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1995 8/96

Monticello Mill Tailings Site

Environmental Summary for Calendar Year 1995

August 1996

U.S. Department of Energy
Grand Junction Projects Office

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Monticello Mill Tailings Site Environmental Summary

for Calendar Year 1995

August 1996

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Abbreviations and Acronyms

BOD	biological oxygen demand
BLM	Bureau of Land Management
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	U.S. Code of Federal Regulations
COD	chemical oxygen demand
COE	U.S. Army Corps of Engineers
CWA	Clean Water Act
DCG	derived concentration guideline
DOE	U.S. Department of Energy
DWQ	Division of Water Quality
EHS	extremely hazardous substances
EPA	U.S. Environmental Protection Agency
ERA	Ecological Risk Assessment
FIFRA	Federal Insecticide, Fugicide, and Rodenticide Act
FONSI	Finding of No Significant Impact
g/F	grams per filter
GJPO	Grand Junction Projects Office
HQ	Headquarters
IWMA	Interim Waste Management Area
MED	Manhattan Engineer District
MRAP	Monticello Remedial Action Project
NEPA	National Environmental Policy Act
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MMTS	Monticello Mill Tailings Site
mrem	millirems
mrem/yr	millirems per year
MVP	Monticello vicinity properties
μg/L	micrograms per liter
$\mu g/m^3$	micrograms per cubic meter
μmhos/cm	micromhos per centimeter
mV	millivolts
NTU	nephelometric turbidity units
OU	Operable Unit
PCB	polychlorinated biphenyl
pCi/L	picocuries per liter
pCi/g	picocuries per gram
pCi/μg	picocuries per microgram

Abbreviations and Acronyms (continued)

PM_{10}	particulate matter less than or equal to 10 micrometers in diameter
ppm	parts per million
QA	quality assurance
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
RI/FS—EA	Remedial Investigation/Feasibility Study—Environmental Assessment
ROD	Record of Decision
SARA	Superfund Amendments and Reauthorization Act
SDWA	Safe Drinking Water Act
SER	Site Environmental Report
SWMP	*Special Waste Management Plan for the Monticello Mill Tailings Site and Vicinity Properties*
TCL	Target Compound List
TDS	total dissolved solids
TLD	thermoluminescent dosimeter
TSCA	Toxic Substances Control Act
UDEQ	Utah Department of Environmental Quality
UMTRCA	Uranium Mill Tailings Radiation Control Act
UPDES	Utah Pollution Discharge Elimination System
UST	underground storage tank
WWTP	Wastewater Treatment Plant

Executive Summary

This Site Environmental Summary presents an update of environmental activities conducted during calendar year 1995 at the Monticello Mill Tailings Site (MMTS) in Monticello, Utah. Rust Geotech, the prime contractor for the U.S. Department of Energy (DOE) Grand Junction Projects Office prepared this report in accordance with the substantive requirements of DOE Order 5400.1, *General Environmental Protection Program*.

Environmental activities conducted at the MMTS during 1995 were associated with remedial action, construction of the on-site repository, installation and start-up of a wastewater treatment plant, collection of baseline risk assessment data, and monitoring of environmental media. Remedial actions included removal of mill tailings, demolition of all buildings associated with the former Bureau of Land Management compound, closure of underground storage tanks, and reconstruction of remediated peripheral properties.

In November 1995, construction of the on-site repository was initiated. The repository is located 1 mile south of the Monticello millsite and will contain tailings, byproduct materials, and hazardous substances from the remediation of contaminated properties.

The wastewater treatment plant commenced operations on the Monticello millsite in May 1995. It is designed to treat contaminated surface runoff from the millsite and groundwater encountered during the excavation of contaminated materials. Analytical results from the sampling of the influent and effluent associated with the wastewater treatment plant are presented in this Site Environmental Summary.

The baseline risk assessment initiated in 1994 was continued in 1995 to support the on-going remedial investigation/feasibility study (RI/FS) for Operable Unit III. The risk assessment will evaluate human health and ecological risks posed by contaminated sediments, groundwater, and surface water within Operable Unit III. Risk assessment activities included both biotic and abiotic sampling downgradient of the MMTS and in two background reference areas to provide analytical data for input to risk calculations. In addition, biotic samples were collected for histopathological analyses and ecological surveys were conducted to determine the presence or absence of sensitive receptors.

Radiological and nonradiological monitoring programs at the MMTS included monitoring of atmospheric radon, particulate matter, direct gamma radiation, surface water, and groundwater. Atmospheric radon concentrations exceeded the U.S. Environmental Protection Agency (EPA) standard for atmospheric radon at one off-site and both site-boundary locations. Maximum airborne concentrations of radium-226, thorium-230, total uranium, and particulate matter less than or equal to 10 micrometers in diameter (PM_{10}) measured in samples from all locations were below EPA standards and the regulatory limits specified by DOE Order 5400.5.

Average annual gamma radiation measurements exceeded the DOE/EPA standard at two site boundary locations and one on-site location. Off-site dose modeling for the MMTS was conducted to determine compliance with the DOE/EPA standard of 100 millirems per year (mrem/yr) above background. The dose caused by the summation of radon, air particulates, and direct gamma is 62 mrem/yr above background, which is below the DOE/EPA standard.

Surface water sampling analytical results from an established monitoring network indicate that metals and radionuclides associated with mill tailings generally exceed background levels in samples collected on and downgradient of the millsite. State of Utah water quality standards for gross alpha activity, total dissolved solids (TDS), and pH were exceeded in one or more on-site or downgradient samples collected during 1995. The TDS standard was also exceeded in up-gradient samples.

Federal and State of Utah groundwater quality standards for gross alpha activity, pH, arsenic, fluoride, molybdenum, nitrate, radium-226, radium-228, selenium, uranium-234+238 were exceeded in one or more on-site and downgradient alluvial monitoring wells. Water quality standards were not exceeded in any upgradient alluvial wells.

1.0 Introduction

The Monticello Mill Tailings Site (MMTS), located in San Juan County, Utah, comprises several tracts of land, including the Monticello millsite, the former Bureau of Land Management (BLM) compound, the South Site, and 25 peripheral properties surrounding the millsite (Figure 1). The DOE owns the former three tracts and several of the peripheral properties. Other entities or individuals own the remaining peripheral properties.

Remediation of the MMTS has been divided into three operable units (OUs). OU I consists of the excavation of mill tailings and other hazardous substances from the millsite and their containment in the permanent repository. OU II consists of the remediation of radioactively contaminated soils, by-product materials, and hazardous substances from private and DOE-owned properties peripheral to the millsite. Collectively, the remedial actions for OU I and OU II are referred to as the Monticello Remedial Action Project (MRAP). Remedial action for OU III addresses groundwater and surface water on the millsite and downstream peripheral properties.

Consistent with DOE's commitment to public involvement in DOE's operation at the MMTS, DOE and Rust established a more active presence in the local community in 1995 by hiring a local community relations coordinator and by maintaining regular attendance at local Site Specific Advisory Board (SSAB) meetings, city council meetings, chamber of commerce meetings, and other public meetings of importance to the MRAP. The Monticello SSAB is an independent forum that can facilitate direct contact between the public, State, and Federal agencies and develop and communicate citizen recommendations. Fact Sheets, News Releases, Display Ads, and Radio Talk Shows also provide an opportunity for public information updates, comments, and input. Citizens with questions, comments, or concerns about the project may call a toll-free number (1-800-269-7145) established for San Juan County residents or contact the DOE Site Manager at the Monticello Area Office (801-587-4005) with questions or concerns.

This Site Environmental Summary presents an information update for environmental activities conducted at the MMTS during calendar year 1995. Significant milestones attained in 1995 also are summarized. Environmental monitoring data for calendar year 1995 are presented in the appendix. Background information pertaining to the MMTS and environmental activities conducted during previous years is presented in the *Monticello Mill Tailings Site Environmental Report for Calendar Year 1994* (1994 SER) (DOE 1995k), and in previous years' reports.

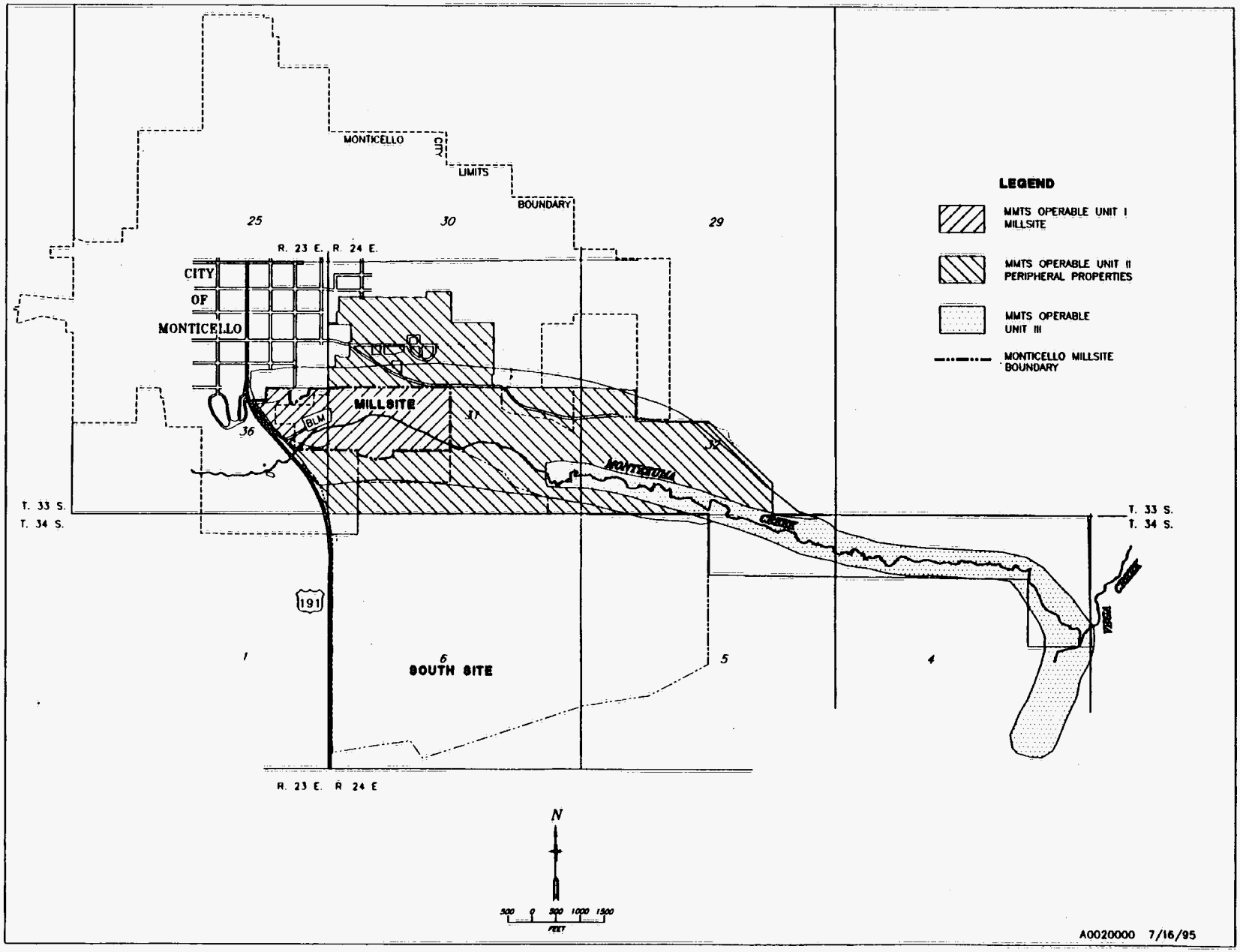

Figure 1. Remedial Action Project Boundary Map, Monticello Mill Tailings Site, San Juan County, Utah

2.0 Compliance Summary

2.1 Compliance Status

The compliance status for the major environmental statutes and Executive Orders applicable to the MMTS is discussed in this section. The compliance status of some of the statutes and executive orders has not changed since the preparation of the 1994 SER. The reader should refer to the 1994 SER for the compliance status for these statutes.

2.1.1 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Environmental restoration of the MMTS is prescribed in a Federal Facility Agreement, signed in December 1988, among DOE, EPA, and the State of Utah. During 1995, DOE met all the enforceable milestones established by this agreement but were assessed stipulated penalties for the accidental discharge of water into Montezuma Creek. The accidental discharges and stipulated penalties assessed against DOE are discussed in Section 2.2.5. Table 1 lists the 1995 enforceable milestones, the target dates for the milestones, and the actual completion dates of the milestones.

Table 1. Compliance Status with CERCLA Enforceable Milestones

Milestone	Target Date	Completion Date
Submit Pre-Final Design and Specification Package for Millsite Remediation (OU I)	April 28, 1995	April 28, 1995
Submit OU I Remedial Design/Remedial Action Work Plan	April 27, 1995	August 27, 1995
Complete Notice of Award for Millsite Remediation (OU I)	November 30, 1995	September 8, 1995
Submit OU II Remedial Design/Remedial Action Work Plan	March 22, 1995	March 22, 1995
Start Construction on MP-00947 (OU II)	August 4, 1995	July 21, 1995
Submit Sampling and Analysis Plan for Suspect Hazardous Substances on MP-00181 (OU II)	August 3, 1995	August 3, 1995
Submit Sampling and Analysis Plan for Suspect Hazardous Substances on MP-00990 (OU II)	November 4, 1995	February 28, 1996
Submit Draft Final RI/FS Work Plan for OU III	March 31, 1995	March 31, 1995
Submit Special Waste Management Plan	March 7, 1995	March 7, 1995
Submit Monticello Site Management Plan	March 15, 1995	March 15, 1995
Submit Explanation of Significant Difference Document	March 22, 1995	March 22, 1995
Submit Community Relations Plan	March 22, 1995	March 22, 1995
Submit Supplemental Standards Documents	March 31, 1995	March 31, 1995
Submit Site Boundary Proposal	March 31, 1995	March 31, 1995

Following are descriptions of the enforceable milestone documents submitted to EPA and the State of Utah in 1995:

- The *Monticello Remedial Action Project Operable Unit I Millsite Remediation Final Design* (DOE 1995p) and the *Construction Specifications for Monticello Remedial Action Project, Operable Unit I Millsite Remediation* (DOE 1995b) provide detailed plans and specifications for remedial design and remedial action at OU I.

- The OU I and OU II Remedial Design/Remedial Action Work Plans (DOE 1995r and DOE 1995s) provide an overview of management, tasks, and schedules associated with completing the remedial design and remedial action for OUs I and II, respectively.

- The Sampling and Analysis Plans for Monticello Peripheral Properties MP-00181 (DOE 1995u) and MP-00990 (DOE 1995v) describe the methods by which DOE will determine if waste materials on these properties are hazardous substances that exceed risk-based cleanup standards.

- The *Draft Final Operable Unit III Remedial Investigation/Feasibility Study—Work Plan* (DOE 1995d) describes the activities that will be performed in support of the OU III RI/FS. Three primary goals have been established for the OU III RI/FS: (1) to determine the ecological and human health risks posed by the sediment/soil contaminant source within the study area, (2) to determine the ecological and human health risks posed by the surface water and groundwater contaminant sources within the study area, and (3) to collect sufficient water quality data to support evaluation of appropriate remedial action(s), if warranted. A draft Baseline Risk Assessment is anticipated to be completed by the end of 1996.

- The *Draft Final Special Waste Management Plan for the Monticello Mill Tailings Site and Vicinity Properties* (DOE 1995e, revised as DOE 1996a) presents DOE's approach for managing wastes contaminated with hazardous substances (other than uranium mill tailings) that are encountered during remedial activities.

- The *Monticello Site Management Plan* (DOE 1995q) establishes the overall plan for remedial action activities at the MMTS and establishes milestones against which DOE's progress is measured.

- The *Explanation of Significant Difference and Notice* (DOE 1995h) explains the reasons for the cost growth in OU I remedial activities from 1990 to 1995. The 1990 MMTS Record of Decision (DOE 1990) established the cost of the selected remedial action as approximately $52 million. The estimated cost of remedial action in 1995 was calculated in the range of $101 million to $116 million, an increase of $49 million to $64 million.

- The *Monticello Mill Tailings Superfund Site and Monticello Vicinity Properties Superfund Site Community Relations Update* (DOE 1995i) describes public

involvement and community information activities that will be conducted during cleanup of the MMTS.

- The *Monticello Mill Tailings Site Supplemental Standards Documents* (DOE 1995o) presents DOE's position on the use of supplemental standards for several OU II properties. (Supplemental standards, defined in 40 *Code of Federal Regulations* [CFR] 192.21 and 192.22, may be applied in situations where attainment of the usual cleanup standards is not justified). Decisions to grant or not grant supplemental standards will likely depend heavily on local public opinion and on the reactions of property owners.

- The *Monticello Mill Tailings Site Boundary Proposal* (DOE 1995j) establishes the boundaries of the MMTS project and creates a mechanism for identifying the movement of tailings and other potentially contaminated materials off the millsite.

Other documents provided to EPA and the State of Utah in support of this CERCLA project during 1995 included:

- The *Construction Quality Assurance Plan* (DOE 1995a) provides specific quality requirements of the repository and implements the Quality Assurance (QA) Program for OU I, millsite remediation.

- The *Draft Wetlands Master Plan* (DOE 1995g) provides delineation results, mitigation measures, and monitoring plans for disturbed wetland areas at OU I, OU II, OU III, and the MVPs.

Designs for several phases of Monticello Remedial Action Project have been prepared in accordance with the applicable or relevant and appropriate requirements identified in the MMTS Record of Decision. In 1995, design documents submitted to DOE Headquarters (DOE-HQ) and/or EPA and the State of Utah for review consisted of:

- Remedial Action Design Packages for Peripheral Properties
  MP-00181-OT Phase III
  MP-00105-VL Phase II/MP-00391-VL Phase II (January 1996)
  MP-01083-MR (includes MP-00950-VL, MP-00951-VL, and MP-001084-VL)
  MP-01077-VL Phase I
  MP-00988-VL

MMTS construction activities that occurred in 1995 included:

- Demolition of MP-00181-OT Phase Ia (i.e., the former BLM Compound structures)
- Remediation of MP-01077-VL Phase I
- Reconstruction of MP-00181-OT Phase III
- Reconstruction of MP-00178-OT Phase IIa
- Reconstruction of MP-00963-OT Phase II
- Reconstruction of MP-00179-VL, Phase IIa and Phase IIb
- Reconstruction of MP-00947-VL

- Initiation of the On-Site Repository construction
- Excavation of Retention Pond 4
- Closure (including excavation, emptying, and removal) of the Underground Storage Tanks on MP-00181-OT Phases I and IV

The Information Repositories for the MMTS (OU I, OU II, and OU III) contain publicly-assessible documents and correspondence concerning the remedial action. The repositories, located at the GJPO Technical Library in Grand Junction, Colorado, and at DOE's Monticello Office, were updated in March, June, September, and December 1995.

2.1.2 Superfund Amendments and Reauthorization Act, Title III (SARA Title III)

Extremely hazardous substances or hazardous chemicals were not present at the MMTS and therefore, not stored in amounts exceeding the threshold planning quantities established in Sections 311 and 312 of SARA Title III. Storage of diesel fuel in excess of 4,540 kilograms (10,000 pounds) would have necessitated reporting and notification; however, diesel fuel was not stored at the MMTS (fuel needed for construction equipment was delivered on a daily basis). In addition, no toxic chemicals were used at the MMTS in excess of applicable threshold quantities established in Section 313 of SARA Title III, and no reportable releases of hazardous substances (as defined by Section 304 of SARA Title III) occurred at the MMTS. The SARA Title III reporting requirements for calendar year 1995 are summarized as follows:

- Sections 302-3-3: Planning Notification - not required

- Section 304: extremely hazardous substances (EHS) Release Notification - not required

- Section 311-312: Material Safety Data Sheets/Chemical Inventory - not required

- Section 313: Toxic Chemical Release Inventory (TRI) Reporting - not required

2.1.3 Resource Conservation and Recovery Act (RCRA)

The Utah Hazardous Waste Management Rules will be considered applicable or relevant and appropriate when hazardous waste must be managed as part of the remedial action activities. To address the State requirements, as well as Federal requirements under RCRA, DOE prepared the *Special Waste Management Plan for the Monticello Mill Tailings Site and Vicinity Properties* (SWMP) (DOE 1995e). This document presents the DOE's approach for the management of wastes contaminated with hazardous substances other than uranium mill tailings that are encountered during remediation of the MMTS. Additionally, it outlines DOE's approach for the assessment and remediation of hazardous substances and other non-radiological wastes. (However, it does not address surface-water and groundwater issues associated with the MMTS.) *Guidelines for Managing Suspect Hazardous Substances Encountered During Remediation at the*

Monticello Mill Tailings Site and Vicinity Properties (Guidelines), Attachment 1 of the SWMP, provides field procedures for implementation of the plan. The SWMP was submitted to the EPA and the State of Utah in March 1995. Comments were incorporated and the Draft Final document (DOE 1996a) was resubmitted in November 1995.

Currently, materials that require special management according to the SWMP may be placed into storage at the Interim Waste Management Area (IWMA), located on a secured area of the millsite. The *Draft Interim Waste Management Area Operating Plan and Procedures* (DOE 1995f) was submitted to EPA and the State of Utah in November 1995. Once the on-site repository begins accepting wastes, hazardous wastes may be hauled directly to the on-site repository. The IWMA meets the substantive requirements of RCRA, and the on-site repository will meet the substantive requirements of a RCRA Subtitle C disposal facility.

RCRA wastes that do not meet the Waste Acceptance Criteria for the permanent on-site repository may be transported by a commercial transporter to an off-site treatment, storage, and/or disposal facility for disposal.

2.1.4 National Environmental Policy Act (NEPA)

Under DOE's NEPA regulations codified at 10 CFR 1021.330(e), DOE is required to provide a NEPA review of the Remedial Investigation/Feasibility Study–Environmental Assessment (RI/FS–EA), Finding of No Significant Impact (FONSI), and Record of Decision (ROD) at 5-year intervals to determine if these documents adequately describe ongoing remedial actions and the environmental impacts associated with those actions. The *Draft Five-Year NEPA Review* (DOE 1996b) concluded that all remedial actions conducted during the last 5 years for OU I and OU II have been consistent with the 1990 ROD and FONSI, additionally, no substantial impacts relative to environmental concerns have occurred to date.

2.1.5 Uranium Mill Tailings Radiation Control Act (UMTRCA)

No changes in the compliance status for this statute have occurred since preparation of the 1994 SER.

2.1.6 Clean Air Act/National Emission Standards for Hazardous Air Pollutants (CAA/NESHAPS)

No changes in the compliance status for this statute have occurred since preparation of the 1994 SER.

2.1.7 Clean Water Act/National Pollutant Discharge Elimination System (CWA/NPDES)

In 1993, DOE submitted a Utah Pollution Discharge Elimination System (UPDES) permit application to the Utah Division of Water Quality, Department of Environmental Quality, for installation of a wastewater treatment plant (WWTP). A WWTP plant was installed in 1995 east of the millsite. The treatment plant treats water in retention Pond 3 to reduce radionuclides, heavy metals, and suspended solids prior to discharge into Montezuma Creek. Specific effluent limitations from the discharge water were proposed by the State of Utah in 1993 and clarified in February 1994. During 1995, the treatment plant discharge (i.e., treated water) was sampled and analyzed weekly from April 25, 1995, through July 18, 1995, and three additional times from August 7, 1995, through August 21, 1995. A comparison of State water quality standards to the WWTP effluent analyses is presented in Section 2.2.4.

To date, the plant has treated and released over 15 million liters (4 million gallons) into Montezuma Creek. During peak runoff in the spring, the plant released up to the allowed maximum of 6.31 liters/second (100 gallons per minute). Retention Pond 3 was nearly empty at the decline of spring runoff because most of the water had been treated and released.

Stipulated penalties of $40,000 for violations of the Utah Pollutant Discharge Elimination System regulations due to storm water discharges from the millsite were assessed DOE by the EPA in May, 1995. A discussion of the discharges and stipulated penalties is presented in section 2.2.4.

2.1.8 Safe Drinking Water Act (SDWA)

No changes in the compliance status for this statute have occurred since preparation of the 1994 SER.

2.1.9 Toxic Substances Control Act (TSCA)

Asbestos was identified at the MMTS in 1994 in several of the buildings and in soil beneath the buildings. In July and August 1995, Buildings 1, 2, 6, 7, 8, 9, and 10 (see Figure 2 on page 13) were demolished on the former BLM Compound. Approximately 15,010 square feet of asbestos floor tile, 1,100 linear feet of pipe insulation, and 12 cubic yards of asbestos-containing soil were removed from these buildings prior to demolition. Asbestos was removed with permit-approval from the State of Utah, Division of Air Quality. All work was completed in compliance with the Utah Administrative Code, R446-1-8, Utah Air Conservation Rules.

Light ballasts removed from three of the BLM-Compound buildings (2, 6, and 7) were determined to contain polychlorinated biphenyls (PCBs) based on the August 1957 date stamped on the ballasts. (In compliance with 40 CFR 761, any ballasts manufactured prior to 1979 that are not labelled "NO PCBs" must be assumed to contain PCBs).

During demolition, the ballasts were removed from the light fixtures, placed into plastic bags, labeled as to building of origin and date of generation, and stored in a 55-gallon open-head drum. Several of the ballasts were noted to be leaking. The drum was placed into an overpack which served as secondary containment.

The ballast-containing drum within the overpack was transported to the IWMA for storage and placed into a steel structure with a locking, hinged lid in August 1995. (TSCA requirements for container storage of PCB waste is outlined in the SWMP (DOE 1996a). The overpack and the steel box were marked with the appropriate PCB marking. The ballasts were shipped to an approved high-temperature incineration facility and will be destroyed in accordance with 40 CFR 761. After certification as non-radioactive, a second shipment of two PCB ballasts was made to the same facility on July 23, 1996.

2.1.10 Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

No changes in the compliance status for this statute have occurred since preparation of the 1994 SER (pesticides were not used on the MMTS in 1995).

2.1.11 Endangered Species Act

A list of threatened or endangered species that could occur at or in the vicinity of the MMTS has been compiled; to date, none of the species has been observed at the site. No substantial impacts to threatened or endangered species have occurred during remedial actions.

In 1995, the millsite and repository site were surveyed for the bog violet, which is the host plant for an endangered butterfly. No bog violets were found. In addition, the millsite and repository site were surveyed for potential southwestern willow flycatcher habitat. Potential habitat was found along Montezuma Creek on the west side of the millsite. Habitat disturbance was prohibited during the breeding season until field surveys confirming flycatcher absence could be conducted. The U.S. Fish and Wildlife Service were apprised of all activities.

2.1.12 National Historic Preservation Act/Archeological Resources Protection Act

During 1995, determinations of no adverse effect were sought and obtained for six archeological sites through the Utah Historic Preservation Office and the Advisory Council on Historic Preservation. Two of these sites (42SA21061 and 42SA21063) were determined eligible for the National Register of Historic Places. Because avoidance of site 42SA21063 was not feasible, mitigation (excavation) was conducted. Preliminary results suggest that the site is a multi-component prehistoric campsite. A final site report was completed in May 1996. Materials collected from the mitigation of the site will be curated at a State-recognized and -approved facility. Curation fees will be paid by the DOE.

Buried human bones were discovered in the fall of 1995 during construction activities at the former BLM compound. From their context, the bones are expected to be of Anasazi association. Consultation with the Hopi Nation has been opened to arrange for the exhumation and reburial of the remains.

2.1.13 Executive Order 11988, "Floodplain Management"

No changes relevant to Floodplain Management for Montezuma Creek occurred in calendar year 1995. Adverse impacts associated with direct and indirect development of the floodplain will be evaluated for each remedial design prepared.

2.1.14 Executive Order 11990, "Protection of Wetlands"

In 1989, the U.S. Army Corps of Engineers (COE) determined that wetland areas exist on the MMTS. DOE submitted the design drawings of OU I, Phase I to EPA in March 1992 to notify EPA of planned wetland disturbances. Design drawings for future MMTS work, including restoration of wetland areas, will be submitted to EPA as the designs are completed.

The *Monticello Wetlands Master Plan* (draft) (1995g) was submitted to EPA and the State in November 1995. The goal of the Master Plan is to ensure that (1) CERCLA cleanup activities comply with wetlands regulations and guidance; (2) adverse effects to wetland areas are avoided where possible; (3) adverse effects to wetland areas are minimized; and (4) unavoidable adverse effects to wetland areas are mitigated. The Master Plan provides delineation results, mitigation measures, and monitoring plans for disturbed wetland areas at the MMTS. Mitigation plans previously submitted to the EPA and/or the State are not part of the Master Plan.

Wetland areas at the MMTS total 11.5 hectares (28.5 acres). Excluding OU III, only 3.1 hectares (7.6 acres) of wetland areas will be affected by remedial activities. Affected wetlands include: perennial streams (2.3 hectares/5.7 acres), intermittent streams (0.39 hectares/0.96 acres), emergent wetlands (0.11 hectares/0.27 acres), depressions (0.17 hectares/0.42 acres), and stock ponds (0.1 hectares/0.25 acres).

Wetland areas will be restored in situ where possible; otherwise they will be re-created at the OU I Millsite or other DOE property. Mitigation will focus on the restoration of wetland functions and the areal extent of the wetland type, the minimization of erosion, and the prevention of noxious and non-noxious weed encroachment. Revegetation efforts will emphasize the use of ecotype seed and cuttings from local willows.

To ensure that wetland areas have not been affected by past remedial activities, DOE-GJPO will investigate remediated properties that have the potential for wetlands in the spring and summer of 1996.

2.1.15 State of Utah Groundwater Quality Protection Regulations

No changes in the compliance status for this statute have occurred since preparation of the 1994 SER.

2.1.16 Title 73, "Water and Irrigation", Utah Code Annotated

No changes in the compliance status for this statute have occurred since preparation of the 1994 SER.

2.2 Environmental Issues and Actions

2.2.1 Suspect Hazardous Substances

Suspected CERCLA hazardous substances were tentatively identified on several MMTS peripheral properties in 1994 and 1995. Site Assessments were conducted for properties MP-00990-CS and MP-00685/688-CS. Characterization of the suspected hazardous substances was completed on properties MP-00181-0T, Phase IV and MP-00211-OT and a Site Characterization Report was submitted for these properties in January 1996. Additionally, on-site suspect hazardous substance monitoring was conducted for MP-00181-0T, Phase I, during remedial activities, during July and August 1995.

2.2.2 Underground Storage Tanks

Although Underground Storage Tanks (USTs) are excluded from the scope of this CERCLA remediation, DOE committed to the closure of 4 USTs on MP-00181-OT Phases I and IV, under R311-204 of the Utah Administrative Code (Figure 2). The tanks were emptied of residual gasoline and diesel fuel and removed in August 1995. Residual product and water present in 3 tanks removed from MS-00181-OT Phase IV was analyzed for radiological contamination and determined to be uncontaminated. The product and water was transported off-site by a Utah-certified petroleum recycler.

Diesel and groundwater present in the tank removed from MP-00181-OT Phase I was determined to be radiologically-contaminated. Prior to excavation of the tank, the tank contents were pumped into DOT-approved 55-gallon drums for storage at the IWMA. The tank contents are considered to be by-product waste and will be disposed at the permanent on-site repository after the contents meet the repository waste acceptance criteria.

Soil and groundwater samples were collected immediately after removal of the four MP-00181-OT USTs. The analytical results were reviewed by the Utah Department of Environmental Quality (UDEQ) Division of Environmental Response and Remediation, UST Section. The DOE was notified by the Executive Secretary of the Division of Environmental Response and Remediation on January 8, 1996, that the low levels of petroleum contamination at the site comply with State underground storage tank rules

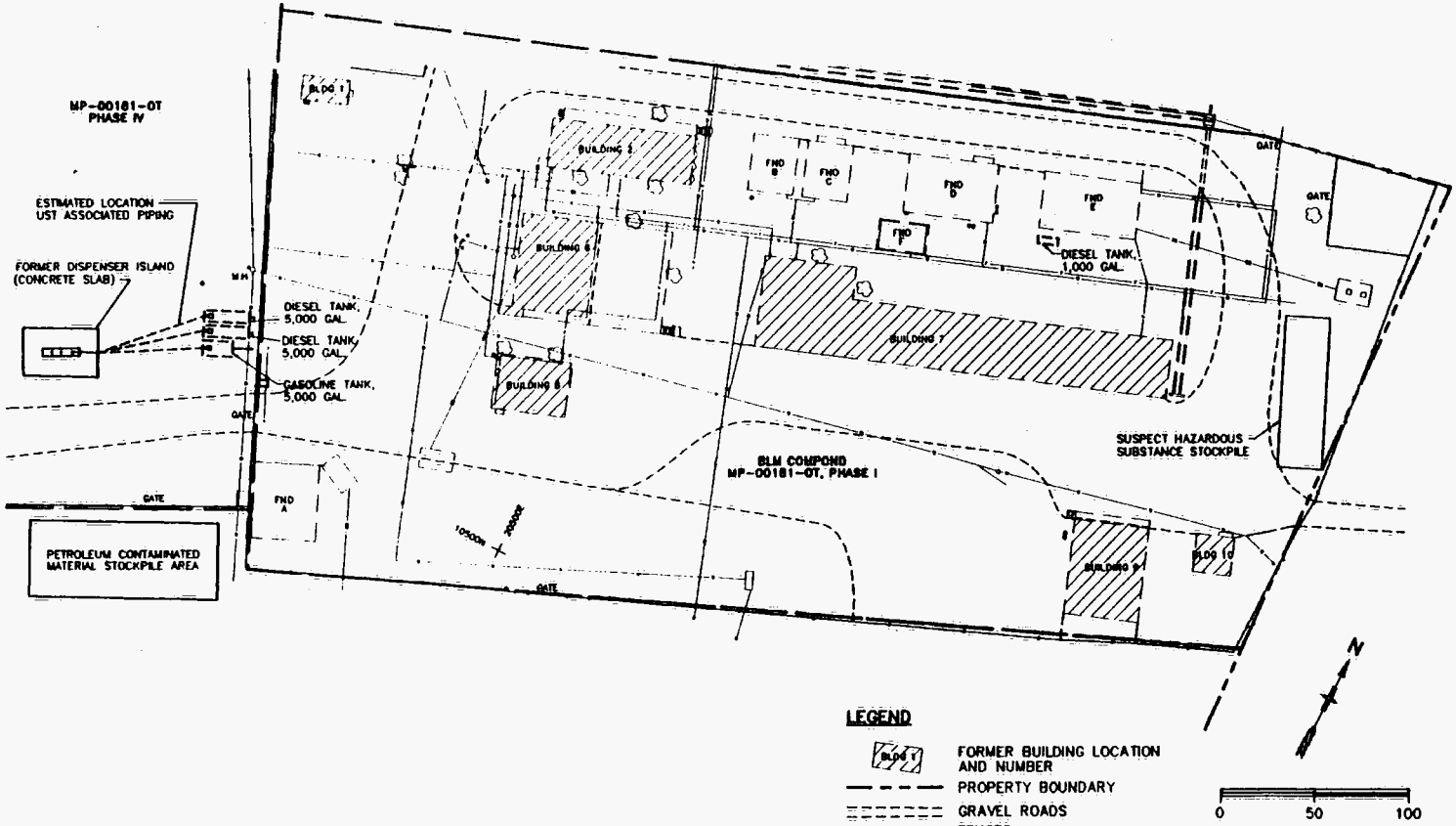

Figure 2. Location of Former Underground Storage Tanks on MP-00181-OT

and that no further corrective action is recommended at this time. Further corrective action would only be required if a change in land use or other evidence of contamination from the facility was indicated.

2.2.3 Repository Site Preparation

DOE reconfirmed the decision to construct a repository on 80 acres of DOE-land south of the MMTS in December 1994 (see Figure 13, page 47, for repository location). The favorable hydrogeologic setting, as well as the design features of the repository, will ensure the site is protective of human health and the environment. Design for the repository was finalized in August 1995, and the construction subcontract was awarded in September 1995. Repository construction was initiated in November 1995.

2.2.4 Wastewater Treatment Plant

The Monticello Millsite Wastewater Treatment Plant (WWTP) has been in operation since May 2, 1995. The WWTP is designed to remove heavy metals and radionuclides from ground and surface wastewaters at an average flow rate of 60 gallons per minute. The plant equipment is housed in three, 48-foot trailers.

The wastewater treatment system employed at the MMTS encompasses all three of the classic treatment processes: primary treatment, secondary treatment, and advanced or tertiary treatment. The primary treatment system consists of the collection pond (Retention Pond 3) located downgradient of the tailings storage areas. Secondary treatment is provided by Trailers 1 and 2. Tertiary treatment is provided by Trailer 3. Trailers 1 and 2 are currently operational. Trailer 3, housing the ion-exchange system, requires equipment upgrade prior to operation and was not required to meet release criteria in 1995.

During tailings excavation, surface and sub-surface waters will be collected and routed to Pond 3 prior to treatment by the WWTP. Wastewaters from various areas of the MMTS will be collected and mixed in Pond 3 such that the water influent to the WWTP meets the influent water quality requirements of the plant specifications. Larger sediment particles settle to the bottom of Pond 3, thus providing primary treatment. This sediment will be removed from the pond and placed in the on-site repository when the pond is decommissioned at the end of the project.

Secondary treatment processes are employed to treat the contaminated solids in the wastewater solution, in order to meet the discharge criteria. The secondary treatment system includes chemical precipitation, sedimentation, and membrane filtration. Trailer I contains the chemical precipitation process. The process involves addition of various chemicals to convert the solids in solution to a colloidal suspension prior to filtration. The membrane filtration system in Trailer 2 then filters the solids from the wastewater producing a clean filtrate that can be discharged to the receiving waters. To verify that the discharge criteria established by the UDEQ, Division of Water Quality (DWQ), water samples are collected and analyzed. If the filtrate produced by the secondary

treatment does not meet the regulatory discharge criteria for one or more of the analytes, the tertiary treatment must be employed.

The tertiary treatment consists of ion-exchange, adsorption, and filtration media with 60-mesh or larger sized filters. Choice of the appropriate media will be dependent on the analyte to be removed and the specific chemistry of the stream influent. As in the case of the secondary treatment system, samples will be collected from the discharged water to verify that the State discharge criteria have been met.

Summary WWTP influent and effluent concentrations (Tables 2, 3, and 4) were provided to the EPA and the UDEQ for May, June, and July 1995. No comments or responses have been received to date. WWTP influent and effluent analytical results from the entire sampling period (April 25, 1995, through August 21, 1995) are presented in the appendix, Tables A-1 and A-2.

With the exception of mercury and silver concentrations, no effluent limits set by the UDEQ DWQ were exceeded. Although mercury was not detected in the WWTP average effluent concentrations or maximum effluent concentrations for May, June, or July 1995, the analytical detection limit for mercury (based on standard analytical procedures defined by the Safe Drinking Water Act) is greater than the 30-day average effluent limit for the WWTP. Similarly, although no silver was detected in WWTP effluent for July 1995, the analytical detection limit for silver is greater than the 30-day average effluent limit set by the DWQ. Silver was detected in WWTP effluent measured in May and June 1995. The average effluent concentration exceeded the 30-day average effluent limits in both May and June 1995. A position paper was submitted to the DWQ in March of 1996 to propose that higher effluent limits be established for mercury and silver; approval was subsequently granted.

2.2.5 Retention Ponds 2 and 3 Discharges

Pond 2 is a small pond on the south side of the MMTS (capacity of 802,420 liters [212,000 gallons]) intended to collect contaminated runoff from the interim repository where tailings from vicinity and peripheral properties are stored. Pond 2 was designed as a temporary retention pond to operate until Pond 3 and the WWTP were fully operational. During February and March 1995, Pond 2 received water from areas beyond the millsite not intended to go into Pond 2. Boggy conditions resulted in an inability to keep drainage ditches open that were designed to prevent the offsite water from entering Pond 2. Accidental discharge of water held in Pond 2 occurred intermittently between February 15, 1995, and March 15, 1995, through the overflow weir into Montezuma Creek. Release from Pond 2 ceased on March 15, 1996, when the water was temporarily diverted to Pond 3 via the south on-site collection ditch. Three maximum effluent limits (total suspended solids, total zinc, and total alpha) and four average effluent concentrations (total suspended solids, total zinc, total selenium, and nitrate) out of the 19 UPDES criteria were exceeded in the overflow water.

Table 2. Average and Maximum WWTP Effluent Concentrations for May 1995

Parameter	Effluent Limits		WWTP Average Effluent Concentration	WWTP Maximum Effluent Concentration	Detection Limit
	30-Day Average	Maximum			
TSS mg/L	20	30	U[1]	U[1]	10
BOD mg/L	25	35	1.76[2]	5[3]	Not listed
COD mg/L	100	200	19.8[2]	29	1
Total Radium 226 pCi/L		5		U[1]	0.3
Dissolved Radium 226 pCi/L	3		0.18[2]		0.3
Uranium mg/L	2	4	0.0073	0.0100	0.0003
Total Zinc mg/L	0.31	0.34	U[1]	U[1]	0.02
Ammonia as N mg/L	3.9	5.6	0.08[2]	0.2	0.1
Total Alpha pCi/l (includes Uranium)		50		2.2	2
Total Arsenic mg/L	0.01	0.05	0.002[2]	0.004	0.003
Total Mercury mg/L	0.00002	0.0024	U[1]	U[1]	0.0002
Total Iron mg/L		1		U[1]	0.1
Total Lead mg/L	0.016	0.05	U[1]	U[1]	0.002
Total Selenium mg/L	0.012	0.02	0.011	0.019	0.0005
Total Silver mg/L	0.00012	0.035	0.001[2]	0.003	0.0005
Oil and Grease mg/L		10		4	1
pH	6.5-9.0		7.01		
Nitrate as N mg/L	5	10	0.28	0.5	0.1
TDS mg/L	1500	3000	495	782	10

Notes: 1. U = analyte not detected
2. The 30-day average was calculated using measured weekly concentration or half of detection limit if not detected. For the duplicate effluent sampling on May 30, 1995, an average of the concentrations was used in determining the 30-day average.
3. Maximum concentration is half of detection limit for effluent sampling on May 2, 1995.

Table 3. Average and Maximum WWTP Effluent Concentrations for June 1995

Parameter	Effluent Limits		WWTP Average Effluent Concentration	WWTP Maximum Effluent Concentration	Detection Limit
	30-Day Average	Maximum			
TSS mg/L	20	30	U[1]	U[1]	10
BOD mg/L	25	35	0.4[2]	0.6	0.4
COD mg/L	100	200	12.8	20	1
Total Radium 226 pCi/L		5		U[1]	0.3
Dissolved Radium 226 pCi/L	3		U[1]		0.3
Uranium mg/L	2	4	0.0087	0.008	0.0003
Total Zinc mg/L	0.31	0.34	U[1]	U[1]	0.02
Ammonia as N mg/L	3.9	5.6	0.1[2]	0.2	0.1
Total Alpha pCi/l (includes Uranium)		50		11	2
Total Arsenic mg/L	0.01	0.05	U[1]	U[1]	0.003
Total Mercury mg/L	0.00002	0.0024	U[1]	U[1]	0.0002
Total Iron mg/L		1		U[1]	0.1
Total Lead mg/L	0.016	0.05	U[1]	U[1]	0.002
Total Selenium mg/L	0.012	0.02	0.008	0.009	0.0005
Total Silver mg/L	0.00012	0.035	0.0003[2]	0.0005	0.0005
Oil and Grease mg/L		10		5	1
pH	6.5–9.0		7.49		
Nitrate as N mg/L	5	10	0.35	0.5	0.1
TDS mg/L	1500	3000	558	630	10

Notes: 1. U = analyte not detected
2. The 30-day average was calculated using measured weekly concentration or half of detection limit if not detected.

Table 4. Average and Maximum WWTP Effluent Concentrations for July 1995

Parameter	Effluent Limits		WWTP Average Effluent Concentration	WWTP Maximum Effluent Concentration	Detection Limit
	30-Day Average	Maximum			
TSS mg/L	20	30	U[1]	U[1]	10
BOD mg/L	25	35	0.40	0.8	Not listed
COD mg/L	100	200	14.3	19	1
Total Radium 226 pCi/L		5		U[1]	0.3
Dissolved Radium 226 pCi/L	3		U[1]		0.3
Uranium mg/L	2	4	0.0008	0.0019	0.0003
Total Zinc mg/L	0.31	0.34	U[1]	U[1]	0.02
Ammonia as N mg/L	3.9	5.6	U[1]	U[1]	0.1
Total Alpha pCi/l (includes Uranium)		50		2.2	2
Total Arsenic mg/L	0.01	0.05	U[1]	U[1]	0.003
Total Mercury mg/L	0.00002	0.0024	U[1]	U[1]	0.0002
Total Iron mg/L		1		U[1]	0.1
Total Lead mg/L	0.016	0.05	0.001[2]	0.002	0.002
Total Selenium mg/L	0.012	0.02	0.008	0.008	0.0005
Total Silver mg/L	0.00012	0.035	U[1]	U[1]	0.0005
Oil and Grease mg/L		10		2	1
pH	6.5-9.0		6.99		
Nitrate as N mg/L	5	10	0.3	0.6	0.1
TDS mg/L	1500	3000	693	700	10

Notes: 1. U = analyte not detected
2. The 30-day average was calculated using measured weekly concentration or half of detection limit if not detected. For the duplicate effluent sampling on July 5, 1995, an average of the concentrations was used in determining the 30-day average.

Pond 3, on the east side of the millsite, is a large pond (capacity of 4,006,244 gallons, 15,163,634 liters) intended to collect contaminated water from the millsite area for treatment through the WWTP. Pond 3 released sometime after business hours on February 14 and before 7:00 a.m. on February 16, 1995. Discharge from Pond 3 occurred through pipes on the north side of the pond that had been left unplugged after the pond was constructed. The pipes were intended to discharge to the wastewater treatment plant (WWTP) that was to be installed later in the year. The pipes were plugged after the discharge was discovered, on February 16, 1995; however, water exceeding 3 maximum (total suspended solids, dissolved radium, and total alpha) and 3 average (total suspended solids, dissolved radium, and total arsenic) out of 19 UPDES criteria was released onto an adjacent peripheral property (MP-00179-VL). It is unlikely that the discharged water reached Montezuma Creek, over 700 feet across topographically low areas.

DOE-GJPO reported this information orally to the EPA and UDEQ in February 1995. On March 17, 1995, the EPA and UDEQ were provided with a summary of the discharge events, which included corrective action plans. An update was provided on March 28, 1995.

On March 23, 1995, the off-site drainage ditch on the south side of Pond 2 was reconstructed through the boggy area to prevent hillside runoff from entering Pond 2. A new drainage ditch was constructed west of Pond 2 to divert runoff to the on-site collection ditch into Pond 3. An overflow weir to Pond 2 had already been plugged. Permanent diversion of the outlet weir water from Pond 2 to Pond 3 has been accomplished using a culvert system. Corrective action for Pond 3 was accomplished by plugging the pipes on the north side of the pond. Additionally, Pond 3 reconstruction was initiated March 27, 1995, to correct the capacity of Pond 3 by raising the spillway elevation. (Due to an error during construction, Pond 3 was originally constructed 10 percent below design capacity.) In addition to these corrective actions, the start-up of the WWTP was expedited to release treated water from Pond 3 to Montezuma Creek. The plant became operational in May 1995, two months ahead of schedule.

DOE-GJPO determined that the root cause of the releases was the contractor's inattention to the condition of the stormwater diversion ditches and Pond 3. As a result, timely action to prevent releases of untreated stormwater to Montezuma Creek was not taken.

In May 1995, the EPA assessed DOE $40,000 in stipulated penalties for violation of the Utah Pollutant Discharge Elimination System regulations due to stormwater discharges from Ponds 2 and 3. DOE, EPA, and the State of Utah entered into dispute resolution. In July 1996, DOE agreed to pay the $40,000 penalty. DOE and EPA had attempted to negotiate a supplemental environmental project in lieu of penalties but could not come to an agreement on settlement language.

3.0 Environmental Monitoring Summary

Historical environmental monitoring information, sampling techniques, and regulatory guidance pertaining to environmental monitoring are presented in the 1994 SER. An update on environmental monitoring and the current ecological risk assessment information are presented in this section.

3.1 Atmospheric Radon

Radon concentration was measured at 15 locations during 1995 (Figure 3) with Landauer Radtrak alpha-sensitive detectors. As in previous radon monitoring, the detectors were exposed in duplicate 1 meter (3.28 feet) above the ground surface and were analyzed quarterly (3-month exposure).

The site-specific standard of 0.9 picocuries per liter (pCi/L) was calculated by adding the EPA standard (40 CFR 192) of 0.50 pCi/L (annual average) to the natural background concentration of 0.4 pCi/L (DOE 1990a). As shown in Table 5, the atmospheric radon concentrations measured during 1995 exceeded the EPA standard at both locations along the millsite boundary and at one location (RN-M-04) off the millsite. Concentrations at the remaining off-site locations were below the standard, which is consistent with previous years' analytical results. Quarterly data collected at each location are listed in the appendix, Tables A-3 through A-6.

3.2 Air Particulates

Air particulate monitoring at the MMTS was initiated in August 1983. The current air sampling network consists of: (1) five high-volume air samplers that sample ambient air at approximately 0.9 cubic meter per minute (m^3/min) for 24 hours every sixth day for particulate matter less than or equal to 10 micrometers in diameter (PM_{10}); and (2) seven low-volume (flow rate of 0.06 m^3/min) air samplers adjacent to the millsite and the city of Monticello that sample radioparticulates (radium-226, thorium-230, and total uranium). Figure 4 depicts the locations of the air particulate samplers at and near the MMTS that provide on-site, off-site, and background data for air particulates.

Table 6 compares measured PM_{10} concentrations to EPA standards. Acceptable levels of PM_{10} are defined in the National Ambient Air Quality Standards (40 CFR 50), which specify a maximum annual average of 50 micrograms per cubic meter ($\mu g/m^3$) and a 24-hour maximum concentration of 150 $\mu g/m^3$. During 1995, the maximum annual average and 24-hour maximum concentrations of PM_{10} measured at all sampling locations were well below EPA standards.

The annual average concentration of PM_{10} measured at the four samplers surrounding the millsite was 12.1 micrograms per cubic meter ($\mu g/m^3$), and the average 24-hour maximum concentration measured at these samplers was 41.4 $\mu g/m^3$. Background

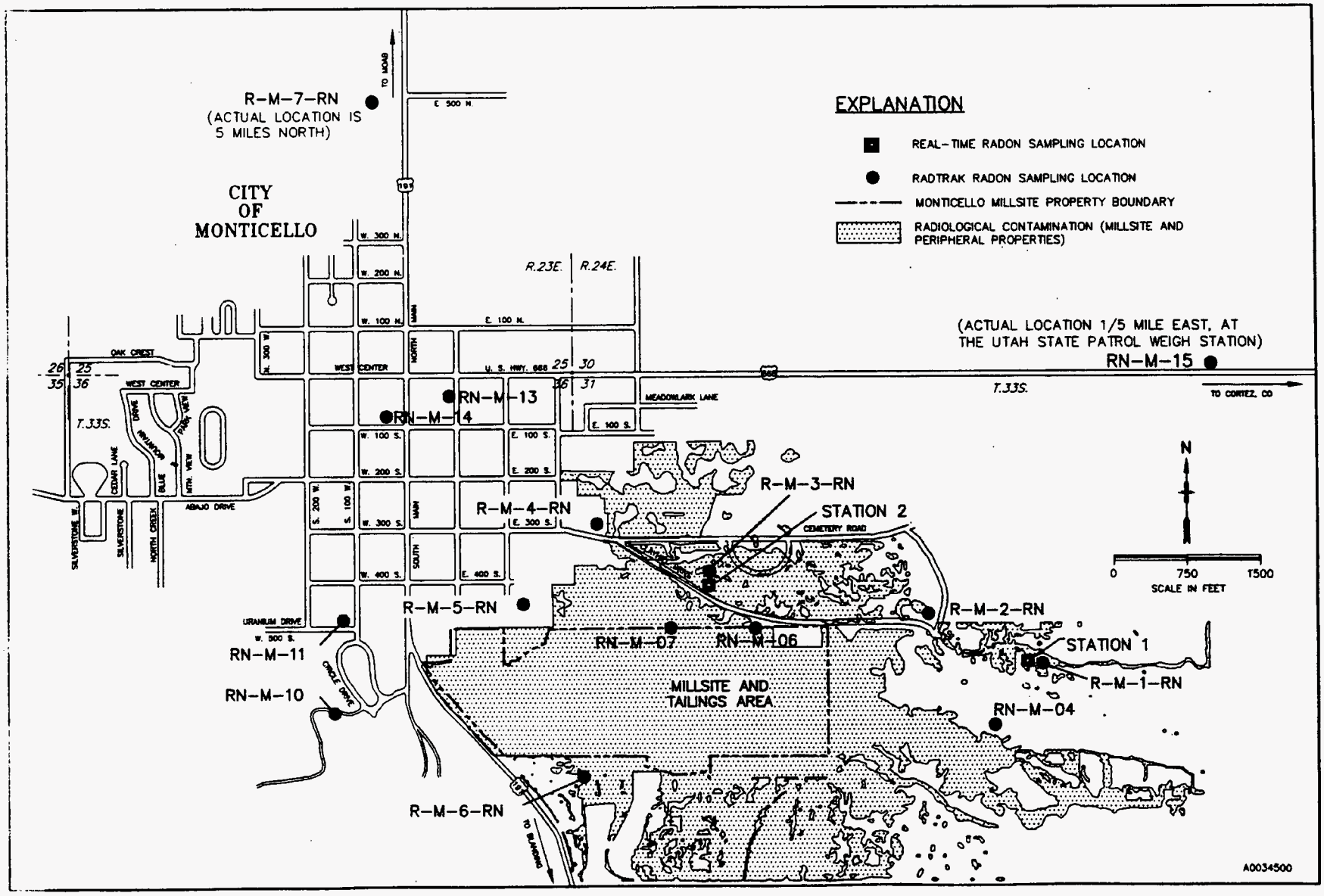

Figure 3. Atmospheric Radon Monitoring Locations At and Near MMTS

Table 5. Comparison of Average Annual Radon Concentrations At and Near MMTS with EPA Standard during 1995

Sampling Location	Radon Concentration	
	Annual Average (pCi/L)[a]	EPA Standard (Including background) (pCi/L)
On-Site		
RN-M-06	1.0	0.9
RN-M-07	1.9	0.9
Off-Site		
RN-M-04	1.0	0.9
RN-M-10	0.3	0.9
RN-M-11	0.2	0.9
RN-M-13	0.3	0.9
RN-M-14	0.3	0.9
RN-M-15	0.5	0.9
R-M-1-RN	0.6	0.9
R-M-2-RN	0.4	0.9
R-M-3-RN	0.6	0.9
R-M-4-RN	0.4	0.9
R-M-5-RN	0.5	0.9
R-M-6-RN	0.4	0.9
R-M-7-RN	0.5	0.9

[a]1 pCi/L = 3.7×10^{-2} becquerels per liter.

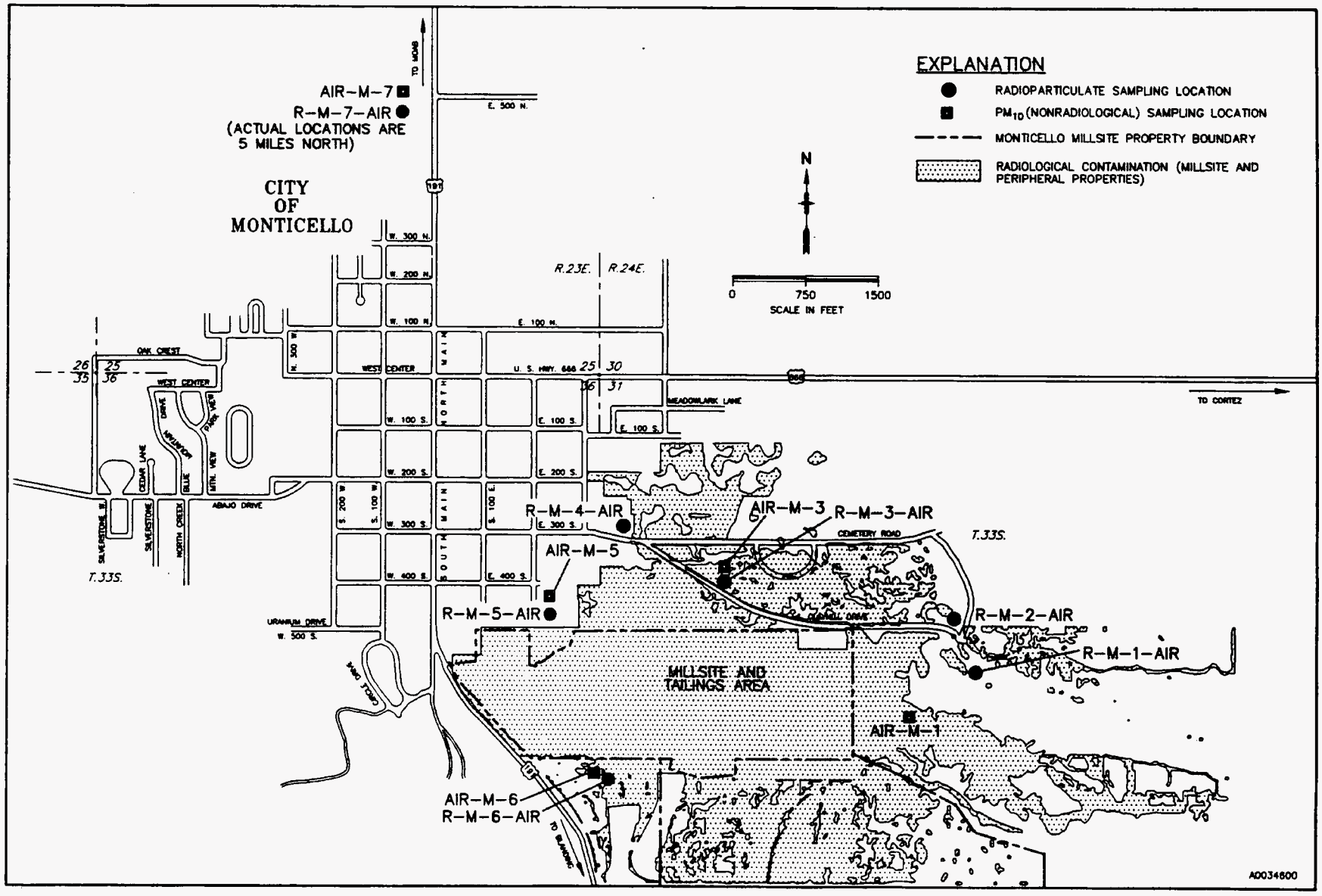

Figure 4. Air Particulate Sampling Locations At and Near MMTS

Table 6. Results of MMTS PM_{10} Monitoring Conducted during 1995

Station		Measured PM_{10}[a] ($\mu g/m^3$)	EPA Standards ($\mu g/m^3$)
	Maximum	42.4	150
AIR-M-1	Average	12.9	50
	Count	41	
	Maximum	39.1	150
AIR-M-3	Average	13.1	50
	Count	43	
	Maximum	32.6	150
AIR-M-5	Average	13.6	50
	Count	43	
	Maximum	51.3	150
AIR-M-6	Average	8.8	50
	Count	43	
	Maximum	25.4	150
AIR-M-7	Average	6.6	50
	Count	43	

[a]The numbers given in this table are defined as follows:
Maximum - Maximum concentration observed in sample period.
Average - Annual average concentration.
Count - Number of samples collected.

concentrations measured at AIR-M-7 were 6.6 $\mu g/m^3$ (annual average) and 25.4 $\mu g/m^3$ (maximum concentration). The higher PM_{10} concentrations near the millsite were probably caused by fugitive dust from remedial activities on the millsite, construction of the repository, and from vehicular traffic on unpaved roads and dirt from streets in and around Monticello. Results of PM_{10} analyses for individual stations are listed in the appendix, Tables A-7 through A-11.

Table 7 compares 1995 maximum and average radioparticulate concentrations with DOE derived concentration guidelines (DCGs). A DCG represents the concentration that would cause a member of the public, residing at the point of collection, to receive a dose of 100 mrem/yr from a specified radionuclide. Exposures above this limit are considered unacceptable. All measured concentrations of radium-226, thorium-230, and total uranium were below DCGs. Results of individual analyses are listed in the appendix, Table A-12.

Table 7. Results of MMTS Radioparticulate Monitoring Conducted during 1995[a]

		Radiological Elements				
		Radium-226 (µCi/mL)[b]	Thorium-230 (µCi/mL)[b]	Thorium-230 (pg/mL)[c]	Uranium (pg/mL)	Uranium (µCi/mL)[b,d]
	DCG	1.0E-12	4.0E-14	No Standard	No Standard	2.0E-12
Station						
	Maximum[e]	5.4E-16	2.0E-16	1.0E-08	~6.5E-04	~4.3E-16
R-M-1-AIR	Average	3.7E-16	1.4E-16	7.2E-09	4.3E-04	2.9E-16
	Count	9 (9)	9 (9)	9 (9)	9 (8)	9 (8)
	Maximum	5.6E-16	2.2E-16	1.1E-08	9.6E-04	6.4E-16
R-M-2-AIR	Average	3.9E-16	1.6E-16	8.2E-09	4.2E-04	2.8E-16
	Count	9 (9)	9 (9)	9 (9)	9 (8)	9 (8)
	Maximum	1.0E-15	2.9E-16	1.5E-08	~7.7E-04	~5.1E-16
R-M-3-AIR	Average	4.2E-16	1.8E-16	9.3E-09	4.2E-04	2.8E-16
	Count	9 (9)	9 (9)	9 (9)	9 (8)	9 (8)
	Maximum	5.5E-16	3.5E-16	1.8E-08	~5.4E-04	~3.6E-16
R-M-4-AIR	Average	3.6E-16	2.1E-16	1.1E-08	4.9E-04	3.3E-16
	Count	5 (5)	5 (5)	5 (5)	5 (4)	5 (4)
	Maximum	6.5E-16	3.5E-16	1.8E-08	8.7E-04	5.8E-16
R-M-5-AIR	Average	3.9E-16	2.1E-16	1.1E-08	5.3E-04	3.5E-16
	Count	9 (9)	9 (9)	9 (9)	9 (8)	9 (8)
	Maximum	8.3E-16	3.1E-16	1.6E-08	~6.2E-04	~4.1E-16
R-M-6-AIR	Average	3.7E-16	1.7E-16	8.8E-09	3.9E-04	2.6E-16
	Count	9 (9)	9 (9)	9 (9)	9 (8)	9 (8)
	Maximum	4.3E-16	2.4E-16	1.2E-08	~4.6E-04	~3.1E-16
R-M-7-AIR	Average	2.6E-16	1.3E-16	6.7E-09	3.1E-04	2.1E-16
	Count	9 (9)	9 (9)	9 (9)	9 (8)	9 (8)

[a]A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated. Scientific notation E-15 = "x 10^{-15}."

[b]1 microcurie per milliliter (µCi/mL) = 3.7 x 10^4 becquerels per milliter.

[c]pg/mL = picograms per milliliter. The conversion of thorium-230 concentrations between microcuries and picograms assumes equilibrium and an activity of 0.0194 µCi/µg.

[d]The conversion of uranium concentrations between microcuries and picograms assumes equilibrium and activity of 0.666 pCi/µg.

[e]The numbers given in this table are defined as follows:

Maximum - Maximum concentration observed in sample period.

Average - Annual average concentration. Samples above detection limit are used in calculation.

Count - Number of samples collected. The number in parentheses indicates the number of samples having concentrations above the detection limit.

3.3 Direct Gamma Radiation Monitoring

A direct environmental radiation monitoring program was initiated at the MMTS in April 1991 to assess the potential gamma radiation dose to persons on and near the millsite. Gamma radiation measurements are included, along with radiation measurements associated with radon and air particulates, in the calculation of total off-site dose to the public to determine compliance with the DOE/EPA standard of 100 mrem/yr above background (see Section 3.5, Off-Site Dose Modeling).

During 1995, nineteen monitoring locations (Figure 5) on the millsite property line and surrounding areas were monitored quarterly using $CaSO_4$:Dy (calcium sulfate: dysprosium) thermoluminescent dosimeters (TLDs). Results of the monitoring are presented in the appendix, Tables A-13 through A-16 (Environmental Radiation Exposure Data), and are summarized in Table 8. The background level of gamma radiation dose was calculated at 103 mrem/yr by averaging measurements from stations R-M-7-TLD and TLD-M-13. Two millsite property line locations yielded annual average measurements greater than the standard; annual averages of measurements collected off the millsite were below the standard. Levels of gamma radiation on the millsite are expected to decrease to background levels after remediation is completed.

3.4 Off-Site Dose Modeling

Monitoring data collected during 1995 were used to calculate the effective dose equivalent (EDE) to the maximally exposed off-site individual near the MMTS. Calculation of the EDE of the maximally exposed off-site individual living approximately 100 meters (328 feet) north of the site boundary involved summing the radon, air particulate, and gamma source terms at this location. The dose caused by these sources was 23 mrem/yr from radon, 38 mrem/yr from gamma radiation, and 0.5 mrem/yr from radioparticulates. Summing these sources results in a total dose of 62 mrem/yr (0.62 millisievert per year) above background, which is below the DOE/EPA standard.

As required by DOE Order 5400.5, the collective population dose was calculated. The dose assessment model CAP88PC predicted that the collective dose to persons residing within an 80-kilometer (50-mile) radius of the MMTS was 29.34 person-rem per year (0.29 person-sievert per year). Because a reliable source term for radionuclides could not be derived, it was not included in the population dose estimate. However, based on ambient air radionuclide concentrations measured at the site (see Table 6 in this report), the population dose from radionuclides was expected to be minimal.

3.5 Meteorology

Meteorological monitoring parameters measured or calculated during 1995 consisted of wind speed, wind direction, standard deviation of wind direction, temperature, barometric pressure, precipitation, solar radiation, and relative humidity (see Figure 5 for station locations).

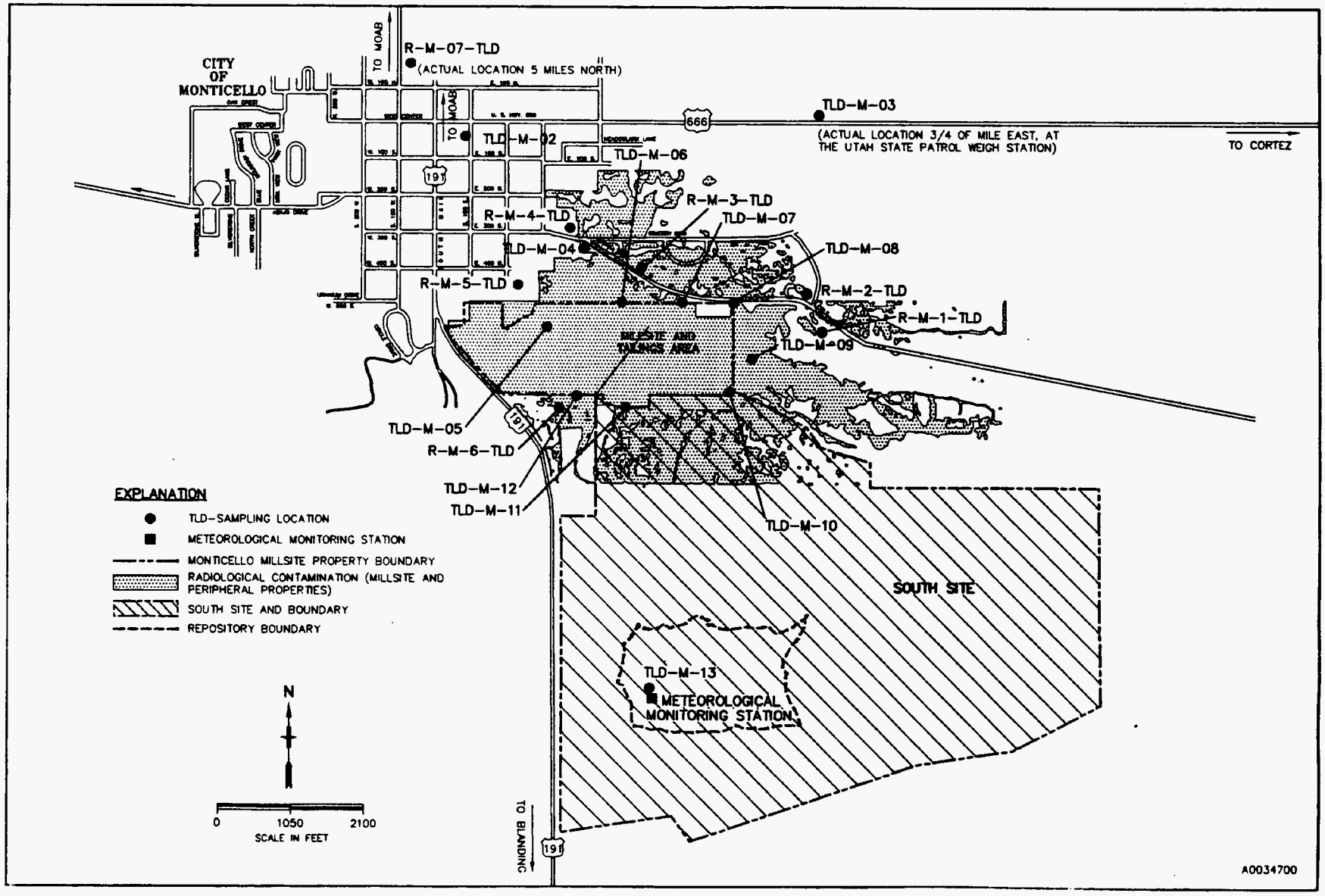

Figure 5. Direct Gamma Radiation and Meteorological Monitoring Locations At and Near MMTS

Table 8. Average Annual Gamma Exposure Rates At and Near MMTS during 1995

Sampling Location	Gamma Exposure Annual Average (mrem/yr)[a]	Gamma Exposure DOE/EPA Standard (mrem/yr)[b]
On-Site		
TLD-M-05	436	203
TLD-M-06	484	203
TLD-M-07	147	203
TLD-M-08	115	203
TLD-M-09	127	203
TLD-M-10	140	203
TLD-M-11	224	203
TLD-M-12	143	203
Off-Site		
R-M-1-TLD	124	203
R-M-2-TLD	108	203
R-M-3-TLD	132	203
R-M-4-TLD	121	203
R-M-5-TLD	120	203
R-M-6-TLD	108	203
R-M-7-TLD	94	203
TLD-M-02	108	203
TLD-M-03	112	203
TLD-M-04	137	203
TLD-M-13	113	203

[a]1 mrem/yr = .01 millisieverts per year.
[b]Standard includes background of 103 mrem/yr.

Collected data were used for soil moisture studies and in the calculation of the population dose assessment (see Section 3.5, Off-Site Dose Modeling). The population file used in the dose modeling was compiled from 1990 U.S. Bureau of Census data; the meteorological data file was derived from meteorological data collected at the MMTS during 1995.

3.6 Surface Water

Montezuma Creek is the primary surface-water body in the MMTS area, flowing west to east through the center of the millsite. Typical flow rates are on the order of 1 to 2 cubic feet per second. Flow is generally perennial; however, portions of the creek are

seasonally dry some years. Montezuma Creek water is diverted about 1 mile upstream of the millsite for crop irrigation. Downstream of the millsite, creek water is also used for crop irrigation and livestock watering. Other surface-water bodies in the MMTS area include several artificial ponds and groundwater seeps.

The 1995 surface-water monitoring program at the MMTS involved a continuation of the OU III Remedial Investigation (RI). The objectives of the RI were (1) to compare upstream water quality conditions within Montezuma Creek with conditions on and downstream of the millsite, (2) to characterize the type and extent of contamination in surface water, and (3) to verify compliance with State surface-water quality standards.

In accordance with the above stated objectives, surface-water samples were collected for chemical analysis during April and October of 1995 from an established monitoring network. Sampling locations included Montezuma Creek sites upstream of the millsite, on the millsite, and downstream of the millsite, and seeps on, north of, and east of the millsite; sampling locations are shown in Figures 6 and 7.

Surface water samples collected during 1995 were submitted for laboratory analysis of common cations and anions, trace metals, radionuclides, gross alpha and beta activity, and total dissolved solids. Alkalinity, pH, electrical conductivity, and temperature were measured in the field at the time of sample collection. The specific constituents analyzed and analytical results are displayed in Table A-17 of the appendix. All surface water samples were collected and analyzed according to standardized, approved methods described in the *Draft Final Monticello Mill Tailings Site Operable Unit III Remedial Investigation/Feasibility Study Field Sampling Plan and Quality Assurance Project Plan* (DOE 1995c). State of Utah water quality standards are compared to 1995 and historic sample results in Table 9.

Analyte concentrations detected in samples from Montezuma Creek upstream of the millsite were below Utah State standards, with the exception of total dissolved solids (TDS). TDS concentrations exceeded the standard in samples collected from each upgradient site during the October 1995 sampling event (maximum concentration of 1,710 milligrams per liter [mg/L], Table 9).

The TDS standard (1,200 mg/L) was also exceeded in samples collected from each on-site creek location (SW92-04 and SW92-05) during the October 1995 sampling event. TDS concentrations of onsite creek samples collected during April did not exceed the standard. The gross alpha standard (15 pCi/L) was exceeded in a sample collected from location SW92-05 (29.1 pCi/L) during the April sampling event. Compliance with the gross alpha standard could not be assessed at other onsite creek locations because the lower limit of detection for gross alpha activity was greater than the standard. All other analyte concentrations detected in on-site Montezuma Creek samples were below State standards.

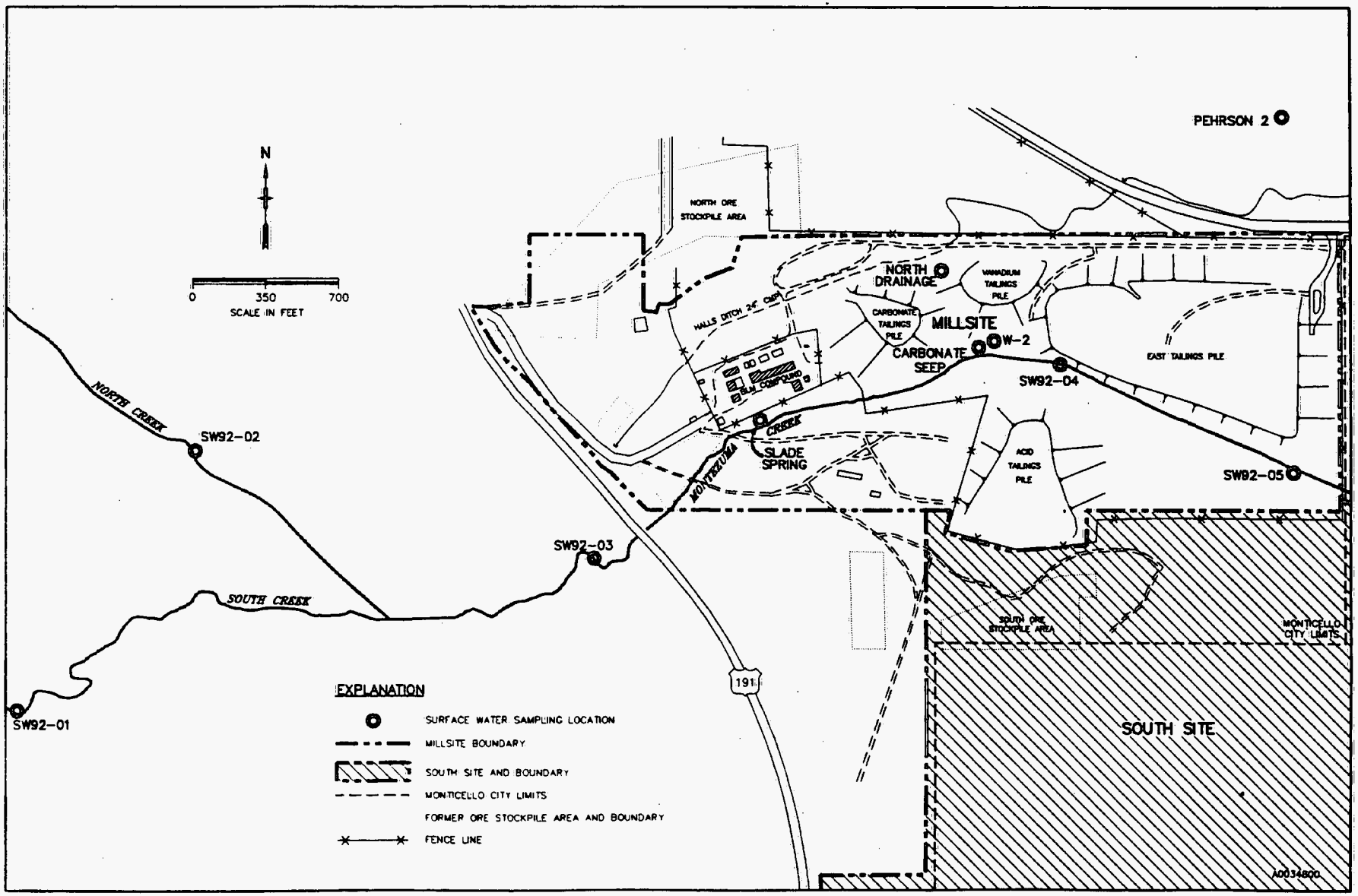

Figure 6. Surface-Water Sampling Locations On and Upstream of MMTS

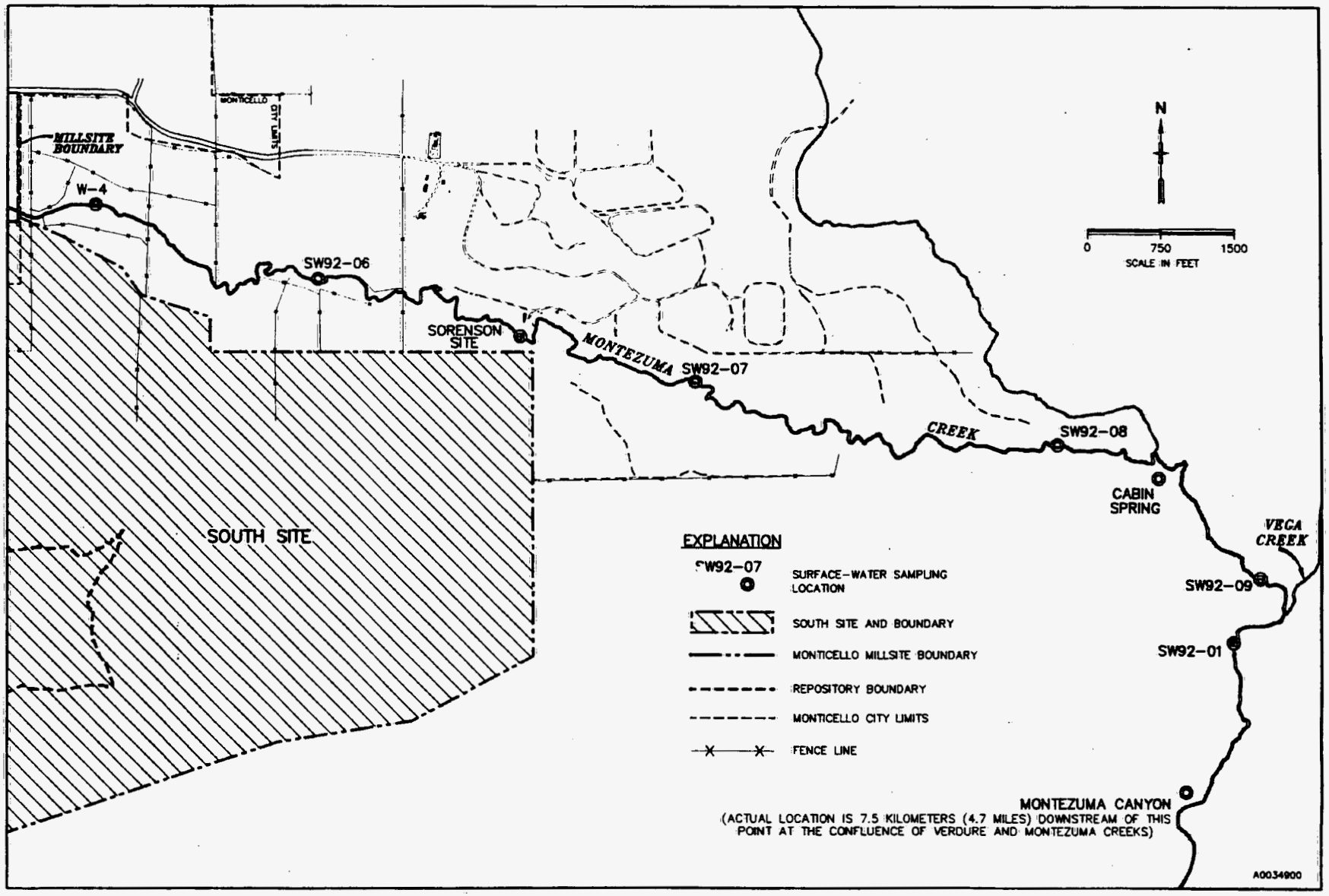

Figure 7. Surface-Water Sampling Locations Downstream of Monticello Millsite

Table 9. Comparison of State of Utah Water Quality Standards[a] with 1995 and Historical Maximum Concentrations in Montezuma Creek[b]

Constituent	State Standard		1995 Maximum[c]			Historical Maximum[c,d]		
			Up-Gradient	On Site	Down-Gradient	Up-Gradient	On Site	Down-Gradient
Common Ions								
Fluoride[e]	1.4-2.4	mg/L	0.289	~0.197	0.243	~0.156	~0.139	0.267
Nitrate (as N)[f]	4	mg/L	~0.323	0.837	1.35	5.67	2.982	10.007
Total Dissolved Solids	1200	mg/L	1710	1650	1700	1842	1860	1630
Field Measurements								
pH	6.5-9.0		7.81-8.42	7.77-8.30	7.79-9.05	7.2-9.16	6.6-8.67	6.74-9.6
Metals								
Arsenic	0.05	mg/L	~0.0015	~0.001	~0.0076	~0.0039	0.0339	0.027
Barium	1.0	mg/L	~0.0972	~0.0679	~0.0663	~0.121	0.1	~0.126
Boron	0.75	mg/L	~0.0145	~0.0309	0.257	0.14	~0.0926	0.13
Cadmium	0.01	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium	0.05	mg/L	<0.004	<0.004	~0.0051	~0.0049	<0.006	0.0263
Copper	0.2	mg/L	~0.0056	~0.0044	0.0515	~0.0101	~0.017	~0.02
Iron	1.0	mg/L	0.268	0.182	0.526	2.85	1.34	4.45
Lead	0.05	mg/L	<0.001	<0.001	0.0036	0.0245	0.0051	0.0065
Mercury	0.002	mg/L	---	---	---	<0.0001	~0.0002	<0.0001
Selenium	0.01	mg/L	~0.0011	~0.0014	~0.0026	0.0097	0.012	0.042
Silver	0.05	mg/L	<0.001	0.0209	~0.001	<0.007	<0.007	<0.007
Radiological								
Gross Alpha	15	pCi/L	<59	29.1	126	76	162	517
Gross Beta	50	pCi/L	<42	<30	34.5	26.5	48	187
Radium-226+228	5	pCi/L	<4	<3.3	0.91	3.3	0.96	1.6
Herbicides								
2,4,5-TP (Silvex)	10	ug/L	---	---	---	<0.22	<0.22	---
2,4-D	100	ug/L	---	---	---	<0.28	<0.28	---
Pesticides and PCBs								
Endrin	0.2	ug/L	---	---	---	<0.1	<0.1	---
Methoxychlor	100	ug/L	---	---	---	<0.52	<0.52	---
Toxaphene	5	ug/L	---	---	---	<5.2	<5.2	---
gamma-BHC (Lindane)	4	ug/L	---	---	---	<0.052	<0.052	---

[a]State of Utah Water Quality Standards for the Montezuma Creek segment, Utah Administrative Code Rule 448-2. Not all State standards are listed in this table.

[b]A "---" indicates no data available; a "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit); a "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

[c]The values are in units shown under the State Standard column.

[d]Based on maximum concentrations observed from 1984 through 1994.

[e]Allowable maximum concentration varies according to the daily maximum air temperature.

[f]Nitrate (as N) was derived using the following conversion: nitrate (as N) = $NO_3 \div 4.427$.

Among samples collected downstream of the millsite, the following standards were exceeded in 1 or more samples: pH, TDS, and gross alpha activity (Table 8). The pH standard (6.5–9.0) was exceeded at site SW92–08 during the October sampling event (measured pH of 9.05). The TDS standard was exceeded in samples collected from sites W–4, SW92–06, and Sorenson site during the October 1995 sampling event, and from the Sorenson site during the April sampling event. Gross alpha activity was detected in excess of the State standard in all downstream samples collected during April 1995.

Samples from 3 sites contained gross alpha activity in excess of the standard during the October sampling event (SW92–06, Sorenson, and SW92–01). The lower limits of detection for gross alpha activity in the remaining downstream samples collected during October were greater than the standard; therefore, a comparison to the standard is not possible. Maximum concentrations of TDS and gross alpha were detected in samples from the Sorenson site for both the April and October sampling events.

Concentrations of several analytes in Montezuma Creek samples, including arsenic, gross alpha, gross beta, manganese, molybdenum, radium-226, selenium, uranium, and vanadium, were generally higher downstream of the millsite than on the millsite. This increase in analyte concentrations may result from discharge of contaminated groundwater into the creek. Following are indications that contaminated alluvial groundwater is discharging into Montezuma Creek downstream of the site (1) seepage from the stream banks is often visible along the creek downstream of the eastern millsite boundary, (2) stream flow measurement data typically indicate a net increase in creek flow between sites SW92–05 and Sorenson, and (3) historical assessments of water quality data indicate that the maximum concentrations of mill tailings-related constituents in Montezuma Creek water were typically detected in samples from W–4 or the Sorenson site.

Groundwater seeps sampled in 1995 include Cabin Spring, Pehrson 2, and Slade Spring (Figures 6 and 7). Samples were not collected from locations W–2, Carbonate Seep, and North Drainage because of insufficient water. Slade Spring discharges directly into Montezuma Creek, whereas Pehrson 2 and Cabin Spring do not reach Montezuma Creek as surface flow. Surface water discharged at Pehrson 2 and Slade Spring contained elevated levels of some mill tailings-related constituents.

3.7 Groundwater

The 1995 groundwater monitoring program at the MMTS involved a continuation of the OU III Remedial Investigation (RI). The objectives of the RI in 1995 were (1) to characterize the extent of contamination within the alluvial aquifer; (2) to determine if water quality within the Burro Canyon Formation aquifer is being degraded by contaminated alluvial groundwater; and (3) to verify compliance with Federal and State groundwater quality standards.

Groundwater sampling in 1995 was conducted during April and October according to standardized, approved methods specified in the *Draft Final Monticello Mill Tailings Site*

Operable Unit III Remedial Investigation/Feasibility Study Field Sampling Plan and Quality Assurance Project Plan (DOE 1995c). Table 10 lists the wells that were sampled and analytical parameters for each sampling event. Individual organic compounds referred to in Table 10 as volatile and semi-volatile organic compounds, herbicides, and pesticides, and PCBs, are listed in appendix Table A-18 (the Target Compound List [TCL]). Field measurements made at each well included alkalinity, electrical conductivity, dissolved oxygen, oxidation-reduction potential (Eh), temperature, and turbidity. Figure 8 shows the sampling locations of on-site and upgradient wells, and Figure 9 shows the sampling locations of downgradient and cross-gradient wells. Analytical results of all 1995 well samples are included in the appendix, Table A-19.

Analyte concentrations in all upgradient alluvial wells were below Federal and State standards. Among the upgradient Burro Canyon Formation and Dakota Sandstone wells, all analyte concentrations were below Federal and State standards, with the exception of pH measured in upgradient Dakota Sandstone well 92-13 (measured values were 9.36 and 9.64 compared to the State standard of 6.5-8.5, Table A-19). Maximum concentrations of analytes measured in alluvial wells are listed and compared to Federal and/or State standards and historical maximums in Table 11. Maximum concentrations of groundwater analytes that exceeded standards in 1995 are posted for each well in Figures 10 and 11.

On-site alluvial groundwater is contaminated at many locations by elements leached from the mill tailings piles. In 1995, the highest concentrations of metals and radionuclides were generally detected in samples from wells 36SE93-201-2 and 82-40A (Figure 10). Standards were exceeded in one or more on-site alluvial well sample for pH, fluoride, nitrate, arsenic, molybdenum, selenium, gross alpha, radium-226+228, and uranium-234+238 (Table 11). All sample results for the on-site Burro Canyon Formation well were below the standards.

Samples from downgradient alluvial wells (Figure 11) provide evidence of off-site migration of contaminants. In 1995, the standards for pH, molybdenum, selenium, silver, gross alpha, and uranium-234+238 were exceeded in samples from one or more downgradient alluvial wells (Table 10). Uranium-234+238 activity exceeded the UMTRCA standard of 30 pCi/L in samples from all downgradient alluvial wells, including the easternmost well (well 92-09, 1.29 kilometers [0.8-mile] east of the millsite boundary). Samples from well 92-09 averaged approximately 185 pCi/L uranium-234+238.

Table 10. 1995 Groundwater Sampling and Analytical Design Schedule

Month	Location	Well Sampled	Analytes Measured
April	Upgradient	Alluvial: 92-01, 92-03	Cl, Fl, (NO_2+NO_3)-N, SO_4, NH_4, Ca, Mg, K, Na, Al, As, Ba, B, Cd, Co, Cr, Cu, Fe, Pb, Mn, Mo, Ni, Se, Sn, Ag, Tl, U, V, Zn, total dissolved solids, gross alpha, gross beta, Pb-210, Po-210, Ra-226, Ra-228, Th-230, Th-232, U-234, U-235, U-238, and Rn-222
		92-05	Volatile organic compounds, semivolatile organic compounds, pesticides, PCBs, herbicides, Cl, Fl, (NO_2+NO_3)-N, SO_4, NH_4, Ca, Mg, K, Na, Al, As, Ba, B, Cd, Co, Cr, Cu, Fe, Pb, Mn, Mo, Ni, Se, Sn, Ag, Tl, U, V, Zn, total dissolved solids, gross alpha, gross beta, Pb-210, Po-210, Ra-226, Ra-228, Th-230, Th-232, U-234, U-235, U-238, and Rn-222
		Burro Canyon: 92-02, 92-04, 92-06	Same as upgradient alluvial wells 92-01 and 92-03
		Dakota Sandstone: 92-13	Same as upgradient alluvial wells 92-01 and 92-03
	On Site	Alluvial: 82-30B, 31SW91-03, 82-40A 36SE93-201-2, 31SW91-23	Same as upgradient alluvial wells 92-01 and 92-03
		31SW91-14	Same as upgradient alluvial well 92-05 with the addition of NO_2
		82-31B-E, 82-42	Same as upgradient alluvial well 92-05
		Burro Canyon: 93-01	Same as upgradient alluvial wells 92-01 and 92-03
	Crossgradient	Burro Canyon: 31NE93-205	Same as upgradient alluvial wells 92-01 and 92-03
	Downgradient	Alluvial: 82-07, 92-07, 92-08, 92-09, 92-11	Same as upgradient alluvial wells 92-01 and 92-03
		88-85	Same as upgradient well 92-05
		Burro Canyon: 83-70, 92-10	Same as upgradient alluvial wells 92-01 and 92-03
		Dakota Sandstone: 92-12	Same as upgradient wells 92-01 and 92-03

Table 10 (continued). 1995 Groundwater Sampling and Analytical Design Schedule

Month	Location	Well Sampled	Analytes Measured
October	Upgradient	Alluvial: 92-01, 92-03, 92-05	Cl, Fl, (NO_2+NO_3)-N, SO_4, NH_4, Ca, Mg, K, Na, Al, As, B, Co, Cu, Mn, Mo, Se, Sn, Sb, U, V, Zn, total dissolved solids, gross alpha, gross beta, Pb-210, Ra-226, Th-230, U-234, U-235, U-238, and Rn-222
		Burro Canyon: 92-02, 92-04, 92-06	Same as upgradient alluvial wells
		Dakota Sandstone: 92-13	Same as upgradient alluvial wells
	On Site	Alluvial: 82-30B, 31SW91-03, 82-40A 36SE93-201-2, 31SW91-14 82-31B-E, 82-42	Same as upgradient alluvial wells
		31SW91-23	Same as upgradient alluvial wells with the addition of NO_2
		Burro Canyon: 93-01	Same as upgradient alluvial wells
	Crossgradient	Burro Canyon: 31NE93-205	Same as upgradient alluvial wells
	Downgradient	Alluvial: 82-07, 92-07, 92-08, 92-09, 92-11, P92-04, P92-04, P92-09, 88-85	Same as upgradient alluvial wells
		Burro Canyon: 83-70, 92-10	Same as upgradient alluvial wells
		Dakota Sandstone: 92-12	Same as upgradient alluvial wells

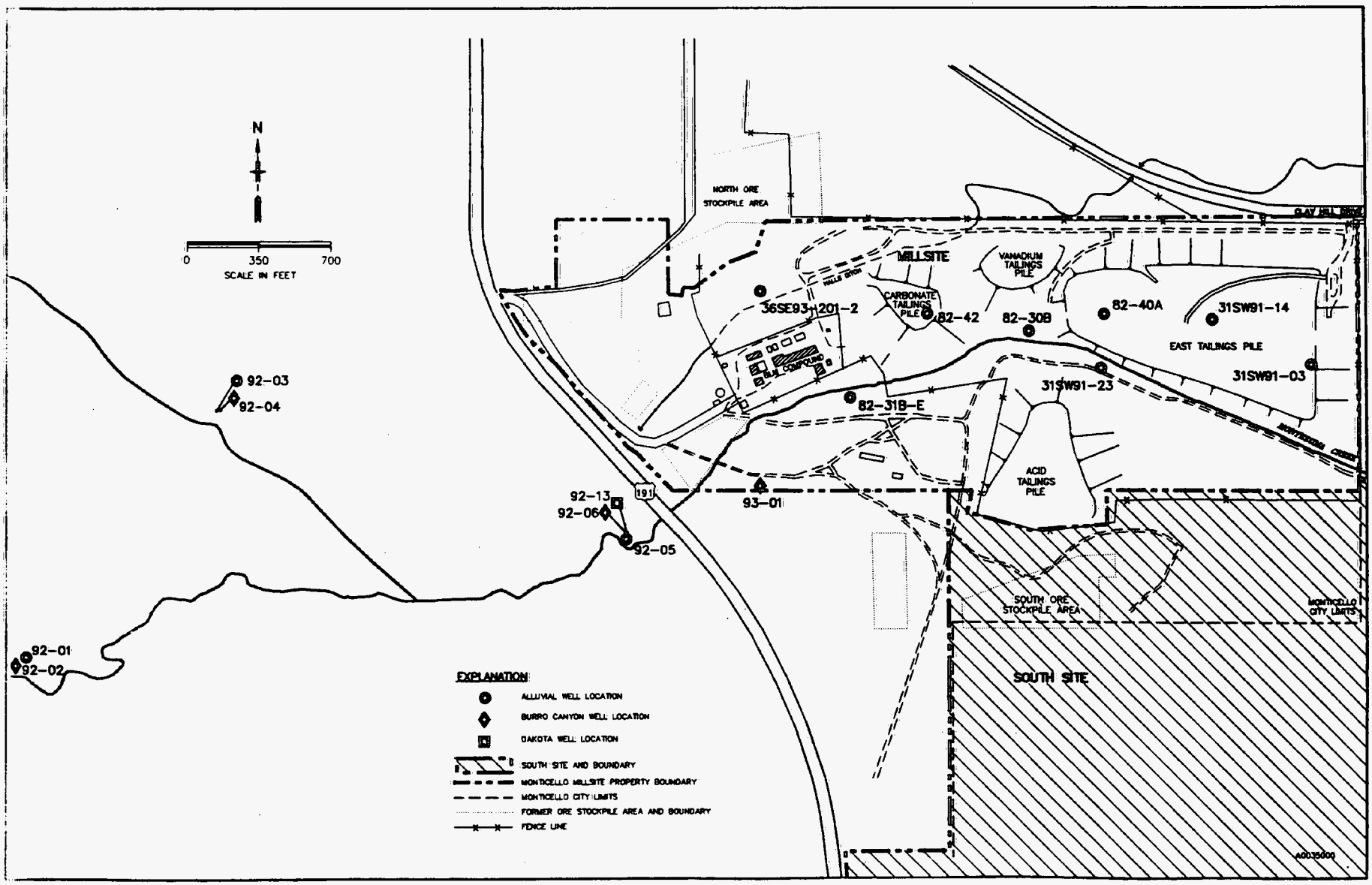

Figure 8. Groundwater Sampling Locations On and Upgradient of Monticello Millsite

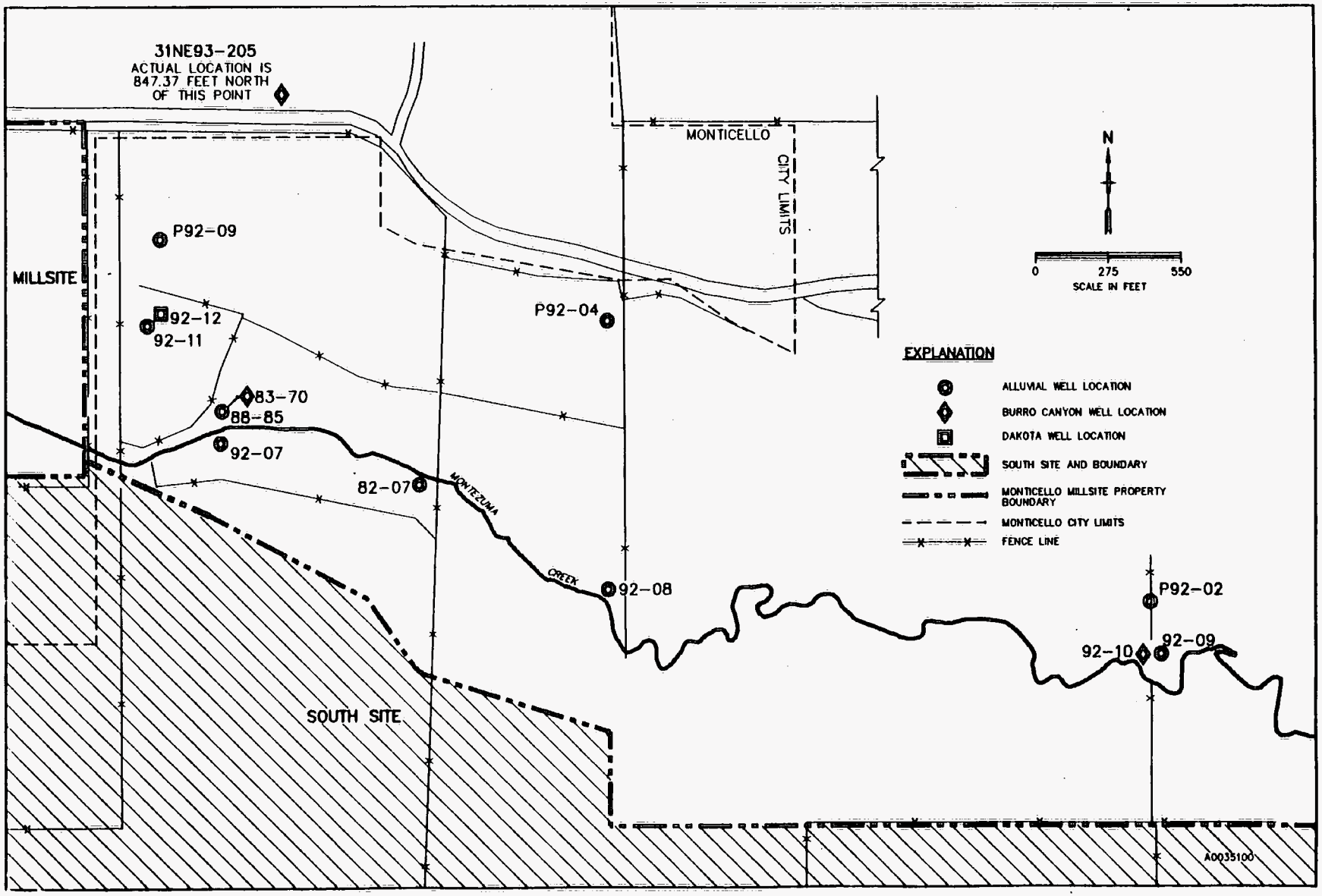

Figure 9. Groundwater Sampling Locations Downgradient and Crossgradient of Monticello Millsite

Table 11. Comparison of Federal[a] and State of Utah[b] Groundwater Quality Standards with 1995 and Historical Maximum Concentrations in Alluvial Aquifer[c]

Constituent	Federal/State Standard		1995 Maximum[d]			Historical Maximum[d,e]		
			Up-Gradient	On Site	Down-Gradient	Up-Gradient	On Site	Down-Gradient
Common Ions								
Fluoride	2.4	mg/L	0.242	5.21	0.638	~0.199	5.66	0.8
Nitrate (as N)[f]	10.0	mg/L	3.89	38.8	4.55	4.721	60.086	33.308
Field Measurements								
pH	6.5-8.5		6.53-7.32	6.52-9.25	6.44-7.02	6.37-7.23	6.0-8.51	6.0-8.8
Metals								
Arsenic	0.05	mg/L	<0.0011	0.526	0.0375	~0.005	1.104	0.131
Barium	1.0	mg/L	~0.0402	~0.0585	~0.0626	~0.147	0.85	2.25
Cadmium	0.01	mg/L	<0.001	<0.001	<0.001	<0.001	0.005	0.005
Chromium	0.05	mg/L	<0.004	~0.0071	<0.004	~0.0044	0.037	0.0797
Copper	1.0	mg/L	~0.0068	0.0505	<0.0044	~0.0061	0.465	0.197
Lead	0.05	mg/L	~0.0014	0.0032	<0.001	0.0113	0.0528	0.0891
Mercury	0.002	mg/L	---	---	---	<0.0001	0.0023	<0.001
Molybdenum	0.1	mg/L	~0.0031	1.74	0.264	~0.0036	2.15	0.53
Selenium	0.01	mg/L	~0.0027	0.277	0.0249	~0.0051	0.302	0.06
Silver	0.05	mg/L	<0.001	<0.001	0.152	<0.007	~0.0067	<0.025
Zinc	5.0	mg/L	0.0297	0.0255	~0.018	0.0375	5.02	0.5
Radiological								
Gross Alpha (excluding Radon & Uranium)[g]	15	pCi/L	<77	2137	873.31	<54	~4318.9	333.96
Radium-226+228	5	pCi/L	<4.4	14.77	0.53	0.56	44	0.9
Uranium-234+238[h]	30	pCi/L	5.95	4750	1429.04	8.48[i]	8524.8	2264.4
Herbicides								
2,4,5-TP (Silvex)	0.01	mg/L	<0.00022	<0.00022	<0.00021	<0.00022	<0.00022	<0.00021
2,4-D	0.1	mg/L	<0.00027	<0.00028	<0.00027	<0.00027	<0.0004	<0.0004
Pesticides and PCBs								
Endrin	0.0002	mg/L	<0.0001	<0.00011	<0.0001	<0.00011	<0.00011	<0.0001
Methoxychlor	0.1	mg/L	<0.0005	<0.00054	<0.0005	<0.00053	<0.001	<0.001
Toxaphene	0.005	mg/L	<0.005	<0.0054	<0.005	<0.0053	<0.0056	<0.005
gamma-BHC (Lindane)	0.004	mg/L	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Semivolatile Organics								
1,4-Dichlorobenzene	0.075	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Volatile Organics								
1,1,1-Trichloroethane	0.200	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,1-Dichloroethene	0.007	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
1,2-Dichloroethane	0.005	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Benzene	0.005	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Carbon Tetrachloride	0.005	mg/L	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001
Trichloroethene	0.005	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Trihalomethanes[j]	0.1	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vinyl Chloride	0.002	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

[a]Standards from the Uranium Mill Tailings Radiation Control Act, revised in 1986.

[b]State of Utah Ground Water Quality Standards, Title 26, Chapter 11, Utah Code Annotated. Not all State standards are listed in this table.

[c]A "---" indicates no data available; a "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit); a "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

[d]The values are in units shown under the Federal/State Standard column.

[e]Based on maximum concentrations observed from 1984 through 1994.

[f]Nitrate (as N) was derived using the following conversion: nitrate (as N) = NO_3 ÷ 4.427.

[g]Measured values represent total gross alpha minus uranium activity using assumptions in footnote h.

[h]Uranium concentrations, which were measured in milligrams per liter, were converted to picocuries per liter for comparison purposes. The conversion assumes equilibrium and an activity of 0.666 picocuries per microgram (pCi/μg).

[i]Extreme-values testing of uranium results from samples collected in 1993 indicated that a value (155.03 pCi/L) was an outlier; this value from an upgradient well was not included in this table.

[j]Trihalomethanes include bromodichloromethane, bromoform, dibromochloromethane, and chloroform.

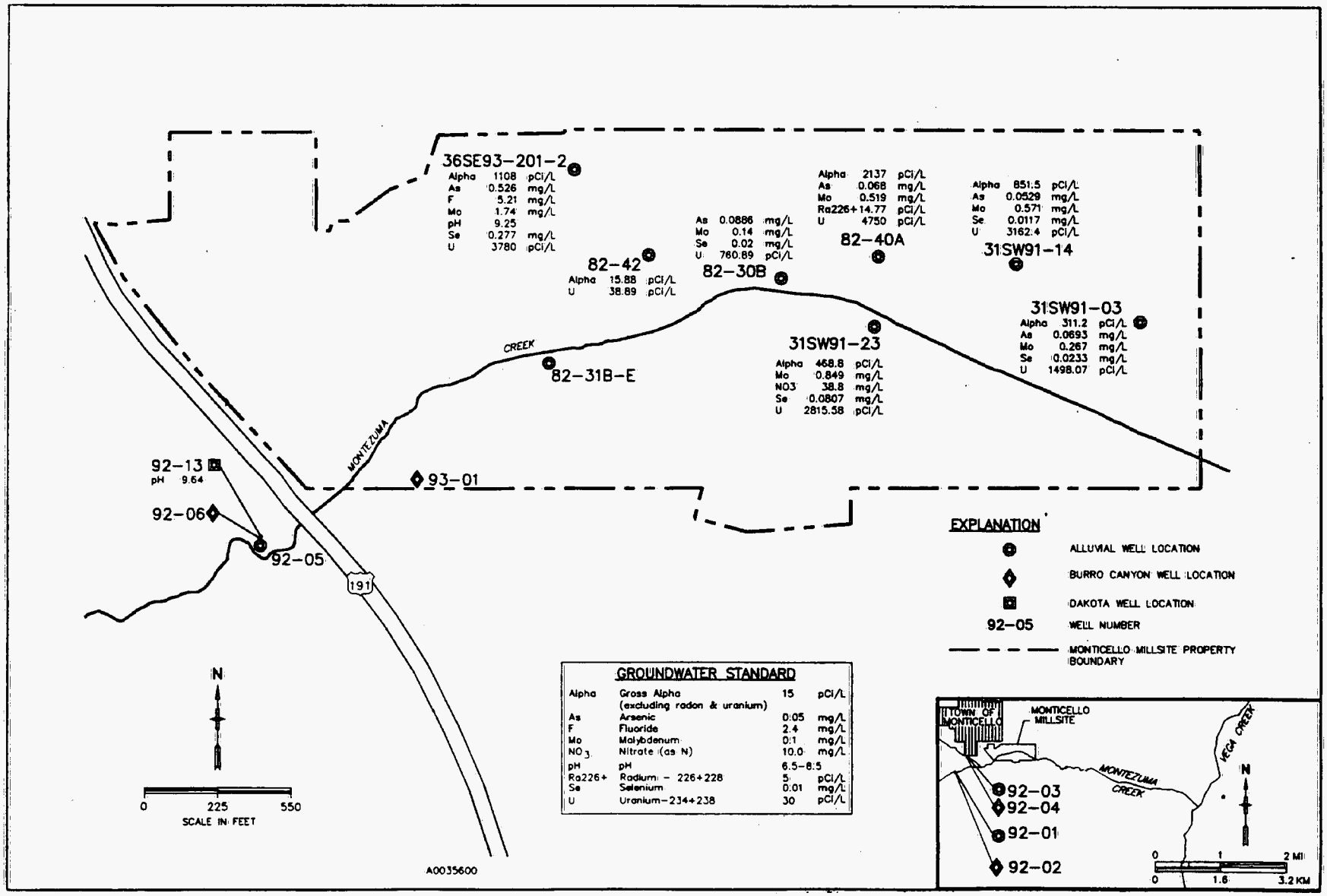

Figure 10. Maximum Concentrations of Groundwater Analytes that Exceeded Federal/State Standards in Well Samples On and Upgradient of Monticello Millsite

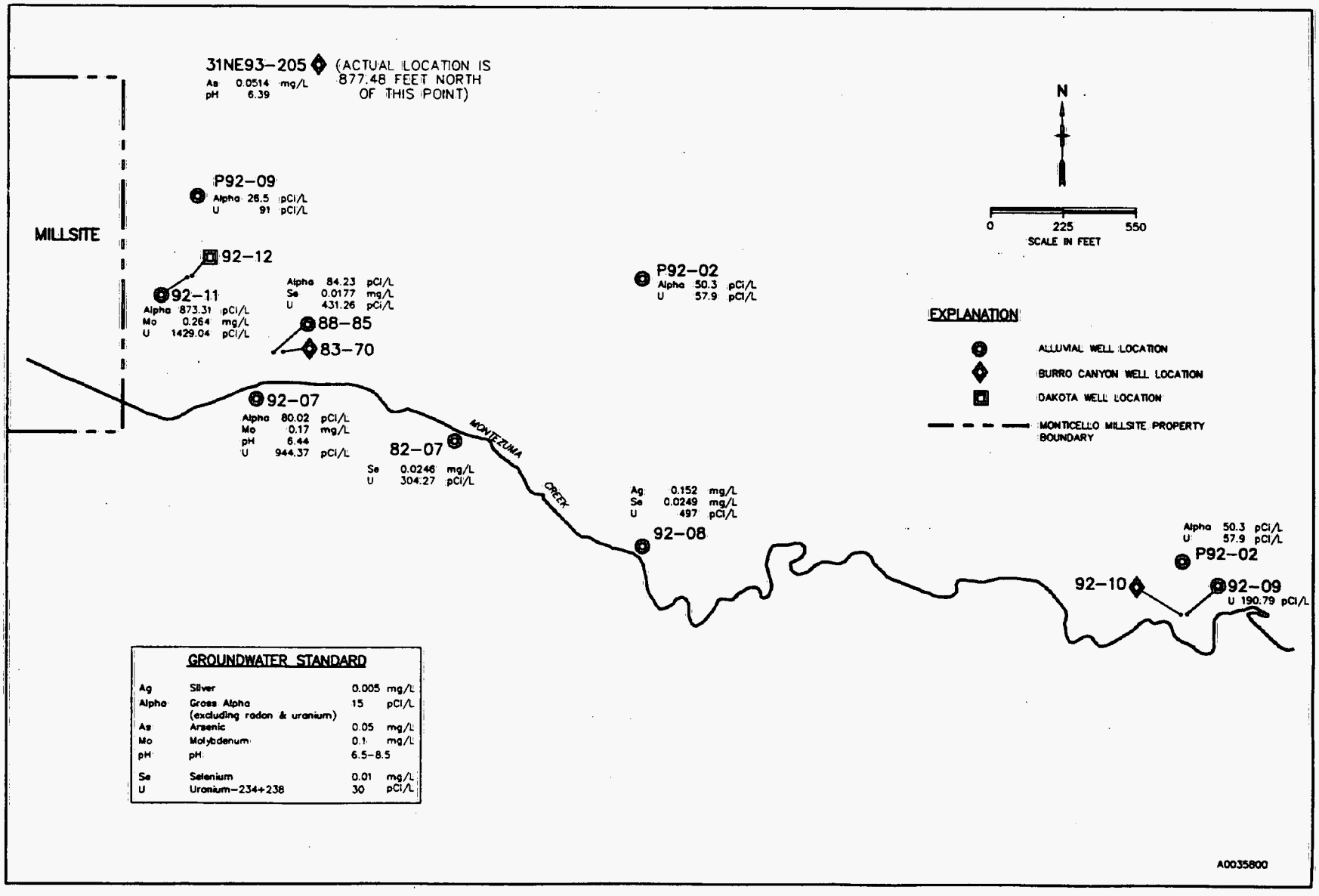

Figure 11. Maximum Concentrations of Groundwater Analytes that Exceeded Federal/State Standards in Well Samples Downgradient and Crossgradient of Monticello Millsite

The arsenic standard (0.05 mg/L) was exceeded in a sample collected during the October sampling event from cross-gradient Burro Canyon Formation well 31NE93-205 (concentration of 0.0514 mg/L). The pH standard (6.5-8.5) was also exceeded in a sample from this well during the April sampling event (6.39)(Figure 11). All analyte concentrations measured in downgradient Burro Canyon Formation wells and the downgradient Dakota Sandstone well were below applicable standards.

Sampling for TCL volatile organic compounds, semivolatile organic compounds, herbicides, pesticides, and PCBs in 5 selected alluvial aquifer wells was conducted during the April sampling event to confirm results of historical monitoring. Significant concentrations of organic compounds were not measured in samples from any of the wells. Results of organic analyses are listed in the appendix, Tables A-19 and A-20, and are compared with Federal/State standards in Table 10.

3.8 Ecological Risk Assessment

An ecological risk assessment (ERA) is being conducted for OU III to determine whether elevated concentrations of millsite-related contaminants are adversely affecting the Montezuma Creek ecosystem. The OU III ecological risk assessment is outlined in the *Draft Final Monticello Mill Tailings Site OU III RI/FS Work Plan* (DOE 1995d). Part of the data collection effort to support the ecological risk assessment was conducted in 1994 and 1995; additional data collection will occur in 1996. A detailed discussion of the Ecological Risk Assessment findings will be presented in the MMTS OU III remedial investigation report. A remediation strategy for Montezuma Creek soil, sediment, and surface water will be based in part on the results of the risk assessment.

Activities conducted in 1995 to support the ecological risk assessment included ecological surveying, biotic media sampling, and soil, sediment, and surface water sampling. The *Draft Final Monticello Mill Tailings Site OU III RI/FS Work Plan* (DOE 1995d) and *Draft Final OU III RI/FS Field Sampling Plan and Quality Assurance Project Plan* (DOE 1995c) present the rationale and methods for these activities.

3.8.1 Ecological Surveys and Biotic Media Sampling

Ecological data collection activities included surveys to determine presence or absence of sensitive receptors, collection of samples of grasses, forbs, shrubs, terrestrial invertebrates, and cliff swallows for chemical and radiological analysis, and collection of cliff swallow liver and kidney samples for histopathological analysis.

Surveys for sensitive receptors, including the spotted bat, southwestern willow flycatcher, peregrine falcon, and fish were conducted in Montezuma Canyon during the summer of 1995. The intent of the surveys was to document presence or absence of the species, not to collect population data.

Spotted bats were observed in Montezuma Canyon during the 1995 survey, and therefore were assumed to be inhabitants of the canyon. Neither southwestern willow flycatchers nor peregrine falcons were found in the canyon during the 1995 survey. The survey results are not considered final because the surveys were not conducted during the

breeding season. Additional surveys for these species will be conducted in 1996 during a formal threatened and endangered species survey.

Fish were not found in Montezuma Creek. The result of this fish survey (i.e. absence of fish) is supported by other studies conducted in Montezuma Creek by BIO/WEST Inc. (1988) and by Oak Ridge National Laboratory (1995, not published). No additional fish surveys are planned.

The primary goal of biotic media sampling was to provide analytical data required for input to contaminant dose calculations for the receptors of concern for the ecological risk assessment. Samples of terrestrial invertebrates, grasses, forbs, and shrubs were collected at 9 transects in Montezuma Canyon (Figure 12), 3 transects in Verdure Canyon, and 1 transect in Vega Canyon (Figure 13). Cliff swallow carcass and liver samples were collected at nest colonies in Montezuma Canyon and Vega Canyon (Figure 12). Samples were submitted to a laboratory for chemical and radiological analyses. Analytes included aluminum, arsenic, cobalt, copper, molybdenum, selenium, tin, uranium, vanadium, zinc, gross alpha, and gross beta. Analytical data are presented in Table A-21.

Slightly elevated metals concentrations and radioactivity levels were found in grasses, forbs, shrubs, and terrestrial invertebrates. Contaminant concentrations in cliff swallow samples were not distinguishable from background concentrations.

A total of six cliff swallows were collected for histopathological analyses: three from the Montezuma Canyon nest colony, near transect 5 (Figure 12) and three from the Vega Canyon nest colony, near transect 13 (Figure 13). Liver and kidney tissues were preserved in 10% buffered formalin and submitted to Colorado State University's Veterinary Pathology Laboratory for histopathological analysis. The laboratory reported no gross abnormalities in any of the tissues. However, minor microvacuolar degeneration was found in tissues from the Vega Canyon swallows. This abnormality was probably the result of metabolic stress, possibly associated with the late spring thaw in the Monticello area.

3.8.2 Abiotic Media Sampling

Soil, sediment, and surface water samples were collected along Montezuma Creek, during July and August 1995, to support the MMTS OU III RI/FS Ecologic Risk Assessment. The primary goal of abiotic media sampling was to provide analytical data necessary for input to contaminant dose calculations for the receptors of concern for the ecological risk assessment.

In Montezuma Canyon, soil and sediment samples were collected at nine sampling transects located across Montezuma Canyon (Figure 12). Three sampling transects were also located in Verdure Canyon, approximately 5 miles south of the millsite, and one additional transect was located on Vega Creek, approximately 1 mile east of Monticello (Figure 13). The Verdure and Vega transects were sampled to obtain soil and sediment chemistry data representative of background conditions.

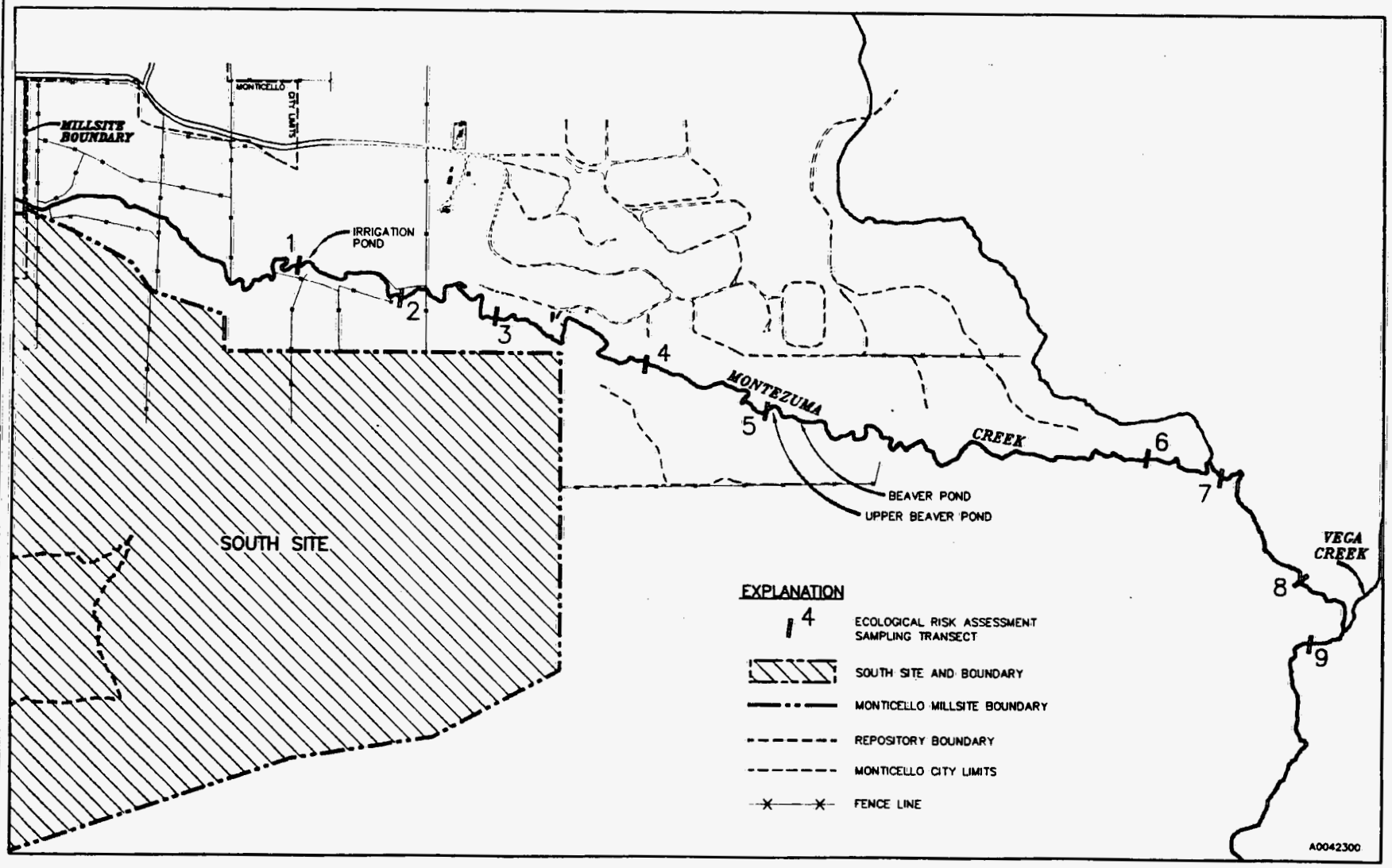

Figure 12. ERA Sampling Transects Below MMTS–Montezuma Creek

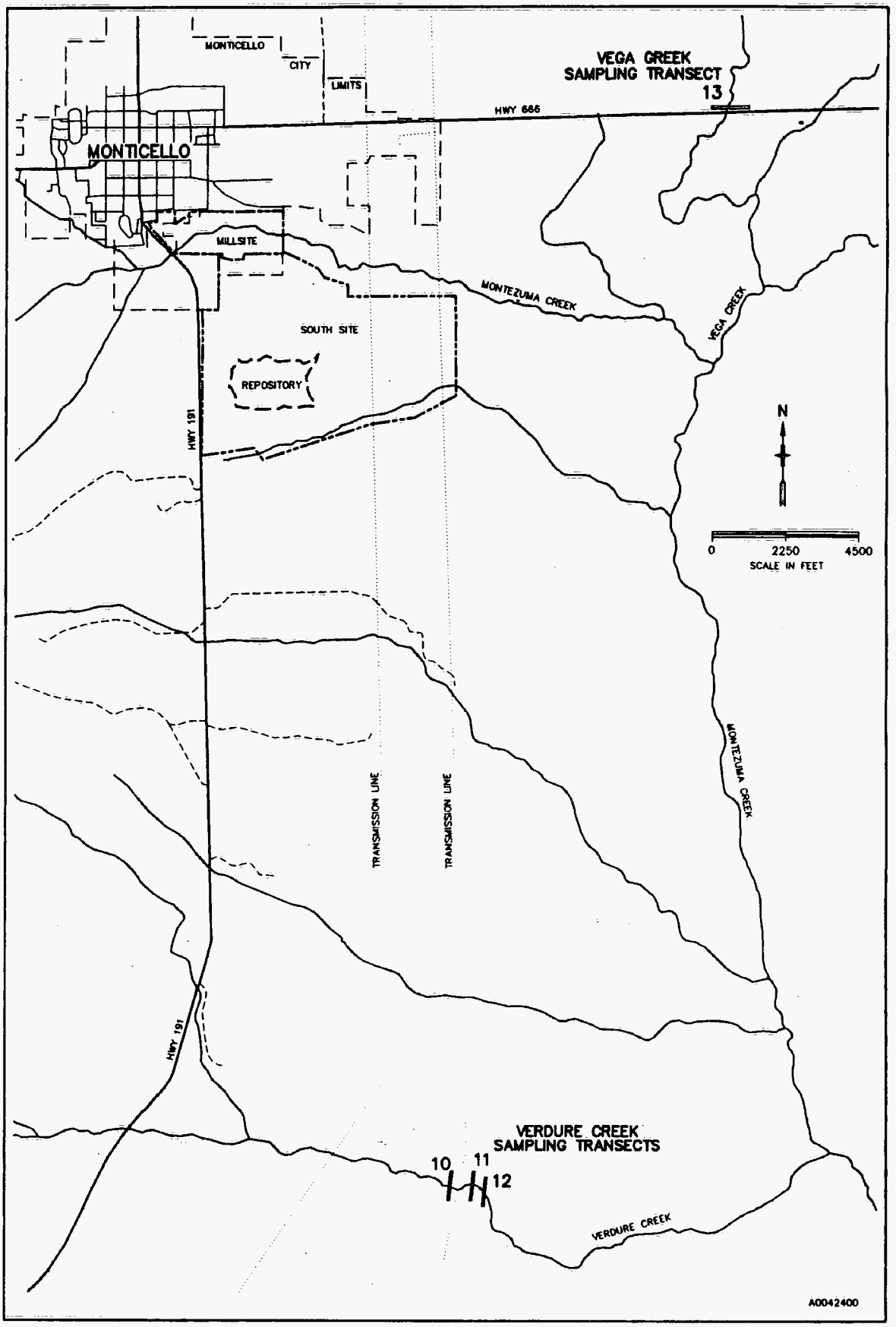

Figure 13. ERA Sampling Transects Verdure and Vega Creek

Five near-surface sediment samples (0 to 6-inch depth interval) were collected from the creek bottom along each transect. Each set of five samples was composited to form one sample per transect for laboratory analysis. Soil samples were also collected along each transect from the 0- to 3-inch and 3- to 24-inch depth intervals at four to five evenly spaced boreholes on each side of the creek. One composite sample was prepared for each side of the creek per depth interval. All sediment and soil samples were submitted for laboratory analysis of radionuclides, metals, sulfate, nitrate+nitrite (as nitrogen), pH, moisture content, and total organic carbon. Analytical results are summarized in Tables A-22 and A-23.

Additional sediment characterization included sediment sample collection from three ponds along Montezuma Creek (Figure 12) for analysis of radionuclides, metals, sulfate, nitrate+nitrite (as nitrogen), pH, moisture content, and total organic carbon; a vertical profile of gamma radioactivity at each soil boring; and a vertical profile of gamma radioactivity at each pond. Results of the gamma measurements, expressed as equivalent radium-226 in picocuries per gram (pCi/g), are presented in Table A-24.

In the upper and middle portions of Montezuma canyon (transects 1-6), radiometric logging results indicate that radium-226 activities greater than 15 pCi/g in soil generally do not exceed a depth of 30 inches. Radium-226 activities obtained in the Irrigation Pond ranged from 1.6 to 38.6 pCi/g, indicating that this pond is not currently a significant trap for tailings. Radium-226 activities measured in the Upper Beaver Pond and the Beaver Pond exceed 15 pCi/g at only one location, indicating that these ponds are also not significant traps for mill tailings. The highest radium-226 activity within the Upper Beaver Pond and Beaver Pond occurred within the 6- to 24-inch depth interval.

In the lower canyon (transects 7-9), radiometric logging results indicate that radium-226 activities greater than 15 pCi/g in soil generally do not exceed a depth of 30 inches. However, at one location (transect 7), radium-226 activities greater than 15 pCi/g exceeds a depth of 42 inches, indicating the possible presence of contaminated sediment at greater depths in this area. Several locations in the lower canyon exhibited relatively low radium-226 activities (approximately 5 pCi/g) at the surface, but increased activities (exceeding 15 pCi/g) were measured at depth at these locations. At Verdure and Vega Creek sampling locations, radiometric logging and laboratory analytical results indicate that radium-226 activities do not exceed 5 pCi/g at any depth interval at any location.

Several metals commonly associated with mill tailings were detected at elevated levels in many Montezuma Creek transect soil and sediment samples. The results for arsenic, selenium, Ra-226, U-234 + 238, and vanadium detected among all Montezuma Creek transect soil and sediment samples is summarized in Table 12. Also included in Table 11 is a summary of the Verdure Creek reference area results. Molybdenum, another metal commonly associated with mill tailings, was not detected in any soil or sediment samples.

A surface water grab sample was collected from the center of the creek at each transect (Figures 12 and 13). Surface water samples were submitted for laboratory analysis of radionuclides, metals, TDS, and major anions and cations. The ecological risk assessment surface water analytical results are provided in Table A-25.

Table 12. Ecological Risk Assessment Soil and Sediment Results Summary

Montezuma Canyon Soil

Analyte	Maximum	Minimum	Mean
Arsenic	18.6 mg/kg	1.7 mg/kg	6.3 mg/kg
Selenium	2.0 mg/kg	<0.2 mg/kg	0.72 mg/kg
Radium-226	120.13 pCi/g	1.15 pCi/g	24.4 pCi/g
Uranium 234 + 238	64.4 pCi/g	2.1 pCi/g	13 pCi/g
Vanadium	41 mg/kg	12.6 mg/kg	87 mg/kg

Montezuma Canyon Creek Sediment

Analyte	Maximum	Minimum	Mean
Arsenic	18.1 mg/kg	2.2 mg/kg	7.4 mg/kg
Selenium	3.6 mg/kg	<0.2 mg/kg	1.3 mg/kg
Radium-226	30.64 pCi/g	1.82 pCi/g	8.7 pCi/g
Uranium 234 + 238	13.9 pCi/g	0.96 pCi/g	8.7 pCi/g
Vanadium	166 mg/kg	17.5 mg/kg	70.3 mg/kg

Montezuma Creek Pond Sediment

Analyte	Maximum	Minimum	Mean
Arsenic	11.6 mg/kg	3.8 mg/kg	6.5 mg/kg
Selenium	3.5 mg/kg	<0.2 mg/kg	1.1 mg/kg
Radium-226	55.08 pCi/g	2.7 pCi/g	10.6 pCi/g
Uranium 234 + 238	32.7 pCi/g	4.3 pCi/g	11.5 pCi/g
Vanadium	167 mg/kg	25.7 mg/kg	70.9 mg/kg

Verdure Creek Soil

Analyte	Maximum	Minimum	Mean
Arsenic	12.1mg/kg	2.2 mg/kg	4.3 mg/kg
Selenium	0.49 mg/kg	<0.2 mg/kg	0.2 mg/kg
Radium-226	2.12 pCi/g	1.53 pCi/g	1.8 pCi/g
Uranium 234 + 238	2.05 pCi/g	1.6 pCi/g	0.91pCi/g
Vanadium	23.4 mg/kg	14.3 mg/kg	17.9 mg/kg

Verdure Creek Sediment

Analyte	Maximum	Minimum	Mean
Arsenic	4.6 mg/kg	4.3 mg/kg	4.5 mg/kg
Selenium	0.55 mg/kg	<0.2 mg/kg	0.2 mg/kg
Radium-226	3.02 pCi/g	2.37 pCi/g	2.75 pCi/g
Uranium 234 + 238	2.7 pCi/g	2.4 pCi/g	2.6 pCi/g
Vanadium	20.2 mg/kg	15.9 mg/kg	18.2 mg/kg

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Appendix
Environmental Monitoring Data

Table A-1. Wastewater Treatment Plant Influent Data Collected During 1995[a]

Sample Date	Ticket Number	Ag (mg/L)	Alpha (pCi/L)	As (mg/L)	BOD[b] (mg/L)	COD[c] (mg/L)	Fe (mg/L)	Hg (mg/L)	NH_4-N[d] (mg/L)	NO_3-N[e] (mg/L)	Oil[f] (mg/L)	Pb (mg/L)
04/25/1995	NBD-294	<0.005	219	0.016	No Data	27	0.4	<0.0002	0.2	0.1	3	<0.002
05/02/1995	NBD-296	0.005	172	0.018	11	39	0.4	<0.0002	0.2	0.2	2	<0.002
05/08/1995	NBD-279	0.001	170	0.035	12	36	0.5	<0.0002	0.2	0.2	3	0.003
05/15/1995	NBD-281	<0.001	172	0.018	3.8	38	0.3	<0.0002	<0.1	0.27	42	<0.002
05/22/1995	NBD-055	<0.0005	106	0.018	1.7	14	<0.1	<0.0002	<0.1	0.2	4	0.002
05/30/1995	NBD-058	<0.0005	166	0.016	2.2	15	<0.1	<0.0002	<0.1	0.3	2	<0.002
06/05/1995	NBD-069	<0.0005	212	0.015	3.0	21	<0.1	<0.0004	0.2	0.3	<1	<0.002
06/12/1995	NBD-071	<0.0005	179	0.014	2.3	19	<0.1	<0.0004	<0.1	0.3	<1	0.002
06/19/1995	NBD-073	<0.0005	234	0.018	2.1	18	0.3	<0.0004	<0.1	0.5	1	<0.002
06/26/1995	NBD-075	<0.0005	184	0.014	1.5	22	0.2	<0.0004	<0.1	0.5	6	<0.002
07/05/1995	NBD-752	<0.0005	275	0.015	2.6	20	0.2	<0.0002	<0.1	0.6	2	<0.002
07/10/1995	NBD-756	<0.0005	222	0.008	3.6	18	0.2	<0.0002	<0.1	0.3	1	<0.002
07/18/1995	NBD-759	<0.0005	242	0.007	3.5	26	0.2	<0.0002	<0.1	<0.1	1	0.005
08/07/1995	NBD-767	<0.0005	612	0.010	3.2	29	0.6	<0.0002	0.1	<0.1	<1	0.005
08/16/1995	NBD-770	0.0010	709	0.006	6.3	38	1.2	<0.0004	<0.1	<0.1	3	<0.002
08/21/1995	NBD-772	<0.0005	458	0.012	4.3	35	1.4	<0.0002	0.1	0.4	1	0.002

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).
[b]Biological oxygen demand.
[c]Chemical oxygen demand.
[d]Ammonia as nitrogen.
[e]Nitrate as nitrogen.
[f]Oil and Grease.

Table A-1 (continued). Wastewater Treatment Plant Influent Data Collected During 1995[a]

Sample Date	Ticket Number	pH	Ra-226 (pCi/L)	Ra-226[b] (pCi/L)	Se (mg/L)	TDS[c] (mg/L)	TSS[d] (mg/L)	U (mg/L)	Zn (mg/L)
04/25/1995	NBD-294	8.59	4.4	No Data	0.008	320	<10	0.194	<0.02
05/02/1995	NBD-296	8.26	2.3	2.5	0.009	338	<10	0.245	<0.02
05/08/1995	NBD-279	7.51	2.7	2.6	0.013	344	10	0.213	<0.02
05/15/1995	NBD-281	7.34	6.2	4.9	0.007	340	10	0.221	<0.02
05/22/1995	NBD-055	7.33	4.3	4.4	0.013	334	<10	0.237	<0.02
05/30/1995	NBD-058	7.56	3.5	3.3	0.008	380	<10	0.226	<0.02
06/05/1995	NBD-069	7.96	4.0	2.8	0.007	420	<10	0.254	<0.02
06/12/1995	NBD-071	8.04	4.0	2.0	0.007	486	<10	0.222	<0.02
06/19/1995	NBD-073	8.70	7.4	5.1	0.009	556	10	0.245	<0.02
06/26/1995	NBD-075	8.08	7.4	4.5	0.009	576	<10	0.429	<0.02
07/05/1995	NBD-752	8.44	8.0	6.6	0.009	634	6	0.260	<0.02
07/10/1995	NBD-756	8.67	6.2	4.3	0.008	596	15	0.229	<0.02
07/18/1995	NBD-759	8.29	6.5	6.1	0.006	624	15	0.206	<0.02
08/07/1995	NBD-767	8.17	12	9.5	<0.005	1310	29	0.679	<0.02
08/16/1995	NBD-770	8.37	16	11	0.005	1380	52	0.686	<0.02
08/21/1995	NBD-772	6.76	14	13	0.011	1010	47	0.503	0.03

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).
[b]Sample was filtered in the laboratory.
[c]Total dissolved solids.
[d]Total suspended solids.

Table A-2. Wastewater Treatment Plant Effluent Data Collected During 1995[a]

Sample Date	Ticket Number	Ag (mg/L)	Alpha (pCi/L)	As (mg/L)	BOD[b] (mg/L)	COD[c] (mg/L)	Fe (mg/L)	Hg (mg/L)	NH_4-N[d] (mg/L)	NO_3-N[e] (mg/L)	Oil[f] (mg/L)	Pb (mg/L)
04/25/1995	NBD-293	<0.005	11	<0.003	No Data	45	<0.1	<0.0002	0.2	0.2	3	<0.002
04/25/1995	NBD-295	<0.005	12	<0.003	No Data	46	<0.1	<0.0002	0.2	0.2	3	<0.002
05/02/1995	NBD-297	0.003	2.2	<0.003	<10	29	<0.1	<0.0002	0.2	0.2	<1	<0.002
05/08/1995	NBD-278	<0.001	<2	0.004	0.4	28	<0.1	<0.0002	<1.0	0.4	4	<0.002
05/15/1995	NBD-280	<0.001	<2	<0.003	2.6	22	<0.1	<0.0002	<0.1	0.22	3	<0.002
05/22/1995	NBD-054	0.0006	<2	<0.003	0.4	9	<0.1	<0.0002	<0.1	0.2	3	<0.002
05/30/1995	NBD-056	<0.0005	<2	<0.003	0.4	8	<0.1	<0.0002	<0.1	0.5	3	<0.002
05/30/1995	NBD-057	<0.0005	<2	<0.003	0.4	14	<0.1	<0.0002	<0.1	0.3	2	<0.002
06/05/1995	NBD-068	0.0005	9.8	<0.003	0.5	9	<0.1	<0.0004	0.2	0.3	<1	<0.002
06/12/1995	NBD-070	<0.0005	<2	<0.003	0.4	8	<0.1	<0.0004	<0.1	0.2	<1	<0.002
06/19/1995	NBD-072	<0.0005	2.7	<0.003	0.4	20	<0.1	<0.0004	<0.1	0.4	1	<0.002
06/26/1995	NBD-074	<0.0005	<2	<0.003	0.6	14	<0.1	<0.0004	0.1	0.5	5	<0.002
07/05/1995	NBD-751	<0.0005	2.2	<0.003	0.8	10	<0.1	<0.0002	<0.1	0.5	2	<0.002
07/05/1995	NBD-753	<0.0005	<2	<0.003	0.78	10	<0.1	<0.0002	<0.1	0.6	2	<0.002
07/10/1995	NBD-755	<0.0005	<2	<0.003	0.4	14	<0.1	<0.0002	<0.1	0.3	<1	<0.002
07/18/1995	NBD-758	<0.0005	2.3	<0.003	0.4	19	<0.1	<0.0002	<0.1	<0.1	<1	0.002
08/07/1995	NBD-766	<0.0005	3.4	<0.003	0.6	20	<0.1	<0.0002	0.1	<0.1	<1	<0.002
08/10/1995	NBB-966	<0.0005	<2	<0.003	0.8	21	<0.1	<0.0002	<0.1	<0.1	<1	<0.002
08/14/1995	NBD-768	0.0008	9.2	<0.003	0.6	15	<0.1	<0.0002	<0.1	<0.1	<1	0.008
08/16/1995	NBD-769	0.0005	3.1	<0.003	0.4	22	<0.1	0.0004	<0.1	<0.1	<1	<0.002
08/21/1995	NBD-771	0.0005	12	0.004	0.4	24	<0.1	<0.0002	0.2	0.3	<1	<0.002

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).
[b]Biological oxygen demand.
[c]Chemical oxygen demand.
[d]Ammonia as nitrogen.
[e]Nitrate as nitrogen.
[f]Oil and Grease.

Table A-2 (continued). Wastewater Treatment Plant Effluent Data Collected During 1995a

Sample Date	Ticket Number	pH	Ra-226 (pCi/L)	Ra-226[b] (pCi/L)	Se (mg/L)	TDS[c] (mg/L)	TSS[d] (mg/L)	U (mg/L)	Zn (mg/L)
04/25/1995	NBD-293	6.61	<0.3	No Data	0.007	406	<10	0.0172	<0.02
04/25/1995	NBD-295	6.61	<0.3	No Data	0.007	386	<10	0.0140	<0.02
05/02/1995	NBD-297	7.75	<0.3	0.3	0.009	394	<10	0.0027	<0.02
05/08/1995	NBD-278	7.59	<0.3	<0.3	0.019	782	<10	0.0100	<0.02
05/15/1995	NBD-280	6.44	<0.3	<0.3	0.008	440	<10	0.0024	<0.02
05/22/1995	NBD-054	6.37	<0.3	<0.3	0.010	420	<10	0.0015	<0.02
05/30/1995	NBD-056	6.90	<0.3	<0.3	0.008	440	<10	0.0202	<0.02
05/30/1995	NBD-057	6.90	<0.3	<0.3	0.008	442	<10	0.0195	<0.02
06/05/1995	NBD-068	7.07	<0.3	<0.3	0.007	480	<10	0.0221	<0.02
06/12/1995	NBD-070	6.40	<0.3	<0.3	0.006	528	<10	0.0020	<0.02
06/19/1995	NBD-072	9.33	<0.3	<0.3	0.009	594	<10	0.0028	<0.02
06/26/1995	NBD-074	7.16	<0.3	<0.3	0.009	630	<10	0.008	<0.02
07/05/1995	NBD-751	6.81	<0.3	<0.3	0.006	700	<10	0.0019	<0.02
07/05/1995	NBD-753	6.81	<0.3	<0.3	0.007	696	<10	0.0015	<0.02
07/10/1995	NBD-755	6.93	<0.3	<0.3	0.008	694	<10	0.0006	<0.02
07/18/1995	NBD-758	7.22	<0.3	<0.3	0.008	688	<10	<0.0003	<0.02
08/07/1995	NBD-766	7.03	<0.3	<0.3	<0.025	1420	<10	0.0005	<0.02
08/10/1995	NBB-966	7.7	<0.3	<0.3	<0.005	1330	<10	0.0063	<0.02
08/14/1995	NBD-768	7.45	<0.3	<0.3	<0.005	1380	<10	0.0056	<0.02
08/16/1995	NBD-769	7.19	0.6	<0.3	<0.005	1400	12	0.0058	<0.02
08/21/1995	NBD-771	7.88	<0.3	<0.3	0.011	1000	<10	0.0071	<0.02

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).
[b]Sample was filtered in the laboratory.
[c]Total dissolved solids.
[d]Total suspended solids.

Table A-3. Radon Data for Monticello, First Quarter 1995 (date installed: 12/29/1994; date removed: 04/04/1995)[a]

Sample Location	Detector Number	Radon Concentration (pCi/L)	Radon Concentration (μCi/mL)[b]
R-M-1-RN	3865865	<0.3	<3E-10
R-M-1-RN	3865877	<0.3	<3E-10
R-M-2-RN	3865889	<0.3	<3E-10
R-M-2-RN	3865931	<0.3	<3E-10
R-M-3-RN	3866027	<0.3	<3E-10
R-M-3-RN	3866062	<0.3	<3E-10
R-M-4-RN	3865896	<0.3	<3E-10
R-M-4-RN	3865909	<0.3	<3E-10
R-M-5-RN	3865963	<0.3	<3E-10
R-M-5-RN	3866108	<0.3	<3E-10
R-M-6-RN	3865925	<0.3	<3E-10
R-M-6-RN	3865939	<0.3	<3E-10
R-M-7-RN	3865852	<0.3	<3E-10
R-M-7-RN	3865871	<0.3	<3E-10
RN-M-04	3865899	<0.3	<3E-10
RN-M-04	3865952	<0.3	<3E-10
RN-M-06	3865900	<0.3	<3E-10
RN-M-06	3866074	0.3	3E-10
RN-M-07	3865980	0.8	8E-10
RN-M-07	3865989	0.5	5E-10
RN-M-10	3865892	<0.3	<3E-10
RN-M-10	3865893	<0.3	<3E-10
RN-M-11	3865906	<0.3	<3E-10
RN-M-11	3865919	<0.3	<3E-10
RN-M-13	3865854	<0.3	<3E-10
RN-M-13	3865880	<0.3	<3E-10
RN-M-14	3865894	<0.3	<3E-10
RN-M-14	3865966	<0.3	<3E-10
RN-M-15	3865836	<0.3	<3E-10
RN-M-15	3865885	<0.3	<3E-10

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).
[b]Scientific notation E-10 = "x 10^{-10}."

Table A–4. Radon Data for Monticello, Second Quarter 1995 (date installed: 04/04/1995; date removed: 07/05/1995)[a]

Sample Location	Detector Number	Radon Concentration (pCi/L)	Radon Concentration (μCi/mL)[b]
R-M-1-RN	3865955	0.3	3E-10
R-M-1-RN	3866046	0.5	5E-10
R-M-2-RN	3865926	0.2	2E-10
R-M-2-RN	3866147	0.2	2E-10
R-M-3-RN	3866079	0.4	4E-10
R-M-3-RN	3866100	0.5	5E-10
R-M-4-RN	3866051	0.1	1E-10
R-M-4-RN	3866117	<0.07	<7E-11
R-M-5-RN	3866011	0.1	1E-10
R-M-5-RN	3866083	0.2	2E-10
R-M-6-RN	3865943	0.2	2E-10
R-M-6-RN	3866033	0.6	6E-10
R-M-7-RN	3866017	0.4	4E-10
R-M-7-RN	3866089	0.4	4E-10
RN-M-04	3866063	1.0	1.0E-09
RN-M-04	3866067	0.8	8E-10
RN-M-06	3866090	1.0	1.0E-09
RN-M-06	3866095	0.8	8E-10
RN-M-07	3865976	1.2	1.2E-09
RN-M-07	3866042	1.3	1.3E-09
RN-M-10	3866045	<0.07	<7E-11
RN-M-10	3866092	0.3	3E-10
RN-M-11	3866031	<0.07	<7E-11
RN-M-11	3866094	0.1	1E-10
RN-M-13	3865968	<0.07	<7E-11
RN-M-13	3866015	0.2	2E-10
RN-M-14	3866022	0.1	1E-10
RN-M-14	3866026	0.2	2E-10
RN-M-15	3865962	0.6	6E-10
RN-M-15	3866058	0.7	7E-10

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).
[b]Scientific notation E-10 = "x 10^{-10}."

Table A-5. Radon Data for Monticello, Third Quarter 1995 (date installed: 07/05/1995; date removed: 10/10/1995)[a]

Sample Location	Detector Number	Radon Concentration (pCi/L)	Radon Concentration (μCi/mL)[b]
R-M-1-RN	3993022	0.78	8E-10
R-M-1-RN	3993074	1.01	1.0E-09
R-M-2-RN	3992900	0.52	5E-10
R-M-2-RN	3992949	0.44	4E-10
R-M-3-RN	3992913	0.75	8E-10
R-M-3-RN	3993056	0.64	6E-10
R-M-4-RN	3992980	0.54	5E-10
R-M-4-RN	3993053	0.54	5E-10
R-M-5-RN	3992982	0.58	6E-10
R-M-5-RN	3992991	0.75	8E-10
R-M-6-RN	3992877	0.46	5E-10
R-M-6-RN	3992942	0.52	5E-10
R-M-7-RN	3992963	0.50	5E-10
R-M-7-RN	3993021	0.54	5E-10
RN-M-04	3992868	0.84	8E-10
RN-M-04	3992955	1.13	1.1E-09
RN-M-06	3992932	1.41	1.4E-09
RN-M-06	3993043	1.18	1.2E-09
RN-M-07	3992924	2.32	2.3E-09
RN-M-07	3992970	2.68	2.7E-09
RN-M-10	3992898	0.33	3E-10
RN-M-10	3993080	<0.31	<3E-10
RN-M-11	3992896	<0.31	<3E-10
RN-M-11	3993060	0.38	4E-10
RN-M-13	3992910	0.33	3E-10
RN-M-13	3993061	0.51	5E-10
RN-M-14	3992897	<0.31	<3E-10
RN-M-14	3992905	0.40	4E-10

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit).
[b]Scientific notation E-10 = "x 10^{-10}."

Table A-6. Radon Data for Monticello, Fourth Quarter 1995
(date installed: 10/06/1995; date removed: 01/03/1996)

Sample Location	Detector Number	Reported Radon[a] Concentration (pCi/L)	Corrected Radon[b] Concentration (pCi/L)	Radon Concentration[c] (μCi/mL)
R-M-1-RN	3992736	0.6	0.7	7E-10
R-M-1-RN	3992888	0.8	1.0	1.0E-09
R-M-2-RN	3992732	0.6	0.7	7E-10
R-M-2-RN	3992839	0.4	0.5	5E-10
R-M-3-RN	3992800	0.6	0.7	7E-10
R-M-3-RN	3992948	0.8	0.9	9E-10
R-M-4-RN	3992852	0.5	0.6	6E-10
R-M-4-RN	3992859	0.5	0.6	6E-10
R-M-5-RN	3992844	0.7	0.8	8E-10
R-M-5-RN	3992999	0.7	0.8	8E-10
R-M-6-RN	3992830	0.5	0.6	6E-10
R-M-6-RN	3992873	0.4	0.5	5E-10
R-M-7-RN	3992795	0.5	0.6	6E-10
R-M-7-RN	3992921	0.8	1.0	1.0E-09
RN-M-04	3992771	1.7	2.1	2.1E-09
RN-M-04	3992902	1.4	1.7	1.7E-09
RN-M-06	3992967	1.2	1.4	1.4E-09
RN-M-06	3992986	1.2	1.4	1.4E-09
RN-M-07	3992816	2.7	3.3	3.3E-09
RN-M-07	3992847	2.5	3.0	3.0E-09
RN-M-10	3992819	0.5	0.6	6E-10
RN-M-10	3992996	0.3	0.4	4E-10
RN-M-11	3992880	0.2	0.3	3E-10
RN-M-11	3992950	0.2	0.3	3E-10
RN-M-13	3992782	0.3	0.3	3E-10
RN-M-13	3992915	0.3	0.3	3E-10
RN-M-14	3992817	0.4	0.5	5E-10
RN-M-14	3992826	0.3	0.4	4E-10
RN-M-15	3992765	0.5	0.6	6E-10
RN-M-15	3992883	0.3	0.4	4E-10

[a]The reported radon value is the result received from the subcontracted laboratory. A "<" indicates that the maximum concentration was below detection limits (number shown is detection limit).

[b]The corrected radon value is derived by applying a correction factor to the reported value. The correction factor is the ratio of a known exposure value to the value that is measured and reported.

[c]Scientific notation E-10 = "x 10^{-10}."

Table A-7. Suspended Particulates (PM_{10}) Data at Station AIR-M-1 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concen-tration ($\mu g/m^3$)
04/07/1995	040795-01	6179761	0.938	24.04	0.0165	12
04/13/1995	041395-01	6179754	0.894	24.05	0.0192	15
04/19/1995	041995-01	6179749	0.850	24.03	0.0047	4
04/25/1995	042595-01	6179744	0.938	24.05	0.0148	11
05/01/1995	050195-01	6179739	0.931	24.04	0.0144	11
05/07/1995	050795-01	6179734	0.887	24.04	0.0075	6
05/13/1995	051395-01	6179729	0.945	24.04	0.0142	10
05/19/1995	051995-01	6179724	0.843	24.03	0.0037	3
05/25/1995	052595-01	6179719	0.931	24.03	0.0147	11
05/31/1995	053195-01	6179714	0.960	24.03	0.0105	8
06/06/1995	060695-01	6179709	0.967	24.04	0.0556	40
06/12/1995	061295-01	6179704	0.924	24.05	0.0160	12
06/24/1995	062495-01	6157894	0.938	24.05	0.0128	9
06/30/1995	063095-01	6157889	0.924	24.01	0.0067	5
07/06/1995	070695-01	6157884	0.892	24.00	0.0120	9
07/12/1995	071295-01	6157879	0.892	24.03	0.0125	10
07/18/1995	071895-01	6157874	0.864	24.04	0.0123	10
07/24/1995	072495-01	6157869	0.921	24.00	0.0191	14
07/30/1995	073095-01	6157864	0.921	23.99	0.0326	25
08/05/1995	080595-01	6157859	0.909	24.04	0.0203	15
08/11/1995	081195-01	6157854	0.894	24.04	0.0178	14
08/17/1995	081795-01	6157849	0.894	24.05	0.0140	11
08/29/1995	082995-01	6157839	0.899	24.10	0.0098	8
09/04/1995	090495-01	6157834	0.904	24.05	0.0175	13
09/10/1995	091095-01	6157829	0.904	24.06	0.0018	1
09/16/1995	091695-01	6157824	0.919	24.09	0.0079	6
09/22/1995	092295-01	6157819	0.890	24.07	0.0037	3
09/28/1995	092895-01	6157814	0.904	24.06	0.0016	1
10/10/1995	101095-01	6157804	0.930	24.06	0.0295	22
10/16/1995	101695-01	6409600	0.930	23.91	0.0339	25
10/22/1995	102295-01	6409595	0.900	24.09	0.0306	24
10/28/1995	102895-01	6409590	0.959	24.11	0.0160	12
11/03/1995	110395-01	6409585	0.954	24.09	0.0585	42
11/09/1995	110995-01	6409580	0.968	24.11	0.0568	41
11/15/1995	111595-01	6409575	0.968	24.05	0.0116	8
11/21/1995	112195-01	6409570	0.968	24.07	0.0262	19
11/27/1995	112795-01	6409565	0.939	24.08	0.0202	15

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-7 (continued). Suspended Particulates (PM_{10}) Data at Station AIR-M-1 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concen-tration ($\mu g/m^3$)
12/03/1995	120395-01	6409560	0.975	24.06	0.0063	4
12/09/1995	120995-01	6409556	0.931	24.07	0.0067	5
12/15/1995	121595-01	6409552	0.960	24.08	0.0102	7
12/21/1995	122195-01	6409547	0.945	24.09	0.0002	<1
12/27/1995	122795-01	6409542	0.948	24.41	0.0106	8

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-8. Suspended Particulates (PM_{10}) Data at Station AIR-M-3 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concen-tration ($\mu g/m^3$)
04/07/1995	040795-03	6179760	0.909	23.97	0.0136	10
04/13/1995	041395-03	6179753	0.865	23.95	0.0221	18
04/19/1995	041995-03	6179748	0.865	23.95	0.0037	3
04/25/1995	042595-03	6179743	0.924	24.01	0.0154	12
05/01/1995	050195-03	6179738	0.902	23.94	0.0166	13
05/07/1995	050795-03	6179733	0.858	23.94	0.0082	7
05/13/1995	051395-03	6179728	0.902	23.93	0.0128	10
05/19/1995	051995-03	6179723	0.931	23.91	0.0042	3
05/25/1995	052595-03	6179718	0.902	23.93	0.0153	12
05/31/1995	053195-03	6179713	0.931	23.92	0.0145	11
06/06/1995	060695-03	6179708	0.836	23.93	0.0450	37
06/12/1995	061295-03	6179703	0.938	23.93	0.0211	16
06/24/1995	062495-03	6157893	1.039	23.94	0.0147	10
06/30/1995	063095-03	6157888	0.851	23.96	0.0048	4
07/06/1995	070695-03	6157883	0.848	23.95	0.0103	8
07/12/1995	071295-03	6157878	0.848	23.95	0.0191	16
07/18/1995	071895-03	6157873	0.834	23.94	0.0104	9
07/24/1995	072495-03	6157868	0.877	23.96	0.0209	17
07/30/1995	073095-03	6157863	0.877	23.94	0.0281	22
08/05/1995	080595-03	6157858	0.879	23.94	0.0163	13
08/11/1995	081195-03	6157853	0.894	23.95	0.0155	12
08/17/1995	081795-03	6157848	0.894	23.92	0.0206	16
08/23/1995	082395-03	6157843	0.894	23.96	0.0094	7
08/29/1995	082995-03	6157838	0.894	24.00	0.0121	9
09/04/1995	090495-03	6157833	0.914	23.96	0.0160	12
09/10/1995	091095-03	6157828	0.855	23.95	0.0022	2
09/16/1995	091695-03	6157823	0.914	23.93	0.0066	5
09/22/1995	092295-03	6157818	0.884	23.94	0.0077	6
09/28/1995	092895-03	6157813	0.855	23.95	-0.0006	<1
10/04/1995	100495-03	6157808	0.910	23.95	0.0128	10
10/10/1995	101095-03	6157803	0.910	23.94	0.0344	26
10/16/1995	101695-03	6409599	0.933	23.94	0.0270	20
10/22/1995	102295-03	6409594	0.895	23.81	0.0172	13
10/28/1995	102895-03	6409589	0.939	23.96	0.0110	8
11/03/1995	110395-03	6409584	0.919	23.96	0.0097	7
11/09/1995	110995-03	6409579	0.949	23.98	0.0209	15
11/15/1995	111595-03	6409574	0.949	23.95	0.0533	39
11/21/1995	112195-03	6409569	0.934	23.95	0.0500	37
11/27/1995	112795-03	6409567	0.934	23.92	0.0225	17

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-8 (continued). Suspended Particulates (PM_{10}) Data at Station AIR-M-3 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concen-tration ($\mu g/m^3$)
12/03/1995	120395-03	6409559	0.970	23.93	0.0099	7
12/09/1995	120995-03	6409555	0.955	23.94	0.0144	10
12/15/1995	121595-03	6409551	0.940	23.93	0.0120	9
12/21/1995	122195-03	6409546	0.940	23.92	0.0125	9
12/27/1995	122795-03	6409541	0.872	24.08	0.0202	16

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-9. Suspended Particulates (PM_{10}) Data at Station AIR-M-5 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concentration ($\mu g/m^3$)
04/07/1995	040795-05	6179759	0.949	24.05	0.0268	20
04/13/1995	041395-05	6179752	0.949	24.02	0.0277	20
04/19/1995	041995-05	6179747	0.963	24.02	0.0050	4
04/25/1995	042595-05	6179742	0.949	24.00	0.0121	9
05/01/1995	050195-05	6179737	0.940	24.00	0.0077	6
05/07/1995	050795-05	6179732	0.940	24.02	0.0072	5
05/13/1995	051395-05	6179727	0.926	23.98	0.0133	10
05/19/1995	051995-05	6179722	0.955	24.02	0.0054	4
05/25/1995	052595-05	6179717	0.940	24.00	0.0111	8
05/31/1995	053195-05	6179712	0.940	24.00	0.0106	8
06/06/1995	060695-05	6179707	0.932	24.02	0.0438	33
06/12/1995	061295-05	6179702	0.918	24.02	0.0151	11
06/18/1995	061895-05	6157897	0.890	24.02	0.0046	4
06/24/1995	062495-05	6157892	0.918	24.00	0.0117	9
06/30/1995	063095-05	6157887	0.904	24.02	0.0073	6
07/06/1995	070695-05	6157882	0.915	24.00	0.0086	7
07/12/1995	071295-05	6157877	0.915	24.01	0.0319	24
07/18/1995	071895-05	6157872	0.915	24.01	0.0105	8
07/24/1995	072495-05	6157867	0.915	24.02	0.0265	20
07/30/1995	073095-05	6157862	0.901	23.98	0.0331	26
08/05/1995	080595-05	6157857	0.903	24.00	0.0175	13
08/11/1995	081195-05	6157852	0.918	24.00	0.0185	14
08/17/1995	081795-05	6157847	0.932	24.00	0.0147	11
08/23/1995	082395-05	6157842	0.918	24.00	0.0134	10
08/29/1995	082995-05	6157837	0.937	24.07	0.0248	18
09/04/1995	090495-05	6157832	0.943	24.02	0.0206	15
09/10/1995	091095-05	6157827	0.943	24.02	0.0052	4
09/16/1995	091695-05	6157822	0.943	24.01	0.0109	8
09/22/1995	092295-05	6157817	0.943	24.03	0.0217	16
09/28/1995	092895-05	6157812	0.949	24.00	0.0000	<1
10/04/1995	100495-05	6157807	0.954	24.00	0.0289	21
10/10/1995	101095-05	6157802	0.940	24.00	0.0180	13
10/16/1995	101695-05	6409598	0.940	24.01	0.0369	27
10/22/1995	102295-05	6409593	0.940	23.99	0.0286	21
10/28/1995	102895-05	6409588	0.969	23.17	0.0161	12
11/03/1995	110395-05	6409583	0.964	24.00	0.0184	13
11/09/1995	110995-05	6409578	0.979	24.00	0.0238	17
11/15/1995	111595-05	6409573	0.979	23.98	0.0300	21
11/21/1995	112195-05	6409568	0.964	23.98	0.0331	24
11/27/1995	112795-05	6409563	0.964	24.00	0.0368	26

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-9 (continued). Suspended Particulates (PM_{10}) Data at Station AIR-M-5 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concen-tration ($\mu g/m^3$)
12/15/1995	121595-05	6409550	0.956	24.00	0.0134	10
12/21/1995	122195-05	6409545	0.956	24.00	0.0172	12
12/27/1995	122795-05	6409540	0.966	24.25	0.0240	17

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-10. Suspended Particulates (PM_{10}) Data at Station AIR-M-6 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concentration ($\mu g/m^3$)
04/07/1995	040795-06	6179758	0.917	24.15	0.0084	6
04/13/1995	041395-06	6179751	0.886	24.39	0.0164	13
04/19/1995	041995-06	6179746	0.901	24.11	0.0070	5
04/25/1995	042595-06	6179741	0.901	24.12	0.0103	8
05/01/1995	050195-06	6179736	0.909	24.11	0.0089	7
05/07/1995	050795-06	6179731	0.909	24.13	0.0075	6
05/13/1995	051395-06	6179726	0.894	24.09	0.0074	6
05/19/1995	051995-06	6179721	0.848	24.11	0.0040	3
05/25/1995	052595-06	6179716	0.894	24.10	0.0119	9
05/31/1995	053195-06	6179711	0.894	24.10	0.0072	6
06/06/1995	060695-06	6179706	0.901	24.12	0.0396	30
06/12/1995	061295-06	6179701	0.901	24.11	0.0123	9
06/18/1995	061895-06	6157896	0.901	24.11	0.0037	3
06/24/1995	062495-06	6157891	0.901	24.38	0.0107	8
06/30/1995	063095-06	6157886	0.886	24.10	0.0084	7
07/06/1995	070695-06	6157881	0.898	24.10	0.0097	7
07/12/1995	071295-06	6157876	0.838	24.12	0.0622	51
07/18/1995	071895-06	6157871	0.898	24.10	0.0119	9
07/24/1995	072495-06	6157866	0.883	24.10	0.0149	12
07/30/1995	073095-06	6157861	0.883	24.10	0.0257	20
08/05/1995	080595-06	6157856	0.886	24.09	0.0140	11
08/11/1995	081195-06	6157851	0.901	24.09	0.0159	12
08/17/1995	081795-06	6157846	0.901	24.10	0.0102	8
08/23/1995	082395-06	6157841	0.901	24.08	0.0097	7
08/29/1995	082995-06	6157836	0.901	24.18	0.0086	7
09/04/1995	090495-06	6157831	0.921	24.08	0.0171	13
09/10/1995	091095-06	6157826	0.892	24.10	0.0048	4
09/16/1995	091695-06	6157821	0.935	24.09	0.0073	5
09/22/1995	092295-06	6157816	0.903	24.10	0.0010	1
09/28/1995	092895-06	6157811	0.892	24.09	0.0023	2
10/04/1995	100495-06	6157806	0.932	24.10	0.0085	6
10/10/1995	101095-06	6157801	0.932	24.09	0.0071	5
10/16/1995	101695-06	6409597	0.952	48.18	0.0152	6
10/22/1995	102295-06	6409592	0.917	24.18	0.0197	15
10/28/1995	102895-06	6409587	0.947	24.12	0.0065	5
11/03/1995	110395-06	6409582	0.941	24.10	0.0047	3
11/09/1995	110995-06	6409577	0.956	24.12	0.0117	8
11/21/1995	112195-06	6409567	0.956	24.10	0.0201	15

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-10 (continued). Suspended Particulates (PM_{10}) Data at Station AIR-M-6 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concentration ($\mu g/m^3$)
12/03/1995	120395-06	6409558	0.971	24.09	0.0091	6
12/09/1995	120995-06	6409554	0.963	24.10	0.0030	2
12/15/1995	121595-06	6409549	0.978	24.11	0.0038	3
12/21/1995	122195-06	6409544	0.978	24.14	0.0093	7
12/27/1995	122795-06	6409539	1.140	24.17	0.0044	3

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-11. Suspended Particulates (PM_{10}) Data at Station AIR-M-7 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concentration ($\mu g/m^3$)
04/07/1995	040795-07	6179757	0.917	23.89	0.0085	6
04/13/1995	041395-07	6179750	0.954	23.74	0.0152	11
04/19/1995	041995-07	6179745	0.973	23.81	0.0033	2
04/25/1995	042595-07	6179740	0.936	24.60	0.0098	7
05/01/1995	050195-07	6179735	0.947	23.80	0.0048	4
05/07/1995	050795-07	6179730	0.965	23.80	0.0083	6
05/13/1995	051395-07	6179725	0.947	23.80	0.0097	7
05/19/1995	051995-07	6179720	0.965	23.81	0.0013	1
05/25/1995	052595-07	6179715	0.984	23.79	0.0068	5
05/31/1995	053195-07	6179710	0.965	23.77	0.0033	2
06/06/1995	060695-07	6179705	0.939	23.78	0.0340	25
06/12/1995	061295-07	6157900	0.921	23.72	0.0015	1
06/18/1995	061895-07	6157895	0.939	23.79	0.0011	1
06/24/1995	062495-07	6157890	0.939	23.77	0.0087	6
06/30/1995	063095-07	6157885	0.902	23.77	0.0057	4
07/06/1995	070695-07	6157880	0.900	23.97	0.0064	5
07/12/1995	071295-07	6157875	0.900	24.03	0.0181	14
07/18/1995	071895-07	6157870	0.900	24.03	0.0090	7
07/24/1995	072495-07	6157865	0.918	24.04	0.0109	8
07/30/1995	073095-07	6157860	0.900	24.03	0.0260	20
08/05/1995	080595-07	6157855	0.920	24.07	0.0118	9
08/11/1995	081195-07	6157850	0.920	24.06	0.0139	10
08/17/1995	081795-07	6157845	0.920	24.04	0.0093	7
08/23/1995	082395-07	6157840	0.920	24.05	0.0050	4
08/29/1995	082995-07	6157835	0.947	24.15	0.0085	6
09/04/1995	090495-07	6157830	0.922	24.04	0.0141	11
09/10/1995	091095-07	6157825	0.922	24.05	0.0015	1
09/16/1995	091695-07	6157820	0.940	24.02	0.0045	3
09/22/1995	092295-07	6157815	0.953	23.99	0.0011	1
09/28/1995	092895-07	6157810	0.922	23.99	-0.0033	<1
10/04/1995	100495-01	6157809	0.964	24.05	0.0228	16
10/10/1995	101095-07	6157805	0.932	24.04	0.0089	7
10/22/1995	102295-07	6409591	0.932	24.02	0.0117	9
10/28/1995	102895-07	6409586	0.979	24.04	0.0165	12
11/03/1995	110395-07	6409581	0.973	24.06	0.0015	1
11/09/1995	110995-07	6409576	0.989	24.03	0.0067	5
11/15/1995	111595-07	6409571	0.973	24.05	0.0017	1
11/21/1995	112195-07	6409566	0.973	24.06	0.0169	12
11/27/1995	112795-07	6409561	0.973	24.05	0.0096	7

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-11 (continued). Suspended Particulates (PM_{10}) Data at Station AIR-M-7 During 1995

Sample Date	Ticket Number	Filter Number	Flow Rate (m^3/min)[a]	Sample Time (hours)	Weight (g/F)[b]	Concentration ($\mu g/m^3$)
12/03/1995	120395-07	6409557	0.980	24.06	0.0058	4
12/09/1995	120995-07	6409553	0.980	24.08	0.0001	<1
12/15/1995	121595-07	6409548	0.964	24.05	0.0056	4
12/21/1995	122195-07	6409543	0.964	24.13	0.0044	3
12/27/1995	122795-07	6409538	0.942	24.09	0.0063	5

[a]Volumetric values of flow have been corrected to EPA standard temperature and pressure.
[b]Grams per filter.

Table A-12. Radioparticulate Air Sample Results for 1995[a]

Sample Location	Sample Date	Flow Rate (L/h)[b]	Sample Time (hours)	Radium-226 (pCi/F)[c]	Radium-226 (μCi/mL)	Thorium-230 (pCi/F)	Thorium-230 (μCi/mL)	Thorium-230 (pg/mL)[d]	Uranium (μg/F)[e]	Uranium (μg/m³)	Uranium (μCi/mL)[f]
R-M-1-AIR	04/1995	3600	740.0	0.52	2.0E-16	0.35	1.3E-16	6.7E-09	<0.40	<1.5E-04	<1.0E-16
R-M-1-AIR	05/1995	3600	601.0	0.65	3.0E-16	0.20	9.2E-17	4.7E-09	~0.54	~2.5E-04	~1.7E-16
R-M-1-AIR	06/1995	3600	728.0	1.11	4.2E-16	0.30	1.1E-16	5.7E-09	~0.67	~2.6E-04	~1.7E-16
R-M-1-AIR	07/1995	3600	587.0	0.87	4.1E-16	0.32	1.5E-16	7.7E-09	~0.80	~3.8E-04	~2.5E-16
R-M-1-AIR	08/1995	3600	672.0	1.31	5.4E-16	0.46	1.9E-16	9.8E-09	~0.95	~3.9E-04	~2.6E-16
R-M-1-AIR	09/1995	3600	560.0	0.91	4.5E-16	0.40	2.0E-16	1.0E-08	~1.0	~5.0E-04	~3.3E-16
R-M-1-AIR	10/1995	3600	722.0	0.54	2.1E-16	0.40	1.5E-16	7.7E-09	~1.7	~6.5E-04	~4.3E-16
R-M-1-AIR	11/1995	3600	700.0	0.98	3.9E-16	0.31	1.2E-16	6.2E-09	~0.98	~3.9E-04	~2.6E-16
R-M-1-AIR	12/1995	3600	816.0	1.15	3.9E-16	0.43	1.5E-16	7.7E-09	1.9	6.5E-04	4.3E-16
R-M-2-AIR	04/1995	3600	741.0	0.76	2.8E-16	0.42	1.6E-16	8.2E-09	<0.40	<1.5E-04	<1.0E-16
R-M-2-AIR	05/1995	3600	601.0	0.65	3.0E-16	0.33	1.5E-16	7.7E-09	~0.61	~2.8E-04	~1.9E-16
R-M-2-AIR	06/1995	3600	725.0	1.45	5.6E-16	0.45	1.7E-16	8.8E-09	~0.91	~3.5E-04	~2.3E-16
R-M-2-AIR	07/1995	3600	670.0	0.80	3.3E-16	0.43	1.8E-16	9.3E-09	~0.84	~3.5E-04	~2.3E-16
R-M-2-AIR	08/1995	3600	672.0	1.17	4.8E-16	0.42	1.7E-16	8.8E-09	~0.91	~3.8E-04	~2.5E-16
R-M-2-AIR	09/1995	3600	609.0	1.08	4.9E-16	0.36	1.6E-16	8.2E-09	~1.0	~4.6E-04	~3.1E-16
R-M-2-AIR	10/1995	3600	485.0	0.32	1.8E-16	0.20	1.1E-16	5.7E-09	~0.61	~3.5E-04	~2.3E-16
R-M-2-AIR	11/1995	3600	700.0	1.00	4.0E-16	0.18	7.1E-17	3.7E-09	~0.54	~2.1E-04	~1.4E-16
R-M-2-AIR	12/1995	3600	755.0	1.38	5.1E-16	0.61	2.2E-16	1.1E-08	2.6	9.6E-04	6.4E-16
R-M-3-AIR	04/1995	3600	677.0	0.49	2.0E-16	0.41	1.7E-16	8.8E-09	<0.40	<1.6E-04	<1.1E-16
R-M-3-AIR	05/1995	3600	583.0	1.15	5.5E-16	0.44	2.1E-16	1.1E-08	~0.54	~2.6E-04	~1.7E-16
R-M-3-AIR	06/1995	3600	788.0	0.77	2.7E-16	0.41	1.4E-16	7.2E-09	~0.88	~3.1E-04	~2.1E-16
R-M-3-AIR	07/1995	3600	669.0	0.63	2.6E-16	0.40	1.7E-16	8.8E-09	~0.81	~3.4E-04	~2.3E-16
R-M-3-AIR	08/1995	3600	672.0	0.89	3.7E-16	0.42	1.7E-16	8.8E-09	~0.95	~3.9E-04	~2.6E-16
R-M-3-AIR	09/1995	3600	609.0	0.71	3.2E-16	0.28	1.3E-16	6.7E-09	~0.79	~3.6E-04	~2.4E-16
R-M-3-AIR	10/1995	3600	722.0	0.85	3.3E-16	0.75	2.9E-16	1.5E-08	~2.0	~7.7E-04	~5.1E-16
R-M-3-AIR	11/1995	3600	700.0	1.13	4.5E-16	0.38	1.5E-16	7.7E-09	~1.2	~4.8E-04	~3.2E-16
R-M-3-AIR	12/1995	3600	816.0	3.08	1.0E-15	0.55	1.9E-16	9.8E-09	1.4	4.8E-04	3.2E-16
R-M-4-AIR	04/1995	3600	739.0	0.47	1.8E-16	0.34	1.3E-16	6.7E-09	<0.40	<1.5E-04	<1.0E-16
R-M-4-AIR	05/1995	3600	473.0	0.70	4.1E-16	0.29	1.7E-16	8.8E-09	~0.68	~4.0E-04	~2.7E-16
R-M-4-AIR	07/1995	3600	532.0	0.75	3.9E-16	0.39	2.0E-16	1.0E-08	~0.97	~5.1E-04	~3.4E-16
R-M-4-AIR	08/1995	3600	503.0	1.00	5.5E-16	0.64	3.5E-16	1.8E-08	~0.94	~5.2E-04	~3.5E-16
R-M-4-AIR	09/1995	3600	516.0	0.47	2.5E-16	0.32	1.7E-16	8.8E-09	~1.0	~5.4E-04	~3.6E-16

[a]A "<" indicates that the maximum concentration was below the detection limit (number show is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instument was calibrated.

[b]L/h = liters per hour.

[c]pCi/F = picocuries per filter.

[d]pg/mL = picograms per milliliter. The conversion of thorium-230 concentrations between microcuries and picograms assumed equilibrium and an activity of 0.0194 μCi/μg.

[e]μg/F = micrograms per filter.

[f]The conversion of uranium concentrations between microcuries per milliliter and micrograms per cubic meter assumed equilibrium and an activity of 0.666 pCi/μg.

Table A-12 (continued). Radioparticulate Air Sample Results for 1995[a]

Sample Location	Sample Date	Flow Rate (L/h)[b]	Sample Time (hours)	Radium-226 (pCi/F)[c]	Radium-226 (μCi/mL)	Thorium-230 (pCi/F)	Thorium-230 (μCi/mL)	Thorium-230 (pg/mL)[d]	Uranium (μg/F)[e]	Uranium (μg/m³)	Uranium (μCi/mL)[f]
R-M-5-AIR	04/1995	3600	551.0	0.65	3.3E-16	0.52	2.6E-16	1.3E-08	<0.40	<2.0E-04	<1.3E-16
R-M-5-AIR	05/1995	3600	602.0	0.98	4.5E-16	0.32	1.5E-16	7.7E-09	~0.55	~2.5E-04	~1.7E-16
R-M-5-AIR	06/1995	3600	868.0	0.71	2.3E-16	0.46	1.5E-16	7.7E-09	~1.1	~3.5E-04	~2.3E-16
R-M-5-AIR	07/1995	3600	649.0	0.92	3.9E-16	0.63	2.7E-16	1.4E-08	~1.4	~6.0E-04	~4.0E-16
R-M-5-AIR	08/1995	3600	672.0	1.58	6.5E-16	0.84	3.5E-16	1.8E-08	2.1	8.7E-04	5.8E-16
R-M-5-AIR	09/1995	3600	672.0	0.78	3.2E-16	0.46	1.9E-16	9.8E-09	~1.2	~5.0E-04	~3.3E-16
R-M-5-AIR	10/1995	3600	722.0	0.51	2.0E-16	0.38	1.5E-16	7.7E-09	~1.9	~7.3E-04	~4.9E-16
R-M-5-AIR	11/1995	3600	700.0	1.26	5.0E-16	0.68	2.7E-16	1.4E-08	~1.8	~7.1E-04	~4.7E-16
R-M-5-AIR	12/1995	3600	816.0	1.25	4.3E-16	0.35	1.2E-16	6.2E-09	0.74	2.5E-04	1.7E-16
R-M-6-AIR	04/1995	3600	740.0	0.51	1.9E-16	0.37	1.4E-16	7.2E-09	<0.40	<1.5E-04	<1.0E-16
R-M-6-AIR	05/1995	3600	601.0	1.80	8.3E-16	0.31	1.4E-16	7.2E-09	~0.60	~2.8E-04	~1.9E-16
R-M-6-AIR	06/1995	3600	868.0	0.86	2.8E-16	0.38	1.2E-16	6.2E-09	~0.89	~2.8E-04	~1.9E-16
R-M-6-AIR	07/1995	3600	667.0	0.56	2.3E-16	0.37	1.5E-16	7.7E-09	~0.75	~3.1E-04	~2.1E-16
R-M-6-AIR	08/1995	3600	672.0	0.82	3.4E-16	0.45	1.9E-16	9.8E-09	~0.83	~3.4E-04	~2.3E-16
R-M-6-AIR	09/1995	3600	672.0	0.78	3.2E-16	0.47	1.9E-16	9.8E-09	~0.98	~4.1E-04	~2.7E-16
R-M-6-AIR	10/1995	3600	721.0	0.43	1.7E-16	0.39	1.5E-16	7.7E-09	~1.6	~6.2E-04	~4.1E-16
R-M-6-AIR	11/1995	3600	499.0	0.96	5.3E-16	0.23	1.3E-16	6.7E-09	~0.80	~4.5E-04	~3.0E-16
R-M-6-AIR	12/1995	3600	670.0	1.11	4.6E-16	0.74	3.1E-16	1.6E-08	1.1	4.6E-04	3.1E-16
R-M-7-AIR	04/1995	3600	740.0	0.45	1.7E-16	0.32	1.2E-16	6.2E-09	<0.40	<1.5E-04	<1.0E-16
R-M-7-AIR	05/1995	3600	602.0	0.31	1.4E-16	0.19	8.8E-17	4.5E-09	~0.46	~2.1E-04	~1.4E-16
R-M-7-AIR	06/1995	3600	869.0	0.71	2.3E-16	0.29	9.3E-17	4.8E-09	~0.72	~2.3E-04	~1.5E-16
R-M-7-AIR	07/1995	3600	668.0	0.54	2.2E-16	0.29	1.2E-16	6.2E-09	~0.65	~2.7E-04	~1.8E-16
R-M-7-AIR	08/1995	3600	671.0	1.04	4.3E-16	0.40	1.7E-16	8.8E-09	~0.76	~3.1E-04	~2.1E-16
R-M-7-AIR	09/1995	3600	672.0	0.44	1.8E-16	0.36	1.5E-16	7.7E-09	~0.89	~3.7E-04	~2.5E-16
R-M-7-AIR	10/1995	3600	510.0	0.32	1.7E-16	0.20	1.1E-16	5.7E-09	~0.84	~4.6E-04	~3.1E-16
R-M-7-AIR	11/1995	3600	607.0	0.85	3.9E-16	0.17	7.8E-17	4.0E-09	~0.62	~2.8E-04	~1.9E-16
R-M-7-AIR	12/1995	3600	816.0	1.23	4.2E-16	0.71	2.4E-16	1.2E-08	1.1	3.7E-04	2.5E-16

[a]A "<" indicates that the maximum concentration was below the detection limit (number show is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instument was calibrated.

[b]L/h = liters per hour.

[c]pCi/F = picocuries per filter.

[d]pg/mL = picograms per milliliter. The conversion of thorium-230 concentrations between microcuries and picograms assumed equilibrium and an activity of 0.0194 μCi/μg.

[e]μg/F = micrograms per filter.

[f]The conversion of uranium concentrations between microcuries per milliliter and micrograms per cubic meter assumed equilibrium and an activity of 0.666 pCi/μg.

Table A-13. Environmental Radiation Exposure Data for Monticello, First Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-16	04/26/1995	12/29/1994	04/05/1995	96

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-6	R-M-1-TLD	32.9	0.3	125
GJ-7	R-M-1-TLD[a]	31.9	0.3	121
GJ-10	R-M-2-TLD	23.0	0.2	87
GJ-33	R-M-2-TLD[a]	27.7	0.3	105
GJ-9	R-M-3-TLD	30.9	0.3	117
GJ-19	R-M-3-TLD[a]	37.0	0.4	141
GJ-1	R-M-4-TLD	27.8	0.3	106
GJ-5	R-M-4-TLD[a]	36.8	0.4	140
GJ-12	R-M-5-TLD	26.9	0.3	102
GJ-26	R-M-5-TLD[a]	29.3	0.3	111
GJ-28	R-M-6-TLD	26.5	0.3	101
GJ-37	R-M-6-TLD[a]	26.4	0.3	100
GJ-3	R-M-7-TLD	24.5	0.3	93
GJ-15	R-M-7-TLD[a]	23.0	0.2	87
GJ-11	TLD-M-02	25.5	0.3	97
GJ-16	TLD-M-02[a]	27.4	0.3	104
GJ-17	TLD-M-03	26.9	0.3	102
GJ-21	TLD-M-03[a]	28.8	0.3	110
GJ-18	TLD-M-04	33.4	0.3	127
GJ-24	TLD-M-04[a]	32.0	0.3	122
GJ-23	TLD-M-05	119.8	1.2	455
GJ-36	TLD-M-05[a]	115.4	1.2	439
GJ-34	TLD-M-06	75.8	0.8	288
GJ-40	TLD-M-06[a]	69.6	0.7	265
GJ-27	TLD-M-07	35.8	0.4	136
GJ-32	TLD-M-07[a]	39.4	0.4	150
GJ-20	TLD-M-08	31.2	0.3	119
GJ-22	TLD-M-08[a]	32.4	0.3	123
GJ-4	TLD-M-09	32.4	0.3	123
GJ-8	TLD-M-09[a]	30.7	0.3	117
GJ-14	TLD-M-10	31.7	0.3	121
GJ-38	TLD-M-10[a]	37.0	0.4	141

[a]Duplicate sample.

Table A-13 (continued). Environmental Radiation Exposure Data for Monticello, First Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-16	04/26/1995	12/29/1994	04/05/1995	96

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-25	TLD-M-11	51.5	0.5	196
GJ-35	TLD-M-11[a]	52.4	0.5	199
GJ-29	TLD-M-12	33.4	0.3	127
GJ-39	TLD-M-12[a]	37.8	0.4	144
GJ-13	TLD-M-13	26.1	0.3	99
GJ-31	TLD-M-13[a]	27.0	0.3	103

[a]Duplicate sample.

Table A-14. Environmental Radiation Exposure Data for Monticello, Second Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-17	07/28/1995	04/05/1995	07/05/1995	92

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-20	R-M-1-TLD	29.8	0.3	118
GJ-20A	R-M-1-TLD[a]	31.4	0.3	125
GJ-39	R-M-1-TLD[a]	31.4	0.3	125
GJ-39A	R-M-1-TLD[a]	32.5	0.4	129
GJ-22	R-M-2-TLD	27.0	0.3	107
GJ-22A	R-M-2-TLD[a]	28.5	0.3	113
GJ-29A	R-M-2-TLD[a]	29.4	0.3	117
GJ-29	R-M-2-TLD[a]	26.6	0.3	106
GJ-8	R-M-3-TLD	31.1	0.3	123
GJ-8A	R-M-3-TLD[a]	33.0	0.4	131
GJ-21	R-M-3-TLD[a]	33.3	0.4	132
GJ-21A	R-M-3-TLD[a]	33.4	0.4	133
GJ-11	R-M-4-TLD	26.7	0.3	106
GJ-11A	R-M-4-TLD[a]	30.9	0.3	123
GJ-34A	R-M-4-TLD[a]	34.7	0.4	138
GJ-34	R-M-4-TLD[a]	31.2	0.3	124
GJ-18	R-M-5-TLD	30.7	0.3	122
GJ-18A	R-M-5-TLD[a]	31.6	0.3	125
GJ-19	R-M-5-TLD[a]	28.5	0.3	113
GJ-19A	R-M-5-TLD[a]	30.8	0.3	122
GJ-14	R-M-6-TLD	26.8	0.3	106
GJ-14A	R-M-6-TLD[a]	29.7	0.3	118
GJ-40A	R-M-6-TLD[a]	29.6	0.3	117
GJ-40	R-M-6-TLD[a]	26.0	0.3	103
GJ-2	R-M-7-TLD	21.0	0.2	83
GJ-2A	R-M-7-TLD[a]	25.0	0.3	99
GJ-13	R-M-7-TLD[a]	22.4	0.2	89
GJ-13A	R-M-7-TLD[a]	24.6	0.3	98
GJ-10	TLD-M-02	26.8	0.3	106
GJ-10A	TLD-M-02[a]	28.7	0.3	114
GJ-38	TLD-M-02[a]	25.6	0.3	102
GJ-38A	TLD-M-02[a]	29.8	0.3	118
GJ-28	TLD-M-03	27.1	0.3	108
GJ-28A	TLD-M-03[a]	27.1	0.3	108
GJ-33	TLD-M-03[a]	29.6	0.3	117
GJ-33A	TLD-M-03[a]	29.2	0.3	116

[a]Duplicate sample.

Table A-14 (continued). Environmental Radiation Exposure Data for Monticello, Second Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-17	07/28/1995	04/05/1995	07/05/1995	92

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-7	TLD-M-05	102.3	1.1	406
GJ-7A	TLD-M-05[a]	118.4	1.3	470
GJ-27	TLD-M-05[a]	110.8	1.2	440
GJ-27A	TLD-M-05[a]	122.2	1.3	485
GJ-1	TLD-M-06	74.6	0.8	296
GJ-1A	TLD-M-06[a]	80.4	0.9	319
GJ-31	TLD-M-06[a]	79.8	0.9	317
GJ-31A	TLD-M-06[a]	81.9	0.9	325
GJ-3	TLD-M-07	36.8	0.4	146
GJ-3A	TLD-M-07[a]	38.5	0.4	153
GJ-6	TLD-M-07[a]	34.3	0.4	136
GJ-6A	TLD-M-07[a]	35.8	0.4	142
GJ-17	TLD-M-08	27.7	0.3	110
GJ-17A	TLD-M-08[a]	29.9	0.3	119
GJ-35	TLD-M-08[a]	30.0	0.3	119
GJ-35A	TLD-M-08[a]	29.9	0.3	119
GJ-23A	TLD-M-09	34.4	0.4	136
GJ-5	TLD-M-10	35.4	0.4	140
GJ-5A	TLD-M-10[a]	37.4	0.4	148
GJ-12	TLD-M-10[a]	30.5	0.3	121
GJ-12A	TLD-M-10[a]	35.7	0.4	142
GJ-9	TLD-M-11	51.8	0.6	206
GJ-9A	TLD-M-11[a]	56.4	0.6	224
GJ-15	TLD-M-11[a]	49.1	0.5	195
GJ-15A	TLD-M-11[a]	58.8	0.6	233
GJ-16	TLD-M-12	31.5	0.3	125
GJ-16A	TLD-M-12[a]	37.8	0.4	150
GJ-37	TLD-M-12[a]	33.4	0.4	133
GJ-37A	TLD-M-12[a]	38.4	0.4	152
GJ-30	TLD-M-13	22.4	0.2	89
GJ-30A	TLD-M-13[a]	31.7	0.3	126
GJ-24	TLD-M-13[a]	27.1	0.3	108
GJ-24A	TLD-M-13[a]	30.3	0.3	120

[a]Duplicate sample.

Table A-15. Environmental Radiation Exposure Data for Monticello, Third Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-18	12/12/1995	07/05/1995	10/10/1995	97

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-21	R-M-1-TLD	31.5	0.3	119
GJ-21A	R-M-1-TLD[a]	32.3	0.3	122
GJ-31	R-M-1-TLD[a]	27.9	0.3	105
GJ-31A	R-M-1-TLD[a]	30.4	0.3	114
GJ-29	R-M-2-TLD	23.6	0.2	89
GJ-29A	R-M-2-TLD[a]	27.1	0.3	102
GJ-36A	R-M-2-TLD[a]	27.4	0.3	103
GJ-36	R-M-2-TLD[a]	23.8	0.2	90
GJ-5	R-M-3-TLD	37.7	0.4	142
GJ-5A	R-M-3-TLD[a]	33.8	0.3	127
GJ-6	R-M-3-TLD[a]	35.0	0.4	132
GJ-6A	R-M-3-TLD[a]	33.8	0.3	127
GJ-16	R-M-4-TLD	26.2	0.3	99
GJ-16A	R-M-4-TLD[a]	30.0	0.3	113
GJ-20A	R-M-4-TLD[a]	30.6	0.3	115
GJ-20	R-M-4-TLD[a]	30.1	0.3	113
GJ-8	R-M-5-TLD	33.9	0.3	128
GJ-8A	R-M-5-TLD[a]	30.5	0.3	115
GJ-14	R-M-5-TLD[a]	26.1	0.3	98
GJ-14A	R-M-5-TLD[a]	29.1	0.3	110
GJ-30	R-M-6-TLD	25.1	0.3	94
GJ-30A	R-M-6-TLD[a]	27.1	0.3	102
GJ-40A	R-M-6-TLD[a]	26.0	0.3	98
GJ-40	R-M-6-TLD[a]	23.2	0.2	87
GJ-17	R-M-7-TLD	21.8	0.2	82
GJ-17A	R-M-7-TLD[a]	22.9	0.2	86
GJ-22	R-M-7-TLD[a]	24.8	0.3	93
GJ-22A	R-M-7-TLD[a]	24.9	0.3	94
GJ-15	TLD-M-02	24.1	0.2	91
GJ-15A	TLD-M-02[a]	26.8	0.3	101
GJ-25	TLD-M-02[a]	24.0	0.2	90
GJ-25A	TLD-M-02[a]	28.6	0.3	108
GJ-18	TLD-M-03	25.8	0.3	97
GJ-18A	TLD-M-03[a]	28.8	0.3	108
GJ-38	TLD-M-03[a]	28.2	0.3	106
GJ-38A	TLD-M-03[a]	30.1	0.3	113

[a]Duplicate sample.

Table A-15 (continued). Environmental Radiation Exposure Data for Monticello, Third Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-18	12/12/1995	07/05/1995	10/10/1995	97

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-4	TLD-M-04	34.3	0.4	129
GJ-4A	TLD-M-04[a]	35.5	0.4	134
GJ-10	TLD-M-04[a]	31.0	0.3	117
GJ-10A	TLD-M-04[a]	37.3	0.4	140
GJ-24	TLD-M-05	105.3	1.1	396
GJ-24A	TLD-M-05[a]	122.3	1.3	460
GJ-33	TLD-M-05[a]	102.5	1.1	386
GJ-33A	TLD-M-05[a]	112.6	1.2	424
GJ-28	TLD-M-06	151.8	1.6	571
GJ-28A	TLD-M-06[a]	164.9	1.7	621
GJ-37	TLD-M-06[a]	140.9	1.5	530
GJ-37A	TLD-M-06[a]	169.9	1.8	639
GJ-3	TLD-M-07	35.6	0.4	134
GJ-3A	TLD-M-07[a]	37.1	0.4	140
GJ-27	TLD-M-07[a]	35.7	0.4	134
GJ-27A	TLD-M-07[a]	39.8	0.4	150
GJ-2	TLD-M-08	26.7	0.3	100
GJ-2A	TLD-M-08[a]	29.7	0.3	112
GJ-9	TLD-M-08[a]	26.8	0.3	101
GJ-9A	TLD-M-08[a]	27.6	0.3	104
GJ-11	TLD-M-09	28.0	0.3	105
GJ-11A	TLD-M-09[a]	32.2	0.3	121
GJ-12	TLD-M-09[a]	27.7	0.3	104
GJ-12A	TLD-M-09[a]	32.3	0.3	122
GJ-26	TLD-M-10	33.6	0.3	126
GJ-26A	TLD-M-10[a]	39.2	0.4	148
GJ-32	TLD-M-10[a]	36.0	0.4	135
GJ-32A	TLD-M-10[a]	38.8	0.4	146
GJ-23	TLD-M-11	55.5	0.6	209
GJ-23A	TLD-M-11[a]	60.7	0.6	228
GJ-34	TLD-M-11[a]	52.0	0.5	196
GJ-34A	TLD-M-11[a]	60.6	0.6	228
GJ-19	TLD-M-12	39.5	0.4	149
GJ-19A	TLD-M-12[a]	37.1	0.4	140
GJ-39	TLD-M-12[a]	32.9	0.3	124
GJ-39A	TLD-M-12[a]	37.1	0.4	140

[a]Duplicate sample.

Table A-15 (continued). Environmental Radiation Exposure Data for Monticello, Third Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-18	12/12/1995	07/05/1995	10/10/1995	97

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-7	TLD-M-13	28.5	0.3	107
GJ-7A	TLD-M-13[a]	29.4	0.3	111
GJ-13	TLD-M-13[a]	25.1	0.3	94
GJ-13A	TLD-M-13[a]	28.7	0.3	108

[a]Duplicate sample.

Table A-16. Environmental Radiation Exposure Data for Monticello, Fourth Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-19	02/08/1995	10/10/1995	01/05/1995	85

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-14	R-M-1-TLD	32.9	0.4	141
GJ-14A	R-M-1-TLD[a]	28.8	0.3	124
GJ-19	R-M-1-TLD[a]	32.5	0.4	140
GJ-19A	R-M-1-TLD[a]	29.7	0.3	128
GJ-36	R-M-2-TLD	30.9	0.4	133
GJ-36A	R-M-2-TLD[a]	28.1	0.3	121
GJ-38A	R-M-2-TLD[a]	27.9	0.3	120
GJ-38	R-M-2-TLD[a]	27.1	0.3	116
GJ-29	R-M-3-TLD	32.2	0.4	138
GJ-29A	R-M-3-TLD[a]	30.3	0.4	130
GJ-39	R-M-3-TLD[a]	33.1	0.4	142
GJ-39A	R-M-3-TLD[a]	30.0	0.4	129
GJ-24	R-M-4-TLD	31.6	0.4	136
GJ-24A	R-M-4-TLD[a]	30.1	0.4	129
GJ-40A	R-M-4-TLD[a]	29.4	0.3	126
GJ-40	R-M-4-TLD[a]	30.8	0.4	132
GJ-10	R-M-5-TLD	32.9	0.4	141
GJ-13	R-M-5-TLD[a]	33.1	0.4	142
GJ-10A	R-M-5-TLD[a]	30.2	0.4	130
GJ-13	R-M-5-TLD[a]	28.4	0.3	122
GJ-9	R-M-6-TLD	29.9	0.4	128
GJ-9A	R-M-6-TLD[a]	27.6	0.3	119
GJ-34A	R-M-6-TLD[a]	25.9	0.3	111
GJ-34	R-M-6-TLD[a]	30.0	0.4	129
GJ-33	R-M-7-TLD	26.9	0.3	116
GJ-33A	R-M-7-TLD[a]	22.2	0.3	95
GJ-37	R-M-7-TLD[a]	24.1	0.3	103
GJ-37A	R-M-7-TLD[a]	23.0	0.3	99
GJ-11	TLD-M-02	28.1	0.3	121
GJ-11A	TLD-M-02[a]	28.1	0.3	121
GJ-16	TLD-M-02[a]	28.1	0.3	121
GJ-16A	TLD-M-02[a]	28.0	0.3	120
GJ-12	TLD-M-03	26.5	0.3	114
GJ-12A	TLD-M-03[a]	27.2	0.3	117
GJ-21	TLD-M-03[a]	32.9	0.4	141
GJ-21A	TLD-M-03[a]	26.7	0.3	115

[a]Duplicate sample.

Table A-16 (continued). Environmental Radiation Exposure Data for Monticello, Fourth Quarter 1995

Report Number	Report Date	Date Installed	Date Removed	Days Exposed
8052-19	02/08/1995	10/10/1995	01/05/1995	85

TLD ID	Field Location	Exposure for Quarter (mrem)	Daily Exposure (mrem)	Approximate Annual Exposure (mrem)
GJ-2	TLD-M-04	33.8	0.4	145
GJ-2A	TLD-M-04[a]	35.1	0.4	151
GJ-22	TLD-M-04[a]	37.7	0.4	162
GJ-22A	TLD-M-04[a]	33.2	0.4	143
GJ-23	TLD-M-06	153.3	1.8	658
GJ-23A	TLD-M-06[a]	156.3	1.8	671
GJ-25	TLD-M-06[a]	147.0	1.7	631
GJ-25A	TLD-M-06[a]	150.3	1.8	645
GJ-4	TLD-M-07	40.7	0.5	175
GJ-4A	TLD-M-07[a]	36.8	0.4	158
GJ-31	TLD-M-07[a]	38.8	0.5	167
GJ-31A	TLD-M-07[a]	32.6	0.4	140
GJ-6	TLD-M-08	32.5	0.4	140
GJ-6A	TLD-M-08[a]	26.0	0.3	112
GJ-27	TLD-M-08[a]	28.6	0.3	123
GJ-27A	TLD-M-08[a]	26.7	0.3	115
GJ-1	TLD-M-09	35.9	0.4	154
GJ-1A	TLD-M-09[a]	30.6	0.4	131
GJ-26	TLD-M-09[a]	35.2	0.4	151
GJ-26A	TLD-M-09[a]	30.8	0.4	132
GJ-28	TLD-M-10	36.0	0.4	155
GJ-28A	TLD-M-10[a]	30.4	0.4	131
GJ-32	TLD-M-10[a]	37.3	0.4	160
GJ-32A	TLD-M-10[a]	33.3	0.4	143
GJ-7	TLD-M-11	62.4	0.7	268
GJ-7A	TLD-M-11[a]	58.3	0.7	250
GJ-20	TLD-M-11[a]	60.5	0.7	260
GJ-20A	TLD-M-11[a]	55.7	0.7	239
GJ-15	TLD-M-12	36.2	0.4	155
GJ-15A	TLD-M-12[a]	33.9	0.4	146
GJ-30	TLD-M-12[a]	40.5	0.5	174
GJ-30A	TLD-M-12[a]	35.0	0.4	150
GJ-8	TLD-M-13	31.0	0.4	133
GJ-8A	TLD-M-13[a]	28.1	0.3	121
GJ-18	TLD-M-13[a]	32.3	0.4	139
GJ-18A	TLD-M-13[a]	27.9	0.3	120

[a]Duplicate sample.

Table A-17. Surface-Water ChemistryData Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Ag (µg/L)	Ag[b] (µg/L)	Al (µg/L)	Al[b] (µg/L)	Alkalinity (as $CaCO_3$) (ppm)	Alpha (pCi/L)[c]	As (µg/L)	As[b] (µg/L)	B (µg/L)
Cabin Spring	NBD-400,NBD-850	10/17/1995	No Data	No Data	8930	<12.0	91	<20	~1.7	<1.0	<6.7
Montezuma Canyon	NBD-740,NBD-290	04/19/1995	<1.0	<1.0	~81.3	<11.0	260	62	<1.0	~2.8	~59.9
	NBD-389,NBD-839	10/04/1995	No Data	No Data	3320	<12.0	243	<30	~5.9	~7.6	223
Pehrson 2	NBD-739,NBD-289	04/19/1995	26.6	<1.0	581	<11.0	595	<27	<1.0	~3.7	~69.3
SW92-01	NBD-726,NBD-276	04/17/1995	<1.0	<1.0	~78.7	<11.0	141	<17.4	<1.0	~1.5	~10.3
	NBD-377,NBD-827	10/02/1995	No Data	No Data	~65.7	<12.0	235	<59	<1.1	<1.0	~51.3
SW92-02	NBD-727,NBD-277	04/17/1995	<1.0	<1.0	~191	<11.0	178	<17.2	<1.0	<1.0	<8.0
	NBD-378,NBD-828	10/02/1995	No Data	No Data	~214	<12.0	206	<16.4	<1.1	~1.3	~49.8
SW92-03	NBD-728,NBD-278	04/17/1995	<1.0	<1.0	~171	<11.0	170	<17.6	<1.0	<1.0	<8.0
	NBD-379,NBD-829	10/03/1995	No Data	No Data	~92.4	<12.0	201	<51	<1.1	<1.0	~56.3
	NBD-380,NBD-830	10/03/1995	No Data	No Data	~81.7	<12.0	No Data	<51	<1.1	<1.0	~52.5
SW92-04	NBD-731,NBD-281	04/18/1995	<1.0	<1.0	~88.1	<11.0	209	<24	<1.0	<1.0	~19.8
	NBD-390,NBD-840	10/05/1995	No Data	No Data	474	<12.0	207	<60	<1.1	~1.0	~55.8
SW92-05	NBD-729,NBD-279	04/18/1995	20.9	<1.0	~71.8	<11.0	214	29.1	<1.0	<1.0	~20.3
	NBD-391,NBD-841	10/05/1995	No Data	No Data	635	<12.0	199	<60	<1.1	<1.0	~57.9
	NBD-392,NBD-842	10/05/1995	No Data	No Data	365	<12.0	No Data	<60	<1.1	<1.0	~58.6
SW92-06	NBD-735,NBD-285	04/19/1995	<1.0	<1.0	440	<11.0	224	92	<1.0	<1.0	~34.7
	NBD-382,NBD-832	10/03/1995	No Data	No Data	688	<12.0	296	71	~1.3	~1.7	~61.8
SW92-07	NBD-738,NBD-288	04/19/1995	~1.0	<1.0	277	<11.0	232	89	<1.0	~1.5	~44.1
	NBD-384,NBD-834	10/03/1995	No Data	No Data	1270	<12.0	261	<35	~3.7	~4.5	257
SW92-08	NBD-741,NBD-291	04/20/1995	<1.0	<1.0	209	<11.0	237	96	<1.0	~1.6	~38.8
	NBD-388,NBD-838	10/04/1995	No Data	No Data	1350	<12.0	267	<40	~4.2	~5.2	240
SW92-09	NBD-742,NBD-292	04/20/1995	<1.0	<1.0	~70.1	<11.0	216	100	<1.0	~1.6	~42.0
	NBD-387,NBD-837	10/04/1995	No Data	No Data	1280	<12.0	289	<40	~4.1	~5.0	243
SW94-01	NBD-385,NBD-835	10/04/1995	No Data	No Data	1410	<12.0	No Data	40	~4.3	~5.2	248
Slade Spring	NBD-730,NBD-280	04/18/1995	75.6	<1.0	~31.9	<11.0	260	<25	<1.0	<1.0	~33.7
	NBD-393,NBD-843	10/05/1995	No Data	No Data	630	<12.0	329	<60	<1.1	<1.0	~60.9
Sorenson	NBD-736,NBD-286	04/19/1995	<1.0	<1.0	~89.7	<11.0	270	126	<1.0	<1.0	~42.3
	NBD-737,NBD-287	04/19/1995	<1.0	<1.0	~111	<11.0	270	121	<1.0	<1.0	~39.4
	NBD-383,NBD-833	10/03/1995	No Data	No Data	~142	<12.0	260	108	~1.4	~1.7	~73.8
W-4	NBD-732,NBD-282	04/18/1995	<1.0	<1.0	~130	<11.0	248	55	<1.0	~1.3	~28.5
	NBD-733,NBD-283	04/18/1995	<1.0	<1.0	~103	<11.0	248	62	<1.0	~1.2	~27.6
	NBD-381,NBD-831	10/03/1995	No Data	No Data	~60.9	<12.0	230	<53	~1.2	~1.6	~58.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.
[c]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.

Table A-17 (continued). Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	B[b] (µg/L)	Ba (µg/L)	Ba[b] (µg/L)	Beta (pCi/L)[c]	Ca (µg/L)	Ca[b] (µg/L)	Cd (µg/L)	Cd[b] (µg/L)	CDT[d] (µmhos/cm)
Cabin Spring	NBD-400,NBD-850	10/17/1995	~21.7	No Data	No Data	<13	110000	104000	No Data	No Data	950
Montezuma Canyon	NBD-740,NBD-290	04/19/1995	~57.3	~52.4	~54.9	34.5	172000	173000	<1.0	<1.0	1440
	NBD-389,NBD-839	10/04/1995	198	No Data	No Data	<20	159000	159000	No Data	No Data	1435
Pehrson 2	NBD-739,NBD-289	04/19/1995	~74.1	~72.7	~74.4	<13.8	133000	132000	<1.0	<1.0	1322
SW92-01	NBD-726,NBD-276	04/17/1995	~12.8	~26.5	~34.7	<14.6	137000	141000	<1.0	<1.0	758
	NBD-377,NBD-827	10/02/1995	~45.3	No Data	No Data	<42	380000	385000	No Data	No Data	1926
SW92-02	NBD-727,NBD-277	04/17/1995	~10.6	~85.8	~97.2	<14.6	94700	104000	<1.0	<1.0	673
	NBD-378,NBD-828	10/02/1995	~24.7	No Data	No Data	<10.5	72200	72500	No Data	No Data	513
SW92-03	NBD-728,NBD-278	04/17/1995	~14.5	~54.1	~56.8	<14.6	104000	108000	<1.0	<1.0	692
	NBD-379,NBD-829	10/03/1995	~40.3	No Data	No Data	<35	340000	342000	No Data	No Data	1880
	NBD-380,NBD-830	10/03/1995	~41.4	No Data	No Data	<35	341000	341000	No Data	No Data	No Data
SW92-04	NBD-731,NBD-281	04/18/1995	~28.4	~61.4	~67.9	<14.7	213000	220000	<1.0	<1.0	1258
	NBD-390,NBD-840	10/05/1995	~43.2	No Data	No Data	<30	350000	347000	No Data	No Data	1879
SW92-05	NBD-729,NBD-279	04/18/1995	~30.9	~59.8	~65.9	<18.3	218000	219000	<1.0	<1.0	1256
	NBD-391,NBD-841	10/05/1995	~46.3	No Data	No Data	<30	351000	347000	No Data	No Data	1981
	NBD-392,NBD-842	10/05/1995	~47.2	No Data	No Data	<30	346000	349000	No Data	No Data	No Data
SW92-06	NBD-735,NBD-285	04/19/1995	~36.3	~63.8	~66.3	18.6	218000	228000	<1.0	<1.0	1349
	NBD-382,NBD-832	10/03/1995	~54.3	No Data	No Data	<35	340000	337000	No Data	No Data	2040
SW92-07	NBD-738,NBD-288	04/19/1995	~47.3	~60.1	~61.2	28.7	214000	217000	<1.0	<1.0	1400
	NBD-384,NBD-834	10/03/1995	237	No Data	No Data	<21	153000	152000	No Data	No Data	1407
SW92-08	NBD-741,NBD-291	04/20/1995	~52.7	~61.3	~65.1	31.8	213000	214000	<1.0	<1.0	1457
	NBD-388,NBD-838	10/04/1995	218	No Data	No Data	<20	157000	158000	No Data	No Data	1427
SW92-09	NBD-742,NBD-292	04/20/1995	~47.3	~54.9	~61.4	33.0	201000	211000	<1.0	<1.0	1473
	NBD-387,NBD-837	10/04/1995	220	No Data	No Data	21	159000	158000	No Data	No Data	1384
SW94-01	NBD-385,NBD-835	10/04/1995	217	No Data	No Data	<20	159000	158000	No Data	No Data	1424
Slade Spring	NBD-730,NBD-280	04/18/1995	~39.4	~28.6	~31.5	<14.8	213000	215000	<1.0	<1.0	1243
	NBD-393,NBD-843	10/05/1995	~49.8	No Data	No Data	<30	358000	358000	No Data	No Data	1958
Sorenson	NBD-736,NBD-286	04/19/1995	~44.3	~53.7	~62.8	26.7	216000	235000	<1.0	<1.0	1528
	NBD-737,NBD-287	04/19/1995	~39.8	~54.2	~60.3	30.7	225000	228000	<1.0	<1.0	1528
	NBD-383,NBD-833	10/03/1995	~64.3	No Data	No Data	<35	332000	325000	No Data	No Data	2040
W-4	NBD-732,NBD-282	04/18/1995	~32.6	~62.2	~64.1	<14.8	218000	221000	<1.0	<1.0	1298
	NBD-733,NBD-283	04/18/1995	~37.3	~57.4	~63.6	<14.8	207000	221000	<1.0	<1.0	1298
	NBD-381,NBD-831	10/03/1995	~48.9	No Data	No Data	<35	349000	348000	No Data	No Data	1957

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.
[c]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[d]Conductivity in micromhos per centimeter.

Table A-17 (continued). Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Cl (µg/L)	Co (µg/L)	Co[b] (µg/L)	Cr (µg/L)	Cr[b] (µg/L)	Cu (µg/L)	Cu[b] (µg/L)	F (µg/L)	Fe (µg/L)
Cabin Spring	NBD-400,NBD-850	10/17/1995	84000	<6.7	<6.0	No Data	No Data	<4.4	<4.0	454	No Data
Montezuma Canyon	NBD-740,NBD-290	04/19/1995	64800	<8.0	<8.0	~5.1	<4.0	~3.3	<3.0	~84.6	319
	NBD-389,NBD-839	10/04/1995	89700	<6.7	<6.0	No Data	No Data	<4.4	<4.0	242	No Data
Pehrson 2	NBD-739,NBD-289	04/19/1995	52600	<8.0	<8.0	<4.0	<4.0	~15.3	<3.0	242	533
SW92-01	NBD-726,NBD-276	04/17/1995	2530	<8.0	<8.0	<4.0	<4.0	<3.0	<3.0	~84.4	214
	NBD-377,NBD-827	10/02/1995	7270	<6.7	<6.0	No Data	No Data	<4.4	<4.0	289	No Data
SW92-02	NBD-727,NBD-277	04/17/1995	10700	<8.0	<8.0	<4.0	<4.0	~3.0	<3.0	~91.6	268
	NBD-378,NBD-828	10/02/1995	5240	<6.7	<6.0	No Data	No Data	<4.4	<4.0	~182	No Data
SW92-03	NBD-728,NBD-278	04/17/1995	7100	<8.0	<8.0	<4.0	<4.0	<3.0	~5.6	~84.9	230
	NBD-379,NBD-829	10/03/1995	7760	<6.7	<6.0	No Data	No Data	<4.4	<4.0	202	No Data
	NBD-380,NBD-830	10/03/1995	7740	<6.7	<6.0	No Data	No Data	<4.4	<4.0	201	No Data
SW92-04	NBD-731,NBD-281	04/18/1995	12300	<8.0	<8.0	<4.0	<4.0	<3.0	~4.4	~76.3	182
	NBD-390,NBD-840	10/05/1995	9880	<6.7	<6.0	No Data	No Data	<4.4	<4.0	~197	No Data
SW92-05	NBD-729,NBD-279	04/18/1995	12400	<8.0	<8.0	<4.0	<4.0	<3.0	<3.0	~102	130
	NBD-391,NBD-841	10/05/1995	10000	<6.7	<6.0	No Data	No Data	<4.4	<4.0	~156	No Data
	NBD-392,NBD-842	10/05/1995	9980	<6.7	<6.0	No Data	No Data	<4.4	<4.0	~138	No Data
SW92-06	NBD-735,NBD-285	04/19/1995	24100	<8.0	<8.0	<4.0	<4.0	<3.0	~3.9	~73.1	526
	NBD-382,NBD-832	10/03/1995	22000	<6.7	<6.0	No Data	No Data	<4.4	<4.0	201	No Data
SW92-07	NBD-738,NBD-288	04/19/1995	36600	<8.0	<8.0	<4.0	<4.0	~6.3	<3.0	~83.3	438
	NBD-384,NBD-834	10/03/1995	90500	<6.7	<6.0	No Data	No Data	<4.4	<4.0	218	No Data
SW92-08	NBD-741,NBD-291	04/20/1995	37600	<8.0	<8.0	<4.0	<4.0	<3.0	<3.0	~75.5	335
	NBD-388,NBD-838	10/04/1995	89200	<6.7	<6.0	No Data	No Data	<4.4	<4.0	243	No Data
SW92-09	NBD-742,NBD-292	04/20/1995	39200	<8.0	<8.0	<4.0	<4.0	51.5	<3.0	~99.6	192
	NBD-387,NBD-837	10/04/1995	89100	<6.7	<6.0	No Data	No Data	<4.4	<4.0	232	No Data
SW94-01	NBD-385,NBD-835	10/04/1995	88300	<6.7	<6.0	No Data	No Data	<4.4	<4.0	~199	No Data
Slade Spring	NBD-730,NBD-280	04/18/1995	19000	<8.0	<8.0	<4.0	<4.0	<3.0	<3.0	~77.5	~72.2
	NBD-393,NBD-843	10/05/1995	10300	<6.7	<6.0	No Data	No Data	<4.4	<4.0	~135	No Data
Sorenson	NBD-736,NBD-286	04/19/1995	35000	<8.0	<8.0	<4.0	<4.0	<3.0	<3.0	~66.8	249
	NBD-737,NBD-287	04/19/1995	35000	<8.0	<8.0	<4.0	<4.0	<3.0	<3.0	~72.3	269
	NBD-383,NBD-833	10/03/1995	35400	<6.7	<6.0	No Data	No Data	<4.4	<4.0	224	No Data
W-4	NBD-732,NBD-282	04/18/1995	18600	<8.0	<8.0	<4.0	<4.0	<3.0	~3.8	~91.8	207
	NBD-733,NBD-283	04/18/1995	18300	<8.0	<8.0	<4.0	<4.0	<3.0	~3.9	~75.0	147
	NBD-381,NBD-831	10/03/1995	13500	<6.7	<6.0	No Data	No Data	<4.4	<4.0	~197	No Data

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.

Table A-17 (continued). Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Fe[b] (µg/L)	K (µg/L)	K[b] (µg/L)	Mg (µg/L)	Mg[b] (µg/L)	Mn (µg/L)	Mn[b] (µg/L)	Mo (µg/L)	Mo[b] (µg/L)
Cabin Spring	NBD-400,NBD-850	10/17/1995	No Data	5820	~2690	22100	19900	140	<1.0	<15.6	<14.0
Montezuma Canyon	NBD-740,NBD-290	04/19/1995	~9.1	~4240	~3280	43300	43900	213	205	~11.4	~10.6
	NBD-389,NBD-839	10/04/1995	No Data	9200	8540	36800	34600	166	117	<15.6	~23.4
Pehrson 2	NBD-739,NBD-289	04/19/1995	~18.3	~1550	<1050	38000	38200	43.1	26.3	~1.1	~1.2
SW92-01	NBD-726,NBD-276	04/17/1995	<5.0	~1560	<1050	16000	16400	45.6	42.2	~2.1	~2.0
	NBD-377,NBD-827	10/02/1995	No Data	~3520	~3160	52200	50900	191	181	<15.6	<14.0
SW92-02	NBD-727,NBD-277	04/17/1995	~6.6	<1050	<1050	14300	15700	34.1	20.7	~1.7	~2.1
	NBD-378,NBD-828	10/02/1995	No Data	<1470	<1320	11700	11400	~10.5	~2.0	<15.6	<14.0
SW92-03	NBD-728,NBD-278	04/17/1995	<5.0	<1050	<1050	14100	14800	22.4	~12.8	~1.7	~1.9
	NBD-379,NBD-829	10/03/1995	No Data	~3130	~2710	49600	47900	~13.1	~11.9	<15.6	~15.9
	NBD-380,NBD-830	10/03/1995	No Data	~3680	~2880	49600	48100	~11.8	~11.9	<15.6	<14.0
SW92-04	NBD-731,NBD-281	04/18/1995	~17.2	~1560	~1330	31800	33500	147	148	~2.1	~2.3
	NBD-390,NBD-840	10/05/1995	No Data	~3870	~2910	55700	52300	137	134	<15.6	<14.0
SW92-05	NBD-729,NBD-279	04/18/1995	<5.0	~2100	<1050	33300	33400	144	143	~3.0	~3.2
	NBD-391,NBD-841	10/05/1995	No Data	~3650	~2900	56500	52900	128	121	<15.6	~16.3
	NBD-392,NBD-842	10/05/1995	No Data	~3560	~3090	55900	52700	122	120	<15.6	<14.0
SW92-06	NBD-735,NBD-285	04/19/1995	<5.0	~2700	~2010	35600	37600	223	225	~11.1	~11.8
	NBD-382,NBD-832	10/03/1995	No Data	~3900	~4040	56700	54400	164	142	<15.6	<14.0
SW92-07	NBD-738,NBD-288	04/19/1995	<5.0	~3730	~3150	40700	41900	246	226	~14.1	~14.8
	NBD-384,NBD-834	10/03/1995	No Data	9910	9310	32900	31400	390	387	<15.6	<14.0
SW92-08	NBD-741,NBD-291	04/20/1995	~7.1	~3990	~2540	40900	41300	350	333	~13.8	~13.7
	NBD-388,NBD-838	10/04/1995	No Data	9100	8970	34300	32500	232	199	<15.6	~15.4
SW92-09	NBD-742,NBD-292	04/20/1995	~9.1	~3400	~3240	39200	41600	274	281	~13.3	~14.9
	NBD-387,NBD-837	10/04/1995	No Data	9510	8570	34400	32200	207	180	<15.6	~22.5
SW94-01	NBD-385,NBD-835	10/04/1995	No Data	10400	8620	34900	32300	190	157	<15.6	~21.5
Slade Spring	NBD-730,NBD-280	04/18/1995	~23.9	~2330	~2400	34100	34300	23.7	23.8	~2.6	~2.7
	NBD-393,NBD-843	10/05/1995	No Data	~2850	~3000	59100	55700	26.2	18.7	<15.6	<14.0
Sorenson	NBD-736,NBD-286	04/19/1995	~13.4	~3120	~2070	38600	42000	234	249	~13.9	~15.3
	NBD-737,NBD-287	04/19/1995	~16.0	~3370	~2550	40600	41600	242	237	~14.4	~15.4
	NBD-383,NBD-833	10/03/1995	No Data	~4990	~4920	60800	57500	191	183	<15.6	~23.4
W-4	NBD-732,NBD-282	04/18/1995	<5.0	~2720	~1860	34800	35500	147	143	~9.8	~10.7
	NBD-733,NBD-283	04/18/1995	<5.0	~2410	~1750	33300	35400	140	141	~9.3	~10.1
	NBD-381,NBD-831	10/03/1995	No Data	~3560	~3840	54600	53000	135	131	<15.6	<14.0

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.

Table A-17 (continued). Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Na (µg/L)	Na[b] (µg/L)	NH_4 (µg/L)	Ni (µg/L)	Ni[b] (µg/L)	NO_3+NO_2-N[c] (µg/L)	Pb (µg/L)	Pb[b] (µg/L)	Pb-210 (pCi/L)[d]
Cabin Spring	NBD-400,NBD-850	10/17/1995	63100	63600	~18.1	No Data	No Data	1060	No Data	No Data	<1.43
Montezuma Canyon	NBD-740,NBD-290	04/19/1995	109000	107000	33.8	<9.0	<9.0	~15.2	<1.0	~1.1	<2
	NBD-389,NBD-839	10/04/1995	109000	102000	834	No Data	No Data	1200	No Data	No Data	<2
Pehrson 2	NBD-739,NBD-289	04/19/1995	153000	151000	42.1	<9.0	<9.0	~14.3	<1.0	<1.0	10.9
SW92-01	NBD-726,NBD-276	04/17/1995	10400	10200	111	<9.0	<9.0	~28.0	<1.0	<1.0	<2
	NBD-377,NBD-827	10/02/1995	28300	26900	29.3	No Data	No Data	~323	No Data	No Data	<2
SW92-02	NBD-727,NBD-277	04/17/1995	24100	25300	58.6	<9.0	<9.0	~28.3	<1.0	<1.0	<2
	NBD-378,NBD-828	10/02/1995	21400	20500	~13.8	No Data	No Data	~15.3	No Data	No Data	<2
SW92-03	NBD-728,NBD-278	04/17/1995	17600	17900	33.8	<9.0	<9.0	~15.4	<1.0	<1.0	<2
	NBD-379,NBD-829	10/03/1995	29900	28600	~19.0	No Data	No Data	~266	No Data	No Data	<2
	NBD-380,NBD-830	10/03/1995	30000	28700	52.5	No Data	No Data	~272	No Data	No Data	<2
SW92-04	NBD-731,NBD-281	04/18/1995	32600	32600	72.4	<9.0	<9.0	~168	<1.0	<1.0	<2
	NBD-390,NBD-840	10/05/1995	38200	35900	26.7	No Data	No Data	~478	No Data	No Data	<2
SW92-05	NBD-729,NBD-279	04/18/1995	35500	34500	61.4	<9.0	<9.0	837	<1.0	<1.0	<2
	NBD-391,NBD-841	10/05/1995	39100	36400	31.9	No Data	No Data	~443	No Data	No Data	<2
	NBD-392,NBD-842	10/05/1995	38800	36300	31.9	No Data	No Data	~439	No Data	No Data	<2
SW92-06	NBD-735,NBD-285	04/19/1995	53400	54700	69.6	<9.0	<9.0	569	<1.0	<1.0	<2
	NBD-382,NBD-832	10/03/1995	57900	54800	26.7	No Data	No Data	~293	No Data	No Data	<2
SW92-07	NBD-738,NBD-288	04/19/1995	74300	74200	33.8	<9.0	<9.0	~263	<1.0	<1.0	<2
	NBD-384,NBD-834	10/03/1995	100000	94200	3680	No Data	No Data	~290	No Data	No Data	<2.26
SW92-08	NBD-741,NBD-291	04/20/1995	76600	74900	44.8	<9.0	<9.0	~108	<1.0	<1.0	<2
	NBD-388,NBD-838	10/04/1995	100000	94200	2430	No Data	No Data	1280	No Data	No Data	<2
SW92-09	NBD-742,NBD-292	04/20/1995	75500	77500	31.0	<9.0	<9.0	~36.5	3.6	<1.0	2.1
	NBD-387,NBD-837	10/04/1995	101000	94200	2350	No Data	No Data	1300	No Data	No Data	<2
SW94-01	NBD-385,NBD-835	10/04/1995	102000	94400	2260	No Data	No Data	1350	No Data	No Data	<2
Slade Spring	NBD-730,NBD-280	04/18/1995	34700	33900	31.0	<9.0	<9.0	548	~1.2	<1.0	<2
	NBD-393,NBD-843	10/05/1995	44100	40800	29.3	No Data	No Data	1110	No Data	No Data	<2
Sorenson	NBD-736,NBD-286	04/19/1995	66600	70600	64.1	<9.0	<9.0	~405	<1.0	<1.0	2.8
	NBD-737,NBD-287	04/19/1995	70000	70600	42.1	<9.0	<9.0	~399	<1.0	<1.0	<2
	NBD-383,NBD-833	10/03/1995	83200	78100	24.1	No Data	No Data	~366	No Data	No Data	<2
W-4	NBD-732,NBD-282	04/18/1995	47200	47200	53.1	<9.0	<9.0	550	<1.0	<1.0	<2
	NBD-733,NBD-283	04/18/1995	45100	46900	50.3	<9.0	<9.0	538	<1.0	<1.0	<2
	NBD-381,NBD-831	10/03/1995	44800	42400	52.5	No Data	No Data	~436	No Data	No Data	<2

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.
[c](Nitrate + nitrite) as nitrogen. The samples were acidified in the field, thus the nitrite was oxidized to nitrate.
[d]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.

Table A-17 (continued). Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	pH	Po-210 (pCi/L)[b]	Ra-226 (pCi/L)[b]	Ra-228 (pCi/L)[b]	Rn-222 (pCi/L)[b]	Sb (µg/L)	Sb[c] (µg/L)	Se (µg/L)	Se[c] (µg/L)
Cabin Spring	NBD-400,NBD-850	10/17/1995	7.69	No Data	1.34	No Data	<26	<35.6	<32.0	~4.6	6.1
Montezuma Canyon	NBD-740,NBD-290	04/19/1995	8.61	<0.5	<0.5	<4.3	<53	No Data	No Data	~2.4	~1.0
	NBD-389,NBD-839	10/04/1995	No Data	No Data	<0.5	No Data	<45	<35.6	<32.0	~1.3	<1.0
Pehrson 2	NBD-739,NBD-289	04/19/1995	7.74	<0.5	0.94	<4.0	713	No Data	No Data	~1.3	<1.0
SW92-01	NBD-726,NBD-276	04/17/1995	8.33	<0.5	<0.5	<2.9	<38	No Data	No Data	<1.0	<1.0
	NBD-377,NBD-827	10/02/1995	7.83	No Data	<0.5	No Data	<37	<35.6	<32.0	~1.5	<1.0
SW92-02	NBD-727,NBD-277	04/17/1995	8.11	<0.5	<0.5	<3.0	56	No Data	No Data	~1.0	<1.0
	NBD-378,NBD-828	10/02/1995	8.26	No Data	<0.5	No Data	<36	<35.6	<32.0	~1.4	<1.0
SW92-03	NBD-728,NBD-278	04/17/1995	8.42	<0.5	<0.5	<4.0	<38	No Data	No Data	<1.0	~1.1
	NBD-379,NBD-829	10/03/1995	7.81	No Data	<0.5	No Data	<33	<35.6	<32.0	<1.1	<1.0
	NBD-380,NBD-830	10/03/1995	No Data	No Data	<0.5	No Data	<33	<35.6	<32.0	~1.8	<1.0
SW92-04	NBD-731,NBD-281	04/18/1995	8.01	<0.5	<0.5	<2.8	295	No Data	No Data	~1.1	~1.3
	NBD-390,NBD-840	10/05/1995	7.77	No Data	<0.5	No Data	209	<35.6	<32.0	~2.2	<1.0
SW92-05	NBD-729,NBD-279	04/18/1995	8.20	<0.5	<0.5	<3.3	179	No Data	No Data	~1.4	~1.3
	NBD-391,NBD-841	10/05/1995	8.30	No Data	<0.5	No Data	107	<35.6	<32.0	~1.7	<1.0
	NBD-392,NBD-842	10/05/1995	No Data	No Data	<0.5	No Data	75	<35.6	<32.0	~1.7	<1.0
SW92-06	NBD-735,NBD-285	04/19/1995	8.57	<0.5	<0.5	<3.3	61	No Data	No Data	~2.2	~2.0
	NBD-382,NBD-832	10/03/1995	8.05	No Data	0.55	No Data	<32	<35.6	<32.0	~1.9	<1.0
SW92-07	NBD-738,NBD-288	04/19/1995	7.80	<0.5	0.88	<4.5	184	No Data	No Data	~2.2	~2.6
	NBD-384,NBD-834	10/03/1995	7.79	No Data	<0.5	No Data	60	<35.6	<32.0	~1.7	<1.0
SW92-08	NBD-741,NBD-291	04/20/1995	8.16	<0.5	0.63	<4.2	88	No Data	No Data	~2.1	~2.0
	NBD-388,NBD-838	10/04/1995	9.05	No Data	<0.5	No Data	<55	<35.6	<32.0	~1.2	<1.0
SW92-09	NBD-742,NBD-292	04/20/1995	8.11	<0.5	0.91	<3.6	134	No Data	No Data	~2.0	~2.5
	NBD-387,NBD-837	10/04/1995	8.21	No Data	0.55	No Data	<55	<35.6	<32.0	~1.9	<1.0
SW94-01	NBD-385,NBD-835	10/04/1995	8.06	No Data	<0.5	No Data	<55	<35.6	<32.0	~1.2	<1.0
Slade Spring	NBD-730,NBD-280	04/18/1995	6.94	<0.5	<0.5	<3.7	1235	No Data	No Data	~1.4	<1.0
	NBD-393,NBD-843	10/05/1995	6.90	No Data	0.54	No Data	1288	<35.6	<32.0	~2.0	~2.3
Sorenson	NBD-736,NBD-286	04/19/1995	8.41	<0.5	0.60	<2.7	145	No Data	No Data	~2.4	~2.4
	NBD-737,NBD-287	04/19/1995	8.41	<0.5	0.73	<3.5	160	No Data	No Data	~2.6	~2.5
	NBD-383,NBD-833	10/03/1995	7.86	No Data	0.84	No Data	136	<35.6	<32.0	~2.3	~1.4
W-4	NBD-732,NBD-282	04/18/1995	8.36	<0.5	<0.5	<2.5	67	No Data	No Data	~2.4	~1.3
	NBD-733,NBD-283	04/18/1995	8.36	<0.5	<0.5	<3.6	80	No Data	No Data	~1.8	~1.6
	NBD-381,NBD-831	10/03/1995	8.05	No Data	<0.5	No Data	33	<35.6	<32.0	~1.9	<1.0

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[c]Sample was filtered in the field.

Table A-17 (continued). Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Sn (µg/L)	Sn[b] (µg/L)	SO_4 (µg/L)	TDS[c] (mg/L)	Temperature (degrees C)	Th-230 (pCi/L)[d]	Th-232 (pCi/L)[d]	Tl (µg/L)	Tl[b] (µg/L)
Cabin Spring	NBD-400,NBD-850	10/17/1995	<1.1	<1.0	240000	605	7.2	<0.76	No Data	No Data	No Data
Montezuma Canyon	NBD-740,NBD-290	04/19/1995	<1.0	<1.0	495000	1140	12.3	<0.3	<0.3	<1.0	<1.0
	NBD-389,NBD-839	10/04/1995	<1.1	<1.0	357000	998	12.7	<0.76	No Data	No Data	No Data
Pehrson 2	NBD-739,NBD-289	04/19/1995	<1.0	<1.0	132000	1020	11.3	<0.3	<0.3	<1.0	<1.0
SW92-01	NBD-726,NBD-276	04/17/1995	<1.0	<1.0	282000	580	8.8	0.30	<0.3	<1.0	<1.0
	NBD-377,NBD-827	10/02/1995	<1.1	<1.0	958000	1710	12.9	<0.76	No Data	No Data	No Data
SW92-02	NBD-727,NBD-277	04/17/1995	<1.0	<1.0	157000	~482	7.6	<0.3	<0.3	<1.0	<1.0
	NBD-378,NBD-828	10/02/1995	<1.1	<1.0	73200	318	9.5	<0.76	No Data	No Data	No Data
SW92-03	NBD-728,NBD-278	04/17/1995	<1.0	<1.0	199000	506	8.1	<0.3	<0.3	<1.0	<1.0
	NBD-379,NBD-829	10/03/1995	<1.1	<1.0	872000	1560	5.8	<0.76	No Data	No Data	No Data
	NBD-380,NBD-830	10/03/1995	<1.1	<1.0	872000	1540	No Data	<0.76	No Data	No Data	No Data
SW92-04	NBD-731,NBD-281	04/18/1995	<1.0	<1.0	473000	1010	4.7	<0.3	<0.3	<1.0	<1.0
	NBD-390,NBD-840	10/05/1995	<1.1	<1.0	904000	1600	11.0	<0.76	No Data	No Data	No Data
SW92-05	NBD-729,NBD-279	04/18/1995	<1.0	<1.0	480000	1010	5.7	<0.3	<0.3	<1.0	<1.0
	NBD-391,NBD-841	10/05/1995	<1.1	<1.0	908000	1620	10.8	<0.76	No Data	No Data	No Data
	NBD-392,NBD-842	10/05/1995	<1.1	<1.0	912000	1650	No Data	<0.76	No Data	No Data	No Data
SW92-06	NBD-735,NBD-285	04/19/1995	<1.0	<1.0	522000	1130	4.9	<0.3	<0.3	<1.0	<1.0
	NBD-382,NBD-832	10/03/1995	<1.1	<1.0	906000	1620	14.2	<0.76	No Data	No Data	No Data
SW92-07	NBD-738,NBD-288	04/19/1995	<1.0	<1.0	553000	1180	12.8	<0.3	<0.3	<1.0	<1.0
	NBD-384,NBD-834	10/03/1995	<1.1	<1.0	327000	935	14.6	<0.76	No Data	No Data	No Data
SW92-08	NBD-741,NBD-291	04/20/1995	<1.0	<1.0	542000	1180	5.8	<0.3	<0.3	<1.0	<1.0
	NBD-388,NBD-838	10/04/1995	<1.1	<1.0	349000	968	9.7	<0.76	No Data	No Data	No Data
SW92-09	NBD-742,NBD-292	04/20/1995	<1.0	<1.0	545000	1190	5.8	<0.3	<0.3	<1.0	<1.0
	NBD-387,NBD-837	10/04/1995	<1.1	<1.0	344000	960	9.8	<0.76	No Data	No Data	No Data
SW94-01	NBD-385,NBD-835	10/04/1995	<1.1	<1.0	344000	975	9.2	<0.76	No Data	No Data	No Data
Slade Spring	NBD-730,NBD-280	04/18/1995	<1.0	<1.0	427000	980	6.9	0.31	<0.3	<1.0	<1.0
	NBD-393,NBD-843	10/05/1995	<1.1	<1.0	916000	1690	11.3	<0.76	No Data	No Data	No Data
Sorenson	NBD-736,NBD-286	04/19/1995	<1.0	<1.0	567000	1220	5.5	<0.3	<0.3	<1.0	<1.0
	NBD-737,NBD-287	04/19/1995	<1.0	<1.0	563000	1200	5.5	<0.3	<0.3	<1.0	<1.0
	NBD-383,NBD-833	10/03/1995	<1.1	<1.0	895000	1700	13.0	<0.76	No Data	No Data	No Data
W-4	NBD-732,NBD-282	04/18/1995	<1.0	<1.0	504000	1070	10.3	<0.3	<0.3	<1.0	<1.0
	NBD-733,NBD-283	04/18/1995	<1.0	<1.0	503000	1070	10.3	<0.3	<0.3	<1.0	<1.0
	NBD-381,NBD-831	10/03/1995	<1.1	<1.0	901000	1640	10.1	<0.76	No Data	No Data	No Data

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.
[c]Total dissolved solids.
[d]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.

Table A-17 (continued). Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	U (µg/L)	U-234 (pCi/L)[b]	U-235 (pCi/L)[b]	U-238 (pCi/L)[b]	V (µg/L)	V[c] (µg/L)	Zn (µg/L)	Zn[c] (µg/L)
Cabin Spring	NBD-400,NBD-850	10/17/1995	No Data	~1.8	<1.0	<1.0	~10.6	<6.0	58.9	<3.0
Montezuma Canyon	NBD-740,NBD-290	04/19/1995	84.3	33.26	1.34	32.09	<4.0	~4.5	~7.1	20.1
	NBD-389,NBD-839	10/04/1995	No Data	20.6	<1.0	20.9	~14.3	~8.3	~4.5	<3.0
Pehrson 2	NBD-739,NBD-289	04/19/1995	31.0	13.26	0.56	11.65	~10.4	~12.1	24.1	~15.7
SW92-01	NBD-726,NBD-276	04/17/1995	~1.9	1.42	<0.3	0.68	<4.0	<4.0	~5.9	22.2
	NBD-377,NBD-827	10/02/1995	No Data	~3.5	<1.0	~1.6	<6.7	<6.0	<3.3	<3.0
SW92-02	NBD-727,NBD-277	04/17/1995	~2.9	2.21	<0.3	1.14	<4.0	~6.2	~11.4	23.2
	NBD-378,NBD-828	10/02/1995	No Data	~0.82	<1.0	<1.0	<6.7	<6.0	~3.8	<3.0
SW92-03	NBD-728,NBD-278	04/17/1995	~2.1	1.66	<0.3	0.95	<4.0	<4.0	~5.2	<3.0
	NBD-379,NBD-829	10/03/1995	No Data	~3.3	<1.0	~1.3	<6.7	<6.0	<3.3	<3.0
	NBD-380,NBD-830	10/03/1995	No Data	~3.3	<1.0	~1.6	<6.7	<6.0	<3.3	<3.0
SW92-04	NBD-731,NBD-281	04/18/1995	27.3	12.60	1.00	10.60	<4.0	<4.0	~5.9	~19.8
	NBD-390,NBD-840	10/05/1995	No Data	10.9	<1.0	~9.1	<6.7	<6.0	~3.4	<3.0
SW92-05	NBD-729,NBD-279	04/18/1995	30.2	12.54	0.58	11.67	<4.0	~8.5	~15.0	~10.2
	NBD-391,NBD-841	10/05/1995	No Data	10.5	<1.0	~8.7	~8.5	<6.0	66.1	<3.0
	NBD-392,NBD-842	10/05/1995	No Data	10.9	<1.0	~8.6	<6.7	<6.0	~5.8	<3.0
SW92-06	NBD-735,NBD-285	04/19/1995	94.8	36.10	1.70	36.20	~17.6	~17.5	29.9	20.7
	NBD-382,NBD-832	10/03/1995	No Data	34.5	~1.6	36.8	~14.8	~16.1	~5.9	<3.0
SW92-07	NBD-738,NBD-288	04/19/1995	122	46.77	2.12	46.46	~10.9	~11.5	~19.0	~11.0
	NBD-384,NBD-834	10/03/1995	No Data	19.0	<1.0	19.5	~7.4	<6.0	~6.2	<3.0
SW92-08	NBD-741,NBD-291	04/20/1995	121	45.63	2.23	44.91	~7.8	~8.5	~7.4	~4.8
	NBD-388,NBD-838	10/04/1995	No Data	19.9	<1.0	22.2	~12.7	<6.0	~4.8	<3.0
SW92-09	NBD-742,NBD-292	04/20/1995	116	47.19	1.96	46.19	~4.3	~9.7	37.7	<3.0
	NBD-387,NBD-837	10/04/1995	No Data	19.9	<1.0	20.7	~9.4	<6.0	~4.3	<3.0
SW94-01	NBD-385,NBD-835	10/04/1995	No Data	21.4	<1.0	21.9	~8.8	~8.1	~4.0	<3.0
Slade Spring	NBD-730,NBD-280	04/18/1995	30.1	12.84	1.21	11.56	<4.0	~7.2	~12.1	~17.8
	NBD-393,NBD-843	10/05/1995	No Data	14.7	<1.0	13.3	~7.4	<6.0	22.6	<3.0
Sorenson	NBD-736,NBD-286	04/19/1995	120	47.80	2.14	45.72	~9.6	~11.8	24.4	~3.1
	NBD-737,NBD-287	04/19/1995	128	49.13	2.46	48.02	~12.3	~15.4	~9.5	~12.9
	NBD-383,NBD-833	10/03/1995	No Data	54.7	~2.8	60.6	~12.2	<6.0	<3.3	<3.0
W-4	NBD-732,NBD-282	04/18/1995	66.6	26.38	1.23	24.94	~21.1	~25.2	~16.0	~9.7
	NBD-733,NBD-283	04/18/1995	64.6	26.28	1.17	24.57	~20.3	~23.6	~17.3	~11.3
	NBD-381,NBD-831	10/03/1995	No Data	18.0	<1.0	19.0	~18.3	~14.3	<3.3	<3.0

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[c]Sample was filtered in the field.

Table A-18. Target Compound List of Organic Constituents Included in Analysis of Groundwater

CAS Number[a]	Constituent	Requested Reporting Limit[b] (μg/L)
Herbicides		
93-76-5	2,4,5-T	0.20
93-72-1	2,4,5-TP (Silvex)	0.17
94-75-7	2,4-D	1.2
94-82-6	2,4-DB	0.91
75-99-0	Dalapon	5.8
120-36-5	Dichloroprop	0.65
Pesticides		
72-54-8	4,4'-DDD	0.10
72-55-9	4,4'-DDE	0.10
50-29-3	4,4'-DDT	0.10
309-00-2	Aldrin	0.05
319-84-6	alpha-BHC	0.05
5103-71-9	alpha-Chlordane	0.05
12674-11-2	Aroclor-1016	0.5
11104-28-2	Aroclor-1221	0.5
11141-16-5	Aroclor-1232	0.5
53469-21-9	Aroclor-1242	0.5
12672-29-6	Aroclor-1248	0.5
11097-69-1	Aroclor-1254	1.0
11096-82-5	Aroclor-1260	1.0
319-85-7	beta-BHC	0.05
319-86-8	delta-BHC	0.05
60-57-1	Dieldrin	0.10
959-98-8	Endosulfan I	0.05
33213-65-9	Endosulfan II	0.10
1031-07-8	Endosulfan Sulfate	0.10
72-20-8	Endrin	0.10
7421-93-4	Endrin Aldehyde	0.10
58-89-9	gamma-BHC (Lindane)	0.05
5103-74-2	gamma-Chlordane	0.05
76-44-8	Heptachlor	0.05
1024-57-3	Heptachlor Epoxide	0.05
72-43-5	Methoxychlor	0.5
8001-35-2	Toxaphene	1.0
Semivolatile Organics		
120-82-1	1,2,4-Trichlorobenzene	10
95-50-1	1,2-Dichlorobenzene	10
541-73-1	1,3-Dichlorobenzene	10
106-46-7	1,4-Dichlorobenzene	10

[a]CAS = Chemical Abstracts Service.
[b]Actual laboratory reporting limits may vary.

Table A-18 (continued). Target Compound List of Organic Constituents Included in Analysis of Groundwater

CAS Number[a]	Constituent	Requested Reporting Limit[b] (μg/L)
Semivolatile Organics (continued)		
108-60-1	2,2-oxybis(1-Chloropropane)	10
95-95-4	2,4,5-Trichlorophenol	50
88-06-2	2,4,6-Trichlorophenol	10
120-83-2	2,4-Dichlorophenol	10
105-67-9	2,4-Dimethylphenol	10
51-28-5	2,4-Dinitrophenol	50
121-14-2	2,4-Dinitrotoluene	10
606-20-2	2,6-Dinitrotoluene	10
91-58-7	2-Chloronaphthalene	10
95-57-8	2-Chlorophenol	10
91-57-6	2-Methylnaphthalene	10
95-48-7	2-Methylphenol	10
88-74-4	2-Nitroaniline	50
88-75-5	2-Nitrophenol	10
91-94-1	3,3'-Dichlorobenzidine	20
99-09-2	3-Nitroaniline	50
534-52-1	4,6-Dinitro-2-Methylphenol	50
101-55-3	4-Bromophenyl-phenylether	10
59-50-7	4-Chloro-3-methylphenol	10
106-47-8	4-Chloroaniline	10
7005-72-3	4-Chlorophenyl phenyl ether	10
106-44-5	4-Methylphenol	10
100-01-6	4-Nitroaniline	50
100-02-7	4-Nitrophenol	50
83-32-9	Acenaphthene	10
208-96-8	Acenaphthylene	10
120-12-7	Anthracene	10
56-55-3	Benzo(a)anthracene	10
50-32-8	Benzo(a)pyrene	10
205-99-2	Benzo(b)fluoranthene	10
191-24-2	Benzo(g,h,i)perylene	10
207-08-9	Benzo(k)fluoranthene	10
111-91-1	bis(2-Chloroethoxy)Methane	10
111-44-4	bis(2-Chloroethyl)Ether	10
117-81-7	bis(2-ethylhexyl)Phthalate	10
85-68-7	Butyl benzyl phthalate	10
218-01-9	Chrysene	10
84-74-2	di-n-Butylphthalate	10
117-84-0	di-n-Octylphthalate	10
53-70-3	Dibenzo(a,h)anthracene	10
132-64-9	Dibenzofuran	10
84-66-2	Diethylphthalate	10
131-11-3	Dimethylphthalate	10
206-44-0	Fluoranthene	10
86-73-7	Fluorene	10

[a]CAS = Chemical Abstracts Service.
[b]Actual laboratory reporting limits may vary.

Table A-18 (continued). Target Compound List of Organic Constituents Included in Analysis of Groundwater

CAS Number[a]	Constituent	Requested Reporting Limit[b] (μg/L)
Semivolatile Organics (continued)		
118-74-1	Hexachlorobenzene	10
87-68-3	Hexachlorobutadiene	10
77-47-4	Hexachlorocyclopentadiene	10
67-72-1	Hexachloroethane	10
193-39-5	Indeno(1,2,3-cd)pyrene	10
78-59-1	Isophorone	10
621-64-7	N-Nitroso-di-n-dipropylamine	10
86-30-6	N-Nitrosodiphenylamine	10
91-20-3	Naphthalene	10
98-95-3	Nitrobenzene	10
87-86-5	Pentachlorophenol	50
85-01-8	Phenanthrene	10
108-95-2	Phenol	10
129-00-0	Pyrene	10
Volatile Organics		
71-55-6	1,1,1-Trichloroethane	1
79-34-5	1,1,2,2-Tetrachloroethane	1
79-00-5	1,1,2-Trichloroethane	1
75-34-3	1,1-Dichloroethane	1
75-35-4	1,1-Dichloroethene	1
107-06-2	1,2-Dichloroethane	1
78-87-5	1,2-Dichloropropane	1
78-93-3	2-Butanone	2
591-78-6	2-Hexanone	2
108-10-1	4-Methyl-2-Pentanone	2
67-64-1	Acetone	2
71-43-2	Benzene	1
75-27-4	Bromodichloromethane	1
75-25-2	Bromoform	1
74-83-9	Bromomethane	2
75-15-0	Carbon Disulfide	1
56-23-5	Carbon Tetrachloride	1
108-90-7	Chlorobenzene	1
75-00-3	Chloroethane	2
67-66-3	Chloroform	1
74-87-3	Chloromethane	2
10061-01-5	cis-1,3-Dichloropropene	1
124-48-1	Dibromochloromethane	1
100-41-4	Ethyl benzene	1
75-09-2	Methylene Chloride	1
100-42-5	Styrene	1
127-18-4	Tetrachloroethene	1

[a]CAS = Chemical Abstracts Service.
[b]Actual laboratory reporting limits may vary.

Table A-18 (continued). Target Compound List of Organic Constituents Included in Analysis of Groundwater

CAS Number[a]	Constituent	Requested Reporting Limit[b] (μg/L)
Volatile Organics (continued)		
108-88-3	Toluene	1
156-60-5	trans-1,2-Dichloroethene	1
10061-02-6	trans-1,3-Dichloropropene	1
79-01-6	Trichloroethene	1
108-05-4	Vinyl Acetate	2
75-01-4	Vinyl Chloride	2
1330-20-7	Xylenes (total)	1

[a]CAS = Chemical Abstracts Service.
[b]Actual laboratory reporting limits may vary.

Table A-19. Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Ag (µg/L)	Al (µg/L)	Alkalinity (as $CaCO_3$) (ppm)	Alpha (pCi/L)[b]	As (µg/L)	B (µg/L)	Ba (µg/L)	Beta (pCi/L)[b]	Ca (µg/L)
31NE93-205	NBD-743	04/20/1995	<1.0	<11.0	152	<17.2	41.5	~36.6	~33.8	<13.7	98100
	NBD-853	10/17/1995	No Data	~42.6	189	14	51.4	~23.2	No Data	<13	99300
31SW91-03	NBD-272	04/26/1995	<1.0	~29.4	470	1780	69.3	~88.8	~24.4	370	316000
	NBD-851	10/12/1995	No Data	~24.2	476	1600	63.6	~84.3	No Data	360	264000
31SW91-14	NBD-256	04/19/1995	<1.0	~15.6	508	3930	49.1	104	~23.6	964	273000
	NBD-373	10/12/1995	No Data	~41.5	532	3500	52.9	~81.8	No Data	780	236000
	NBD-374	10/12/1995	No Data	~30.9	No Data	3500	51.7	~87.7	No Data	670	236000
31SW91-23	NBD-275	04/27/1995	<1.0	~30.2	530	2610	<1.0	190	~7.4	790	425000
	NBD-372	10/12/1995	No Data	~31.8	509	1400	<1.1	140	No Data	220	384000
36SE93-201-2	NBD-273	04/26/1995	<1.0	221	704	3000	508	356	~56.6	857	23600
	NBD-375	10/12/1995	No Data	2980	770	5000	526	630	No Data	1040	89400
82-07	NBD-266	04/25/1995	<1.0	~16.1	395	256	<1.0	105	~48.8	66	339000
	NBD-365	10/09/1995	No Data	~42.6	356	210	~2.2	128	No Data	110	328000
82-30B	NBD-274	04/26/1995	<1.0	~14.2	445	778	88.6	~75.9	~58.5	262	252000
	NBD-368	10/10/1995	No Data	<13.3	441	700	85.2	~79.3	No Data	200	225000
82-31B-E	NBD-254	04/18/1995	<1.0	~26.4	336	<85	<1.0	~91.9	~19.8	<73	556000
	NBD-371	10/11/1995	No Data	~18.7	394	<90	<1.1	141	No Data	<70	596000
82-40A	NBD-270	04/26/1995	<1.0	~75.7	425	2250	68.0	~88.4	~27.4	519	274000
	NBD-271	04/26/1995	<1.0	~67.1	470	2050	63.5	~81.9	~27.8	492	254000
	NBD-370	10/11/1995	No Data	~32.3	529	7000	59.3	~103	No Data	1120	316000
82-42	NBD-253	04/18/1995	<1.0	~62.6	340	56	<1.0	~56.7	~50.9	<29	285000
	NBD-369	10/11/1995	No Data	<13.3	334	<30	~4.9	~50.0	No Data	<20	206000
83-70	NBD-269	04/25/1995	<1.0	~11.7	212	<17.1	<1.0	~22.3	~21.7	<16.1	55700
	NBD-849	10/11/1995	No Data	<13.3	182	<14	<1.1	~17.6	No Data	<10	54800
88-85	NBD-255	04/18/1995	<1.0	~14.1	410	529	~8.1	115	~33.4	105	293000
	NBD-362	10/06/1995	No Data	837	483	320	14.0	137	No Data	130	296000
	NBD-363	10/06/1995	No Data	916	No Data	300	13.4	148	No Data	100	291000
92-01	NBD-257	04/19/1995	<1.0	~80.7	270	<38	<1.0	~41.1	~22.3	<27	386000
	NBD-354	10/03/1995	No Data	~83.7	294	<77	<1.1	~79.4	No Data	<42	509000
92-02	NBD-251	04/17/1995	<1.0	~55.4	147	<9.1	~3.4	<8.0	~32.9	<7.3	57700
	NBD-351	10/02/1995	No Data	~21.5	128	<13.6	~3.8	~29.0	No Data	<10.4	57900

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Ag (µg/L)	Al (µg/L)	Alkalinity (as $CaCO_3$) (ppm)	Alpha (pCi/L)[b]	As (µg/L)	B (µg/L)	Ba (µg/L)	Beta (pCi/L)[b]	Ca (µg/L)
92-03	NBD-258	04/19/1995	<1.0	211	225	<15.6	<1.0	~9.4	~40.2	<13.6	104000
	NBD-355	10/04/1995	No Data	1150	184	<20	<1.1	~33.0	No Data	<10	124000
92-04	NBD-259	04/20/1995	<1.0	<11.0	213	<14.2	~7.0	~25.2	~28.5	<13.6	71500
	NBD-356	10/04/1995	No Data	<13.3	209	<17	~7.0	~31.0	No Data	<10	73200
92-05	NBD-252	04/18/1995	<1.0	~82.1	225	<28	<1.0	~27.9	~37.6	<18.4	225000
	NBD-353	10/03/1995	No Data	~97.4	287	<41	<1.1	~62.5	No Data	<21	248000
92-06	NBD-260	04/20/1995	<1.0	<11.0	214	<13.6	<1.0	~19.2	~19.8	<13.6	69000
	NBD-352	10/03/1995	No Data	~13.8	212	<16.4	~1.6	~31.8	No Data	<10.5	68800
92-07	NBD-265	04/25/1995	<1.0	<11.0	434	1047	13.8	~80.0	~62.6	267	293000
	NBD-364	10/09/1995	No Data	<13.3	460	930	13.9	~83.5	No Data	270	299000
92-08	NBD-267	04/25/1995	152	<11.0	386	456	<1.0	~80.1	~35.5	120	285000
	NBD-268	04/25/1995	106	<11.0	No Data	416	<1.0	~80.6	~37.3	106	293000
	NBD-367	10/10/1995	No Data	<13.3	395	360	<1.1	~88.2	No Data	120	327000
92-09	NBD-263	04/24/1995	<1.0	<11.0	330	168	<1.0	~97.2	~11.6	54	265000
	NBD-264	04/24/1995	<1.0	<11.0	No Data	149	<1.0	~99.3	~11.5	42	272000
	NBD-359	10/04/1995	No Data	~14.1	387	180	~1.8	192	No Data	60	272000
92-10	NBD-262	04/24/1995	<1.0	~14.3	193	<16.4	<1.0	~8.5	~21.2	<11.6	80100
	NBD-357	10/04/1995	No Data	~14.0	205	<19	<1.1	~27.3	No Data	<10	80700
	NBD-358	10/04/1995	No Data	<13.3	No Data	<19	<1.1	~44.5	No Data	<10	81000
92-11	NBD-261	04/20/1995	<1.0	<11.0	422	2330	31.0	~87.3	~24.6	478	284000
	NBD-361	10/06/1995	No Data	~26.7	412	1900	37.5	~109	No Data	400	268000
92-12	NBD-745	04/27/1995	<1.0	5730	243	<23	~4.2	~69.4	~174	<23	47600
	NBD-848	10/10/1995	No Data	1300	319	<16	~1.2	~51.5	No Data	<10	32600
92-13	NBD-744	04/24/1995	<1.0	~191	318	<20	25.1	~91.7	~62.6	<20	13000
	NBD-847	10/10/1995	No Data	~161	299	<15	19.0	~73.2	No Data	<10	14700
93-01	NBB-584	04/27/1995	<1.0	~25.5	196	<14.8	~4.7	<8.0	~18.3	<11.6	68900
	NBD-360	10/05/1995	No Data	<13.3	232	<17	~4.1	~33.8	No Data	<10	68900
P92-02	NBD-366	10/10/1995	No Data	1650	440	110	~1.9	146	No Data	<40	336000
P92-04	NBD-845	10/09/1995	No Data	~111	234	<60	<1.1	126	No Data	<40	303000
P92-09	NBD-852	10/12/1995	No Data	~102	577	120	<1.1	212	No Data	<70	354000

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Cd (µg/L)	CDT[b] (µmhos/cm)	Cl (µg/L)	Co (µg/L)	Cr (µg/L)	Cu (µg/L)	DO[c] (mg/L)	Eh[d] (mV)	F (µg/L)
31NE93-205	NBD-743	04/20/1995	<1.0	1215	2470	<8.0	<4.0	<3.0	0.23	16	~48.4
	NBD-853	10/17/1995	No Data	1100	2450	<6.7	No Data	<4.4	0.67	-075	~103
31SW91-03	NBD-272	04/26/1995	<1.0	3880	121000	<8.0	<4.0	~14.6	1.56	179	342
	NBD-851	10/12/1995	No Data	3420	130000	<6.7	No Data	<4.4	0.75	135	730
31SW91-14	NBD-256	04/19/1995	<1.0	4600	159000	~15.8	<4.0	<3.0	1.29	165	433
	NBD-373	10/12/1995	No Data	4070	151000	~18.8	No Data	~4.6	1.91	141	908
	NBD-374	10/12/1995	No Data	No Data	150000	~21.1	No Data	~5.3	No Data	No Data	863
31SW91-23	NBD-275	04/27/1995	<1.0	6370	50400	<8.0	<4.0	~10.9	1.93	140	325
	NBD-372	10/12/1995	No Data	4520	40300	<6.7	No Data	<4.4	2.33	114	840
36SE93-201-2	NBD-273	04/26/1995	<1.0	6700	566000	<8.0	~7.1	39.2	6.35	83	3650
	NBD-375	10/12/1995	No Data	7310	676000	~7.9	No Data	50.5	0.15	-155	5210
82-07	NBD-266	04/25/1995	<1.0	2740	135000	<8.0	<4.0	<3.0	1.24	170	~151
	NBD-365	10/09/1995	No Data	1610	146000	<6.7	No Data	<4.4	1.91	159	461
82-30B	NBD-274	04/26/1995	<1.0	2340	47100	<8.0	<4.0	~7.2	0.90	130	436
	NBD-368	10/10/1995	No Data	2190	88900	<6.7	No Data	<4.4	0.25	-2	803
82-31B-E	NBD-254	04/18/1995	<1.0	3120	34700	<8.0	<4.0	<3.0	3.94	135	<15.0
	NBD-371	10/11/1995	No Data	3220	35800	<6.7	No Data	<4.4	3.68	-38	~148
82-40A	NBD-270	04/26/1995	<1.0	2600	77800	~43.0	<4.0	~16.9	1.72	-55	554
	NBD-271	04/26/1995	<1.0	3880	77800	~40.2	<4.0	~13.3	1.56	179	566
	NBD-370	10/11/1995	No Data	3410	106000	61.3	No Data	<4.4	2.82	-74	961
82-42	NBD-253	04/18/1995	<1.0	1846	103000	<8.0	<4.0	<3.0	2.06	126	~53.1
	NBD-369	10/11/1995	No Data	1391	38500	<6.7	No Data	<4.4	1.71	132	216
83-70	NBD-269	04/25/1995	<1.0	619	2980	<8.0	<4.0	~3.3	0.40	-87	~89.5
	NBD-849	10/11/1995	No Data	606	2900	<6.7	No Data	<4.4	0.30	-43	201
88-85	NBD-255	04/18/1995	<1.0	2660	135000	<8.0	<4.0	<3.0	1.08	128	224
	NBD-362	10/06/1995	No Data	2510	141000	<6.7	No Data	<4.4	2.09	127	472
	NBD-363	10/06/1995	No Data	No Data	142000	<6.7	No Data	<4.4	No Data	No Data	418
92-01	NBD-257	04/19/1995	<1.0	2220	9250	<8.0	<4.0	<3.0	4.65	118	~34.4
	NBD-354	10/03/1995	No Data	2740	13600	<6.7	No Data	<4.4	3.91	131	242
92-02	NBD-251	04/17/1995	<1.0	3950	1080	<8.0	<4.0	~4.2	1.48	25	~137
	NBD-351	10/02/1995	No Data	384	1080	<6.7	No Data	<4.4	0.62	69	~139

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Conductivity in micromhos per centimeter.
[c]Dissolved oxygen.
[d]Oxidation potential in millivolts.

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Cd (µg/L)	CDT[b] (µmhos/cm)	Cl (µg/L)	Co (µg/L)	Cr (µg/L)	Cu (µg/L)	DO[c] (mg/L)	Eh[d] (mV)	F (µg/L)
92-03	NBD-258	04/19/1995	<1.0	731	9360	<8.0	<4.0	<3.0	5.35	158	~85.5
	NBD-355	10/04/1995	No Data	778	9000	<6.7	No Data	<4.4	4.40	147	~171
92-04	NBD-259	04/20/1995	<1.0	640	2700	<8.0	<4.0	<3.0	2.83	126	~165
	NBD-356	10/04/1995	No Data	624	2740	<6.7	No Data	<4.4	1.40	32	~178
92-05	NBD-252	04/18/1995	<1.0	1432	10700	<8.0	<4.0	~6.8	5.98	140	~47.7
	NBD-353	10/03/1995	No Data	1445	11200	<6.7	No Data	<4.4	6.75	119	~140
92-06	NBD-260	04/20/1995	<1.0	562	1870	<8.0	<4.0	<3.0	5.64	52	~110
	NBD-352	10/03/1995	No Data	545	1850	<6.7	No Data	<4.4	6.17	4	~137
92-07	NBD-265	04/25/1995	<1.0	2740	105000	<8.0	<4.0	~4.2	2.78	221	~195
	NBD-364	10/09/1995	No Data	2640	117000	~7.4	No Data	<4.4	2.86	131	483
92-08	NBD-267	04/25/1995	<1.0	2170	84300	<8.0	<4.0	~3.3	1.67	136	~112
	NBD-268	04/25/1995	<1.0	No Data	83900	<8.0	<4.0	~3.1	No Data	No Data	~103
	NBD-367	10/10/1995	No Data	2390	122000	<6.7	No Data	<4.4	0.47	85	340
92-09	NBD-263	04/24/1995	<1.0	2360	75900	<8.0	<4.0	<3.0	0.55	24	~62.0
	NBD-264	04/24/1995	<1.0	No Data	75200	<8.0	<4.0	<3.0	No Data	No Data	~67.2
	NBD-359	10/04/1995	No Data	2300	81400	<6.7	No Data	<4.4	0.75	-33	239
92-10	NBD-262	04/24/1995	<1.0	725	15300	<8.0	<4.0	~3.2	0.86	-53	~104
	NBD-357	10/04/1995	No Data	734	17700	<6.7	No Data	<4.4	0.40	-55	~133
	NBD-358	10/04/1995	No Data	No Data	17900	<6.7	No Data	<4.4	No Data	No Data	~161
92-11	NBD-261	04/20/1995	<1.0	3120	105000	<8.0	<4.0	<3.0	0.46	149	280
	NBD-361	10/06/1995	No Data	2980	128000	<6.7	No Data	<4.4	0.56	151	638
92-12	NBD-745	04/27/1995	<1.0	748	3850	<8.0	<4.0	40.3	No Data	No Data	419
	NBD-848	10/10/1995	No Data	763	3550	<6.7	No Data	~5.4	No Data	No Data	513
92-13	NBD-744	04/24/1995	<1.0	678	4420	<8.0	<4.0	~14.3	No Data	No Data	925
	NBD-847	10/10/1995	No Data	700	4290	<6.7	No Data	<4.4	No Data	No Data	1020
93-01	NBB-584	04/27/1995	<1.0	596	2180	<8.0	<4.0	~5.6	0.86	95	~82.1
	NBD-360	10/05/1995	No Data	579	2180	<6.7	No Data	<4.4	0.57	31	~151
P92-02	NBD-366	10/10/1995	No Data	3070	155000	<6.7	No Data	<4.4	0.85	-40	289
P92-04	NBD-845	10/09/1995	No Data	2440	132000	<6.7	No Data	<4.4	5.05	224	359
P92-09	NBD-852	10/12/1995	No Data	3710	207000	<6.7	No Data	<4.4	No Data	128	557

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Conductivity in micromhos per centimeter.
[c]Dissolved oxygen.
[d]Oxidation potential in millivolts.

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Fe (µg/L)	H_2O Depth (feet)	Herbicide (µg/L)	K (µg/L)	Mg (µg/L)	Mn (µg/L)	Mo (µg/L)	Na (µg/L)	NH_4 (µg/L)
31NE93-205	NBD-743	04/20/1995	1660	177.1	No Data	5160	29200	948	~1.5	105000	428
	NBD-853	10/17/1995	No Data	177.2	No Data	~4970	29100	1000	<15.6	104000	344
31SW91-03	NBD-272	04/26/1995	~23.4	53.38	No Data	40600	82600	10300	267	427000	10900
	NBD-851	10/12/1995	No Data	53.7	No Data	41900	70200	8780	264	463000	9350
31SW91-14	NBD-256	04/19/1995	~20.8	44.11	No Detect	54200	88000	14100	571	686000	28200
	NBD-373	10/12/1995	No Data	~42.9	No Data	51900	75800	11900	567	597000	23000
	NBD-374	10/12/1995	No Data	No Data	No Data	52200	76100	11700	540	602000	23200
31SW91-23	NBD-275	04/27/1995	~18.6	12.38	No Data	~3730	210000	120	849	930000	2080
	NBD-372	10/12/1995	No Data	~13.9	No Data	6290	139000	425	710	590000	10000
36SE93-201-2	NBD-273	04/26/1995	184	5.36	No Data	105000	7110	147	~1710	1430000	730
	NBD-375	10/12/1995	No Data	~7	No Data	35700	15000	382	1740	1570000	135
82-07	NBD-266	04/25/1995	~18.5	9.26	No Data	9500	79800	112	~38.0	188000	30.2
	NBD-365	10/09/1995	No Data	10.28	No Data	9800	83500	130	~32.7	202000	25.8
82-30B	NBD-274	04/26/1995	~85.6	13.12	No Data	37300	50100	8520	103	192000	2950
	NBD-368	10/10/1995	No Data	15.80	No Data	38500	43900	7060	140	210000	2670
82-31B-E	NBD-254	04/18/1995	~6.4	4.96	No Detect	~3890	105000	26.7	<1.0	123000	33.8
	NBD-371	10/11/1995	No Data	3.78	No Data	5630	115000	90.5	<15.6	152000	56.3
82-40A	NBD-270	04/26/1995	4740	17.16	No Data	23400	38700	4390	300	258000	2830
	NBD-271	04/26/1995	4400	53.38	No Data	22600	36200	4110	215	241000	2800
	NBD-370	10/11/1995	No Data	~19.5	No Data	26900	41600	5250	519	478000	3860
82-42	NBD-253	04/18/1995	~33.0	36.72	No Detect	5420	44500	357	~3.5	58300	384
	NBD-369	10/11/1995	No Data	~37.8	No Data	~3910	32300	268	<15.6	65100	25.8
83-70	NBD-269	04/25/1995	401	32.90	No Data	~2380	11200	272	<1.0	61100	259
	NBD-849	10/11/1995	No Data	32.96	No Data	~1820	11000	274	<15.6	62300	242
88-85	NBD-255	04/18/1995	~24.2	6.70	No Detect	8850	72300	~2.6	~43.3	210000	72.4
	NBD-362	10/06/1995	No Data	8.10	No Data	10400	76800	39.4	~41.4	221000	246
	NBD-363	10/06/1995	No Data	No Data	No Data	10600	76100	33.0	~44.0	218000	262
92-01	NBD-257	04/19/1995	119	21.46	No Data	~2530	64800	~9.3	<1.0	47500	25.5
	NBD-354	10/03/1995	No Data	21.77	No Data	~3370	92000	~7.3	<15.6	75200	~13.8
92-02	NBD-251	04/17/1995	~81.9	186.40	No Data	~1390	7860	505	~2.5	10500	72.4
	NBD-351	10/02/1995	No Data	186.80	No Data	<1470	8250	497	<15.6	10800	55.1

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Fe (µg/L)	H_2O Depth (feet)	Herbicide (µg/L)	K (µg/L)	Mg (µg/L)	Mn (µg/L)	Mo (µg/L)	Na (µg/L)	NH_4 (µg/L)
92-03	NBD-258	04/19/1995	205	10.40	No Data	<1050	13600	22.9	~3.1	23500	39.3
	NBD-355	10/04/1995	No Data	12.08	No Data	~1570	17300	~11.7	<15.6	26700	~19.0
92-04	NBD-259	04/20/1995	111	180.70	No Data	~1670	11500	443	~13.1	45200	197
	NBD-356	10/04/1995	No Data	171.85	No Data	~2400	12100	426	<15.6	47300	171
92-05	NBD-252	04/18/1995	~81.8	14.20	No Detect	~1670	35200	~4.3	~1.7	31600	25.5
	NBD-353	10/03/1995	No Data	17.05	No Data	~2800	39800	20.0	<15.6	38800	21.6
92-06	NBD-260	04/20/1995	146	108.87	No Data	~1870	10400	407	~2.0	30900	205
	NBD-352	10/03/1995	No Data	109.05	No Data	~1950	10800	398	<15.6	32000	156
92-07	NBD-265	04/25/1995	~8.4	No Data	No Data	22200	62100	397	138	256000	515
	NBD-364	10/09/1995	No Data	18.42	No Data	23200	63200	807	170	276000	859
92-08	NBD-267	04/25/1995	<5.0	9.00	No Data	10500	55900	1030	71.7	130000	32.9
	NBD-268	04/25/1995	<5.0	No Data	No Data	9980	55900	1070	71.2	131000	22.1
	NBD-367	10/10/1995	No Data	~9.6	No Data	13400	63800	1210	56.2	165000	20.7
92-09	NBD-263	04/24/1995	896	9.49	No Data	<1050	64600	107	~2.7	197000	59.8
	NBD-264	04/24/1995	915	No Data	No Data	<1050	65900	109	~2.7	201000	59.8
	NBD-359	10/04/1995	No Data	9.40	No Data	<1470	69100	96.2	<15.6	206000	73.2
92-10	NBD-262	04/24/1995	715	12.32	No Data	~2010	13600	357	~1.6	53800	229
	NBD-357	10/04/1995	No Data	12.47	No Data	~2900	14500	345	<15.6	57400	215
	NBD-358	10/04/1995	No Data	No Data	No Data	~4190	14600	343	<15.6	58200	220
92-11	NBD-261	04/20/1995	~36.6	No Data	No Data	30200	65700	1630	220	348000	4140
	NBD-361	10/06/1995	No Data	16.65	No Data	33600	67000	3770	264	369000	6600
92-12	NBD-745	04/27/1995	8180	53.2	No Data	~3810	10200	313	86.1	126000	27.5
	NBD-848	10/10/1995	No Data	53.7	No Data	~3730	9260	~13.2	72.6	125000	105
92-13	NBD-744	04/24/1995	142	105.9	No Data	~1950	~3120	17.2	~38.0	141000	515
	NBD-847	10/10/1995	No Data	106.31	No Data	~2350	~3810	22.9	~21.3	141000	~27.0
93-01	NBB-584	04/27/1995	159	107.52	No Data	~1240	11200	379	~1.6	39200	181
	NBD-360	10/05/1995	No Data	106.65	No Data	~2680	11900	378	<15.6	41400	213
P92-02	NBD-366	10/10/1995	No Data	11.12	No Data	~2520	127000	201	<15.6	279000	58.9
P92-04	NBD-845	10/09/1995	No Data	23.30	No Data	<1470	84900	~5.5	<15.6	168000	~7.9
P92-09	NBD-852	10/12/1995	No Data	~15.3	No Data	<1470	163000	~6.3	<15.6	383000	25.8

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Ni (µg/L)	NO_2 (µg/L)	NO_3+NO_2-N[b] (µg/L)	Pb (µg/L)	Pb-210 (pCi/L)[c]	Pesticide (µg/L)	pH	Po-210 (pCi/L)[c]	Ra-226 (pCi/L)[c]
31NE93-205	NBD-743	04/20/1995	<9.0	No Data	~10.3	<1.0	<2	No Data	6.39	<0.5	1.63
	NBD-853	10/17/1995	No Data	No Data	<10.0	No Data	<1.39	No Data	6.65	No Data	1.74
31SW91-03	NBD-272	04/26/1995	~13.5	No Data	1190	<1.0	15.3	No Data	6.81	<0.5	<0.5
	NBD-851	10/12/1995	No Data	No Data	~514	No Data	<2.16	No Data	6.81	No Data	<0.5
31SW91-14	NBD-256	04/19/1995	~20.1	No Data	~818	<1.0	6.4	No Detect	6.80	<0.5	<0.5
	NBD-373	10/12/1995	No Data	No Data	1090	No Data	0.58	No Data	6.84	No Data	<0.5
	NBD-374	10/12/1995	No Data	No Data	1100	No Data	1.45	No Data	No Data	No Data	<0.5
31SW91-23	NBD-275	04/27/1995	<9.0	~158	38800	<1.0	12.1	No Data	7.14	<0.5	<0.5
	NBD-372	10/12/1995	No Data	~123	36900	No Data	4.92	No Data	6.95	No Data	<0.5
36SE93-201-2	NBD-273	04/26/1995	~10.0	No Data	~38.4	3.2	17.0	No Data	9.25	9.02	3.72
	NBD-375	10/12/1995	No Data	No Data	~17.5	No Data	6.03	No Data	7.87	No Data	2.21
82-07	NBD-266	04/25/1995	<9.0	No Data	4550	<1.0	<2	No Data	6.58	<0.5	<0.5
	NBD-365	10/09/1995	No Data	No Data	2970	No Data	<1.32	No Data	6.88	No Data	<0.5
82-30B	NBD-274	04/26/1995	<9.0	No Data	~27.5	<1.0	5.8	No Data	6.96	<0.5	0.76
	NBD-368	10/10/1995	No Data	No Data	<10.0	No Data	1.72	No Data	7.04	No Data	<0.5
82-31B-E	NBD-254	04/18/1995	<9.0	No Data	~894	<1.0	<2	No Detect	6.68	<0.5	<0.5
	NBD-371	10/11/1995	No Data	No Data	~154	No Data	<1.43	No Data	6.66	No Data	<0.5
82-40A	NBD-270	04/26/1995	~12.4	No Data	~35.0	~1.1	10.3	No Data	6.90	0.85	11.97
	NBD-271	04/26/1995	<9.0	No Data	~34.1	<1.0	7.0	No Data	6.81	0.73	12.31
	NBD-370	10/11/1995	No Data	No Data	~27.2	No Data	13.10	No Data	6.73	No Data	14.77
82-42	NBD-253	04/18/1995	<9.0	No Data	1190	<1.0	<2	No Detect	6.52	<0.5	<0.5
	NBD-369	10/11/1995	No Data	No Data	~105	No Data	<1.29	No Data	7.08	No Data	<0.5
83-70	NBD-269	04/25/1995	<9.0	No Data	~36.4	<1.0	<2	No Data	7.57	<0.5	1.30
	NBD-849	10/11/1995	No Data	No Data	<10.0	No Data	<1.41	No Data	7.52	No Data	1.27
88-85	NBD-255	04/18/1995	<9.0	No Data	3480	<1.0	4.6	No Detect	6.93	<0.5	<0.5
	NBD-362	10/06/1995	No Data	No Data	2100	No Data	<2.62	No Data	6.72	No Data	<0.5
	NBD-363	10/06/1995	No Data	No Data	2130	No Data	<2	No Data	No Data	No Data	<0.5
92-01	NBD-257	04/19/1995	~10.1	No Data	~128	<1.0	<2	No Data	6.89	<0.5	<0.5
	NBD-354	10/03/1995	No Data	No Data	3890	No Data	<2	No Data	6.53	No Data	<0.5
92-02	NBD-251	04/17/1995	<9.0	No Data	<10.0	~1.8	<2	No Data	7.28	<0.5	0.55
	NBD-351	10/02/1995	No Data	No Data	<10.0	No Data	<2	No Data	7.68	No Data	<0.5

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b](Nitrate + nitrite) as nitrogen. The samples were acidified in the field, thus the nitrite was oxidized to nitrate.
[c]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Ni (µg/L)	NO_2 (µg/L)	NO_3+NO_2-N[b] (µg/L)	Pb (µg/L)	Pb-210 (pCi/L)[c]	Pesticide (µg/L)	pH	Po-210 (pCi/L)[c]	Ra-226 (pCi/L)[c]
92-03	NBD-258	04/19/1995	<9.0	No Data	~35.6	<1.0	<2	No Data	7.32	<0.5	<0.5
	NBD-355	10/04/1995	No Data	No Data	~187	No Data	<2	No Data	7.15	No Data	<0.5
92-04	NBD-259	04/20/1995	~9.7	No Data	<20.0	<1.0	<2	No Data	6.98	<0.5	0.64
	NBD-356	10/04/1995	No Data	No Data	~94.1	No Data	<2	No Data	7.28	No Data	0.67
92-05	NBD-252	04/18/1995	<9.0	No Data	~300	~1.4	<2	No Detect	6.87	<0.5	<0.5
	NBD-353	10/03/1995	No Data	No Data	~469	No Data	<2	No Data	6.67	No Data	<0.5
92-06	NBD-260	04/20/1995	<9.0	No Data	~21.9	<1.0	<2	No Data	7.46	<0.5	0.74
	NBD-352	10/03/1995	No Data	No Data	<10.0	No Data	<2	No Data	7.86	No Data	<0.5
92-07	NBD-265	04/25/1995	<9.0	No Data	1090	<1.0	5.2	No Data	6.44	<0.5	<0.5
	NBD-364	10/09/1995	No Data	No Data	725	No Data	3.96	No Data	6.76	No Data	<0.5
92-08	NBD-267	04/25/1995	<9.0	No Data	1180	<1.0	<2	No Data	6.86	<0.5	<0.5
	NBD-268	04/25/1995	<9.0	No Data	1180	<1.0	2.2	No Data	No Data	<0.5	<0.5
	NBD-307	10/10/1995	No Data	No Data	1400	No Data	3.69	No Data	6.61	No Data	<0.5
92-09	NBD-263	04/24/1995	<9.0	No Data	~38.8	<1.0	<2	No Data	7.02	<0.5	<0.5
	NBD-264	04/24/1995	<9.0	No Data	~42.1	<1.0	<2	No Data	No Data	<0.5	<0.5
	NBD-359	10/04/1995	No Data	No Data	<10.0	No Data	<2	No Data	6.89	No Data	<0.5
92-10	NBD-262	04/24/1995	<9.0	No Data	~41.4	<1.0	<2	No Data	7.32	<0.5	1.30
	NBD-357	10/04/1995	No Data	No Data	<10.0	No Data	<2	No Data	7.49	No Data	1.17
	NBD-358	10/04/1995	No Data	No Data	<10.0	No Data	<2	No Data	No Data	No Data	1.09
92-11	NBD-261	04/20/1995	~9.9	No Data	~911	<1.0	9.7	No Data	6.69	<0.5	<0.5
	NBD-361	10/06/1995	No Data	No Data	934	No Data	<2	No Data	6.84	No Data	<0.5
92-12	NBD-745	04/27/1995	<9.0	No Data	1220	14.5	<2	No Data	7.70	<0.5	<0.5
	NBD-848	10/10/1995	No Data	No Data	774	No Data	<2.74	No Data	7.65	No Data	1.23
92-13	NBD-744	04/24/1995	<9.0	No Data	680	<1.0	<2	No Data	9.64	<0.5	<0.5
	NBD-847	10/10/1995	No Data	No Data	1340	No Data	<1.34	No Data	9.36	No Data	<0.5
93-01	NBB-584	04/27/1995	<9.0	No Data	~23.6	<1.0	<2	No Data	7.47	<0.5	0.93
	NBD-360	10/05/1995	No Data	No Data	~40.1	No Data	<2	No Data	7.50	No Data	0.75
P92-02	NBD-366	10/10/1995	No Data	No Data	<10.0	No Data	<1.29	No Data	6.90	No Data	<0.5
P92-04	NBD-845	10/09/1995	No Data	No Data	3230	No Data	<1.39	No Data	~6.7	No Data	<0.5
P92-09	NBD-852	10/12/1995	No Data	No Data	3120	No Data	<1.38	No Data	6.96	No Data	0.53

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b](Nitrate + nitrite) as nitrogen. The samples were acidified in the field, thus the nitrite was oxidized to nitrate.
[c]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Ra-228 (pCi/L)[b]	Rn-222 (pCi/L)[b]	Sb (µg/L)	Se (µg/L)	Semivolatile (µg/L)	Sn (µg/L)	SO_4 (µg/L)	TDS[c] (mg/L)	Temperature (degrees C)
31NE93-205	NBD-743	04/20/1995	<3.1	112	No Data	<1.0	No Data	<1.0	415000	964	13.3
	NBD-853	10/17/1995	No Data	119	<35.6	<1.1	No Data	<1.1	416000	768	14.3
31SW91-03	NBD-272	04/26/1995	<2.6	864	No Data	23.3	No Data	<1.0	1490000	2920	10.9
	NBD-851	10/12/1995	No Data	1005	<35.6	17.1	No Data	<1.1	1330000	2680	11.3
31SW91-14	NBD-256	04/19/1995	<3.0	1169	No Data	10.4	See Table	<1.0	1840000	3570	10.4
	NBD-373	10/12/1995	No Data	1103	<35.6	11.2	No Data	<1.1	1600000	3130	10.9
	NBD-374	10/12/1995	No Data	1277	~48.7	11.7	No Data	<1.1	1590000	3150	No Data
31SW91-23	NBD-275	04/27/1995	<2.6	364	No Data	80.7	No Data	<1.0	3080000	5510	7.7
	NBD-372	10/12/1995	No Data	318	<35.6	17.0	No Data	<1.1	2130000	3970	12.6
36SE93-201-2	NBD-273	04/26/1995	<6.9	1265	No Data	277	No Data	<1.0	1740000	5030	9.4
	NBD-375	10/12/1995	No Data	876	314	268	No Data	<1.1	2000000	5080	15.1
82-07	NBD-266	04/25/1995	<2.5	819	No Data	22.8	No Data	<1.0	885000	2100	8.0
	NBD-365	10/09/1995	No Data	749	<35.6	24.6	No Data	<1.1	954000	2110	13.3
82-30B	NBD-274	04/26/1995	<3.5	2958	No Data	15.0	No Data	<1.0	787000	1750	9.0
	NBD-368	10/10/1995	No Data	3548	<35.6	20.0	No Data	<1.1	661000	1600	9.7
82-31B-E	NBD-254	04/18/1995	<3.1	1145	No Data	~1.3	See Table	<1.0	1540000	2870	7.80
	NBD-371	10/11/1995	No Data	1393	<35.6	<1.1	No Data	<1.1	1760000	3120	13.8
82-40A	NBD-270	04/26/1995	<6.0	47022	No Data	<1.0	No Data	<1.0	876000	1920	10.3
	NBD-271	04/26/1995	<6.7	47165	No Data	<1.0	No Data	<1.0	869000	1920	10.9
	NBD-370	10/11/1995	No Data	54205	~59.7	<1.1	No Data	<1.1	1290000	2680	10.8
82-42	NBD-253	04/18/1995	<2.8	1502	No Data	~3.3	See Table	<1.0	502000	1340	10.0
	NBD-369	10/11/1995	No Data	1564	<35.6	~2.6	No Data	<1.1	399000	1030	9.9
83-70	NBD-269	04/25/1995	<3.6	318	No Data	<1.0	No Data	<1.0	99800	606	10.5
	NBD-849	10/11/1995	No Data	353	<35.6	~1.4	No Data	<1.1	102000	400	10.6
88-85	NBD-255	04/18/1995	<2.9	5942	No Data	17.7	See Table	<1.0	856000	2050	9.0
	NBD-362	10/06/1995	No Data	2129	<35.6	11.4	No Data	<1.1	820000	1940	12.5
	NBD-363	10/06/1995	No Data	2046	<35.6	11.7	No Data	<1.1	821000	1970	No Data
92-01	NBD-257	04/19/1995	<4.4	847	No Data	~2.7	No Data	<1.0	1010000	1900	8.1
	NBD-354	10/03/1995	No Data	853	<35.6	~4.7	No Data	<1.1	1430000	2570	9.4
92-02	NBD-251	04/17/1995	<4.0	116	No Data	<1.0	No Data	<1.0	48300	~242	10.0
	NBD-351	10/02/1995	No Data	120	<35.6	~1.5	No Data	<1.1	49300	198	10.4

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated). "See Table" indicates that the reader should refer to Table A-20 for a list of detected constituents.
[b]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[c]Total dissolved solids

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Ra-228 (pCi/L)[b]	Rn-222 (pCi/L)[b]	Sb (µg/L)	Se (µg/L)	Semivolatile (µg/L)	Sn (µg/L)	SO_4 (µg/L)	TDS[c] (mg/L)	Temperature (degrees C)
92-03	NBD-258	04/19/1995	<4.2	1079	No Data	<1.0	No Data	<1.0	140000	~482	6.5
	NBD-355	10/04/1995	No Data	603	<35.6	~1.6	No Data	<1.1	170000	508	9.5
92-04	NBD-259	04/20/1995	<3.7	90	No Data	<1.0	No Data	<1.0	106000	528	10.2
	NBD-356	10/04/1995	No Data	86	<35.6	~1.3	No Data	<1.1	109000	375	10.7
92-05	NBD-252	04/18/1995	<3.1	844	No Data	~1.6	See Table	<1.0	516000	1070	6.6
	NBD-353	10/03/1995	No Data	577	<35.6	~1.7	No Data	<1.1	539000	1130	14.6
92-06	NBD-260	04/20/1995	<4.5	77	No Data	<1.0	No Data	<1.0	88100	~438	9.8
	NBD-352	10/03/1995	No Data	57	<35.6	~1.4	No Data	<1.1	90100	320	10.2
92-07	NBD-265	04/25/1995	<2.8	1097	No Data	6.4	No Data	<1.0	939000	2050	8.3
	NBD-364	10/09/1995	No Data	1092	<35.6	7.8	No Data	<1.1	975000	2110	14.0
92-08	NBD-267	04/25/1995	<3.0	1163	No Data	22.7	No Data	<1.0	707000	1630	7.7
	NBD-268	04/25/1995	<2.1	1264	No Data	24.9	No Data	<1.0	710000	1630	No Data
	NBD-367	10/10/1995	No Data	1364	<35.6	14.0	No Data	<1.1	831000	1910	11.0
92-09	NBD-263	04/24/1995	<2.2	525	No Data	<1.0	No Data	<1.0	850000	1870	8.1
	NBD-264	04/24/1995	<2.0	583	No Data	<1.0	No Data	<1.0	844000	1870	No Data
	NBD-359	10/04/1995	No Data	496	<35.6	~1.2	No Data	<1.1	803000	1820	12.8
92-10	NBD-262	04/24/1995	<4.9	176	No Data	<1.0	No Data	<1.0	142000	530	9.9
	NBD-357	10/04/1995	No Data	184	<35.6	<1.1	No Data	<1.1	152000	460	9.8
	NBD-358	10/04/1995	No Data	158	<35.6	~1.5	No Data	<1.1	153000	463	No Data
92-11	NBD-261	04/20/1995	<3.5	933	No Data	6.7	No Data	<1.0	1140000	2400	9.2
	NBD-361	10/06/1995	No Data	829	<35.6	9.1	No Data	<1.1	1080000	2300	12.1
92-12	NBD-745	04/27/1995	<2.8	52	No Data	<1.0	No Data	~2.7	113000	980	9.7
	NBD-848	10/10/1995	No Data	49	<35.6	~2.6	No Data	<1.1	109000	473	10.7
92-13	NBD-744	04/24/1995	<1.6	287	No Data	<1.0	No Data	<1.0	19900	836	9.7
	NBD-847	10/10/1995	No Data	155	<35.6	~1.6	No Data	<1.1	18900	418	10.6
93-01	NBB-584	04/27/1995	3.7	120	No Data	<1.0	No Data	<1.0	100000	524	9.9
	NBD-360	10/05/1995	No Data	110	<35.6	<1.1	No Data	<1.1	101000	345	10.1
P92-02	NBD-366	10/10/1995	No Data	471	<35.6	<1.1	No Data	<1.1	1240000	2640	12.6
P92-04	NBD-845	10/09/1995	No Data	713	<35.6	~3.8	No Data	<1.1	805000	1900	10.6
P92-09	NBD-852	10/12/1995	No Data	336	<35.6	6.9	No Data	<1.1	1450000	3180	14.9

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated). "See Table" indicates that the reader should refer to Table A-20 for a list of detected constituents.
[b]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[c]Total dissolved solids

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Th-230 (pCi/L)[b]	Th-232 (pCi/L)[b]	Tl (µg/L)	Turbidity (NTU)[c]	U (µg/L)	U-234 (pCi/L)[b]	U-235 (pCi/L)[b]	U-238 (pCi/L)[b]	V (µg/L)
31NE93-205	NBD-743	04/20/1995	<0.3	<0.3	<1.0	0.81	<1.0	1.78	<0.3	<0.3	<4.0
	NBD-853	10/17/1995	<0.76	No Data	No Data	1.95	No Data	~2.3	<1.0	<1.0	<6.7
31SW91-03	NBD-272	04/26/1995	<0.3	<0.3	<1.0	1.70	2100	745.71	29.80	752.36	1200
	NBD-851	10/12/1995	<0.76	No Data	No Data	0.86	No Data	610	33.8	645	1250
31SW91-14	NBD-256	04/19/1995	<0.3	<0.3	<1.0	0.85	4080	1561.7	75.3	1600.7	785
	NBD-373	10/12/1995	~1.1	No Data	No Data	2.92	No Data	1290	76.6	1320	866
	NBD-374	10/12/1995	<0.76	No Data	No Data	No Data	No Data	1250	78.5	1320	869
31SW91-23	NBD-275	04/27/1995	<0.3	<0.3	<1.0	0.95	3750	1381.75	67.13	1433.83	<4.0
	NBD-372	10/12/1995	<0.76	No Data	No Data	1.79	No Data	446	27.2	458	<6.7
36SE93-201-2	NBD-273	04/26/1995	1.03	<0.3	<1.0	31.0	4200	1449.40	56.92	1449.63	93800
	NBD-375	10/12/1995	~1.2	No Data	No Data	53.3	No Data	1880	112	1900	159000
82-07	NBD-266	04/25/1995	<0.3	<0.3	<1.0	0.82	404	153.17	7.82	151.10	73.0
	NBD-365	10/09/1995	<0.76	No Data	No Data	1.03	No Data	142	~8.0	138	82.2
82-30B	NBD-274	04/26/1995	<0.3	<0.3	<1.0	1.05	965	378.84	17.76	382.05	1700
	NBD-368	10/10/1995	<0.76	No Data	No Data	0.72	No Data	340	17.1	353	2060
82-31B-E	NBD-254	04/18/1995	<0.3	<0.3	<1.0	0.24	21.6	16.30	0.39	7.85	<4.0
	NBD-371	10/11/1995	<0.76	No Data	No Data	1.10	No Data	21.5	<1.0	~9.6	<6.7
82-40A	NBD-270	04/26/1995	<0.3	<0.3	<1.0	3.23	2330	776.31	37.77	826.96	60.8
	NBD-271	04/26/1995	<0.3	<0.3	<1.0	1.70	2400	781.40	38.25	813.97	56.8
	NBD-370	10/11/1995	<0.76	No Data	No Data	2.20	No Data	2350	113	2400	61.8
82-42	NBD-253	04/18/1995	<0.3	<0.3	<1.0	1.78	48.9	20.85	1.23	18.04	219
	NBD-369	10/11/1995	<0.76	No Data	No Data	1.17	No Data	15.1	~1.3	16.0	220
83-70	NBD-269	04/25/1995	<0.3	<0.3	<1.0	0.18	<1.0	0.53	<0.3	<0.3	<4.0
	NBD-849	10/11/1995	<0.76	No Data	No Data	0.65	No Data	15.3	<1.0	<1.0	~23.2
88-85	NBD-255	04/18/1995	<0.3	<0.3	<1.0	2.30	571	214.90	13.51	216.36	412
	NBD-362	10/06/1995	<0.76	No Data	No Data	3.63	No Data	184	~9.5	202	458
	NBD-363	10/06/1995	<0.76	No Data	No Data	No Data	No Data	182	~9.8	203	454
92-01	NBD-257	04/19/1995	<0.3	<0.3	<1.0	3.84	~5.0	4.09	<0.3	1.86	<4.0
	NBD-354	10/03/1995	<0.76	No Data	No Data	3.26	No Data	5.5	<1.0	~2.7	<6.7
92-02	NBD-251	04/17/1995	<0.3	<0.3	<1.0	0.63	<1.0	0.82	<0.3	<0.3	<4.0
	NBD-351	10/02/1995	<0.76	No Data	No Data	0.77	No Data	~0.63	<1.0	<1.0	<6.7

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[c]Nephelometric turbidity units.

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Th-230 (pCi/L)[b]	Th-232 (pCi/L)[b]	Tl (µg/L)	Turbidity (NTU)[c]	U (µg/L)	U-234 (pCi/L)[b]	U-235 (pCi/L)[b]	U-238 (pCi/L)[b]	V (µg/L)
92-03	NBD-258	04/19/1995	<0.3	<0.3	<1.0	40.5	~2.5	2.09	<0.3	1.01	<4.0
	NBD-355	10/04/1995	<0.76	No Data	No Data	22.40	No Data	~2.4	<1.0	~1.1	<6.7
92-04	NBD-259	04/20/1995	<0.3	<0.3	<1.0	1.56	<1.0	3.73	<0.3	<0.3	<4.0
	NBD-356	10/04/1995	<0.76	No Data	No Data	0.48	No Data	~3.4	<1.0	<1.0	<6.7
92-05	NBD-252	04/18/1995	<0.3	<0.3	<1.0	3.08	~3.9	3.05	<0.3	1.38	<4.0
	NBD-353	10/03/1995	<0.76	No Data	No Data	2.63	No Data	~3.1	<1.0	~1.6	<6.7
92-06	NBD-260	04/20/1995	<0.3	<0.3	<1.0	1.38	<1.0	0.32	<0.3	<0.3	<4.0
	NBD-352	10/03/1995	<0.76	No Data	No Data	2.16	No Data	~0.88	<1.0	<1.0	<6.7
92-07	NBD-265	04/25/1995	<0.3	<0.3	<1.0	0.96	1300	468.11	22.61	476.26	426
	NBD-364	10/09/1995	<0.76	No Data	No Data	0.67	No Data	433	24.7	475	457
92-08	NBD-267	04/25/1995	<0.3	<0.3	<1.0	0.10	594	237.04	10.67	224.34	<4.0
	NBD-268	04/25/1995	<0.3	<0.3	<1.0	No Data	588	226.79	9.60	223.43	~6.8
	NBD-367	10/10/1995	<0.76	No Data	No Data	0.51	No Data	242	12.7	255	<6.7
92-09	NBD-263	04/24/1995	<0.3	<0.3	<1.0	0.94	256	96.74	4.81	94.05	<4.0
	NBD-264	04/24/1995	<0.3	<0.3	<1.0	No Data	255	94.03	3.85	91.74	<4.0
	NBD-359	10/04/1995	<0.76	No Data	No Data	0.67	No Data	89.6	~4.2	87.5	<6.7
92-10	NBD-262	04/24/1995	<0.3	<0.3	<1.0	2.15	<1.0	0.88	<0.3	<0.3	<4.0
	NBD-357	10/04/1995	<0.76	No Data	No Data	3.36	No Data	~0.85	<1.0	<1.0	<6.7
	NBD-358	10/04/1995	<0.76	No Data	No Data	No Data	No Data	~0.89	<1.0	<1.0	<6.7
92-11	NBD-261	04/20/1995	<0.3	<0.3	<1.0	0.87	2050	707.78	27.65	721.26	808
	NBD-361	10/06/1995	<0.76	No Data	No Data	1.08	No Data	559	26.1	~546	1000
92-12	NBD-745	04/27/1995	<0.3	<0.3	<1.0	285	~4.5	6.15	<0.3	1.66	~8.9
	NBD-848	10/10/1995	<0.76	No Data	No Data	338.0	No Data	~3.8	<1.0	~1.2	<6.7
92-13	NBD-744	04/24/1995	<0.3	<0.3	<1.0	66.0	~1.8	5.07	<0.3	1.24	<4.0
	NBD-847	10/10/1995	<0.76	No Data	No Data	>1000	No Data	5.9	<1.0	<1.0	<6.7
93-01	NBB-584	04/27/1995	<0.3	<0.3	<1.0	1.43	<1.0	0.63	<0.3	<0.3	<4.0
	NBD-360	10/05/1995	<0.76	No Data	No Data	1.00	No Data	~0.81	<1.0	<1.0	<6.7
P92-02	NBD-366	10/10/1995	<0.76	No Data	No Data	36.2	No Data	31.2	~1.8	26.7	<6.7
P92-04	NBD-845	10/09/1995	<0.76	No Data	No Data	4.48	No Data	24.8	~1.3	16.2	<6.7
P92-09	NBD-852	10/12/1995	<0.76	No Data	No Data	10.9	No Data	48.0	~2.5	43.0	<6.7

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[c]Nephelometric turbidity units.

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Volatile (µg/L)	Zn (µg/L)
31NE93-205	NBD-743	04/20/1995	No Data	~3.9
	NBD-853	10/17/1995	No Data	~10.1
31SW91-03	NBD-272	04/26/1995	No Data	~7.4
	NBD-851	10/12/1995	No Data	<3.3
31SW91-14	NBD-256	04/19/1995	No Detect	~7.3
	NBD-373	10/12/1995	No Data	~5.4
	NBD-374	10/12/1995	No Data	~6.7
31SW91-23	NBD-275	04/27/1995	No Data	~3.1
	NBD-372	10/12/1995	No Data	<3.3
36SE93-201-2	NBD-273	04/26/1995	No Data	~10.5
	NBD-375	10/12/1995	No Data	22.6
82-07	NBD-266	04/25/1995	No Data	~5.9
	NBD-365	10/09/1995	No Data	~6.4
82-30B	NBD-274	04/26/1995	No Data	<3.0
	NBD-368	10/10/1995	No Data	~5.2
82-31B-E	NBD-254	04/18/1995	No Detect	25.5
	NBD-371	10/11/1995	No Data	~18.6
82-40A	NBD-270	04/26/1995	No Data	~8.2
	NBD-271	04/26/1995	No Data	~9.8
	NBD-370	10/11/1995	No Data	~5.9
82-42	NBD-253	04/18/1995	No Detect	~10.5
	NBD-369	10/11/1995	No Data	<3.3
83-70	NBD-269	04/25/1995	No Data	~15.3
	NBD-849	10/11/1995	No Data	<3.3
88-85	NBD-255	04/18/1995	No Detect	~6.9
	NBD-362	10/06/1995	No Data	<3.3
	NBD-363	10/06/1995	No Data	<3.3
92-01	NBD-257	04/19/1995	No Data	~6.6
	NBD-354	10/03/1995	No Data	<3.3
92-02	NBD-251	04/17/1995	No Data	~18.5
	NBD-351	10/02/1995	No Data	<3.3

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

Table A-19 (continued). Groundwater Chemistry Data Collected At and Near the MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Volatile (µg/L)	Zn (µg/L)
92-03	NBD-258	04/19/1995	No Data	~13.1
	NBD-355	10/04/1995	No Data	~4.6
92-04	NBD-259	04/20/1995	No Data	24.2
	NBD-356	10/04/1995	No Data	<3.3
92-05	NBD-252	04/18/1995	No Detect	29.7
	NBD-353	10/03/1995	No Data	<3.3
92-06	NBD-260	04/20/1995	No Data	~6.9
	NBD-352	10/03/1995	No Data	~3.4
92-07	NBD-265	04/25/1995	No Data	~4.2
	NBD-364	10/09/1995	No Data	<3.3
92-08	NBD-267	04/25/1995	No Data	~4.1
	NBD-268	04/25/1995	No Data	~5.5
	NBD-367	10/10/1995	No Data	~8.0
92-09	NBD-263	04/24/1995	No Data	~4.5
	NBD-264	04/24/1995	No Data	<3.0
	NBD-359	10/04/1995	No Data	<3.3
92-10	NBD-262	04/24/1995	No Data	~6.7
	NBD-357	10/04/1995	No Data	<3.3
	NBD-358	10/04/1995	No Data	~3.4
92-11	NBD-261	04/20/1995	No Data	~18.0
	NBD-361	10/06/1995	No Data	<3.3
92-12	NBD-745	04/27/1995	No Data	74.3
	NBD-848	10/10/1995	No Data	~4.9
92-13	NBD-744	04/24/1995	No Data	39.7
	NBD-847	10/10/1995	No Data	<3.3
93-01	NBB-584	04/27/1995	No Data	~4.8
	NBD-360	10/05/1995	No Data	<3.3
P92-02	NBD-366	10/10/1995	No Data	~8.2
P92-04	NBD-845	10/09/1995	No Data	~6.3
P92-09	NBD-852	10/12/1995	No Data	~4.8

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

Table A-20. Organic Constituents Detected in Samples Collected from Groundwater At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Analyte Name	CAS Number[b]	Concentration (µg/L)	Category	TCL Constituent[c]
31SW91-14	NBD-256	04/19/1995	bis(2-ethylhexyl)Phthalate	117-81-7	790[d]	Semivolatile	X
			Unknown	UNK-10.04	~10	Semivolatile	
			Unknown	UNK-11.22	~6	Semivolatile	
			Unknown	UNK-8.00	~4	Semivolatile	
82-31B-E	NBD-254	04/18/1995	bis(2-ethylhexyl)Phthalate	117-81-7	~2	Semivolatile	X
			Unknown	UNK-10.04	~11	Semivolatile	
			Unknown	UNK-8.00	~6	Semivolatile	
82-42	NBD-253	04/18/1995	bis(2-ethylhexyl)Phthalate	117-81-7	~7	Semivolatile	X
			Unknown	UNK-10.02	~8	Semivolatile	
			Unknown	UNK-30.92	~6	Semivolatile	
			Unknown	UNK-7.98	~4	Semivolatile	
88-85	NBD-255	04/18/1995	bis(2-ethylhexyl)Phthalate	117-81-7	~2	Semivolatile	X
			Unknown	UNK-10.02	~9	Semivolatile	
			Unknown	UNK-11.20	~7	Semivolatile	
			Unknown	UNK-8.00	~4	Semivolatile	
92-05	NBD-252	04/18/1995	bis(2-ethylhexyl)Phthalate	117-81-7	73	Semivolatile	X
			Unknown	UNK-10.02	~6	Semivolatile	
			Unknown	UNK-29.02	~5	Semivolatile	

[a]A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]CAS numbers are not assigned to unknown analytes; identifiers listed in this column for unknown analytes reflect the peak and range as displayed graphically by the mass spectrometer.
[c]Constituents not identified by an "X" are tentatively identified compounds.
[d]The result exceeded the calibration range of the instrument. The sample was diluted by a factor of 20 and reanalyzed. The result from the dilution and reanalysis was 2600 µg/L.

Table A-21. Ecological Risk Assessment Biota Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Sample Type	Ticket Number	Sample Date	Al (mg/kg)	Alpha (pCi/g)	As (mg/kg)	Beta (pCi/g)	Co (mg/kg)	Cu (mg/kg)
Montezuma Transect 1	Forbs	NBF-279	09/01/1995	12.8	0.42	0.19	6.71	<0.05	4.0
Montezuma Transect 2	Forbs	NBF-280	09/01/1995	20.2	<0.23	<0.13	7.07	0.05	<2.6
Montezuma Transect 3	Forbs	NBF-281	09/01/1995	35.4	1.06	<0.14	6.29	0.12	3.2
Montezuma Transect 4	Forbs	NBF-282	09/01/1995	18.0	No Data	<0.24	No Data	<0.08	4.3
Montezuma Transect 5	Forbs	NBF-283	08/31/1995	333	1.22	0.29	9.06	0.20	4.1
Montezuma Transect 5 (Dup)	Forbs	NBF-284	08/31/1995	419	1.36	0.25	7.95	0.20	3.8
Montezuma Transect 6	Forbs	NBF-285	08/31/1995	608	6.3	0.60	10.0	0.35	5.4
Montezuma Transect 7	Forbs	NBF-286	08/31/1995	51.8	<0.32	1.5	6.35	0.06	2.9
Montezuma Transect 8	Forbs	NBF-287	08/31/1995	365	1.45	0.33	9.87	0.23	3.3
Montezuma Transect 9	Forbs	NBF-288	08/31/1995	208	0.43	0.25	5.77	0.17	3.0
Vega Transect	Forbs	NBF-308	08/30/1995	152	<0.30	0.30	7.05	0.12	4.3
Verdure Transect 1	Forbs	NBF-289	08/30/1995	102	<0.38	0.22	7.18	0.08	3.1
Verdure Transect 2	Forbs	NBF-290	08/30/1995	39.2	<0.30	0.27	6.04	0.07	4.4
Verdure Transect 2 (Dup)	Forbs	NBF-291	08/31/1995	54.1	<0.25	0.38	5.32	0.06	3.2
Verdure Transect 3	Forbs	NBF-292	08/30/1995	31.1	<0.24	0.14	4.53	0.06	15.5
Montezuma Transect 1	Grasses	NBF-265	09/01/1995	23.5	0.99	0.71	4.78	0.09	3.2
Montezuma Transect 2	Grasses	NBF-266	09/01/1995	9.4	<0.51	0.62	7.14	<0.05	5.1
Montezuma Transect 3	Grasses	NBF-267	09/01/1995	22.5	1.88	0.72	5.66	0.08	3.5
Montezuma Transect 4	Grasses	NBF-268	09/01/1995	39.4	1.28	0.46	5.95	0.06	4.1
Montezuma Transect 5	Grasses	NBF-269	08/31/1995	184	0.63	0.95	4.07	0.19	6.5
Montezuma Transect 5 (Dup)	Grasses	NBF-270	08/31/1995	191	1.12	0.53	6.76	0.15	2.8
Montezuma Transect 6	Grasses	NBF-271	08/31/1995	154	2.36	0.57	5.50	0.12	3.0
Montezuma Transect 7	Grasses	NBF-272	08/31/1995	59.8	<0.32	0.49	6.27	0.07	2.6
Montezuma Transect 8	Grasses	NBF-273	08/31/1995	313	<0.50	0.88	6.41	0.25	2.3
Montezuma Transect 9	Grasses	NBF-274	08/31/1995	187	0.60	0.61	5.32	0.12	34.9
Vega Transect	Grasses	NBF-307	08/30/1995	300	<0.45	0.60	5.12	0.19	2.1
Verdure Transect 1	Grasses	NBF-275	08/30/1995	204	<0.49	0.72	7.26	0.19	2.3
Verdure Transect 2	Grasses	NBF-276	08/30/1995	17.3	<0.37	0.72	5.40	0.13	2.8
Verdure Transect 2 (Dup)	Grasses	NBF-277	08/31/1995	131	<0.43	1.0	5.29	0.21	2.7
Verdure Transect 3	Grasses	NBF-278	08/30/1995	35.3	<0.52	0.88	3.75	0.14	2.9

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

Table A-21 (continued). Ecological Risk Assessment Biota Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Sample Type	Ticket Number	Sample Date	Al (mg/kg)	Alpha (pCi/g)	As (mg/kg)	Beta (pCi/g)	Co (mg/kg)	Cu (mg/kg)
Montezuma Transect 1	Shrubs	NBF-293	09/01/1995	9.9	<0.26	0.50	5.83	<0.05	3.1
Montezuma Transect 2	Shrubs	NBF-294	09/01/1995	8.6	<0.29	0.52	4.99	0.06	3.2
Montezuma Transect 3	Shrubs	NBF-295	09/01/1995	15.9	0.32	0.67	5.47	0.08	5.3
Montezuma Transect 4	Shrubs	NBF-296	09/01/1995	16.6	0.53	0.53	4.26	0.10	2.5
Montezuma Transect 5	Shrubs	NBF-297	08/31/1995	19.8	<0.36	0.54	4.57	0.05	2.8
Montezuma Transect 5 (Dup)	Shrubs	NBF-298	08/31/1995	117	<0.27	0.67	5.43	0.14	5.0
Montezuma Transect 6	Shrubs	NBF-299	08/31/1995	14.6	<0.30	0.54	5.45	<0.05	4.0
Montezuma Transect 7	Shrubs	NBF-300	08/31/1995	45.6	<0.31	0.46	6.05	<0.05	2.9
Montezuma Transect 8	Shrubs	NBF-301	08/31/1995	25.5	<0.30	0.49	6.16	0.05	3.2
Montezuma Transect 9	Shrubs	NBF-302	08/31/1995	53.6	<0.32	0.61	5.70	0.05	3.4
Vega Transect	Shrubs	NBF-309	08/30/1995	32.7	<0.34	0.61	6.92	0.05	3.8
Verdure Transect 1	Shrubs	NBF-303	08/30/1995	14.5	<0.29	0.40	7.13	0.12	4.4
Verdure Transect 2	Shrubs	NBF-304	08/30/1995	9.6	<0.31	0.55	6.13	0.09	3.7
Verdure Transect 2 (Dup)	Shrubs	NBF-305	08/31/1995	7.3	<0.25	0.47	6.05	0.12	3.8
Verdure Transect 3	Shrubs	NBF-306	08/30/1995	19.1	<0.28	0.56	4.81	0.06	3.1
Montezuma Creek Sample 1	Swallow carcass	NBE-404	07/11/1995	15.7	<0.32	0.32	1.93	<0.05	2.3
Montezuma Creek Sample 2	Swallow carcass	NBE-408	07/11/1995	11.6	<0.25	0.39	2.11	<0.05	2.2
Montezuma Creek Sample 3	Swallow carcass	NBE-409	07/11/1995	14.0	<0.24	0.33	2.21	<0.05	2.6
Vega Creek Sample 1	Swallow carcass	NBE-418	08/03/1995	15.9	<0.23	0.25	1.96	<0.05	2.3
Vega Creek Sample 2	Swallow carcass	NBE-419	08/03/1995	17.5	<0.24	0.33	2.21	<0.05	2.8
Vega Creek Sample 3	Swallow carcass	NBE-420	08/03/1995	13.4	<0.44	0.38	2.44	<0.05	2.5
Montezuma Creek	Swallow liver	NBE-402	07/11/1995	<2.3	<0.17	0.33	2.19	<0.05	6.0
Vega Creek	Swallow liver	NBE-416	08/03/1995	<1.3	<0.14	0.22	2.07	<0.05	3.4
Montezuma Transect 1	Terrestrial invertebrates	NBF-251	09/13/1995	31.2	0.22	0.44	3.24	0.08	~11.3
Montezuma Transect 2	Terrestrial invertebrates	NBF-252	09/13/1995	16.9	0.44	0.35	3.17	<0.05	~14.0
Montezuma Transect 3	Terrestrial invertebrates	NBF-253	09/13/1995	18.4	0.37	0.35	3.59	0.05	~19.1
Montezuma Transect 4	Terrestrial invertebrates	NBF-254	09/13/1995	12.9	<0.22	0.37	3.12	0.05	~11.9
Montezuma Transect 4 (Dup)	Terrestrial invertebrates	NBF-255	09/13/1995	<6.1	<0.16	0.42	3.11	<0.05	~12.9
Montezuma Transect 5	Terrestrial invertebrates	NBF-256	09/12/1995	103	0.33	0.63	3.51	0.25	~13.9
Montezuma Transect 6	Terrestrial invertebrates	NBF-257	09/12/1995	503	2.6	0.85	7.06	0.49	~10.2
Montezuma Transect 7	Terrestrial invertebrates	NBF-258	09/12/1995	18.1	0.140	0.37	3.38	0.07	~10.4
Montezuma Transect 8	Terrestrial invertebrates	NBF-259	09/12/1995	183	1.47	0.80	5.27	0.38	~9.3
Montezuma Transect 9	Terrestrial invertebrates	NBF-260	09/12/1995	30.2	<0.29	0.43	3.31	0.07	~14.9
Verdure Transect 1	Terrestrial invertebrates	NBF-261	09/11/1995	85.1	0.38	0.40	3.32	0.12	~9.9
Verdure Transect 1 (Dup)	Terrestrial invertebrates	NBF-262	09/13/1995	27.0	<0.24	0.42	2.72	0.06	~11.3
Verdure Transect 2	Terrestrial invertebrates	NBF-263	09/11/1995	24.7	<0.30	0.43	3.42	0.08	~12.9
Verdure Transect 3	Terrestrial invertebrates	NBF-264	09/11/1995	18.0	<0.19	0.34	3.40	0.08	~9.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

Table A-21 (continued). Ecological Risk Assessment Biota Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Sample Type	Ticket Number	Sample Date	Mo (mg/kg)	Se (mg/kg)	Sn (mg/kg)	U (mg/kg)	V (mg/kg)	Zn (mg/kg)
Montezuma Transect 1	Forbs	NBF-279	09/01/1995	1.4	0.91	<0.05	0.07	<0.18	~14.1
Montezuma Transect 2	Forbs	NBF-280	09/01/1995	2.1	0.51	<0.09	0.06	<0.17	~14.9
Montezuma Transect 3	Forbs	NBF-281	09/01/1995	1.8	0.23	<0.21	0.13	0.58	~16.0
Montezuma Transect 4	Forbs	NBF-282	09/01/1995	0.21	0.41	<0.16	<0.08	<0.33	~5.2
Montezuma Transect 5	Forbs	NBF-283	08/31/1995	0.33	0.38	<0.08	0.08	0.81	~11.0
Montezuma Transect 5 (Dup)	Forbs	NBF-284	08/31/1995	0.28	0.26	<0.12	<0.05	0.88	~12.9
Montezuma Transect 6	Forbs	NBF-285	08/31/1995	0.95	0.48	<0.12	0.29	2.9	~13.6
Montezuma Transect 7	Forbs	NBF-286	08/31/1995	0.28	0.40	<0.92	0.13	<0.18	~12.3
Montezuma Transect 8	Forbs	NBF-287	08/31/1995	0.24	<0.19	<0.14	0.15	0.77	~13.7
Montezuma Transect 9	Forbs	NBF-288	08/31/1995	1.4	0.20	~1.1	0.56	0.67	~11.1
Vega Transect	Forbs	NBF-308	08/30/1995	0.46	0.29	<0.05	0.06	<0.20	~13.5
Verdure Transect 1	Forbs	NBF-289	08/30/1995	0.72	0.33	<0.08	<0.05	0.23	~11.4
Verdure Transect 2	Forbs	NBF-290	08/30/1995	0.59	0.40	<0.05	<0.05	<0.19	~11.0
Verdure Transect 2 (Dup)	Forbs	NBF-291	08/31/1995	0.91	0.34	<0.19	<0.05	<0.19	~11.4
Verdure Transect 3	Forbs	NBF-292	08/30/1995	2.5	<0.19	<0.81	<0.05	<0.19	~17.6
Montezuma Transect 1	Grasses	NBF-265	09/01/1995	1.2	0.95	<0.08	~0.21	2.3	~10.9
Montezuma Transect 2	Grasses	NBF-266	09/01/1995	1.8	0.42	~0.96	<0.05	<0.19	~11.2
Montezuma Transect 3	Grasses	NBF-267	09/01/1995	1.5	1.0	~0.16	~0.18	2.3	~11.3
Montezuma Transect 4	Grasses	NBF-268	09/01/1995	0.74	0.32	~0.15	~0.26	0.32	~13.3
Montezuma Transect 5	Grasses	NBF-269	08/31/1995	1.3	0.40	<0.07	<0.05	0.59	~14.2
Montezuma Transect 5 (Dup)	Grasses	NBF-270	08/31/1995	1.5	0.41	~0.18	<0.05	0.49	<9.7
Montezuma Transect 6	Grasses	NBF-271	08/31/1995	1.8	0.77	~0.17	<0.05	0.67	<7.8
Montezuma Transect 7	Grasses	NBF-272	08/31/1995	0.34	0.91	<0.06	<0.05	0.23	~16.9
Montezuma Transect 8	Grasses	NBF-273	08/31/1995	2.0	0.55	~0.13	~0.08	0.88	<9.4
Montezuma Transect 9	Grasses	NBF-274	08/31/1995	0.75	0.36	~0.09	~0.35	0.42	~25.6
Vega Transect	Grasses	NBF-307	08/30/1995	0.29	0.24	<0.05	<0.05	0.54	<7.9
Verdure Transect 1	Grasses	NBF-275	08/30/1995	2.0	0.34	~0.14	<0.05	0.57	<9.6
Verdure Transect 2	Grasses	NBF-276	08/30/1995	1.1	0.41	<0.05	<0.05	<0.19	~11.7
Verdure Transect 2 (Dup)	Grasses	NBF-277	08/31/1995	0.83	0.25	~0.09	<0.05	0.33	~15.2
Verdure Transect 3	Grasses	NBF-278	08/30/1995	1.5	0.42	~0.12	<0.05	0.20	~13.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

Table A-21 (continued). Ecological Risk Assessment Biota Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Sample Type	Ticket Number	Sample Date	Mo (mg/kg)	Se (mg/kg)	Sn (mg/kg)	U (mg/kg)	V (mg/kg)	Zn (mg/kg)
Montezuma Transect 1	Shrubs	NBF-293	09/01/1995	0.25	0.39	<0.22	~0.30	<0.20	19.7
Montezuma Transect 2	Shrubs	NBF-294	09/01/1995	0.21	0.32	<0.29	<0.05	<0.19	19.3
Montezuma Transect 3	Shrubs	NBF-295	09/01/1995	0.45	0.72	<0.23	~0.23	<0.19	50.8
Montezuma Transect 4	Shrubs	NBF-296	09/01/1995	0.20	0.50	<0.24	~0.48	<0.20	64.7
Montezuma Transect 5	Shrubs	NBF-297	08/31/1995	0.18	0.47	<0.25	<0.05	<0.20	11.9
Montezuma Transect 5 (Dup)	Shrubs	NBF-298	08/31/1995	0.24	0.34	<0.20	<0.05	0.41	14.7
Montezuma Transect 6	Shrubs	NBF-299	08/31/1995	0.36	0.76	<0.20	<0.05	<0.20	16.4
Montezuma Transect 7	Shrubs	NBF-300	08/31/1995	0.14	0.27	<0.19	<0.05	<0.20	10
Montezuma Transect 8	Shrubs	NBF-301	08/31/1995	0.21	0.32	<0.22	<0.05	<0.20	13.5
Montezuma Transect 9	Shrubs	NBF-302	08/31/1995	0.19	0.44	<0.22	~0.07	0.21	11.0
Vega Transect	Shrubs	NBF-309	08/30/1995	0.11	0.36	<0.22	<0.05	<0.20	20.6
Verdure Transect 1	Shrubs	NBF-303	08/30/1995	0.25	0.27	<0.24	<0.05	<0.20	37.2
Verdure Transect 2	Shrubs	NBF-304	08/30/1995	0.77	0.32	<0.25	<0.05	0.30	48.9
Verdure Transect 2 (Dup)	Shrubs	NBF-305	08/31/1995	0.19	0.41	<0.22	<0.05	<0.20	24.4
Verdure Transect 3	Shrubs	NBF-306	08/30/1995	0.31	0.27	<0.21	<0.05	<0.20	20.9
Montezuma Creek Sample 1	Swallow carcass	NBE-404	07/11/1995	<0.10	1.3	<0.23	<0.05	<0.19	30.9
Montezuma Creek Sample 2	Swallow carcass	NBE-408	07/11/1995	<0.10	1.8	<0.15	<0.05	<0.19	33.9
Montezuma Creek Sample 3	Swallow carcass	NBE-409	07/11/1995	<0.10	1.7	<0.15	<0.05	<0.19	30.8
Vega Creek Sample 1	Swallow carcass	NBE-418	08/03/1995	<0.10	1.0	<0.18	<0.05	<0.20	29.1
Vega Creek Sample 2	Swallow carcass	NBE-419	08/03/1995	<0.10	0.98	<0.16	<0.05	<0.20	25.7
Vega Creek Sample 3	Swallow carcass	NBE-420	08/03/1995	<0.10	0.93	<0.16	<0.05	<0.20	26.8
Montezuma Creek	Swallow liver	NBE-402	07/11/1995	0.81	1.7	<0.15	<0.05	<0.20	27.9
Vega Creek	Swallow liver	NBE-416	08/03/1995	0.49	1.3	<0.13	<0.05	<0.19	20.3
Montezuma Transect 1	Terrestrial invertebrates	NBF-251	09/13/1995	0.42	0.48	<0.16	<0.05	<0.20	~46.7
Montezuma Transect 2	Terrestrial invertebrates	NBF-252	09/13/1995	0.36	0.41	<0.18	0.06	0.26	~50.5
Montezuma Transect 3	Terrestrial invertebrates	NBF-253	09/13/1995	0.48	0.54	<0.17	<0.05	0.20	~52.5
Montezuma Transect 4	Terrestrial invertebrates	NBF-254	09/13/1995	0.36	0.59	<0.19	<0.05	<0.19	~47.0
Montezuma Transect 4 (Dup)	Terrestrial invertebrates	NBF-255	09/13/1995	0.27	0.55	<0.33	<0.05	<0.20	~46.0
Montezuma Transect 5	Terrestrial invertebrates	NBF-256	09/12/1995	0.51	1.8	<0.18	<0.05	<0.20	~50.4
Montezuma Transect 6	Terrestrial invertebrates	NBF-257	09/12/1995	0.45	2.9	<0.14	0.13	1.6	~54.1
Montezuma Transect 7	Terrestrial invertebrates	NBF-258	09/12/1995	0.83	0.33	<0.21	<0.05	<0.20	~44.4
Montezuma Transect 8	Terrestrial invertebrates	NBF-259	09/12/1995	0.38	2.4	<0.17	0.09	0.56	~47.5
Montezuma Transect 9	Terrestrial invertebrates	NBF-260	09/12/1995	0.54	0.33	<0.20	<0.05	<0.20	~50.8
Verdure Transect 1	Terrestrial invertebrates	NBF-261	09/11/1995	0.42	0.26	<0.16	<0.05	<0.19	~42.6
Verdure Transect 1 (Dup)	Terrestrial invertebrates	NBF-262	09/13/1995	0.38	0.30	<0.19	<0.05	<0.20	~48.3
Verdure Transect 2	Terrestrial invertebrates	NBF-263	09/11/1995	0.46	0.27	<0.19	<0.05	<0.19	~50.5
Verdure Transect 3	Terrestrial invertebrates	NBF-264	09/11/1995	0.60	<0.20	<0.19	<0.05	<0.20	~46.9

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).

Table A-22. Ecological Risk Assessment Soil Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Al (mg/kg)	As (mg/kg)	B (mg/kg)	Co (mg/kg)	Cu (mg/kg)	K-40 (pCi/g)	LOD[b] (%)	Mn (mg/kg)	Mo (mg/kg)
01SS95-01A	NBE-803	07/17/1995	14200	5.7	~7.6	8.1	56.9	19.38	11.54	444	<2.6
01SS95-01B	NBE-804	07/17/1995	13600	7.0	~6.0	8.2	67.8	18.24	15.29	472	<2.6
01SS95-02A	NBE-809	07/18/1995	13700	~3.1	~5.1	6.7	17.1	17.69	6.30	509	<2.6
01SS95-02B	NBE-810	07/18/1995	16100	5.1	~6.4	6.6	16.5	17.33	6.86	494	<2.6
02SS95-01A	NBE-805	07/17/1995	11700	3.4	~6.1	5.4	24.1	18.55	12.85	324	<2.6
02SS95-01B	NBE-806	07/17/1995	13200	3.7	~5.8	6.3	15.4	<2.07	13.10	308	<2.6
02SS95-02A	NBE-807	07/17/1995	14300	2.9	~5.1	5.9	12.5	17.40	10.49	469	<2.6
02SS95-02B	NBE-808	07/17/1995	16400	4.2	~7.0	6.4	13.3	18.71	11.33	525	<2.6
03SS95-01A	NBE-811	07/18/1995	10000	10.2	~5.7	9.2	91.9	18.20	5.25	370	<2.6
03SS95-01B	NBE-812	07/18/1995	13500	8.6	~5.9	8.8	70.6	20.61	7.99	470	<2.6
	NBE-813	07/18/1995	12700	10.5	~4.6	9.2	71.8	21.16	8.07	487	<2.6
03SS95-02A	NBE-814	07/18/1995	13000	5.5	~6.6	6.4	18.5	19.00	6.22	509	<2.6
03SS95-02B	NBE-815	07/18/1995	15900	~1.7	~6.8	7.0	15.1	19.50	7.35	529	<2.6
04SS95-01A	NBE-816	07/19/1995	11600	6.3	~7.2	6.0	40.3	16.21	5.18	366	<2.6
04SS95-01B	NBE-817	07/19/1995	10600	6.5	~3.8	5.3	25.4	15.92	6.39	318	<2.6
04SS95-02A	NBE-826	07/19/1995	13000	5.7	~6.8	6.4	20.3	17.34	8.84	447	<2.6
04SS95-02B	NBE-827	07/19/1995	13200	3.8	~5.2	6.4	15.2	18.33	10.73	411	<2.6
05SS95-01A	NBE-830	07/19/1995	11600	13.5	~2.8	9.3	86.6	16.92	38.43	2300	<2.6
05SS95-01B	NBE-831	07/19/1995	12500	18.6	~7.7	10.0	189	16.70	23.71	365	<2.6
	NBE-832	07/19/1995	11900	13.1	~5.2	12.0	217	13.68	23.71	440	<2.6
05SS95-02A	NBE-828	07/19/1995	10500	3.2	~7.0	5.5	12.7	16.11	15.87	383	<2.6
05SS95-02B	NBE-829	07/19/1995	8530	2.6	~2.1	~4.5	9.5	17.06	23.13	255	<2.6
06SS95-01A	NBE-834	07/20/1995	8170	9.1	~2.1	7.1	80.3	15.19	6.52	300	<2.6
06SS95-01B	NBE-835	07/20/1995	8960	8.4	~2.2	5.3	29.0	15.64	8.63	322	<2.6
06SS95-02A	NBE-836	07/20/1995	10600	2.8	~4.5	~4.8	10.8	17.27	5.36	333	<2.6
06SS95-02B	NBE-837	07/20/1995	12700	2.9	~3.8	5.4	10.6	16.53	8.78	367	<2.6
07SS95-01A	NBE-841	07/25/1995	10900	5.3	~3.8	5.2	62.2	26.33	17.03	365	<2.6
07SS95-01B	NBE-842	07/25/1995	9750	13.1	~2.7	6.1	59.1	28.91	11.01	409	<2.6
07SS95-02A	NBE-839	07/24/1995	14100	3.4	~7.1	5.4	14.2	29.50	13.39	367	<2.6
07SS95-02B	NBE-840	07/24/1995	14000	4.1	~4.3	6.2	12.7	29.30	16.30	389	<2.6
08SS95-01A	NBE-846	07/25/1995	12700	6.1	~7.1	~4.1	15.5	24.33	8.35	326	<2.6
08SS95-01B	NBE-847	07/25/1995	9690	6.9	~3.7	~4.5	25.6	24.50	8.63	361	<2.6
08SS95-02A	NBE-843	07/25/1995	10100	5.7	~3.5	~4.9	12.5	25.12	10.98	379	<2.6
08SS95-02B	NBE-844	07/25/1995	10300	3.9	~4.3	5.4	51.9	29.55	16.90	339	<2.6
	NBE-845	07/25/1995	9600	4.8	~2.7	5.0	50.0	29.82	16.58	344	<2.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Loss on drying measured as a percentage.

Table A-22 (continued). Ecological Risk Assessment Soil Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Al (mg/kg)	As (mg/kg)	B (mg/kg)	Co (mg/kg)	Cu (mg/kg)	K-40 (pCi/g)	LOD[b] (%)	Mn (mg/kg)	Mo (mg/kg)
09SS95-01A	NBE-850	07/25/1995	9730	3.5	~4.3	~3.9	17.1	25.51	11.41	324	<2.6
09SS95-01B	NBF-001	07/25/1995	9670	7.6	~3.5	5.4	66.1	26.04	13.59	400	<2.6
09SS95-02A	NBE-848	07/25/1995	11300	4.5	~5.4	~4.6	28.0	26.50	24.40	364	<2.6
09SS95-02B	NBE-849	07/25/1995	9880	8.4	~3.8	8.3	226	25.68	18.77	463	<2.6
10SS95-01A	NBF-002	07/26/1995	10800	4.3	~4.6	~4.1	8.0	27.39	3.64	329	<2.6
10SS95-01B	NBF-003	07/26/1995	9790	4.1	~3.3	~4.1	7.6	24.29	5.28	349	<2.6
10SS95-02A	NBF-004	07/26/1995	8090	12.1	~4.1	~3.9	7.2	27.28	5.51	344	<2.6
10SS95-02B	NBF-005	07/26/1995	7640	4.7	~2.6	5.1	6.9	23.90	5.69	440	<2.6
	NBF-006	07/27/1995	8180	5.0	~1.9	~4.9	7.4	25.82	6.26	420	<2.6
11SS95-01A	NBF-010	07/31/1995	12100	5.1	~8.7	~4.1	7.7	24.96	2.61	377	<2.6
11SS95-01B	NBF-011	07/31/1995	11700	5.4	~6.5	~4.7	6.9	23.68	5.49	361	<2.6
11SS95-02A	NBF-007	07/27/1995	10500	2.3	~3.4	~4.3	8.5	29.93	5.46	338	<2.6
11SS95-02B	NBF-008	07/27/1995	10900	2.2	~2.2	~4.8	8.2	29.65	8.51	324	<2.6
12SS95-01A	NBF-012	07/31/1995	8450	2.4	~5.0	~3.6	6.9	23.21	4.38	324	<2.6
12SS95-01B	NBF-013	07/31/1995	11300	3.1	~5.8	~4.5	8.2	26.97	8.72	335	<2.6
12SS95-02A	NBF-014	08/01/1995	12100	2.8	~5.7	5.2	10.1	25.01	5.00	446	<2.6
12SS95-02B	NBF-015	08/01/1995	12300	3.3	~6.1	5.2	9.7	27.62	8.15	440	<2.6
	NBF-016	08/01/1995	11300	3.7	~3.9	5.2	9.3	27.15	8.16	437	<2.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Loss on drying measured as a percentage.

Table A-22 (continued). Ecological Risk Assessment Soil Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Na (mg/kg)	NO_3+NO_2-N[b] (mg/kg)	Pb-210 (pCi/g)	pH	Po-210 (pCi/g)	Ra-226 (pCi/g)	Se (mg/kg)	Sn (mg/kg)	SO_4 (mg/kg)
01SS95-01A	NBE-803	07/17/1995	~339	2.2	8.46	7.7	9.12	14.54	0.81	<0.10	709
01SS95-01B	NBE-804	07/17/1995	~274	1.7	8.10	7.9	11.45	16.59	1.4	<0.10	745
01SS95-02A	NBE-809	07/18/1995	~140	3.9	<2	7.9	3.87	4.81	~0.39	<0.10	5.7
01SS95-02B	NBE-810	07/18/1995	~213	2.2	<2	8.1	3.83	5.35	0.51	<0.10	17.9
02SS95-01A	NBE-805	07/17/1995	~113	2.4	7.79	7.9	10.67	16.23	0.59	<0.10	6.7
02SS95-01B	NBE-806	07/17/1995	~183	2.4	<2	8.1	2.09	2.64	~0.34	<0.10	121
02SS95-02A	NBE-807	07/17/1995	~94.6	4.4	<2	7.7	2.11	2.55	~0.43	<0.10	9.8
02SS95-02B	NBE-808	07/17/1995	~200	1.9	<2	8.2	1.73	2.36	~0.39	<0.10	21.0
03SS95-01A	NBE-811	07/18/1995	~428	2.4	69.9	7.9	66.67	115.14	1.0	<0.10	6.7
03SS95-01B	NBE-812	07/18/1995	~464	3.1	41.9	8.3	43.98	75.32	0.73	<0.10	143
	NBE-813	07/18/1995	~408	2.2	42.6	8.3	42.71	73.00	0.74	<0.10	53.4
03SS95-02A	NBE-814	07/18/1995	~93.7	2.7	4.30	7.4	6.87	7.69	~0.40	<0.10	5.8
03SS95-02B	NBE-815	07/18/1995	~198	3.4	<2	7.8	2.22	3.16	~0.27	<0.10	15.8
04SS95-01A	NBE-816	07/19/1995	~176	3.4	17.5	8.0	21.44	30.77	1.1	<0.10	8.8
04SS95-01B	NBE-817	07/19/1995	~184	3.6	12.3	8.2	16.21	24.47	~0.37	<0.10	16.5
04SS95-02A	NBE-826	07/19/1995	~99.2	4.9	4.63	8.0	6.76	8.44	0.54	<0.10	11.2
04SS95-02B	NBE-827	07/19/1995	~109	4.1	<2	8.2	2.60	2.72	0.77	<0.10	10.5
05SS95-01A	NBE-830	07/19/1995	~407	1.9	15.7	7.5	18.86	27.91	2.0	<0.10	701
05SS95-01B	NBE-831	07/19/1995	~356	1.5	73.5	7.6	90.10	99.74	2.0	<0.10	558
	NBE-832	07/19/1995	~371	1.6	78.4	7.5	82.96	106.55	1.2	<0.10	436
05SS95-02A	NBE-828	07/19/1995	~116	3.1	<2	7.8	2.24	2.33	0.84	<0.10	52.5
05SS95-02B	NBE-829	07/19/1995	~93.2	2.2	<2	8.0	1.20	1.15	<0.20	<0.10	28.6
06SS95-01A	NBE-834	07/20/1995	~361	3.7	74.4	8.3	81.51	120.13	0.72	<0.10	17.4
06SS95-01B	NBE-835	07/20/1995	~222	2.7	23.5	8.2	27.76	39.54	0.64	<0.10	86.6
06SS95-02A	NBE-836	07/20/1995	~72.4	2.6	<2	7.5	2.42	1.82	0.84	<0.10	5.1
06SS95-02B	NBE-837	07/20/1995	~85.1	2.8	<2	8.0	1.00	1.20	~0.38	<0.10	5.8
07SS95-01A	NBE-841	07/25/1995	~464	2.3	8.7	7.9	9.89	14.17	0.55	<0.10	1270
07SS95-01B	NBE-842	07/25/1995	~346	1.7	11.0	8.2	19.82	17.36	0.69	<0.10	250
07SS95-02A	NBE-839	07/24/1995	~155	4.5	<2	7.8	1.88	2.35	0.69	<0.10	297
07SS95-02B	NBE-840	07/24/1995	~304	3.1	<2	8.0	0.99	2.42	~0.27	<0.10	520
08SS95-01A	NBE-846	07/25/1995	~137	2.5	2.0	8.2	2.74	3.44	0.66	<0.10	166
08SS95-01B	NBE-847	07/25/1995	~124	2.3	3.4	8.1	5.31	8.20	~0.26	<0.10	109
08SS95-02A	NBE-843	07/25/1995	~207	5.3	<2	7.7	1.87	2.69	0.51	<0.10	283
08SS95-02B	NBE-844	07/25/1995	~394	5.2	7.0	8.0	7.71	10.00	0.61	<0.10	459
	NBE-845	07/25/1995	~352	2.7	5.6	7.9	7.13	9.28	~0.31	<0.10	570

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b](Nitrate + nitrite) as nitrogen. The samples were acidified in the field, thus the nitrite was oxidized to nitrate.

Table A-22 (continued). Ecological Risk Assessment Soil Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Na (mg/kg)	NO_3+NO_2-N[b] (mg/kg)	Pb-210 (pCi/g)	pH	Po-210 (pCi/g)	Ra-226 (pCi/g)	Se (mg/kg)	Sn (mg/kg)	SO_4 (mg/kg)
09SS95-01A	NBE-850	07/25/1995	~210	7.6	2.5	8.1	4.49	5.11	~0.49	<0.10	195
09SS95-01B	NBF-001	07/25/1995	~210	1.9	12.2	8.3	14.00	16.95	0.89	<0.10	27.2
09SS95-02A	NBE-848	07/25/1995	854	2.0	6.4	7.8	6.88	9.46	0.86	<0.10	1890
09SS95-02B	NBE-849	07/25/1995	~319	1.8	35.3	8.0	36.67	42.19	1.5	<0.10	325
10SS95-01A	NBF-002	07/26/1995	~79.0	2.5	<2	8.1	1.49	1.57	~0.37	<0.10	7.8
10SS95-01B	NBF-003	07/26/1995	~110	2.2	<2	8.4	1.17	1.74	<0.20	<0.10	7.2
10SS95-02A	NBF-004	07/26/1995	~101	1.7	<2	7.6	1.91	1.53	<0.20	<0.10	388
10SS95-02B	NBF-005	07/26/1995	~120	2.1	<2	8.3	1.05	2.06	<0.20	<0.10	59.7
	NBF-006	07/27/1995	~143	1.9	<2	8.2	1.27	1.75	~0.22	<0.10	42.4
11SS95-01A	NBF-010	07/31/1995	~132	1.9	2.4	7.8	1.31	1.70	~0.49	<0.10	18.3
11SS95-01B	NBF-011	07/31/1995	~159	1.6	<2	8.4	0.93	1.59	<0.20	<0.10	7.3
11SS95-02A	NBF-007	07/27/1995	~58.5	1.4	<2	7.3	1.49	1.69	~0.46	<0.10	3.4
11SS95-02B	NBF-008	07/27/1995	~69.9	2.3	<2	7.9	0.90	1.82	<0.20	<0.10	10.5
12SS95-01A	NBF-012	07/31/1995	~157	1.3	<2	8.1	1.44	2.00	~0.29	<0.10	52.2
12SS95-01B	NBF-013	07/31/1995	~149	1.9	<2	7.8	0.83	1.70	~0.33	<0.10	37.7
12SS95-02A	NBF-014	08/01/1995	~90.3	1.6	<2	7.7	1.65	1.66	<0.20	<0.10	3.3
12SS95-02B	NBF-015	08/01/1995	~85.9	2.1	<2	8.3	0.78	1.92	~0.35	<0.10	4.5
	NBF-016	08/01/1995	~80.6	2.0	<2	8.2	0.85	2.12	<0.22	<0.10	4.2

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b](Nitrate + nitrite) as nitrogen. The samples were acidified in the field, thus the nitrite was oxidized to nitrate.

Table A-22 (continued). Ecological Risk Assessment Soil Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Th-230 (pCi/g)	Th-232 (pCi/g)	TOC[b] (mg/kg)	U-234 (pCi/g)	U-235 (pCi/g)	U-238 (pCi/g)	V (mg/kg)	Zn (mg/kg)
01SS95-01A	NBE-803	07/17/1995	14.7	2.05	24000	4.4	<0.20	4.6	67.3	68.8
01SS95-01B	NBE-804	07/17/1995	17.6	<0.33	5520	5.5	<0.20	5.7	71.5	61.7
01SS95-02A	NBE-809	07/18/1995	4.6	1.80	13000	2.1	<0.20	2.3	33.4	56.1
01SS95-02B	NBE-810	07/18/1995	4.9	1.43	10100	2.5	<0.20	2.7	40.2	51.7
02SS95-01A	NBE-805	07/17/1995	16.6	2.09	25400	5.8	<0.20	6.2	67.8	54.2
02SS95-01B	NBE-806	07/17/1995	2.5	1.80	1960	2.7	<0.20	3.0	33.3	52.1
02SS95-02A	NBE-807	07/17/1995	2.4	1.59	14500	1.4	<0.20	~1.6	20.4	45.2
02SS95-02B	NBE-808	07/17/1995	2.3	1.92	9700	1.4	<0.20	~1.6	23.0	46.4
03SS95-01A	NBE-811	07/18/1995	125	<1.09	9240	31.1	~1.4	33.3	316	59.6
03SS95-01B	NBE-812	07/18/1995	77.7	<0.64	4980	20.0	~0.86	20.6	263	61.2
	NBE-813	07/18/1995	81.2	<0.51	5060	19.1	~0.86	20.8	259	63.8
03SS95-02A	NBE-814	07/18/1995	7.4	1.66	11700	3.4	<0.20	3.5	43.4	47.5
03SS95-02B	NBE-815	07/18/1995	2.6	<0.19	9810	1.8	<0.20	~1.8	34.3	53.0
04SS95-01A	NBE-816	07/19/1995	35.1	<0.42	12000	7.3	~0.23	7.9	99.4	46.0
04SS95-01B	NBE-817	07/19/1995	29.4	<0.39	5650	7.2	~0.22	7.5	120	36.9
04SS95-02A	NBE-826	07/19/1995	9.1	1.75	13500	2.7	<0.20	3.0	44.0	57.5
04SS95-02B	NBE-827	07/19/1995	3.5	1.41	11400	1.8	<0.20	2.0	27.1	52.9
05SS95-01A	NBE-830	07/19/1995	26.9	<0.71	14200	9.2	~0.30	9.5	104	62.5
05SS95-01B	NBE-831	07/19/1995	118	<1.04	6570	19.0	~0.74	18.6	299	58.7
	NBE-832	07/19/1995	115	<0.98	4710	18.9	~0.76	18.9	341	66.8
05SS95-02A	NBE-828	07/19/1995	2.6	1.26	19900	1.6	<0.20	~1.8	24.2	49.0
05SS95-02B	NBE-829	07/19/1995	1.1	<0.37	12500	0.99	<0.20	~1.1	12.6	38.0
06SS95-01A	NBE-834	07/20/1995	141	<1.28	6110	27.4	~1.2	27.8	311	43.3
06SS95-01B	NBE-835	07/20/1995	45.6	<0.67	6310	10.8	~0.40	11.3	170	38.3
06SS95-02A	NBE-836	07/20/1995	1.6	1.49	11400	1.1	<0.20	~1.1	17.7	43.9
06SS95-02B	NBE-837	07/20/1995	1.2	1.33	9420	1.3	<0.20	~0.98	17.1	43.6
07SS95-01A	NBE-841	07/25/1995	13.0	<0.34	11000	4.3	<0.20	4.6	57.2	47.7
07SS95-01B	NBE-842	07/25/1995	16.5	2.19	6460	4.1	<0.20	4.3	69.9	45.0
07SS95-02A	NBE-839	07/24/1995	2.0	1.61	12800	1.4	<0.20	1.2	21.4	58.9
07SS95-02B	NBE-840	07/24/1995	1.5	2.61	8070	1.3	<0.20	1.2	18.6	52.2
08SS95-01A	NBE-846	07/25/1995	3.0	<0.54	8850	1.4	<0.20	1.6	27.6	34.7
08SS95-01B	NBE-847	07/25/1995	7.4	<0.79	4260	1.9	<0.20	2.0	33.5	35.9
08SS95-02A	NBE-843	07/25/1995	2.2	<0.56	7060	1.2	<0.20	1.3	18.3	35.7
08SS95-02B	NBE-844	07/25/1995	8.5	<0.75	7150	1.9	<0.20	2.0	32.0	40.8
	NBE-845	07/25/1995	7.8	2.71	6510	1.9	<0.20	2.0	28.4	42.8

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Total organic carbon.

Table A-22 (continued). Ecological Risk Assessment Soil Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Th-230 (pCi/g)	Th-232 (pCi/g)	TOC[b] (mg/kg)	U-234 (pCi/g)	U-235 (pCi/g)	U-238 (pCi/g)	V (mg/kg)	Zn (mg/kg)
09SS95-01A	NBE-850	07/25/1995	4.9	<0.49	10700	2.5	<0.20	2.5	23.3	34.1
09SS95-01B	NBF-001	07/25/1995	18.1	2.34	8180	3.8	<0.20	4.0	59.2	40.1
09SS95-02A	NBE-848	07/25/1995	9.4	1.89	14200	5.5	~0.27	6.0	43.3	39.3
09SS95-02B	NBE-849	07/25/1995	41.2	<1.01	10200	6.0	~0.26	6.3	100	51.8
10SS95-01A	NBF-002	07/26/1995	1.3	<0.35	9720	0.96	<0.20	1.1	20.4	34.1
10SS95-01B	NBF-003	07/26/1995	1.1	1.86	5860	0.88	<0.20	~0.97	18.5	30.8
10SS95-02A	NBF-004	07/26/1995	1.1	5.73	8090	0.93	<0.20	~0.97	17.3	33.4
10SS95-02B	NBF-005	07/26/1995	1.1	1.27	3650	0.90	<0.20	1.0	19.0	29.2
	NBF-006	07/27/1995	1.1	<0.79	6760	0.95	<0.20	1.1	18.9	31.9
11SS95-01A	NBF-010	07/31/1995	0.81	2.09	8940	0.89	<0.20	~0.85	22.3	31.7
11SS95-01B	NBF-011	07/31/1995	0.98	2.00	4620	0.97	<0.20	~0.90	23.4	30.9
11SS95-02A	NBF-007	07/27/1995	1.2	<0.50	10500	0.89	<0.20	~0.94	14.3	27.0
11SS95-02B	NBF-008	07/27/1995	1.2	1.92	9490	0.74	<0.20	~0.94	14.4	30.0
12SS95-01A	NBF-012	07/31/1995	0.91	2.03	6320	0.77	<0.20	~0.83	15.0	28.2
12SS95-01B	NBF-013	07/31/1995	0.91	1.93	5230	0.76	<0.20	~0.86	17.2	38.4
12SS95-02A	NBF-014	08/01/1995	1.2	2.52	9710	0.80	<0.20	~0.97	17.3	41.2
12SS95-02B	NBF-015	08/01/1995	1.1	2.15	8260	0.81	<0.20	~0.92	16.9	39.9
	NBF-016	08/01/1995	1.1	2.31	9220	0.91	<0.20	~0.95	15.2	49.1

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Total organic carbon.

Table A-23. Ecological Risk Assessment Sediment Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Al (mg/kg)	As (mg/kg)	B (mg/kg)	Co (mg/kg)	Cu (mg/kg)	K-40 (pCi/g)	LOD[b] (%)	Mn (mg/kg)	Mo (mg/kg)
01SD95-01A	NBF-053	08/25/1995	24900	6.4	10.9	6.6	20.6	16.82	36.3	365	<2.6
02SD95-01A	NBF-054	08/25/1995	16200	5.7	~7.9	5.9	21.1	12.05	39.0	275	<2.6
03SD95-01A	NBF-055	08/25/1995	13500	11.2	~3.7	6.4	20.6	13.37	30.4	454	<2.6
04SD95-01A	NBF-057	08/28/1995	18400	7.3	~9.8	6.1	24.1	14.26	29.8	627	<2.6
06SD95-01A	NBF-045	08/24/1995	15100	4.8	~7.3	5.0	18.1	16.07	26.9	445	<2.6
	NBF-046	08/24/1995	13700	7.2	~5.5	~4.5	17.3	16.26	25.9	519	<2.6
07SD95-01A	NBF-047	08/24/1995	11600	3.8	~5.6	~3.9	12.2	15.87	25.2	323	<2.6
08SD95-01A	NBF-048	08/24/1995	11700	2.2	~5.6	~4.0	7.1	16.30	29.4	273	<2.6
09SD95-01A	NBF-049	08/24/1995	12100	18.1	~5.1	8.8	179	17.82	27.9	529	<2.6
10SD95-01A	NBF-050	08/24/1995	10700	4.6	~3.7	5.3	13.5	9.66	32.0	318	<2.6
11SD95-01A	NBF-051	08/24/1995	9960	4.3	~3.3	~4.6	10.5	14.80	29.6	326	<2.6
12SD95-01A	NBF-052	08/24/1995	12700	4.6	~5.4	5.1	10.6	17.52	32.5	394	<2.6
13SD95-01A	NBF-058	08/29/1995	32600	5.9	21.0	7.4	16.4	19.67	30.0	443	<2.6
	NBF-059	08/29/1995	27700	4.5	15.5	7.3	15.9	16.77	30.0	432	<2.6
BPSD95-01A	NBF-029	08/22/1995	19200	6.3	~7.8	7.1	46.7	18.10	43.6	457	<2.6
BPSD95-02A	NBF-030	08/22/1995	12000	7.4	~4.5	5.8	52.0	10.18	37.0	373	<2.6
BPSD95-02B	NBF-031	08/22/1995	14100	7.6	~5.1	6.1	41.2	14.68	32.3	420	<2.6
BPSD95-03A	NBF-032	08/23/1995	9330	5.4	~2.5	5.5	42.0	13.05	27.0	343	<2.6
BPSD95-03B	NBF-033	08/23/1995	14000	5.0	~5.7	6.1	37.9	14.64	48.1	446	<2.6
BPSD95-04A	NBF-034	08/23/1995	16500	8.6	~4.9	6.8	32.9	16.60	39.5	481	<2.6
BPSD95-05A	NBF-035	08/23/1995	10800	4.6	~3.0	5.3	39.7	10.19	34.4	172	<2.6
IPSD95-01A	NBF-018	08/22/1995	22400	5.8	~9.1	7.0	20.5	17.71	43.1	395	<2.6
IPSD95-01B	NBF-019	08/22/1995	17900	4.2	~8.0	6.4	19.1	17.37	38.7	389	<2.6
IPSD95-02A	NBF-020	08/22/1995	26200	6.7	~6.2	9.0	28.5	19.81	49.7	533	<2.6
IPSD95-02B	NBF-021	08/22/1995	24400	7.2	~5.5	9.1	27.8	16.96	46.4	588	<2.6
IPSD95-03A	NBF-022	08/22/1995	23300	6.0	~5.3	8.7	25.3	16.92	43.5	498	<2.6
IPSD95-03B	NBF-023	08/22/1995	20000	6.6	~7.3	7.6	22.8	18.86	44.0	486	<2.6
IPSD95-04A	NBF-024	08/22/1995	21800	6.0	~5.3	7.3	22.6	19.28	43.9	408	<2.6
IPSD95-04B	NBF-025	08/22/1995	26000	6.9	12.2	7.3	20.7	16.78	40.3	434	<2.6
IPSD95-05A	NBF-026	08/22/1995	22100	7.7	~5.6	7.6	22.0	11.50	42.5	382	<2.6
IPSD95-05B	NBF-027	08/22/1995	20900	5.9	~8.4	6.8	19.6	16.08	39.4	392	<2.6
	NBF-028	08/22/1995	19900	5.7	~6.5	6.4	18.7	15.59	39.7	392	<2.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Loss on drying as a percentage.

Table A-23 (continued). Ecological Risk Assessment Sediment Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Al (mg/kg)	As (mg/kg)	B (mg/kg)	Co (mg/kg)	Cu (mg/kg)	K-40 (pCi/g)	LOD[b] (%)	Mn (mg/kg)	Mo (mg/kg)
UBPSD95-01A	NBF-037	08/23/1995	17600	5.4	~8.7	6.3	43.3	13.06	25.9	209	<2.6
UBPSD95-01B	NBF-038	08/23/1995	15200	6.1	~4.0	6.2	13.5	15.05	24.1	418	<2.6
UBPSD95-02A	NBF-041	08/23/1995	12700	9.6	~7.2	8.1	220	17.62	29.6	395	<2.6
UBPSD95-02B	NBF-042	08/23/1995	15300	7.2	~6.9	7.6	133	16.51	33.2	326	<2.6
UBPSD95-03A	NBF-043	08/23/1995	12000	5.4	~5.3	~4.6	12.8	16.18	23.9	150	<2.6
UBPSD95-03B	NBF-044	08/23/1995	12000	3.8	~4.7	~5.0	14.3	16.93	25.3	161	<2.6
UBPSD95-04A	NBF-039	08/23/1995	14400	5.5	~7.2	5.6	31.8	14.64	44.0	427	<2.6
UBPSD95-05A	NBF-040	08/23/1995	11700	11.6	~5.3	7.4	152	14.55	24.8	230	<2.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Loss on drying measured as a percentage.

Table A-23 (continued). Ecological Risk Assessment Sediment Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Na (mg/kg)	NO_3+NO_2-N[b] (mg/kg)	Pb-210 (pCi/g)	pH	Po-210 (pCi/g)	Ra-226 (pCi/g)	Se (mg/kg)	Sn (mg/kg)	SO_4 (mg/kg)
01SD95-01A	NBF-053	08/25/1995	~337	~0.33	2.4	7.43	4.55	5.53	<1.0	<0.10	448
02SD95-01A	NBF-054	08/25/1995	~269	~0.65	5.3	7.50	6.38	9.18	<0.20	<0.10	283
03SD95-01A	NBF-055	08/25/1995	~346	~0.78	3.9	7.55	5.16	7.31	~1.2	<0.10	322
04SD95-01A	NBF-057	08/28/1995	~461	~0.63	8.2	7.64	9.66	11.92	2.0	~0.19	318
06SD95-01A	NBF-045	08/24/1995	~221	~0.51	2.7	7.73	3.32	4.71	<1.0	~0.13	77.7
	NBF-046	08/24/1995	~246	~0.48	<2	7.86	2.90	4.32	1.5	<0.10	99.2
07SD95-01A	NBF-047	08/24/1995	~211	~0.47	<2	7.69	1.84	2.59	<1.0	<0.10	109
08SD95-01A	NBF-048	08/24/1995	~98.2	~0.51	<2	7.76	1.07	1.82	<0.20	<0.10	73.2
09SD95-01A	NBF-049	08/24/1995	~405	~0.37	20.7	7.65	25.63	30.64	3.6	~0.10	103
10SD95-01A	NBF-050	08/24/1995	~172	~0.22	<2	7.45	1.86	3.02	0.55	<0.10	33.9
11SD95-01A	NBF-051	08/24/1995	~147	~0.41	<2	7.48	1.55	2.87	<0.22	<0.10	34.9
12SD95-01A	NBF-052	08/24/1995	~155	~0.44	<2	7.39	1.54	2.37	~0.22	<0.10	16.4
13SD95-01A	NBF-058	08/29/1995	~418	1.1	<2	7.69	1.58	1.77	0.55	<0.10	391
	NBF-059	08/29/1995	~371	1.1	<2	7.70	1.54	1.79	1.8	<0.10	383
BPSD95-01A	NBF-029	08/22/1995	~328	~0.67	8.7	7.92	9.80	12.35	2.1	<0.10	237
BPSD95-02A	NBF-030	08/22/1995	~297	~0.55	10.8	7.78	9.11	12.26	0.58	<0.10	75.8
BPSD95-02B	NBF-031	08/22/1995	~367	~0.31	4.3	7.80	7.03	8.45	0.96	~0.10	153
BPSD95-03A	NBF-032	08/23/1995	~252	~0.42	5.2	7.84	5.06	5.92	~0.28	<0.10	57.0
BPSD95-03B	NBF-033	08/23/1995	~262	~0.81	8.2	7.70	9.06	9.56	1.5	~0.14	132
BPSD95-04A	NBF-034	08/23/1995	~230	~0.75	9.0	7.66	6.61	8.30	0.60	<0.10	40.4
BPSD95-05A	NBF-035	08/23/1995	~213	~0.73	6.5	7.77	6.28	8.20	1.3	<0.10	104
IPSD95-01A	NBF-018	08/22/1995	~290	~0.84	<2	7.73	3.88	4.94	~1.5	<0.10	335
IPSD95-01B	NBF-019	08/22/1995	~240	~0.99	2.4	7.73	3.60	5.29	3.5	<0.10	196
IPSD95-02A	NBF-020	08/22/1995	~301	~0.55	4.9	7.67	7.44	8.43	~0.30	<0.10	132
IPSD95-02B	NBF-021	08/22/1995	~272	~0.26	4.8	7.68	6.86	7.45	<1.0	<0.10	45.6
IPSD95-03A	NBF-022	08/22/1995	~473	~0.47	<2	7.60	5.05	6.20	<0.20	<0.10	329
IPSD95-03B	NBF-023	08/22/1995	~366	~0.68	2.8	7.65	4.26	4.52	0.62	~0.10	228
IPSD95-04A	NBF-024	08/22/1995	~236	~0.46	2.6	7.72	5.36	6.91	~1.0	<0.10	128
IPSD95-04B	NBF-025	08/22/1995	~294	~0.36	<2	7.75	3.78	5.40	~1.3	<0.10	110
IPSD95-05A	NBF-026	08/22/1995	~219	1.3	3.3	7.72	4.61	5.79	<1.0	<0.10	77.0
IPSD95-05B	NBF-027	08/22/1995	~220	~0.58	5.6	7.68	3.83	4.82	<1.0	<0.10	93.6
	NBF-028	08/22/1995	~205	~0.80	5.0	7.98	3.88	4.90	<1.0	<0.10	28.1

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b](Nitrate + nitrite) as nitrogen. The samples were acidified in the field, thus the nitrite was oxidized to nitrate.

Table A-23 (continued). Ecological Risk Assessment Sediment Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Na (mg/kg)	NO_3+NO_2-N[b] (mg/kg)	Pb-210 (pCi/g)	pH	Po-210 (pCi/g)	Ra-226 (pCi/g)	Se (mg/kg)	Sn (mg/kg)	SO_4 (mg/kg)
UBPSD95-01A	NBF-037	08/23/1995	~280	~0.77	6.6	7.94	6.04	8.15	~0.47	<0.10	176
UBPSD95-01B	NBF-038	08/23/1995	~240	1.3	<2	7.94	1.76	2.70	0.55	<0.10	191
UBPSD95-02A	NBF-041	08/23/1995	~312	~0.70	40.7	7.56	47.56	55.08	2.5	<0.10	119
UBPSD95-02B	NBF-042	08/23/1995	~294	1.3	18.6	7.38	21.11	25.92	1.4	<0.10	284
UBPSD95-03A	NBF-043	08/23/1995	~211	~0.84	2.4	7.88	2.80	4.37	<0.22	<0.10	145
UBPSD95-03B	NBF-044	08/23/1995	~212	~0.66	<2	7.70	2.20	3.25	~0.30	<0.10	175
UBPSD95-04A	NBF-039	08/23/1995	~295	~0.79	6.0	8.02	6.40	7.81	2.4	~0.10	205
UBPSD95-05A	NBF-040	08/23/1995	~318	~0.70	25.7	7.90	27.82	37.51	<1.0	<0.10	285

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b](Nitrate + nitrite) as nitrogen. The samples were acidified in the field, thus the nitrite was oxidized to nitrate.

Table A-23 (continued). Ecological Risk Assessment Sediment Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Th-230 (pCi/g)	Th-232 (pCi/g)	TOC[b] (mg/kg)	U-234 (pCi/g)	U-235 (pCi/g)	U-238 (pCi/g)	V (mg/kg)	Zn (mg/kg)
01SD95-01A	NBF-053	08/25/1995	4.5	2.32	8310	2.6	<0.20	3.1	63.0	72.7
02SD95-01A	NBF-054	08/25/1995	8.7	3.17	3020	4.7	~0.20	5.5	62.7	56.2
03SD95-01A	NBF-055	08/25/1995	6.3	<0.71	9610	5.6	~0.21	6.1	83.4	60.2
04SD95-01A	NBF-057	08/28/1995	15.8	2.51	10400	6.2	~0.22	6.3	104	53.4
06SD95-01A	NBF-045	08/24/1995	2.8	1.82	7150	4.4	<0.20	4.4	56.8	42.3
	NBF-046	08/24/1995	3.1	<0.45	7900	3.5	<0.20	3.8	51.5	41.1
07SD95-01A	NBF-047	08/24/1995	2.0	1.80	4520	3.0	<0.20	3.3	27.8	28.8
08SD95-01A	NBF-048	08/24/1995	1.2	1.99	3500	~0.96	<0.20	~1.0	17.5	23.8
09SD95-01A	NBF-049	08/24/1995	24.7	3.91	6830	6.7	~0.26	7.2	166	69.5
10SD95-01A	NBF-050	08/24/1995	1.8	2.12	7710	1.3	<0.20	~1.4	18.6	44.1
11SD95-01A	NBF-051	08/24/1995	1.4	2.43	7990	1.3	<0.20	~1.4	15.9	35.9
12SD95-01A	NBF-052	08/24/1995	1.1	2.50	6160	1.1	<0.20	~1.3	20.2	39.0
13SD95-01A	NBF-058	08/29/1995	1.5	2.18	9550	1.6	<0.20	~1.2	40.0	59.5
	NBF-059	08/29/1995	1.3	2.18	9600	1.0	<0.20	~1.1	32.9	57.9
BPSD95-01A	NBF-029	08/22/1995	12.1	<0.72	9930	8.5	~0.38	9.3	84.2	60.4
BPSD95-02A	NBF-030	08/22/1995	12.1	2.93	9090	6.6	~0.25	7.0	74.7	50.7
BPSD95-02B	NBF-031	08/22/1995	7.5	<0.71	7330	4.8	<0.20	5.2	67.5	60.3
BPSD95-03A	NBF-032	08/23/1995	5.5	2.02	6360	3.6	<0.20	3.9	51.2	51.3
BPSD95-03B	NBF-033	08/23/1995	9.5	2.77	10700	4.8	<0.20	5.2	83.0	60.5
BPSD95-04A	NBF-034	08/23/1995	7.4	2.20	10900	5.7	<0.20	5.9	73.0	61.0
BPSD95-05A	NBF-035	08/23/1995	7.6	2.20	8500	3.0	<0.20	2.9	70.9	55.4
IPSD95-01A	NBF-018	08/22/1995	4.2	2.40	9010	5.1	<0.20	5.2	64.5	70.5
IPSD95-01B	NBF-019	08/22/1995	4.1	2.37	10200	9.0	~0.37	9.4	80.6	61.0
IPSD95-02A	NBF-020	08/22/1995	7.0	3.05	9380	4.1	<0.20	4.2	64.8	87.8
IPSD95-02B	NBF-021	08/22/1995	7.2	<1.05	8250	3.4	<0.20	3.7	55.3	77.1
IPSD95-03A	NBF-022	08/22/1995	5.8	3.38	7940	3.2	<0.20	3.9	49.1	70.6
IPSD95-03B	NBF-023	08/22/1995	4.6	2.60	9290	5.7	~0.22	6.2	63.1	70.7
IPSD95-04A	NBF-024	08/22/1995	5.3	<0.80	8500	3.8	<0.20	4.1	57.4	74.4
IPSD95-04B	NBF-025	08/22/1995	4.2	2.79	8980	7.5	~0.32	8.2	84.2	69.3
IPSD95-05A	NBF-026	08/22/1995	5.0	<0.45	8690	3.4	<0.20	3.4	60.0	78.3
IPSD95-05B	NBF-027	08/22/1995	4.9	2.17	8720	4.7	<0.20	5.3	68.3	68.2
	NBF-028	08/22/1995	4.6	<0.69	8360	4.7	<0.20	5.2	63.9	65.0

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Total organic carbon.

Table A-23 (continued). Ecological Risk Assessment Sediment Samples Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Number	Sample Date	Th-230 (pCi/g)	Th-232 (pCi/g)	TOC[b] (mg/kg)	U-234 (pCi/g)	U-235 (pCi/g)	U-238 (pCi/g)	V (mg/kg)	Zn (mg/kg)
UBPSD95-01A	NBF-037	08/23/1995	7.8	<0.58	8540	3.4	<0.20	3.6	52.8	53.1
UBPSD95-01B	NBF-038	08/23/1995	2.3	3.25	7480	2.1	<0.20	2.2	35.2	49.5
UBPSD95-02A	NBF-041	08/23/1995	56.4	3.07	11000	9.7	~0.43	10.3	167	64.9
UBPSD95-02B	NBF-042	08/23/1995	26.5	<1.11	12400	6.8	~0.26	7.3	102	65.6
UBPSD95-03A	NBF-043	08/23/1995	3.8	2.81	5820	2.8	<0.20	2.8	27.7	37.1
UBPSD95-03B	NBF-044	08/23/1995	2.8	<0.63	5420	2.5	<0.20	2.6	25.7	40.4
UBPSD95-04A	NBF-039	08/23/1995	9.5	2.58	10400	15.7	~0.75	17.0	90.5	53.8
UBPSD95-05A	NBF-040	08/23/1995	39.7	<1.05	7900	10.2	~0.45	10.7	127	62.7

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Total organic carbon.

Table A-24. Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
01SS95-1N	0	TC	4.6	01SS95-1S	0	TC	4.6
01SS95-1N	6	TC	5.4	01SS95-1S	6	TC	6.9
01SS95-1N	12	TC	8.1	01SS95-1S	12	TC	4.9
01SS95-1N	18	TC	9.9	01SS95-1S	18	TC	4.9
01SS95-1N	24	TC	14.0	01SS95-1S	24	TC	6.7
01SS95-1N	30	TC	12.1				
01SS95-1N	36	TC	6.4				
01SS95-2N	0	TC	8.3	01SS95-2S	0	TC	3.2
01SS95-2N	6	TC	19.5	01SS95-2S	6	TC	3.8
01SS95-2N	12	TC	34.2	01SS95-2S	12	TC	4.7
01SS95-2N	18	TC	20.8	01SS95-2S	18	TC	4.6
01SS95-2N	24	TC	18.4	01SS95-2S	24	TC	5.2
01SS95-2N	30	TC	16.3				
01SS95-2N	36	TC	9.4				
01SS95-2N	42	TC	5.1				
01SS95-3N	0	TC	3.6	01SS95-3S	0	DS	2.6
01SS95-3N	6	TC	3.8	01SS95-3S	6	DS	3.7
01SS95-3N	12	TC	4.5	01SS95-3S	12	DS	6.3
01SS95-3N	18	TC	4.9	01SS95-3S	18	DS	5.4
01SS95-3N	24	TC	4.6	01SS95-3S	24	DS	3.6
01SS95-4N	0	TC	5.9	01SS95-4S	0	DS	1.9
01SS95-4N	6	TC	9.8	01SS95-4S	6	DS	2.5
01SS95-4N	12	TC	5.7	01SS95-4S	12	DS	1.6
01SS95-4N	18	TC	4.3	01SS95-4S	18	DS	1.9
01SS95-4N	24	TC	3.8				
01SS95-5N	0	TC	2.9	01SS95-5S	0	TC	2.6
01SS95-5N	6	TC	3.5	01SS95-5S	6	TC	3.0
01SS95-5N	12	TC	3.9	01SS95-5S	12	TC	3.4
01SS95-5N	18	TC	3.7	01SS95-5S	18	TC	3.3
01SS95-5N	24	TC	3.3	01SS95-5S	24	TC	3.2
02SS95-1N	0	TC	8.4	02SS95-1S	0	TC	4.7
02SS95-1N	6	TC	9.4	02SS95-1S	6	TC	4.4
02SS95-1N	12	TC	4.7	02SS95-1S	12	TC	7.7
02SS95-1N	18	TC	3.8	02SS95-1S	18	TC	6.3
02SS95-1N	24	TC	3.5	02SS95-1S	24	TC	5.0

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
02SS95-2N	0	TC	4.4	02SS95-2S	0	DS	1.6
02SS95-2N	6	TC	4.4	02SS95-2S	6	DS	2.0
02SS95-2N	12	TC	4.6	02SS95-2S	12	DS	1.1
02SS95-2N	18	TC	4.1				
02SS95-2N	24	TC	3.3				
02SS95-3N	0	TC	3.4	02SS95-3S	0	TC	2.7
02SS95-3N	6	TC	3.3	02SS95-3S	6	TC	3.0
02SS95-3N	12	TC	3.7	02SS95-3S	12	TC	3.5
02SS95-3N	18	TC	3.6	02SS95-3S	18	TC	3.7
				02SS95-3S	18	DS	2.1
				02SS95-3S	21	TC	3.4
02SS95-3N	24	TC	3.6				
02SS95-4N	0	TC	3.2	02SS95-4S	0	TC	2.7
02SS95-4N	6	TC	3.2	02SS95-4S	6	TC	3.0
02SS95-4N	12	TC	4.2	02SS95-4S	12	TC	3.9
02SS95-4N	18	TC	4.1	02SS95-4S	18	TC	3.9
02SS95-4N	24	TC	4.1	02SS95-4S	24	TC	3.7
02SS95-5N	0	TC	2.9	02SS95-5S	0	TC	2.8
02SS95-5N	6	TC	3.0	02SS95-5S	6	TC	3.1
02SS95-5N	12	TC	3.8	02SS95-5S	12	TC	4.1
02SS95-5N	18	TC	4.0	02SS95-5S	18	TC	4.2
02SS95-5N	24	TC	3.2	02SS95-5S	24	TC	4.1
03SS95-1N	0	TC	20.4	03SS95-1S	0	TC	10.0
03SS95-1N	6	TC	39.0	03SS95-1S	6	TC	12.0
03SS95-1N	12	TC	62.1	03SS95-1S	12	TC	6.0
03SS95-1N	18	TC	5.3	03SS95-1S	18	TC	4.8
03SS95-1N	24	TC	5.7	03SS95-1S	24	TC	4.6
03SS95-2N	0	TC	21.2	03SS95-2S	0	TC	4.7
03SS95-2N	6	TC	14.7	03SS95-2S	6	TC	3.6
03SS95-2N	12	TC	5.6	03SS95-2S	12	TC	3.7
03SS95-2N	18	TC	5.0	03SS95-2S	18	TC	3.6
03SS95-2N	24	TC	4.9	03SS95-2S	24	TC	3.4

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
03SS95-3N	0	TC	78.9	03SS95-3S	0	TC	4.6
03SS95-3N	6	TC	142.8	03SS95-3S	6	TC	3.1
03SS95-3N	12	TC	166.8	03SS95-3S	12	TC	2.5
				03SS95-3S	15	TC	2.8
03SS95-3N	18	TC	62.7	03SS95-3S	18	DS	<1.0
03SS95-3N	24	TC	29.3				
03SS95-4N	0	TC	74.1	03SS95-4S	0	DS	<1.0
03SS95-4N	6	TC	115.5	03SS95-4S	6	DS	<1.0
03SS95-4N	12	TC	65.2	03SS95-4S	12	DS	<1.0
03SS95-4N	18	TC	15.4	03SS95-4S	18	DS	<1.0
03SS95-4N	24	TC	10.4				
03SS95-4N	30	TC	8.3				
03SS95-5N	0	TC	4.7	03SS95-5S	0	DS	2.2
03SS95-5N	6	TC	4.1	03SS95-5S	6	DS	<1.0
03SS95-5N	12	TC	4.5	03SS95-5S	12	DS	<1.0
03SS95-5N	18	TC	4.3	03SS95-5S	18	DS	<1.0
03SS95-5N	24	TC	4.1				
04SS95-1N	0	TC	43.7	04SS95-1S	0	TC	9.4
04SS95-1N	6	TC	87.5	04SS95-1S	6	TC	18.1
04SS95-1N	12	TC	74.9	04SS95-1S	12	TC	6.8
04SS95-1N	18	TC	19.1	04SS95-1S	18	TC	4.3
04SS95-1N	24	TC	17.1	04SS95-1S	24	TC	3.9
04SS95-1N	30	TC	6.9				
04SS95-2N	0	TC	40.0	04SS95-2S	0	TC	3.9
04SS95-2N	6	TC	89.3	04SS95-2S	6	TC	4.4
04SS95-2N	12	TC	60.1	04SS95-2S	12	TC	4.7
04SS95-2N	18	TC	4.3	04SS95-2S	18	TC	3.9
04SS95-2N	24	TC	6.9	04SS95-2S	24	TC	3.5
04SS95-3N	0	TC	2.7	04SS95-3S	0	TC	3.4
04SS95-3N	6	TC	1.9	04SS95-3S	6	TC	3.8
04SS95-3N	12	TC	2.0	04SS95-3S	12	TC	4.4
04SS95-3N	18	TC	2.0	04SS95-3S	18	TC	3.8
04SS95-3N	24	TC	2.0	04SS95-3S	24	TC	3.5

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
04SS95-4N	0	DS	<1.0	04SS95-4S	0	TC	3.1
04SS95-4N	6	DS	<1.0	04SS95-4S	6	TC	3.4
04SS95-4N	12	DS	<1.0	04SS95-4S	12	TC	4.0
04SS95-4N	18	DS	<1.0	04SS95-4S	18	TC	3.7
				04SS95-4S	24	TC	3.6
04SS95-5N	0	DS	<1.0	04SS95-5S	0	TC	3.0
04SS95-5N	6	DS	<1.0	04SS95-5S	6	TC	3.3
04SS95-5N	12	DS	<1.0	04SS95-5S	12	TC	3.8
04SS95-5N	18	DS	<1.0	04SS95-5S	18	TC	3.5
				04SS95-5S	24	TC	3.3
05SS95-1N	0	TC	13.2	05SS95-1S	0	TC	3.0
05SS95-1N	6	TC	36.3	05SS95-1S	6	TC	2.7
05SS95-1N	12	TC	70.9	05SS95-1S	12	TC	2.9
05SS95-1N	18	TC	136.4	05SS95-1S	18	TC	2.9
05SS95-1N	24	TC	44.6	05SS95-1S	24	TC	3.0
05SS95-1N	30	TC	2.8				
05SS95-1N	36	TC	4.1				
05SS95-2N	0	TC	24.1	05SS95-2S	0	TC	2.4
05SS95-2N	6	TC	52.7	05SS95-2S	6	TC	2.2
05SS95-2N	12	TC	146.4	05SS95-2S	12	TC	2.5
05SS95-2N	18	TC	112.0	05SS95-2S	18	TC	2.9
05SS95-2N	24	TC	38.5	05SS95-2S	24	TC	2.9
05SS95-3N	0	TC	21.6	05SS95-3S	0	TC	2.1
05SS95-3N	6	TC	54.9	05SS95-3S	6	TC	2.1
05SS95-3N	12	TC	142.2	05SS95-3S	12	TC	2.5
05SS95-3N	18	TC	22.2	05SS95-3S	18	TC	3.0
05SS95-3N	24	TC	40.8	05SS95-3S	24	TC	2.7
05SS95-3N	30	TC	9.6				
05SS95-4N	0	TC	15.5	05SS95-4S	0	TC	2.3
05SS95-4N	6	TC	26.7	05SS95-4S	6	TC	2.2
05SS95-4N	12	TC	136.6	05SS95-4S	12	TC	2.0
05SS95-4N	18	TC	119.9	05SS95-4S	18	TC	2.4
05SS95-4N	24	TC	34.4	05SS95-4S	24	TC	2.2
05SS95-4N	30	TC	8.1				

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
05SS95-5N	0	TC	11.4				
05SS95-5N	6	TC	18.6				
05SS95-5N	12	TC	87.4				
05SS95-5N	18	TC	14.4				
05SS95-5N	24	TC	21.1				
05SS95-5N	30	TC	5.0				
06SS95-1N	0	TC	14.0	06SS95-1S	0	TC	3.5
06SS95-1N	6	TC	14.8	06SS95-1S	6	TC	3.4
06SS95-1N	12	TC	3.0	06SS95-1S	12	TC	3.1
06SS95-1N	18	TC	3.0	06SS95-1S	18	TC	3.2
06SS95-1N	24	TC	3.5	06SS95-1S	24	TC	3.1
06SS95-2N	0	TC	28.2	06SS95-2S	0	TC	2.8
06SS95-2N	6	TC	22.9	06SS95-2S	6	TC	3.3
06SS95-2N	12	TC	11.3	06SS95-2S	12	TC	3.3
06SS95-2N	18	TC	8.2	06SS95-2S	18	TC	3.4
06SS95-2N	24	TC	7.8	06SS95-2S	24	TC	3.4
06SS95-2N	30	TC	4.8				
06SS95-3N	0	TC	49.6	06SS95-3S	0	TC	2.6
06SS95-3N	6	TC	100.5	06SS95-3S	6	TC	3.3
06SS95-3N	12	TC	13.9	06SS95-3S	12	TC	3.1
06SS95-3N	18	TC	3.5	06SS95-3S	18	TC	3.1
06SS95-3N	24	TC	9.0	06SS95-3S	24	TC	3.0
06SS95-3N	30	TC	7.6				
06SS95-3N	36	TC	6.8				
06SS95-3N	42	TC	5.1				
06SS95-4N	0	TC	54.1	06SS95-4S	0	TC	2.7
06SS95-4N	6	TC	110.9	06SS95-4S	6	TC	3.2
06SS95-4N	12	TC	17.2	06SS95-4S	12	TC	3.3
06SS95-4N	18	TC	3.3	06SS95-4S	18	TC	3.4
06SS95-4N	24	TC	8.4	06SS95-4S	24	TC	3.4
06SS95-4N	30	TC	5.5				

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
06SS95-5N	0	TC	23.7	06SS95-5S	0	TC	2.5
06SS95-5N	6	TC	4.7	06SS95-5S	6	TC	2.8
06SS95-5N	12	TC	4.9	06SS95-5S	12	TC	3.2
06SS95-5N	18	TC	4.5	06SS95-5S	18	TC	3.2
06SS95-5N	24	TC	4.6	06SS95-5S	24	TC	3.2
07SS95-1N	0	TC	4.6	07SS95-1S	0	TC	2.5
07SS95-1N	6	TC	8.3	07SS95-1S	6	TC	2.8
07SS95-1N	12	TC	10.8	07SS95-1S	12	TC	3.1
07SS95-1N	18	TC	16.0	07SS95-1S	18	TC	3.0
07SS95-1N	24	TC	15.4	07SS95-1S	24	TC	3.1
07SS95-2N	0	TC	5.9	07SS95-2S	0	TC	2.3
07SS95-2N	6	TC	10.7	07SS95-2S	6	TC	3.2
07SS95-2N	12	TC	14.3	07SS95-2S	12	TC	3.3
07SS95-2N	18	TC	16.6	07SS95-2S	18	TC	3.1
07SS95-2N	24	TC	17.7	07SS95-2S	24	TC	3.0
07SS95-2N	30	TC	25.6				
07SS95-2N	36	TC	23.6				
07SS95-2N	42	TC	23.2				
07SS95-3N	0	TC	8.2	07SS95-3S	0	TC	2.1
07SS95-3N	6	TC	12.8	07SS95-3S	6	TC	3.0
07SS95-3N	12	TC	30.4	07SS95-3S	12	TC	3.1
07SS95-3N	18	TC	37.2	07SS95-3S	18	TC	3.0
07SS95-3N	24	TC	3.6	07SS95-3S	24	TC	3.0
07SS95-3N	30	TC	10.9				
07SS95-4N	0	TC	9.6	07SS95-4S	0	TC	1.8
07SS95-4N	6	TC	31.3	07SS95-4S	6	TC	2.8
07SS95-4N	12	TC	27.9	07SS95-4S	12	TC	3.0
07SS95-4N	18	TC	2.5	07SS95-4S	18	TC	3.0
07SS95-4N	24	TC	7.3	07SS95-4S	24	TC	3.1
				07SS95-5S	0	TC	2.5
				07SS95-5S	6	TC	3.6
				07SS95-5S	12	TC	3.4
				07SS95-5S	18	TC	3.4
				07SS95-5S	24	TC	3.4

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
08SS95-1N	0	TC	5.3	08SS95-1S	0	TC	3.3
08SS95-1N	6	TC	15.6	08SS95-1S	6	TC	7.6
08SS95-1N	12	TC	26.2	08SS95-1S	12	TC	8.8
08SS95-1N	18	TC	23.3	08SS95-1S	18	TC	13.6
08SS95-1N	24	TC	16.5	08SS95-1S	24	TC	8.0
08SS95-2N	0	TC	5.3	08SS95-2S	0	TC	1.9
08SS95-2N	6	TC	11.0	08SS95-2S	6	TC	2.6
08SS95-2N	12	TC	33.4	08SS95-2S	12	TC	3.8
08SS95-2N	18	TC	12.6	08SS95-2S	18	TC	10.2
08SS95-2N	24	TC	7.9	08SS95-2S	24	TC	6.4
08SS95-3N	0	TC	2.1	08SS95-3S	0	TC	2.0
08SS95-3N	6	TC	2.8	08SS95-3S	6	TC	2.6
08SS95-3N	12	TC	2.7	08SS95-3S	12	TC	3.3
08SS95-3N	18	TC	2.4	08SS95-3S	18	TC	3.2
08SS95-3N	24	TC	2.3	08SS95-3S	24	TC	2.9
08SS95-4N	0	TC	1.9	08SS95-4S	0	TC	1.9
08SS95-4N	6	TC	1.8	08SS95-4S	6	TC	2.6
08SS95-4N	12	TC	2.9	08SS95-4S	12	TC	3.1
08SS95-4N	18	TC	2.6	08SS95-4S	18	TC	2.9
08SS95-4N	24	TC	2.5	08SS95-4S	24	TC	2.9
08SS95-5N	0	TC	1.9	08SS95-5S	0	TC	2.0
08SS95-5N	6	TC	2.4	08SS95-5S	6	TC	2.6
08SS95-5N	12	TC	2.6	08SS95-5S	12	TC	2.9
08SS95-5N	18	TC	2.5	08SS95-5S	18	TC	2.8
08SS95-5N	24	TC	2.5	08SS95-5S	24	TC	2.8
09SS95-1N	0	TC	8.1	09SS95-1S	0	TC	5.2
09SS95-1N	6	TC	19.0	09SS95-1S	6	TC	5.7
09SS95-1N	12	TC	55.8	09SS95-1S	12	TC	31.3
09SS95-1N	18	DS	6.7	09SS95-1S	18	DS	59.0
09SS95-1N	18	TC	33.4				

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
09SS95-2N	0	TC	4.4	09SS95-2S	0	DS	9.8
09SS95-2N	6	TC	8.9	09SS95-2S	6	DS	26.0
09SS95-2N	12	TC	5.3	09SS95-2S	12	DS	52.6
09SS95-2N	18	TC	3.7	09SS95-2S	18	DS	88.9
09SS95-2N	24	TC	3.2	09SS95-2S	24	DS	33.2
				09SS95-2S	30	DS	13.5
09SS95-3N	0	TC	9.1	09SS95-3S	0	TC	6.8
09SS95-3N	6	TC	33.2	09SS95-3S	6	TC	24.0
09SS95-3N	12	TC	7.5	09SS95-3S	12	TC	24.9
09SS95-3N	18	TC	9.6	09SS95-3S	18	TC	6.8
09SS95-3N	24	TC	4.6	09SS95-3S	24	TC	6.8
09SS95-4N	0	TC	5.4	09SS95-4S	0	TC	7.1
09SS95-4N	6	TC	10.9	09SS95-4S	6	TC	13.0
09SS95-4N	12	TC	6.2	09SS95-4S	12	TC	13.8
09SS95-4N	18	TC	4.0	09SS95-4S	18	TC	6.1
				09SS95-4S	24	TC	4.1
09SS95-5N	0	TC	2.7				
09SS95-5N	6	TC	2.8				
09SS95-5N	12	TC	3.2				
09SS95-5N	18	TC	2.7				
09SS95-5N	24	TC	2.8				
10SS95-1N	0	DS	<1.0	10SS95-1S	0	TC	1.9
10SS95-1N	6	DS	<1.0	10SS95-1S	6	TC	2.5
10SS95-1N	12	DS	<1.0	10SS95-1S	12	TC	2.6
10SS95-1N	18	DS	<1.0	10SS95-1S	18	TC	2.9
				10SS95-1S	24	TC	2.3
10SS95-2N	0	TC	2.1	10SS95-2S	0	DS	<1.0
10SS95-2N	6	TC	2.6	10SS95-2S	6	DS	<1.0
10SS95-2N	12	TC	3.5	10SS95-2S	12	DS	<1.0
10SS95-2N	18	TC	2.5	10SS95-2S	18	DS	<1.0
10SS95-2N	24	TC	2.7				
10SS95-3N	0	TC	2.0	10SS95-3S	0	DS	<1.0
10SS95-3N	6	TC	2.4	10SS95-3S	6	DS	<1.0
10SS95-3N	12	TC	2.7	10SS95-3S	12	DS	<1.0
10SS95-3N	18	DS	<1.0	10SS95-3S	18	DS	<1.0

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
10SS95-4N	0	TC	1.8	10SS95-4S	0	TC	1.9
10SS95-4N	6	TC	2.2	10SS95-4S	6	TC	2.3
10SS95-4N	12	TC	2.5	10SS95-4S	12	TC	3.0
10SS95-4N	18	TC	2.8	10SS95-4S	18	TC	2.9
10SS95-4N	24	TC	2.7	10SS95-4S	24	TC	3.0
10SS95-5N	0	TC	1.9	10SS95-5S	0	TC	2.1
10SS95-5N	6	TC	2.3	10SS95-5S	6	TC	2.7
10SS95-5N	12	TC	2.7	10SS95-5S	12	TC	3.0
10SS95-5N	18	TC	2.6	10SS95-5S	18	TC	3.0
10SS95-5N	24	TC	2.7	10SS95-5S	24	TC	3.1
11SS95-1N	0	DS	<1.0	11SS95-1S	0	TC	1.9
11SS95-1N	6	DS	<1.0	11SS95-1S	6	TC	2.6
11SS95-1N	12	DS	<1.0	11SS95-1S	12	TC	3.0
11SS95-1N	18	DS	<1.0	11SS95-1S	18	TC	3.1
				11SS95-1S	24	TC	2.9
11SS95-2N	0	TC	1.6	11SS95-2S	0	TC	2.1
11SS95-2N	6	TC	2.0	11SS95-2S	6	TC	2.4
11SS95-2N	12	TC	2.6	11SS95-2S	12	TC	3.5
11SS95-2N	18	TC	2.8	11SS95-2S	18	TC	3.3
11SS95-2N	24	TC	2.7	11SS95-2S	24	TC	3.3
11SS95-3N	0	TC	1.8	11SS95-3S	0	TC	2.0
11SS95-3N	6	TC	2.1	11SS95-3S	6	TC	2.5
11SS95-3N	12	TC	2.5	11SS95-3S	12	TC	3.1
11SS95-3N	18	TC	2.4	11SS95-3S	18	TC	2.9
11SS95-3N	24	TC	2.4	11SS95-3S	24	TC	2.9
11SS95-4N	0	TC	1.9	11SS95-4S	0	TC	2.1
11SS95-4N	6	TC	2.6	11SS95-4S	6	TC	2.8
11SS95-4N	12	TC	2.4	11SS95-4S	12	TC	3.2
11SS95-4N	18	TC	2.3	11SS95-4S	18	TC	3.2
11SS95-4N	24	TC	2.2	11SS95-4S	24	TC	3.2
11SS95-5N	0	TC	1.6	11SS95-5S	0	TC	2.1
11SS95-5N	6	TC	1.8	11SS95-5S	6	TC	2.8
11SS95-5N	12	TC	2.7	11SS95-5S	12	TC	3.2
11SS95-5N	18	TC	2.3	11SS95-5S	18	TC	3.2
11SS95-5N	24	TC	2.3	11SS95-5S	24	TC	3.2

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A–24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

North				South			
Id	Depth[a]	Type[b]	Result	Id	Depth[a]	Type[b]	Result
12SS95-1N	0	TC	2.0	12SS95-1S	0	TC	2.2
12SS95-1N	6	TC	2.8	12SS95-1S	6	TC	2.7
12SS95-1N	12	TC	2.9	12SS95-1S	12	TC	3.2
12SS95-1N	18	TC	2.7	12SS95-1S	18	TC	3.4
12SS95-1N	24	TC	2.6	12SS95-1S	24	TC	3.3
12SS95-2N	0	TC	1.7	12SS95-2S	0	TC	2.1
12SS95-2N	6	TC	2.2	12SS95-2S	6	TC	2.7
12SS95-2N	12	TC	2.2	12SS95-2S	12	TC	3.4
12SS95-2N	18	TC	2.6	12SS95-2S	18	TC	3.4
12SS95-2N	21	TC	1.8				
				12SS95-2S	24	TC	3.2
12SS95-3N	0	TC	1.7	12SS95-3S	0	TC	2.0
12SS95-3N	6	TC	1.7	12SS95-3S	6	TC	2.8
12SS95-3N	12	TC	3.4	12SS95-3S	12	TC	3.4
12SS95-3N	18	TC	3.2	12SS95-3S	18	TC	3.3
12SS95-3N	24	TC	3.3	12SS95-3S	24	TC	3.4
12SS95-4N	0	TC	1.7	12SS95-4S	0	TC	1.9
12SS95-4N	6	TC	2.0	12SS95-4S	6	TC	2.4
12SS95-4N	12	TC	2.9	12SS95-4S	12	TC	2.9
12SS95-4N	18	TC	2.8	12SS95-4S	18	TC	3.1
12SS95-4N	24	TC	2.9	12SS95-4S	24	TC	2.9
12SS95-5N	0	TC	1.6	12SS95-5S	0	TC	1.8
12SS95-5N	6	TC	1.8	12SS95-5S	6	TC	2.3
12SS95-5N	12	TC	2.5	12SS95-5S	12	TC	2.8
12SS95-5N	18	TC	2.6	12SS95-5S	18	TC	2.9
12SS95-5N	24	TC	2.7	12SS95-5S	24	TC	2.7

[a]Depth in inches.
[b]Measurement type: DS=Delta Scintillometer, TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

Id	Depth[a]	Type[b]	Result
BPSD95-01	0	TC	3.9
BPSD95-01	6	TC	7.1
BPSD95-01	12	TC	8.0
BPSD95-01	18	TC	6.9
BPSD95-01	24	TC	6.5
BPSD95-01	30	TC	8.2
BPSD95-01	36	TC	6.3
BPSD95-01	42	TC	6.8
BPSD95-01	48	TC	9.4
BPSD95-01	54	TC	6.8
BPSD95-01	60	TC	6.3
BPSD95-02	0	TC	1.1
BPSD95-02	6	TC	2.7
BPSD95-02	12	TC	8.1
BPSD95-02	18	TC	8.5
BPSD95-02	24	TC	5.4
BPSD95-02	30	TC	5.1
BPSD95-02	36	TC	5.5
BPSD95-02	42	TC	5.3
BPSD95-02	48	TC	5.4
BPSD95-02	54	TC	4.8
BPSD95-02	60	TC	5.0
BPSD95-03	0	TC	4.7
BPSD95-03	6	TC	5.3
BPSD95-03	12	TC	5.1
BPSD95-03	18	TC	3.9
BPSD95-03	24	TC	2.9
BPSD95-03	30	TC	2.4
BPSD95-03	36	TC	2.3
BPSD95-03	42	TC	3.4
BPSD95-03	48	TC	4.0
BPSD95-03	54	TC	3.7

[a]Depth in inches.
[b]Measurement type:
DS=Delta Scintillometer,
TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

Id	Depth[a]	Type[b]	Result
IPSD95-01	0	TC	7.0
IPSD95-01	6	TC	3.0
IPSD95-01	12	TC	4.0
IPSD95-01	18	TC	4.2
IPSD95-01	24	TC	3.0
IPSD95-01	30	TC	2.7
IPSD95-01	36	TC	5.0
IPSD95-01	42	TC	8.1
IPSD95-01	48	TC	7.9
IPSD95-01	54	TC	8.1
IPSD95-01	60	TC	5.5
IPSD95-01	66	TC	5.3
IPSD95-01	72	TC	9.3
IPSD95-01	78	TC	10.8
IPSD95-02	0	TC	1.6
IPSD95-02	6	TC	3.0
IPSD95-02	12	TC	6.7
IPSD95-02	18	TC	4.5
IPSD95-02	24	TC	3.6
IPSD95-02	30	TC	3.9
IPSD95-02	36	TC	3.7
IPSD95-02	42	TC	2.8
IPSD95-02	48	TC	2.3
IPSD95-02	54	TC	2.3
IPSD95-02	60	TC	4.4
IPSD95-02	66	TC	4.4
IPSD95-02	72	TC	7.4
IPSD95-02	78	TC	6.7
IPSD95-03	0	TC	1.7
IPSD95-03	6	TC	4.3
IPSD95-03	12	TC	3.6
IPSD95-03	18	TC	3.4
IPSD95-03	24	TC	3.6
IPSD95-03	30	TC	3.7
IPSD95-03	36	TC	3.9
IPSD95-03	42	TC	3.2
IPSD95-03	48	TC	3.6
IPSD95-03	54	TC	4.8

[a]Depth in inches.
[b]Measurement type:
DS=Delta Scintillometer,
TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

Id	Depth[a]	Type[b]	Result
IPSD95-04	0	TC	3.1
IPSD95-04	6	TC	4.6
IPSD95-04	12	TC	3.8
IPSD95-04	18	TC	4.6
IPSD95-04	24	TC	4.0
IPSD95-04	30	TC	2.8
IPSD95-04	36	TC	2.4
IPSD95-04	42	TC	29.8
IPSD95-04	48	TC	38.6
IPSD95-04	54	TC	27.2
IPSD95-05	0	TC	3.2
IPSD95-05	6	TC	5.2
IPSD95-05	12	TC	4.2
IPSD95-05	18	TC	4.0
IPSD95-05	24	TC	4.3
IPSD95-05	30	TC	3.8
IPSD95-05	36	TC	3.8
IPSD95-05	42	TC	3.6
IPSD95-05	48	TC	4.8
IPSD95-05	54	TC	3.7
UBPSD95-01	0	TC	1.8
UBPSD95-01	6	TC	3.2
UBPSD95-01	12	TC	2.3
UBPSD95-01	18	TC	2.6
UBPSD95-01	24	TC	2.3
UBPSD95-01	30	TC	2.0
UBPSD95-01	36	TC	2.2
UBPSD95-01	42	TC	2.2
UBPSD95-01	48	TC	2.3

[a]Depth in inches.
[b]Measurement type:
DS=Delta Scintillometer,
TC=Total Count Borehole

Table A-24 (continued). Soil and Sediment Radium-226 Field Measurements in pCi/g

Id	Depth[a]	Type[b]	Result
UBPSD95-02	0	TC	6.0
UBPSD95-02	6	TC	16.2
UBPSD95-02	12	TC	39.7
UBPSD95-02	18	TC	66.5
UBPSD95-02	24	TC	9.1
UBPSD95-02	30	TC	5.1
UBPSD95-02	36	TC	3.7
UBPSD95-02	42	TC	2.6
UBPSD95-02	48	TC	2.6
UBPSD95-02	54	TC	2.8
UBPSD95-02	60	TC	3.1
UBPSD95-02	66	TC	2.2
UBPSD95-02	72	TC	2.5
UBPSD95-03	0	TC	2.7
UBPSD95-03	6	TC	2.8
UBPSD95-03	12	TC	3.0
UBPSD95-03	18	TC	2.8
UBPSD95-03	24	TC	2.5
UBPSD95-03	36	TC	2.7
UBPSD95-03	42	TC	2.1
UBPSD95-03	48	TC	2.3
UBPSD95-03	54	TC	2.3

[a]Depth in inches.
[b]Measurement type:
DS=Delta Scintillometer,
TC=Total Count Borehole

Table A-25. Ecological Risk Assessment Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Al (µg/L)	Al[b] (µg/L)	Alkalinity (as $CaCO_3$) (ppm)	Alpha[c] (pCi/L)[d]	Alpha[e] (pCi/L)[d]	As (µg/L)	As[b] (µg/L)	B (µg/L)	B[b] (µg/L)
01SW95	NBF-198,NBF-199	09/07/1995	~163	<20.0	235	96	96	~1.3	~1.7	~52.7	~49.9
	NBF-200,NBF-151	09/07/1995	~185	<20.0	No Data	68	68	~1.6	~1.9	~55.9	~54.3
02SW95	NBF-177,NBF-176	09/05/1995	~96.4	<20.0	247	131	131	~1.6	~1.5	~64.2	~59.2
03SW95	NBF-178,NBF-179	09/05/1995	<22.2	<20.0	225	102	102	~1.5	~1.5	~67.5	~65.9
04SW95	NBF-180,NBF-181	09/05/1995	~90.1	<20.0	228	8.4	<35	~3.2	~3.9	251	237
05SW95	NBF-182,NBF-183	09/05/1995	223	<20.0	230	<35	<35	~3.7	~5.7	238	235
06SW95	NBF-184,NBF-185	09/06/1995	420	<20.0	240	<35	<35	~4.4	~5.6	230	234
07SW95	NBF-186,NBF-187	09/06/1995	418	<20.0	229	<35	<35	~4.6	~5.8	239	233
08SW95	NBF-188,NBF-189	09/06/1995	904	<20.0	245	36	36	~4.6	~6.0	233	236
09SW95	NBF-190,NBF-191	09/06/1995	622	<20.0	240	<35	<35	~4.6	~5.9	232	234
10SW95	NBF-192,NBF-193	09/06/1995	~186	<20.0	210	<21	<21	<1.1	~1.4	~28.8	~33.8
11SW95	NBF-194,NBF-195	09/06/1995	~136	<20.0	180	<21	<21	<1.1	~1.4	~31.9	~28.1
12SW95	NBF-196,NBF-197	09/06/1995	~152	<20.0	178	<21	<21	<1.1	~1.3	~28.3	~32.5
13SW95	NBF-153,NBF-154	09/07/1995	2240	<20.0	325	<32	<32	~5.3	~6.0	~83.1	~79.9
	NBF-155,NBF-156	09/07/1995	3510	<20.0	No Data	<33	<33	~5.7	~6.1	~77.2	~73.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.
[c]Result represents total activity from analysis of filtered aliquot + filter residue.
[d]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[e]Sample was filtered in the analytical laboratory.

Table A-25 (continued). Ecological Risk Assessment Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Beta[b] (pCi/L)[c]	Beta[d] (pCi/L)[c]	Ca (µg/L)	Ca[e] (µg/L)	CDT[f] (µmhos/cm)	Cl (µg/L)	Co (µg/L)	Co[e] (µg/L)	Cu (µg/L)
01SW95	NBF-198,NBF-199	09/07/1995	<36	<36	321000	317000	1885	22900	<4.4	<4.0	<5.6
	NBF-200,NBF-151	09/07/1995	<36	<36	323000	316000	No Data	22500	<4.4	<4.0	<5.6
02SW95	NBF-177,NBF-176	09/05/1995	<36	<36	319000	314000	2002	35800	<4.4	<4.0	<5.6
03SW95	NBF-178,NBF-179	09/05/1995	<36	<36	313000	311000	1975	38200	<4.4	<4.0	<5.6
04SW95	NBF-180,NBF-181	09/05/1995	<22	<22	123000	122000	1267	93600	<4.4	<4.0	<5.6
05SW95	NBF-182,NBF-183	09/05/1995	<22	<22	127000	127000	1296	92900	<4.4	<4.0	<5.6
06SW95	NBF-184,NBF-185	09/06/1995	<22	<22	128000	127000	1278	91800	<4.4	<4.0	<5.6
07SW95	NBF-186,NBF-187	09/06/1995	<22	<22	129000	128000	1276	91800	<4.4	<4.0	<5.6
08SW95	NBF-188,NBF-189	09/06/1995	22.1	22.1	129000	128000	1246	92100	<4.4	<4.0	<5.6
09SW95	NBF-190,NBF-191	09/06/1995	<22	<22	127000	127000	1265	92500	<4.4	<4.0	<5.6
10SW95	NBF-192,NBF-193	09/06/1995	<14.3	<14.3	88900	88600	690	20400	<4.4	<4.0	<5.6
11SW95	NBF-194,NBF-195	09/06/1995	<14.3	<14.3	84600	83700	662	20000	<4.4	<4.0	<5.6
12SW95	NBF-196,NBF-197	09/06/1995	<14.3	<14.3	81400	80600	660	19900	<4.4	<4.0	<5.6
13SW95	NBF-153,NBF-154	09/07/1995	<21	<21	112000	110000	1007	33000	<4.4	<4.0	<5.6
	NBF-155,NBF-156	09/07/1995	<21	<21	113000	111000	No Data	33400	<4.4	<4.0	<5.6

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Result represents total activity from analysis of filtered aliquot + filter residue.
[c]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[d]Sample was filtered in the analytical laboratory.
[e]Sample was filtered in the field.
[f]Conductivity in micromhos per centimeter.

Table A-25 (continued). Ecological Risk Assessment Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Cu[b] (µg/L)	F (µg/L)	K (µg/L)	K[b] (µg/L)	Mg (µg/L)	Mg[b] (µg/L)	Mn (µg/L)	Mn[b] (µg/L)	Mo (µg/L)
01SW95	NBF-198,NBF-199	09/07/1995	<5.0	~117	~4300	~3810	51900	50600	103	98.7	<28.9
	NBF-200,NBF-151	09/07/1995	<5.0	~118	~3640	~4000	51300	50100	102	98.6	<28.9
02SW95	NBF-177,NBF-176	09/05/1995	<5.0	~119	~5250	~4320	56200	55800	106	98.4	<28.9
03SW95	NBF-178,NBF-179	09/05/1995	<5.0	~112	~4540	~4770	57400	57000	27.6	25.2	<28.9
04SW95	NBF-180,NBF-181	09/05/1995	<5.0	~120	9740	9800	28700	28100	303	254	<28.9
05SW95	NBF-182,NBF-183	09/05/1995	<5.0	~111	9540	9450	28800	28400	186	208	<28.9
06SW95	NBF-184,NBF-185	09/06/1995	<5.0	~131	9720	9890	29000	28500	135	106	<28.9
07SW95	NBF-186,NBF-187	09/06/1995	<5.0	~144	8930	8820	29100	28400	137	113	<28.9
08SW95	NBF-188,NBF-189	09/06/1995	<5.0	~133	10200	10100	29200	28600	119	88.8	<28.9
09SW95	NBF-190,NBF-191	09/06/1995	~13.8	~138	9630	9710	29000	28400	95.5	70.0	<28.9
10SW95	NBF-192,NBF-193	09/06/1995	<5.0	~161	~1470	~1770	18900	18300	24.9	21.9	<28.9
11SW95	NBF-194,NBF-195	09/06/1995	<5.0	~145	~1170	~1610	18500	18100	20.5	17.0	<28.9
12SW95	NBF-196,NBF-197	09/06/1995	<5.0	~142	~2100	~1220	18400	18000	~14.5	~11.8	<28.9
13SW95	NBF-153,NBF-154	09/07/1995	<5.0	269	5650	~4420	32100	31600	2380	2270	<28.9
	NBF-155,NBF-156	09/07/1995	<5.0	289	~5040	~4350	32600	31800	2430	2280	<28.9

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.

Table A-25 (continued). Ecological Risk Assessment Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Mo[b] (µg/L)	Na (µg/L)	Na[b] (µg/L)	NH_4 (µg/L)	NO_3+NO_2-N[c] (µg/L)	Pb-210[d] (pCi/L)[e]	Pb-210[f] (pCi/L)[e]	pH	Po-210[d] (pCi/L)[e]
01SW95	NBF-198,NBF-199	09/07/1995	<26.0	57600	55600	31.3	~230	<2	<2	7.73	<.5
	NBF-200,NBF-151	09/07/1995	<26.0	56700	55300	23.8	~229	<2	<2	No Data	<.5
02SW95	NBF-177,NBF-176	09/05/1995	<26.0	81500	78500	41.4	~230	<2	<2	7.61	<.5
03SW95	NBF-178,NBF-179	09/05/1995	<26.0	87000	83600	28.8	~112	<2	<2	7.85	<.5
04SW95	NBF-180,NBF-181	09/05/1995	<26.0	98700	93900	2680	~41.0	<2	<2	7.80	<.5
05SW95	NBF-182,NBF-183	09/05/1995	<26.0	99100	95300	1640	799	<2	<2	7.94	<.5
06SW95	NBF-184,NBF-185	09/06/1995	<26.0	98700	95500	1410	971	<2	<2	7.91	<.5
07SW95	NBF-186,NBF-187	09/06/1995	<26.0	98900	94700	1220	1030	<2	<2	7.95	<.5
08SW95	NBF-188,NBF-189	09/06/1995	<26.0	99300	95700	1110	1100	<2	<2	8.21	<.5
09SW95	NBF-190,NBF-191	09/06/1995	<26.0	98600	95800	952	1140	<2	<2	8.29	<.5
10SW95	NBF-192,NBF-193	09/06/1995	<26.0	29000	27800	~16.3	~35.8	<2	<2	8.10	<.5
11SW95	NBF-194,NBF-195	09/06/1995	<26.0	29000	27900	28.8	<10.0	<2	<2	8.07	<.5
12SW95	NBF-196,NBF-197	09/06/1995	<26.0	29100	27700	~13.7	~10.6	<2	<2	8.09	<.5
13SW95	NBF-153,NBF-154	09/07/1995	<26.0	66700	65000	51.5	<10.0	<2	<2	7.37	<.5
	NBF-155,NBF-156	09/07/1995	<26.0	67600	65000	43.9	<10.0	<2	<2	No Data	<.5

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.
[c](Nitrate + nitrite) as nitrogen. The samples were acidified in the field, thus the nitrite was oxidized to nitrate.
[d]Result represents total activity from analysis of filtered aliquot + filter residue.
[e]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[f]Sample was filtered in the analytical laboratory.

Table A-25 (continued). Ecological Risk Assessment Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Po-210[b] (pCi/L)[c]	Ra-226[d] (pCi/L)[c]	Ra-226[b] (pCi/L)[c]	Rn-222[b] (pCi/L)[c]	Se (µg/L)	Se[e] (µg/L)	Sn (µg/L)	Sn[e] (µg/L)	SO_4 (µg/L)
01SW95	NBF-198,NBF-199	09/07/1995	<0.5	<.5	<0.5	139	<2.2	~2.7	<1.1	<1.0	837000
	NBF-200,NBF-151	09/07/1995	<0.5	<.5	<0.5	152	<2.2	~2.4	<1.1	<1.0	838000
02SW95	NBF-177,NBF-176	09/05/1995	<0.5	0.78	0.78	167	~2.3	~2.3	<1.1	<1.0	872000
03SW95	NBF-178,NBF-179	09/05/1995	<0.5	0.63	0.63	109	~2.5	~3.0	<1.1	<1.0	880000
04SW95	NBF-180,NBF-181	09/05/1995	<0.5	<.5	<0.5	<43	<2.2	<2.0	<1.1	<1.0	272000
05SW95	NBF-182,NBF-183	09/05/1995	<0.5	<.5	<0.5	76	<2.2	<2.0	<1.1	<1.0	279000
06SW95	NBF-184,NBF-185	09/06/1995	<0.5	0.61	0.61	<39	<2.2	<2.0	<1.1	<1.0	272000
07SW95	NBF-186,NBF-187	09/06/1995	<0.5	0.61	0.61	<39	<2.2	<2.0	<1.1	<1.0	274000
08SW95	NBF-188,NBF-189	09/06/1995	<0.5	0.50	0.50	<39	<2.2	<2.0	<1.1	<1.0	272000
09SW95	NBF-190,NBF-191	09/06/1995	<0.5	0.53	0.53	<39	<2.2	<2.0	<1.1	<1.0	273000
10SW95	NBF-192,NBF-193	09/06/1995	<0.5	<.5	<0.5	<38	<2.2	<2.0	<1.1	<1.0	129000
11SW95	NBF-194,NBF-195	09/06/1995	<0.5	<.5	<0.5	<38	<2.2	<2.0	<1.1	<1.0	128000
12SW95	NBF-196,NBF-197	09/06/1995	<0.5	<.5	<0.5	<38	<2.2	<2.0	<1.1	<1.0	129000
13SW95	NBF-153,NBF-154	09/07/1995	<0.5	<.5	<0.5	301	<2.2	<2.0	<1.1	<1.0	154000
	NBF-155,NBF-156	09/07/1995	<0.5	<.5	<0.5	275	<2.2	<2.0	<1.1	<1.0	154000

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the analytical laboratory.
[c]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[d]Result represents total activity from analysis of filtered aliquot + filter residue.
[e]Sample was filtered in the field.

Table A-25 (continued). Ecological Risk Assessment Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	Temperature (degrees C)	Th-230[b] (pCi/L)[c]	Th-230[d] (pCi/L)[c]	U-234[b] (pCi/L)[c]	U-234[d] (pCi/L)[c]	U-235[b] (pCi/L)[c]	U-235[d] (pCi/L)[c]	U-238[b] (pCi/L)[c]	U-238[d] (pCi/L)[c]
01SW95	NBF-198,NBF-199	09/07/1995	13.9	<1.5	<1.5	35.97	35.8	~1.8	~1.8	35.29	35.1
	NBF-200,NBF-151	09/07/1995	No Data	<1.5	<1.5	37.24	37.0	~2.0	~2.0	38.85	38.6
02SW95	NBF-177,NBF-176	09/05/1995	17.2	<1.5	<1.5	63.14	62.9	~3.2	~3.2	63.56	63.3
03SW95	NBF-178,NBF-179	09/05/1995	18.7	<1.5	<1.5	64.49	64.2	~3.4	~3.4	66.89	66.6
04SW95	NBF-180,NBF-181	09/05/1995	No Data	<1.5	<1.5	16.6	13.8	~0.15	<1.0	17.1	14.2
05SW95	NBF-182,NBF-183	09/05/1995	22.1	<1.5	<1.5	16.55	15.7	<1	<1.0	17.44	16.6
06SW95	NBF-184,NBF-185	09/06/1995	17.8	<1.5	<1.5	14.81	14.4	<1	<1.0	16.74	16.3
07SW95	NBF-186,NBF-187	09/06/1995	17.8	<1.5	<1.5	16.35	15.4	<1	<1.0	17.66	16.7
08SW95	NBF-188,NBF-189	09/06/1995	19.2	<1.5	<1.5	16.21	15.9	<1	<1.0	17.05	16.7
09SW95	NBF-190,NBF-191	09/06/1995	19.3	<1.5	<1.5	16.03	15.2	<1	<1.0	17.48	16.6
10SW95	NBF-192,NBF-193	09/06/1995	20.7	<1.5	<1.5	~1.0	~1.0	<1	<1.0	<1	<1.0
11SW95	NBF-194,NBF-195	09/06/1995	21.6	<1.5	<1.5	.9	~0.85	<1	<1.0	<1	<1.0
12SW95	NBF-196,NBF-197	09/06/1995	22.0	<1.5	<1.5	~0.93	~0.93	<1	<1.0	<1	<1.0
13SW95	NBF-153,NBF-154	09/07/1995	18.8	~0.11	<1.5	1.45	~1.2	<1	<1.0	~0.13	<1.0
	NBF-155,NBF-156	09/07/1995	No Data	~0.14	<1.5	2.17	~2.0	<1	<1.0	~0.16	<1.0

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Result represents total activity from analysis of filtered aliquot + filter residue.
[c]The values listed multiplied by 10^{-9} will result in microcuries per milliliter.
[d]Sample was filtered in the analytical laboratory.

Table A-25 (continued). Ecological Risk Assessment Surface-Water Chemistry Data Collected At and Near MMTS During 1995[a]

Sample Location	Ticket Numbers	Sample Date	V (µg/L)	V[b] (µg/L)	Zn (µg/L)	Zn[b] (µg/L)
01SW95	NBF-198,NBF-199	09/07/1995	~15.5	~13.1	~14.5	~13.4
	NBF-200,NBF-151	09/07/1995	~16.1	~16.4	~18.6	~14.0
02SW95	NBF-177,NBF-176	09/05/1995	~12.2	~9.8	~15.2	<3.0
03SW95	NBF-178,NBF-179	09/05/1995	~9.0	<4.0	<3.3	<3.0
04SW95	NBF-180,NBF-181	09/05/1995	<4.4	<4.0	~11.5	<3.0
05SW95	NBF-182,NBF-183	09/05/1995	<4.4	~13.3	<3.3	~9.2
06SW95	NBF-184,NBF-185	09/06/1995	<4.4	<4.0	<3.3	<3.0
07SW95	NBF-186,NBF-187	09/06/1995	~7.4	~6.1	~14.2	~11.1
08SW95	NBF-188,NBF-189	09/06/1995	~6.5	~4.7	~4.9	~6.6
09SW95	NBF-190,NBF-191	09/06/1995	~9.1	~6.0	~4.7	30.3
10SW95	NBF-192,NBF-193	09/06/1995	<4.4	<4.0	~5.3	~13.1
11SW95	NBF-194,NBF-195	09/06/1995	<4.4	<4.0	~21.1	~18.8
12SW95	NBF-196,NBF-197	09/06/1995	<4.4	<4.0	~14.8	~14.6
13SW95	NBF-153,NBF-154	09/07/1995	<4.4	<4.0	~12.0	~16.5
	NBF-155,NBF-156	09/07/1995	<4.4	<4.0	~13.1	~16.7

[a]A "<" indicates that the maximum concentration was below the detection limit (number shown is detection limit). A "~" indicates an approximate value (the value was outside the limits for which the instrument was calibrated).
[b]Sample was filtered in the field.