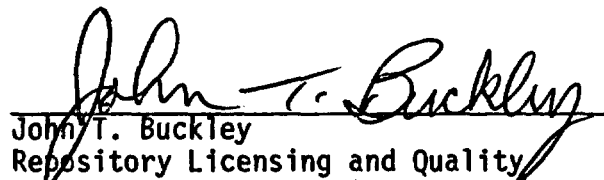
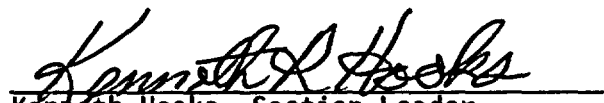


U. S. NUCLEAR REGULATORY COMMISSION  
SAFETY EVALUATION  
FOR  
SCIENCE APPLICATIONS INTERNATIONAL CORPORATION  
TECHNICAL & MANAGEMENT SUPPORT SERVICES  
QUALITY ASSURANCE PROGRAM DESCRIPTION DOCUMENT  
(QAPD N-QA-093)

Prepared by:

  
John T. Buckley  
Repository Licensing and Quality  
Assurance Project Directorate  
Division of High-Level Waste Management

Reviewed and  
Approved by:

  
Kenneth Hooks, Section Leader  
Repository Licensing and Quality  
Assurance Project Directorate  
Division of High-Level Waste Management

## SAFETY EVALUATION

### 1. INTRODUCTION

The U.S. Department of Energy (DOE) established the Yucca Mountain Site Characterization Project (YMP) to investigate whether Yucca Mountain is a suitable site for the high-level radioactive waste repository. All YMP organizations (i.e., Yucca Mountain Site Characterization Project Office (YMPO), Nevada Test Site Support Contractors and Participating Organizations) were required to meet the requirements described in the Nevada Nuclear Waste Storage Investigations Quality Assurance (QA) Plan NNWSI/88-9, Revision 2 (88-9 QA Plan), and incorporate them into their QA Program Plans and procedures. The 88-9 QA Plan was superseded by the DOE Office of Civilian Radioactive Waste Management's (OCRWM) Quality Assurance Requirements Document (QARD), DOE/RW-0214, Revision 4, dated September 1990.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the QARD for the YMP and concluded that it contained adequate requirements and planned and systematic controls to address the requirements of Title 10 Code of Federal Regulations (10 CFR) Part 60, Subpart G and Appendix B to 10 CFR Part 50, in an acceptable manner, pending resolution of six issues identified by the NRC staff (ref. Linehan/Shelor letter dated December 3, 1990). The NRC staff further determined, based on recent audits and surveillances of OCRWM, that the OCRWM QA program was acceptable for new site characterization activities limited to those associated with the Midway Valley Trenching and Calcite Silica Activities (ref. Linehan/Shelor letter dated January 18, 1991). The NRC review criteria used in evaluating the OCRWM QARD are contained in the "NRC Review Plan for High-Level Waste Repository Quality Assurance Program Descriptions," Revision 2, dated March 1989 (NRC Review Plan), which elaborates on and identifies specific information needed by the NRC staff to determine compliance with the criteria of 10 CFR Part 50, Appendix B, as applicable.

The QARD can serve as an adequate framework for DOE/YMPO and its project participants to develop specific policies, plans, and procedures to implement the QA Program for the YMP. NRC staff is not reevaluating, in this Safety Evaluation (SE), approaches already approved in the QARD that Science Applications International Corporation and Technical Management Support Services (SAIC/T&MSS) has adopted.

This SE documents NRC's review and evaluation, against the NRC Review Plan, of the SAIC/T&MSS Quality Assurance Program Description, (QAPD) N-QA-093, Revision 4, which commits to comply with the requirements of the QARD. This SE also describes the regulatory criteria against which the SAIC/T&MSS QAPD was reviewed, provides a basis for NRC staff acceptance, and describes the differences from the NRC Review Plan. The six issues identified in the NRC review of the OCRWM QARD and QAPD are adequately addressed in the SAIC/T&MSS QARD.

## 2. BACKGROUND

DOE forwarded the SAIC/T&MSS QAPD, Revision 1 (ref. Shelor/Browning letter dated November 7, 1990) to the NRC for information and review. The NRC staff reviewed and evaluated the SAIC/T&MSS QAPD against the requirements contained in the NRC Review Plan. The NRC staff review resulted in 34 comments which were discussed with DOE, SAIC/T&MSS and the State of Nevada during a telephone conference on January 26, 1991.

On April 24, 1991, DOE forwarded the DOE responses and proposed resolutions to the NRC staff's comments, for NRC review and acceptance. Proposed changes were incorporated in Revision 4 of the SAIC/T&MSS QAPD which was sent to the NRC for review and acceptance (ref. Shelor/Linehan letter dated July 16, 1991). The NRC staff evaluated the SAIC/T&MSS QAPD to determine whether it contained the agreed upon changes.

## 3. STAFF EVALUATION

The following sections of the SAIC/T&MSS QAPD (Rev. 4) meet the applicable criteria of Appendix B to 10 CFR Part 50 as elaborated on in the NRC Review Plan.

### 3.1 SAIC/T&MSS QAPD Sections in Accordance with the Review Plan for High-Level Waste Repository Quality Assurance Program Descriptions, Rev. 2 and Appendix B, 10 CFR Part 50

- a. Section 1, "Organization" (Criterion I)
- b. Section 2, "Quality Assurance Program" (Criterion II)
- c. Section 3, "Design Control" (Criterion III)
- d. Section 4, "Procurement Document Control" (Criterion IV)
- e. Section 5, "Instructions, Procedures, Plans, and Drawings" (Criterion V)
- f. Section 6, "Document Control" (Criterion VI)
- g. Section 7, "Control of Purchased Items and Services" (Criterion VII)
- h. Section 8, "Identification and Control of Items, Samples and Data" (Criterion VIII)
- i. Section 9, "Control of Processes" (Criterion IX)
- j. Section 10, "Inspection" (Criterion X)
- k. Section 11, "Test Control" (Criterion XI)
- l. Section 12, "Control of Measuring and Test Equipment" (Criterion XII)
- m. Section 13, "Handling, Storage, and Shipping" (Criterion XIII)
- n. Section 14, "Inspection, Test and Operating Status" (Criterion XIV)
- o. Section 15, "Control of Nonconforming Items" (Criterion XV)
- p. Section 16, "Corrective Action" (Criterion XVI)
- q. Section 17, "Quality Assurance Records" (Criterion XVII)
- r. Section 18, "Audits" (Criterion XVIII)

The following section describes the area that differs from the NRC Review Plan and why NRC finds it acceptable:

3.2 SAIC/T&MSS QAPD Section Area Differing from the NRC Review Plan,  
Plus NRC Acceptance Rationale

Section 3 of the SAIC/T&MSS QAPD describes the requirements that apply to the design control process. Since SAIC/T&MSS is not responsible for engineering design, many of the review criteria presented in Section 3.0 of the NRC Review Plan are not applicable.

4. CONCLUSION

Based on its review and evaluation, the NRC staff concluded that the SAIC/T&MSS QAPD Revision 4, meets the requirements of 10 CFR Part 60, Subpart G and the applicable criteria of Appendix B to 10 CFR Part 50. The provisions to meet these requirements are contained in the NRC Review Plan, Revision 2, dated March 1989 and in the following documents, which are referenced in the NRC Review Plan:

- o ANSI/ASME, NOA-1, "Quality Assurance Program Requirements for Nuclear Facilities," 1986.
- o U.S. Nuclear Regulatory Commission, Generic Technical Position, "Peer Review for High-Level Nuclear Waste Repositories," NUREG-1297, 1987.
- o U.S. Nuclear Regulatory Commission, Generic Technical Position, "Qualification of Existing Data for High-Level Nuclear Waste Repositories," NUREG-1298, 1987.
- o U.S. Nuclear Regulatory Commission, "Technical Position on Items and Activities in the High-Level Waste Geologic Repository Program Subject to Quality Assurance Requirements," NUREG-1318, 1988.
- o U.S. Nuclear Regulatory Commission, "Final Technical Position on Documentation of Computer Codes for High-Level Waste Management," NUREG-0856, 1981.

The SAIC/T&MSS QAPD complies with the QARD that the NRC staff conditionally accepted on January 18, 1991. The NRC staff review of the SAIC/T&MSS QAPD concludes that it meets the aforementioned guidance and NRC staff positions or has provided an acceptable rationale for where they are not applicable.

On the basis of its detailed review and evaluation of the SAIC/T&MSS QAPD, the NRC staff concludes that it contains adequate requirements and planned and systematic controls that address each of the applicable criteria of Appendix B to 10 CFR Part 50, in an acceptable manner.