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1. Remove Page 3 of the Change Control Record (last page of Contents Section) and insert Page 3 of the Change Control Record, dated 12-01-89.

2. Insert in the front of the Introduction Section DOE Letter YMP:NAV-829, dated 11-16-89; NRC Acceptance Letter, dated 10-24-89; and NRC Safety Evaluation of the FSN Quality Assurance Program Plan.

By signing below the recipient acknowledges that the above instructions have been complied with and that obsolete documents have been destroyed or marked superseded.

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Signature

Date

Respectfully yours,

Manager of Quality Assurance
Fenix & Scisson of Nevada

11-27-89
Date

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FENIX & SCISSON OF NEVADA

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Approved by: [signature] 11-27-89
Manager of QA Date

/mjh 11-27-89

CHANGE CONTROL RECORD

TITLE: YMP QUALITY ASSURANCE MANUAL

DOCUMENT NO: See Below

REV. NO.	DATE	PAGES AFFECTED	REMARKS
	08-25-89	Issue of revised Procedure QAP-7.1(N), Rev. 2 and PIC #1 to QAP-5.1(N), Rev. 4. Delete Procedures QAP-7.2(N), Rev. 1 and QAP-10.1(N), Rev. 2.	
	09-11-89	Issue of new Procedure QAP-2.5(N), Rev. 0. Delete Procedure QAP-4.2(N), Rev. 1.	
	09-26-89	Issue revised Procedure QAP-16.3(N), Rev. 2 and Table of Contents, Rev. 15.	
	11-06-89	Issue revised Procedure QAP-5.1(N), Rev. 5 and Table of Contents, Rev. 16.	
	12-01-89	Issue of the U.S. Nuclear Regulatory Commission Acceptance letter and Safety Evaluation for the FSN Quality Assurance Program Plan, and DOE Transmittal Letter YMP:NAV-829, Dated November 16, 1989.	

Department of Energy
Nevada Operations Office
P. O. Box 98518
Las Vegas, NV 89193-8518

WBS 1.2.9.3
QA

NOV 16 1989

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Richard L. Bullock
Technical Project Officer for Yucca Mountain Project
Fenix and Scisson of Nevada
101 Convention Center Drive
Phase II, Suite P-250
M/S 403
Las Vegas, NV 89109

COPY

U.S. NUCLEAR REGULATORY COMMISSION (NRC) ACCEPTANCE OF THE FENIX AND SCISSON OF NEVADA (FSN) YUCCA MOUNTAIN PROJECT QUALITY ASSURANCE PROGRAM PLAN (QAPP), REVISION 6 (NN1-1990-0488)

Reference: Letter, Linehan to Stein, dtd. 10/24/89

The Yucca Mountain Project Office (Project Office) has received notification by copy of correspondence from the NRC to the Office of Civilian Radioactive Waste Management that FSN's QAPP, Revision 6, is acceptable. The NRC's evaluation of FSN's Quality Assurance Program is reflected in the Safety Evaluation enclosed in the subject correspondence. A copy of this enclosure is required to be included and distributed with each controlled copy of the FSN QAPP, Revision 6. Please submit an "information only" copy of the FSN QAPP, including the subject enclosure, to the Project Office for resubmittal to the NRC.

Should you have any questions, please contact Nancy A. Voltura of my staff at 794-7972.

N Voltura for
Donald G. Horton, Director
Quality Assurance
Yucca Mountain Project Office

YMP:NAV-829

Enclosure:
Ltr 10/24/89 Linehan to Stein,
w/encl

cc w/encl:
Ralph Stein, HQ (RW-30) FORS
D. E. Shelor, HQ (RW-3) FORS
M. J. Regenda, FSN, Las Vegas, NV
S. R. Dippner, SAIC, Las Vegas, NV, 517/T-08
J. W. Estella, SAIC, Las Vegas, NV, 517/T-08
K. O. Gilkerson, SAIC, Las Vegas, NV, 517/T-08
R. J. Bahorich, W, Las Vegas, NV, 517/T-12

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

OCT 24 1989

Mr. Ralph Stein, Associate Director
for Systems Integration and Regulations
Office of Civilian Radioactive Waste Management
U. S. Department of Energy, RW-30
Washington, D.C. 20545

Dear Mr. Stein:

On August 11, 1989, the U. S. Department of Energy (DOE) forwarded Revision 6 of the Fenix & Scisson of Nevada (F&S) Quality Assurance Program Plan (QAPP-002) for U. S. Nuclear Regulatory Commission (NRC) staff review and acceptance.

The NRC staff's evaluation is contained in the enclosed Safety Evaluation (SE). As noted in the conclusion of the SE, the NRC staff finds that the F&S QAPP, Revision 6, meets the applicable criteria of Subpart G to 10 CFR Part 60 and Appendix B to 10 CFR Part 50, and the plan is fully acceptable.

Changes may be made to the F&S QAPP if these changes do not downgrade DOE commitments that the NRC has already accepted. Changes that downgrade the program commitments should be submitted to the NRC for its review, evaluation, and acceptance.

A copy of this letter and the SE should be included with each controlled copy of the F&S QAPP, Revision 6. One copy should be resubmitted to NRC. Should you have any questions, please contact Mark Delligatti of my staff on (301) 492-0430.

Sincerely,

John J. Linehan, Director
Repository Licensing and Quality
Assurance Project Directorate
Division of High-Level Waste Management

Enclosure: As stated

cc: R. Loux, State of Nevada
M. Baughman, Lincoln County, NV
S. Bradhurst, Nye County, NV
D. Bechtel, Clark County, NV
C. Gertz, DOE/Nevada
K. Turner, GAO

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CC: VOLK - SAIC

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U. S. NUCLEAR REGULATORY COMMISSION
SAFETY EVALUATION
FOR
FENIX AND SCISSON OF NEVADA
QUALITY ASSURANCE PROGRAM PLAN
(QAPP 002)

Prepared by: James T. Conway 10/10/89

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

Reviewed and Approved by: James E. Kennedy 10/10/89

James E. Kennedy, Section Leader
Repository Licensing and Quality
Assurance Project Directorate
Division of High-Level Waste Management

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4/11

SAFETY EVALUATION

1. INTRODUCTION

The U. S. Department of Energy (DOE) established the Yucca Mountain 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 Project Office (YMPO), Nevada Test Site (NTS) Support Contractors and Participating Organizations) must 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 (QAPPs) and procedures.

The U. S. Nuclear Regulatory Commission (NRC) staff reviewed the 88-9 QA Plan for the YMP and concluded (ref. Linehan/Stein letter and Safety Evaluation (SE) dated December 30, 1988) that it contained adequate requirements and planned and systematic controls to address the requirements of 10 CFR Part 60, Subpart G and Appendix B to 10 CFR Part 50, in an acceptable manner. The NRC review criteria used in evaluating the 88-9 QA Plan are contained in the "NRC Review Plan for High-Level Waste Repository Quality Assurance Program Descriptions," Revision 2, dated March 1989 (NRC Review Plan).

The detailed NRC staff analysis of the 88-9 QA Plan approaches for meeting the requirements of Appendix B to 10 CFR Part 50 are contained in the 88-9 QA Plan SE. The 88-9 QA Plan 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 SE, approaches already approved in the 88-9 QA Plan, that Fenix & Scisson (F&S) has adopted.

This SE documents NRC's review and evaluation of the F&S QAPP-002, Revision 6, which commits to comply with the requirements of the 88-9 QA Plan. This SE also describes the regulatory criteria against which the F&S QAPP was reviewed, provides a basis for NRC staff acceptance, and describes the differences from the 88-9 QA Plan and/or the NRC staff's review criteria.

2. BACKGROUND

DOE forwarded the F&S QAPP, Revision 6 (ref. Appel/Linehan letter dated February 21, 1989), for NRC review and acceptance. The NRC staff reviewed and evaluated the F&S QAPP to determine whether it contained adequate requirements and planned and systematic controls to address the applicable criteria of Appendix B to 10 CFR Part 50 which apply to F&S, for the DOE YMP. The NRC staff also reviewed selected procedures that F&S had prepared to implement the QAPP, as a part of the staff's QAPP evaluation.

As a result of its review of the F&S QAPP, the NRC staff generated two comments which were discussed with DOE and the State of Nevada, during a March 2, 1989, telephone conversation and a May 10, 1989 meeting at NRC Headquarters in Rockville, Maryland. F&S revised the QAPP to resolve NRC's comments, and DOE resubmitted it for NRC staff review and acceptance on August 11, 1989.

3. STAFF EVALUATION

The following sections of the F&S QAPP are in accordance with the 88-9 QA Plan and meet the applicable criteria of Appendix B to 10 CFR Part 50.

3.1 F&S QAPP Sections in Accordance with 88-9 QA Plan and Appendix B, 10 CFR Part 50

a. Section 1, "Organization" (Criterion I)
b. Section 2, "Quality Assurance Program" (Criterion II)
c. Section 3, "Scientific Investigation Control and 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 9, "Control of Processes" (Criterion IX)
i. Section 10, "Inspections" (Criterion X)
j. Section 12, "Control of Measuring and Test Equipment" (Criterion XII)
k. Section 15, "Control of Nonconforming Items" (Criterion XV)
l. Section 16, "Corrective Action" (Criterion XVI)
m. Section 17, "Quality Assurance Records" (Criterion XVII)
n. Section 18, "Audits" (Criterion XVIII)

3.2 F&S QAPP Section Areas Differing from 88-9 QA Plan, and/or 88-9 QA Plan Areas Not Applicable, Plus NRC Acceptance Rationale

The following sections of the F&S QAPP describe those areas that differ from the 88-9 QA Plan and/or those areas of the 88-9 QA Plan that do not apply to the F&S QAPP and, where applicable, why NRC finds them acceptable:

3.2.1 "Identification and Control of Items, Samples and Data" (Criterion VIII)

Section 8 of the F&S QAPP describes the requirements that apply to the identification and control of items, samples and data. This section is not the responsibility of F&S, as the architect/engineer (A/E) for the design of the Exploratory Shaft Facility (ESF).

3.2.2 "Test Control" Criterion XI

The requirements of this section apply to engineered items. F&S will impose test control requirements, as appropriate, on suppliers and subcontractors, by inclusion in Technical Specifications and/or drawings. F&S will not be conducting tests, however, because it is the A/E.

3.2.3 "Handling, Storage and Shipping" (Criterion XIII)

Section 13 of the F&S QAPP describes the requirements to control the packaging, handling, storage, shipping, cleaning, and preservation of material and equipment. F&S will impose these requirements, as appropriate, on suppliers and subcontractors, by inclusion in Technical Specifications and/or drawings.

3.2.4 "Inspection, Test and Operating Status" (Criterion XIV)

The requirements of this section apply to engineered items. This section is not the responsibility of F&S, as the AE for the design of the ESF.

4. CONCLUSION

Based on its review and evaluation, the NRC staff concluded that the F&S QAPP, Revision 6, 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 Review Plan:

- ANSI/ASME, NQA-1, "Quality Assurance Program Requirements for Nuclear Facilities," 1986.
- U. S. Nuclear Regulatory Commission, Generic Technical Position, "Peer Review for High-Level Nuclear Waste Repositories," NUREG-1297, 1987.
- U. S. Nuclear Regulatory Commission, Generic Technical Position, "Qualification of Existing Data for High-Level Nuclear Waste Repositories," NUREG-1298, 1987.
- 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.
- U. S. Nuclear Regulatory Commission, "Final Technical Position on Documentation of Computer Codes for High-Level Waste Management," NUREG-0856, 1982.

The F&S QAPP complies with the 88-9 QA Plan that the NRC staff accepted December 30, 1988. The NRC staff review of the F&S QAPP concludes that it meets the aforementioned guidance and NRC staff positions or has provided an acceptable rationale for where its QAPP is not applicable.

On the basis of its detailed review and evaluation of the F&S QAPP, 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.