/28/00	F	1	0	—	[3.4]	50	0/1	100	0/1
Arsenic	3	1191	9/28/00	NF	1	0	—	[3.4]	—	—	—	—
Barium	3	1191	9/28/00	F	1	1	24	—	2000	0/1	1000	0/1
Barium	3	1191	9/28/00	NF	1	1	22	—	—	—	—	—
Beryllium	3	1191	9/28/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	3	1191	9/28/00	NF	1	0	—	[0.01]	—	—	—	—
Bicarbonate (as $CaCO_3$)	3	1191	9/28/00	F	1	1	67000	—	—	—	—	—
Bicarbonate (as $CaCO_3$)	3	1191	9/28/00	NF	1	1	62000	—	—	—	—	—
Boron	3	1191	9/28/00	F	1	1	8.4	—	—	—	750	0/1
Boron	3	1191	9/28/00	NF	1	1	9.6	—	—	—	—	—
Bromide	3	1191	9/28/00	F	1	0	—	[200]	—	—	—	—
Bromide	3	1191	9/28/00	NF	1	0	—	[200]	—	—	—	—
Cadmium	3	1191	9/28/00	F	1	0	—	[0.13]	5	0/1	10	0/1
Cadmium	3	1191	9/28/00	NF	1	0	—	[0.13]	—	—	—	—

Table F-23 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Calcium	3	1191	9/28/00	F	1	1	12000	—	—	—	—	—
Calcium	3	1191	9/28/00	NF	1	1	12000	—	—	—	—	—
Carbonate (as $CaCO_3$)	3	1191	9/28/00	F	1	0	—	[20000]	—	—	—	—
Carbonate (as $CaCO_3$)	3	1191	9/28/00	NF	1	0	—	[20000]	—	—	—	—
Chloride	3	1191	9/28/00	F	1	1	2600	—	250000	0/1	250000	0/1
Chloride	3	1191	9/28/00	NF	1	1	2300	—	—	—	—	—
Chromium	3	1191	9/28/00	F	1	1	1.6	—	100	0/1	50	0/1
Chromium	3	1191	9/28/00	NF	1	1	1.6	—	—	—	—	—
Cobalt	3	1191	9/28/00	F	1	0	—	[1.2]	—	—	50	0/1
Cobalt	3	1191	9/28/00	NF	1	0	—	[0.43]	—	—	—	—
Copper	3	1191	9/28/00	F	1	1	0.44	—	1300	0/1	1000	0/1
Copper	3	1191	9/28/00	NF	1	1	0.46	—	—	—	—	—
Cyanide (total)	3	1191	9/28/00	NF	1	0	—	[10]	—	—	—	—
Fluoride	3	1191	9/28/00	F	1	1	340	—	4000	0/1	1600	0/1
Fluoride	3	1191	9/28/00	NF	1	1	350	—	—	—	—	—
Iron	3	1191	9/28/00	F	1	1	1100	—	300	1/1	1000	1/1
Iron	3	1191	9/28/00	NF	1	0	—	[200]	—	—	—	—
Lead	3	1191	9/28/00	F	1	0	—	[0.01]	15	0/1	50	0/1
Lead	3	1191	9/28/00	NF	1	0	—	[0.05]	—	—	—	—
Magnesium	3	1191	9/28/00	F	1	1	3000	—	—	—	—	—
Magnesium	3	1191	9/28/00	NF	1	1	3000	—	—	—	—	—
Manganese	3	1191	9/28/00	F	1	1	32	—	50	0/1	200	0/1
Manganese	3	1191	9/28/00	NF	1	1	29	—	—	—	—	—

Table F-23 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Mercury	3	1191	9/28/00	F	1	0	—	[0.0092]	2	0/1	—	—
Mercury	3	1191	9/28/00	NF	1	0	—	[0.0092]	—	—	2	0/1
Molybdenum	3	1191	9/28/00	F	1	0	—	[3.1]	—	—	—	—
Molybdenum	3	1191	9/28/00	NF	1	0	—	[3.1]	—	—	—	—
Nickel	3	1191	9/28/00	F	1	1	1.5	—	100	0/1	200	0/1
Nickel	3	1191	9/28/00	NF	1	0	—	[0.46]	—	—	—	—
Nitrate + Nitrite (expressed as N)	3	1191	9/28/00	F	1	1	340	—	10000	0/1	—	—
Nitrate + Nitrite (expressed as N)	3	1191	9/28/00	NF	1	1	320	—	—	—	—	—
Oxalate	3	1191	9/28/00	F	1	0		[113]	—	—	—	—
Perchlorate	3	1191	9/28/00	NF	1	1	1.68		—	—	—	—
Perchlorate	3	1191	9/28/00	F	1	0	—	[1.04]	—	—	—	—
Phosphorus (total)	3	1191	9/28/00	F	1	0	—	[50]	—	—	—	—
Phosphorus (total)	3	1191	9/28/00	NF	1	0	—	[50]	—	—	—	—
Potassium	3	1191	9/28/00	F	1	1	1300	—	—	—	—	—
Potassium	3	1191	9/28/00	NF	1	1	1300	—	—	—	—	—
Selenium	3	1191	9/28/00	F	1	0	—	[2.6]	50	0/1	50	0/1
Selenium	3	1191	9/28/00	NF	1	0	—	[2.6]	—	—	—	—
Silicon Dioxide	3	1191	9/28/00	F	1	1	70290	—	—	—	—	—
Silicon Dioxide	3	1191	9/28/00	NF	1	1	72420	—	—	—	—	—
Silver	3	1191	9/28/00	F	1	0	—	[0.45]	100	0/1	50	0/1
Silver	3	1191	9/28/00	NF	1	0	—	[0.45]	—	—	—	—

Table F-23 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Sodium	3	1191	9/28/00	F	1	1	9000	—	—	—	—	—
Sodium	3	1191	9/28/00	NF	1	1	9000	—	—	—	—	—
Strontium	3	1191	9/28/00	F	1	1	54	—	—	—	—	—
Strontium	3	1191	9/28/00	NF	1	1	54	—	—	—	—	—
Sulfate	3	1191	9/28/00	F	1	1	2000	—	250000	0/1	600000	0/1
Sulfate	3	1191	9/28/00	NF	1	1	2000	—	—	—	—	—
Thallium	3	1191	9/28/00	F	1	0	—	[0.026]	2	0/1	—	—
Thallium	3	1191	9/28/00	NF	1	1	0.395	—	—	—	—	—
Total Kjeldahl Nitrogen	3	1191	9/28/00	F	1	1	650	—	—	—	—	—
Total Kjeldahl Nitrogen	3	1191	9/28/00	NF	1	1	470	—	—	—	—	—
Uranium by KPA[h]	3	1191	9/28/00	F	1	1	0.28	—	—	—	—	—
Uranium by KPA	3	1191	9/28/00	NF	1	1	0.29	—	—	—	—	—
Vanadium	3	1191	9/28/00	F	1	1	4.3	—	—	—	—	—
Vanadium	3	1191	9/28/00	NF	1	1	3.6	—	—	—	—	—
Zinc	3	1191	9/28/00	F	1	0	—	[4.3]	5000	0/1	10000	0/1
Zinc	3	1191	9/28/00	NF	1	0	—	[2.9]	—	—	—	—
Stable Isotopes (‰)												
δ 15N/14N	3	1191	9/28/00	NF	1	1	+1.9	—	—	—	—	—
δ 18O/16O	3	1191	9/28/00	NF	1	1	-10.7	—	—	—	—	—
δ D/H	3	1191	9/28/00	NF	1	1	-76	—	—	—	—	—

Table F-23 (continued)

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] NF = Nonfiltered.

[h] KPA = Kinetic phosphorescence analysis.

Table F-24
Regional Well R-19 Screen 5 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Stable Isotopes (‰)												
δ 18O/16O	5	1584	10/11/01	NF[e]	1	1	-10.9	—[f]	—	—	—	—
δ D/H	5	1584	10/11/01	NF	1	1	-78	—	—	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not applicable or not available.

Table F-25
Regional Well R-19 Screen 6 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Alkalinity (as $CaCO_3$)	6	1735	10/5/00	F[e]	1	1	112000	—[f]	—	—	—	—
Aluminum	6	1735	10/5/00	F	1	0	—	[89.9][g]	50	0/1	5000	0/1
Aluminum	6	1735	10/5/00	NF[h]	1	0	—	[49.5][g]	—	—	—	—
Ammonia (expressed as N)	6	1735	10/5/00	F	1	1	429	—	—	—	—	—
Ammonia (expressed as N)	6	1735	10/5/00	NF	1	1	500	—	—	—	—	—
Antimony	6	1735	10/5/00	F	1	0	—	[0.222]	6	0/1	—	—
Antimony	6	1735	10/5/00	NF	1	0	—	[0.683]	—	—	—	—
Arsenic	6	1735	10/5/00	F	1	1	1.9	—	50	0/1	100	0/1
Arsenic	6	1735	10/5/00	NF	1	1	1.6	—	—	—	—	—
Barium	6	1735	10/5/00	F	1	1	38.3[g]	—	2000	0/1	1000	0/1
Barium	6	1735	10/5/00	NF	1	1	29[g]	—	—	—	—	—
Beryllium	6	1735	10/5/00	F	1	0	—	[0.01]	4	0/1	—	—
Beryllium	6	1735	10/5/00	NF	1	0	—	[0.01]	—	—	—	—
Bicarbonate (as $CaCO_3$)	6	1735	10/5/00	NF	1	1	99000	—	—	—	—	—
Boron	6	1735	10/5/00	F	1	1	29.8[g]	—	—	—	750	0/1
Boron	6	1735	10/5/00	NF	1	1	16[g]	—	—	—	—	—
Bromide	6	1735	10/5/00	F	1	1	250	—	—	—	—	—
Bromide	6	1735	10/5/00	NF	1	0	—	[2000]	—	—	—	—
Cadmium	6	1735	10/5/00	F	1	0	—	[0.059]	5	0/1	10	0/1
Cadmium	6	1735	10/5/00	NF	1	0	—	[0.13]	—	—	—	—

Table F-25 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Calcium	6	1735	10/5/00	F	1	1	11400[g]	—	—	—	—	—
Calcium	6	1735	10/5/00	NF	1	1	9100[g]	—	—	—	—	—
Carbonate (as $CaCO_3$)	6	1735	10/5/00	NF	1	0	—	[10000]	—	—	—	—
Chloride	6	1735	10/5/00	F	1	1	1800	—	250000	0/1	250000	0/1
Chloride	6	1735	10/5/00	NF	1	1	2100	—	—	—	—	—
Chromium	6	1735	10/5/00	F	1	1	0.93[g]	—	100	0/1	50	0/1
Chromium	6	1735	10/5/00	NF	1	0	—	[3.2][g]	—	—	—	—
Cobalt	6	1735	10/5/00	F	1	1	1.8[g]	—	—	—	50	0/1
Cobalt	6	1735	10/5/00	NF	1	0	—	[0.2][g]	—	—	—	—
Copper	6	1735	10/5/00	F	1	0	—	[1.2]	1300	0/1	1000	0/1
Copper	6	1735	10/5/00	NF	1	0	—	[2.8]	—	—	—	—
Cyanide (total)	6	1735	10/5/00	NF	1	0	—	[10]	—	—	—	—
Fluoride	6	1735	10/5/00	F	1	1	260	—	4000	0/1	1600	0/1
Fluoride	6	1735	10/5/00	NF	1	1	320	—	—	—	—	—
Iron	6	1735	10/5/00	F	1	1	1860	—	300	1/1	1000	1/1
Iron	6	1735	10/5/00	NF	1	1	2000	—	—	—	—	—
Lead	6	1735	10/5/00	F	1	1	0.248	—	15	0/1	50	0/1
Lead	6	1735	10/5/00	NF	1	1	0.378	—	—	—	—	—
Magnesium	6	1735	10/5/00	F	1	1	2780[g]	—	—	—	—	—
Magnesium	6	1735	10/5/00	NF	1	1	2200[g]	—	—	—	—	—
Manganese	6	1735	10/5/00	F	1	1	339[g]	—	50	1/1	200	1/1
Manganese	6	1735	10/5/00	NF	1	1	300[g]	—	—	—	—	—

Table F-25 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Mercury	6	1735	10/5/00	F	1	0	—	[0.1]	2	0/1	—	—
Mercury	6	1735	10/5/00	NF	1	1	0.62	—	—	—	2	0/1
Molybdenum	6	1735	10/5/00	F	1	1	9.1[g]	—	—	—	—	—
Molybdenum	6	1735	10/5/00	NF	1	0	—	[10.2][g]	—	—	—	—
Nickel	6	1735	10/5/00	F	1	1	5.8[g]	—	100	0/1	200	0/1
Nickel	6	1735	10/5/00	NF	1	0	—	[1][g]	—	—	—	—
Nitrate + Nitrite (expressed as N)	6	1735	10/5/00	F	1	0	—	[50]	10000	0/1	—	—
Nitrate + Nitrite (expressed as N)	6	1735	10/5/00	NF	1	0	—	[50]	—	—	—	—
Perchlorate	6	1735	10/5/00	F	1	1	1.04	—	—	—	—	—
Perchlorate	6	1735	10/5/00	NF	1	0	—	[1.04]	—	—	—	—
Phosphorus (total)	6	1735	10/5/00	F	1	1	122[g]	—	—	—	—	—
Phosphorus (total)	6	1735	10/5/00	NF	1	0	—	[100][g]	—	—	—	—
Potassium	6	1735	10/5/00	F	1	1	4470[g]	—	—	—	—	—
Potassium	6	1735	10/5/00	NF	1	1	2800[g]	—	—	—	—	—
Selenium	6	1735	10/5/00	F	1	0	—	[2.2][g]	50	0/1	50	0/1
Selenium	6	1735	10/5/00	NF	1	0	—	[0.126][g]	—	—	—	—
Silicon Dioxide	6	1735	10/5/00	F	1	1	68586[g]	—	—	—	—	—
Silicon Dioxide	6	1735	10/5/00	NF	1	1	57510[g]	—	—	—	—	—

Table F-25 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Silver	6	1735	10/5/00	F	1	0	—	[0.03]	100	0/1	50	0/1
Silver	6	1735	10/5/00	NF	1	0	—	[0.45]	—	—	—	—
Sodium	6	1735	10/5/00	F	1	1	35500[g]	—	—	—	—	—
Sodium	6	1735	10/5/00	NF	1	1	26000[g]	—	—	—	—	—
Strontium	6	1735	10/5/00	F	1	1	56.9[g]	—	—	—	—	—
Strontium	6	1735	10/5/00	NF	1	1	48[g]	—	—	—	—	—
Sulfate	6	1735	10/5/00	F	1	1	500[g]	—	250000	0/1	600000	0/1
Sulfate	6	1735	10/5/00	NF	1	0	—	[2000][g]	—	—	—	—
Thallium	6	1735	10/5/00	F	1	1	0.317[g]	—	2	0/1	—	—
Thallium	6	1735	10/5/00	NF	1	1	0.027[g]	—	—	—	—	—
Total Kjeldahl Nitrogen	6	1735	10/5/00	F	1	1	6300[g]	—	—	—	—	—
Total Kjeldahl Nitrogen	6	1735	10/5/00	NF	1	1	3400[g]	—	—	—	—	—
Uranium by KPA[i]	6	1735	10/5/00	F	1	0		[0.376]	—	—	—	—
Uranium by KPA	6	1735	10/5/00	NF	1	1	0.39	—	—	—	—	—
Vanadium	6	1735	10/5/00	F	1	1	1.7[g]	—	—	—	—	—
Vanadium	6	1735	10/5/00	NF	1	0	—	[3.91][g]	—	—	—	—
Zinc	6	1735	10/5/00	F	1	1	19.5	—	5000	0/1	10000	0/1
Zinc	6	1735	10/5/00	NF	1	1	30	—	—	—	—	—
Stable Isotopes (‰)												
δ 18O/16O	6	1735	10/5/00	NF	1	1	-11	—	—	—	—	—
δ D/H	6	1735	10/5/00	NF	1	1	-74	—	—	—	—	—

Table F-25 (continued)

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] For the water samples collected from R-19 at Screen 6, the comparability of the filtered and nonfiltered sample results has been compromised because the samples were analyzed at different analytical laboratories in different extraction lots.

[h] NF = Nonfiltered.

[i] KPA = Kinetic phosphorescence analysis.

Table F-26
Regional Well R-19 Screen 7 First Round Sample Results: Data Summary for Inorganic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Aluminum	7	1835	10/05/00	F[e]	1	1	250	—[f]	50	1/1	5000	0/1
Ammonia (expressed as N)	7	1835	10/05/00	F	1	1	210	—	—	—	—	—
Antimony	7	1835	10/05/00	F	1	0		[0.683]	6	0/1	—	—
Arsenic	7	1835	10/05/00	F	1	1	3.5	—	50	0/1	100	0/1
Barium	7	1835	10/05/00	F	1	1	25	—	2000	0/1	1000	0/1
Beryllium	7	1835	10/05/00	F	1	1	0.114	—	4	0/1	—	—
Bicarbonate (as $CaCO_3$)	7	1835	10/05/00	F	1	1	100000	—	—	—	—	—
Boron	7	1835	10/05/00	F	1	1	18	—	—	—	750	0/1
Bromide	7	1835	10/05/00	F	1	0	—	[2000]	—	—	—	—
Cadmium	7	1835	10/05/00	F	1	0	—	[0.13]	5	0/1	10	0/1
Calcium	7	1835	10/05/00	F	1	1	6800	—	—	—	—	—
Carbonate (as $CaCO_3$)	7	1835	10/05/00	F	1	0	—	[10000]	—	—	—	—
Chloride	7	1835	10/05/00	F	1	1	2900	—	250000	0/1	250000	0/1
Chromium	7	1835	10/05/00	F	1	1	5.2	—	100	0/1	50	0/1
Cobalt	7	1835	10/05/00	F	1	0	—	[0.2]	—	—	50	0/1
Copper	7	1835	10/05/00	F	1	0	—	[4.2]	1300	0/1	1000	0/1
Fluoride	7	1835	10/05/00	F	1	1	470	—	4000	0/1	1600	0/1
Iron	7	1835	10/05/00	F	1	1	1600	—	300	1/1	1000	1/1
Lead	7	1835	10/05/00	F	1	1	3.06	—	15	0/1	50	0/1
Magnesium	7	1835	10/05/00	F	1	1	1800	—	—	—	—	—
Manganese	7	1835	10/05/00	F	1	1	150	—	50	1/1	200	0/1

Table F-26 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Mercury	7	1835	10/05/00	F	1	1	1.6	—	2	0/1	—	—
Molybdenum	7	1835	10/05/00	F	1	1	15	—	—	—	—	—
Nickel	7	1835	10/05/00	F	1	0	—	[1]	100	0/1	200	0/1
Nitrate + Nitrite (expressed as N)	7	1835	10/05/00	F	1	0	—	[50]	10000	0/1	—	—
Perchlorate	7	1835	10/05/00	F	1	0	—	[1.04]	—	—	—	—
Phosphorus (total)	7	1835	10/05/00	F	1	0	—	[100]	—	—	—	—
Potassium	7	1835	10/05/00	F	1	1	1600	—	—	—	—	—
Selenium	7	1835	10/05/00	F	1	0	—	[0.126]	50	0/1	50	0/1
Silicon Dioxide	7	1835	10/05/00	F	1	1	55380	—	—	—	—	—
Silver	7	1835	10/05/00	F	1	0	—	[0.45]	100	0/1	50	0/1
Sodium	7	1835	10/05/00	F	1	1	49000	—	—	—	—	—
Strontium	7	1835	10/05/00	F	1	1	49	—	—	—	—	—
Sulfate	7	1835	10/05/00	F	1	1	33000	—	250000	0/1	600000	0/1
Thallium	7	1835	10/05/00	F	1	1	0.043	—	2	0/1	—	—
Total Kjeldahl Nitrogen	7	1835	10/05/00	F	1	1	4600	—	—	—	—	—
Uranium by KPA[g]	7	1835	10/05/00	F	1	1	0.89	—	—	—	—	—
Vanadium	7	1835	10/05/00	F	1	0	—	[3.91]	—	—	—	—
Zinc	7	1835	10/05/00	F	1	1	180	—	5000	0/1	10000	0/1

Table F-26 (continued)

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Non-detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Stable Isotopes (‰)												
δ 18O/16O	7	1835	10/05/00	NF[h]	1	1	-11	—	—	—	—	—
δ D/H	7	1835	10/05/00	NF	1	1	-78	—	—	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] F = Filtered.

[f] — = Not available or not applicable.

[g] KPA = Kinetic phosphorescence analysis.

[h] NF = Nonfiltered.

Table F-27
Regional Well R-19 Screen 2 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
RDX	2	909	921	NF[e]	1	1	0.098	—[f]	—	—	—
Total Organic Carbon	2	909	921	NF	1	1	3300	—	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

Table F-28
Regional Well R-19 Screen 5 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Dinitrobenzene[1,3-]	5	1584	10/11/00	NF[e]	1	1	0.22	—[f]	—	—	—
Dinitrotoluene[2,4-]	5	1584	10/11/00	NF	1	1	0.3	—	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

Table F-29
Regional Well R-19 Screen 6 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Butanone[2-]	6	1735	10/05/00	NF[e]	1	1	1.6	—[f]	—	—	—
Dissolved Organic Carbon	6	1735	10/05/00	F[g]	1	1	6800	—	—	—	—
Humic Substances, Hydrophilic Acids	6	1735	10/05/00	F	1	1	2800	—	—	—	—
Humic Substances, Hydrophilic Bases	6	1735	10/05/00	F	1	1	200	—	—	—	—
Humic Substances, Hydrophilic Neutrals	6	1735	10/05/00	F	1	1	200	—	—	—	—
Humic Substances, Hydrophilic Total	6	1735	10/05/00	F	1	1	3300	—	—	—	—
Humic Substances, Hydrophobic Acids	6	1735	10/05/00	F	1	1	700	—	—	—	—
Humic Substances, Hydrophobic Bases	6	1735	10/05/00	F	1	1	0	—	—	—	—
Humic Substances, Hydrophobic Neutrals	6	1735	10/05/00	F	1	1	2700	—	—	—	—
Humic Substances, Hydrophobic Total	6	1735	10/05/00	F	1	1	3500	—	—	—	—
Nitrobenzene	6	1735	10/05/00	NF	2	1	0.41	—	—	—	—
Total Organic Carbon	6	1735	10/05/00	NF	1	1	2700	—	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

[g] F = Filtered

Table F-30
Regional Well R-19 Screen 7 First Round Sample Results: Data Summary for Detected Organic Chemicals

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (µg/L)	Drinking Water MCL[b] (µg/L)	Frequency of Detects >Drinking Water MCL	NMED[c] Groundwater Standard[d] (µg/L)	Frequency of Detects >NMED Groundwater Standard
Amino-2,6-dinitrotoluene[4-]	7	1835	10/05/00	NF[e]	1	1	0.22	—[f]	—	—	—
Dinitrobenzene[1,3-]	7	1835	10/05/00	NF	1	1	0.24	—	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NMED = New Mexico Environment Department.

[d] State of New Mexico groundwater standards are from New Mexico Water Quality Control Commission Regulations, Ground and Surface Water Protection, 20 NMAC 6.2.

[e] NF = Nonfiltered.

[f] — = Not available or not applicable.

Table F-31
Regional Well R-19 Screen 2 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	2	909	9/25/00	F[c]	1	0	—[d]	[0.00169]	15[e]	0/1
Americium-241	2	909	9/25/00	NF[f]	1	0	—	[0.042]	—	—
Gross Alpha Radiation	2	909	9/25/00	F	1	0	—	[0.957]	15	0/1
Gross Beta Radiation	2	909	9/25/00	F	1	0	—	[2.44]	—	—
Plutonium-238	2	909	9/25/00	F	1	0	—	[0.00326]	15[e]	0/1
Plutonium-238	2	909	9/25/00	NF	1	0	—	[-0.001]	—	—
Plutonium-239	2	909	9/25/00	F	1	0	—	[0.00204]	15[e]	0/1
Plutonium-239	2	909	9/25/00	NF	1	0	—	[0.006]	—	—
Strontium-90	2	909	9/25/00	F	1	0	—	[0.806]	8	0/1
Strontium-90	2	909	9/25/00	NF	1	0	—	[-0.03]	—	—
Tritium	2	909	9/25/00	NF	1	0	—	[-0.04]	20000	0/1
Uranium-234	2	909	9/25/00	F	1	1	0.192	—	—	—
Uranium-234	2	909	9/25/00	NF	1	1	0.226	—	—	—
Uranium-235	2	909	9/25/00	F	1	0	—	[0.0017]	—	—
Uranium-235	2	909	9/25/00	NF	1	0	—	[0.041]	—	—
Uranium-238	2	909	9/25/00	F	1	0	—	[0.0832]	—	—
Uranium-238	2	909	9/25/00	NF	1	1	0.124	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

Table F-32
Regional Well R-19 Screen 3 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	3	1191	9/28/00	F[c]	1	0	—[d]	[0.015]	15[e]	0/1
Americium-241	3	1191	9/28/00	NF[f]	1	0	—	[0.039]	—	—
Gross Alpha Radiation	3	1191	9/28/00	F	1	0	—	[0.2]	15	0/1
Gross Alpha Radiation	3	1191	9/28/00	NF	1	0	—	[0.2]	—	—
Gross Beta Radiation	3	1191	9/28/00	F	1	0	—	[0.5]	—	—
Gross Beta Radiation	3	1191	9/28/00	NF	1	0	—	[0.3]	—	—
Gross Gamma Radiation	3	1191	9/28/00	F	1	0	—	[154]	—	—
Gross Gamma Radiation	3	1191	9/28/00	NF	1	0	—	[198]	—	—
Plutonium-238	3	1191	9/28/00	F	1	0	—	[0.013]	15[e]	0/1
Plutonium-238	3	1191	9/28/00	NF	1	0	—	[-0.003]	—	—
Plutonium-239	3	1191	9/28/00	F	1	0	—	[0.023]	15[e]	0/1
Plutonium-239	3	1191	9/28/00	NF	1	0	—	[0.005]	—	—
Strontium-90	3	1191	9/28/00	F	1	0	—	[0.18]	8	0/1
Strontium-90	3	1191	9/28/00	NF	1	0	—	[0.04]	—	—
Tritium	3	1191	9/28/00	NF	1	0	—	[-0.1]	20000	0/1
Uranium-234	3	1191	9/28/00	F	1	1	0.177	—	—	—
Uranium-234	3	1191	9/28/00	NF	1	1	0.272	—	—	—
Uranium-235	3	1191	9/28/00	F	1	0	—	[0.017]	—	—
Uranium-235	3	1191	9/28/00	NF	1	0	—	[0.008]	—	—
Uranium-238	3	1191	9/28/00	F	1	1	0.079	—	—	—
Uranium-238	3	1191	9/28/00	NF	1	1	0.14	—	—	—

Table F-32 (continued)

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

Table F-33
Regional Well R-19 Screen 5 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Tritium	5	1584	10/11/00	NF[c]	1	0	—[d]	[0.1]	20000	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] NF = Nonfiltered.

[d] — = Not available or not applicable.

Table F-34
Regional Well R-19 Screen 6 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	6	1735	10/5/00	F[c]	1	0	—[d]	[0.00356]	15[e]	0/1
Americium-241	6	1735	10/5/00	NF[f]	1	0	—	[0.00212]	—	—
Gross Alpha Radiation	6	1735	10/5/00	F	1	0	—	[0.926]	15	0/1
Gross Alpha Radiation	6	1735	10/5/00	NF	1	0	—	[1.56]	—	—
Gross Beta Radiation	6	1735	10/5/00	F	1	1	4.77	—	—	—
Gross Beta Radiation	6	1735	10/5/00	NF	1	1	3.71	—	—	—
Gross Gamma Radiation[g]	6	1735	10/5/00	NF	—	—	—	—	—	—
Plutonium-238	6	1735	10/5/00	F	1	0	—	[-0.000846]	15[e]	0/1
Plutonium-238	6	1735	10/5/00	NF	1	0	—	[-0.00111]	—	—
Plutonium-239	6	1735	10/5/00	F	1	0	—	[0.000844]	15[e]	0/1
Plutonium-239	6	1735	10/5/00	NF	1	0	—	[0.00139]	—	—
Strontium-90	6	1735	10/5/00	F	1	0	—	[0.429]	8	0/1
Strontium-90	6	1735	10/5/00	NF	1	0	—	[-0.0114]	—	—
Tritium	6	1735	10/5/00	NF	1	0	—	[0.08]	20000	0/1
Uranium-234	6	1735	10/5/00	F	1	1	0.229	—	—	—
Uranium-234	6	1735	10/5/00	NF	1	1	0.215	—	—	—
Uranium-235	6	1735	10/5/00	F	1	0	—	[0.00616]	—	—
Uranium-235	6	1735	10/5/00	NF	1	0	—	[0.00561]	—	—
Uranium-238	6	1735	10/5/00	F	1	1	0.115	—	—	—
Uranium-238	6	1735	10/5/00	NF	1	1	0.0881	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.

[g] The results for gross gamma radiation are still pending.

Table F-35
Regional Well R-19 Screen 7 First Round Sample Results: Data Summary for Radionuclides

Analyte	Screen	Depth (ft)[a]	Collection Date	Field Preparation	Number of Analyses	Number of Detects	Detected Value (pCi/L)	Non-detected Value (pCi/L)	Drinking Water MCL[b] (pCi/L)	Frequency of Detects >Drinking Water MCL
Americium-241	7	1835	10/05/00	F[c]	1	0	—[d]	[0.000307]	15[e]	0/1
Gross Alpha Radiation	7	1835	10/05/00	F	1	1	4.44	—	15	0/1
Gross Beta Radiation	7	1835	10/05/00	F	1	1	3.94	—	—	—
Plutonium-238	7	1835	10/05/00	F	1	0	—	[0.00135]	15[e]	0/1
Plutonium-239	7	1835	10/05/00	F	1	0	—	[-0.000542]	15[e]	0/1
Strontium-90	7	1835	10/05/00	F	1	0	—	[-0.398]	8	0/1
Tritium	7	1835	10/05/00	NF[f]	1	0	—	[0.21]	20000	0/1
Uranium-234	7	1835	10/05/00	F	1	1	0.621	—	—	—
Uranium-235	7	1835	10/05/00	F	1	1	0.0171	—	—	—
Uranium-238	7	1835	10/05/00	F	1	1	0.35	—	—	—

[a] The static water level for the regional aquifer at R-19 is 1178 ft.

[b] MCL = Maximum contaminant level. US Environmental Protection Agency (EPA) MCLs are from the National Primary Water Regulations, 40 CFR Part 141. US EPA secondary MCLs are from National Secondary Drinking Water Regulations, 40 CFR Part 143. State of New Mexico MCLs are from Drinking Water Regulations, 20 NMAC 7.1.

[c] F = Filtered.

[d] — = Not available or not applicable.

[e] Based on an MCL of 15 pCi/L (including radium-226, but excluding radon and uranium).

[f] NF = Nonfiltered.