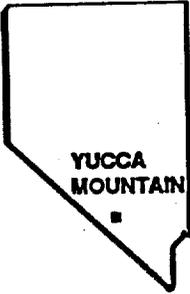


*Rec'd Mr. Phillips
4/17/93 - 5/31/93*

U.S. DEPARTMENT OF ENERGY

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**YUCCA MOUNTAIN
SITE CHARACTERIZATION
PROJECT**

**YUCCA MOUNTAIN
SITE CHARACTERIZATION PROJECT**

**TECHNICAL DATA
CATALOG
(QUARTERLY SUPPLEMENT)**

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MARCH 31, 1993

UNITED STATES DEPARTMENT OF ENERGY

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**YUCCA MOUNTAIN
SITE CHARACTERIZATION PROJECT**

**TECHNICAL DATA CATALOG
(QUARTERLY SUPPLEMENT)**

MARCH 31, 1993

Prepared by

**Civilian Radioactive Waste Management System
Management and Operating Contractor
Yucca Mountain Site Characterization Project
101 Convention Center Drive
Las Vegas, NV 89109**

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INTRODUCTION

The June 1, 1985, Department of Energy (DOE)/Nuclear Regulatory Commission (NRC) Site-Specific Procedural Agreement for Geologic Repository Site Investigation and Characterization Program requires the DOE to develop and maintain a catalog of data which will be updated and provided to the NRC at least quarterly. This catalog is to include a description of the data; the time (date), place, and method of acquisition; and where it may be examined. The Yucca Mountain Site Characterization Project (YMP) Technical Data Catalog is published and distributed in accordance with the requirements of the Site-Specific Agreement.

The YMP Technical Data Catalog is a report based on reference information contained in the YMP Automated Technical Data Tracking System (ATDT). The reference information is provided by Participants for data acquired or developed in support of the YMP. The Technical Data Catalog is updated quarterly and published in the month following the end of each quarter. A complete revision to the Catalog is published at the end of each fiscal year. Supplements to the end-of-year edition are published each quarter. These supplements provide information related to new data items not included in previous quarterly updates and data items affected by changes to previously published reference information. The Technical Data Catalog, dated December 31, 1992, should be retained as the baseline document for the supplements until the end-of-year revision is published and distributed in October 1993.

Requests for technical data referenced in the Data Catalog must be submitted in writing to the YMP Project Manager, Carl Gertz at the following address:

U.S. Department of Energy
Yucca Mountain Site Characterization
Project Office
P.O. Box 98608
Las Vegas, NV 89193-8608

Requests should reference the Data Tracking Number (DTN) used to identify each data item included in the Data Catalog and should include the following information: the requester's name, organization, address, and telephone number; the scope of the data requested; a description of the intended use of the data; and any special format preferences. In response to specific requests, the YMP will provide the solicited technical data or information regarding where the data may be examined.

The information contained in the Technical Data Catalog is organized by the governing plan under which the referenced technical data were acquired or developed. The applicable governing plans are identified in the Table of Contents. Site Characterization Program Baseline (SCPB) data items referenced in the Catalog are further grouped by SCPB Activity Number.

The Technical Data Catalog format includes the following information for each referenced data item:

- (1) Data Tracking Number - Unique identifier for the referenced data item.
- (2) Data Title/Description - A brief description of the referenced data item.
- (3) Acquisition/Development Period - The date or range of dates during which the referenced data item was acquired or developed.
- (4) Acquisition/Development Location - The field or laboratory location where the referenced data item was acquired or developed.

(NOTE: Locations are identified by unique names/identifiers or coordinates. Locations identified by coordinates may be expressed in geographic, Nevada state plane, or Universal Transverse Mercator (UTM). Nevada state plane coordinates are indicated by an "(N)" at the end of each coordinate; UTM coordinates are indicated by a "(U)".)

- (5) Acquisition/Development Method - A brief description of the method used and/or the procedure followed to acquire or develop the referenced data item.
- (6) Data Type - An "A" for acquired data or a "D" for developed data.
- (7) Qualified - A "Y" for Yes or an "N" for No indicating whether or not the referenced data item was acquired or developed in accordance with an NRC accepted quality assurance program or qualified in accordance with appropriate YMP procedures.

(NOTE: Developed data items derived from other data sources are not classified as "Qualified" unless the data sources are also qualified.)

- (8) Data Location, - A "P" indicates that the data reside in, and may be examined only at, a Participant Data Archive. A "T" indicates that the data are in the Technical Data Base (TDB) and may be examined there or at the Central Records Facility (CRF). A "C" indicates that the data are in, and may be examined at, the CRF.

New data items, which were not included in a previous quarterly edition of the Technical Data Catalog, are identified by an asterisk (*) preceding the DTN. Changes to reference information published in a previous edition of the Catalog are identified by a double asterisk (**) preceding the DTN for each affected data item.

Appendix A of this document lists the activity numbers and titles of all SCPB related data items referenced in the Catalog. Appendix B outlines the types of data that are available in the Geologic and Engineering Materials Bibliography of Chemical Species (GEMBOCHS) component of the TDB. Appendix C identifies any additions or modifications that were incorporated into the GEMBOCHS data base during the current quarter. Appendices D and E provide similar information for the Geographic Nodal Information Study and Evaluation System (GENISES) component of the TDB.

The ATDT data base and, consequently, the Technical Data Catalog do not contain reference information for all data available in the TDB. This discrepancy, which is in the process of being corrected, is due to the varying implementation dates of the TDB components and ATDT.

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ENVIRONMENTAL MONITORING AND MITIGATION PLAN

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|---------------------|--|-------------------|---|-------|
| *GS930100121347.001 | DATA ON GROUND WATER LEVELS AND SPRING FLOWS INCLUDING WELL DEPTHS, CASING INFORMATION, DISCHARGE MEASUREMENTS, WELL AND SPRING LOCATIONS. | 10/01/92-12/31/92 | DATA WERE COLLECTED USING HP-54,R0, WATER-FLOW MEASUREMENTS USING WEIRS, FLUMES, AND BARRELS; HP-61,R0, USE OF HAND-HELD STEEL TAPES (IN VERTICAL BOREHOLES); HP-99,R1, INSTRUCTION FOR OPERATION OF A WELL SOUNDER FOR MEASURING WATER LEVELS; AND HP-166,R0, STREAM DISCHARGE MEASUREMENTS USING A PYGMY METER. | A Y P |

ACQN/DEVL LOCATION : 36 00'N 117 00'W ;37 00'N 116 00'W

METEOROLOGICAL MONITORING PLAN

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|----------------------|--|-------------------|---|-------|
| **TM000000000001.024 | AMBIENT AIR MONITORING REPORT, JANUARY - MARCH 1992 ACQN/DEVL LOCATION : T&MSS | 01/01/92-03/31/92 | REFORMATING OF DATA ACQUIRED BY DATALOGGERS | D Y C |
| **TM000000000001.029 | QUARTERLY METEOROLOGICAL DATA REPORT, DECEMBER 1987 THROUGH FEBRUARY 1988 ACQN/DEVL LOCATION : YUCCA MOUNTAIN SITE AREA | 12/01/87-02/29/88 | DATA WAS ACQUIRED FROM ON-SITE DATALOGGERS | D N P |
| **TM000000000001.030 | QUARTERLY METEOROLOGICAL DATA REPORT, MARCH 1988 THROUGH MAY 1988 ACQN/DEVL LOCATION : YUCCA MOUNTAIN SITE AREA | 03/01/88-05/31/88 | DATA WAS ACQUIRED FROM ON-SITE DATALOGGERS | D N P |
| **TM000000000001.031 | QUARTERLY METEOROLOGICAL DATA REPORT, JUNE 1988 THROUGH AUGUST 1988 ACQN/DEVL LOCATION : YUCCA MOUNTAIN SITE AREA | 06/01/88-08/31/88 | DATA WAS ACQUIRED FROM ON-SITE DATALOGGERS | D N P |
| **TM000000000001.032 | QUARTERLY METEOROLOGICAL DATA REPORT, DECEMBER 1988 THROUGH FEBRUARY 1989 ACQN/DEVL LOCATION : YUCCA MOUNTAIN SITE AREA | 12/01/88-02/28/89 | DATA WAS ACQUIRED FROM ON-SITE DATALOGGERS | D N P |
| **TM000000000001.033 | AMBIENT AIR MONITORING REPORT, JULY - SEPTEMBER 1992 ACQN/DEVL LOCATION : T&MSS | 07/01/92-09/30/92 | REFORMATING OF DATA ACQUIRED BY DATALOGGERS | D Y C |

METEOROLOGICAL MONITORING PLAN

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD |
|---------------------|---|-------------------|--|
| *TM000000000001.034 | AMBIENT AIR MONITORING REPORT, OCTOBER - DECEMBER 1992 | 10/01/92-12/01/92 | REFORMATING OF DATA ACQUIRED BY DATALOGGERS |
| | ACQN/DEVL LOCATION : T&MSS | | |

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PERFORMANCE ASSESSMENT MANAGEMENT PLAN

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|---------------------|---|-------------------|--|-------|
| *GS930200012547.001 | PHYSICAL AND FLOW PROPERTIES OF 100 CORE SAMPLES FROM CALICO HILLS AND TOPOPAH SPRING UNITS USED IN A STUDY ON THE EFFECTS OF HIGH TEMPERATURE ON HYDROLOGIC PROPERTIES OF VOLCANIC TUFF. | 03/10/92-10/28/92 | USGS HP-229,R1, DETERMINATION OF WATER CONTENT AND PHYSICAL PROPERTIES FOR LABORATORY ROCK SAMPLES, WAS USED TO DETERMINE BULK DENSITY, POROSITY, AND PARTICLE DENSITY. AIR AND WATER PERMEABILITY WERE DONE USING A STEADY STATE PERMEAMETER, SORPTIVITY WAS CALCULATED FROM IMBIBITION EXPERIMENTS WHERE IMBIBITION = SORPTIVITY * TIME ^{1/2} . PARTICLE DENSITY WAS ALSO DETERMINED USING A HELIUM PYCNOMETER. | A N C |
| | ACQN/DEVL LOCATION : USGS HRF, NTS AREA 25, MERCURY, NV | | | |
| *SNL19011590002.001 | LOGBOOK FOR GRAVITY-DRIVEN INSTABILITY IN A PARTIALLY WETTED FRACTURE EXPERIMENT. | 06/11/92-02/28/93 | YMP EP-0031, REV. 0: "UNSATURATED FLOW AND TRANSPORT EXPERIMENTS". AN EXPERIMENTAL APPARATUS COMPOSED OF A ROTATING TEST STAND (RTS), FRACTURE TEST CELL, AND TRANSMITTED-LIGHT VISUALIZATION SYSTEM WAS DESIGNED TO FACILITATE OBSERVATION OF WETTING-FRONT ADVANCE IN TRANSPARENT ANALOG FRACTURES. THE RTS HOLDS A TEST CELL CONTAINING THE ANALOG FRACTURE, DIGITAL CAMERA, AND LIGHTING IN RIGID, REPRODUCIBLE ALIGNMENT. ALL EXPERIMENTS WERE IMAGED AND RECORDED AT PRE-DETERMINED INTERVALS. (FOR MORE DETAIL SEE EP-0031 & LOGBOOK PAGES I THRU V). | A N P |
| | ACQN/DEVL LOCATION : SNL | | | |

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PERFORMANCE ASSESSMENT MANAGEMENT PLAN

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|---------------------|---|-------------------|---|-------|
| *SNL19011590002.002 | LOGBOOK FOR SINGLE FINGER IN INITIALLY DRY FRACTURE EXPERIMENT. | 01/23/90-02/28/93 | AN EXPERIMENTAL APPARATUS COMPOSED OF A ROTATING TEST STAND (RTS), FRACTURE TEST CELL, AND TRANSMITTED-LIGHT VISUALIZATION SYSTEM WAS DESIGNED TO FACILITATE OBSERVATION OF WETTING-FRONT ADVANCE IN TRANSPARENT ANALOGUE FRACTURES. THE RTS HOLDS A TEST CELL CONTAINING THE ANALOGUE FRACTURE, DIGITAL CAMERA, AND LIGHTING SYSTEM IN RIGID, REPRODUCIBLE ALIGNMENT. TEST CELLS OF UP TO 100X50 CM CAN BE CLAMPED ONTO THE TEST-PLANE TABLE OF THE RTS. DATA IS ACQUIRED BY A CHARGE-COUPLED-DEVICE (CCD) VIDEO CAMERA ATTACHED TO THE SUPERSTRUCTURE OF THE RTS AND FOCUSED ON THE FRACTURE PLANE. ALL EXPERIMENTS ARE IMAGED AND RECORDED AT PRE-DETERMINED INTERVALS. (FOR MORE DETAIL SEE: EP-0031 & LOGBOOK PAGES I THRU III). | A N P |

ACQN/DEVL LOCATION : SNL

RADIOLOGICAL MONITORING PLAN

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|---------------------|--|-------------------|--|-------|
| *TM000000001992.012 | ENVIRONMENTAL RADON MEASUREMENTS FOR DECEMBER 1992. ACQN/DEVL LOCATION : RFPD NEAR FIELD MONITORING SITES. | 12/02/92-01/04/93 | DATA ACQUIRED PER TMSS WORK INSTRUCTION WI-RM-770, REVISION 4 ICN 0. | A Y C |
| *TM000000001992.027 | FAR FIELD SITE 19 AND 23 PRESSURIZED IONIZATION CHAMBER MEASUREMENTS FOR 1992. ACQN/DEVL LOCATION : FAR FIELD MONITORING SITES 19 AND 23. | 12/02/91-11/06/92 | DATA ACQUIRED PER TMSS WORK INSTRUCTION WI-RM-904, REVISION 0. | A Y C |
| *TM000000001993.001 | ENVIRONMENTAL RADON MEASUREMENTS FOR JANUARY 1993. ACQN/DEVL LOCATION : RFPD FAR FIELD AND NEAR FIELD SITES. | 01/04/93-02/04/93 | DATA ACQUIRED PER TMSS WORK INSTRUCTION WI-RM-770, REVISION 4, ICN 0. | A Y C |
| *TM000000001993.002 | ENVIRONMENTAL RADON MEASUREMENTS FOR FEBRUARY 1993. ACQN/DEVL LOCATION : RFPD NEAR FIELD AND FAR FIELD SITES. | 02/02/93-03/04/93 | DATA ACQUIRED IN ACCORDANCE WITH TMSS WORK INSTRUCTION WI-RM-770, REVISION 4, ICN 0. | A Y C |

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SITE CHARACTERIZATION PLAN BASELINE

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|--------------------------|---|-------------------|--|-------|
| Activity - 8.3.1.2.1.1.1 | | | | |
| *GS930108312111.004 | PRECIPITATION DEPTH, IN INCHES, FOR EVENTS BETWEEN 10/1/92 AND 10/07/92, COLLECTED USING A NON-AUTOMATED, COLLECTOR-TYPE PLASTIC GAUGE AT UE-25 UZN #7. MEASUREMENTS WERE TAKEN AFTER EACH MAJOR PRECIPITATION EVENT AND TOTALLED FOR EACH MONTH. | 10/01/92-10/07/92 | PRECIPITATION AMOUNTS WERE READ DIRECTLY FROM A SCALE IMPRINTED ON THE SIDE OF THE GAUGE. MEASUREMENTS WERE MADE IN INCHES OF RAINFALL. | A N P |
| | ACQN/DEVL LOCATION : UE-25 UZN #7 USGS HRF, AREA 25, MERCURY, NV | | | |
| Activity - 8.3.1.2.1.2.1 | | | | |
| *GS930308312132.003 | HYDROLOGY OF YUCCA MOUNTAIN AND VICINITY, NEVADA - CALIFORNIA -- INVESTIGATIVE RESULTS THROUGH MID-1983, BY R.K. WADDELL, J.H. ROBISON, AND R.K. BLANKENNAGEL. | 01/01/83-12/31/83 | SYNTHESIS OF NUMEROUS REPORTS AND DATA BASED ON LITERATURE AND PRELIMINARY SITE-EXPLORATION ACTIVITIES THROUGH MID-1983. IMPORTANT DATA AND CHARACTERISTICS OF THE GENERAL SITE AREA INCLUDE STREAM CHARACTERISTICS, POTENTIOMETRIC WATER LEVELS, HYDROCHEMISTRY, GROUNDWATER FLOW, HYDROGEOLOGIC UNIT INFORMATION, ETC. REPORT IS A CONTRIBUTION TO THE EARLY SITE CHARACTERIZATION REPORT (NOW CALLED SITE CHARACTERIZATION PLAN). | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

SITE CHARACTERIZATION PLAN BASELINE

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|--------------------------|--|-------------------|--|-------|
| Activity - 8.3.1.2.1.3.2 | | | | |
| *GS930108312132.001 | HYDROLOGY OF YUCCA MOUNTAIN AND VICINITY, NEVADA - CALIFORNIA: INVESTIGATIVE RESULTS THROUGH MID-1983, BY R.K. WADDELL, J.H. ROBISON, & R.K. BLANKENNAGEL. | 01/01/84-08/20/84 | COMPILATION OF HYDROLOGIC DATA COLLECTED AND ANALYZED THROUGH MID-1983 FOR INCLUSION IN THE SITE CHARACTERIZATION REPORT (SCR) FOR THE NEVADA NUCLEAR WASTE STORAGE INVESTIGATIONS. DATA TYPES INCLUDE HYDROCHEMISTRY. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *GS930308312132.003 | HYDROLOGY OF YUCCA MOUNTAIN AND VICINITY, NEVADA - CALIFORNIA -- INVESTIGATIVE RESULTS THROUGH MID-1983, BY R.K. WADDELL, J.H. ROBISON, AND R.K. BLANKENNAGEL. | 01/01/83-12/31/83 | SYNTHESIS OF NUMEROUS REPORTS AND DATA BASED ON LITERATURE AND PRELIMINARY SITE-EXPLORATION ACTIVITIES THROUGH MID-1983. IMPORTANT DATA AND CHARACTERISTICS OF THE GENERAL SITE AREA INCLUDE STREAM CHARACTERISTICS, POTENTIOMETRIC WATER LEVELS, HYDROCHEMISTRY, GROUNDWATER FLOW, HYDROGEOLOGIC UNIT INFORMATION, ETC. REPORT IS A CONTRIBUTION TO THE EARLY SITE CHARACTERIZATION REPORT (NOW CALLED SITE CHARACTERIZATION PLAN). | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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SITE CHARACTERIZATION PLAN BASELINE

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|--------------------------|---|-------------------|---|-------|
| Activity - 8.3.1.2.2.1.1 | | | | |
| **GS920108312211.001 | LABORATORY AND FIELD MEASUREMENTS DONE ON SOIL/ALLUVIUM/COLLUVIUM SAMPLES TO DETERMINE PHYSICAL PROPERTIES AND FIELD GEOMORPHOLOGICAL OBSERVATIONS. | 01/01/87-01/31/89 | LABORATORY METHODS FOR SOIL PHYSICAL PROPERTIES WERE STANDARD SOILS METHODS LOCATED IN "METHODS OF SOIL ANALYSIS - PHYSICAL PROPERTIES" ASA MONOGRAPH NO.9. REMAINING METHODS WERE PROTOTYPE. | A N C |
| | ACQN/DEVL LOCATION : COLO. SCHOOL OF MINES, GOLDEN USGS HRF, NTS AREA 25, MERCURY | | | |
| *GS921008312211.008 | GEOHYDROLOGIC DATA FROM TEST HOLES UE-25 UZ #4 AND UE-25 UZ #5, YUCCA MOUNTAIN AREA, NYE COUNTY, NEVADA, BY CAROLE L. LOSKOT AND DALE P. HAMMERMEISTER | 09/06/84-07/12/90 | COMPILED DATA FROM GRAVIMETRIC WATER CONTENT MEASUREMENTS, WATER POTENTIAL MEASUREMENTS, BULK AND GRAIN DENSITY MEASUREMENTS, TRITIUM MEASUREMENTS, CORES, LITHOLOGY. | D N C |
| | ACQN/DEVL LOCATION : USGS, DENVER | | | |
| *GS921208312211.013 | GEOHYDROLOGIC DATA FROM TEST HOLE USW UZ-6S, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY CAROLE A. LOSKOT. | 04/23/85-11/30/92 | COMPILED DATA FROM GRAVIMETRIC WATER CONTENT MEASUREMENTS, WATER POTENTIAL MEASUREMENTS, BULK & GRAIN DENSITY MEASUREMENTS, CORES, LITHOLOGY. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO. | | | |
| *GS930108312211.001 | USE OF STATISTICALLY DISTINCT GENESIS-LITHOLOGY-QUALIFIER MAP UNITS FOR CLASSIFYING UPLAND SOILS AT YUCCA MOUNTAIN, NEVADA, BY GEOMORPHOLOGY AND PHYSICAL PROPERTIES AFFECTING INFILTRATION, BY M.R. SCHMIDT, K.E. KOIM, AND ALAN L. FLINT. | 01/01/89-07/01/91 | RELATIONS BETWEEN GEOMORPHIC ENVIRONMENTS AND PHYSICAL PROPERTY VARIABLES WERE EVALUATED USING CORRELATION AND ANALYSIS-OF VARIANCE TECHNIQUES, AND STATISTICALLY DISTINCT MAP UNITS WERE DETERMINED FOR GLQ MAPPING USING MULTIPLE COMPARISON TECHNIQUE. HYDRAULIC-CONDUCTIVITY VALUES FOR EACH MAP UNIT WERE ESTIMATED BASED ON MEAN SILT AND CLAY CONTENT. | D N C |
| | ACQN/DEVL LOCATION : USGS HRF, NTS AREA 25, MERCURY | | | |

SITE CHARACTERIZATION PLAN BASELINE

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|--------------------------|---|-------------------|---|-------|
| Activity - 8.3.1.2.2.1.2 | | | | |
| **GS920208312212.001 | WEATHERSTATION DATA FOR YUCCA MOUNTAIN, NV FOR 1988 AND UP TO 5/2/89. DATA INCLUDES DAILY VALUES OF INCOMING SHORTWAVE SOLAR RADIATION AND AIR TEMPERATURE. | 01/01/88-05/02/89 | PYRANOMETER AND CSI 207 TEMPERATURE AND RELATIVE HUMIDITY PROBE; HP-168, R0, MEASUREMENT OF ENERGY FLUX DENSITY BY A PYRANOMETER. | A N P |
| | ACQN/DEVL LOCATION : 36 08'00"N 116 04'00"W | | | |
| **GS920208312212.003 | PREDICTION OF ACTUAL SOLAR RADIATION USING MODELED CLEARSKY RADIATION AND AIR TEMPERATURE, BY ALAN L. FLINT AND LORRAINE E. FLINT | 01/01/90-01/24/92 | MODELING OF CLEARSKY RADIATION DATA USING SITE PARAMETERS DESCRIBED IN PAPER "CALCULATION OF SOLAR RADIATION IN MOUNTAINOUS TERRAIN" IN AGRICULTURE AND FOREST METEOROLOGY, 40:233-249, 1987. | D N P |
| | ACQN/DEVL LOCATION : USGS HRF, MERCURY, NV | | | |
| *GS921008312211.008 | GEOHYDROLOGIC DATA FROM TEST HOLES UE-25 UZ #4 AND UE-25 UZ #5, YUCCA MOUNTAIN AREA, NYE COUNTY, NEVADA, BY CAROLE L. LOSKOT AND DALE P. HAMMERMEISTER | 09/06/84-07/12/90 | COMPILED DATA FROM GRAVIMETRIC WATER CONTENT MEASUREMENTS, WATER POTENTIAL MEASUREMENTS, BULK AND GRAIN DENSITY MEASUREMENTS, TRITIUM MEASUREMENTS, CORES, LITHOLOGY. | D N C |
| | ACQN/DEVL LOCATION : USGS, DENVER | | | |
| *GS921208312211.013 | GEOHYDROLOGIC DATA FROM TEST HOLE USW UZ-6S, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY CAROLE A. LOSKOT. | 04/23/85-11/30/92 | COMPILED DATA FROM GRAVIMETRIC WATER CONTENT MEASUREMENTS, WATER POTENTIAL MEASUREMENTS, BULK & GRAIN DENSITY MEASUREMENTS, CORES, LITHOLOGY. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO. | | | |

SITE CHARACTERIZATION PLAN BASELINE

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
|---------------------|--|-------------------|--|-------|
| *GS930108312212.001 | THE INFLUENCE OF LONG-TERM CLIMATE CHANGE ON NET INFILTRATION AT YUCCA MOUNTAIN, NEVADA, BY A.L. FLINT, L.E. FLINT & J.A. HEVESI | 06/01/92-12/31/92 | THE FOLLOWING DATA FROM THE SOURCE DATASETS WERE USED TO ESTIMATE PARAMETERS FOR FLOW MODELING: POROSITY, SATURATED PERMEABILITY, MOISTURE RETENTION, PARTICLE DENSITY. AVERAGE VALUES WERE USED FOR THE DIFFERENT LITHOLOGIC UNITS. IF A LITHOLOGIC UNIT WAS HIGHLY VARIABLE IT WAS DIVIDED INTO SEVERAL UNITS. | D Y P |
| | ACQN/DEVL LOCATION : USGS HRF, AREA 25, MERCURY, NV | | | |
| *GS930108312212.002 | NEUTRON MOISTURE METER COUNTS FROM LOGS COLLECTED FROM BOREHOLE UE-25 UZN #7 AT YUCCA MOUNTAIN, NV, FROM 10/1/91 TO 10/7/92. | 10/01/91-10/07/92 | NEUTRON LOGS WERE COLLECTED USING THE CPN 503 MOISTURE PROBE APPROXIMATELY EVERY 1 MONTH USING USGS TECHNICAL PROCEDURE HP-62,R4 THRU R6 "METHOD FOR MEASURING (SUB-SURFACE) MOISTURE CONTENT USING A NEUTRON MOISTURE METER." | A Y P |
| | ACQN/DEVL LOCATION : N768724(N) E566141(N) USGS HRF, AREA 25, MERCURY, NV | | | |
| *GS930108312212.003 | PRELIMINARY CALCULATION OF VOLUMETRIC WATER CONTENT FROM NEUTRON COUNTS IN BOREHOLE UE-25 UZN#7. | 01/06/87-04/07/87 | PRELIMINARY CALIBRATION EQUATION DEVELOPED USING POLYNOMIAL REGRESSION METHODS. DATA USED WAS NEUTRON COUNTS AND VOLUMETRIC WATER CONTENT DETERMINED ON BOREHOLE CORE SAMPLES USING HP-229,R0, AND HP-62,R6. CORE SAMPLE DATA FROM GS920508312231.010. | D N P |
| | ACQN/DEVL LOCATION : HRF, AREA 25, MERCURY, NV. | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS930108312212.004 | THE INFLUENCE OF SEASONAL CLIMATIC VARIABILITY ON SHALLOW INFILTRATION AT YUCCA MOUNTAIN, BY A.L. FLINT & J.A. HEVESI | 06/01/92-12/31/92 | PRECIPITATION DATA, AIR TEMPERATURE DATA, SOLAR RADIATION DATA, AND NEUTRON LOGGING DATA FOR THE PERIOD 1/11/90 TO 10/7/92 WERE USED TO DEVELOP AND CALIBRATE A 2-DIMENSIONAL FINITE DIFFERENCE NUMERICAL MODEL OF UNSATURATED GROUNDWATER FLOW. | D N P |
| | ACQN/DEVL LOCATION : USGS HRF, AREA 25, MERCURY, NV | | | |
| *GS930108312212.005 | CALCULATED SORPTIVITY VALUES AT VARIOUS INITIAL WATER CONTENTS FOR CORE FROM NONWELDED (DD-1), AND WELDED (DD-2) BOREHOLES AT THE G-TUNNEL UNDERGROUND FACILITY. IMBIBITION INTO NONWELDED (DD-1) BOREHOLE WITH TIME. | 07/12/89-12/19/89 | BOREHOLE IMBIBITION DATA COLLECTED WITH PRESSURE TRANSDUCER HOOKED TO A MARIOTTE SYSTEM AND TO A DATA LOGGER. CORE DATA COLLECTED FROM A TOP LOADING BALANCE CONNECTED TO A COMPUTER, AND REGRESSIONS RUN TO PRODUCE SLOPE OF SORPTIVITY VS. TIME ^{1/2} . | A N P |
| | ACQN/DEVL LOCATION : GTUF, NTS USGS HRF, NTS AREA 25, MERCURY, NV | | | |
| Activity - 8.3.1.2.2.3.2 | | | | |
| *GS921208312232.002 | SEISMIC CROSS-BOREHOLE IMAGING OF THE NEAR SURFACE USING TOMOGRAPHY AND PRESTACK MIGRATION IN ELASTIC PHYSICAL MODELS BY A.H. BALCH, HYUNSAM CHANG, GREGG HOFFLAND, KURT RANZINGER, AND W.A. SCHNEIDER, JR. | 01/01/90-08/31/92 | COMPUTER MODELING INCLUDING WAVEMODE SEPARATION, INVERSE Q-FILTERING, AND PRESTACK MIGRATION. | D N C |
| | ACQN/DEVL LOCATION : COLORADO SCHOOL OF MINES, GOLDEN, CO. | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS930108312232.001 | "A THREE-DIMENSIONAL PHYSICAL MODELING STUDY APPLYING TOMOGRAPHIC INVERSION AND SEISMIC MIGRATION TO THE TUNNEL DETECTION PROBLEM", BY WILLIAM A. SCHNEIDER, JR. ACQN/DEVL LOCATION : COLORADO SCHOOL OF MINES, GOLDEN, CO | 01/01/88-03/28/90 | COMPUTER MODELING INCLUDING TUNNEL IMAGING THROUGH TOMOGRAPHIC TRAVEL-TIME INVERSION. | D N C |
| *GS930108312232.002 | "MULTI-MODE SEISMIC CROSS-BOREHOLE IMAGING OF A PRODUCING HORIZON USING PHYSICAL ELASTIC MODELING", BY M. HAKAN KARAZINCIR. ACQN/DEVL LOCATION : COLORADO SCHOOL OF MINES, GOLDEN, CO | 01/01/90-05/07/92 | COMPUTER MODELING INCLUDING MODE-SEPARATION, SIGNATURE DECONVOLUTION, MULTI-MODE REVERSE TIME MIGRATION (IMAGING) OF COMMON SOURCE GATHERS, AND STACKING. | D N C |
| *GS930108312232.003 | "WAVE MODE SEPARATION OF MULTI-COMPONENT MULTIPLE-OFFSET VSP DATA FROM A COMPLEX PHYSICAL EARTH MODEL", BY KURT A. RANZINGER. ACQN/DEVL LOCATION : COLORADO SCHOOL OF MINES, GOLDEN, CO | 01/01/88-04/10/90 | COMPUTER MODELING: INCLUDES MODE SEPARATION ALGORITHM. | D N C |
| *GS930108312232.004 | "MULTI-MODE CROSSHOLE REFLECTION IMAGING OF MULTI-COMPONENT PHYSICAL MODEL DATA", BY HYUNSAM CHANG. ACQN/DEVL LOCATION : COLORADO SCHOOL OF MINES, GOLDEN, CO | 01/01/89-06/26/91 | COMPUTER MODELING: INCLUDES STACKING, IMAGING, WAVE MODE SEPARATING. | D N C |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS930108312232.005 | "COMPUTER AND PHYSICAL VSP MODELING OF YUCCA MOUNTAIN, NEVADA", BY DAVID A. CUNNINGHAM. ACQN/DEVL LOCATION : COLORADO SCHOOL OF MINES, GOLDEN, CO | 01/01/87-11/07/88 | COMPUTER MODELING INCLUDING SEPARATION OF WAVEFIELDS, MEDIAN FILTERING, IMAGING. | D N C |
| *GS930108312232.006 | "MULTI-MODE, MULTIPLE OFFSET VSP REVERSE TIME MIGRATION (IMAGING) OF A COMPLEX, PHYSICAL EARTH MODEL", BY GREGG S. HOFFLAND ACQN/DEVL LOCATION : COLORADO SCHOOL OF MINES, GOLDEN, CO | 09/01/88-06/01/89 | COMPUTER MODELING INCLUDING IMAGING, WAVE-MODE SEPARATION, DECONVOLUTION, TRACING. | D N C |
| *GS930108312232.007 | "ILLUMINATION ANGLE DETERMINATION AND ITS APPLICATION TO PRESTACK MIGRATION OF P/S CONVERTED WAVES ON PHYSICAL ELASTIC MODEL DATA", BY CEMAL ERDEMIR. ACQN/DEVL LOCATION : COLO. SCHOOL OF MINES, GOLDEN, CO | 01/01/90-06/26/92 | COMPUTER MODELING INCLUDING TRACING, STACKING. | D N C |
| *GS930208314213.005 | DRILLING AND GEOHYDROLOGIC DATA FOR TEST HOLE USW UZ-1, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY M.S. WHITFIELD, W. THORDARSON, AND D.P. HAMMERMEISTER. | 01/01/89-06/05/90 | DESCRIPTION & INTERPRETATION OF GEOLOGIC DATA INCLUDING GEOPHYSICAL LOGS, LITHOLOGIC LOG, AND STRIKE & DISTRIBUTION OF FRACTURES. HYDROLOGIC DATA INCLUDES WATER CONTENT, WATER POTENTIAL MEASUREMENTS, WATER LEVEL MEASUREMENTS AND PHYSICAL/CHEMICAL ANALYSIS OF WATER. WATER CONTENT MEASUREMENT BY WEIGHT USING STANDARD GRAVIMETRIC OVEN-DRYING METHODS. WATER POTENTIAL MEASUREMENTS USING SC-10 THERMOCOUPLE PSYCHROMETER AND 181 NANOVOLTMETER. THE RICHARD METHOD DESCRIBED IN RICHARDS, L.A., & OGATA, G., 1958, THERMOCOUPLE FOR VAPOR PRESSURE MEASUREMENTS ON BIOLOGICAL AND SOIL SYSTEMS AT HIGH HUMIDITY, SCIENCE, V.128, NO.3331,P.1089-1090, USED TO CONDENSE WATER IN THE THERMOCOUPLE JUNCTION. TOTAL-ORGANIC-CARBON ANALYSIS, AND METHYLENE-CHLORIDE EXTRACTION | D N P |

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| | | | CONCENTRATION & GAS CHROMATOGRAPHIC ANALYSIS USED FLAME-IONIZATION DETECTOR. LIGHT HYDROCARBONS CONFIRMED BY MASS SPECTROSCOPY. |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | |
| | Activity - 8.3.1.2.2.9.3 | | |
| *GS930208312293.001 | GEOMETRICAL DATA FOR THE A-A' CROSS SECTION FROM THE LBL/USGS SITE-SCALE MODEL OF YUCCA MOUNTAIN. COLOR FIGURE OF GEOMETRY AND HYDROGEOLOGICAL UNIT IN CROSS SECTION A-A'. A TABLE WITH PROPERTY DATA CURRENTLY USED IN THE SITE-SCALE MODEL. | 01/01/90-01/01/93 | THE GEOMETRIC DATA WERE PRODUCED BY A GRID D N C GENERATOR. |
| | ACQN/DEVL LOCATION : LBL, BERKELEY, CA | | |
| *GS930308312293.002 | STUDIES OF THE ROLE OF FAULT ZONES ON FLUID FLOW USING THE SITE-SCALE NUMERICAL MODEL OF YUCCA MOUNTAIN, BY C.S. WITWER, G. CHEN AND G.S. BODVARSSON. | 10/01/92-01/25/93 | COMPUTER CODE TOUGH2 (K. PRUESS, TOUGH2 - D N P A GENERAL-PURPOSE NUMERICAL SIMULATOR FOR MULTIPHASE FLUID AND HEAT FLOW, LBL-29400 (1990)) PRODUCED 2-D SIMULATIONS FROM GEOMETRICAL AND MECHANICAL INPUT DATA. OTHER METHODS USED INCLUDE: BROOKS & COREY (1966); M.TH. VAN GENUCHTEN, A CLOSED-FORM EQUATION FOR PREDICTING THE HYDRAULIC CONDUCTIVITY OF UNSATURATED SOILS, (1980); E.A. KLAVETTER AND R.R. PETERS, ESTIMATION OF HYDROLOGIC PROPERTIES OF AN UNSATURATED FRACTURED ROCK MASS, SAND84-2642; SCALING RELATIONSHIP PROPOSED IN J.S.Y. WANG, PROC. 3RD IHLRMMC, (1992). COMPLETE BIBLIOGRAPHIC CITATIONS IN REPORT. |
| | ACQN/DEVL LOCATION : LAWRENCE BERKELEY LABS, BERKELEY, CA | | |

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| Activity - 8.3.1.2.3.1.2 | | | | |
| **GS900908312312.002 | GEOHYDROLOGIC AND DRILL HOLE DATA FOR TEST WELL USW H-4, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY M.S. WHITFIELD, JR., WM. THORDARSON AND E.P. ESSHOM. | 03/01/82-12/31/93 | COMPILATION OF DATA ON DRILLING LOGS, SIDEWALL CORE SAMPLES, WATER-LEVEL MONITORING, PUMPING TESTS, INJECTIONS TESTS, RADIOACTIVE-TRACER BOREHOLE FLOW SURVEY, AND WATER CHEMISTRY. | D N P |
| ACQN/DEVL LOCATION : USGS | | | | |
| **GS910208312312.003 | RAW DATA FROM THE CONTINUOUS AND PERIODIC WATER-LEVEL MEASUREMENT NETWORKS, 1986-1990. THE RAW DATA IS IN THE FORM OF LOGBOOKS AND MAGNETIC CASSETTE TAPES. | 07/21/86-01/04/91 | COLLECTION PROCESSES DETAILED IN TECHNICAL A N P PROCEDURES HP-25,R1, METHOD FOR MEASURING WATER LEVEL USING A PORTABLE MULTICONDUCTOR; HP-26,R1 METHOD FOR CALIBRATING WATER-LEVEL MEASUREMENT EQUIPMENT USING THE REFERENCE STEEL TAPE; HP-60,R1, METHOD FOR MONITORING WATER-LEVEL CHANGES USING PRESSURE TRANSDUCERS; HP-71,R0, METHOD FOR MONITORING WATER-LEVEL CHANGES USING A CAMPBELL SCIENTIFIC 21X MICROLOGGER; HP-75,R1, METHOD FOR MEASURING WATER LEVELS IN WELLS USING REELED (2600-FOOT AND 2800-FOOT) STEEL TAPES; AND HP-93,R0, METHOD FOR PROCESSING ELECTRONIC DATA FROM CAMPBELL SCIENTIFIC 21X MICROLOGGER INTO WATER LEVELS. | A N P |
| ACQN/DEVL LOCATION : J-11 | | | | |
| J-12 WATER WELL | | | | |
| TEST WELL B | | | | |
| UE-25 WT #12 | | | | |
| UE-25 WT #13 | | | | |
| UE-25 WT #14 | | | | |
| UE-25 WT #15 | | | | |
| UE-25 WT #16 | | | | |
| UE-25 WT #17 | | | | |
| UE-25 WT #18 | | | | |
| UE-25 WT #3 | | | | |
| UE-25 WT #4 | | | | |
| UE-25 WT #6 | | | | |
| UE-25B #1 | | | | |
| UE-25C #1 | | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| | UE-25C #2 | | | |
| | UE-25C #3 | | | |
| | UE-25P #1 | | | |
| | UE-29A #1 | | | |
| | UE-29A #2 | | | |
| | UE-5N | | | |
| | USW G-3 | | | |
| | USW G-4 | | | |
| | USW H-1 | | | |
| | USW H-3 | | | |
| | USW H-4 | | | |
| | USW H-5 | | | |
| | USW H-6 | | | |
| | USW VH-1 | | | |
| | USW WT-1 | | | |
| | USW WT-10 | | | |
| | USW WT-11 | | | |
| | USW WT-2 | | | |
| | USW WT-7 | | | |
| | WATER WELL J-13 | | | |
| **GS910508312312.005 | RAW MANUAL WATER-LEVEL MEASUREMENT DATA FROM THE PERIODIC WATER-LEVEL MEASUREMENT NETWORK. | 05/07/89-12/31/89 | MANUAL WATER LEVEL MEASUREMENTS MADE FOLLOWING PROCEDURES HP-25,R1, METHOD FOR MEASURING WATER-LEVEL USING A PORTABLE MULTICONDUCTOR CABLE UNIT, AND HP-75,R0, METHOD FOR MEASURING WATER-LEVELS IN WELLS USING REELED (2600-FOOT AND 2800 FOOT) STEEL TAPES. | A Y P |
| | ACQN/DEVL LOCATION : | | | |
| | UE-25 WT #12 | | | |
| | UE-25 WT #14 | | | |
| | UE-25 WT #15 | | | |
| | UE-25 WT #17 | | | |
| | UE-25 WT #3 | | | |
| | UE-25 WT #4 | | | |
| | USW VH-1 | | | |
| | USW WT-1 | | | |
| | USW WT-10 | | | |
| | USW WT-7 | | | |
| | WATER WELL J-13 | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| **GS910508312312.006 | RAW DATA COLLECTED FROM THE CONTINUOUS WATER-LEVEL MONITORING NETWORK 1985-1988. DATA IN THE FORM OF LOGBOOKS CONTAINING RAW DATA, CASSETTE TAPES CONTAINING RAW TRANSDUCER OUTPUT DATA, AND SUPPORTING DATA. | 01/01/85-12/31/88 | TRANSDUCER AND RELATED DATA COLLECTED USING THE PROCEDURES OUTLINED IN HP-60,R0, METHOD FOR MONITORING WATER LEVEL CHANGES USING PRESSURE TRANSDUCERS; AND HP-71,R0, METHOD FOR MONITORING WATER-LEVEL CHANGES USING A CAMPBELL SCIENTIFIC 21X MICROLOGGER. | A N P |
| | ACQN/DEVL LOCATION : | | | |
| | UE-25 WT #13 | | | |
| | UE-25 WT #16 | | | |
| | UE-25 WT #6 | | | |
| | UE-25B #1 | | | |
| | UE-25C #2 | | | |
| | UE-25C #3 | | | |
| | UE-25P #1 | | | |
| | USW G-3 | | | |
| | USW H-1 | | | |
| | USW H-3 | | | |
| | USW H-4 | | | |
| | USW H-5 | | | |
| | USW H-6 | | | |
| | USW WT-11 | | | |
| | USW WT-2 | | | |
| **GS920608312312.010 | MANUAL WATER-LEVEL MEASUREMENTS DATA COLLECTED FROM WELLS IN THE YUCCA MOUNTAIN AREA, 1990. | 07/02/90-02/21/91 | SELECTION OF MANUAL WATER-LEVEL MEASUREMENTS. DATA WERE COLLECTED USING REELED STEEL TAPES (HP-75) AND MULTICONDUCTOR CABLE UNITS (HP-25) | D Y P |
| | ACQN/DEVL LOCATION : | | | |
| | J-11 | | | |
| | J-12 WATER WELL | | | |
| | TEST WELL B | | | |
| | UE-25 WT #12 | | | |
| | UE-25 WT #13 | | | |
| | UE-25 WT #14 | | | |
| | UE-25 WT #15 | | | |
| | UE-25 WT #16 | | | |
| | UE-25 WT #17 | | | |
| | UE-25 WT #18 | | | |
| | UE-25 WT #3 | | | |
| | UE-25 WT #4 | | | |
| | UE-25 WT #6 | | | |

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| | UE-25B #1 UE-25C #1 UE-25C #2 UE-25C #3 UE-25P #1 UE-5N USW G-3 USW H-1 USW H-3 USW H-4 USW H-5 USW H-6 USW VH-1 USW WT-1 USW WT-10 USW WT-11 USW WT-2 USW WT-7 WATER WELL J-13 | | |
| **GS920708312312.012 | MANUAL WATER LEVEL MEASUREMENT DATA COLLECTED IN THE YUCCA MOUNTAIN AREA, NEVADA, 1988. RAW DATA IN THE FORM OF LOGBOOKS. ACQN/DEVL LOCATION : UE-25 WT #12 UE-25 WT #14 UE-25 WT #15 UE-25 WT #17 UE-25 WT #4 USW WT-1 USW WT-10 USW WT-7 WATER WELL J-13 | 01/01/88-12/31/88 | WATER-LEVEL DATA COLLECTED USING HP-75,R0, A N P METHOD FOR MEASURING WATER LEVELS IN WELLS USING REELED (2600 FT AND 2800 FT) STEEL TAPES AND HP-25,R0 AND R1, METHOD FOR MEASURING WATER LEVEL USING A PORTABLE MULTICONDUCTOR CABLE. |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS930108312132.001 | HYDROLOGY OF YUCCA MOUNTAIN AND VICINITY, NEVADA - CALIFORNIA: INVESTIGATIVE RESULTS THROUGH MID-1983, BY R.K. WADDELL, J.H. ROBISON, & R.K. BLANKENNAGEL. | 01/01/84-08/20/84 | COMPILATION OF HYDROLOGIC DATA COLLECTED AND ANALYZED THROUGH MID-1983 FOR INCLUSION IN THE SITE CHARACTERIZATION REPORT (SCR) FOR THE NEVADA NUCLEAR WASTE STORAGE INVESTIGATIONS. DATA TYPES INCLUDE HYDROCHEMISTRY. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *GS930108312312.001 | WATER-LEVEL DATA RESULTING FROM MANUAL WATER-LEVEL MEASUREMENTS TAKEN AT WELL SITES ON OR AROUND YUCCA MOUNTAIN, NEVADA -- FOURTH QUARTER, 1992, OF THE PERIODIC NETWORK LOGBOOK. | 10/14/92-12/29/92 | THE DATA WERE COLLECTED USING REELED STEEL A Y P TAPES. SEE HP-61,R0, USE OF HAND-HELD STEEL TAPES (IN VERTICAL BOREHOLES); HP-75,R1, METHOD FOR MEASURING WATER LEVELS IN WELLS USING REELED (2600-FOOT AND 2800-FOOT) STEEL TAPES; HP-26,R1, METHOD FOR CALIBRATING WATER-LEVEL MEASUREMENT EQUIPMENT USING THE REFERENCE STEEL TAPE. | |
| | ACQN/DEVL LOCATION : J-11 J-12 WATER WELL TEST WELL B UE-25 WT #12 UE-25 WT #13 UE-25 WT #14 UE-25 WT #15 UE-25 WT #16 UE-25 WT #17 UE-25 WT #18 UE-25 WT #3 UE-25 WT #4 UE-25 WT #6 UE-25B #1 UE-25P #1 UE-29 UZN #91 UE-29A #1 UE-29A #2 UE-5N USW G-3 USW H-1 USW H-3 USW H-4 | | | |

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| | USW H-5 USW H-6 USW WT-1 USW WT-10 USW WT-11 USW WT-2 USW WT-7 WATER WELL J-13 WELL VH-1 | | |
| *GS930108312312.002 | HYDROLOGIC RESPONSES TO EARTHQUAKES, JUNE 28-29, 1992, AT YUCCA MOUNTAIN, NEVADA, BY GRADY M. O'BRIEN AND PATRICK TUCCI. BASED ON DATA FROM USW WELLS H-3, H-5, AND H-6, AND FROM UE-25P #1. ACQN/DEVL LOCATION : USGS, DENVER, CO | 07/01/92-12/18/92 | DATA DEVELOPED USING STANDARD MATHEMATICAL D Y P TECHNIQUES. |
| *GS930108312312.003 | "EARTHQUAKE-INDUCED WATER-LEVEL FLUCTUATIONS AT YUCCA MOUNTAIN, NEVADA, JUNE, 1992" BY G.M. O'BRIEN. BASED ON DATA FROM WELLS USW H-5, USW H-6, USW H-3, AND UE-25 P #1. ACQN/DEVL LOCATION : USGS, DENVER, CO | 07/01/92-10/21/92 | DATA DEVELOPED USING STANDARD MATHEMATICAL D Y P TECHNIQUES. |
| *GS930208312312.004 | 1992 CONTINUOUS NETWORK WATER-LEVEL DATA. DATA IN THE FORM OF LOGBOOKS, STRIPCHARTS, AND ELECTRONIC DATA (AS STORED ON THE NWIS/ADAPS SYSTEM). ACQN/DEVL LOCATION : UE-25 WT #13 UE-25 WT #16 UE-25 WT #3 | 01/01/92-12/31/92 | WATER-LEVEL AND RELATED DATA COLLECTED USING TRANSDUCERS/21X SYSTEMS OR TRANSDUCER/DCP SYSTEMS. REFERENCE HP-196, R1, METHOD FOR COLLECTING WATER LEVEL DATA USING DATA COLLECTION PLATFORMS; HP-60,R2 METHOD FOR MONITORING WATER LEVEL CHANGES USING PRESSURE TRANSDUCERS AND PRESSURE TRANSMITTERS; HP-71,R0, METHOD FOR MONITORING WATER-LEVEL CHANGES USING A CAMPBELL SCIENTIFIC 21X MICROLOGGER. |

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| | UE-25 WT #6 UE-25B #1 UE-25P #1 USW G-3 USW H-1 USW H-3 USW H-4 USW H-5 USW H-6 USW WT-11 USW WT-2 | | | |
| *GS930308312312.005 | GROUNDWATER LEVEL DATA AND PRELIMINARY POTENTIOMETRIC SURFACE MAPS, YUCCA MOUNTAIN AND VICINITY, NYE COUNTY, NEVADA, BY J.H. ROBISON. | 01/01/84-12/31/84 | COMPILATION OF WATER LEVEL MEASUREMENT DATA OBTAINED BY THE USGS USING CALIBRATED STEEL CABLES WITH ELECTRICAL OR MECHANICAL WATER-LEVEL SENSORS OR USING PRESSURE TRANSDUCERS. POTENTIOMETRIC SURFACE MAPS PRODUCED BY STANDARD USGS CONTOURING MAPPING METHODS. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *GS930308312312.006 | WATER-LEVEL ALTITUDE DATA FOR WELLS UE-25P #1 AND USW H-3. | 07/01/92-12/18/92 | WATER-LEVEL ALTITUDES CALCULATED USING THE D Y P RAW CALIBRATION DATA, MANUAL WATER-LEVEL MEASUREMENT DATA AND TRANSDUCER OUTPUT DATA. CALCULATIONS PERFORMED USING STANDARD STATISTICAL EQUATIONS. | |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS930308312312.007 | CALIBRATION REGRESSION DATA FOR CALIBRATIONS PERFORMED AT WELL USW H-5 ON 7/7/92 AND AT WELL USW H-6 ON 5/6/92 AND 4/30/92 ACQN/DEVL LOCATION : USGS, DENVER, CO | 07/01/92-12/18/92 | CALIBRATION DATA REGRESSIONS PERFORMED USING STANDARD REGRESSION TECHNIQUES. | D Y P |
| *GS930308312312.009 | "WATER LEVELS IN PERIODICALLY MEASURED WELLS IN THE YUCCA MOUNTAIN AREA, NEVADA, 1989" BY G.M. O'BRIEN ACQN/DEVL LOCATION : USGS, DENVER | 01/01/90-05/08/91 | RAW WATER LEVEL MEASUREMENTS CORRECTED FOR STRETCH, THERMAL EXPANSION, AND BOREHOLE DEVIATION, AND ALTITUDE OF THE WATER TABLE ABOVE SEA LEVEL CALCULATED. | D N P |
| *GS930308312312.011 | RAW MANUAL WATER-LEVEL MEASUREMENT DATA FROM THE PERIODIC MEASUREMENT NETWORK. ACQN/DEVL LOCATION : UE-25 WT #12 UE-25 WT #14 UE-25 WT #15 UE-25 WT #17 UE-25 WT #3 UE-25 WT #4 USW VH-1 USW WT-1 USW WT-10 USW WT-7 WATER WELL J-13 | 01/01/89-05/06/89 | MANUAL WATER-LEVEL MEASUREMENTS ARE MADE FOLLOWING THE PROCEDURES OUTLINED IN HP-25,R1, METHOD FOR MEASURING WATER-LEVEL USING A PORTABLE MULTICONDUCTOR CABLE, AND HP-75,R0, METHOD FOR MEASURING WATER-LEVELS IN WELLS USING REELED (2600-FOOT AND 2800-FOOT) STEEL TAPES. | A N P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| Activity - 8.3.1.2.3.1.3 | | | | |
| *GS930308312313.002 | PRELIMINARY HYDROGEOLOGIC ASSESSMENT OF BOREHOLES UE-25C #1, UE-25C #2, UE-25C #3, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY A.L. GELDON. | 01/01/92-12/31/92 | STANDARD HYDROLOGIC METHODS AND TESTS TO GENERALLY CHARACTERIZE THE C-HOLE COMPLEX SYSTEM, INCLUDING WATER LEVEL MEASUREMENTS, AQUIFER TESTS, FRACTURE ANALYSIS, ETC. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| Activity - 8.3.1.2.3.2.3 | | | | |
| *GS930308312323.001 | CHEMICAL COMPOSITION OF GROUNDWATER AND THE LOCATIONS OF PERMEABLE ZONES IN THE YUCCA MOUNTAIN AREA, BY L.V. BENSON, J.H. ROBISON, R.K. BLANKENNAGEL, AND A.E. OGARD. | 01/01/83-12/31/83 | COMPOSITIONAL CHARACTERIZATION OF GROUNDWATER SAMPLES USING STANDARD LAB ANALYSES BY USGS AND BOREHOLE FLOW SURVEY METHODS. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| Activity - 8.3.1.3.2.1.2 | | | | |
| *LA000000000014.002 | CALCITE DEPOSITS IN DRILL CORES USW G-2 AND USW GU-3/G-3 AT YUCCA MOUNTAIN, NEVADA | 07/01/92-03/01/93 | PETROGRAPHY, INSTRUMENTAL NEUTRON ACTIVATION ANALYSIS, AND ELECTRON MICROPROBE ANALYSIS. | D Y P |
| | ACQN/DEVL LOCATION : LANL | | | |
| *LA000000000015.002 | GEOLOGICAL EVALUATION OF SIX NON-WELDED TUFF SITES IN THE VICINITY OF YUCCA MOUNTAIN, NEVADA, FOR A SURFACED BASED TEST FACILITY FOR THE YUCCA MOUNTAIN PROJECT. | 03/01/91-02/28/93 | X-RAY DIFFRACTION, MODAL PETROGRAPHY AND CHEMISTRY. | D Y P |
| | ACQN/DEVL LOCATION : LANL | | | |

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| Activity - 8.3.1.3.2.2.1 | | | | |
| *LA000000000023.002 | PRELIMINARY ASSESSMENT OF CLINOPTILOLITE >K/AR RESULTS FROM YUCCA MOUNTAIN, NEVADA, USA; A POTENTIAL HIGH-LEVEL RADIOACTIVE WASTE REPOSITORY SITE | 11/01/91-12/10/92 | SECONDARY MINERALS SEPARATED BY SEDIMENTATION AND HEAVY LIQUIDS AND IDENTIFIED BY X-RAY DIFFRACTION AND SCANNING ELECTRON MICROSCOPY. POTASSIUM AND ARGON CONTENTS OF CLINOPTILOLITES DETERMINED BY FLAME PHOTOMETER AND MASS SPECTROMETER, RESPECTIVELY (TWS-EES-1-10-91-4). APPARENT AGES CALCULATED FROM POTASSIUM AND ARGON DATA. | D Y P |
| ACQN/DEVL LOCATION : CASE WESTERN RESERVE UNIVERSITY LANL | | | | |
| *LA000000000036.001 | WORKING PAPER ON CALICITE-SILICA DEPOSITS IN TRENCH 14 AND BUSTED BUTTE. | 11/01/84-05/08/92 | INSTRUMENTAL NEUTRON ACTIVATION ANALYSES AND QUANTITATIVE X-RAY DIFFRACTION ANALYSES. | A Y P |
| ACQN/DEVL LOCATION : BUSTED BUTTE QUADRANGLE (NEVADA) & LANL | | | | |
| Activity - 8.3.1.3.2.2.2 | | | | |
| **LA000000000017.001 | DEHYDRATION AND REHYDRATION OF A TUFF VITROPHYRE | 07/14/87-04/11/92 | HEATING, WEIGHING, X-RAY DIFFRACTION, THERMOGRAVIMETRIC ANALYSIS, FOURIER- TRANSFORM INFRARED SPECTROGRAPHY, MOISTURE-EVOLUTION ANALYSIS, ION CHROMO- TOGRAPHY AND ATOMIC ABSORPTION | A N P |
| ACQN/DEVL LOCATION : LANL | | | | |

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| *LA00000000017.002 | DEHYDRATION AND REHYDRATION OF A TUFF VITROPHYRE | 05/01/92-03/19/93 | HEATING, WEIGHING, X-RAY DIFFRACTION THERMOGRAVIMETRIC ANALYSIS, FOURIER-TRANSFORM INFRARED SPECTROGRAPHY, MOISTURE-EVOLUTION AND ATOMIC ABSORPTION. | D N P |
| | ACQN/DEVL LOCATION : LANL | | | |
| | Activity - 8.3.1.3.4.1 | | | |
| *LA00000000032.001 | DEPENDENCE OF RADIONUCLIDE SORPTION ON SAMPLE GRINDING SURFACE AREA AND WATER COMPOSITION. | 05/23/90-12/08/92 | BATCH SORPTION MEASUREMENTS FOLLOWING TWS-INC-DP-05,R2. | A Y P |
| | ACQN/DEVL LOCATION : LANL | | | |
| | Activity - 8.3.1.3.6.1.1 | | | |
| *LA00000000035.001 | TRANSPORT OF NEPTUNIUM THROUGH YUCCA MOUNTAIN TUFFS | 04/20/92-09/17/92 | THE EXPERIMENTS CONDUCTED CONSIST OF BATCH A N P SORPTION MEASUREMENTS AND COLUMN EXPERIMENTS WITH CRUSHED TUFF AND PURE MINERIAL SEPARATES. | |
| | ACQN/DEVL LOCATION : LANL | | | |
| *LA00000000035.002 | NEPTUNIUM RETARDATION WITH TUFFS AND GROUNDWATER FROM YUCCA MOUNTAIN | 04/20/92-09/17/92 | THE EXPERIMENTS CONSIST OF BATCH SORPTION A N P MEASUREMENTS AND COLUMN EXPERIMENTS WITH CRUSHED TUFF AND PURE MINERAL SEPARATES | |
| | ACQN/DEVL LOCATION : LANL | | | |

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| Activity - 8.3.1.3.6.2.1 | | | | |
| *LA00000000043.001 | DIFFUSION OF SORBING AND NON-SORBING RADIONUCLIDES | 11/25/91-03/25/92 | THE EXPERIMENTAL TECHNIQUE INVOLVES MAKING A Y P CONTAINERS MADE OF TUFF INTO THE FORM OF BEAKERS. A SOLUTION OF J-13 WELL WATER AND RADIONUCLIDES OF INTEREST. | |
| | ACQN/DEVL LOCATION : LANL | | | |
| Activity - 8.3.1.4.2.1.1 | | | | |
| **GS900908314211.014 | THREE-DIMENSIONAL MODELING OF THE NEVADA TEST SITE AND VICINITY FROM TELESEISMIC P-WAVE RESIDUALS, BY M.E. MONFORT AND J.R. EVANS. | 01/01/80-12/31/81 | TELESEISMIC P-WAVE TRAVEL-TIME RESIDUAL STUDY USED TO REVEAL THE REGIONAL COMPRESSIONAL-VELOCITY STRUCTURE OF CALIFORNIA TO A DEPTH OF 280 KM. | D N P |
| | ACQN/DEVL LOCATION : USGS, MENLO PARK, CA | | | |
| *GS921208314211.005 | DEVELOPMENT OF 3-D LITHOSTRATIGRAPHIC AND CONFIDENCE MODELS AT YUCCA MOUNTAIN, NEVADA. | 02/01/84-04/23/88 | REPORT SHOWS EXAMPLES OF PRELIMINARY DRAWINGS USING DATA FROM PUBLISHED AND NONPUBLISHED CORE LOGS FROM DRILL HOLES, MEASURED STRATIGRAPHIC SECTIONS, GEOLOGIC MAPS, CROSS SECTIONS, AND STRUCTURAL CONTOUR MAPS. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *GS930108314211.002 | PRELIMINARY LITHOLOGIC LOG OF TEST HOLE UE-25 UZ #5, NEVADA. | 05/01/85-07/31/85 | THESE DATA WERE ACQUIRED FROM ANALYSES OF CORE DRILLED PRIOR TO MAY 1985. INVESTIGATOR USED X-RAY ANALYSIS, THIN SECTIONS AND SCIENTIFIC OBSERVATIONS. | A N C |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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| *GS930208314211.003 | STRATIGRAPHIC AND STRUCTURAL CHARACTERISTICS OF VOLCANIC ROCKS IN CORE HOLE USW G-4, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY R.W. SPENGLER AND M.P. CHORNACK. | 01/13/83-11/06/84 | DESCRIPTIONS AND INTERPRETATIONS OF STRATIGRAPHIC, LITHOLOGIC, AND GEOPHYSICAL DATA FROM COREHOLE USW G-4, INCLUDING SURFACE FRACTURE CHARACTERISTICS, SUBSURFACE FRACTURE CHARACTERISTICS, FOLIATION AND LAYERING, CORE INDEX, AND GEOPHYSICAL LOGS. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *GS930208314211.004 | PRELIMINARY LITHOLOGY WELL REPORTS; USW WT-1, WT-2, WT-7 & WT-10, AND UE-25 WT #3, #16, #17 & #18. | 02/01/84-04/23/88 | THESE DATA WERE ACQUIRED FROM ANALYSIS OF CORE DRILLED PRIOR TO 1984. DATA ARE GEOPHYSICAL LOGS MADE FROM SCIENTIFIC OBSERVATIONS OF BIT CUTTING SAMPLES. | A N C |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO. | | | |
| *GS930208314211.005 | STRATIGRAPHY AND STRUCTURE OF VOLCANIC ROCKS IN DRILL HOLE USW-G1 (USW G-1), YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY R.W. SPENGLER, F.M. BYERS, AND J.B. WARNER. | 01/01/81-11/02/81 | DESCRIPTIONS AND INTERPRETATIONS OF THE STRATIGRAPHY, STRUCTURE (SHEAR FRACTURES, JOINTS, FOLIATION AND LAYERING, FAULT ZONES, AND FRACTURE COATINGS), AND THE LITHOLOGIC LOG FOR DRILLHOLE USW G-1. METHODS USED INCLUDE CORE LOGGING AND PETROGRAPHIC STUDIES OF THIN SECTIONS. CHEMICAL ANALYSES USED AS AN AID IN ROCK CLASSIFICATION. X-RAY DIFFRACTION ANALYSIS USED TO IDENTIFY ALTERATION PRODUCTS. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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| *GS930208314211.006 | PRELIMINARY LITHOLOGY WELL REPORT FOR UE-25 WT #6 ACQN/DEVL LOCATION : USGS, DENVER, CO | 02/01/84-04/23/88 | GEOPHYSICAL LOGS MADE FROM SCIENTIFIC OBSERVATIONS OF BIT CUTTING SAMPLES OF CORE DRILLED PRIOR TO FEBRUARY, 1984. | A N P |
| *GS930208314211.007 | GEOLOGY OF DRILL HOLE USW VH-2 AND STRUCTURE OF CRATER FLAT, SOUTHWESTERN NEVADA, BY W.J. CARR AND L.D. PARRISH. ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/01/84-07/23/85 | DESCRIPTIONS AND INTERPRETATIONS OF PREVIOUSLY PUBLISHED AND UNPUBLISHED DATA/INFORMATION INCLUDING: STRATIGRAPHY AND LITHOLOGY, STRUCTURAL CHARACTERISTICS, AND GEOPHYSICAL LOGS FOR USW VH-2. | D N P |
| *GS930208314211.008 | STRATIGRAPHY, STRUCTURE AND SOME PETROGRAPHIC FEATURES OF TERTIARY VOLCANIC ROCKS AT THE USW G-2 DRILLHOLE, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY F. MALDONADO AND S.L. KOETHER. ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/01/82-08/26/83 | DESCRIPTIONS AND INTERPRETATIONS OF THE DRILL HOLE HISTORY, STRATIGRAPHY, LITHOLOGY, FOLIATION AND BEDDING, FRACTURE ANALYSIS (FRACTURES, SHEAR FRACTURES AND FAULT ZONES, FRACTURE-FILLINGS AND COATINGS, AND CORE INDEX); AND THE MINERALS PRESENT IN CORE SAMPLES USING THE X-RAY DIFFRACTION METHOD. | D N P |

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| Activity - 8.3.1.4.2.1.2 | | | | |
| **GS900908314212.005 | RESISTIVITY SOUNDING INVESTIGATION BY THE SCHLUMBERGER METHOD IN THE YUCCA MOUNTAIN AND JACKASS FLATS AREA, NEVADA TEST SITE, BY M.P. CHORNACK AND D.B. HOOVER ACQN/DEVL LOCATION : JACKASS FLATS, NTS USGS | 01/01/82-12/31/82 | SCHLUMBERGER ARRAY. | D N P |
| Activity - 8.3.1.4.2.1.3 | | | | |
| **GS900908314213.009 | INTERPRETATION OF GEOPHYSICAL WELL-LOG MEASUREMENTS IN DRILL-HOLE UE24A-1 (UE-25A #1), NEVADA TEST SITE, RADIOACTIVE WASTE PROGRAM, BY J.T. HAGSTRUM, J.J. DANIELS, AND J.H. SCOTT. ACQN/DEVL LOCATION : USGS | 01/01/80-12/31/80 | INTERPRETATION OF PHYSICAL PROPERTIES FOR THE TUFF UNITS USING A COMPUTER PROGRAM DEVELOPED FOR COMPARISON OF MEASUREMENTS. | D N P |
| **GS900908314213.010 | INTERPRETATION OF GEOPHYSICAL WELL-LOG MEASUREMENTS IN DRILL HOLES UE25A-4, -5, -6, -7, (UE-25A #4, #5, #6, #7), YUCCA MOUNTAIN, NEVADA TEST SITE, BY J.J. DANIELS, J.H. SCOTT, AND J.T. HAGSTRUM. ACQN/DEVL LOCATION : USGS | 06/01/79-12/31/80 | USGS STANDARD METHODS. | D N P |
| **GS900908314213.011 | ANALYSIS OF THE MAGNETIC SUSCEPTIBILITY WELL LOG IN DRILL HOLE UE25A-5 (UE-25A #5), YUCCA MOUNTAIN, NEVADA TEST SITE, BY J.T. HAGSTRUM, J.J. DANIELS, AND J.H. SCOTT ACQN/DEVL LOCATION : USGS | 06/01/78-06/30/78 | ANLYSIS UNDERTAKEN TO DETERMINE THE FACTORS RESPONSIBLE FOR THE VARIATIONS IN MAGNETIC SUSCEPTIBILITY MEASUREMENTS FROM THE BOREHOLE. | D N P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| **GS921208314213.004 | ESTIMATION OF WATER-FILLED AND AIR-FILLED POROSITY IN THE UNSATURATED ZONE, YUCCA MOUNTAIN NEVADA, BY P.H. NELSON. ACQN/DEVL LOCATION : USGS, DENVER | 09/01/92-12/01/92 | THE METHODS USED TO DEVELOP THIS REPORT WERE BASED ON THE AUTHOR'S EDUCATION AND WORK EXPERIENCE. | D N P |
| *GS930208314211.003 | STRATIGRAPHIC AND STRUCTURAL CHARACTERISTICS OF VOLCANIC ROCKS IN CORE HOLE USW G-4, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY R.W. SPENGLER AND M.P. CHORNACK. ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/13/83-11/06/84 | DESCRIPTIONS AND INTERPRETATIONS OF STRATIGRAPHIC, LITHOLOGIC, AND GEOPHYSICAL DATA FROM COREHOLE USW G-4, INCLUDING SURFACE FRACTURE CHARACTERISTICS, SUBSURFACE FRACTURE CHARACTERISTICS, FOLIATION AND LAYERING, CORE INDEX, AND GEOPHYSICAL LOGS. | D N P |
| *GS930208314213.005 | DRILLING AND GEOHYDROLOGIC DATA FOR TEST HOLE USW UZ-1, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY M.S. WHITFIELD, W. THORDARSON, AND D.P. HAMMERMEISTER. | 01/01/89-06/05/90 | DESCRIPTION & INTERPRETATION OF GEOLOGIC DATA INCLUDING GEOPHYSICAL LOGS, LITHOLOGIC LOG, AND STRIKE & DISTRIBUTION OF FRACTURES. HYDROLOGIC DATA INCLUDES WATER CONTENT, WATER POTENTIAL MEASUREMENTS, WATER LEVEL MEASUREMENTS AND PHYSICAL/CHEMICAL ANALYSIS OF WATER. WATER CONTENT MEASUREMENT BY WEIGHT USING STANDARD GRAVIMETRIC OVEN-DRYING METHODS. WATER POTENTIAL MEASUREMENTS USING SC-10 THERMOCOUPLE PSYCHROMETER AND 181 NANOVOLTMETER. THE RICHARD METHOD DESCRIBED IN RICHARDS, L.A., & OGATA, G., 1958, THERMOCOUPLE FOR VAPOR PRESSURE MEASUREMENTS ON BIOLOGICAL AND SOIL SYSTEMS AT HIGH HUMIDITY, SCIENCE, V.128, NO.3331,P.1089-1090, USED TO CONDENSE WATER IN THE THERMOCOUPLE JUNCTION. TOTAL-ORGANIC-CARBON ANALYSIS, AND METHYLENE-CHLORIDE EXTRACTION CONCENTRATION & GAS CHROMATOGRAPHIC ANALYSIS USED FLAME-IONIZATION DETECTOR. LIGHT HYDROCARBONS CONFIRMED BY MASS | D N P |

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| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *GS930308318512.002 | VOLCANO-TECTONIC HISTORY OF CRATER FLAT, SOUTHWESTERN NEVADA, AS SUGGESTED BY NEW EVIDENCE FROM DRILL HOLE USW-VH-1 (USW VH-1) AND VICINITY, BY W.J. CARR. | 01/01/81-03/16/82 | SUMMARIES AND INTERPRETATIONS OF THE DRILL-HOLE LOCATION, HISTORY, LITHOLOGIC LOG, AND STRATIGRAPHY; AND THE STRUCTURAL FRAMEWORK, AEROMAGNETIC ANOMALIES, AND VOLCANO-TECTONIC HISTORY OF CRATER FLAT. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| | Activity - 8.3.1.4.2.1.5 | | | |
| *GS930108314215.002 | PALEOMAGNETIC CONSTRAINTS ON THE GEOMETRY AND TIMING OF DEFORMATION AT YUCCA MOUNTAIN, NEVADA BY J.G. ROSENBAUM, M.R. HUDSON, AND R.B. SCOTT. | 01/01/89-01/01/91 | INTERPRETATION OF REMNANT MAGNETISM WHICH CONCLUDES THAT THE SOUTHERN TIP OF YUCCA MOUNTAIN WAS ROTATED IN A CLOCKWISE FASHION RELATIVE TO A NORTHERN YUCCA MOUNTAIN REFERENCE POINT AFTER EMPLACEMENT OF THE TIVA CANYON MEMBER OF THE PAINTBRUSH TUFF (13 MA) | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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| Activity - 8.3.1.4.2.2.1 | | | | | |
| **GS920708314221.002 | FIELD OBSERVATIONS OF FRACTURES AND FIELD MEASUREMENTS OF ATTRIBUTES OF FRACTURES ACQN/DEVL LOCATION : N761600(N) E561800(N) ;N761600(N) E562600(N) | 01/13/92-07/17/92 | GP-01, GEOLOGIC MAPPING; AND GP-12, MAPPING FRACTURES OR PAVEMENTS, OUTCROPS& ALONG TRAVERSES. | A | Y P |
| *GS920708314221.003 | GEOLOGIC MAPPING DATA FOR EAST OF BEATTY MOUNTAIN 7.5' QUADRANGLE, NORTHERN CRATER FLAT: 2 FIELD NOTEBOOKS, 4 ORTHOPHOTOS WITH COMPILED FIELD DATA, 4 COLOR MAPS ON TOPOGRAPHIC BASES, AND EXPLANATION OF MAP UNITS. ACQN/DEVL LOCATION : 35 56'15"N 116 37'30"W ;37 00'00"N 116 33'45"W | 04/04/92-06/02/92 | TECHNICAL PROCEDURE GP-01,R2 GEOLOGIC MAPPING | A | Y P |
| *GS930108314221.001 | STRUCTURAL CHARACTER OF THE GHOST DANCE FAULT, YUCCA MOUNTAIN, NEVADA, BY R.W. SPENGLER, C.A. BRAUN, R.M. LINDEN, L.G. MARTIN, D.M. ROSS-BROWN, AND R.L. BLACKBURN. ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/01/92-01/11/93 | THIS REPORT WAS DEVELOPED BY INTERPRETING DETAILED STRUCTURAL MAPPING OF AN AREA THAT STRADDLES THE SURFACE OF THE GHOST DANCE FAULT. CONCLUSIONS WERE BASED ON OBSERVATIONS AND MAP ANALYSIS AT 1:240 AND 1:600 SCALES. | D | Y P |
| *GS930208314221.006 | STRATIGRAPHIC AND STRUCTURAL FRAMEWORK OF YUCCA MOUNTAIN, NEVADA, BY R.W. SPENGLER AND K.F. FOX, JR. ACQN/DEVL LOCATION : USGS, DENVER | 01/01/88-12/31/89 | COMPILATION OF STRATIGRAPHIC, LITHOLOGIC, MINERALOGICAL, AND STRUCTURAL DATA BASED ON NUMEROUS PUBLISHED PAPERS, AS WELL AS THE PERSONAL INVESTIGATIONS OF THE AUTHORS. DATA WERE OBTAINED USING STANDARD USGS METHODS FOR COLLECTING GEOLOGIC INFORMATION. | D | N P |

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| *GS930208314221.007 | GEOLOGIC CHARACTER OF TUFFS IN THE UNSATURATED ZONE OF YUCCA MOUNTAIN, SOUTHERN NEVADA, BY B. SCOTT, R. SPENGLER, SHARON DIEHL, A.R. LAPPIN, AND M. CHORNACK. | 01/01/82-01/10/83 | DESCRIPTIONS AND INTERPRETATIONS OF PREVIOUSLY PUBLISHED AND UNPUBLISHED DATA/INFORMATION, INCLUDING THE PHYSICAL PROPERTY CRITERIA STRATIGRAPHY, STRUCTURAL FRAMEWORK, PHYSICAL PROPERTIES, AND REGIONAL HYDROLOGIC OBSERVATIONS, WHICH ARE USED TO CHARACTERIZE QUALITATIVELY THOSE ROCK-MASS PROPERTIES THAT MAY AFFECT THE HYDROLOGY OF THE UNSATURATED ZONE AT YUCCA MOUNTAIN. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *GS930308314221.008 | STRUCTURE OF PRE-CENOZOIC ROCKS IN THE VICINITY OF YUCCA MOUNTAIN, NEVADA - A POTENTIAL NUCLEAR-WASTE REPOSITORY, BY G.D. ROBINSON. | 01/01/84-01/01/85 | SUMMARIES AND PRELIMINARY INTERPRETATIONS OF PREVIOUSLY PUBLISHED DATA/INFORMATION FOR THE GROSS DISTRIBUTION AND PRESENT STRUCTURE OF PREVOLCANIC ROCKS IN THE YUCCA MOUNTAIN AREA INCLUDING: REGIONAL STRATIGRAPHY AND STRUCTURE OF PRE-CENOZOIC ROCKS, STRUCTURE OF PRE-CENOZOIC ROCKS OF THE YUCCA FLAT AREA, AND STRUCTURE OF THE PRE-CENOZOIC ROCKS OF THE YUCCA MOUNTAIN STUDY AREA. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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| Activity - 8.3.1.4.2.2.2 | | | | |
| *LA000000000031.001 | PRELIMINARY FRAN RIDGE WATER USE JOB PACKAGE 92-7. THIS PRELIMINARY DATA INDICATES THE QUANTITY OF WATER USED AND ITS PURPOSE DURING FRAN RIDGE PIT MAPPING. | 09/29/92-10/01/92 | DATA WAS COLLECTED UNDER REECO PROCEDURE CND-SOP-001 "WATER ACCOUNTABILITY ON THE YMP. TOTALS ARE A SUMMATION OF WATER USAGE AMOUNTS. FINALS RECEIVED WILL BE SUBMITTED TO THE DRC 018 FILE AND CLOSED WITH JP-92-7. | D Y T |
| ACQN/DEVL LOCATION : FRAN RIDGE | | | | |
| Activity - 8.3.1.4.2.2.3 | | | | |
| *GS930208314211.003 | STRATIGRAPHIC AND STRUCTURAL CHARACTERISTICS OF VOLCANIC ROCKS IN CORE HOLE USW G-4, YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY R.W. SPENGLER AND M.P. CHORNACK. | 01/13/83-11/06/84 | DESCRIPTIONS AND INTERPRETATIONS OF STRATIGRAPHIC, LITHOLOGIC, AND GEOPHYSICAL DATA FROM COREHOLE USW G-4, INCLUDING SURFACE FRACTURE CHARACTERISTICS, SUBSURFACE FRACTURE CHARACTERISTICS, FOLIATION AND LAYERING, CORE INDEX, AND GEOPHYSICAL LOGS. | D N P |
| ACQN/DEVL LOCATION : USGS, DENVER, CO | | | | |
| *GS930208314211.005 | STRATIGRAPHY AND STRUCTURE OF VOLCANIC ROCKS IN DRILL HOLE USW-G1 (USW G-1), YUCCA MOUNTAIN, NYE COUNTY, NEVADA, BY R.W. SPENGLER, F.M. BYERS, AND J.B. WARNER. | 01/01/81-11/02/81 | DESCRIPTIONS AND INTERPRETATIONS OF THE STRATIGRAPHY, STRUCTURE (SHEAR FRACTURES, JOINTS, FOLIATION AND LAYERING, FAULT ZONES, AND FRACTURE COATINGS), AND THE LITHOLOGIC LOG FOR DRILLHOLE USW G-1. METHODS USED INCLUDE CORE LOGGING AND PETROGRAPHIC STUDIES OF THIN SECTIONS. CHEMICAL ANALYSES USED AS AN AID IN ROCK CLASSIFICATION. X-RAY DIFFRACTION ANALYSIS USED TO IDENTIFY ALTERATION PRODUCTS. | D N P |
| ACQN/DEVL LOCATION : USGS, DENVER, CO | | | | |

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| *GS930208314211.007 | GEOLOGY OF DRILL HOLE USW VH-2 AND STRUCTURE OF CRATER FLAT, SOUTHWESTERN NEVADA, BY W.J. CARR AND L.D. PARRISH. ACQN/DEVL LOCATION : USGS, DENVER, CO Activity - 8.3.1.4.2.2.5 | 01/01/84-07/23/85 | DESCRIPTIONS AND INTERPRETATIONS OF PREVIOUSLY PUBLISHED AND UNPUBLISHED DATA/INFORMATION INCLUDING: STRATIGRAPHY AND LITHOLOGY, STRUCTURAL CHARACTERISTICS, AND GEOPHYSICAL LOGS FOR USW VH-2. | D N P |
| **GS900908314211.013 | GEOPHYSICAL STUDIES OF THE SYNCLINE RIDGE AREA, NEVADA TEST SITE, NYE COUNTY, NEVADA, BY D.B. HOOVER, W.J. HANNA, L.A. ANDERSON, V.J. FLANIGAN, AND L.W. PANKRATZ ACQN/DEVL LOCATION : USGS Activity - 8.3.1.5.1.4.1 | 01/01/77-12/31/81 | GRAVITY, MAGNETIC, SEISMIC REFRACTION AND REFLECTION, AND FOUR DISTINCT ELECTRICAL METHODS EMPLOYED IN ATTEMPT TO DEFINE THE STRUCTURAL INTEGRITY AND SHAPE OF THE PROPOSED REPOSITORY MEDIUM. | D N P |
| *GS911008315141.001 | DESCRIPTIONS OF SOIL MICROMORPHOLOGY IN THIN SECTIONS OF SELECTED SOIL HORIZONS AND X-RAY DIFFRACTION ANALYSIS OF CLAY MINERALOGY IN SELECTED SOIL HORIZONS ACQN/DEVL LOCATION : 36 15'N 115 31'W ;36 23'N 115 20'W USGS, DENVER | 01/01/86-12/31/86 | VERBAL DESCRIPTION OF MICROMORPHOLOGICAL SOIL PROPERTIES USING A POLARIZING LIGHT MICROSCOPE. CLAY MINERALOGY BY STANDARD TECHNIQUES USING X-RAY DIFFRACTOMETER. | A N C |
| *GS911008315141.002 | MAJOR-OXIDE, TRACE ELEMENTS, AND IRON-OXIDE ANALYSIS OF SELECTED SOIL SAMPLES. ACQN/DEVL LOCATION : USGS, DENVER | 07/04/86-12/11/86 | FE-OXIDE BY WET CHEMICAL METHODS; TRACE ELEMENTS BY EDXRF; MAJOR OXIDES BY X-RAY SPECTROSCOPY. | A N-C |

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| *GS911008315141.003 | SOIL DESCRIPTION SHEETS AND TRENCH LOCATIONS AND DESCRIPTION OF FIELD SETTING; CHANNEL ALLUVIUM SAMPLES AND VOLUMES; AND DETAILED DESCRIPTIONS OF TRENCH LOCATIONS. ACQN/DEVL LOCATION : 36 15'N 115 31'W ;36 23'N 115 20'W | 04/22/85-05/03/85 03/16/87-03/28/87 | GP-07,R0, GEOLOGIC TRENCHING STUDIES. | A N P |
| *GS911008315141.004 | LABORATORY CHEMICAL ANALYSIS AND CALCULATIONS OF NON-PEDOGENIC CACO3 CONTENT OF SELECTED SOILS. ACQN/DEVL LOCATION : U.N.M., ALBUQUERQUE, NM | 06/18/86-03/26/87 10/01/88-10/31/88 | DRAFT, GP-21,R0, LABORATORY ANALYSIS OF SOILS, FOR SOIL ANALYSES (CHEMICAL). VIDEO CACO3 MEASUREMENTS DONE BY REAL MEASUREMENTS ON SLABS AND BY POINT-COUNTING THIN SECTIONS. CALCULATIONS FOR NON-CACO3 PEDOGENIC MATERIAL DONE BY HAND CALCULATOR USING DATA ON PRESENT PEDOGENIC MATERIAL, % CACO3, HORIZON THICKNESS, AND BULK DENSITY. | A N C |
| *GS911008315141.005 | COMPUTER CALCULATIONS OF SOIL AGES VS. FIELD PROPERTIES - REGRESSION STATISTICS. ACQN/DEVL LOCATION : USGS, DENVER | 03/01/90-01/31/91 | LINEAR REGRESSION TECHNIQUES APPLIED TO SOIL FIELD DATA AND SOIL AGES, USING STATPRO PROGRAMS. | D N C |
| *GS930108315141.001 | MORPHOLOGY AND GENESIS OF CARBONATE SOILS ON THE KYLE CANYON FAN, NEVADA, USA. ACQN/DEVL LOCATION : USGS, DENVER | 04/01/85-08/22/91 | DESCRIBE TIMING AND FORMATION OF QUATERNARY SOILS. | D N C |

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| *GS930108315141.002 | LATE CENOZOIC EVOLUTION OF THE UPPER AMARGOSA RIVER DRAINAGE SYSTEM, SOUTHWESTERN GREAT BASIN, NEVADA AND CALIFORNIA , BY N. KING HUBER ACQN/DEVL LOCATION : USGS, MENLO PARK, CA Activity - 8.3.1.5.1.4.2 | 01/01/87-09/04/87 | THIS REPORT IS BASED ON PUBLISHED REPORTS AND GEOLOGIC MAPS, TOPOGRAPHIC MAPS, AND AERIAL PHOTOGRAPHS. FIELD EXAMINATION WAS PRECLUDED. | D N P |
| *GS930108315142.001 | "IMPACT OF TIME AND CLIMATE ON QUATERNARY SOILS IN THE YUCCA MOUNTAIN AREA OF THE NEVADA TEST SITE" BY, E.M. TAYLOR ACQN/DEVL LOCATION : USGS, DENVER, CO Activity - 8.3.1.5.2.1.3 | 01/01/84-05/28/86 | MAPPING AND INTERPRETATION OF AERIAL PHOTOGRAPHS AND SATELLITE IMAGERY; FIELD MAPPING AND VERIFICATION. (TECHNICAL PROCEDURE GP-01,R0, GEOLOGICAL MAPPING, DESCRIBES THE METHODS USED AT THE TIME OF DATA COLLECTION) | D N P |
| **GS910508315213.006 | WATER AND FAUNAL SAMPLE CHARACTERISTICS AND LAB ANALYSES RESULTS FROM WATER SAMPLES AND FLORA AND FAUNA SAMPLES FROM MODERN SPRINGS IN THE AMARGOSA FLOW SYSTEM INCLUDING WATER PROPERTIES. ACQN/DEVL LOCATION : BIG SPRING BOLE SPRING CANE SPRING GRAPEVINE SPRING NAVARES SPRING NAVEL SPRING SCOTTY'S CASTLE SUPPLY SPRING TEXAS SPRING USGS, DENVER | 02/25/91-02/28/91 | HP-91,R2, COLLECTION AND FIELD ANALYSIS OF A Y P SURFACE-WATER SAMPLES; AND HP-199T,R0 COLLECTION OF AQUATIC MICRO-ORGANISMS. | A Y P |

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| *GS930108315213.002 | WATER CHEMISTRY AND SAMPLE DOCUMENTATION FOR TWO SAMPLES ANALYZED BY USGS-NWQL: 1) LATHROP WELLS CONE, 2) USW VH-2. ACQN/DEVL LOCATION : USGS CENTRAL LAB, ARVADA, CO | 10/15/92-01/06/93 | STANDARD USGS CENTRAL LABORATORY ANALYZING PROCEDURES. | A Y P |
| *GS930108315213.003 | 234U/238U RATIOS AS A GROUND-WATER FLOW TRACER, SW NEVADA - SE CALIFORNIA, BY K.R. LUDWIG, Z.E. PETERMAN, K.R. SIMMONS & E.D. GUTENTAG. ACQN/DEVL LOCATION : USGS, DENVER, CO | 12/10/92-01/08/93 | THIS REPORT SUMMARIZES RESULTS OF URANIUM ISOTOPIC ANALYSES OF GROUND WATER BY THERMAL IONIZATION MASS SPECTROMETRY. | D N P |
| *GS930108315213.004 | URANIUM ISOTOPIC ANALYSES OF GROUNDWATERS FROM SW NEVADA - SE CALIFORNIA. ACQN/DEVL LOCATION : USGS, DENVER, CO | 12/10/92-01/08/93 | DATA WERE ACQUIRED PER GCP-28,R0, "URANIUM ISOTOPIC GEOCHEMISTRY". | A Y C |
| *GS930108315213.006 | GROUNDWATER RECHARGE ESTIMATES USING GEOMORPHIC DISTRIBUTED PARAMETER SIMULATION MODEL APPROACH, AMARGOSA RIVER BASIN, NEVADA AND CALIFORNIA, BY W.R. OSTERKAMP, L.J. LANE, AND C.S. SAVARD. INCLUDES WATER BALANCE ESTIMATES AT SELECTED STREAM CHANNEL SITES. ACQN/DEVL LOCATION : USGS, DENVER, CO | 12/01/91-08/30/92 | FIELD OBSERVATIONS OF CHANNEL CHARACTERISTICS, USE OF DISTRIBUTED PARAMETER RUNOFF SIMULATION MODEL, AND A MODIFICATION OF A FIELD-SCALE MODEL FOR INTERCHANNEL RUNOFF AND RECHARGE. | D Y P |

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| *GS930208315213.010 | WATER CHEMISTRIES FOR WATER SAMPLES COLLECTED FROM 11/4/92 TO 11/8/92 BY E. GUTENTAG AND J. WATSON. ACQN/DEVL LOCATION : USGS NWQL, DENVER, CO | 11/01/92-02/28/93 | STANDARD USGS-NWQL (APPROVED VENDOR) LAB ANALYSIS METHODS | A Y P |
| Activity - 8.3.1.5.2.1.4 | | | | |
| **GS920508315214.009 | PRECIPITATION DATA FROM KAWICH BASE WEATHER STATION FROM SEPTEMBER 1985 TO MAY 1989. ACQN/DEVL LOCATION : 37 57'37"N 116 25'23"W | 09/25/85-05/24/89 | DATA WERE ACQUIRED USING HP-167,R0, PRECIPITATION MEASUREMENT USING BELFORT WEIGHING RAIN GAGE. | A N P |
| **GS920508315214.010 | PRECIPITATION DATA FROM KAWICH BASE WEATHER STATION FROM MAY 1989 TO SEPTEMBER 1990. ACQN/DEVL LOCATION : 37 57'37"N 116 25'23"W | 05/24/89-09/23/90 | DATA WERE ACQUIRED USING HP-167,R0, PRECIPITATION MEASUREMENT USING A BELFORT WEIGHING RAIN GAGE. | A Y P |
| **GS920508315214.011 | PRECIPITATION DATA FROM KAWICH BASE WEATHER STATION FROM SEPTEMBER 1990 TO SEPTEMBER 1991. ACQN/DEVL LOCATION : 37 57'37"N 116 25'23"W | 09/23/90-09/25/91 | DATA WERE ACQUIRED USING HP-167,R0, PRECIPITATION MEASUREMENT USING A BELFORT WEIGHING RAIN GAGE. | A Y P |
| *GS920908315214.032 | ISOTOPE CONTENT AND TEMPERATURE OF PRECIPITATION IN SOUTHERN NEVADA, AUGUST 1983 - AUGUST 1986, BY MILNE, BENSON, AND MCKINLEY. | 08/09/83-08/27/86 | DATA WERE ACQUIRED PRIOR TO THE APPROVAL OF THE QA PROGRAM BUT THE AQUISITION METHOD WAS THE SAME AS IN THE FOLLOWING HYDROLOGIC PROCEDURES: HP-16,R3, COLLECTION AND PRESERVATION OF ATMOSPHERIC PRECIPITATION SAMPLES FOR DEUTERIUM AND OXYGEN-18 ANALYSIS; HP-91,R3, COLLECTION AND FIELD ANALYSIS OF SURFACE-WATER SAMPLES; HP-170,R1, METHOD FOR MEASURING TEMPERATURE USING A CAMPBELL SCIENTIFIC, INC., 107 TEMPERATURE PROBE; AND HP-179, R2, FIELD MEASUREMENT OF PRECIPITATION USING A TIPPING BUCKET RAIN GAGE. THE METHODS ARE ALSO OUTLINED IN THE DATA | D N P |

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| | ACQN/DEVL LOCATION : USGS, DENVER | | | |
| *GS930108315214.003 | CHEMICAL ANALYSIS OF SURFACE-WATER, SPRING, AND PRECIPITATION SAMPLES COLLECTED FROM KAWICH AND STEWART CREEK BASINS FROM SEPTEMBER, 1984, TO APRIL, 1989. SAMPLES ANALYZED FOR ANIONS, CATIONS, STABLE ISOTOPES, PHYSICAL PARAMETERS. | 09/19/84-04/12/89 | STANDARD USGS CENTRAL LABORATORY ANALYSIS PROCEDURES. | A N P |
| | ACQN/DEVL LOCATION : USGS CENTRAL LAB, ARVADA, CO | | | |
| | Activity - 8.3.1.5.2.1.5 | | | |
| *GS921208315215.031 | U-SERIES RAW DATA FROM 236U-229TH MIXED SPIKE CALIBRATION, BOTTLE #7. | 01/03/90-01/31/91 | YMP-USGS-GCP-03,R2 URANIUM-SERIES DATING ; YMP-USGS-GCP-22,R0: SPIKE CALIBRATION FOR URANIUM-SERIES AND URANIUM-TREND ANALYSIS | A Y C |
| | ACQN/DEVL LOCATION : USGS U-SERIES LABS, DENVER | | | |
| *GS921208315215.032 | U-SERIES RAW DATA FROM 236U-229TH MIXED SPIKE CALIBRATION, BOTTLE #7. | 02/20/92-09/14/92 | YMP-USGS-GCP-03,R2 URANIUM-SERIES DATING ; YMP-USGS-GCP-22,R0: SPIKE CALIBRATION FOR URANIUM-SERIES AND URANIUM-TREND ANALYSIS | A Y C |
| | ACQN/DEVL LOCATION : USGS U-SERIES LABS, DENVER | | | |
| *GS921208315215.034 | REDUCED SPIKE #7 CALIBRATION DATA WITH FINAL CONCENTRATION CALIBRATION CALCULATIONS | 01/12/92-12/14/92 | APPROPRIATE DATA REDUCTION AND ASSESSMENT AS DICTATED BY SCIENTIFIC REASONING AND EXPERIENCE OF THE PRINCIPAL INVESTIGATOR. FINAL CALIBRATION INCLUDES DATA COLLECTED PRIOR TO MAY 1989. | D N C |
| | ACQN/DEVL LOCATION : USGS, U-SERIES LABS, DENVER | | | |

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| *GS921208315215.036 | DATA REDUCTION CALCULATIONS FOR DETERMINING CORRECTED CONCENTRATIONS, ISOTOPIC RATIOS AND AGES FOR QUATERNARY SPRING DISCHARGE DEPOSITS FROM CRATER FLAT, AND AMARGOSA VALLEY, NV. ACQN/DEVL LOCATION : USGS U-SERIES LABS, DENVER | 08/01/92-12/30/92 | APPROPRIATE DATA REDUCTION AND ASSESSMENT AS DICTATED BY SCIENTIFIC REASONING AND EXPERIENCE OF THE PRINCIPAL INVESTIGATOR. | D N C |
| *GS921208315215.037 | LATE QUATERNARY HISTORY AND URANIUM ISOTOPIC COMPOSITIONS OF GROUND WATER DISCHARGE DEPOSITS, CRATER FLAT, NEVADA: BY JAMES B. PACES, EMILY M. TAYLOR, CHARLES A. BUSH. ACQN/DEVL LOCATION : USGS U-SERIES LABS, DENVER | 08/12/92-12/30/92 | INTERPRETATIONS AND CONCLUSIONS FROM DATA ARE BASED ON THE SCIENTIFIC REASONING AND EXPERIENCE OF THE PRINCIPAL INVESTIGATOR. | D N P |
| *GS930108315215.002 | ISOTOPIC STUDIES OF CAVITY FILLING AND FRACTURE COATING MINERALS AS AN AID TO UNDERSTANDING PALEOHYDROLOGY, YUCCA MOUNTAIN, NEVADA, USA, BY B.D. MARSHALL, J.S. STUCKLESS, Z.E. PETERMAN, AND J.F. WHELAN ACQN/DEVL LOCATION : USGS, DENVER, CO | 10/01/92-12/08/92 | THE STUDY OF FRACTURE COATINGS & OTHER OPEN-SPACE FILLINGS IN THE VOLCANIC ROCKS SUMMARIZED IN THE PUBLICATION IS AN EXTENSION OF PREVIOUS WORK EMPHASIZING SECONDARY MINERALS IN THE CALCAREOUS SOIL HORIZONS SURROUNDING THE SITE & A RECONNAISSANCE STUDY OF THE DEEPER FRACTURE FILLINGS THROUGHOUT THE ROCK MASS. THIS EARLY WORK FOCUSED ON THE ORIGIN OF THE LARGE CALCITE-SILICA DEPOSITS WHICH ARE PARTICULARLY WELL DEVELOPED ALONG FAULTS IN ORDER TO ESTABLISH THE NATURE OF THE FLUID FLUX WHICH LED TO THEIR DISPOSITION. OF PARTICULAR INTEREST IN THE CURRENT STUDY ARE QUESTIONS OF WHETHER CERTAIN MINERALS AND/OR THEIR ISOTOPIC COMPOSITIONS PROVIDE EVIDENCE FOR THEIR HYDROLOGIC ORIGINS. | D N P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS930108315215.003 | URANIUM, THORIUM AND LEAD ANALYSIS OF CALCITE- SILICA SAMPLES FROM BARE MTN., STRIPED HILLS, YUCCA MTN. DRILL CORES ACQN/DEVL LOCATION : USGS, DENVER | 04/06/92-10/02/92 | USGS TECHNICAL PROCEDURE NWM-USGS-GCP-13, R2, URANIUM, THORIUM, AND LEAD ISOTOPE GEOCHEMISTRY | A Y P |
| *GS930108315215.004 | LEAD ISOTOPIC COMPOSITION OF PALEOZOIC AND LATE PROTEROZOIC CARBONATE ROCKS IN THE VICINITY OF YUCCA MOUNTAIN, NV, BY R.E. ZARTMAN AND L.M. KWAK. ACQN/DEVL LOCATION : USGS, DENVER | 10/01/92-12/08/92 | THIS REPORT WAS DEVELOPED TO ASSIST IN DETERMINING WHETHER SECONDARY CARBONATE-BEARING COMPOUNDS, SUCH AS FOUND UBIQUITOUSLY IN CALCRETES AND SHALLOW VEIN DEPOSITS, HAVE BEEN INTRODUCED INTO THE SURFACE AND NEAR SURFACE ENVIRONMENT ENTIRELY BY PEDOGENIC PROCESSES OR, IN PART, BY THE UPWARD MOVEMENT OF THE HYDROTHERMAL FLUIDS. | D Y P |
| *GS930108315215.005 | U AND SR IN GROUND WATER AND CALCITE, YUCCA MOUNTAIN, NEVADA: EVIDENCE AGAINST UPWELLING, BY J.S. STUCKLESS, Z.E. PETERMAN & D.R. MUHS. ACQN/DEVL LOCATION : USGS, DENVER, CO | 10/01/90-02/01/91 | SR AND U ISOTOPIC COMPOSITIONS OF HYDROGENIC MATERIALS WERE USED TO TEST WHETHER THE DEPOSITS IN FAULT ZONES AT YUCCA MOUNTAIN COULD HAVE FORMED FROM UPWELLING OF DEEP-SEATED WATERS. | D N P |
| *GS930108315215.006 | CHARACTERIZATION OF FAULT-FILLING DEPOSITS IN THE VICINITY OF YUCCA MOUNTAIN, NEVADA, BY J.S. STUCKLESS, Z.E. PETERMAN, R.L. FORESTER, J.F. WHELAN, D.T. VANIMAN, B.D. MARSHALL AND E.M. TAYLOR ACQN/DEVL LOCATION : USGS, DENVER, CO | 10/01/91-12/31/91 | CHARACTERIZATION OF CALCITE AND OPALINE SILICA VEIN-LIKE DEPOSITS THAT INFILL FAULTS AND FRACTURES IN THE VICINITY OF YUCCA MOUNTAIN. | D N C |

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| *GS930108315215.007 | RECONNAISSANCE CARBONATE CARBON AND OXYGEN ISOTOPE DATA FROM TRENCH 14, BUSTED BUTTE, AND DRILL HOLE (USW) G-4 YUCCA MOUNTAIN, NEVADA, TEST SITE. ACQN/DEVL LOCATION : USGS, DENVER, CO | 11/01/89-12/31/89 | ANALYSIS OF CARBONATE CARBON AND OXYGEN ISOTOPE VALUES OF CALCITE FROM THE YUCCA MOUNTAIN AREA TO DETERMINE TRENDS AND VARIATIONS ON THE TEMPERATURE OF CALCITE PRECIPITATION. | D N P |
| *GS930108315215.008 | PRELIMINARY STUDY OF LEAD ISOTOPES IN THE CARBONATE-SILICA VEINS OF TRENCH 14, YUCCA MOUNTAIN, BY R.E. ZARTMAN AND L.M. KWAK ACQN/DEVL LOCATION : USGS, DENVER, CO | 09/01/89-05/31/91 | ANALYSIS OF SOURCE MATERIALS THAT HAVE CONTRIBUTED TO THE TRENCH-14 CARBONATE-SILICATE VEINS BASED ON A LEAD ISOTOPE CHARACTERIZATION OF THE VEIN & OTHER ROCKS FROM WHICH THE LEAD MAY HAVE BEEN DERIVED. | D Y P |
| *GS930108315215.009 | URANIUM-SERIES DATING OF SECONDARY CARBONATES NEAR YUCCA MOUNTAIN, NEVADA: APPLICATIONS TO TECTONIC, PALEOCLIMATIC AND PALEOHYDROLOGIC PROBLEMS BY D.R. MUHS, J.W. WHITNEY, R.R. SHROBA, E.M. TAYLOR, AND C.A. BUSH ACQN/DEVL LOCATION : USGS, DENVER, CO. | 11/01/89-02/21/90 | IN THE YUCCA MTN. NV AREA SOILS & SURFICIAL GEOLOGIC DEPOSITS ARE OFTEN THE HOST FOR ACCUMULATIONS OF SECONDARY CALCIUM CARBONATE. SUCH CARBONATES ARE OFTEN USEFUL FOR GEOCHRONOLOGIC STUDIES BECAUSE THEY FORMED AFTER DEPOSITION OF THE HOST SEDIMENT. THEREFORE, THEY PROVIDE USEFUL MINIMUM AGES FOR THE HOST SEDIMENT OR SOIL. THE CARBONATES WERE DATED USING THE URANIUM-SERIES DISEQUILIBRIUM METHOD (230TH / 234U) BECAUSE URANIUM BUT NO THORIUM IS COPRECIPITATED WITH THE CARBONATE. | D N P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS930108315215.010 | AGES AND STABLE-ISOTOPE COMPOSITIONS OF SECONDARY CALCITE AND OPAL IN DRILL CORES FROM TERTIARY VOLCANIC ROCKS OF THE YUCCA MOUNTAIN AREA, NEVADA, BY B.J. SZABO AND T.K. KYSER. | 04/01/87-05/23/89 | AGES OF CALCITE, FREE OF ACID-INSOLUBLE RESIDUE, AND OF OPAL SAMPLES ARE CALCULATED FROM THEIR MEASURED 230TH/234U ACTIVITY RATIOS USING STANDARD RADIOACTIVE GROWTH AND DECAY EQUATIONS ASSUMING THAT THE AUTHIGENIC CALCITE AND OPAL HAD REMAINED IDEAL CLOSED SYSTEMS WITH RESPECT TO ISOTOPE OF U AND TH SINCE THEIR FORMATION. THE DATES FOR IMPURE CALCITE SAMPLES WERE CALCULATED USING THE RESULTS FOR THE ACID-SOLUBLE AND ACID INSOLUBLE FRACTIONS IN A PSEUDO-ISOCRON-PLOT METHOD DESCRIBED BY SZABO AND OTHERS (1981) AND SZABO AND ROSHOLT (1982). | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *GS930208315215.011 | AGES AND STABLE-ISOTOPE COMPOSITIONS OF SECONDARY CALCITE AND OPAL IN DRILL CORES FROM TERTIARY VOLCANIC ROCKS OF THE YUCCA MOUNTAIN AREA, NEVADA, BY B.J. SZABO AND T.K. KYSER. | 01/01/87-08/24/88 | AGES OF THE CALCITE AND OPAL PRECIPITATED IN FRACTURES DETERMINED BY URANIUM-SERIES DATING DESCRIBED IN SZABO, B.J., AND KYSER, T.K., 1985, URANIUM, THORIUM ISOTOPIC ANALYSES AND URANIUM-SERIES AGES OF CALCITE AND OPAL, AND STABLE ISOTOPIC COMPOSITIONS OF CALCITE FROM DRILL CORES UE-25A-1, USW G-2, AND USG G-3/GU-3, YM, NV, USGS OFR 85-224. CALCITE FROM VEINS DISSOLVED IN PHOSPHORIC ACID AND THE RELEASED CO2 GAS ANALYZED IN AN ISOTOPE RATIO MASS SPECTROMETER FOR CARBON AND OXYGEN ISOTOPIC COMPOSITIONS. OXYGEN EXTRACTED FROM OPAL USING BRF5 PROCEDURE DESCRIBED IN CLAYTON, R.M., AND MAYEDA, T.K., 1963, THE USE OF BROMINE PENTAFLUORIDE IN THE EXTRACTION OF OXYGEN FROM OXIDES AND SILICATES FOR ISOTOPIC ANALYSIS: GEOCHIMICA ET COSMOCHIMICA ACTA, V.27, P. 43-52. REPORT ALSO CONTAINS SUMMARIES OF PREVIOUSLY PUBLISHED DATA. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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| *GS930208315215.012 | U AND SR IN GROUNDWATER AND CALCITE, YUCCA MOUNTAIN, NEVADA: EVIDENCE AGAINST UPWELLING WATER, BY J.S. STUCKLESS, A.E. PETERMAN, AND D.R. MUHS. ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/01/90-02/13/91 | SUMMARIES AND INTERPRETATIONS OF U AND SR ISOTOPIIC COMPOSITIONS OF GROUNDWATER AND HYDROGENIC DEPOSITS IN THE YUCCA MOUNTAIN AREA AND INTERPRETATIONS OF THE ORIGIN OF THESE DEPOSITS. | D N P |
| *GS930208315215.013 | ISOTOPIIC DISCONTINUITIES IN GROUNDWATER BENEATH YUCCA MOUNTAIN, NEVADA, BY J.S. STUCKLESS, J.F. WHELAN, AND W.C. STEINKAMPF. ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/01/90-11/27/90 | REVIEW AND PRELIMINARY EVALUATIONS OF PREVIOUSLY PUBLISHED AND UNPUBLISHED DATA/INFORMATION OF STABLE ISOTOPIIC DATA FOR GROUNDWATER IN THE YUCCA MOUNTAIN AREA AND ADJACENT TO FORTYMILE WASH. | D N P |
| Activity - 8.3.1.6.1.1.1 | | | | |
| *GS930108316111.001 | "PRELIMINARY DESCRIPTION OF QUATERNARY AND LATE PLIOCENE SURFICIAL DEPOSITS AT YUCCA MOUNTAIN AND VICINITY, NYE COUNTY, NEVADA" BY D.L. HOOVER ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/01/87-06/14/89 | COMPILATION OF EXISTING DATA RESULTING IN A DESCRIPTION OF QUATERNARY AND LATE PLIOCENE SURFICIAL DEPOSITS AT YUCCA MOUNTAIN AND VICINITY. | D N P |
| *GS930208316111.002 | FIELD NOTES FROM OBSERVATIONS OF THE SOUTH-FACING HILLSLOPE OF JAKE RIDGE, ABOUT 6 KM EAST OF YUCCA MOUNTAIN, WHERE DEBRIS FLOWS OCCURRED IN JULY, 1984. ACQN/DEVL LOCATION : N236550(N) E176850(N) | 10/25/89-11/24/92 | FIELD NOTES WERE RECORDED ACCORDING TO SPECIFICATIONS IN USGS TECHNICAL PROCEDURE GP-01,R1 & R2, GEOLOGIC MAPPING. | A N P |

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| *GS930208316111.003 | PRE- AND POST-DEBRIS-FLOW DIGITAL ELEVATION MODELS (WITH 2M SPATIAL RESOLUTION) OF THE SOUTH-FACING HILLSLOPE OF JAKE RIDGE, ABOUT 6 KM EAST OF YUCCA MOUNTAIN. | 07/01/91-10/25/91 | DIGITAL ELEVATION MODELS (DEM'S) WERE MEASURED FROM PRE-FLOW (1982) AND POST-FLOW (1991) AERIAL PHOTOGRAPHS USING AN ANALYTICAL STEREO PLOTTER AND A PREVIOUSLY EXISTING SET OF GROUND CONTROL POINTS. | A N P |
| | ACQN/DEVL LOCATION : N236420(N) E176730(N) ;N236750(N) E176970(N) USGS, DENVER, CO | | | |
| *GS930208316111.004 | VOLUMETRIC ANALYSIS OF DEBRIS ERODED FROM A HILLSLOPE NEAR YUCCA MOUNTAIN DURING A CONVECTIVE STORM, BY J.A. COE, P.A. GLANCY, & J.W. WHITNEY. | 07/01/91-02/05/93 | VOLUMES OF DEBRIS ERODED WERE CALCULATED BY NUMERICAL INTEGRATION OF A DIFFERENCE DEM CREATED BY SUBTRACTING THE PRE-DEBRIS-FLOW DEM FROM THE POST-DEBRIS-FLOW DEM. INTER-CHANNEL AREAS AND DIFFERENCE VALUES THAT FELL WITHIN THE 2 SIGMA MEASUREMENT ERROR (+/- 0.3M) WERE NOT INCLUDED IN THE VOLUMETRIC CALCULATION. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| *TMTPR000000001.001 | TOPICAL REPORT - EVALUATION OF THE POTENTIAL ADVERSE CONDITION "EVIDENCE OF EXTREME EROSION DURING THE QUATERNARY PERIOD" AT YUCCA MOUNTAIN, NEVADA | 03/01/92-03/08/93 | NEW DATA WAS DEVELOPED BY ANALYSIS AND EVALUATION OF EXISTING DATA. | D Y C |
| | ACQN/DEVL LOCATION : T&MSS | | | |

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| Activity - 8.3.1.6.1.1.2 | | | | |
| *TMTPR00000001.001 | TOPICAL REPORT - EVALUATION OF THE POTENTIAL ADVERSE CONDITION "EVIDENCE OF EXTREME EROSION DURING THE QUATERNARY PERIOD" AT YUCCA MOUNTAIN, NEVADA | 03/01/92-03/08/93 | NEW DATA WAS DEVELOPED BY ANALYSIS AND EVALUATION OF EXISTING DATA. | D Y C |
| | ACQN/DEVL LOCATION : T&MSS | | | |
| Activity - 8.3.1.6.1.1.3 | | | | |
| **LA00000000011.001 | ROCK VARNISH CATION-RATIO DATA | 06/30/84-07/31/88 | FIELD SAMPLING, SEM ANALYSIS | A Y C |
| | ACQN/DEVL LOCATION : YUCCA MOUNTAIN AND VICINITY | | | |
| *LA00000000026.002 | ROCK-VARNISH CATION RATIO DATA AND ROCK-VARNISH DATING CURVE CALIBRATION SITES DATA | 07/01/86-06/30/91 | FIELD SAMPLING, SEM ANALYSIS | D Y C |
| | ACQN/DEVL LOCATION : LANL | | | |
| *LA00000000029.001 | "BARIUM CONCENTRATION IN ROCK VARNISH: IMPLICATIONS FOR CALIBRATED ROCK VARNISH DATING CURVES" | 05/01/89-11/30/89 | SCANNING ELECTRON MICROSCOPE METHOD FOR ROCK VARNISH DATING. | D Y C |
| | ACQN/DEVL LOCATION : LANL | | | |
| *LA00000000030.001 | "BARIUM CONCENTRATION IN ROCK VARNISH: IMPLICATIONS FOR CALIBRATED ROCK-VARNISH DATING CURVES; SCANNING MICROSCOPY. | 11/30/89-01/30/91 | SCANNING ELECTRON MICROSCOPE METHOD FOR ROCK-VARNISH DATING. | D Y C |
| | ACQN/DEVL LOCATION : LANL | | | |

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| *TMTPRO00000001.001 | TOPICAL REPORT - EVALUATION OF THE POTENTIAL ADVERSE CONDITION "EVIDENCE OF EXTREME EROSION DURING THE QUATERNARY PERIOD" AT YUCCA MOUNTAIN, NEVADA ACQN/DEVL LOCATION : T&MSS Activity - 8.3.1.8.5.1.2 | 03/01/92-03/08/93 | NEW DATA WAS DEVELOPED BY ANALYSIS AND EVALUATION OF EXISTING DATA. | D Y C |
| *GS930208318512.001 | NEOTECTONICS AND VOLCANISM AT YUCCA MOUNTAIN AND VICINITY, NEVADA, BY K.F. FOX, JR., AND M.D. CARR. ACQN/DEVL LOCATION : USGS, DENVER, CO USGS, MENLO PARK, CA | 06/28/87-06/28/88 | INTERPRETATIONS OF VOLCANISM, FAULTS, AND SEISMICITY IN THE YUCCA MOUNTAIN AREA. | D N P |
| *GS930308318512.002 | VOLCANO-TECTONIC HISTORY OF CRATER FLAT, SOUTHWESTERN NEVADA, AS SUGGESTED BY NEW EVIDENCE FROM DRILL HOLE USW-VH-1 (USW VH-1) AND VICINITY, BY W.J. CARR. ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/01/81-03/16/82 | SUMMARIES AND INTERPRETATIONS OF THE DRILL-HOLE LOCATION, HISTORY, LITHOLOGIC LOG, AND STRATIGRAPHY; AND THE STRUCTURAL FRAMEWORK, AEROMAGNETIC ANOMALIES, AND VOLCANO-TECTONIC HISTORY OF CRATER FLAT. | D N P |
| *LA000000000027.001 | "THE LATHROP WELLS VOLCANIC CENTER: STATUS OF FIELD AND GEOCHRONOLOGY STUDIES" ACQN/DEVL LOCATION : LANL, LAS VEGAS, NV | 01/30/88-12/30/91 | CONVENTIONAL K-AR AGE DETERMINATIONS. 40AR/39AR FOR AGE DETERMINATIONS. U-TH DISEQUILIBRIUM AGE DETERMINATIONS USING SOLID SOURCE MASS SPECTROMETRY. COSMOGENIC HELLIUM AGE DETERMINATIONS AND THERMOLUMINESCENCE. | D N C |

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Activity - 8.3.1.8.5.2.3

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| *GS930208318523.001 | TEMPERATURE, THERMAL CONDUCTIVITY, AND HEAT FLOW NEAR YUCCA MOUNTAIN, NEVADA: SOME TECTONIC AND HYDROLOGIC IMPLICATIONS, BY J.H. SASS, A.H. LACHENBRUCH, W.W. DUDLEY, JR., S.S. PRIEST, AND R.J. MUNROE. | 01/01/87-12/01/87 | HEAT FLOW ESTIMATES BY 1) LEAST-SQS. GRADIENT X HARMONIC MEAN OF MEASURED CONDUCTIVITIES OVER SAME INTERVAL, 2) LEAST-SQS. GRADIENT X CONDUCTIVITY CALCULATED FROM FORMATION MEANS, AND 3) LEAST-SQS. GRADIENT X HARMONIC MEAN OF CONDUCTIVITIES INFERRED FROM K VS. VP RELATION. TEMP. MEASUREMENTS IN AIR BY 1) SASS, J.H. & OTHERS, 1971, HEAT FLOW IN THE WESTERN U.S.: JNL. OF GEOPHYSICAL RESEARCH, V.76, P.6376-6413, AND 2) TECH. PROCEDURE NWM USGS GPP-02, RO, HEAT-FLOW STUDIES RELATED TO NUCLEAR WASTE STORAGE INVESTIGATIONS. THERMAL CONDUCTIVITY BY 1) SASS, J.H. & OTHERS, 1984, LABORATORY LINE-SOURCE METHODS FOR THE MEASUREMENT OF TH. CONDUCT. OF ROCKS NEAR ROOM TEMP.: USGS OFR 84-91, AND 2) SASS & OTHERS, 1971, OP. CIT. 3) SASS, J.H. & OTHERS, 1980, ANALYSIS OF THERMAL DATA FROM DRILL HOLES UE25A-3 AND UE25A-1, CALICO HILLS & YM, NTS: USGS OFR 80-826 AND 4) NWM USGS GPP-05, R1 HEAT-FLOW STUDIES CALIBRATION PROCEDURES | D N P |
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ACQN/DEVL LOCATION : USGS, DENVER, CO
USGS, FLAGSTAFF, AZ
USGS, MENLO PARK, CA

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| Activity - 8.3.1.14.2.1.1 | | | | |
| *GS930383114211.001 | PRELIMINARY ENGINEERING GEOLOGY RECONNAISSANCE FOR SOUTH RAMP ALIGNMENT, EXPLORATORY STUDIES FACILITY, YUCCA MOUNTAIN PROJECT, BY M.H. MCKEOWN AND S.C. BEASON | 01/01/90-07/31/91 | GEOLOGIC LOGGING; CONTOUR PLOTTING; INFORMAL TESTING OF ROCK AND SOIL FOR PHYSICAL PROPERTIES, TRIAXIAL SHEAR, AND STATIC ELASTIC PROPERTIES; GRADATION ANALYSIS, PRELIMINARY DRAWING OF CROSS SECTION. | A N P |
| | ACQN/DEVL LOCATION : USBR ROCK & SOILS LAB, DENVER USBR, DENVER | | | |
| Activity - 8.3.1.14.2.1.2 | | | | |
| *GS930283114212.001 | DYNAMIC MODULI FOR THE YMP NORTH PORTAL. | 11/17/92-12/14/92 | THESE DATA WERE COLLECTED PER SCIENTIFIC NOTEBOOK PLAN NWM-USGS GPP-28T,R0, GEOPHYSICAL BOREHOLE LOGGING AND CHECKSHOTS IN DRILL HOLES | A Y P |
| | ACQN/DEVL LOCATION : UE-25 NRG-1 | | | |
| Activity - 8.3.1.14.2.2.1 | | | | |
| *GS921283114220.003 | SUMMARY OF RELATIVE DENSITY DETERMINATION, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 04/02/92-11/20/92 | U.S.BUREAU OF RECLAMATION EARTH MANUAL PROCEDURE USBR 5205-89, APPENDIX X3[4], PREPARING SOIL SAMPLES BY SPLITTING OR QUARTERING, SYNTHETIC GRADATION ANALYSIS. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.004 | SUMMARY ACCESS ROAD TEST PIT DATA, LOGS OF VISUAL OBSERVATIONS OF SITE AND TEST PIT. FIELD TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 09/15/92-09/19/92 | YMP-USGS TECHNICAL PROCEDURES EGP-7000-89, R1, PERFORMING DISTURBED SOIL SAMPLING IN TEST PITS, TRENCHES, ACCESSIBLE BORINGS, AND TUNNELS; EGP-5005-86,R1, DETERMINING UNIFIED SOIL CLASSIFICATION (VISUAL METHOD). | A Y P |
| | ACQN/DEVL LOCATION : UE-25 NRG-1 | | | |

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| *GS921283114220.005 | SUMMARY OF PHYSICAL PROPERTIES AND DIMENSIONAL TOLERANCE CONFORMANCE OF ROCK CORE TEST SPECIMENS. LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/15/92-11/30/92 | ASTM C 97-83, ISRM PART 1: SUGGESTED METHODS FOR DETERMINING WATER CONTENT, POROSITY, DENSITY, AND RELATED PROPERTIES. | A Y P |
| *GS921283114220.006 | SUMMARY OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANTS OF INTACT ROCK CORE TEST SPECIMANS - LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 11/13/92-11/19/92 | ASTM D 2845-90 STANDARD TEST METHODS FOR LABORATORY DETERMINATION OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANCY OF ROCK. | A Y P |
| *GS921283114220.007 | DIRECT SHEAR TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A Y P |
| *GS921283114220.008 | SUMMARY OF DIRECT SHEAR COMBINED TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A Y P |

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| *GS921283114220.009 | SUMMARY OF TRIAXIAL COMPRESSION AND ELASTIC PROPERTIES OF INTACT ROCK CORE TEST SPECIMANS. LAB TESTS OF MECHANICAL PROPERTIES. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/10/92-11/27/92 | ASTM D 2664-86, TEST METHOD FOR TRIAXIAL COMPRESSION STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENTS. | A Y P |
| *GS921283114220.010 | ULTRASONIC WAVEFORM SOUNDSAFE COUPLANT, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/01/92-11/13/92 | ASTM D 2845-90, STANDARD TEST METHOD FOR LABORATORY DETERMINATION OF PULSE VELOCITIES & ULTRASONIC ELASTIC CONSTANTS OF ROCK. | A Y P |
| *GS921283114220.011 | DIRECT SHEAR TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-10/30/92 | ISRM TEST PROCEDURE FOR DIRECT SHEAR TESTING. | A Y P |
| *GS921283114220.012 | STATIC COMPRESSION AND ELASTIC PROPERTIES TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/10/92-10/10/92 | ASTM D 2938-86, TEST METHOD FOR UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS. | A Y P |
| *GS921283114220.013 | TRIAxIAL COMPRESSIVE STRENGTH TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 11/17/92-11/21/92 | ASTM D-2664-86, TEST METHOD FOR TRIAXIAL COMPRESSIVE STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENT. | A Y P |

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| *GS921283114220.014 | SOIL AND ROCK GEOTECHNICAL INVESTIGATIONS, FIELD AND LABORATORY STUDIES, NORTH RAMP SURFACE FACILITY, EXPLORATORY STUDIES FACILITY, YUCCA MOUNTAIN PROJECT, NEVADA. ACQN/DEVL LOCATION : USBR, DENVER Activity - 8.3.1.14.2.2.2 | 04/01/92-11/30/92 | THIS REPORT IS DERIVED FROM GEOLOGIC MAPPING, PAVEMENT MAPPING, TEST PITS, AND LABORATORY DATA FROM TEST PITS, AND DRILL HOLES. | D Y P |
| *GS921283114220.003 | SUMMARY OF RELATIVE DENSITY DETERMINATION, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 04/02/92-11/20/92 | U.S.BUREAU OF RECLAMATION EARTH MANUAL PROCEDURE USBR 5205-89, APPENDIX X3[4], PREPARING SOIL SAMPLES BY SPLITTING OR QUARTERING, SYNTHETIC GRADATION ANALYSIS. | A Y P |
| *GS921283114220.004 | SUMMARY ACCESS ROAD TEST PIT DATA, LOGS OF VISUAL OBSERVATIONS OF SITE AND TEST PIT. FIELD TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : UE-25 NRG-1 | 09/15/92-09/19/92 | YMP-USGS TECHNICAL PROCEDURES EGP-7000-89, R1, PERFORMING DISTURBED SOIL SAMPLING IN TEST PITS, TRENCHES, ACCESSIBLE BORINGS, AND TUNNELS; EGP-5005-86,R1, DETERMINING UNIFIED SOIL CLASSIFICATION (VISUAL METHOD). | A Y P |
| *GS921283114220.005 | SUMMARY OF PHYSICAL PROPERTIES AND DIMENSIONAL TOLERANCE CONFORMANCE OF ROCK CORE TEST SPECIMENS. LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/15/92-11/30/92 | ASTM C 97-83, ISRM PART 1: SUGGESTED METHODS FOR DETERMINING WATER CONTENT, POROSITY, DENSITY, AND RELATED PROPERTIES. | A Y P |

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| *GS921283114220.006 | SUMMARY OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANTS OF INTACT ROCK CORE TEST SPECIMANS - LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 11/13/92-11/19/92 | ASTM D 2845-90 STANDARD TEST METHODS FOR LABORATORY DETERMINATION OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANCY OF ROCK. | A Y P |
| *GS921283114220.007 | DIRECT SHEAR TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A Y P |
| *GS921283114220.008 | SUMMARY OF DIRECT SHEAR COMBINED TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A Y P |
| *GS921283114220.009 | SUMMARY OF TRIAXIAL COMPRESSION AND ELASTIC PROPERTIES OF INTACT ROCK CORE TEST SPECIMANS. LAB TESTS OF MECHANICAL PROPERTIES. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/10/92-11/27/92 | ASTM D 2664-86, TEST METHOD FOR TRIAXIAL COMPRESSION STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENTS. | A Y P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS921283114220.010 | ULTRASONIC WAVEFORM SOUNDSAFE COUPLANT, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/01/92-11/13/92 | ASTM D 2845-90, STANDARD TEST METHOD FOR LABORATORY DETERMINATION OF PULSE VELOCITIES & ULTRASONIC ELASTIC CONSTANTS OF ROCK. | A Y P |
| *GS921283114220.011 | DIRECT SHEAR TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-10/30/92 | ISRM TEST PROCEDURE FOR DIRECT SHEAR TESTING. | A Y P |
| *GS921283114220.012 | STATIC COMPRESSION AND ELASTIC PROPERTIES TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/10/92-10/10/92 | ASTM D 2938-86, TEST METHOD FOR UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS. | A Y P |
| *GS921283114220.013 | TRIAxIAL COMPRESSIVE STRENGTH TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 11/17/92-11/21/92 | ASTM D-2664-86, TEST METHOD FOR TRIAXIAL COMPRESSIVE STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENT. | A Y P |
| *GS921283114220.014 | SOIL AND ROCK GEOTECHNICAL INVESTIGATIONS, FIELD AND LABORATORY STUDIES, NORTH RAMP SURFACE FACILITY, EXPLORATORY STUDIES FACILITY, YUCCA MOUNTAIN PROJECT, NEVADA. ACQN/DEVL LOCATION : USBR, DENVER | 04/01/92-11/30/92 | THIS REPORT IS DERIVED FROM GEOLOGIC MAPPING, PAVEMENT MAPPING, TEST PITS, AND LABORATORY DATA FROM TEST PITS, AND DRILL HOLES. | D Y P |

SITE CHARACTERIZATION PLAN BASELINE

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | T Q D U L I A O F L C I A T F T Y I I P E O E D N |
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| Activity - 8.3.1.14.2.3.1 | | | | |
| *GS921283114220.003 | SUMMARY OF RELATIVE DENSITY DETERMINATION, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 04/02/92-11/20/92 | U.S.BUREAU OF RECLAMATION EARTH MANUAL PROCEDURE USBR 5205-89, APPENDIX X3(4), PREPARING SOIL SAMPLES BY SPLITTING OR QUARTERING, SYNTHETIC GRADATION ANALYSIS. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.004 | SUMMARY ACCESS ROAD TEST PIT DATA, LOGS OF VISUAL OBSERVATIONS OF SITE AND TEST PIT. FIELD TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 09/15/92-09/19/92 | YMP-USGS TECHNICAL PROCEDURES EGP-7000-89, R1, PERFORMING DISTURBED SOIL SAMPLING IN TEST PITS, TRENCHES, ACCESSIBLE BORINGS, AND TUNNELS; EGP-5005-86,R1, DETERMINING UNIFIED SOIL CLASSIFICATION (VISUAL METHOD). | A Y P |
| | ACQN/DEVL LOCATION : UE-25 NRG-1 | | | |
| *GS921283114220.005 | SUMMARY OF PHYSICAL PROPERTIES AND DIMENSIONAL TOLERANCE CONFORMANCE OF ROCK CORE TEST SPECIMENS. LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 10/15/92-11/30/92 | ASTM C 97-83, ISRM PART 1: SUGGESTED METHODS FOR DETERMINING WATER CONTENT, POROSITY, DENSITY, AND RELATED PROPERTIES. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.006 | SUMMARY OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANTS OF INTACT ROCK CORE TEST SPECIMANS - LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 11/13/92-11/19/92 | ASTM D 2845-90 STANDARD TEST METHODS FOR LABORATORY DETERMINATION OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANCY OF ROCK. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | A Y P |
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| *GS921283114220.007 | DIRECT SHEAR TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES. | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.008 | SUMMARY OF DIRECT SHEAR COMBINED TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.009 | SUMMARY OF TRIAXIAL COMPRESSION AND ELASTIC PROPERTIES OF INTACT ROCK CORE TEST SPECIMANS. LAB TESTS OF MECHANICAL PROPERTIES. | 10/10/92-11/27/92 | ASTM D 2664-86, TEST METHOD FOR TRIAXIAL COMPRESSION STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENTS. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.010 | ULTRASONIC WAVEFORM SOUNDSAFE COUPLANT, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 10/01/92-11/13/92 | ASTM D 2845-90, STANDARD TEST METHOD FOR LABORATORY DETERMINATION OF PULSE VELOCITIES & ULTRASONIC ELASTIC CONSTANTS OF ROCK. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS921283114220.011 | DIRECT SHEAR TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-10/30/92 | ISRM TEST PROCEDURE FOR DIRECT SHEAR TESTING. | A Y P |
| *GS921283114220.012 | STATIC COMPRESSION AND ELASTIC PROPERTIES TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/10/92-10/10/92 | ASTM D 2938-86, TEST METHOD FOR UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS. | A Y P |
| *GS921283114220.013 | TRIAXIAL COMPRESSIVE STRENGTH TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 11/17/92-11/21/92 | ASTM D-2664-86, TEST METHOD FOR TRIAXIAL COMPRESSIVE STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENT. | A Y P |
| *GS921283114220.014 | SOIL AND ROCK GEOTECHNICAL INVESTIGATIONS, FIELD AND LABORATORY STUDIES, NORTH RAMP SURFACE FACILITY, EXPLORATORY STUDIES FACILITY, YUCCA MOUNTAIN PROJECT, NEVADA. ACQN/DEVL LOCATION : USBR, DENVER | 04/01/92-11/30/92 | THIS REPORT IS DERIVED FROM GEOLOGIC MAPPING, PAVEMENT MAPPING, TEST PITS, AND LABORATORY DATA FROM TEST PITS, AND DRILL HOLES. | D Y P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| Activity - 8.3.1.14.2.3.2 | | | | |
| *GS921283114220.003 | SUMMARY OF RELATIVE DENSITY DETERMINATION, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 04/02/92-11/20/92 | U.S.BUREAU OF RECLAMATION EARTH MANUAL PROCEDURE USBR 5205-89, APPENDIX X3(4), PREPARING SOIL SAMPLES BY SPLITTING OR QUARTERING, SYNTHETIC GRADATION ANALYSIS. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.004 | SUMMARY ACCESS ROAD TEST PIT DATA, LOGS OF VISUAL OBSERVATIONS OF SITE AND TEST PIT. FIELD TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 09/15/92-09/19/92 | YMP-USGS TECHNICAL PROCEDURES EGP-7000-89, R1, PERFORMING DISTURBED SOIL SAMPLING IN TEST PITS, TRENCHES, ACCESSIBLE BORINGS, AND TUNNELS; EGP-5005-86, R1, DETERMINING UNIFIED SOIL CLASSIFICATION (VISUAL METHOD). | A Y P |
| | ACQN/DEVL LOCATION : UE-25 NRG-1 | | | |
| *GS921283114220.005 | SUMMARY OF PHYSICAL PROPERTIES AND DIMENSIONAL TOLERANCE CONFORMANCE OF ROCK CORE TEST SPECIMENS. LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 10/15/92-11/30/92 | ASTM C 97-83, ISRM PART 1: SUGGESTED METHODS FOR DETERMINING WATER CONTENT, POROSITY, DENSITY, AND RELATED PROPERTIES. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.006 | SUMMARY OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANTS OF INTACT ROCK CORE TEST SPECIMANS - LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 11/13/92-11/19/92 | ASTM D 2845-90 STANDARD TEST METHODS FOR LABORATORY DETERMINATION OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANCY OF ROCK. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |

SITE CHARACTERIZATION PLAN BASELINE

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | T D I F I T Y P E | Q A L C A T I O N P E R I O D |
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| *GS921283114220.007 | DIRECT SHEAR TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES. | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A | Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | | |
| *GS921283114220.008 | SUMMARY OF DIRECT SHEAR COMBINED TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A | Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | | |
| *GS921283114220.009 | SUMMARY OF TRIAXIAL COMPRESSION AND ELASTIC PROPERTIES OF INTACT ROCK CORE TEST SPECIMANS. LAB TESTS OF MECHANICAL PROPERTIES. | 10/10/92-11/27/92 | ASTM D 2664-86, TEST METHOD FOR TRIAXIAL COMPRESSION STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENTS. | A | Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | | |
| *GS921283114220.010 | ULTRASONIC WAVEFORM SOUNDSAFE COUPLANT, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 10/01/92-11/13/92 | ASTM D 2845-90, STANDARD TEST METHOD FOR LABORATORY DETERMINATION OF PULSE VELOCITIES & ULTRASONIC ELASTIC CONSTANTS OF ROCK. | A | Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | | |

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| *GS921283114220.011 | DIRECT SHEAR TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-10/30/92 | ISRM TEST PROCEDURE FOR DIRECT SHEAR TESTING. | A Y P |
| *GS921283114220.012 | STATIC COMPRESSION AND ELASTIC PROPERTIES TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/10/92-10/10/92 | ASTM D 2938-86, TEST METHOD FOR UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS. | A Y P |
| *GS921283114220.013 | TRIAxIAL COMPRESSIVE STRENGTH TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 11/17/92-11/21/92 | ASTM D-2664-86, TEST METHOD FOR TRIAXIAL COMPRESSIVE STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENT. | A Y P |
| *GS921283114220.014 | SOIL AND ROCK GEOTECHNICAL INVESTIGATIONS, FIELD AND LABORATORY STUDIES, NORTH RAMP SURFACE FACILITY, EXPLORATORY STUDIES FACILITY, YUCCA MOUNTAIN PROJECT, NEVADA. ACQN/DEVL LOCATION : USBR, DENVER | 04/01/92-11/30/92 | THIS REPORT IS DERIVED FROM GEOLOGIC MAPPING, PAVEMENT MAPPING, TEST PITS, AND LABORATORY DATA FROM TEST PITS, AND DRILL HOLES. | D Y P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| Activity - 8.3.1.14.2.3.3 | | | | |
| *GS921283114220.003 | SUMMARY OF RELATIVE DENSITY DETERMINATION, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 04/02/92-11/20/92 | U.S.BUREAU OF RECLAMATION EARTH MANUAL PROCEDURE USBR 5205-89, APPENDIX X3[4], PREPARING SOIL SAMPLES BY SPLITTING OR QUARTERING, SYNTHETIC GRADATION ANALYSIS. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.004 | SUMMARY ACCESS ROAD TEST PIT DATA, LOGS OF VISUAL OBSERVATIONS OF SITE AND TEST PIT. FIELD TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 09/15/92-09/19/92 | YMP-USGS TECHNICAL PROCEDURES EGP-7000-89, R1, PERFORMING DISTURBED SOIL SAMPLING IN TEST PITS, TRENCHES, ACCESSIBLE BORINGS, AND TUNNELS; EGP-5005-86, R1, DETERMINING UNIFIED SOIL CLASSIFICATION (VISUAL METHOD). | A Y P |
| | ACQN/DEVL LOCATION : UE-25 NRG-1 | | | |
| *GS921283114220.005 | SUMMARY OF PHYSICAL PROPERTIES AND DIMENSIONAL TOLERANCE CONFORMANCE OF ROCK CORE TEST SPECIMENS. LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 10/15/92-11/30/92 | ASTM C 97-83, ISRM PART 1: SUGGESTED METHODS FOR DETERMINING WATER CONTENT, POROSITY, DENSITY, AND RELATED PROPERTIES. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |
| *GS921283114220.006 | SUMMARY OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANTS OF INTACT ROCK CORE TEST SPECIMANS - LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. | 11/13/92-11/19/92 | ASTM D 2845-90 STANDARD TEST METHODS FOR LABORATORY DETERMINATION OF PULSE VELOCITIES AND ULTRASONIC ELASTIC CONSTANCY OF ROCK. | A Y P |
| | ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS921283114220.007 | DIRECT SHEAR TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A Y P |
| *GS921283114220.008 | SUMMARY OF DIRECT SHEAR COMBINED TEST RESULTS - INTACT ROCK AND SLIDING FRICTION. LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-11/27/92 | ISRM SUGGESTED METHODS FOR DETERMINING SHEAR STRENGTH, PART 2, LABORATORY DETERMINATION OF DIRECT SHEAR STRENGTH, FEBRUARY 1974. | A Y P |
| *GS921283114220.009 | SUMMARY OF TRIAXIAL COMPRESSION AND ELASTIC PROPERTIES OF INTACT ROCK CORE TEST SPECIMANS. LAB TESTS OF MECHANICAL PROPERTIES. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/10/92-11/27/92 | ASTM D 2664-86, TEST METHOD FOR TRIAXIAL COMPRESSION STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENTS. | A Y P |
| *GS921283114220.010 | ULTRASONIC WAVEFORM SOUNDSAFE COUPLANT, LAB TESTS OF PHYSICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/01/92-11/13/92 | ASTM D 2845-90, STANDARD TEST METHOD FOR LABORATORY DETERMINATION OF PULSE VELOCITIES & ULTRASONIC ELASTIC CONSTANTS OF ROCK. | A Y P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *GS921283114220.011 | DIRECT SHEAR TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/02/92-10/30/92 | ISRM TEST PROCEDURE FOR DIRECT SHEAR TESTING. | A Y P |
| *GS921283114220.012 | STATIC COMPRESSION AND ELASTIC PROPERTIES TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 10/10/92-10/10/92 | ASTM D 2938-86, TEST METHOD FOR UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS. | A Y P |
| *GS921283114220.013 | TRIAXIAL COMPRESSIVE STRENGTH TEST, LAB TESTS OF MECHANICAL PROPERTIES, NORTH RAMP. ACQN/DEVL LOCATION : USBR SOIL & ROCK LAB, DENVER | 11/17/92-11/21/92 | ASTM D-2664-86, TEST METHOD FOR TRIAXIAL COMPRESSIVE STRENGTH OF UNDRAINED ROCK CORE SPECIMANS WITHOUT PORE PRESSURE MEASUREMENT. | A Y P |
| *GS921283114220.014 | SOIL AND ROCK GEOTECHNICAL INVESTIGATIONS, FIELD AND LABORATORY STUDIES, NORTH RAMP SURFACE FACILITY, EXPLORATORY STUDIES FACILITY, YUCCA MOUNTAIN PROJECT, NEVADA. ACQN/DEVL LOCATION : USBR, DENVER | 04/01/92-11/30/92 | THIS REPORT IS DERIVED FROM GEOLOGIC MAPPING, PAVEMENT MAPPING, TEST PITS, AND LABORATORY DATA FROM TEST PITS, AND DRILL HOLES. | D Y P |
| *GS930283114233.001 | RESISTIVITY DATA FOR THE YMP NORTH PORTAL ACQN/DEVL LOCATION : UE-25 NRG-1 | 05/28/92-06/04/92 | THESE DATA WERE COLLECTED PER TECHNICAL PROCEDURE USBR GPP-01,R0, ELECTRICAL RESISTIVITY MEASUREMENT USING THE ABEM TERRAMETER SAS SYSTEM, EXCEPT AS NOTED IN COMMENTS. | A N C |

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| Activity - 8.3.1.15.1.1.1 | | | | |
| *SNL03120178001.001 | INITIAL CHARACTERIZATION OF UE-25A#1 DRILL HOLE. | 12/01/78-11/30/79 | PHYSICAL PROPERTIES INCLUDING NATURAL STATE BULK DENSITY, GRAIN DENSITY USING A WATER PYCNOMETER TECHNIQUE AND POROSITY USING HELIUM POROSITY/GAS PERMEABILITY TECHNIQUE. (SEE ASTM D 1188-71, ASTM D 2216-71, ASTM D 854-58, & API RP40.) | A N C |
| ACQN/DEVL LOCATION : HOLMES & NARVER, INC. | | | | |
| Activity - 8.3.1.15.1.3.1 | | | | |
| *SNL02030180001.001 | MATRIX COMPRESSIVE TESTS TO CHARACTERIZE TUFFS FROM UE-25A#1 AND THE LASER DRIFT IN G-TUNNEL. | 11/01/78-11/01/80 | MATERIAL FROM G-TUNNEL HAS BEEN TESTED IN OVEN-DRIED AND SATURATED STATES. SPECIMEN DIAMETERS ARE 25MM FOR THE GROUSE CANYON TUFF AND 48 OR 64MM FOR THE YUCCA MOUNTAIN ROCK, ALL WITH A 2 TO 1 OR GREATER LENGTH TO DIAMETER RATIO. TESTING IS ACCOMPLISHED IN A 1.8 GN ULTRA-STIFF, ELECTRO-HYDRAULIC, SERVO-CONTROLLED COMPRESSION TESTING MACHINE. AXIAL DISPLACEMENT IS MEASURED BY LINEAR VARIABLE DIFFERENTIAL TRANSDUCERS MOUNTED AT TWO POINTS ALONG THE LENGTH OF THE SPECIMEN. FOR TRIAXIAL TESTS THE SPECIMENS ARE JACKETED WITH A 2-PART BRUSH-ON RUBBER COMPOUND OR HEAT-SHRINK POLYOLEFIN TUBING. A DIGITAL PDP-11 COLLECTS AND REDUCES FORCES. (SEE SAND80-1453 FOR A MORE DETAILED DESCRIPTION OF METHOD.) | A N C |
| ACQN/DEVL LOCATION : SNL | | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *SNL04021384001.001 | CHARACTERIZATION OF SAMPLES IN SUPPORT OF MECHANICAL TESTING ON DENSELY WELDED SAMPLES OF THE TOPOPAH SPRING MEMBER FROM BUSTED BUTTE. | 06/01/84-01/12/87 | THE MINERALOGY AND PETROLOGY OF ELEVEN CORE SAMPLES OF WELDED TUFF WERE STUDIED IN SUPPORT OF ROCK MECHANICS TESTS. TWO PRIMARY PURPOSES OF THE PETROLOGIC STUDY. FIRST, DETERMINE IF THERE ARE ANY SIGNIFICANT MINERALOGIC OR TEXTURAL VARIATIONS BETWEEN SAMPLES WHICH MIGHT BE REFLECTED IN MECHANICAL TEST RESULTS. SECOND, DETERMINE MINERALOGIC DIFFERENCES BETWEEN THESE SURFACE SAMPLES AND EQUIVALENT HORIZONS PRESENT BENEATH YUCCA MTN. AS SAMPLED IN DRILL HOLES. (FOR MORE DETAIL SEE, DATASET SECTION 13 "REPORTS" LETTER TO: FRAN NIMICK DATED 7/8/85; SAND86-1131). | A N C |
| | ACQN/DEVL LOCATION : UNM, ALBUQUERQUE, NM | | | |
| | Activity - 8.3.1.15.1.4 | | | |
| *SNL02060183001.001 | MATRIX COMPRESSIVE TESTS TO CHARACTERIZE THE TOPOPAH SPRING MEMBER IN USW G-4. | 07/01/83-08/01/83 | TESTS PERFORMED ON A LOAD FRAME HAVING A MAXIMUM LOAD CAPACITY OF 1.0 MN (200 KIP). A CONSTANT DISPLACEMENT RATE OF THE LOADING PISTON IS ACHIEVED BY SERVO-CONTROL OF THE HYDRAULIC LOADING RAM WHILE MONITORING A LINEAR VARIABLE DISPLACEMENT TRANSFORMER (LVDT) AT THE BASE OF THE LOADING COLUMN. AXIAL FORCE WAS CALCULATED BY DIVIDING THE FORCE MEASURED ON A STANDARD LOAD CELL BY THE ORIGINAL CROSS-SECTIONAL AREA OF THE SAMPLE. AXIAL & LATERAL STRAIN WERE ALSO CALCULATED. AXIAL FORCE, AXIAL DISPLACEMENT, TRANSVERSE DISPLACEMENT, RAM DISPLACEMENT, AND TIME DATA WERE COLLECTED, REDUCED, AND PLOTTED BY A MINI-COMPUTER, AND STORED ON FLOPPY DISKS. (SEE SAND84-1101 FOR A MORE DETAILED DESCRIPTION.) | A N C |
| | ACQN/DEVL LOCATION : SNL | | | |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD |
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| *SNL02101283001.001 | MATRIX COMPRESSIVE TESTS TO CHARACTERIZE THE TOPOPAH SPRING MEMBER IN USW G-4. | 11/07/83-10/05/84 | EXPERIMENTS WERE PERFORMED ON A LOAD FRAME A N C WITH A MAXIMUM CAPACITY OF 1.1 MN. CONSTANT DISPLACEMENT RATE OF THE LOADING PISTON WAS ACHIEVED BY SERVO-CONTROL OF THE HYDRAULIC LOADING RAM WITH SERVO-FEEDBACK FROM AN LVDT MOUNTED AT THE TOP OF THE LOADING COLUMN. AXIAL STRESS AND STRAIN WERE CALCULATED. AVERAGE LATERAL STRAIN WAS THEN OBTAINED BY DIVIDING THE AVERAGE DISPLACEMENT BY THE AVERAGE VALUE OF THE ORIGINAL DIAMETER OF THE SAMPLE. AXIAL FORCE, AXIAL DISPLACEMENT, TRANSVERSE DISPLACEMENT, RAM DISPLACEMENT, AND TIME DATA WERE COLLECTED, REDUCED, AND STORED ON MAGNETIC TAPES. (FOR MORE DETAIL SEE SAND84-1101.) |

ACQN/DEVL LOCATION : TERRA TEK, SALT LAKE CITY, UT

Activity - 8.3.1.17.3.3.2

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| **SNF0800000009.000 | 9 TRACK MAGNETIC TAPE OF UNE-GENERATED GROUND MOTION DATA FROM UNE BARNWELL. | 12/08/89-12/08/89 | TEST WAS AN UNDERGROUND NUCLEAR EXPLOSION A N P (UNE). COLLECTION METHOD CONSISTS OF SENSING UNE-GENERATED GROUND MOTIONS WITH ACCELEROMETERS WHICH CONVERT MOTION TO ELECTRICAL SIGNALS WHICH ARE AMPLIFIED, MULTIPLEXED AND TRANSMITTED TO CENTRAL SITE WHERE SIGNALS ARE RECORDED ON AN ANALOG TAPE. |
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ACQN/DEVL LOCATION : NRDA FIRE STATION - AREA 25/NTS

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | T Q D U L I A O F L C I A T F T Y I I P E O E D N |
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| Activity - 8.3.1.17.4.1.1 | | | | |
| *GS930383117411.001 | ANALYSIS OF EARTHQUAKE DATA RECORDED BY DIGITAL FIELD SEISMIC SYSTEMS, JACKASS FLATS, NEVADA, BY A.C. TARR AND A.M. ROGERS. | 01/01/85-05/30/86 | SUMMARIES OF 1) RESULTS OF SPECTRAL ANALYSES OF 10 EARTHQUAKES OCCURRING IN/NEAR THE NTS AND 2) EVIDENCE SUPPORTING THE VALIDITY OF THE NEW SOUTHERN GREAT BASIN SEISMIC NETWORK (SGBSN) CODA DURATION MAGNITUDE SCALE. ARRIVAL TIMES AND FIRST MOTIONS DETERMINED BY SEISMIC DATA ANALYSIS PKG. (SDAP) PROGRAM. SPECTRA DETERMINED BY SPCJMP ANALYSIS PROGRAM. MOMENT MAGNITUDES DETERMINED USING MOMENT-MAG. RELATIONSHIP ADAPTED FROM BAKUN, W.H., 1984, SEISMIC MOMENTS, LOCAL MAGNITUDES, AND CODA DURATION MAGNITUDES FOR EARTHQUAKES IN CENTRAL CA, BULLETIN SEISMOLOGICAL SOC. OF AMER., V.74. FOCAL MAGNITUDE DETERMINED BY TRANSFORMING THE DIGITAL VELOCITY TIME-SERIES INTO A DISPLACEMENT TIME-SERIES FOR A STANDARD WOOD-ANDERSON SEISMOGRAPH AND SCALING THE MAXIMUM DISPLACEMENT AMPLITUDE PEAK GROUND MOTION PARAMETERS DETERMINED BY COMBINING HYPOCENTRAL DISTANCE, DENSITY, PEAK VELOCITY AND PEAK ACCELERATION | D N P |

ACQN/DEVL LOCATION : USGS, DENVER, CO

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| Activity - 8.3.1.17.4.3.1 | | | | |
| **GS900983117431.001 | DATA REPORT FOR THE 1985 SEISMIC REFRACTION EXPERIMENT AT YUCCA MOUNTAIN AND VICINITY, SOUTHWESTERN NEVADA, BY VICKIE D. SUTTON. ACQN/DEVL LOCATION : USGS | 02/01/85-12/31/85 | USGS STANDARD METHODS. | D N P |
| **GS900983117431.002 | RECONNAISSANCE SEISMIC REFRACTION STUDIES AT CALICO HILLS, WARMONIE, AND YUCCA MOUNTAIN, SOUTHWEST NEVADA TEST SITE, NYE COUNTY, NEVADA, BY LEE PANKRATZ. ACQN/DEVL LOCATION : USGS | 12/01/78-12/31/78 09/01/79-09/30/79 01/01/81-12/31/81 | REFRACTION SEISMIC EXPERIMENTS. | D N P |
| **GS900983117431.003 | DATA REPORT FOR THE 1983 SEIEMIC-REFRACTION EXPERIMENT AT YUCCA MOUNTAIN, BEATTY, AND VICINITY, SOUTHERN NEVADA, BY V.D. SUTTON. INCLUDES RECORD SECTIONS FROM THE TEN SHOTPOINTS, A LIST OF SEIEMOGRAPH LOCATIONS, A LIST OF SHOTPOINT LOCATIONS AND TIMES, DKDAT DATA FILES AND TAPE GRADE CODE AND A LIST OF FIRST-ARRIVAL TRAVEL TIME PICKS. ACQN/DEVL LOCATION : USGS | 06/01/83-12/31/83 | USGS STANDARD METHOD. | D N P |

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| Activity - 8.3.1.17.4.3.2 | | | | |
| *GS930208318512.001 | NEOTECTONICS AND VOLCANISM AT YUCCA MOUNTAIN AND VICINITY, NEVADA, BY K.F. FOX, JR., AND M.D. CARR. ACQN/DEVL LOCATION : USGS, DENVER, CO. USGS, MENLO PARK, CA | 06/28/87-06/28/88 | INTERPRETATIONS OF VOLCANISM, FAULTS, AND SEISMICITY IN THE YUCCA MOUNTAIN AREA. | D N P |
| *GS930283117432.002 | TECTONIC SETTING OF YUCCA MOUNTAIN, SOUTHWEST NEVADA, BY R.B. SCOTT ACQN/DEVL LOCATION : USGS, DENVER | 01/01/83-06/19/84 | INTERPRETATION OF TECTONIC DEVELOPMENT BASED ON DETAILED GEOLOGIC MAPPING AND RELATED INVESTIGATIONS. STANDARD METHODS FOR GEOLOGIC MAPPING AND RELATED STUDIES USED IN COLLECTION OF DATA. | D N P |
| *GS930283117452.001 | A FIELD TRIP GUIDE TO THE GEOLOGY OF BARE MOUNTAIN, BY M.D. CARR AND S.A. MONSEN. ACQN/DEVL LOCATION : USGS, MENLO PARK, CA | 01/01/87-11/18/87 | SUMMARIES AND INTERPRETATIONS OF PREVIOUSLY PUBLISHED DATA AND INFORMATION AND INTERPRETATIONS OF THE STRATIGRAPHY, STRUCTURAL GEOLOGY, AND FAULT CHARACTERISTICS OF THE BARE MOUNTAIN AREA. | D N P |

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| Activity - 8.3.1.17.4.4.1 | | | | |
| *GS930383117441.001 | INTERIM REPORT: A RECONNAISSANCE STUDY OF STRIKE-SLIP FAULTING NEAR YUCCA MOUNTAIN, NEVADA, BY D.W. O'LEARY | 01/01/92-09/30/92 | THOROUGH EVALUATION OF THE FAULT ZONES BASED ON NUMEROUS DETAILED FIELD OBSERVATIONS AND REVIEW OF PUBLISHED DATA OF LOCAL AND REGIONAL SCALE. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| Activity - 8.3.1.17.4.5.1 | | | | |
| *GS930283117451.001 | ISOSTATIC UPLIFT, CRUSTAL ATTENUATION, AND THE EVOLUTION OF AN EXTENSIONAL DETACHMENT SYSTEM IN SOUTHWESTERN NEVADA, BY R.B. SCOTT | 01/01/87-01/29/88 | INTERPRETATIONS OF A REGIONAL DETACHMENT SYSTEM IN SOUTHWESTERN NEVADA. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| Activity - 8.3.1.17.4.5.2 | | | | |
| *GS930283117452.001 | A FIELD TRIP GUIDE TO THE GEOLOGY OF BARE MOUNTAIN, BY M.D. CARR AND S.A. MONSEN. | 01/01/87-11/18/87 | SUMMARIES AND INTERPRETATIONS OF PREVIOUSLY PUBLISHED DATA AND INFORMATION AND INTERPRETATIONS OF THE STRATIGRAPHY, STRUCTURAL GEOLOGY, AND FAULT CHARACTERISTICS OF THE BARE MOUNTAIN AREA. | D N P |
| | ACQN/DEVL LOCATION : USGS, MENLO PARK, CA | | | |

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| Activity - 8.3.1.17.4.6.1 | | | | |
| *GS920783117461.002 | PHOTOGEOLOGIC AND KINEMATIC ANALYSIS OF LINEAMENTS AT YUCCA MOUNTAIN, NEVADA: IMPLICATIONS FOR STRIKE-SLIP FAULTING AND OROCLINAL BENDING, BY J.M. O'NEILL, J.W. WHITNEY, & M.R. HUDSON. ACQN/DEVL LOCATION : USGS, DENVER | 03/19/91-12/13/91 | PHOTOGEOLOGIC AND KINEMATIC ANALYSIS | D Y P |
| *GS930283117461.001 | PRELIMINARY GEOLOGIC MAP OF YUCCA MOUNTAIN, NYE COUNTY, NEVADA, WITH GEOLOGIC SECTIONS, SCALE 1:12,000, BY R.B. SCOTT AND J. BONK. ACQN/DEVL LOCATION : USGS, DENVER, CO | 01/01/88-12/31/89 | DETAILED GEOLOGIC MAP AND STRUCTURE SECTIONS BASED ON STANDARD USGS GEOLOGIC MAPPING PROCEDURES. | D N P |
| *GS930283117461.002 | GEOLOGY OF DRILL HOLE UE25P#1 (UE-25P #1): A TEST HOLE INTO PRE-TERTIARY ROCKS NEAR YUCCA MOUNTAIN, SOUTHERN NEVADA, BY M.D. CARR, S.J. WADDELL, G.S. VICK, J.M. STOCK, S.A. MONSEN, A.G. HARRIS, B.W. CORK, AND F.M. BYERS, JR. ACQN/DEVL LOCATION : USGS, MENLO PARK, CA | 05/24/83-03/12/86 | INTERPRETATIONS OF THE PRE-CENOZOIC STRATIGRAPHY AND CORRELATION WITH A SILURIAN SECTION AT BARE MTN., CENOZOIC STRATIGRAPHY AND PETROGRAPHY, STRUCTURAL GEOLOGY, LITHOLOGIC LOG, CONODONT FAUNAS, AND DESCRIPTION OF THIN SECTIONS FROM THE PALEOZOIC SECTION. | D N P |

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| Activity - 8.3.1.17.4.6.2 | | | |
| *GS930283117462.001 | PRELIMINARY TRENCH LOGS FOR TRENCHES T8 AND T8A ON SOLITARIO CANYON FAULT ZONE | 10/01/92-10/31/92 02/01/93-02/28/93 | TECHNICAL PROCEDURE GP-07,R1- CONVENTIONAL A Y P GEOLOGIC MAPPING OF TRENCH WALLS |
| ACQN/DEVL LOCATION : N749620(N) E555420(N) | | | |
| Activity - 8.3.1.17.4.7.2 | | | |
| *GS930283117472.001 | INTERPRETATION OF GRAVITY DATA IN A COMPLEX VOLCANO-TECTONIC SETTING, SOUTHWESTERN NEVADA, BY D.B. SNYDER AND W.J. CARR. | 01/01/83-06/17/83 | SUMMARIES AND INTERPRETATIONS BY THE PI OF D N P PREVIOUSLY PUBLISHED DATA AND INFORMATION INCLUDING: GEOLOGY, STRATIGRAPHY, ROCK DENSITIES (USING GAMMA-GAMMA DENSITY LOGS AND BOREHOLE GRAVITY MEASUREMENTS), STRUCTURE, VOLCANO-TECTONIC HISTORY, GRAVITY DATA (BOUGUER ANOMALIES REDUCED BY R.W. SALTUS METHOD), AND GRAVITY FIELDS. |
| ACQN/DEVL LOCATION : USGS, DENVER, CO USGS, MENLO PARK, CA | | | |
| *GS930383111742.002 | GRAVITY DATA FOR THE STATE OF NEVADA ON MAGNETIC TAPE, BY R.W. SALTUS. | 01/01/88-06/07/88 | THIS REPORT IS BASED UPON A COMPILATION OF D N P DATA NOT ACQUIRED BY THE YMP. THE FIRST 18 FILES OF THE TAPE CONTAIN PRINCIPAL FACTS FOR INDIVIDUAL DATA POINTS. EACH DATA RECORD CONTAINS GEOGRAPHIC POSITION, OBSERVED GRAVITY, TERRAIN CORRECTION, BOUGUER GRAVITY ANOMALY, AND ISOSTATIC RESIDUAL ANOMALY. |
| ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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| Activity - 8.3.1.17.4.7.5 | | | | |
| *GS930831117475.001 | TIME-DOMAIN ELECTROMAGNETIC SOUNDINGS AT THE NEVADA TEST SITE, NEVADA, BY F.C. FRISCHKNECHT AND P.V. RAAB. | 01/01/83-01/01/84 | DESCRIPTIONS OF WORK DONE NEAR YM TO DEVELOP AND DEMONSTRATE ELECTROMAGNETIC SOUNDING METHODS WHICH WOULD BE EFFECTIVE IN GEOLOGICALLY COMPLICATED REGIONS. EFFORTS FOCUSED ON SHORT-OFFSET (NEAR ZONE) TIME-DOMAIN ELECTROMAGNETIC (TDEM) TECHNIQUES IN WHICH THE RECEIVING LOOP IS INSIDE OR VERY NEAR THE TRANSMITTING LOOP. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |
| Activity - 8.3.1.17.4.7.8 | | | | |
| *GS930383117478.001 | PRELIMINARY RESULTS OF HIGH-RESOLUTION SEISMIC-REFLECTION SURVEYS CONDUCTED ACROSS THE BEATTY AND CRATER FLAT FAULT SCARPS, NEVADA, BY S.T. HARDING. | 01/01/85-08/20/85 | PRELIMINARY RESULTS AND INTERPRETATIONS OF THE HIGH-RESOLUTION SEISMIC-REFLECTION SURVEY ACROSS THE BEATTY AND CRATER FLAT FAULT SCARPS THAT USED THE MINI-SOSIE HIGH-SOLUTION SEISMIC-REFLECTION TECHNIQUE. | D N P |
| | ACQN/DEVL LOCATION : USGS, DENVER, CO | | | |

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| Activity - 8.3.1.17.4.8.1 | | | | |
| *GS930283117481.001 | STRESS FIELD AT YUCCA MOUNTAIN, BY J.M. STOCK AND J.H. HEALEY. | 01/01/85-10/21/85 | DESCRIPTIONS & INTERPRETATIONS OF DATA/INFO. INCLUDING STRESS MAGNITUDES, STRESS DIRECTIONS AND TOPOGRAPHIC EFFECTS ON STRESS LEVELS. METHOD IN HICKMAN, S.H. & M.D.ZOBACK, 1983, THE INTERPRETATION OF HYDRAULIC FRACTURING PRESSURE-TIME DATA FOR IN-SITU STRESS DETERMINATION, IN HYDRAULIC FRACTURING STRESS MEASUREMENTS, NAT'L ACADEMY PRESS, WASH.D.C., 44-54, USED TO DETERMINE STRESS MAGNITUDES. TEST PROCEDURES & EQUIPMENT SETUP IN 1) HEALY, J.H., & OTHERS, 1984, REPORT ON TELEVIEWER LOG AND STRESS MEASUREMENTS IN CORE HOLE USW-G1, NTS, DEC.13-22, 1981, USGS OFR 84-15; 2) STOCK, J.M., & OTHERS, 1984, REPORT ON TELEVIEWER LOG AND STRESS MEASUREMENTS IN CORE HOLE USW G-2, NTS, OCT-NOV.1982, USGS OFR 84-172; AND 3) STOCK, J.M., & OTHERS, 1986, REPORT ON TELEVIEWER LOG AND STRESS MEASUREMENTS IN HOLES USW G-3 AND UE-25P#1, YM, NYE CO., NV, USGS OFR 86-369. STRESS DIRECTION DETERMINED USING TELEVIEWER LOGS. | D N P |

ACQN/DEVL LOCATION : USGS, MENLO PARK, CA

SITE CHARACTERIZATION PLAN BASELINE - PROTOTYPE

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | T Q D U L I A O F L C I A T F T Y I I P E O E D N |
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| **GS90090123344G.001 | <p>TRIAxIAL-COMPRESSION EXTRACTION OF PORE WATER FROM UNSATURATED TUFF, YUCCA MOUNTAIN, NEVADA, BY I.C. YANG, A.K. TURNER, T.M. SAYRE AND PARVIZ MONTAZER</p> <p>ACQN/DEVL LOCATION : USGS</p> | 06/01/87-12/31/87 | THIS REPORT IS A DETAILED DESCRIPTION OF THE METHOD USED IN THIS STUDY. | D N P |
| *GS930201233124.001 | <p>WET AND DRY DRILLING DATA & LITHOLOGIC DATA FROM BOREHOLES DRILLED IN THE G-TUNNEL UNDERGROUND FACILITY (GTUF) AND G-TUNNEL</p> <p>ACQN/DEVL LOCATION : U12G DD-2 U12G WD2 U12G12 DD1 U12G12 WD1</p> | 11/14/88-12/20/88 | PROTOTYPE TESTING. | A N P |
| *SNL12011393001.001 | <p>SORPTION PROPERTIES OF WEDRON 510 SAND (DATA COLLECTION AND ANALYSES).</p> <p>ACQN/DEVL LOCATION : SNL</p> | 07/03/91-12/14/92 | <p>NICKEL SORPTION WAS MEASURED IN BATCH EXPERIMENTS AT SOLID:SOLUTION RATIOS OF APPROXIMATELY 1:1 OVER THE PH RANGE 5 TO 9.5. EXPERIMENTS WERE CARRIED OUT UNDER ATMOSPHERIC OR CARBON-DIOXIDE-FREE CONDITIONS IN 0.01 OR 0.001 M SODIUM-CHLORIDE IN 40 ML POLYCARBONATE (PC) OR PA CENTRIFUGE TUBES. BATCH STUDIES OF SORPTION OF LITHIUM & BROMIDE BY WEDRON 510 SAND IN 0.001 M SODIUM-CHLORIDE UNDER ATMOSPHERIC CONDITIONS WERE CARRIED OUT IN 40 ML PC CENTRIFUGE TUBES. AFTER ALLOWING SAMPLES TO PRE-EQUILIBRATE FOR SIX DAYS, THEY WERE ANALYZED FOR LITHIUM BY ATOMIC ADSORPTION & FOR BROMINE BY ION-SPECIFIC ELECTRODE. (FOR MORE DETAIL, SEE SAND93-0039C).</p> | A N C |

SITE CHARACTERIZATION PLAN BASELINE - PROTOTYPE

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| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD | |
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| *SNL12011393001.002 | SORPTION PROPERTIES OF WEDRON 510 SAND (NICKEL DATA AND ANALYSIS). | 10/21/91-12/23/92 | NICKEL SORPTION WAS MEASURED IN BATCH EXPERIMENTS AT SOLID:SOLUTION RATIOS OF APPROXIMATELY 1:1 OVER THE PH RANGE 5 TO 9.5. EXPERIMENTS WERE CARRIED OUT UNDER ATMOSPHERIC OR CARBON-DIOXIDE-FREE CONDITIONS IN 0.01 OR 0.001 M SODIUM-CHLORIDE IN 40ML POLYCARBONATE (PC) OR PA CENTRIFUGE TUBES. NICKEL CONCENTRATIONS WERE CALCULATED FROM ABSORBANCE DATA USING A QUADRATIC FIT TO THE CALIBRATION DATA. (SEE SAND 93-0039C, FOR MORE DETAIL) | D N C |

ACQN/DEVL LOCATION : SNL

SOCIOECONOMIC PLAN

| DATA TRACKING NO. | TITLE/DESCRIPTION | ACQN/DEVL PERIOD | ACQN/DEVL METHOD |
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| *TM00121361T1DB.002 | YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT SOCIOECONOMIC MONITORING PROGRAM QUARTERLY DATA REPORT, OCTOBER 1992 THROUGH DECEMBER 1992 ACQN/DEVL LOCATION : T&MSS | 10/01/92-12/31/92 | MONITORING OF YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT CHARACTERISTICS AS DESCRIBED IN REVISION 0 OF THE SOCIOECONOMIC PLAN |

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APPENDIX A

SITE CHARACTERIZATION PROGRAM BASELINE ACTIVITY NUMBERS AND NAMES

| <u>ACTIVITY NO.</u> | <u>ACTIVITY NAME</u> |
|---------------------|--|
| 8.3.1.2.1.1.1 | Precipitation and meteorological monitoring |
| 8.3.1.2.1.2.1 | Surface - water runoff monitoring |
| 8.3.1.2.1.2.2 | Transport of debris by severe runoff |
| 8.3.1.2.1.3.1 | Assessment of the regional hydrogeologic data needs in the saturated zones |
| 8.3.1.2.1.3.2 | Regional potentiometric-level distribution and hydrogeologic framework studies |
| 8.3.1.2.1.3.3 | Fortymile Wash recharge study |
| 8.3.1.2.1.3.4 | Evapotranspiration studies |
| 8.3.1.2.1.4.1 | Conceptualization of regional hydrologic flow models |
| 8.3.1.2.1.4.2 | Subregional two-dimensional area hydrologic modeling |
| 8.3.1.2.2.1.1 | Characterization of hydrological properties of surficial materials |
| 8.3.1.2.2.1.2 | Evaluation of natural infiltration |
| 8.3.1.2.2.3.1 | Matrix hydrologic properties testing |
| 8.3.1.2.2.3.2 | Site vertical borehole studies |
| 8.3.1.2.2.4.2 | Percolation tests in the Exploratory Studies Facility |
| 8.3.1.2.2.4.8 | Hydrochemistry tests in the Exploratory Studies Facility |
| 8.3.1.2.2.4.9 | Multipurpose-borehole testing |
| 8.3.1.2.2.6.1 | Gaseous-phase circulation study |
| 8.3.1.2.2.7.1 | Gaseous - phase chemical investigations |

| ACTIVITY NO. | ACTIVITY NAME |
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| 8.3.1.2.2.7.2 | Aqueous - phase chemical investigations |
| 8.3.1.2.2.8.1 | Development of conceptual and numerical models of fluid flow in unsaturated, fractured rock |
| 8.3.1.2.2.9.3 | Simulation of the natural hydrogeologic system |
| 8.3.1.2.3.1.2 | Site potentiometric-level evaluation |
| 8.3.1.2.3.1.3 | Analysis of single- and multiple-well hydraulic-stress tests |
| 8.3.1.2.3.1.4 | Multiple-well interference testing |
| 8.3.1.2.3.2.1 | Assessment of saturated-zone hydrochemical data availability and needs |
| 8.3.1.2.3.2.2 | Hydrochemical characterization of water in the upper part of the saturated zone |
| 8.3.1.2.3.2.3 | Regional hydrochemical characterization |
| 8.3.1.2.3.3.1 | Conceptualization of saturated-zone flow models within the boundaries of the accessible environment |
| 8.3.1.3.2.1.2 | Mineral distributions between the host rock and the accessible environment |
| 8.3.1.3.2.1.3 | Fracture mineralogy |
| 8.3.1.3.2.2.1 | History of mineralogic and geochemical alteration of Yucca Mountain |
| 8.3.1.3.2.2.2 | Assessment of the effects of igneous intrusions on water-table elevations |
| 8.3.1.3.2.3.2 | Smectite, zeolite, manganese minerals, glass dehydration, and transformation |
| 8.3.1.3.4.2 | Biological sorption and transport |
| 8.3.1.3.5.1.1 | Solubility measurements |
| 8.3.1.3.6.1.1 | Crushed tuff column experiments |

| <u>ACTIVITY NO.</u> | <u>ACTIVITY NAME</u> |
|---------------------|---|
| 8.3.1.3.6.2.1 | Uptake of radionuclides on rock beakers in a saturated system |
| 8.3.1.3.6.2.2 | Diffusion through a saturated tuff slab |
| 8.3.1.4.2.1.1 | Surface and subsurface stratigraphic studies of the host rock and surrounding units |
| 8.3.1.4.2.1.2 | Surface-based geophysical surveys |
| 8.3.1.4.2.1.3 | Borehole geophysical surveys |
| 8.3.1.4.2.1.5 | Magnetic properties and stratigraphic correlations |
| 8.3.1.4.2.1.6 | Integration of geophysical activities |
| 8.3.1.4.2.2.1 | Geologic mapping of zonal features in the Paintbrush Tuff |
| 8.3.1.4.2.2.2 | Surface - fracture network studies |
| 8.3.1.4.2.2.3 | Borehole evaluation of faults and fractures |
| 8.3.1.4.2.2.4 | Geologic mapping of the Exploratory Studies Facility |
| 8.3.1.4.2.2.5 | Seismic tomography/vertical seismic profiling |
| 8.3.1.4.2.3.1 | Development of a three-dimensional geologic model of the site area |
| 8.3.1.5.1.1.1 | Synoptic characterization of regional climate |
| 8.3.1.5.1.2.2 | Analysis of the stratigraphy-sedimentology of marsh lacustrine, and playa deposits |
| 8.3.1.5.1.3.1 | Analysis of pack rat middens |
| 8.3.1.5.1.3.3 | Determination of vegetation-climate relationships |
| 8.3.1.5.1.4.1 | Modeling of soil properties in the Yucca Mountain region |
| 8.3.1.5.1.4.2 | Surficial deposits mapping of the Yucca Mountain area |

| ACTIVITY NO. | ACTIVITY NAME |
|---------------------|---|
| 8.3.1.5.1.4.3 | Eolian history of the Yucca Mountain region |
| 8.3.1.5.2.1.1 | Regional paleoflood evaluation |
| 8.3.1.5.2.1.2 | Quaternary unsaturated zone hydrochemical analysis |
| 8.3.1.5.2.1.3 | Evaluation of past discharge areas |
| 8.3.1.5.2.1.4 | Analog recharge studies |
| 8.3.1.5.2.1.5 | Studies of calcite and opaline silica vein deposits |
| 8.3.1.6.1.1.1 | Development of a geomorphic map of Yucca Mountain |
| 8.3.1.6.1.1.2 | Analysis of the downcutting history of Fortymile Wash and its tributaries |
| 8.3.1.6.1.1.3 | An analysis of hillslope erosion at Yucca Mountain |
| 8.3.1.6.2.1.1 | Synthesis and data evaluation of impact of future climatic conditions on locations and rates of erosion |
| 8.3.1.6.3.1.1 | Synthesis and data evaluation of the impact of future uplift or subsidence and faulting on erosion at Yucca Mountain and vicinity |
| 8.3.1.8.5.1.2 | Geochronology studies |
| 8.3.1.8.5.1.3 | Field geologic studies |
| 8.3.1.8.5.2.3 | Heat flow at Yucca Mountain and evaluation of regional ambient heat flow and local heat flow anomalies |
| 8.3.1.9.2.2.1 | Projected trends in local and regional groundwater development, and estimated withdrawal rates in southern Nevada, proximal to Yucca Mountain |
| 8.3.1.12.2.1.1 | Site meteorological monitoring program |
| 8.3.1.14.2.1.1 | Site reconnaissance |
| 8.3.1.14.2.1.2 | Preliminary and detailed exploration |

| <u>ACTIVITY NO.</u> | <u>ACTIVITY NAME</u> |
|---------------------|---|
| 8.3.1.14.2.2.1 | Physical property and index laboratory tests |
| 8.3.1.14.2.2.2 | Mechanical and dynamic laboratory property tests |
| 8.3.1.14.2.3.1 | Physical property field tests and characterization measurements |
| 8.3.1.14.2.3.2 | Mechanical property field tests |
| 8.3.1.14.2.3.3 | Geophysical field measurements |
| 8.3.1.15.1.1.1 | Density and porosity characterization |
| 8.3.1.15.1.2.1 | Thermal expansion characterization |
| 8.3.1.15.1.3.1 | Compressive mechanical properties of intact rock at baseline experiment conditions |
| 8.3.1.15.1.3.2 | Effects of variable environmental conditions on mechanical properties |
| 8.3.1.15.1.4 | Laboratory determination of the mechanical properties of fractures |
| 8.3.1.15.1.7.1 | Plate loading tests |
| 8.3.1.15.2.1.2 | Overcore stress experiments in the exploratory studies facility |
| 8.3.1.15.2.2.1 | Surface-based evaluation of ambient thermal conditions |
| 8.3.1.16.1.1.1 | Site flood and debris hazards studies |
| 8.3.1.16.2.1.4 | Identification and evaluation of potential effects of repository related withdrawals on the local flow system at Yucca Mountain, Nevada |
| 8.3.1.17.2.1.2 | Assess the potential for displacement on faults that intersect underground facilities |
| 8.3.1.17.3.3.2 | Select or develop empirical models for ground motion from underground nuclear explosions |
| 8.3.1.17.3.5.1 | Identify controlling seismic events |

| <u>ACTIVITY NO.</u> | <u>ACTIVITY NAME</u> |
|---------------------|---|
| 8.3.1.17.4.1.1 | Compile historical earthquake record |
| 8.3.1.17.4.1.2 | Monitor current seismicity |
| 8.3.1.17.4.1.3 | Evaluate potential for induced seismicity at the site |
| 8.3.1.17.4.2.1 | Identify appropriate trench locations in Midway Valley |
| 8.3.1.17.4.3.1 | Conduct and evaluate deep geophysical surveys in an east-west transect crossing the Furnace Creek fault zone, Yucca Mountain, and the Walker Lane |
| 8.3.1.17.4.3.2 | Evaluate Quaternary faults within 100km of Yucca Mountain |
| 8.3.1.17.4.3.5 | Evaluate structural domains and characterize the Yucca Mountain region with respect to regional patterns of faults and fractures |
| 8.3.1.17.4.4.1 | Evaluate the Rock Valley fault system |
| 8.3.1.17.4.5.1 | Evaluate the significance of the Miocene-Paleozoic contact in the Calico Hills area to detachment faulting within the site area |
| 8.3.1.17.4.5.2 | Evaluate postulated detachment faults in the Beatty-Bare Mountain area |
| 8.3.1.17.4.6.1 | Evaluate Quaternary geology and potential Quaternary faults at Yucca Mountain |
| 8.3.1.17.4.6.2 | Evaluate age and recurrence of movement on suspected and known Quaternary faults |
| 8.3.1.17.4.7.1 | Evaluate intermediate depth (2 to 3 km) reflection and refraction methods and plan potential application of these methods within the site area |
| 8.3.1.17.4.7.2 | Detailed gravity survey of the site area |
| 8.3.1.17.4.7.3 | Detailed aeromagnetic survey of the site area |
| 8.3.1.17.4.7.5 | Evaluate surface geoelectric methods and plan potential application of these methods within the site area |

ACTIVITY NO.**ACTIVITY NAME**

- 8.3.1.17.4.7.8 Evaluate shallow seismic reflection (mimi-sosie) methods and, if appropriate, conduct surveys of selected structures at and proximal to the site area
- 8.3.1.17.4.8.1 Evaluate present stress field within site area
- 8.3.1.17.4.8.2 Evaluate and test shallow borehold hydrofrac and triaxial strain recovery methods for the determination of in situ stress and, if appropriate, plan potential application of these methods within and proximal to the site
- 8.3.1.17.4.9.1 Evaluate age and extent of tectonically stable areas at and near Yucca Mountain
- 8.3.1.17.4.10.3 Analyze existing releveled data, Yucca Mountain and vicinity
- 8.3.1.17.4.12.1 Evaluate tectonic processes and tectonic stability at the site
- 8.3.2.4.1.1 Design activity to verify access and drift usability
- 8.3.5.4.1.1 Refinement of site data parameters required for Issue 2.2
- 8.3.5.10.2.1 Characterization of the spent fuel waste form
- 8.3.5.10.2.2 Characterization of the glass waste form
- 8.3.5.10.3.2 Develop geochemical speciation and reaction model
- 8.3.5.10.5.2 Radionuclide transport modeling in the near-field waste package environment
- 8.3.5.12.1.1 Application of results
- 8.3.5.12.2.1 Model development
- 8.3.5.12.2.1.1 Development of a theoretical framework for calculational models
- 8.3.5.12.2.2 Verification and validation

APPENDIX B

GEOLOGIC AND ENGINEERING MATERIALS: BIBLIOGRAPHY OF CHEMICAL SPECIES (GEMBOCHS) SPECIES AND DATA TYPES

COMPOSITIONAL DATA FOR MINERALS, GASES, OR AQUEOUS SPECIES

Elemental Composition
Common Name

REACTION DATA FOR AQUEOUS DISSOCIATION OF MINERALS, GASES, OR AQUEOUS SPECIES

Reaction Stoichiometry
Equilibrium Constants
Pressure, Temperature Conditions
Standard Molal Gibbs Free Energies of Reaction
Standard Molal Enthalpies of Reaction
Standard Molal Entropies of Reaction
Standard Molal Volumes of Reaction
Standard Molal Heat Capacities of Reaction
Parameter Units
Literature References

THERMODYNAMIC DATA FOR MINERALS

Standard Molal Gibbs Free Energy of Formation
Standard Molal Enthalpy of Formation
Standard Molal Entropy at Reference Pressure (Pr) and Temperature (Tr)
Standard Molal Volume at Pr, Tr
Standard Molal Heat Capacity at Pr, Tr
Molecular Weight
Heat Capacity Coefficients
Temperature Limits on Heat Capacity Coefficients
Standard Molal Enthalpy of Transition
Standard Molal Entropy of Transition
Standard Molal Volume of Transition
Clapeyron Slope
Parameter Units
Literature References

THERMODYNAMIC DATA FOR GASES

Standard Molal Gibbs Free Energy of Formation
Standard Molal Enthalpy of Formation
Standard Molal Entropy at Pr, Tr
Standard Molal Volume at Pr, Tr
Standard Molal Heat Capacity at Pr, Tr
Molecular Weight
Heat Capacity Coefficients
Temperature Limits on Heat Capacity Coefficients
Parameter Units
Literature References

THERMODYNAMIC DATA FOR AQUEOUS SPECIES

Standard Molal Gibbs Free Energy of Formation
Standard Molal Enthalpy of Formation
Standard Molal Entropy at Pr, Tr
Standard Molal Volume at Pr, Tr
Standard Molal Heat Capacity at Pr, Tr
Molecular Weight
Equation-of-State Coefficients
Debye-Huckel Parameters
Ionic Charge
Electronic Entropy
Parameter Units
Literature References

APPENDIX C

GEMBOCHS MODIFICATIONS AND ADDITIONS: 1st QUARTER, 1993

No modifications or additions were incorporated during this quarter

APPENDIX D

**GEOGRAPHIC NODAL INFORMATION STUDY AND EVALUATION SYSTEM
(GENISES) DATA CATEGORIES, TYPES AND ITEMS**

| CATEGORY | TYPE | ITEM |
|----------------------------|--|--|
| Activities | Activity Level | Distribution of vehicle traffic in the Yucca Mountain area in FY91. |
| | Biologic | Location of raven survey observation and id. |
| | | Location of small mammal traplines in support of biological studies. |
| | Biological | Location data for biological study areas. |
| | Disturbances | Pads and other disturbances located by photo interpretation. |
| | Ecological Sampling | Location and id of ecological sampling plots. |
| Sampling type and period. | | |
| Existing Activities | Existing coordinate information for monitoring stations, drill holes, pits, and trenches. Information includes elevation, activity type, activity id, prime user, location, contractor, date began, date completed, depth, and source. | |

CATEGORY**TYPE****ITEM**

| | |
|--------------------|---|
| | Borehole runs, borehole bits, core loss, drilling rate, general location, general area, county, WBS, work order, study plan, status, source documents, hole histories, construction time breakdown, rigs uses and logging data. |
| Facilities | Central Support area buildings, streets, sidewalks, and support areas for the Field Operating Center (FOC). G-Tunnel id and elevation. Location, area, type, and name of the Exploratory Studies Facility. Ramp and drift subsurface access coordinates. |
| Geoelectric | Area and type of geoelectric surveys. Length, sounding locations, and type of traverse. |
| Geographic | Coordinate data for drillholes, pits, trenches, monitoring sites, and other surface/subsurface activities. Coordinates and elevation for benchmarks and survey reference points. Location coordinates for surface samples. |

| CATEGORY | TYPE | ITEM |
|-----------------|----------------------|---|
| | | Reported bottom coordinates for drillholes. |
| | Groundwater | Site id, elevation, and well depth for groundwater observation wells. |
| | Groundwater Recharge | Location, elevation, and station id for groundwater recharge monitoring stations. |
| | Proposed Activities | Proposed coordinate information for monitoring stations, drill holes, pits, and trenches. Information includes, activity type, activity id, prime user, location, and source. |
| | | Borehole diameter, study plan, WBS, core sample request, and activity study description. |
| | | Proposed scent station and routes. |
| | | Proposed transect with length and id. |
| | Resistivity | Location of sounding. |
| | Seismic | Length, id, shot point locations for seismic refraction studies. |
| | Transportation | Roads, trails, railroads, airfields, pipelines, and transmission lines. |
| Administrative | Demographic | Populated places, census tract, and census block. |
| | Geographic | Gazetteer for Nevada and California. |

| CATEGORY | TYPE | ITEM |
|-----------------|-----------------|--|
| | Land Ownership | Land status from map 1:100k. |
| | Land Withdrawal | BLM land withdraw areas. Includes boundaries, area, perimeters, and id. |
| | Mining Claims | Boundary, area, perimeter, and claim id. |
| | Political | Political and administrative boundaries. |
| | Public Land | Public Land Survey System. Township and range. |
| Biologic | Bats | Total captures of each bat species during mist-net sessions near Yucca Mountain. |
| | Habitat | Distribution of disturbances inventories by vegetation association. |
| | Invertebrates | Average number of invertebrates by taxonomic group captured per study plot in black-light traps for each vegetation. Total number of invertebrates by taxonomic group collected from pitfall traps per study plot. |
| | Predators | Summary of operable stations, visits by predators, and visitations rates. |

CATEGORY**TYPE****ITEM****Reptile**

Number of individual reptiles captured on three plots during two consecutive week trap sessions in 1991.

Small Mammals

Number of individual Merriam's kangaroo rats and long-tailed pocket mice captured on the radiological monitoring small mammal plots, December 1990- July 1991. Number of individuals collected is in parentheses.

Number of individual small mammals captured on ecological study plots from December 1990 to September 1991.

Surveys

Results of the FY91 reactivity surveys for Yucca Mountain Site Characterization Program activities. Includes number of requests, number of sites, area, distance, tortoise sign, important plants, important biological resources, recommended altering activity, and post activity survey done.

Tortoise

Biology id, study area, year, length, and presence of sign.

Date, type, and id of desert tortoise sightings.

| CATEGORY | TYPE | ITEM |
|-----------------|------------------|---|
| | Ungulates | Deer forage species collected in July 1991 for analysis of radionuclide levels. |
| | Vegetation | Vegetation data reported as percent plant cover. Data collected 1989-1991. |
| Climate | Paleoclimate | Fossil woodrat midden location, date, and ids. Paleoclimate temperature, precipitation, station id, and elevation. |
| | Precipitation | Maximum, minimum, and mean precipitation amounts at control and treatment environmental sampling plots for the four vegetation associations sampled between September 1990 to October 1991. |
| Geologic | Alluvium | Area of alluvium in the Yucca Mountain area. |
| | Bedrock | Area of bedrock in the Yucca Mountain area. |
| | Bulk Density | Bulk density values and test conditions. |
| | Bulk Modulus | Bulk modulus data and test conditions. |
| | Conductivity | Thermal conductivity data and test conditions. |
| | Core-Information | Core information, intervals and percent recovery. |
| | Elasticity | Elastic properties (Poisson's Ratio & Young's Modulus). |

| CATEGORY | TYPE | ITEM |
|---------------------|-------------------------|---|
| | Faults | Location certainty and fault movement. |
| | Fractures | Location and strike. |
| | Grain Density | Grain density values and test conditions. |
| | Lithologic | Lithologic unit depths in drillhole. At borehole lithology picks and fracture frequency. |
| | Matrix Potential | Matrix potential data and test conditions. |
| | Mineralogy | Mineralogical samples and test conditions. |
| | Paleomagnetic | Paleomagnetic data and test conditions. |
| | Seismic | Data source, date, time, location of event, focal depth, body-wave value, magnitude, intensity, diastrophism, codes to tsunami, seiche, volcanism, nontectonic, type of wave, surge wave value, Z or H component, and type of damage. |
| | Stratigraphic | Thermal/mechanical stratigraphic units. |
| | Tectonic Breccia | Location |
| | Velocity | Laboratory sonic velocity measurements. |
| Hydrographic | Conductivity | Hydraulic conductivity values. |

| CATEGORY | TYPE | ITEM |
|-----------------|------------------------|--|
| | | Relative hydraulic conductivity and test conditions. |
| | | Well test hydraulic conductivity measurements. |
| | Flood | Flood prone areas. Limits of inundation. |
| | Fluvial | Streams, and water bodies. |
| | Permeability | Permeability and test conditions. |
| | Pore Water | Natural-state porewater content percentages. |
| | Porosity | Porosity values and test conditions. |
| | Saturation | Pore saturation and test conditions. |
| | Spring Water Chemistry | Water chemical values for springs and non-drill hole wells. |
| | Transmissivity | Transmissivity data and pumping conditions. |
| | Water Chemistry | Water chemical constituent values for drillholes. |
| | Water Level | Water elevations and depths, dates of measurements. |
| | Water Production | Percent water production in drillhole intervals. |
| Physiographic | Elevation | Digital Elevation Model (DEM). Point elevation for southern Nevada and California. |

CATEGORY**TYPE****ITEM**

Orthophoto

Elevation contours
isoline values at 2, 10,
20, 40, 100, and 200 foot
intervals.

Aerial photography of the
Yucca Mountain area.

APPENDIX E

GENISES ADDITIONS: 1st QUARTER, 1993

| <u>DATA TRACKING NO.</u> | <u>DATA ITEM DESCRIPTION</u> |
|--------------------------|---|
| LA000000000031.001 | PRELIMINARY FRAN RIDGE WATER USE, JOB PACKAGE 92-7. THIS PRELIMINARY DATA INDICATES THE QUANTITY OF WATER USED AND ITS PURPOSE DURING FRAN RIDGE PIT MAPPING. |