

*Received. Mr. K. Hooks
Attn. 10/24/94*

SANDIA NATIONAL LABORATORIES

OQA AUDIT NO. YMP-92-09

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT

QUALITY ASSURANCE AUDIT PLAN

FOR AUDIT NO. YMP-92-09

OF

SANDIA NATIONAL LABORATORIES

ALBUQUERQUE, NEW MEXICO

FEBRUARY 11 THROUGH 13, 1992

Prepared by:

Neil D. Cox

Date: 12/19/91

Neil D. Cox
Audit Team Leader
Yucca Mountain Quality Assurance Division

Approved by:

D. G. Horton For

Date: 12/20/91

Donald G. Horton
Director
Office of Quality Assurance

ENCLOSURE

1.0 SCOPE

This audit will evaluate the Sandia National Laboratories (SNL) Quality Assurance (QA) Program to determine whether it meets the requirements and commitments imposed by the Office of Civilian Radioactive Waste Management. This will be done by verifying implementation and effectiveness of the system in place, as well as verifying compliance with requirements.

A representative sample of discrepancies identified during previous audits and surveillances of SNL will be included in the scope of this audit to determine the effectiveness of SNL corrective actions. The status of corrective action implementation concerning open Corrective Action Requests will also be reviewed.

The programmatic elements and technical areas to be audited, as well as those programmatic elements not included in this audit, are identified in Section 4.0 of this plan.

2.0 AUDIT SCHEDULE

Pre-Audit Team/Observers Meeting	8:30 a.m., February 11, 1992, Albuquerque, New Mexico
Pre-Audit Conference	9:00 a.m., February 11, 1992, Albuquerque, New Mexico
Audit Activities	10:00 a.m. to 4:00 p.m., February 11, 1992
Audit Activities	8:30 a.m. to 4:00 p.m., February 12, 1992
Audit Activities	8:30 a.m. to 11:00 a.m., February 13, 1992
Post-Audit Conference	1:00 p.m., February 13, 1992 Albuquerque, New Mexico

There will be daily audit team/observer meetings starting at 4:15 p.m. and daily audit team/observer/SNL meetings starting at 8:00 a.m. to discuss potential deficiencies and establish needed liaison.

3.0 REQUIREMENTS TO BE AUDITED AND APPLICABLE REFERENCES

The requirements to be audited will be contained in the pre-approved programmatic checklists. These checklists will be developed from the latest available revision of the following documents:

- o SNL QA Program Description and implementing procedures
- o Yucca Mountain Site Characterization Project Office Administrative Procedures-Quality
- o Quality Assurance Grading Reports for Sandia National Laboratories, Volumes 1, 2, and 3, Revision 15, YMP/90-79, June 11, 1991

The conduct of the audit will be guided by the documents listed below:

- o Quality Assurance Administrative Procedure QAAP 18.2, Revision 4, "Audit Program"
- o QAAP 16.1, Revision 3, "Corrective Action Requests"
- o Yucca Mountain Site Characterization Project Audit Observer Inquiry
- o Policy for Participation of State, Tribal and U.S. Nuclear Regulatory Commission Representatives as Observers on U.S. Department of Energy Audits, dated July 14, 1987

4.0 ACTIVITIES TO BE AUDITED

Programmatic Elements:

- 1.0 Organization
- 2.0 Quality Assurance Program
- 15.0 Control of Nonconformances
- 16.0 Corrective Action
- 18.0 Audits

The following programmatic element was considered during development of this audit scope and determined to be not applicable since SNL has no activities for which this element applies:

- 11.0 Test Control

Other programmatic elements will be covered in subsequent audits during the Fiscal Year 1992.

Technical Areas

NONE

If the audit team identifies a need to verify additional programmatic areas during the audit, they will be added to the audit checklist(s) and verified accordingly.

5.0 AUDIT TEAM MEMBERS

Neil D. Cox--Audit Team Leader, Science Applications International Corporation
(SAIC)/Yucca Mountain Quality Assurance Division (YMQAD), Las Vegas, Nevada
James Blaylock--Auditor, U.S. Department of Energy/YMQAD, Las Vegas, Nevada
Kenneth T. McFall--Auditor, SAIC/YMQAD, Las Vegas, Nevada

Dynamic Matrix

SANDIA NATIONAL LABORATORIES
NUCLEAR WASTE REPOSITORY TECHNOLOGY DEPARTMENT
QUALITY ASSURANCE PROGRAM DESCRIPTION

PREPARED:

[Signature]
R. R. RICHARDS, SUPERVISOR
QUALITY ASSURANCE DIVISION SUPERVISOR

DATE:

7-15-91

APPROVED:

Thomas E. Blejwas
for THOMAS E. BLEJWAS, ACTING DEPARTMENT MANAGER
SNL TECHNICAL PROJECT OFFICER (TPO)

DATE:

7/15/91

EFFECTIVE DATE:

7/29/91

SNL DEPARTMENT 6310
CONTROLLED DOCUMENT
(If Numbered in Red Ink)

Copy Number: 000041

INTRODUCTION

This document serves as the Quality Assurance Program Description (QAPD) document for the Yucca Mountain Site Characterization Project (YMP) activities performed by the Sandia National Laboratories (SNL) Nuclear Waste Repository Technology (NWRT) Department. The U.S. Department of Energy (DOE) Quality Assurance Requirements Document (QARD), DOE/RW-0214 issued by the DOE Office of Civilian Radioactive Waste Management (OCRWM), defines the Quality Assurance requirements governing activities affecting quality for the YMP.

Sections 1.0 through 20.0 of this QAPD describe and state the commitment by SNL to meet QARD requirements applicable to SNL's YMP activities. Section 1.0 describes the SNL NWRT Department organization. Section 2.0 describes the SNL Quality Assurance Program, identifies applicable QARD requirements, and explains exceptions or clarifications thereto. Sections 3.0 through 20.0 identify applicable QARD requirements and explain exceptions or clarifications thereto for each section. Appendix A contains a flow chart of Quality Assurance documents.

All of the SNL NWRT Department work is a set of processes;

(design-related activities, analysis, data-collection, etc.)

which require some input:

(performance objectives, design bases, data, samples, personnel, measurement equipment, etc.)

and produce outputs or products

(design requirements report, performance assessment predictions, parameter values, etc.).

The SNL approach to achieving and assuring quality calls for exercising appropriate controls on the process and its inputs and outputs. The effectiveness of these controls is monitored and feedback occurs in order that input and process controls have optimum effect.

As stated in each section of this QAPD, SNL will follow the requirements of the OCRWM QARD and implement those requirements through our implementing procedures. To help ensure that, SNL uses a computer product (matrix) to link each QARD requirement to the actual procedure text which satisfies that requirement. The Quality Assurance implementing procedures that prescribe the implementation of this QAPD are listed in the SNL Master List of Controlled Documents.

This QAPD supersedes the SNL NWRT Quality Assurance Program Plan (QAPP), Rev
E.

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1.3 SNL NWRT Department Organization

The NWRT Department consists of line divisions and a Quality Assurance Division. The organizational structure, lines of communication, authority and duties of persons and organizations performing activities affecting quality are established and delineated in SNL Quality Assurance implementing procedures. These activities include both the performing functions of achieving quality objectives as well as the verification functions. Each person in the Department is responsible for the achievement of quality in the work the person performs.

1.4 Application

The provisions of the QARD Section 1 are applied in the SNL Quality Assurance Program. The list of the SNL implementing procedures is the SNL Master List of Controlled Documents.

2.0

QUALITY ASSURANCE PROGRAM

2.1 General

The provisions of QARD Section 2 are applied with the following exception.

SNL's scope of work does not include engineered items. Therefore the QARD requirements for inspections and test activities to verify conformance of such items to specified requirements for the purpose of acceptance and to demonstrate that such items will perform satisfactorily in service are not applicable. For the same reason, NQA-1, Supplement 2S-1 and Appendix 2A-1 are not applicable in any situation, including receipt inspection. Similarly, since the SNL scope of work does not include engineered items, NQA-1 Supplement 2S-2 does not apply.

25-3
25-4
24-3

2.2 Quality Assurance Program Controls

Quality Assurance controls are applied to items and activities affecting quality. The Quality Assurance Program is implemented by management, line, and Quality Assurance personnel within SNL and by each supporting organization. Line personnel are responsible for achieving the specified level of quality. The Department Manager and Division Supervisors review Quality Assurance Program status and line performance to determine acceptability of product quality, programmatic compliance and implementation effectiveness, and to resolve quality problems. Division Supervisors ensure that specified quality is achieved by using appropriate management controls.

Quality Assurance controls over items and activities affecting quality are established jointly by line and Quality Assurance personnel and described in appropriate documents. The controls are executed by line and Quality Assurance personnel.

Direction and overview of the quality affecting activities of supporting organizations is achieved by establishing Quality Assurance Program requirements; specifying these requirements through controlled documents, including procurement documents; and performing overview activities, such as reviews, audits, and surveillances.

6.0

DOCUMENT CONTROL

The provisions of QARD Section 6 paragraph 6.0 and Appendix A, paragraph 6.0 are applied by SNL for the control of documents. Controlled documents generated by SNL are issued by SNL. Controlled documents generated by the YMP office (e.g., Administrative Procedures) are issued by the YMP office.

7.0

CONTROL OF PURCHASED ITEMS AND SERVICES

The provisions of QARD Section 7 paragraph 7.0 and the amplifications of QARD paragraphs 7.1 through 7.3 are applied by SNL for the control of purchased items and services with the following exceptions.

- It is recognized that some of the research and analysis required for site characterization requires the services of specialists, or of institutions or agencies whose work does not ordinarily involve formal Quality Assurance activities. In these instances, selection is based on technical capability and the establishment of Quality Assurance requirements appropriate to the services, including the performance of verifications and overview activities by SNL Quality Assurance personnel.
- Concerning NQA-1, Supplement 7S-1, paragraph 3.1: Although requesters of purchased items and services at SNL influence source selection by suggesting sources, the evaluation of and final selection of the set of sources to be solicited for a particular procurement is the function of the SNL Purchasing Organization. SNL NWRT Quality Assurance personnel are involved in the evaluation and selection of suppliers relative to their quality capability. While SNL Purchasing utilizes selection measures as described in the subject paragraph (as well as other measures) for the more minor purchases, the documentation of all evaluations and selections is maintained by and available from the SNL Purchasing Organization.
- Concerning NQA-1, Supplement 7S-1, paragraph 10: These provisions apply to all commercial grade items within the scope of this QAPD, not only those "utilized by the design". Therefore subparagraph (a) is not applicable.

8.0 IDENTIFICATION & CONTROL OF MATERIALS, PARTS, COMPONENTS & SAMPLES

The provisions of QARD Section 8, concerning the control of materials, parts, and components, are associated with engineered items, which are not in the SNL scope of work, so are not applicable. However, provisions of QARD, Appendix A, paragraph 8.0 are applied for identification and control of samples used in scientific investigations.

17.0

QUALITY ASSURANCE RECORDS

The provisions of QARD Section 17 are applied with the following clarification.

- Concerning NQA-1, Supplement 17S-1, SNL Quality Assurance records are classified as Lifetime only at the direction of OCRWM. Storage of records by SNL is temporary (as this term is used in NQA-1, supplement 17S-1), pending turnover to the YMP Office Central Records Facility.

18.0

AUDITS

The provisions of QARD Section 18 are applied with the following clarification.

- SNL will not perform audits of other YMP participating organizations when those organizations provide items or services to SNL as specified in interface documents or job packages, as that audit function will be retained by the YMP Office. Participating organizations are:
 - Government agencies external to DOE (e.g., USGS),
 - National Laboratories (e.g., LANL), and
 - Contractor organizations participating directly under the YMP Office (e.g., Raytheon Services Nevada).

19.0

COMPUTER SOFTWARE

The provisions of QARD Section 19 and Appendix A, paragraph 19.0, are applicable.

20.0

SCIENTIFIC INVESTIGATIONS

The provisions of QARD Appendix A, paragraph 20 are applied for control of scientific investigation activities.

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MASTER LIST OF ACTIVE CONTROLLED DOCUMENTS
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DOCUMENT ID	REV	ICN	DOCUMENT TITLE	EFFECTIVE DATE	PAGES	AUTHOR
DIM -020	B		Special Studies on Radionuclide Plate-out, Dry Deposition, and Fuel Dust	05/25/88	4	Hill, R. R.
DIM -021	A		An Analysis of Scenarios and Potential Radiological Releases Consequences Associated with US Military Aircraft Crashes for the Yucca Mountain Repository	08/18/87	4	Hill, R. R.
DIM -027	00		Evaluation of the Effects on the Tuff Repository Surface Facilities for the Revised DOE Mission Plan Schedule	06/06/87	3	Subramanian, C. V.
DIM -029	0		Ventilation System Investigation and Design Bases	06/06/87	4	Hill, R. R.
DIM -031	01		Contamination Control Study	07/31/87	4	Dennis, A. W.
DIM -033	0		Document Preparation Support for FY87 Operational Studies Report, SAND87-0088	01/21/88	3	Hill, R. R.
DIM -035	A		Repository Design Requirements (RDR)	06/07/88	4	Hill, R. R.
DIM -037	D		Aircraft Crash Consequences Analyses: Part 2	12/22/88	5	Hill, R. R.
DIM -040	C		Source Terms Data Base and Uncertainty Methods Development and Evaluations	06/23/89	5	Hill, R. R.
DIM -041	01		Seismic Cost Benefit Sensitivity Study	10/25/88	8	Subramanian, C. V.
DIM -042	0		Thermal Consequence of Forced Ventilation System Loss	09/30/88	4	Hill, R. R.
DIM -043	B		MRS System Studies	09/14/89	4	Dennis, A. W.
DIM -044	0		Waste Handling Building - Subsystem Design Studies	08/19/88	5	Hill, R. R.
DIM -045	00		Preliminary Analysis of Shielding Requirements for Waste Handling Building Hot Cell Walls	08/10/88	4	O'Brien

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DOCUMENT ID	REV	ICN	DOCUMENT TITLE	EFFECTIVE DATE	PAGES	AUTHOR
DIM -046	0		Allowable Stress Levels and Load Combinations for FITS and Non-FITS	09/23/88	4	Hill, R. R.
DIM -047	0		Seismic Design Analysis Methodology for FITS and non-FITS and Methods for Evaluating Seismic Design Margins	09/23/88	4	Hill, R. R.
DIM -048	0		Material Specifications for use in the Surface Facilities	10/14/88	4	Hill, R. R.
DIM -049	0		Design of Seismic Joints	10/14/88	4	Hill, R. R.
DIM -050	0		Effects of Various Radiation Source Characteristics on Shielding Requirements	09/23/88	5	Hill, R. R.
DIM -051	A		Establish Physical Characteristics of Waste Handling Equipment	04/05/89	6	Hill, R. R.
DIM -052	0		Shipping Cask Decontamination and Maintenance Facility	10/14/88	4	Hill, R. R.
DIM -053	0		Repository Criticality Safety Study	11/08/88	9	Hill, R. R.
DIM -054	B		MRS Case 2 and 5 Design Development	09/15/89	7	Hill, R. R.
DIM -055	0		Passive Ventilation - Surface Storage Vault Module	12/22/88	4	Hill, R. R.
DIM -056	0		Exploratory Shaft Facilities - Items Important to Safety	01/16/89	3	Hill, R. R.
DIM -057	0		Fault Displacement Analysis Methodology for the Surface Structures of the Yucca Mountain Repository	03/07/89	4	Hill, R. R.
DIM -058	0		Uniform Cost Estimating Model Support Costpro Evaluation	02/14/89	4	Hill, R. R.
DIM -059	0		Summary of BNI Studies and Reports	04/05/89	4	Hill, R. R.

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DOCUMENT ID	REV	ICN	DOCUMENT TITLE	EFFECTIVE DATE	PAGES	AUTHOR
DIM -060	0		Repository Items Important to Safety	08/18/89	5	Klamerus, L. J.
DIM -102	E		Waste Emplacement Orientation Study	09/14/89	5	Wavrik, R. W.
DIM -130	C		Alternatives for Underground Design	09/14/89	5	Wavrik, R. W.
DIM -131	A		Seismic Design Criteria	05/26/88	4	Stinebaugh, R. E.
DIM -132	B		Seals Integration	09/14/89	4	Wavrik, R. W.
DIM -133	B		Review of Preliminary Drift Design Methodology	10/25/88	4	Stinebaugh, R. E.
DIM -134	C		Criteria for Usable/Required Underground Area	09/15/89	4	Hertel, E. S.
DIM -135	C		Design and Review Support for the ESF	09/15/89	4	Wavrik, R. W.
DIM -136	A		ESF/Repository Interface Working Group (ICWG)	05/26/88	3	Stinebaugh, R. E.
DIM -137	A		Performance Conformation	05/26/88	4	Stinebaugh, R. E.
DIM -138	A		Cost and Schedule	05/26/88	4	Stinebaugh, R. E.
DIM -139	A		Waste Emplacement Geometry	05/26/88	4	Stinebaugh, R. E.
DIM -140	B		Retrieval Strategy	09/14/88	4	Stinebaugh, R. E.
DIM -142	B		Review of the Underground Layout	09/14/88	4	Stinebaugh, R. E.
DIM -143	A		Document Preparation and Support for FY87 Operational Report -- SAND87-0088	05/26/88	4	Stinebaugh, R. E.
DIM -144	A		Repository Design Requirements (RDR)	06/13/88	4	Stinebaugh, R. E.
DIM -146	B		Ventilation System Analysis, Design, and Design Review	06/12/89	4	Stinebaugh, R. E.
DIM -147	B		Case History Evaluations	08/22/88	4	Stinebaugh, R. E.

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DIM -148	C		Empirical Analyses of Opening Stability	06/30/89	6	Finley, R. E.
DIM -149	B		Shaft Analysis	02/01/89	6	Stinebaugh, R. E.
DIM -151	A		MRS System Studies	11/14/88	4	Stinebaugh, R. E.
DIM -152	0		Scoping and Preliminary Studies to Support the Yucca Mountain Project	05/18/89	4	Stinebaugh, R. E.
DIM -154	0		An Evaluation of the Available Technologies for Sealing Underground Openings, Shafts and Ramps	06/16/89	34	Fernandez, J. A.
DIM -155	0		Repository Items Important to Safety	10/06/89	4	Wavrik, R. W.
DIM -156	0		Alternatives for Access and Subsurface Designs	12/07/89	4	Wavrik, R. W.
DIM -158	00		Subsystem Design Requirements Document (SDRD) Support	04/10/90	7	Morales, A. R.
DIM -202	0		Design (and associated design modifica- tion) of development prototype boring machine (DPBM)	03/26/87	18	Glowka, D. A.
DIM -203	0		Conceptual Design of Off-Normal Retrieval Equipment	03/26/87	7	Glowka, D. A.
DIM -204	0		Conceptual Design of Emplacement/ Retrieval (E/R) System	03/31/87	13	Glowka, D. A.
DIM -205	C		Waste Emplacement Orientation Recommendation	09/15/89	5	Wavrik, R. W.
DIM -206	0		Radiological Conditions Underground	10/11/88	3	Dennis, A. W.
DIM -208	0		Support of Underground Service System Design	11/08/88	5	Stinebaugh, R. E.
DIM -209	0		Support of Systems Engineering for Repository Design Requirements (RDR)	01/18/89	4	Hill, R. R.

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DIM -212	0		MRS Systems Studies	11/30/88	5	Dennis, A. W.
DIM -213	0		Shaft and Ramp Design Support	11/08/88	5	Stinebaugh, R. E.
DIM -214	0		Evaluate Truck-Rail Ratio Impact on Repository Design	10/22/88	5	Dennis, A. W.
DIM -215	0		Support and Review of Underground Excavation Design	11/08/88	5	Stinebaugh, R. E.
DIM -216	A		Preparation of Miscellaneous Documents	01/31/89	3	Dennis, A. W.
DIM -217	0		Waste Emplacement Orientation Recommendation	11/08/88	5	Wavrik, R. W.
DIM -218	0		Life Cycle Plan for a Simulation System to Model Repository Systems	02/08/89	5	Dennis, A. W.
DIM -219	0		Development of a Simulation System to Model Repository Operations	02/16/89	6	Dennis, A. W.
DIM -220	B		Records Compilation for SAND84-1895	01/18/89	3	Dennis, A. W.
DIM -221	B		Records Compilation for SAND85-0598	01/18/89	3	Dennis, A. W.
DIM -223	0		SCP Progress Reports	12/22/88	4	Dennis, A. W.
DIM -224	0		SCP Completion Activities	12/21/88	4	Dennis, A. W.
DIM -232	0		Assist in Preparation of the ESF Title I Design Report	01/20/89	3	Dennis, A. W.
DIM -234	0		Position Paper on Retrievability	02/03/89	3	Dennis, A. W.
DIM -235	0		Position Paper on the Disturbed Zone	02/13/89	3	Dennis, A. W.
DIM -236	0		Records Management Support	01/31/89	3	Sharpton, S. E.
DIM -237	0		Technical Support for the MGDS -- Transportation System Interface Committee	03/29/89	7	Hill, R. R.

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DOCUMENT ID	REV	ICN	DOCUMENT TITLE	EFFECTIVE DATE	PAGES	AUTHOR
DIM -238	0		Preliminary Drift Design Methodology for the Yucca Mountain Project	06/24/89	3	Bauer, S. J.
DIM -239	01		Development of a Strategy for Sealing Exploratory Boreholes	04/03/91	11	Fernandez, J. A.
DIM -240	A		Development of a Decision Methodology for the ESF Alternatives Study	04/13/90	8	Costin, L. S.
DIM -241	0		Selecton of Evaluation Panel Members	02/19/90	3	Bauer, S. J.
DIM -242	A		Development of Preliminary Screening Criteria and Method for the ESF Alternative Study	03/26/90	6	Costin, L. S.
DIM -243	B		Identification of Repository Access and ESF Options	03/25/91	10	Gruer, E. R.
DIM -244	B		Identification of Repository and ESF Design Performance and Construction Requirements	07/11/90	17	Parsons, M. W.
DIM -245	A		Development of Influence Diagrams and Performance Measures for the ESF Alternatives Study	04/16/90	4	Costin, L. S.
DIM -246	0		Exploratory Shaft Facility (ESF) Alter- natives Evaluation Study - Task 7 Subtask - Testing	03/29/90	5	Milligan, J. C.
DIM -247	01		ESF Design Requirements (ESFDR) Support	02/26/91	13	Morales, A. R.
DIM -249	A		ESF Alternatives Study Task 1. Plan Management	09/19/90	4	Dennis, A. W.
DIM -251	00		Evaluation of Repository/ESF - Feature Performance Discriminators	04/26/90	6	Blejwas, T. E.
DIM -252	00		Application of Management and Policy- Based Judgements to the ESF Alternative Study	04/19/90	4	Costin, L. S.

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DIM -253	00		Investigation of Impacts Construction Method on Geologic Mapping of Shafts and Drifts for the ESF Alternatives Study	05/03/90	4	Hansen, F. D.
DIM -254	A		Scoring of Options for the ESF Alternatives Study	09/25/90	8	Bauer, S. J.
DIM -256	00		Assessment of the Potential Effects of Creep Deformation of the Tuffs upon the Exploratory Shaft Liner	03/25/91	4	Bauer, S. J.
DIM -257	00		Assessment of the Potential Extent of Fracturing for the Pad, Collar, and Shaft for the Exploratory Shaft Facility	03/25/91	4	Bauer, S. J.
DIM -258	00		Rock Mass Strength Criterion Assessment	04/05/91	4	Bauer, S. J.
DIM -259	00		Preliminary Siting Report Evaluations	04/25/91	4	Fewell, M. E.
DIM -260	00		Rock Mass Property Assessment - I Fracture Analysis	10/18/91	4	Bauer, S. J.
DIM -261	00		Rock Mass Property Assessment - II Rock Mass Modulus, Strength, Etc.	10/24/91	4	Bauer, S. J.

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		02		09/28/90	2	Foreman, C. E.
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DOP 02-04	A		Analysis Control and Verification	01/27/89	21	Prindle, R. W.
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DOP 02-09	A		Preparedness Review	07/11/89	6	Richards, R. R.
		01		02/20/91	1	Hotchkiss, A. P.
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DOP 03-01	E		Preparing, Reviewing, Approving, and Issuing Engineering Drawings	04/20/90	12	Hill, R. R.
		01		09/07/90	1	Finley, R. E.
DOP 03-03	C		Analysis Definition Requirements	07/11/89	9	Bauer, S. J.
		01		10/13/89	1	Bauer, S. J.
		02		06/25/91	1	Bauer, S. J.
DOP 03-05	B		Design Control and Verification	07/31/89	17	Hill, R. R.
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DOP 03-06	C		Design Change Control	07/17/89	8	Hill, R. R.
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DOP 03-07	B		Technical Data Base	07/20/89	13	Krebs-Jespersen, M.
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		02		03/23/90	2	Gonzales, M. M.
		03		02/07/92	2	Jones, M. L.
DOP 03-08	C		Reference Information Base Change Process	08/10/89	14	Schelling, F. J.
DOP 03-09	D		Interface Control of NWRT Engineering	03/23/90	4	Hill, R. R.
DOP 03-10	B		Routine Calculations	05/04/90	7	Nimick, F. B.
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DOP 03-12	A		Peer Reviews	04/18/89	15	Baehr, R. M.
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DOP 03-13	C		Independent Technical and Management Reviews of Documents	01/19/90	15	Klamerus, L. J.
		01		08/19/91	2	Klamerus, L. J.
DOP 03-16	A		Interface Interactions	06/07/89	20	Morales, A. R.
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DOP 03-17	O		Preparing Technical Information Documents	08/14/89	4	Shephard, L. E.
		01		10/13/89	1	Shephard, L. E.
DOP 06-01	D		Document Control System	05/08/90	12	Sharpton, S. E.
		01		08/20/90	1	Edmund, S. A.
		02		07/23/91	2	Hotchkiss, A. P.
DOP 08-02	C		Operation of the SNL NWRT Department Samples Library	01/05/90	7	Nimick, F. B.
		01		09/11/90	1	Nimick, F. B.
DOP 11-02	D		Requirements for Experiment and Equipment-Test Logbooks	03/01/90	6	Price, R. H.
DOP 13-01	D		Identification, Handling, Shipping, and Storage of Items	04/23/90	8	Sifre-Soto, C.
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DOP 17-01	C		Records Management System	08/14/89	38	Sharpton, S. E.
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		02		09/07/90	6	Hotchkiss, A. P.
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EP -0002	D		Effects on Variable Environmental Conditions on Compressive Mechanical Properties - High Temperature/Low Strain Rate Experiments	09/14/90	21	Price, R. H.
EP -0007	C		Characterization of the Mineralogy and Petrology of Mechanical Test Samples	05/23/90	35	Nimick, F. B.
EP -0008	0		Procedure for Saturation-Pulse Imbibition Experiment	06/04/87	7	Klavetter, E. A.
EP -0010	0		Bulk Property Measurements on Posttest Mechanical Samples	05/13/88	6	Schwartz, B. M.
EP -0011	0		Prototype Testing of Blast Effects on Instrumentation in Support of Exploratory Shaft Hydrologic Testing	05/25/89	26	Luke, B. A.
EP -0012	B		Alteration of the Consolidation Behavior and Hydraulic Conductivity of Crushed Tuff Due to the Presence of Fine-Sized Particles	10/10/88	121	Fernandez, J. A.
EP -0013	0		Detailed Test Plan for Prototype In-Situ Stress Testing	01/15/88	29	Finley, R. E.
EP -0014	0		Development of Tensile Strength Techniques in the Geomechanics Laboratory	01/25/88	6	Price, R. H.
EP -0015	0		Preliminary Investigation of the Mechanical Anisotropy in Samples of the Topopah Spring Member	02/26/88	5	Price, R. H.
EP -0016	0		Fracture Properties Testing: Comparison of Triaxial and Rotary Shear Techniques	02/26/88	5	Price, R. H.

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EP -0025	0		Preliminary Investigation of the Effects of Partial Saturation on the Mechanical Behavior of Tuff	03/28/89	5	Nimick, F. B.
EP -0027	0		Developmental Ground Penetrating Radar Survey Testing.	04/27/89	3	Gibson, J. D.
EP -0029	00		Development of Procedures for Large- Block Tests and Evaluation of Analysis Techniques	12/19/89	10	Hansen, F. D.
EP -0031	0		Unsaturated Flow and Transport Experiment	02/15/90	13	Glass, R. J.
EP -0032	0		Simulated Fracture Unsaturated Flow Experiment	04/30/90	8	Russo, A. J.
EP -0036	00		Field Research Program for Unsaturated Flow and Transport Experimentation	09/28/90	15	Tidwell, V. C.
EP -0037	00		Linear Cutting Tests and Supporting Mechanical Properties Tests on Tuff	08/24/90	25	Ozdemir, L.
EP -0038	00		Experiment Procedures for Acquiring, Digitizing, Processing, Storing and Retrieving Ground Motion Data from Underground Nuclear Explosions	10/24/90	26	Phillips, J. S.
EP -0039	01		Geologic Trench Mapping in Midway Valley	07/05/91	28	Gibson, J. D.
EP -0040	00		Laboratory-Scale Excavator Tests for Performance Validation and Geologic Mappability Assessment in Welded Tuff	06/07/91	24	Gertsch, Ozdemir
EP -0041	00		Saturation Effects on Thermal Conductivity	07/01/91	6	Davis, A. C.
EP -0044	00		Normal Compression and Shear Tests on Rock Joints	03/11/91	26	Hansen, F. D.

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EP -0045	00		Profilometer Measurements on Joint Surfaces	03/11/91	17	Hansen, F. D.

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ESIP	01		Exploratory Shaft Facility Alternatives Study Implementation Plan	12/20/90	27	Blejwas, T. E.

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GQAI 07-01	00		Geomatrix Quality Assurance Implementing Procedure - Planning, Documentation, and Evaluation of Procurement	11/20/90	10	Wesling, J. R.

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HQAP 07-01	0		Planning, Documentation, and Evaluation of Procurements	01/19/90	11	Soos, T.
HQAP 13-01	0		Identification, Handling, Shipping, and Storage of Items (Holometrix)	01/19/90	5	Soos, T.

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ITM -001	0		Determinations of Participant/Individual Responsibilities for ESF SDRD Requirements	03/29/90	5	Morales, A. R.
ITM -002	B		ESF Testing Interface Interactions	05/27/91	5	Pott, J.
ITM -003	A		ESF Fault Technical Assessment Review (TAR) Activities	09/14/89	8	Hinkebein, T. E.
ITM -004	A		Review of Documentation Packages Resulting from AP-6.8Q, AP-6.10Q, and AP-6.11Q	02/26/90	4	Klamerus, L. J.
ITM -005	B		Verification of ESF SDRD Benchmark #6	04/02/91	11	Morales, A. R.
ITM -010	0		ESF Alternatives Study	01/31/90	17	Dennis, A. W.
ITM -012	01		Modifications of Yucca Mountain Mined Geological Disposal System (MGDS) Requirements, Revision D, and the Yucca Mountain MGDS Description, Revision C	02/26/91	8	Klamerus, L. J.
ITM -014	00		Early Site Suitability Evaluation	05/01/91	5	DuCharme, A. R.
ITM -015	00		Systems Studies Plan Preparation	08/07/91	4	Schelling, F. J.
ITM -016	01		Performance Assessment Support for Design and Site Characterization	11/06/91	4	Fewell, M. E.

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NQAI 13-01	00		New England Research Quality Assurance Implementation Procedure for Identifi- cation, Handling, Shipping and Storage of Items	06/18/90	4	Boyd, P. J.

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PDM 71-33	A		Analysis of Spatial Variability of Properties and of the Effect of Parameter Variation on Properties	05/02/88	6	Nimick, F. B.
PDM 71-34	0		Verification Analyses for SPECTROM-31	01/12/88	10	Bauer, S. J.
PDM 71-36	0		Verification Analyses for SPECTROM-349	06/06/88	9	Bauer, S. J.
PDM 71-39	0		In Situ Stress Analysis for the ESF	03/27/89	8	Bauer, S. J.
PDM 71-40	0		Analyses to Support Development of Slot Cutting Methods for ESF Thermomechanical Testing	02/17/89	17	Costin, L. S.
PDM 71-42	0		Analyses of the G-Tunnel High-Pressure Flatjack Development Test	10/25/89	23	Costin, L. S.
PDM 71-43	00		Test Interference Calculations for the Canister Scale Heater Experiment	06/19/91	20	Pott, J.
PDM 71-44	00		Test Interference Calculations for the Thermal Stress Test	06/19/91	17	Pott, J.
PDM 71-45	00		Test Interference Calculations for the Heated Room Experiment	06/19/91	17	Pott, J.
PDM 72-11	B		COVE3a Benchmarking Nonisothermal SNL 1511, LBL, LANL	06/18/87	19	Langkopf, B. S.
		01		08/24/90	1	Cheek-Martin, F.
PDM 72-21	0		Development of an Analytical Solution of an Emplaced Heat Source	10/16/87	7	Langkopf, B. S.
		01		08/24/90	1	Cheek-Martin, F.
PDM 72-23	A		Part I: Ambient Movement of Gas at Yucca Mountain	11/05/87	8	Langkopf, B. S.
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		01		07/16/91	1	Sobolik, S. R.
PDM 72-29	00		ESF SDRD Analysis #1 - Effects of Surface Water on Experiments in the ESF	12/13/90	10	Sobolik, S. R.
PDM 72-30	00		ESF SDRD Analysis #2 - Effects of Shaft Construction Water on Experiments in ESF	12/14/90	9	Sobolik, S. R.
PDM 72-31	00		ESF SDRD Analysis #3 - Effects of Sewage and Settling Pond Water on Experiments in ESF	12/14/90	10	Sobolik, S. R.
PDM 75-11	0		A Parametric Study of Controlling Variables of the Areal Power Density (APD) in Support of ACD	10/25/88	11	Hertel, E. S.
PDM 75-12	0		NNWSI Approach for Evaluating Excavation Stability	11/20/87	1	Ehgartner, B. L.
PDM 75-13	C		3-D Far-Field Analyses for the ESF	12/05/90	23	Bauer, S. J.
PDM 75-14	0		Thermal Effects on Rock Bolts	03/11/88	3	Ehgartner, B. L.
PDM 75-15	0		Near-Field Analyses for the Exploratory Shaft Facility	08/26/88	22	Ehgartner, B. L.
PDM 75-16	0		Analysis of Ground Motion Data and Theoretical Calculations in Support of the Quantitification of Seismic Risk at the Yucca Mountain Site	12/05/88	8	Phillips, J. S.
PDM 75-17	0		Thermal Modeling in Support of the Waste Package Emplacement Orientation Study	10/28/88	7	Hertel, E. S.
PDM 75-19	B		Shaft Liner Analysis	03/24/89	9	Bauer, S. J.
PDM 75-21	0		Scoping Studies to Investigate Two-Phase Flow Phenomena	07/21/89	7	Hertel, E. S.

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PDM 75-23	00		Analyses in Support of Scoring for the Exploratory Shaft Facility-Alternatives Configuration Study	09/25/90	5	Bauer, S. J.
PDM 75-24	00		Statistical Analyses of UNE Ground Motions	04/09/91	5	Phillips, J. S.
PDM 76-05	A		Analysis (Using EQ3NR/EQ6) of the Geochemical Effects of Cementitious Materials on Ground Water and Tuff in the MPZ and at the base of the Shaft	04/13/89	19	Hinkebein, T. E.
PDM 76-06	0		Hydrologic-Related Analyses to Support Development of Section 8.4 of the SCP	07/11/88	35	Fernandez, Hinkebein
PDM 76-09	00		Plan for Sealing Code Development	07/15/91	10	Fernandez, J. A.
PDM 76-10	00		Review of Available Technologies for Sealing an Underground Repository in Unsaturated Tuff	07/25/91	7	Fernandez, J. A.
PDM 77-01	00		Regional Climate Modeling	09/18/91	4	Sandoval, R. P.

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QAIP 01-05	00		Task Definition Statements	08/22/91	21	Cheek-Martin, F.
QAIP 02-02	00		Study Plan Requirements	12/10/91	16	Price, R. H.
QAIP 02-06	00		Qualification and Certification of Personnel	02/17/92	8	Friend, J.-C.
QAIP 02-08	00		Conduct and Reporting of Management Assessments	11/07/91	4	Hersum, T. G.
QAIP 02-10	00		Determination of Applicable QA Controls	08/08/90	18	Klamerus, L. J.
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QAIP 03-02	01		Software Quality Assurance Requirements	10/17/91	62	Miller, W. B.
QAIP 03-04	00		Design Investigation Control	09/05/90	16	Finley, R. E.
		01		01/25/91	1	Finley, R. E.
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QAIP 04-01	01		Procurement	12/18/91	25	Cheek-Martin, F.
QAIP 05-01	01		Quality Assurance Implementing Procedures	09/10/91	21	Hersum, T. G.
QAIP 05-02	00		Technical Procedure Requirements	08/08/90	7	Nimick, F. B.
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QAIP 05-04	00		Use of Yucca Mountain Project Quality-Related Administrative Procedures AP(Q)	02/26/91	7	Voigt, J. V.
QAIP 06-02	00		Reviewing, Approving, and Issuing Technical Information Documents	09/11/91	14	Erickson, L. J.
QAIP 07-03	00		Evaluation of Contractor QA Program Documents	08/31/90	5	Smit, G. A.

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QAIP 10-01	00		Surveillances	02/12/91	8	Voigt, J. V.
QAIP 11-01	01		Experiment Procedure Requirements	01/18/91	19	Nimick, F. B.
QAIP 12-01	00		Measuring and Test Equipment Control	09/03/91	7	Nimick, F. B.
QAIP 16-02	00		Deviation Reporting	03/15/91	10	Voigt, J. V.
QAIP 17-02	00		Data Records Management System	09/06/90	20	Hotchkiss, A. P.
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QAP 01-03	A		Quality-Related Work Stoppages	01/18/89	4	Richards, R. R.
QAP 01-04	0		Resolution of Quality Assurance Disputes	03/15/89	4	Richards, R. R.
		01		09/07/89	1	Richards, R. R.
		02		09/01/90	1	Richards, R. R.
QAP 02-05	C		Training and Familiarization Procedures	08/15/89	24	Tang, M. A.
		01		08/15/89	24	Tang, M. A.
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QAP 02-07	D		Qualification of Quality Assurance Program Audit Personnel	12/01/89	9	Richards, R. R.
		01		05/23/91	1	Hawkinson, D. R.
QAP 15-01	A		Nonconformance Control and Reporting	08/09/89	11	Baehr, R. M.
QAP 16-01	B		Corrective Action	07/25/89	6	Baehr, R. M.
		01		09/20/91	1	Voigt, J. V.
QAP 16-03	A		Quality Assurance Program Report	08/02/89	5	Baehr, R. M.
QAP 18-01	C		Quality Assurance Audits	02/16/90	10	Baehr, R. M.
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TDS 1510	00		Code Development, Analysis, and Experimental Support	08/19/91	13	Bingham, F. W.
TDS 6230	00		Support for Experiments, Analysis, and Code Development	08/19/91	11	Nimick, F. B.
TDS 6300	00		Midway Valley Investigations	11/15/91	4	Nimick, F. B.
TDS 6410	00		Yucca Mountain Performance Assessment Analysis	08/19/91	7	Fewell, M. E.
TDS 7220	00		Statistical Analyses	08/19/91	6	Nimick, F. B.
TDS 9320	00		Support for Experiments	08/19/91	6	Nimick, F. B.

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TP -051	A		Preparing Cylindrical Samples, Including Inspection of Dimensional and Shape Tolerances	05/15/90	12	Davis, A. C.
		01		05/15/90	12	Davis, A. C.
TP -059	C		Procedures for Laboratory Sample Petrology Determination	02/02/90	16	Connolly, J. R.
		01		03/01/91	1	Anderson, K. R.
		02		04/14/91	2	Anderson, K. R.
TP -060	B		Procedures for Preparation of Polished Thin Sections	02/02/90	10	Nimick, F. B.
		01		03/01/91	1	Anderson, K. R.
		02		04/14/91	2	Anderson, K. R.
TP -061	A		Procedures for Laboratory Sample Bulk Chemical Determination	02/02/90	72	Connolly, J. R.
		01		03/01/91	1	Anderson, K. R.
		02		04/14/91	2	Anderson, K. R.
TP -062	B		Laboratory Procedures for Mineralogic Analysis by X-Ray Powder Diffraction Part 1: Data Gathering	02/02/90	47	Connolly, J. R.
		01		03/01/91	1	Anderson, K. R.
		02		04/14/91	2	Anderson, K. R.
TP -064	A		Procedure for Vacuum Saturation of Geologic Core Samples	05/18/90	9	Davis, A. C.
		01		07/15/90	1	Davis, A. C.
TP -065	B		Drying Geologic Samples to Constant Weight	05/15/90	9	Davis, A. C.
TP -080	00		Procedure for Operation of the Hitachi S-450 Scanning Electron Microscope	04/21/91	23	Connolly, J. R.
TP -090	0		Confined Compression Experiments at 250 Degrees C. and a Strain Rate of 10 (-8) s (-1).	03/01/90	37	Martin, R. J.
		01		04/14/91	2	Anderson, K. R.

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DOCUMENT ID	REV	ICN	DOCUMENT TITLE	EFFECTIVE DATE	PAGES	AUTHOR
TP -091	A		Unconfined Compression Experiments at 22 Deg. (C) and a Strain Rate of 10(-9) s(-1).	04/02/90	16	Martin, R. J.
		01		04/14/91	2	Anderson, K. R.
TP -092	0		Constant Stress (Creep) Experiments at 250 Deg. Celsius	04/02/90	40	Martin, R. J.
		01		04/14/91	2	Anderson, K. R.
TP -093	0		Load Cell Calibration at New England Research, Inc.	03/01/90	6	Martin, R. J.
		01		04/14/91	2	Anderson, K. R.
TP -094	00		LVDT Calibration at New England Research, Inc.	05/14/90	14	Martin, R. J.
		01		04/14/91	2	Anderson, K. R.
TP -095	0		Furnace and Thermocouple Calibration at New England Research, Inc.	03/01/90	10	Martin, R. J.
		01		04/14/91	2	Anderson, K. R.
TP -096	0		Pressure Transducer Calibration at New England Research, Inc.	03/01/90	7	Martin, R. J.
		01		04/14/91	2	Anderson, K. R.
TP -102	0		Laboratory Procedures for Mineralogic Analysis by X-Ray Powder Diffraction Part 2: Data Analysis	01/12/90	35	Connolly, J. R.
		01		03/01/91	1	Anderson, K. R.
		02		04/14/91	2	Anderson, K. R.
TP -200	0		Inspection of Samples Used in Thermal Properties Measurements	04/16/90	28	Soos, T.
		01		02/14/91	1	Anderson, K. R.
TP -201	00		Calibration of Mechanical and Electrical Measuring Equipment used for Thermal Properties Testing	02/14/91	62	Desjarlais, A. O.
		01		12/30/91	9	Chervenak, J. G.
TP -202	00		Measurement of Thermal Conductivity of Geologic Samples by the Guarded-Heat- Flow-Meter Method	05/31/91	53	Soos, T.

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DOCUMENT ID	REV	ICN	DOCUMENT TITLE	EFFECTIVE DATE	PAGES	AUTHOR
TP -206	00		Measurement of Thermal Conductivity of Geologic Samples by the Comparative Method	06/21/91	35	Soos, T.
TP -207	00		Calibration of Temperture Sensors Used for Thermal Properites Testing	09/13/91	40	Desjarlais, A.
TP -208	00		Procedures for Acquiring, Digitizing, Processing, Storing and Retrieving Ground Motion Data from Underground Nuclear Explosions	08/20/90	108	Phillips, J. S.
		01		03/28/91	1	Phillips, J. S.
TP -209	00		Verification of PNE Amplifier Gains and Frequency Response	09/18/90	11	Lee, J. G.
TP -211	00		Verification of PFTU Amplifier Gains and Frequency Response	09/18/90	11	Lee, J. G.
TP -212	00		Set-Up and Adjustment of TM Control Box (PNE Seismic)	09/18/90	9	Lee, J. G.
TP -213	00		Set-Up and Adjustment of TM Control Box (PFTU)	09/18/90	8	Lee, J. G.
TP -214	00		Ground Motion Gage Operation Verification	08/17/90	7	Lee, J. G.

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WP90 1211	00		Systems Management and Integration (FY90)	06/08/90	10	Klamerus, L. J.
WP90 12121	01		System Requirements and Description (FY90)	11/16/90	15	Klamerus, L. J.
WP90 12122	00		System Studies (FY90)	10/23/90	8	Klamerus, L. J.
WP90 12124	00		Systems Engineering Implementation (FY90)	07/11/90	10	Klamerus, L. J.
WP90 12125	00		Configuration Management and Plans and Procedures Control (FY90)	11/13/90	6	Schelling, F. J.
WP90 12131	00		Site and Engineering Properties Data Base (FY90)	07/11/90	11	Sandoval, R. P.
WP90 12132	00		Interactive Graphics Information System (FY90)	10/22/90	12	Jones, M. L.
WP90 12133	00		Reference Information Base (FY90)	04/19/90	9	Schelling, F. J.
WP90 12134	00		Technical Data Base Management Computer Support (FY90)	10/04/90	8	Yarrington, L.
WP90 12135	00		Technical Data Base Input (FY90)	11/01/90	8	Schelling, F. J.
WP90 12141	01		Total System Performance Assessment (FY90)	11/16/90	58	Dunn, E. T.
WP90 121431	00		Postclosure Repository Design Analysis (FY90)	05/14/90	53	Ryder, E. E.
WP90 121432	00		Preclosure Radiological Safety Analyses (FY90)	01/16/91	62	Klamerus, L. J.
WP90 121434	00		Seal Performance Requirements and Design Analyses (FY90)	07/25/90	24	Fernandez, J. A.
WP90 121441	00		Pre-Waste-Emplacement Ground Water Travel Time	05/14/90	16	Kaplan, P. G.

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WP90 121442	00		Favorable and Adverse Conditions (FY90)	05/09/90	6	Barr, G. E.
WP90 121443	00		Higher Level Findings (FY90)	05/09/90	8	Barr, G. E.
WP90 12146	02		Development and Validation of Flow and Transport Models (FY90)	06/12/91	16	Siegel, M. D.
WP90 12147	00		Supporting Calculations for Postclosure Performance Analyses (FY90)	04/19/90	19	Peterson, A. C.
WP90 12149	00		Development and Verification of Flow and Transport Codes (FY90)	06/21/90	30	Barnard, R. W.
WP90 1231	00		Site Management/Integration (FY90)	08/08/90	8	Shephard, L. E.
WP90 1232221	00		Systematic Acquisition of Site-Specific Subsurface Information (Systematic Drilling Program) (FY90)	04/20/90	11	Rautman, C. A.
WP90 1232222	00		Three-Dimensional Rock Characteristics Models (FY90)	05/21/90	12	Rautman, C. A.
WP90 1232621	00		Surface Facilities Exploration Progress (FY90)	05/22/90	14	Gibson, J. D.
WP90 1232711	00		Laboratory Thermal Properties (FY90)	05/09/90	28	Nimick, F. B.
WP90 1232712	00		Laboratory Thermal Expansion (FY90)	05/09/90	22	Nimick, F. B.
WP90 1232713	00		Laboratory Determination of the Mechanical Properties of Intact Rock (FY90)	05/07/90	26	Price, R. H.
WP90 1232714	00		Laboratory Determination of the Mechanical Properties of Fractures (FY90)	04/20/90	18	Price, R. H.
WP90 1232833	01		Ground Motion from Regional Earthquakes and Underground Nuclear Explosions (FY90)	12/13/90	17	Nimick, F. B.

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WP90 1232842	01		Location and Recency of Faulting Near Prospective Surface Facilities (FY90)	12/20/90	7	Gibson, J. D.
WP90 1236216	00		Future Regional Climate and Environments (FY90)	11/13/90	9	Sandoval, R. P.
WP90 1241	00		Repository Management/Integration (FY90)	10/30/90	8	Dennis, A. W.
WP90 12411	00		Repository Management/Integration (FY90)	05/09/90	8	Dennis, A. W.
WP90 12412	00		Design Basis - Design Requirements (FY90)	07/12/90	14	Stevens, A. L.
WP90 1242111	00		Excavation Investigation (FY90)	10/24/90	9	Blankenship, D. A.
WP90 1242112	01		In Situ Thermomechanical Properties (FY90)	10/18/90	40	Hansen, F. D.
WP90 1242113	00		In Situ Mechanical Properties (FY90)	06/27/90	14	Hansen, F. D.
WP90 1242114	00		In Situ Design Verification (FY90)	10/24/90	17	Blankenship, D. A.
WP90 124212	00		Rock-Mass Analysis (FY90)	06/27/90	23	Bauer, S. J.
WP90 124213	00		Rock Mechanics Field Testing (FY90)	05/08/90	26	Hansen, F. D.
WP90 12422	00		Equipment/Instrument Development (FY90)	10/19/90	11	Finley, R. E.
WP90 124231	00		Certification/Design Methods (FY90)	06/27/90	50	Bauer, S. J.
WP90 124232	00		Design Analysis (FY90)	06/26/90	43	Ryder, E. E.
WP90 12432	00		Surface Facilities (FY90)	06/08/90	9	Stevens, A. L.
WP90 12433	00		Shafts/Ramps (FY90)	05/09/90	13	Finley, R. E.
WP90 12434	00		Subsurface Excavations (FY90)	05/09/90	19	Finley, R. E.
WP90 12435	00		Underground Service System (FY90)	10/30/90	12	Finley, R. E.
WP90 1244	00		Operations and Maintenance (FY90)	05/09/90	11	Dennis, A. W.

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WP90 1245	00		Decommissioning (FY90)	07/09/90	5	Fernandez, J. A.
WP90 12461	00		Sealing Design and Design Requirements (FY90)	05/11/90	14	Fernandez, J. A.
WP90 12462	01		Sealing Testing (FY90)	10/18/90	20	Fernandez, J. A.
WP90 1251	00		Management and Integration (FY90)	10/24/90	5	Barr, D. A.
WP90 12521	00		NRC Interaction Support (FY90)	08/29/90	5	Barr, D. A.
WP90 12523	00		Regulatory Review (FY90)	06/08/90	5	Barr, D. A.
WP90 12525	00		Study Plan Coordination (FY90)	08/01/90	7	Price, R. H.
WP90 12526	00		Semi - Annual Progress Reports (FY90)	11/13/90	5	Barr, D. A.
WP90 12611	01		Exploratory Shaft Management, Planning/ Technical Assessment (FY90)	04/28/91	52	Morales, A. R.
WP90 12911	00		Management (FY90)	11/21/90	9	Sharpton, S. E.
WP90 12913	00		Project Peer Review (FY90)	12/20/90	6	Schelling, F. J.
WP90 12914	00		Records Management (FY90)	10/31/90	10	Hotchkiss, A. P.
WP90 1292	00		Project Control (FY90)	11/16/90	6	Sharpton, S. E.
WP90 12931	00		Quality Assurance Program Development (FY90)	05/22/90	8	Richards, R. R.
WP90 12932	00		Quality Assurance Audits/Surveillances (FY90)	05/22/90	7	Richards, R. R.
WP90 12933	00		Quality Assurance Quality Engineering (FY90)	07/09/90	8	Richards, R. R.
WP90 12934	00		Quality Assurance Quality Overview (FY90)	05/22/90	6	Richards, R. R.

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WP91 12126	00		Yucca Mountain Site Characterization Project (YMP) support to the Management Systems Improvement Strategy (MSIS) (FY91)	02/28/91	6	Schelling, F. J.

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED	
1-1	QAIP 1-2, Rev. 1, ICN #1, Para. 4.0 Para. 4.2 Para. 5.2 Para. 5.2.2	1. Verify that the organizational structure and levels ^{lack} of authority are as shown in Figure 1				
		2. Verify that the assigned supervisor of each division has administrative, programmatic, and technical responsibility for their divisions.				
		3. Verify that the QA personnel have sufficient authority, access to work areas, and organizational freedom to: a. identify quality problems, b. initiate or recommend solutions to quality problems through designated channels, c. verify implementation of corrective actions, and d. control further quality activities until nonconformance or deficiency satisfactorily resolved.				
		4. Verify QA Division Supervisor fulfills overview requirements for QA program.				
				9 AUDITOR SIGNATURE	10 DATE	

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2-1	QAIP 2-2, Rev. 00, Para. 5.0	1. Verify that Study Plan authors were qualified to write the document. 2. Verify that the draft Study Plan has been reviewed by at least one technical reviewer. 3. Verify that the approved draft SP has any required change requests and copies of references not readily available.			
				9 AUDITOR SIGNATURE	10 DATE

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³ AUDIT ITEM NO.	⁴ QUALITY REQUIREMENT REFERENCE(S)	⁵ QUALITY REQUIREMENT/GUIDELINE	⁶ RESULTS S,X,N/A	⁷ SUMMARY OF INVESTIGATION	⁸ PERSON CONTACTED
2-2	QAIP 2-8, Rev. 00, Para. 4.0	1. Verify that annual performance assessment has been completed. 2. Verify that the performance assessment has addressed identified program aspects. 3. Verify that the results were transmitted to management for appropriate action.			
				<div> <div>⁹ AUDITOR SIGNATURE</div> <div>¹⁰ DATE</div> </div>	

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2-3	QAIP 2-10, Rev. 00, ICN #2	1. Check completion of QAG Report for those areas within SNL responsibility. 2. Verify any revision to the QAG packages and QA Control Specification Records.			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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2-4	DOP 2.9, Rev. A, Para. 5.1	1. Verify Department Manager maintains list of planned preparedness reviews. 2. Designates a Preparedness Review Board chairman. 3. Prepares a documented Preparedness Review Directive for each review.			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
2-4 CONT	Para. 5.3 Para. 5.5	4. Prerequisite List established and tracked to closure. 5. Accumulated records package transmitted to Records Center.			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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2-5	DOP 2-6, Rev. D, ICN #1, Paras. 4.0 and 5.0 DOP 2-6, Rev. D, ICN #1, Para. 6.0	1. Verify selection of qualified personnel based on education and experience commensurate with established position and category descriptions. 2. Verify documentation of certification and recertification of personnel to include the following: a. Name b. Organization c. Position Title d. Category of assigned responsibilities e. Restrictions, if any, including special skills f. Education g. Experience h. Signature of Division Supervisor or Contract Manager			
				<div style="display: flex; justify-content: space-between;"> ⁹ AUDITOR SIGNATURE _____ ¹⁰ DATE _____ </div>	

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2-5 CONT	Para. 7.0	3. Verify annual evaluation of personnel.			
			<div style="display: flex; justify-content: space-between;"> ⁹ AUDITOR SIGNATURE _____ ¹⁰ DATE _____ </div>		

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³ AUDIT ITEM NO.	⁴ QUALITY REQUIREMENT REFERENCE(S)	⁵ QUALITY REQUIREMENT/GUIDELINE	⁶ RESULTS S,X,N/A	⁷ SUMMARY OF INVESTIGATION	⁸ PERSON CONTACTED
2-6	QAP 2-7, Rev. D, ICN #1, Paras. 4.1 and 4.2	1. Verify qualification of Auditors and Technical Specialists a. Education and experience commensurate with scope, complexity, and special nature of activities to be audited. b. Completion of one or more of the following: 1. Orientation 2. Training programs 3. On-the-job training			
				⁹ AUDITOR SIGNATURE _____	¹⁰ DATE _____

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2-6 CONT	QAP 2-7, Rev. D, ICN #1, Para. 4.3	2. Verification of qualification of Lead Auditor a. Education and Experience b. Effective communications c. Developed auditing skills through training, as necessary, based on management evaluation. d. Knowledge and understanding of applicable, governing documents. e. Knowledge of principles and techniques of auditing. f. Knowledge of SNL documents and general structure of QA program. g. Successful completion of examination on body of knowledge from above. h. Participation in a minimum of 5 audits within last three years to include nuclear audit. i. Signature of Department Manager			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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2-6 CONT	QAP 2-7, Rev. D, ICN #1, Para. 5.0 Para. 5.1	3. Verify maintenance of Auditor/Lead Auditor qualifications. 4. Verify requalification of Auditors/Lead Auditors.			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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2-7	QAP 1-1, Para. 4.1.1	1. Verify that a checklist was submitted to YMP for review prior to implementation of QAPD. The checklist will identify requirements from the QAPD that are not applicable and/or acceptable alternatives.			
	Para. 4.1.2	2. Verify QAPD reviewed and provided to QA Coordinator.			
				<div data-bbox="1331 1468 1608 1500">⁹ AUDITOR SIGNATURE</div> <div data-bbox="1713 1468 1814 1500">¹⁰ DATE</div>	

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2-7 CONT	Para. 4.1.3	3. Verify comments from #2 resolved.			
	Para. 4.1.4	4. Verify that QA and TPO reviewed and approved document prior to submittal to YMPO.			
				9 AUDITOR SIGNATURE	10 DATE

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2-7 CONT	QAP 1-1, Para. 4.2.1 Para. 4.3.1	5. Verify that QAPD/checklist revisions are consistent in changes to the QARD and that such changes are approved by the QA Coordinator and TPO. 6. Verify that such changes are clearly indicated by boldface type, vertical lines in the margin, or other obvious indicators.			
				9 AUDITOR SIGNATURE	10 DATE

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2-8	QAP 1-2, Rev. A, Para. 4.1 Para. 4.2	1. Verify initiation of stop work by division supervisor, task leader, contract monitor, TPO or Quality Assurance. 2. Verify Nonconformance Report or equivalent or written correspondence to document stoppage.			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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2-8 CONT	Para. 4.3	3. Verify that responsible party initiates action to terminate affected activity and timely action to correct identified deficiency.			
	Para. 4.4	4. Verify documented rescission by means of letter or memo and concurrence by QA Coordinator and initiator.			
				<div>9 AUDITOR SIGNATURE</div> <div>10 DATE</div>	

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2-9	QAP 1-4, Rev. 0, ICN #2, Para. 4.1 Para. 4.2 Para. 4.3	1. Verify documentation of differences of opinion between QA and Department personnel and the substance of the dispute. 2. Verify that the QA Coordinator validate the dispute as being a QA issue. 3. Verify the resolution between QA and the Division Supervisor or the TPO, is elevated to that level.			
				⁹ AUDITOR SIGNATURE _____	¹⁰ DATE _____

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
	QAP 2-5, Rev. C, ICN #2, Para. 4.1	1. Sample SNL personnel files and verify that each individual file contains: a. Certification of Personnel Qualification b. Personnel Assignment form c. Training Assignment form d. Confirmation of Form/Training Activities e. Training Attendance Sheet			
	QAP 2-5, Rev. C, ICN #2, Paras. 4.3.1 and 4.3.2 (Con't)	2. Verify initial training completed prior to initiation of quality affecting work.			
	Paras. 4.5.1 and 4.5.2	3. Verify trainer qualified in accordance with same paragraphs, paragraph 5.4, and documented on Appendix F.			
	Paras. 4.6.1 and 4.6.2	4. Verify Lesson Plan(s) approved by Training Manager and reviewed by Training Requester when applicable (Appendix G).			
		5. Verify that prior to implementation of a new procedure or changes to a procedure, the Training Manager notifies each Supervisor to allow determination of individuals to receive applicable training.			
				9 AUDITOR SIGNATURE	10 DATE

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	Para. 5.6.1	6. Verify that the training program has been assessed and the evaluation results documented as QA records.			
	Para. 8.0	7. Verify that training forms are submitted to LRC as QA records.			
				9 AUDITOR SIGNATURE	10 DATE

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15-1	QAP 15-1, Rev. A Para. 5.1.5.2	<p>NONCONFORMANCE CONTROL</p> <p>1. Verify the QA Organization maintains a Nonconformance Control Log that contains the following information as a minimum:</p> <ul style="list-style-type: none"> o NCR number o Brief description of the nonconformance o Organization responsible for determining and carrying out the nonconformance disposition. o Status of each Nonconformance Report (open or closed) <p>2. Verify a Nonconformance Tag was affixed to the nonconforming item and contains the NCR number and date.</p>			
				<p>9 AUDITOR SIGNATURE</p> <p>10 DATE</p>	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
15-1 cont.	QAP 15-1, Rev. A Para. 5.3.8 QAP 15-1, Rev. A Paras. 5.3.5 & 5.3.9	5. Verify the QA Coordinator reviewed and approved the disposition, and signed and dated Part III of the NCR. 6. Verify dispositions of use-as-is or repairs had technical justifications documented in Part III of the NCR and the YMP Project Office Branch Chief and PQM concurred with the disposition by signing and dating the NCR, Part III.			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
15-1 cont.	QAP 15-1, Rev. A Para. 5.4.1 QAP 15-1, Rev. A Para. 5.5.1	7. Verify the person responsible for implementing the NCR disposition signed and dated Part III indicating the disposition action was completed. 8. Verify the QA Coordinator or his designee verified accomplishment of the disposition. Repaired or reworked items were re-examined in accordance with applicable procedures and the original acceptance or other as dispositioned on the NCR establishing acceptance criteria. The NCR shall be signed and dated in Part IV, indicating acceptable resolution.			
				9 AUDITOR SIGNATURE	10 DATE

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
15-1 cont.	QAP 15-1, Rev. A Para. 5.5.4	9. Verify that if the resolution action was unacceptable, the NCR was marked "Rejected" in Part IV and signed and dated by the QA Coordinator or his designee, and a new NCR was generated to identify the existing condition. (Same number followed by -A.)			
	QAP 15-1, Rev. A Para. 6.1	10. Verify the original NCRs with attached supporting documents were identified with appropriate file codes and forwarded to the SNL Records Management System (RMS).			
				<div>9 AUDITOR SIGNATURE</div> <div>10 DATE</div>	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
16-1	SNL-NWRT-QAPD, REVISION 00 QAP 16-1, Revision B 7/25/89	CORRECTIVE ACTION OF SIGNIFICANT CONDITIONS ADVERSE TO QUALITY			
16-2	QAP 16-1, REV. B Sect. 4.1.2	1. Verify that in Part I of the Corrective Action Form, (similar to or identical to Appendix A) the initiator describes the condition and signs and dates where indicated.			
16-2	QAP 16-1, REV. B Sect. 4.1.3	1. Verify that the QA Coordinator or other QA staff member has reviewed the CAR and indicated so by signing and dating in Part I.			
				<div style="display: flex; justify-content: space-between;"> <div>9 AUDITOR SIGNATURE</div> <div>10 DATE</div> </div>	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
16-3	QAP 16-1, REV. B Sect. 4.1.4	1. Verify that a unique number is assigned to each CAR and recorded on each page of the CAR. 2. Verify that the CAR is entered on the CAR Log Form.			
				⁹ AUDITOR SIGNATURE _____ ¹⁰ DATE _____	

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16-4	QAP 16-1, REV. B Sect. 4.1.4.1	1. Verify that for approved CAR's, the SNL/TPO has signed and dated Part I. 2. Verify that an individual has been assigned responsibility for disposition of the CAR and this is indicated in Part II. 3. Verify that affected management personnel at all levels are notified of the CAR.			
				9 AUDITOR SIGNATURE	10 DATE

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16-5	QAP 16-1, REV. B Sect. 4.1.4.2	1. Verify that for CARs that are voided, justification is provided in Part II by the QA reviewer. 2. Verify that the voided CAR has been filed in the SNL/NWRT Record Management System.			
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16-6	QAP 16-1, REV. B Sect. 4.2.1	1. Verify that responsible individual completes the following actions: a) determine root cause of the adverse condition b) complete Part II of the CAR to indicate corrective action to be taken 2. Verify that specified corrective action addresses whether items or data processed previously were affected and, if so, the action necessary to resolve the effect. 3. Verify that actions to preclude repetition of the adverse situation are specified.			
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16-6 Cont.		<p>4. Verify that organizations or personnel responsible for implementation of these actions are identified.</p> <p>5. Verify that a schedule for completion of the corrective action(s) is developed.</p> <p>6. Verify that the proposed corrective action has been submitted to the SNL/TPO no later than 15 working days of receipt of the CAR.</p>			
				9 AUDITOR SIGNATURE	10 DATE

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
16-9	QAP 16-1, REV. B Sect. 4.3.2	1. Verify that upon completion of verification, the SNL QA Coordinator indicates by signature and date in Part III.			
16-10	QAP 16-1, REV. B Sect. 4.3.3	1. Verify that for closed CARs, the CAR Log is updated			
				9 AUDITOR SIGNATURE	10 DATE

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
16-11	QAIP 16-2, REV. 0 3/15/91	DEVIATION REPORTING (OF CONDITIONS ADVERSE TO QUALITY)			
	QAIP 16-2, REV. 0 Sect. 4.1 A)	1. When is a deficient condition is documented? (Appendix A) 2. What documentation exists to support the disposition of the above deficient conditions? (Appendix A)			
			9 AUDITOR SIGNATURE _____ 10 DATE _____		

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
16-14	QAIP 16-2, REV. 0 Sect. 4.1 D)	<p>1. Verify that for DRs converted to a NCR or CAR, the appropriate CAR or NCR number is recorded on the Voided DR.</p> <p>2. Verify that when using the DR form, the name of the designated dispositioner and the due date for corrective action disposition approval are recorded.</p>			
				<p>9 AUDITOR SIGNATURE _____ 10 DATE _____</p>	

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16-15	QAIP 16-2, REV. 0 Sect. 4.2 A)	1. Verify that the following information has been provided in Part II of the DR: a) describe the action to be taken to correct the specific deviation or its effect. b) identify organizations or personnel responsible for implementation of these actions c) identify a schedule or due date for completion of the disposition actions				
16-16	QAIP 16-2, REV. 0 Sect. 4.2 B)	1. Verify that upon approval of the corrective action disposition, the PI/TL signs and dates Part II.				
				<div style="display: flex; justify-content: space-between;"> ⁹ AUDITOR SIGNATURE _____ ¹⁰ DATE _____ </div>		

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
16-17	QAIP 16-2, REV. 0 Sect. 4.3 A)	<p>1. Verify that the assigned Verifier has signed Part III of the DR form indicating the disposition has been satisfactorily accomplished.</p> <p>2. Verify that the proper file code from the Master List of File Codes and "YMP CRF" have been entered at the bottom of the DR form.</p>			
				<p>9 AUDITOR SIGNATURE _____ 10 DATE _____</p>	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
16-20	QAP 16-3, REV. A Sect. 5.0	1. Verify that when a recurring nonconformance is identified and an evaluation has determined that corrective action is warranted to prevent repetition, a report of this analysis is prepared and includes information on the following: <ul style="list-style-type: none"> a. adequacy b. compliance c. effectiveness 2. Verify that this analysis is provided to the Department Manager (QA record?).			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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16-21	QAP 16-3, REV. A Sect. 5.0	1. Verify that a QA Program Report is prepared and submitted to the Department Manager at least bimonthly and includes the following (QA records): <ul style="list-style-type: none"> a. deviation report status, including open items b. nonconformance status, including open items c. surveillance activities, including open items d. audit activities, including open items e. corrective action reports status, including open items 			
				<div> <div>9 AUDITOR SIGNATURE</div> <div>10 DATE</div> </div>	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-1	SNL-NWRT-QAPD, REV. E QAP 18-1, REV. C	<p>QUALITY ASSURANCE AUDITS</p> <p>1. Verify that an audit schedule for external and internal audits has been generated at the beginning of the fiscal year.</p> <p>2. Verify that all elements of the SNL-NWRT-QAPD are scheduled to be audited annually.</p> <p>3. Verify that QA programs of external organizations are audited annually or once during the activity whichever is shorter. (See exception)</p> <p>4. Verify that justification for not performing audits of contractors whose activities are less than four months in duration, are documented by the PI and approved by the SNL QA Coordinator.</p>			
				9 AUDITOR SIGNATURE	10 DATE

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-2	QAP 18-1, REV C, Sect. 4.1.1.2	1. Verify that the annual audit schedule includes the following information: a. dates of audits b. activities or organizations to be audited c. requirements against which the activities are to be audited			
18-3	QAP 18-1, REV C, Sect. 4.1.2.1	1. Verify that for each audit, an Audit Plan has been prepared utilizing Form QAP 18-1(1) and identifies the following: a. the organization to be audited b. the requirements and documents to be audited against c. the scope of the audit d. activities to be audited e. the audit team f. the personnel or organization to be notified g. the general schedule of the audit h. the date of the audit i. the procedure or checklist used			
				9 AUDITOR SIGNATURE _____ 10 DATE _____	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-4	QAP 18-1, REV C, Sect. 4.1.2.2	1. Verify that the QA Coordinator/PI for audits approves each individual Audit prior to its implementation.			
18-5	QAP 18-1, REV C, Sect. 4.2.1	1. Verify that Lead Auditors have been certified in accordance with QAP 2-7.			
18-6	QAP 18-1, REV C, Sect. 4.2.2	1. Verify that Auditors have been certified in accordance with QAP 2-7.			
				<div>9 AUDITOR SIGNATURE</div> <div>10 DATE</div>	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-7	QAP 18-1, REV C, Sect. 4.2.3	<p>1. Verify that an Audit Checklist in the format of Form QAP 18-2(2) has been developed and addresses the following items:</p> <p>a. intended scope of the audit</p> <p>b. verifies compliance with the applicable requirements documents, as specified in the Audit Plan</p> <p>2. Verify that the checklist includes a review of corrective actions specified as a result of previous audits of the organization.</p>			
				9 AUDITOR SIGNATURE _____	10 DATE _____

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-8	QAP 18-1, REV C, Sect. 4.2.4	1. Verify that an "Audit Designator" has been established for each Audit.			
18-9	QAP 18-1, REV C, Sect. 4.4	1. Verify that the Lead Auditor and QA Coordinator sign the audit report. (The QA Coordinator will not cosign reports of SNL internal audits.) 2. Verify that the Audit Report includes the following: <ul style="list-style-type: none"> a. audit scope and identification of the audit team b. identification of personnel contacted during the audit c. a summary of the audit results, including a statement of the effectiveness of the QA program elements audited d. a description of each reported finding and observation 			
				9 AUDITOR SIGNATURE _____ 10 DATE _____	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-9 Cont.		3. Verify that the audit report requires the auditee, for each finding and observation, to complete the following: <ul style="list-style-type: none"> a. investigate the findings and observations b. devise and schedule corrective actions c. provide a written response specifying and scheduling corrective action 4. Verify that the audit report requires auditee to describe in the response corrective actions taken to determine root cause, including measures to prevent recurrence. 5. What action is required if the auditee does not respond within 30 days?			
				⁹ AUDITOR SIGNATURE _____ ¹⁰ DATE _____	

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-10	QAP 18-1, REV C, Sect. 4.5.2	1. Verify that the SNL NWRT QA organization maintains a tracking system which indicates the extent of completion of the audit and close-out of findings.			
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18-11	QAIP 10-1, REV. 0	SURVEILLANCES			
	QAIP 10-1, REV. 0 Sect. 3.1	1. Verify that scheduled surveillances are documented and tracked using Appendix B.			
		2. Verify that the surveillance schedule is reviewed and updated, as a minimum, semi-annually.			
					<div> <div>9 AUDITOR SIGNATURE</div> <div>10 DATE</div> </div>

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-12	QAIP 10-1, REV. 0 Sect. 3.2.1	1. Verify that for surveillances of scientific investigation activities, the surveillance team is comprised of one or more technical personnel and one or more QA personnel. 2. Verify that surveillance Team Leader and Team members are certified. (Obtain a list of members and pass off to auditor conducting training evaluation.)			
18-13	QAIP 10-1, REV. 0 Sect. 3.2.1	1. Who is the surveillance requestor for each surveillance?			
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18-14	QAIP 10-1, REV. 0 Sect. 3.2.2	<p>1. Verify that the Team Leader documents surveillance planning with the following documentation as a minimum:</p> <ul style="list-style-type: none"> a. A brief description of the area or activity to be surveilled, including the specific characteristics of concern. b. The members of the surveillance team. c. The organization to be contacted during the surveillance. d. Criteria for determining acceptability of the activity surveilled. <p>2. Verify that an SNL Division Supervisor approves the surveillance plan.</p>			
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18-15	QAIP 10-1, REV. 0 Sect. 3.5.1	1. Verify that the surveillance report contains the following information as a minimum: <ul style="list-style-type: none"> a. The identification of the organization, or activity surveilled. b. Date of surveillance. c. Results of surveillance, including a statement of acceptability or non-acceptability of the item or activity, and if applicable, any conclusions about the degree to which performance objectives of the activity are being achieved. d. Names of surveillance team members. e. Name(s) of personnel contacted and their organization. f. Identification of any equipment used in performing the surveillance. g. Surveillance criteria. h. Description of any deficiencies, nonconformances, or potential quality problems identified. Include a summary of any immediate corrective actions taken. i. If applicable, feedback information specically requested by management. 			
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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED
18-16	QAIP 10-1, REV. 0 Sect. 3.5.2	1. Verify that the surveillance is distributed to the following: a. the organization surveilled b. the individual within the SNL NWRT Department responsible for the item or activity surveilled c. concerned management personnel d. the SNL NWRT QA Supervisor e. the Records Management System			
				9 AUDITOR SIGNATURE	10 DATE

OCRWM AUDIT CHECKLIST NO. YMP-92-09-01

1 ORGANIZATION SANDIA NAT'L LABORATORIES

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3 AUDIT ITEM NO.	4 QUALITY REQUIREMENT REFERENCE(S)	5 QUALITY REQUIREMENT/GUIDELINE	6 RESULTS S,X,N/A	7 SUMMARY OF INVESTIGATION	8 PERSON CONTACTED			
18-17	QAIP 10-1, REV. 0 Sect. 4.0	1. Verify that the following records have been submitted to the LRC: <ul style="list-style-type: none"> a. Surveillance schedule and revisions. (individual QA record) b. Surveillance Plan c. Surveillance Report d. copies of Deficiency Report 						
				4				
				<div style="display: flex; justify-content: space-between;"> ⁹ AUDITOR SIGNATURE ¹⁰ DATE </div>				