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NEVADA NUCLEAR WASTE STORAGE INVESTIGATIONS

MANAGEMENT AND OVERVIEW QUALITY ASSURANCE PROGRAM PLAN



MASTER

AUGUST 1980

**UNITED STATES
DEPARTMENT OF ENERGY
NEVADA OPERATIONS OFFICE
LAS VEGAS, NV**

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**UNITED STATES
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NNWSI MANAGEMENT AND OVERVIEW
QUALITY ASSURANCE PROGRAM PLAN

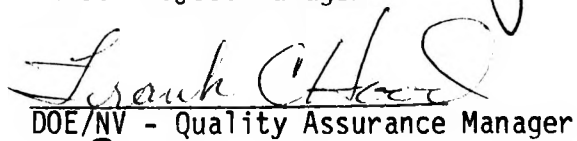
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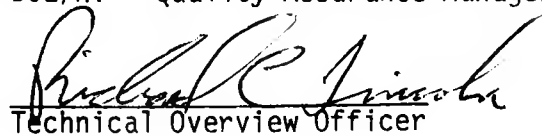
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NNWSI Management and Overview
Quality Assurance Program Plan

Approved By:


NNWSI Project Manager


DOE/NV - Quality Assurance Manager


Technical Overview Officer

 7/29/80
Quality Assurance Officer

INTRODUCTION

The Nevada Nuclear Waste Storage Investigations (NNWSI) Project Office is the U. S. Department of Energy, Nevada Operations Office (DOE/NV) organization charged with the responsibility of administering and coordinating the activities of the various Participating Organizations and Support Contractors working on the NNWSI project. This Quality Assurance Program Plan (QAPP) describes how the NNWSI Project Office and their consultant and advisory organizations, Technical Overview and Quality Assurance Overview, perform the quality assurance (QA) aspects of administering and coordinating NNWSI activities. This QAPP was developed to comply with the elements of 10CFR50 Appendix B (Ref. A) criteria which apply to the activities of the Project Office and their advisory staff. These activities are intended to conform with the applicable portions of ANSI/ASME NQA-1-1979 (Ref. B).

PURPOSE AND SCOPE

This QAPP defines the quality assurance program in effect for those activities of the NNWSI that are directly controlled by: DOE/NV, the Technical Overview Contractor, and the Quality Assurance Overview Contractor. It is intended as a supplement to the NNWSI-QAP.

1. ORGANIZATION

This section describes the DOE/NV, Technical Overview Contractor, and Quality Assurance Overview Contractor organizations and delineates their responsibilities. An organization chart is shown in Figure 1.

1.1 DOE/NV

1.1.1 DOE/NV has the ultimate responsibility for the NNWSI, including the quality assurance program. The Project Office has been established within the DOE/NV organization for management of the project. The Project Office discharges its quality assurance responsibilities, with the assistance and concurrence of the DOE/NV QA manager, by such activities as participation in design reviews and QA audits, review and approval of test plans and QA procedures, provision of QA surveillance and policy guidance, and review and approval of the Quality Assurance Program Plans (QAPP's) prepared by organizations participating in the project. The extent of involvement in these activities is shown elsewhere in this QAPP. Project management also encompasses planning activities and goals, and assessing progress toward those goals; planning budgets; and delegating responsibilities to participant organizations for completion of the various project tasks.

1.1.2 The NNWSI Project Manager is the management officer responsible for administering the NNWSI. The Project Coordinators are part of the NNWSI Project Office staff and assist the Project Manager in administering the NNWSI. The NNWSI Project Office, specifically the Project Manager, shall make the final decision on unresolved disputes regarding quality assurance matters that are brought to the attention of the Project Office.

ORGANIZATION CHART
NEVADA NUCLEAR WASTE STORAGE INVESTIGATIONS
MANAGEMENT AND OVERVIEW OPERATIONS

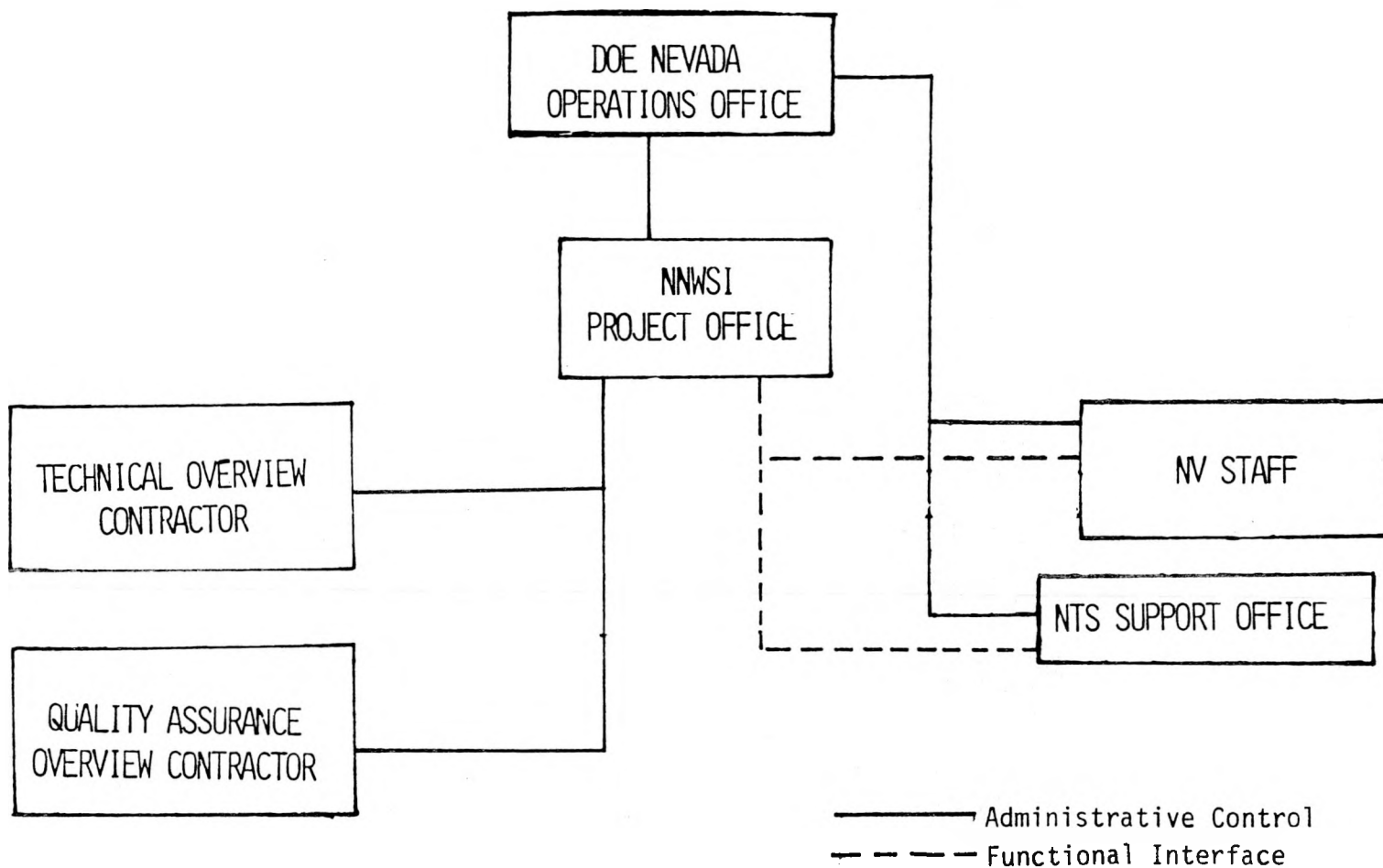


Figure 1

- 1.1.3 The Nevada Test Site Support Office (NTSSO) is responsible for field direction of work performed at NTS with the exception of that done by Westinghouse Electric Corporation which is managed directly by DOE/NV. The Project Manager makes the decisions concerning the type and extent of work assigned to the contractors and architect-engineers (A-E) through NTSSO for this project.
- 1.1.4 NV Staff assists the Project Manager by providing reviews, recommendations, and expertise on the various aspects of the NNWSI in terms of their respective responsibilities. The Project Manager is responsible for coordinating NV staff support.
- 1.1.5 The DOE/NV QA Manager is a policy guidance, surveillance, and audit position within DOE/NV management and is part of DOE/NV staff for the purposes of this document.
- 1.2 Technical Overview Contractor
 - 1.2.1 Sandia National Laboratories, NTS Waste Management Overview Division, is the Technical Overview Contractor for NNWSI and reports to the Project Manager. The activity is directed by the Technical Overview Officer, who is a Sandia National Laboratories (SNL) Division Supervisor. The Technical Overview Contractor has the lead responsibility for advising the Project Office on the following activities covered by this QAPP:
 - 1.2.1.1 Recommendations for planning, integration, coordination, and documentation of NNWSI technical activities.
 - 1.2.1.2 Interfacing with the National Waste Terminal Storage (NWTs) Program on technical issues designated by the Project Office.
 - 1.2.1.3 Reviewing NNWSI technical activities and reporting results to the Project Office.
 - 1.2.1.4 Planning, performance, and documentation of in-depth technical studies authorized by the Project Office.

1.3 Quality Assurance Overview Contractor

1.3.1 The Quality Assurance Overview Contractor organization for the NNWSI is SNL, Quality Assurance Advanced Planning Division. The Quality Assurance Overview Contractor is identified as QA Overview throughout the remainder of this QAPP. QA Overview is responsible directly to the Project Manager. The activities as given below are directed by a Quality Assurance Officer, who is a SNL Division Supervisor. QA Overview will:

- 1.3.1.1 Develop guidelines for and administer the NNWSI quality assurance program under the direction of DOE/NV.
- 1.3.1.2 Develop and maintain the NNWSI Quality Assurance Plan and the Management and Overview QAPP and related QA procedures.
- 1.3.1.3 Review all Participating Organization and Support Contractor quality assurance programs on behalf of DOE/NV.
- 1.3.1.4 Conduct audits of selected program activities under the direction of DOE/NV. Quality Assurance auditors will have access to all project quality-related activities and records.
- 1.3.1.5 Perform the necessary quality assurance functions to support and advise the Project Manager and his staff, and the Technical Overview Contractor on quality assurance matters. The extent of this support is detailed in this QAPP.
- 1.3.1.6 Notify the Project Manager of unsatisfactory work requiring stop work action. Unsatisfactory work may be discovered during surveillance, acceptance of work, or audits. The Project Manager, or a designated Project Office alternate, will issue stop work orders for NNWSI activities. Stop work actions and necessary corrective actions will be documented in Nonconformance Reports and audit reports, as appropriate.

1.3.2 The qualification requirements for Quality Assurance Engineers (SNL) are:

1.3.2.1 Engineering or Science Degree, or equivalent experience.

1.3.2.2 Formal training or sufficient quality assurance experience to establish requirements and develop the overall quality assurance program for the NNWSI.

1.4 Interfaces

1.4.1 Interfaces for quality assurance program requirements are established between the Project Office, the DOE/NV QA Manager, the Technical Overview Contractor, and QA Overview, and with the Participating Organizations and Support Contractors as described herein. The Project Manager will be cognizant of NTSSO activities and the progress of work assigned to NTSSO contractors and A-E's. Work done by these organizations in direct support of the Project Office, Technical Overview Contractor, or QA Overview activities is initiated through the NTS system defined in DOE/NV Standard Operating Procedure NTSO-SOP-6001, Part I.

1.4.2 QA Overview will interface with the Project Office, the DOE/NV QA Manager, and the Technical Overview Contractor by memorandum correspondence and by the methods described in this QAPP for reviewing and distributing controlled documents (ref. Section 6).

1.4.3 The Project Office interfaces with the various organizations working on NNWSI by means of reports and meetings, scheduled at the discretion of the Project Manager. Progress, problems, status, budget, and similar items are discussed. These reports and meetings provide the Project Office with management review needed to evaluate and direct the project activities.

1.4.4 Since the Project Office has no contracts, as such, with the participating organizations, project quality assurance requirements are forwarded to them by means of procedures or documents prepared by QA Overview and approved by the

Project Manager and the DOE/NV QA Manager. They are distributed either through the document control procedures of Section 6 or by a similarly approved DOE/NV cover letter.

2. QUALITY ASSURANCE PROGRAM

2.1 Requirements

The quality assurance program implemented according to this plan complies with 10CFR50 Appendix B, and is intended to meet ANSI/ASME NQA-1-1979 requirements, as applicable. (See paragraph 2.2 below.)

2.2 Scope of Work

Activities by DOE/NV, the Technical Overview Contractor, and QA Overview directly affecting quality are: 1) overall program administration, 2) decisions directing or redirecting site evaluation studies, 3) auditing of the overall quality assurance program by the Project Office and DOE/NV QA, and 4) the procurement of services as needed to support the project. The quality assurance program for these activities utilizes existing procedures of DOE/NV and Sandia National Laboratories, plus additional procedures developed specifically for NNWSI use by both organizations. A matrix containing a cross-reference of the QAPP and associated procedures with the applicable elements of 10CFR50 Appendix B and ANSI/ASME NQA-1 is shown as Figure 2.

2.3 Program Control and Assessment

The Project Manager and DOE/NV QA Manager will assess the status of the overall quality assurance program through periodic management staff meetings attended by representatives of QA Overview. Representatives of Participating Organizations will attend and participate in these meetings at the invitation of the Project Manager.

2.4 Training

Training is conducted in orientation briefings that are held on an as-needed basis to acquaint DOE/NV, Technical Overview Contractor, and QA Overview personnel on operation and use of the quality assurance program defined herein. QA Overview will schedule and conduct these briefings and maintain records of attendees.

Figure 2
NNWSI Management and Overview
QA Procedures

<u>10CFR50, App. B Criterion</u>	<u>QAPP Section</u>	<u>QA Procedure</u>	<u>Applicable NQA-1 Sections</u>	<u>Non-applicable NQA-1 Sections</u>
I.	1	None	1, 1S-1, 1A-1	
II.	2	None	2, 2S-1 (1), 2S-3 (2), 2A-2	2S-2, 2A-1, 2A-3
III.	3 (3)	QP-06-02 NTSO-SOP-6001	3S-1 (3)	3A-1
IV.	4	Federal Procurement Specifications EP401414 QP-04-01 QP-04-02 QP-04-03 QP-04-04 QP-04-05 QP-04-06 QP-04-07	4, 4S-1, 4A-1 (4)	
V.	5	QMP-06-01 QP-06-01	5 (5)	
VI.	6	QMP-06-01 QP-06-01 QP-06-02 QP-17-01 Unclassified Sandia Reports: Approvals and Controls	6, 6S-1	
VII.	7	QP-07-01 QP-07-02 QP-07-03 QP-10-01	7 (6), 7S-1 (6)	7A-1
VIII.	8			
IX.	9			
X.	10	QP-10-01 QP-07-01	10 (7), 10S-1 (7)	

Figure 2 (Continued)
NNWSI Management and Overview
QA Procedures

<u>10CFR50, App. B Criterion</u>	<u>QAPP Section</u>	<u>QA Procedure</u>	<u>Applicable NQA-1 Sections</u>	<u>Non-applicable NQA-1 Sections</u>
XI.	11			
XII.	12			
XIII.	13			
XIV.	14			
XV.	15	QP-15-01	15 (8), 15S-1 (8)	
XVI.	16	QP-15-01	16	
XVII.	17	QP-17-01 and Section 6	17, 17S-1 (9)	17A-1
XVIII.	18	QP-18-01 QP-18-02	18, 18S-1, 18A-1	

Figure 2 (Continued)
NNWSI Management and Overview
QA Procedures

Explanation of notes in matrix

Note #

1. Supplement 2S-1 is used to the extent that "inspection" is done on procured services of an inspectable nature (quantifiable characteristics). Inspection is performed by peers of the service being inspected. No formal training programs are used nor are lists of qualified inspectors maintained. Built in controls require Technical Overview to consult with QA Overview before assigning an individual to an inspection job.
2. Supplement 2S-3, Sections 2.1 and 4.0 are not used. Section 3.3 is followed to the extent that experience is required to be a lead auditor, but there is no set requirement. In Section 6.2, only (a), (b), and (c), certification, are used.
3. Limited to activities described in M&O-QAPP.
4. Appendix 4A-1, 3a.c-k, 3.2 are not applicable to activities covered by M&O-QAPP.
5. Basic Requirement 5 limited to procedures.
6. Applicable to procurement of services only.
7. Applicable to services that are of an "inspectable" (quantifiable) nature.
8. Segregation aspects of Basic Requirement 15 and Supplement 15S-1 are not used due to nature of job. Other aspects of requirement are addressed.
9. Supplement 17S-1 - There will not be a list of personnel with access to records (Sec. 5.0).

2.5 Quality Classification Levels

DOE/NV, the Technical Overview Contractor, and QA Overview use a procedure that implements a system for graded application of controls by providing the method for determining and documenting the controls necessary for specific activities. The controls provided by this QAPP may then be applied to activities in a graded manner. The extent of control application (i.e., graded application) to any activity will be dependent on its impact to "safety" or project objectives.

3. DESIGN CONTROL

3.1 Scope of Activities

3.1.1 The Project Office does not do any "design" work as it is normally defined. Special studies are defined and design work is assigned to other organizations by the Project Office. DOE/NV participates in design reviews but does not have the necessary staff to conduct an independent design review apart from the QA programs of project participants.

3.1.2 DOE/NV, the Technical Overview Contractor, and QA Overview review documents generated by participant organizations for programmatic, policy, and quality assurance content. The types of documents reviewed will be determined by the Project Manager and include such documents as test plans, etc. The results of reviews will be documented.

3.2 Nevada Test Site Support Office (NTSSO)

3.2.1 NTSSO is the interface between the various Participating Organizations and the Support Contractors performing work for DOE/NV in Nevada. Criteria letters describing needed work are prepared by the Participating Organizations. They are received by NTSSO and assigned to the appropriate Support Contractor for development of detailed work plans, designs, etc.

3.2.2 The activities and procedures governing NTSSO processing of criteria letters and assignment of work to Support Contractors is detailed in DOE/NV procedures. Procedural

definitions include methods for control of work, approvals for designs, documents, etc., and control of revisions necessitated by revised criteria letters.

3.3 Technical Overview Contractor

3.3.1 The Technical Overview Contractor will perform special technical studies to investigate general areas of programmatic impact that result in establishment of criteria or project direction, or confirm results or conclusions of Participating Organizations. Scopes of Work will define these special study activities.

3.3.2 Scopes of Work will be controlled as follows:

3.3.2.1 Control of the Scope of Work documents will be per the document control procedure defined in Section 6 of this chapter. Included are requirements for document identification and revision control.

3.3.2.2 Procedures will define review, approval, and control methods of Scope of Work documents. Approval requirements will include review by a peer, plus approval by the Technical Overview Contractor and QA Overview.

3.3.2.3 Review and approval of changes to Scope of Work documents will be the same as for the original document. These procedures are contained in the procedure defining document review, approval, and control methods.

4. PROCUREMENT DOCUMENT CONTROL

4.1 DOE/NV

4.1.1 The DOE/NV Contracts and Procurement Division is responsible for DOE/NV requisition of materials and services for NNWSI operations. Activities of this division are governed by Federal Procurement Regulations, supplemented by DOE Procurement Regulations. These procedures provide controls for the origination of and revisions to procurement documents and the selection of suppliers and contractors.

- 4.1.2 Procurement documentation may be initiated by any DOE/NV personnel by submitting an approved statement of work through the DOE/NV QA Manager to the Contracts and Procurement Division. Statements of work will contain necessary technical and quality assurance requirements. The actual procurement documents (purchase orders, etc.) are prepared and issued, and suppliers selected by the Contracts and Procurement Division as described above.
- 4.1.3 QA Overview may be requested to review DOE/NV statements of work to assure inclusion of necessary quality assurance requirements. In this event, QA Overview will acknowledge completeness of statements of work by memorandum or TWX, signed by a QA Overview representative, and attached to the statement of work sent to the Project Manager and DOE/NV QA Manager. Review by QA Overview will concentrate on assuring inclusion of necessary quality assurance provisions. Inadequate quality assurance requirements will be documented in a request to the Project Office (DOE/NV) for revisions to the statement of work.
- 4.2 Sandia National Laboratories Purchases
 - 4.2.1 The SNL Directorate of Purchasing and Materials Management is responsible for the acquisition of services for the Technical Overview Contractor and QA Overview. The directorate policies and procedures govern the organizational activities and define the controls placed on procurement documentation. Controls include methods for selection of suppliers, conversion of Purchase Requisitions (PR) into Purchase Orders (PO), contracts, etc., and control of procurement documents and their revisions. Adequate control of SNL purchasing activities is assured by internal audits by Quality Assurance Overview (in conjunction with the internal SNL auditing organization).

- 4.2.2 Procurement documentation may be initiated by any individual in the Technical Overview Contractor or QA Overview organizations on a Purchase Requisition containing both the technical and quality assurance requirements. Conversion into Purchase Orders, contracts, etc., will be accomplished by the SNL Purchasing organization in accordance with the procedures described above.
- 4.2.3 QA Overview will review Purchase Requisitions. This review will verify inclusion of necessary quality assurance provisions. Approval is by signature of a QA Overview representative on the Purchase Requisition during routine approval before the Purchase Requisition is transmitted to the Purchasing organization. Review of the Purchase Order will be made after issuance in that Purchasing organization procedures provide for exact translation of requirements from the Purchase Requisition to the Purchase Order. QA Overview review of the Purchase Order will verify this translation.
- 4.3 DOE/NV conveys quality assurance requirements to contractors (other than Participating Organizations and Support Contractors) in procurement documents. DOE/NV procurement documents include a specification of quality assurance program requirements as a contractual requirement. These requirements may be supplemented by specialized quality assurance requirements as need dictates, or when requested for inclusion by a Participating Organization.
- 4.4 Quality assurance program requirements will be conveyed to suppliers and contractors for the Technical Overview Contractor and Quality Assurance Overview by a SNL Engineering Procedure included as a contractual requirement.

5. INSTRUCTIONS, PROCEDURES, AND DRAWINGS

- 5.1 All procedures implementing this quality assurance program are contained in the document control system described in Section 6. These procedures and resulting controlled documents include, but are not limited to:

- 5.1.1 QA Procedures
- 5.1.2 Scopes of Work
- 5.1.3 SNL reports (SAND reports) which have inputs to the project for SNL (overview organizations) work
- 5.1.4 Inspection Instructions
- 5.2 The procedures used are listed in Figure 2. The "QMP" series of procedures are used by the Project Office, the Technical Overview Contractor, and QA Overview. The "QP" series of procedures are internal SNL procedures used by the Technical Overview Contractor and QA Overview. Facility and equipment drawings will not be originated or controlled in the course of work covered by this QAPP.
- 5.3 The M&O-QAPP is generated and maintained by QA Overview. QA procedures will normally be generated by QA Overview. Scope of Work documents are normally generated by the Technical Overview Contractor. Inspection procedures are normally generated by QA Overview.

6. DOCUMENT CONTROL

- 6.1 The controlled documents to be utilized directly by DOE/NV, the Technical Overview Contractor, and QA Overview are the instructions and procedures listed in Section 5 plus related project procurement documents.
- 6.2 Document control procedures define:
 - 6.2.1 The method of identification of each document type listed in 6.1 (above).
 - 6.2.2 The identification of documents.
 - 6.2.3 The assignment of responsibilities for generation and maintenance for each type of document.
 - 6.2.4 The review and approval requirements for each type of document.
 - 6.2.5 The method of revision control for each type of document.
 - 6.2.6 The method and control of distribution for each type of document. The minimum distribution of documents is in accordance with approved lists.

- 6.3 The responsibility for use of the current revision of all documents is vested in the using individual. A current list of all documents in the above categories, including revision status will be maintained in the Project Record Center. Required documents will be distributed to the work area before work is initiated. Distribution methods are noted in item 6.2.6, above.

7. CONTROL OF PURCHASED MATERIALS, EQUIPMENT, AND SERVICES

- 7.1 Usually no materials or equipment affecting the outcome or quality of work will be procured directly by the Project Office, the Technical Overview Contractor, or QA Overview. The elements of this Section will not normally apply to Support Contractors or Participating Organizations.
- 7.2 Potential contractors are evaluated for their ability to provide contract deliverables of desired quality. The extent of evaluation and documentation of results is dependent on the impact of the results of the contracted activity. The respective purchasing organization (DOE/NV or SNL) will notify the requestor of the receipt of bids, and then potential contractors will be evaluated by technical and QA personnel. Evaluation will be based upon either a review of records of the potential contractor's past performance, a review of the potential contractor's proposed processes and quality assurance program, or a preliminary survey of the potential contractor's facilities and quality assurance program.

When a preliminary survey is selected as the basis for contractor evaluation, it will be scheduled and conducted by the respective purchasing organization (DOE/NV or SNL) upon request by the using organization. Representatives from the using organization and QA Overview will assist in preliminary surveys at their request, or when requested by the respective purchasing organization. Preliminary surveys for contracts are to be performed according to a plan and results are to be documented.

- 7.3 Where necessary and specified in Purchase Requisitions, access to contractor facilities for the purpose of audits and acceptance of work will be provided in purchase order agreements. Audits will be planned and conducted using procedures which define characteristics to be reviewed. Quality Operations Instructions (QOI's), SNL inspection instructions developed by QA Overview, will contain criteria for acceptance of work of an inspectable nature. QOI's will be developed from the technical requirements included in the purchase contract.
- 7.4 Services provided under this section will be evaluated during the performance of the work or upon receipt by the contracting agency (DOE/NV or SNL). The bases for evaluation are the requirements stated in the contract, and results of the evaluation are to be documented. Any nonconformances will be reported and dispositioned by the methods of Section 15 of this QAPP.
8. IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS
- 8.1 No materials, parts, or components affecting the outcome or quality of work are under the direct responsibility of DOE/NV, the Technical Overview Contractor, or QA Overview. Equipment purchased for DOE contract work will be controlled by Participating Organization or Support Contractor quality assurance programs and is not covered under this plan. Those systems for identification and control of materials, parts, and components will be subject to Project Office surveillance and audit.
9. CONTROL OF SPECIAL PROCESSES
- 9.1 Special processing will be generally performed by Participating Organizations or Support Contractors and will be controlled by their DOE-approved quality assurance programs. DOE/NV, the Technical Overview Contractor, and QA Overview require no separate provisions for control of special processing. The Project Office will, however,

review and approve designated special processes proposed by Participating Organizations and Support Contractors, and monitor qualification of these processes and personnel.

10. INSPECTION

10.1 Inspection will usually be limited to evaluation of procured services. Hardware, if required, will be procured and inspected by Participating Organizations and Support Contractors per approved QAPP's. QOI's will be used to document acceptance criteria, and utilized to the extent defined in Section 7.3. QA Overview individuals performing inspections or evaluations shall have the necessary qualifications as outlined in Section 1.3. Technical Overview Contractor personnel performing inspections or evaluations shall be designated by the Technical Overview Officer, after consultation with QA Overview, and be qualified as peers of the service being inspected or evaluated.

11. TEST CONTROL

11.1 Testing will be performed and controlled by Participating Organizations or Support Contractors per their approved QAPP's. DOE/NV, the Technical Overview Contractor, and QA Overview will perform no direct test control activities.

Planning documents for testing will be reviewed by the Project Office, and approved by the Project Manager. The Technical Overview Contractor and QA Overview will participate in these reviews to the extent directed by the Project Manager.

12. CONTROL OF MEASURING AND TEST EQUIPMENT

12.1 No activities requiring measurement or test equipment will be directly performed by DOE/NV, the Technical Overview Contractor, or QA Overview. All measuring and test equipment will be under the control of Participating Organizations or Support Contractors per their QAPP's.

13. HANDLING, STORAGE, AND SHIPPING

13.1 Operations covered by this criterion are the responsibility of Participating Organizations or Support Contractors in the NNWSI project and will be controlled by their QAPP's.

14. INSPECTION, TEST, AND OPERATING STATUS

14.1 All activities covered by this criterion are the responsibility of Participating Organizations or Support Contractors and will be controlled by their QAPP's.

15. NONCONFORMANCES

15.1 A Nonconformance Report (NCR) form will be used by Technical Overview and QA Overview to document all information and data concerning nonconformances discovered in their course of work. Disposition of the NCR will be in accordance with a procedure requiring review by the SNL Nonconformance Review Committee consisting of QA Overview, chairman, Technical Overview, and a technical expert member named by the committee when necessary. The committee will make disposition on the NCR and approve the necessary corrective action. All committee action will be documented including the satisfactory completion of the indicated corrective action.

15.2 A memorandum will be used by the Project Office to document nonconformance information and corrective action requests to Participating Organizations and Support Contractors.

16. CORRECTIVE ACTION

16.1 Nonconformances, and circumstances contributing to the nonconformance, will be evaluated by the SNL Nonconformance Review Committee during review for disposition of the NCR. Refer to Section 15 of this QAPP for details of generation and disposition of the NCR. Corrective action documented on NCR's will include necessary provisions to minimize the potential of recurrence of nonconformances. Necessary contractor corrective action will be

coordinated through the SNL purchasing organization for transmittal to the affected contractors. QA Overview and appropriate contracting agency representatives will review contractor activities to verify proper implementation of the corrective action program. Suitable means of review such as audits, surveillance, or monitoring will be used as necessitated by circumstances.

- 16.2 The Project Office will request corrective actions on nonconformances by sending memoranda to appropriate organizations. Corrective action follow-up will be done by using audits or surveillance techniques.

17. QUALITY ASSURANCE RECORDS

- 17.1 QA records to be retained include, but are not limited to:
- 17.1.1 Documents listed in Section 6.1
 - 17.1.2 Audit plans and reports
 - 17.1.3 Nonconformance reports
 - 17.1.4 Supplier evaluation reports
- 17.2 Temporary storage of QA records by DOE/NV, the Technical Overview Contractor, and QA Overview will be in access-controlled files until transfer to the Project Record Center.
- 17.3 The Project Office will control the temporary files at DOE/NV. QA Overview will control the temporary files at SNL for the Technical Overview Contractor and QA Overview.
- 17.4 QA records generated by DOE/NV, the Technical Overview Contractor, and QA Overview will normally be transferred to the Project Record Center at monthly intervals. Longer intervals are used if there is insufficient accumulation of records to be transferred.

18. AUDITS

- 18.1 The Project Office will assure audits are conducted to cover activities described in this QAPP. Audit teams will include representatives from Project Office, NV staff, QA Overview,

Technical Overview, or consultant organizations, as appropriate. Project Office or NV staff personnel will act as the lead auditor of these teams.

- 18.2 Audits of these activities will be shown in the annual Project Office audit schedule. Audit numbers will be assigned in accordance with the Project Office audit schedule.
- 18.3 SNL auditors will be qualified in accordance with project requirements that require attendance at auditor training courses, knowledge of the NNWSI quality assurance program, and QA principles. Previous audit experience is required to qualify as a SNL lead auditor. These auditors will be included on the list of auditors qualified for NNWSI audits.
- 18.4 Each audit will be performed to an audit plan developed by the lead auditor with concurrence by audit team members. The audit plan will reference the audit number. Procedures will define the required actions to plan, conduct, and report an audit.
- 18.5 Audit findings will be reviewed in a closeout meeting with the audited organization. An audit report will be issued to the Project Manager, DOE/NV, referencing the audit number. The Project Manager will review the audit findings with the DOE/NV QA Manager and issue the audit report to the audited organization with requests for corrective action included. The lead auditor will review the proposed corrective action to assure that audit findings will be adequately corrected.
- 18.6 Follow-up action, including verification of corrective action, shall be taken when necessary. A re-audit may also be required if extensive corrective action is necessary to correct audit findings.

References

- A. Code of Federal Regulations, Title 10, Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants."
- B. American National Standards Institute Specification ANSI/ASME NQA-1-1979, "Quality Assurance Program Requirements for Nuclear Facilities."

Definitions

The definitions of quality assurance terms used in this Quality Assurance Program Plan shall be as given in American National Standards Institute specification ANSI/ASME NQA-1-1979, Supplement S-1 (Ref. B) with the following additions:

Contractor - organizations under contract to provide services.

NNWSI - Nevada Nuclear Waste Storage Investigations.

NTS - Nevada Test Site.

Participant Organizations - those government agencies and national laboratories participating in NNWSI activities. The Participating Organizations are:

Los Alamos Scientific Laboratory (LASL)

Lawrence Livermore National Laboratory (LLNL)

Sandia National Laboratories (SNL)

U.S. Geological Survey (USGS)

Quality Assurance Program Plan (QAPP) - the document that describes the quality criteria, practices, and procedures necessary to achieve the desired quality levels for NNWSI.

Quality Assurance Program - the planned systematic quality actions which assure that all activities of the Nevada Nuclear Waste Storage Investigations are accomplished per the QAPP to the required quality levels.

Supplier - organizations under contract to provide materials or components.

Support Contractors - the organizations directly under contract to DOE/NV.

The Support Contractors are:

Fenix and Scisson, Inc. (F&S)

Holmes and Narver, Inc. (H&N)

Reynolds Electrical and Engineering Company (REECO)

Westinghouse Electric Corporation, Advanced Energy Systems Division
(W/AESD)

NEVADA NUCLEAR WASTE STORAGE INVESTIGATIONS

STANDARD MINIMUM DISTRIBUTION LIST

U. S. Department of Energy
Assistant Secretary
for Defense Programs
Mail Stop SF-066
Washington, D.C. 20545
Duane C. Sewell (DP-1)

U. S. Department of Energy
Assistant Secretary Nuclear Energy
Mail Stop 6E-09S
Washington, D.C. 20545
George W. Cunningham (NE-1)

U. S. Department of Energy
Office of Nuclear Waste Management
Mail Stop B-107
Washington, D.C. 20545
Sheldon Meyers (NE-30)
Raymond G. Romatowski (NE-30)
Colin A. Heath (NE-30)
Donald L. Vieth (NE-30)
Ralph Stein, OW (NE-30)
Carl R. Cooley (NE-30)
Mark W. Frei (NE-30)
G. P. Dix (EV-12)
C. D. Newton, (NE-30)

U. S. Department of Energy
Richland Operations Office
Post Office Box 550
Richland, WA 99352
Frank Standerfer
David J. Squires

U. S. Department of Energy
Albuquerque Operations Office
Post Office Box 5400
Albuquerque, NM 87115
Dorner T. Schueler, Jr.

U. S. Department of Energy
San Francisco Operations Office
1333 Broadway, Wells Fargo Bldg.
Oakland, CA 94612
Leonard Lanni

Rockwell International
Atomics International Division
Rockwell Hanford Operations
Richland, WA 99352
Raul Deju
Bernie Dietz

U. S. Department of Energy
Nevada Operations Office
Post Office Box 14100
Las Vegas, NV 89114
Mahlon E. Gates
Robert W. Taft
Robert W. Newman
James B. Cotter
Mitchell P. Kunich
Henry L. Melancon
Charles P. Bromley
Frank C. Hood
Allen J. Roberts
Robert M. Nelson
David G. Jackson
Paul J. Mudra
Roy H. Marks, CP-1
Shed R. Elliott
Bruce W. Church
Thomas H. Blankenship
Robert R. Loux (10)

U. S. Department of Energy
NTS Support Office
Post Office Box 435
Mercury, NV 89023
Joseph H. Dryden
Fred Huckabee
Lester P. Skousen

Director of External Affairs
U. S. Department of Energy
DOE-IX
333 Market Street, 7th Floor
San Francisco, CA 94105
Dale J. Cook

U. S. Department of Energy
Columbus Program
Richland Operations Office
505 King Avenue
Columbus, OH 43201
Jeff O. Neff

Nuclear Regulatory Commission
Washington, D.C. 20555
James C. Malaro, M/S SS-674
Regis Boyle, M/S P-522

Holmes & Narver, Inc.
Post Office Box 14340
Las Vegas, NV 89114
A. E. Gurrola

Lawrence Livermore National Laboratory
University of California
Post Office Box 808
Livermore, CA 94550

Lawrence D. Ramspott, L-204
Alfred Holzer, L-209
Lynden B. Ballou, L-204 (3)
J. S. Kahn, L-49
Kenneth Street, L-209
Richard C. Carlson, L-204
Aubrey B. Miller, L-204

Los Alamos Scientific Laboratory
University of California
Post Office Box 1663
Los Alamos, NM 87545

Kurt Wolfsberg, M/S 514
Lawrence S. Germain, M/S 570
Lloyd Lanham, M/S 755
Bruce R. Erdal, M/S 514
Joseph R. Smyth, M/S 978
Dean C. Nelson, M/S 985

Sandia National Laboratories
Post Office Box 5800
Albuquerque, NM 87185

Everet H. Beckner - 4500
Richard W. Lynch - 4530
Wendell D. Weart - 4510
Richard C. Lincoln - 4538 (7)
Frank W. Muller - 1417
Gerald F. Rudolfo - 1417
Lynn D. Tyler - 4537
Morgan L. Kramm - 4540
Robert M. Jefferson - 4550

Westinghouse Electric Corp.
Post Office Box 708
Mercury, NV 89023

Dave C. Durrill (7)
Anthony R. Hakl

Westinghouse Electric Corp.
Post Office Box 10864
Pittsburgh, PA 15236

James B. Wright (6)
W. R. Morris
T. E. Cross
R. J. Bahorich
Charles R. Bolmgren
W. A. Henninger

Nuclear Fuel Cycle Research
University of Arizona
Tucson, AZ 85721

James G. McCray

U. S. Geological Survey
National Center
Reston, VA 22092

G. D. DeBuchananne, M/S 410
Peter R. Stevens, M/S 410
David B. Stewart, M/S 959

U. S. Geological Survey
Post Office Box 25046
Federal Center
Denver, CO 80301

Gary L. Dixon, M/S 954
William S. Twenhofel, M/S 954

Geological Society of America
3300 Penrose Place
Boulder, CO 80301

John C. Frye

Kansas Geological Survey
University of Kansas
Lawrence, KS 66044

W. W. Hambleton

Battelle
Office of Nuclear Waste Isolation
505 King Avenue
Columbus, OH 43201

Neal E. Carter
Samuel J. Basham
John A. Carr
ONWI Library (5)
Richard A. Robinson
Wayne A. Carbiener

State of Nevada
Capitol Complex
Carson City, NV 89710

Robert Hill
State Planning Coordinator
Governor's Office of Planning
Coordination

Fenix & Scisson, Inc.
Post Office Box 498
Mercury, NV 89023
Fred D. Waltman

State of Nevada
Capitol Complex
Carson City, NV 89710
Noel Clark
Department of Energy

Woodward-Clyde Consultants
No. 3 Embarcadero Center
San Francisco, CA 94111
Western Region Library

Holmes & Narver, Inc.
Post Office Box I
Mercury, NV 89023
George E. Christensen

John A. Blume Engineers
Sheraton Palace Hotel
130 Jessie Street
San Francisco, CA 94105
Peter Yanev

Department of Earth Sciences
Harvard University
Cambridge, MA 02138
Raymond Siever

Department of Earth Sciences
Dartmouth College
Hanover, NH 03755
John Lyons

International Atomic Energy Agency
Division of Nuclear Power & Reactors
Karntner Ring 11
Post Office Box 590, A-1011
Vienna, Austria
John P. Colton

Technical Information Center (27)
U. S. Department of Energy
Post Office Box 62
Oakridge, TN 37830

Fenix & Scisson, Inc.
Post Office Box 15408
Las Vegas, NV 89114
Jack A. Cross

Department of Civil Engineering
Princeton University
Princeton, NJ 07540
George Pinder

California Energy Resources
Conservation & Development
Commission
1111 Howe Avenue
Sacramento, CA 95825
Art Soinski

Lawrence Berkeley Laboratory
Energy & Environment Division
University of California
Berkeley, CA 94720
Paul Witherspoon

Hanford Engineering Development
Laboratory
Post Office Box 1970
Richland, WA 99352
Dave Cantley

Arthur D. Little, Inc.
Acorn Park
Cambridge, MA 02140
Charles R. Hadlock

Department of Geological
Sciences
Brown University
Providence, RI 02912
Bruno Giletti

Center for Tectonophysics
Texas A&M University
College Station, TX 77840
John Handin

Law Engineering Testing Co.
2749 Delk Road, S.E.
Marietta, GA 30067
Bud Woodward

Subcommittee on Energy
Research & Production
Room B-374
Rayburn House Office Bldg.
Washington, D.C. 20575
Steve Lanes, Staff Director

Bureau of Radiation Control
Department of Health and Environment
Forbes Field
Topeka, KS 66620
Gerald W. Allen, Director

Energy Research and Policy
State of Connecticut
80 Washington Street
Hartford, CT 06115
Ms. Faith N. Brenneman

Executive Office
Lansing, MI 48909
William C. Taylor
Science Advisor

Director for Policy and Planning
Room 300, 325 West Adams Street
Springfield, IL 62706
Dr. Anthony Liberatore

Nuclear Projects Coordinator
Nuclear Energy Division
Post Office Box 14690
Baton Rouge, LA 70808
L. Hall Bohlinger

Oregon Department of Energy
Labor & Industries Bldg.
Room 111
Salem, OR 97310
Donald W. Godard

Radiation Protection Division
1000 Northeast 10th Street
Post Office Box 53551
Oklahoma City, OK 73152
Robert L. Craig
Director

Reynolds Electrical &
Engineering Co., Inc.
Post Office Box 14400
Las Vegas, NV 89114
Harold D. Cunningham, M/S 555
William G. Flangas, M/S 615
Gaylan W. Adair, M/S 154
Victor M. Milligan, M/S 765
Collin W. Dunnam, M/S 745
Robert L. Powell, M/S 634
Richard B. Land, M/S 585

Radiation Health
Information Project
Environmental Policy Inst.
317 Pennsylvania Ave., S.E.
Washington, D.C. 20003
Ms. Elli Walters

State of South Carolina
Division of Energy Resources
Edgar A. Brown Bldg.
1205 Pendleton Street
Columbia, SC 29201
Dr. Lamar E. Priester, Jr.

Federal Agency Relations
1050 17th St., N.W.
Washington, D.C. 20036
Owen H. Davis, Director

Environmental Program Supervisor
903 Ninth Street Office Bldg.
Richmond, VA 23219
Keith J. Buttleman

Energy Administration
Department of Natural Resources
Tawes State Office Bldg.
Annapolis, MD 21401
Paul Massicot
Acting Director

State of Ohio Environmental
Protection Agency
Box 1049, 361 E. Broad St.
Columbus, OH 43216
James F. McAvoy
Director

State of Connecticut
House of Representatives
One Hundred and Sixth District
24 Rock Ridge Road
Newtown, CT 06470
John W. Anderson

Missouri Department of Natural Resources
Post Office Box 176
Jefferson City, MO 65102
Todd D. Davis

Mississippi Department of Natural Resources
Suite 228, Barefield Complex
455 North Lamar Street
Jackson, MS 39201
P. T. Bankston

Tennessee Energy Authority
Suite 708 Capitol Blvd. Bldg.
Nashville, TN 37219
Jack A. Thomas
Associate Director

Council Member
374 South Rock River Drive
Berea, OH 44017
Dr. George A. Brown

Public Law Utilities Group
One American Place, Suite 1601
Baton Rouge, LA 70825
Ms. Doris Falkenheier
Assistant Director

Associate Dean for Research
Georgia Institute of Technology
Atlanta, GA 30332
Richard Williams

Fenix & Scisson, Inc.
Post Office Box 498
Mercury, NV 89023
D. A. Robins

Reynolds Electrical & Engineering Co., Inc.
Post Office Box 14400
Las Vegas, NV 89114
E. H. Weintraub, M/S 625

U. S. Department of Energy
Division of Waste Isolation
Germantown, MD 20767
J. W. Rowen, (DP-342)
M. E. Langston, (ME-512), M/S B-107

Energy Facility Site
Evaluation Council
820 East Fifth Avenue
Olympia, WA 98504
Nicholas D. Lewis

University of Texas at Austin
University Station, Box X
Austin, TX 78712
E. G. Wermund

Department for Human Resources
Commonwealth of Kentucky
Frankfort, KY 40601
Richard M. Fry

Office of Energy Resources
73 Tremont Street
Boston, MA 02108
Dr. Lillian Morgenstern

Department of Environmental
Regulation
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32301
Donald S. Kell

Holmes & Narver
Post Office Box I
Mercury, NV 89023
V. L. Angell

Westinghouse
Post Office Box 708
Mercury, NV 89023
R. L. Malloy

EG&G, Inc.
Post Office Box 295
Mercury, NV 89023
W. C. Roper

Office of Nuclear
Waste Isolation
505 King Avenue
Columbus, OH 43201
M. J. Golis

Hanford Engineering
Development Laboratory
Post Office Box 1970
Richland, WA 99352
D. L. Garland