

PROJECT OFFICE QUALITY ASSURANCE AUDIT REPORT FOR

THE YUCCA MOUNTAIN PROJECT OFFICE AUDIT OF

HOLMES & NARVER, INC.

AUDIT NUMBER 89-2

CONDUCTED: APRIL 24-28, 1989

PREPARED BY: Frederick G. Ruth DATE: 5/16/89  
FREDERICK G. RUTH  
LEAD AUDITOR

APPROVED BY: HA Caldwell DATE: 16 May 89  
HENRY H. CALDWELL  
DIVISION MANAGER, AUDITS

APPROVED BY: James Blaylock DATE: 5/23/89  
JAMES BLAYLOCK  
PROJECT QUALITY MANAGER

**EXECUTIVE SUMMARY**

**PROJECT OFFICE AUDIT REPORT 89-2**

**HOLMES & NARVER, INC. (H&N)**

**LAS VEGAS, NEVADA**

**APRIL 24 - 28, 1989**

In the opinion of the Project Office audit team, the effectiveness of the Quality Assurance (QA) program at H&N cannot be determined at this time. However, based on the results of the audit, the H&N QA program appears adequate to support the initiation of Title II design. This is based upon the fact that staffing appears adequate, training is satisfactory, most required procedures are in place, and there are no major outstanding deficiencies.

It should be noted that the H&N QA program, at this point, is not in total compliance with NNWSI QA Plan 88-9, Revision 2. The areas not in compliance are Organization and the Control of Non-Conforming Items. In addition, the 14 Observations identified should be an indication that the full program is not yet totally complete. If quality related work governed by the program had been in progress, some of the observations would have been documented as deficiencies. These Observations should be closely scrutinized and actions taken where necessary.

The effectiveness of the QA program cannot be determined until such time as the program is completed and objective evidence to demonstrate technical adequacy and program implementation can be reviewed.

## 1.0 Introduction

This report contains the results of a Quality Assurance (QA) audit of H&N Yucca Mountain Project (YMP) activities. The audit was conducted at the H&N facilities in Las Vegas, Nevada, April 24 - 28, 1989. The audit was conducted in accordance with the requirements of QMP-18-01, Revision 3, "Audit System for the Waste Management Project Office." The QA program requirements to be verified were taken from NNWSI/QA plan 88-9, Revision 2.

## 2.0 Audit Scope

The purpose of this audit was to evaluate the effectiveness of the H&N Quality Assurance Program Plan (QAPP), Revision 3, and to verify the implementation of the Quality Assurance program as it relates to the Yucca Mountain Project.

The scope of the audit focused on the 18 QA criteria with the implementation of appropriate procedures. In addition, deficiencies identified during the Project Office Audit S89-1 were added to the audit scope to verify satisfactory implementation of corrective actions. The technical portion of the audit included the review of technical procedures, readiness to start Title II design activities, and interviews with the design engineers to determine their knowledge of procedures, and their education and experience as it relates to the Holmes & Narver Position Descriptions.

## 3.0 Audit Team Personnel

Frederick J. Ruth	Audit Team Leader/ Lead Auditor	SAIC, Las Vegas, NV
John C. Friend	Auditor	SAIC, Las Vegas, NV
Stephen P. Hans	Auditor	SAIC, Las Vegas, NV
Sidney L. Crawford	Auditor	SAIC, Las Vegas, NV
LeRoy Savage	Auditor	SAIC, Las Vegas, NV
Neil D. Cox	Auditor-In-Training	SAIC, Las Vegas, NV
Ed Cikanek	Technical Specialist	HARZA, Las Vegas, NV
Mike Robb	Technical Specialist	LATA, Albuquerque, NM
John W. Gilray	Observer	NRC, Las Vegas, NV
Bill Belke	Observer	NRC, Washington, DC
Naiem Tanious	Observer	NRC, Washington, DC
Robert Brient	Observer	NRC, SAN Antonio, TX
Jim McConville	Observer	HARZA, Las Vegas, NV
Susan Zimmerman	Observer	State of Nevada
Francisco Cheng	Surveillant	DOE/HQ Weston
W. R. Marchant	Surveillant	DOE/HQ Weston
Wendell B. Mansel	Observer	YMP, Las Vegas, NV
Ram B. Murthy	Observer	YMP, Las Vegas, NV

#### 4.0 Summary of Audit Results

##### 4.1 Statement of Program Effectiveness

In the opinion of the Project Office audit team, the effectiveness of the Quality Assurance program at H&N cannot be determined at this time. Until such time as the program is completed and objective evidence to demonstrate technical adequacy and program implementation can be reviewed, the effectiveness will remain indeterminate.

However, based on the results of the audit, the H&N QA program appears to be adequate to support the initiation of Title II design. This is based upon the fact that staffing appears adequate, training is satisfactory, most required procedures are in place, and there are no major outstanding deficiencies.

##### 4.2 Summary of Technical Evaluation

Based upon the responses to the technical questions that the technical specialists asked of Holmes & Narver, Inc. during the audit, it was concluded that the H&N Quality Assurance Program is technically adequate. The H&N design control procedures were reviewed and found to be technically adequate for the performance of Title II design. The H&N design personnel appeared to be well qualified in the specific areas for which they have been assigned design responsibility and had an adequate understanding of their design control procedures. In summation, the technical specialists found no reason to impede H&N from starting Title II design.

##### 4.3 Summary

A total of 2 Standard Deficiency Reports (SDRs)/(Enclosure 3), and 14 Observations (Enclosure 4) were identified as a result of this audit. One SDR (No. 332) was issued to H&N, and one SDR (No. 333) was issued to the YMPO. In addition, the audit team generated 3 Recommendations for consideration by H&N. A synopsis of each SDR and Observation, and the complete Recommendations are contained in Section 6.0 of this report.

Deficiencies identified by the Project Office are qualified by Severity Level, which is related to the significance of the deficiency. A discussion of Severity Levels is provided in Enclosure 1.

At the time of the audit, SDRs No. 249, 251, and 257 remained open from the previous Project Office audit of H&N (S89-1). The corrective actions to close SDRs No. 249 and 251 have been satisfactorily implemented and a recommendation will be to close both SDRs. The corrective action required by H&N is complete for SDR 257; however, revision of NNWSI-029 is dependent upon the resolution of Observations 1 and 2, which were generated during Audit S89-1 that are the responsibility of the Project Office.

The following program elements were deemed to meet the requirements of NNWSI/88-9, Revision 2 and H&N QAPP, Revision 3.

- 2.0 QA Program
- 3.0 Design Control
- 5.0 Instructions, Procedures, and Drawings
- 6.0 Document Control
- 12.0 Control of Measuring and Test Equipment
- 16.0 Corrective Action
- 17.0 QA Records
- 18.0 Audits

Program elements or portions of elements that are not in compliance with program requirements are:

- 1.0 Organization
- 15.0 Control of Nonconforming Items

The following program elements were reviewed for compliance during the audit; however, no activities had taken place that would have provided objective evidence to verify implementation:

- 4.0 Procurement Document Control
- 7.0 Control of Purchased Items and Services
- 8.0 Identification and Control of Items
- 10.0 Inspection
- 11.0 Test Control
- 13.0 Handling, Storage, and Shipping
- 14.0 Inspection Test and Status

The following program element was reviewed during this audit, but is not ready to be used for Yucca Mountain Project activities:

- 9.0 Control of Process

Technical review was limited during this audit to the following:

- o Technical Qualifications of Design Personnel
- o Understanding of the Design Control Process and Procedural Requirements
- o Procedural Adequacy from a Technical Standpoint

## 5.0 Audit Meetings

### 5.1 Preaudit Conference

A preaudit conference was held with the H&N Technical Project Officer (TPO) and his staff at 10 a.m. on April 24, 1989. The purpose, scope, and proposed agenda for the audit were presented and the audit team was introduced. A list of attendees for this meeting is provided in Enclosure 2.

### 5.2 Audit Status Meetings

Audit Status Meetings were held with the Holmes & Narver TPO and his key staff at 8:30 a.m. on April 25, 26, and 27, 1989. A status of how the audit was progressing and identification of discrepancies were discussed daily.

### 5.3 Postaudit Conference

The postaudit conference was held at 10 a.m. on April 28, 1989. A synopsis of the preliminary SDRs and Observations identified during the course of the audit was presented to the TPO and his staff. A list of attendees of this meeting is provided in Enclosure 2.

## 6.0 Synopsis of SDRs, Observations, and Complete Recommendations

### 6.1 Standard Deficiency Reports (SDRs)

1. H&N's QAPP does not address the organizational structure, lines of communication, authority, and duties of the NTSO organization, or the EG&G organization. SDR No. 332.
2. H&N does not have sufficient authority or organizational freedom to assure the control of nonconforming items, or unsatisfactory conditions until proper disposition has occurred. SDR No. 333.

### 6.2 Observations

#### Observation No. 89-2-01

H&N has not established channels for the resolution of disputes to progressively higher organizational levels including the YMPO, PQM.

#### Observation No. 89-2-02

The QA record package on the code Traverse did not include any documentation from the software supplies, nor a verification/validation report, nor a software requirements review.

#### Observation No. 89-2-03

H&N does not have procedures for conducting Readiness Reviews prior to starting major activity. Draft procedures were reviewed during the audit.

#### Observation No. 89-2-04

The H&N/QAPP allows minor changes to be processed without the same level of review and approval as the original document. Several procedures have been issued without changing revision, or date date, or indicating the reissue as a "corrected copy." As a result, it is very difficult to assure distributed procedures are, in fact, the current version.

#### Observation 89-2-05

Nondestructive testing is considered a special process; however, H&N has not identified in its program which NDT will be performed.

**Observation 89-2-06**

H&N procedures do not contain specific measures for the control of design information received and transmitted by H&N.

**Observation 89-2-07**

H&N's report to management, issued 4/19/89, contained a section on trending that contained combined data from YMP and the H&N weapons activities.

**Observation 89-2-08**

H&N NDT personnel have not been certified to H&N procedure NNWSI-022, Rev. 0, "NDT Personnel Certification."

**Observation 89-2-09**

H&N/QAPP, Rev. 2, Section 8, Para. 111.A.2.b, states in part, "methods shall be described and implemented to ensure that samples are mixed with like samples." NNWSI/88-9, Rev. 2, Section VIII, Part B, Para. 1.1, requires measures to "assure that samples are not mixed with like samples."

**Observation 89-2-10**

H&N Procedures do not clearly denote the relationship between the DBD and the DICD, or the relationship of the DBD and DICD to the "ESF Basis for Design Document," the SDRD and the Reference Information Base (RIB).

**Observation 89-2-11**

YMP-003 does not contain provisions for design verification of specifications. Also, YMP-006 does not provide for design verification to be accomplished per YMP-014 for design analyses to justify assumptions, or confirm the adequacy of analyses.

**Observation 89-2-12**

The Exploratory Shaft Facility Subsystem Design Requirements Document (SDRD) was issued 4/11/89 as "Revision 0" by YMP Change Directive 89/023. Revision 0 is the same document as the previous Benchmark 4, dtd. 1/31/89, without incorporating several resolved comments from the Benchmark 4 review cycle.

**Observation 89-2-13**

The H&N/QAPP excludes "Scientific Investigations" from the scope of H&N responsibility. Much of the testing performed at the H&N Material Test Lab (MTL) is done to USGS direction with USGS supplied samples. However, USGS/QAPP excludes requirements of Criteria XI

(Test Control), and conducts all test activities as "Scientific Investigations." H&N and USGS should mutually resolve the basis under which tests for ESF are/and will be conducted with project Office assistance, if necessary.

#### **Observation 89-2-14**

NNWSI project QA plan 88-9, Rev. 2, Section IX, "Quality Assurance Program," states, "Readiness reviews shall apply to major scheduled/planned activities which could affect quality. Readiness reviews used in verifying that specified prerequisites and programmatic requirements have been identified prior to starting a major activity." The State of Nevada is requesting written documentation as to how major activities are determined. If Title II ESF Design is not considered a major activity, the State would like written justification as to how this was determined.

### **6.3 Recommendations**

#### **Recommendation No. 1**

H&N procedure YMP-036, "Ultrasonic Testing", Rev. 0 contains acceptance criteria; however, H&N/ NNWSI-028, "Magnetic Particle Testing Procedure", Rev. 0, and YMP-035, "Ultrasonic Flaw Detection", Rev. 0 do not contain acceptance criteria. It is recommended that a standard method of identifying acceptance standards be used during the next procedure revision.

#### **Recommendation No. 2**

H&N procedure NNWSI-028, "Magnetic Particle Testing Procedure", Rev. 0 contains several areas that need to be corrected during the next revision of the procedure.

- o Section 3.2, SNT-TC-1A (latest edition) should be SNT-TC-1A (1980 edition)
- o Section 4.1, ASTM Standard E265 should be ASTM Standard E269
- o Section 6.2.8, does not address what actions are to be taken if damage is done to the examined item during the use of the prod method.
- o Section 6.3.9.f, Para. 6.6 should be Para. 6.7.

#### **Recommendation No. 3**

H&N plans to have auditors from the weapons program perform the independent audit of Criteria 18 each year. The use of personnel from outside of the YMP should be explained in H&N procedure NNWSI-031, Rev. 0, "Audits."

## 7.0 Required Action

A written response is required for each SDR delineated in Section 6.0. Responses to each SDR are due 20 working days from the date of the SDR transmittal letter. Upon response, acceptance, and satisfactory verification of all remedial and corrective actions, the SDRs will be closed and H&N will be notified by letter of closure.

A written response is required for the 14 Observations contained in Enclosure 4 of this report. Responses are due 20 working days after the transmittal letter of this report.

Written responses are not required for the recommendations contained in this report. The recommendations were generated by the audit team for the H&N staff to consider during implementation of its QA program.

**ENCLOSURE 1**

**Severity Levels**

**Severity Level 1**

Significant deficiencies considered of major importance. These deficiencies require remedial, investigative, and corrective actions to prevent recurrence.

**Severity Level 2**

A deficiency which is not of major importance, but may also require remedial, investigative, and/or corrective action to prevent recurrence.

**Severity Level 3**

A minor deficiency in that only remedial action is required. These deficiencies are generally isolated in nature or have a very limited scope. In addition, the integrity of the end result of the activity is not affected nor does the deficiency affect the ability to achieve those results.

ENCLOSURE 2

ATTENDEES

AUDIT REPORT 89-2

ENCLOSURE 2

<u>TITLE</u>	<u>ORGANIZATION</u>	<u>PREAUDIT</u>	<u>CONTACTED DURING AUDIT</u>	<u>POSTAUDIT</u>
QA Project Manager	NRC	X		X
Project Quality Manager	DOE/YMP			X
Sr. Engineer	H&N	X	X	X
Group Leader	NRC/CNMRA	X		X
Sr. QA Engineer	H&N	X	X	X
Observer	SAIC	X		
Manager, QA Audits	SAIC	X		
Technical Project Officer	H&N	X	X	X
Nuclear Engineer	Weston/HQ	X		X
Lead Tech. Specialist	T&MSS/HARZA	X		X
Auditor-in-Training	SAIC	X		X
Auditor	SAIC	X		X
Sr. QA Engineer	H&N	X	X	X
QA Engineer	DOE			X
Auditor	SAIC	X		X
Observer	NRC	X		X
Sr. Engineer	H&N	X		X
Auditor	SAIC	X		X
QA Engineer	SAIC	X		X
QA Engineer	DOE/YMP	X		X
QA Engineer	Weston/HQ	X		X
Observer	HARZA	X		X
Sr. Engineer	H&N	X		
Rep. Director, QA	T&MSS	X		X
Observer	DOE	X		
Project Engineer	H&N	X		X
QA Engineer	SAIC	X		X
Project Engineer	H&N	X	X	X
Technical Specialist	LATA	X		X
Audit Team Leader	SAIC	X		X
QA Engineer	H&N	X	X	X
Auditor	SAIC	X		X
Design Section Chief	H&N	X	X	X
Mining Engineer	NRC	X		X
Sr. Engineer	H&N	X		X
Sr. Project Engineer	H&N	X	X	X

AUDIT REPORT 89-2

ENCLOSURE 2

(Continued)

<u>NAME</u>	<u>TITLE</u>	<u>ORGANIZATION</u>	<u>PREAUDIT</u>	<u>DURING AUDIT</u>	<u>POSTAUDIT</u>
Verden, Janice	Admin. Section Chief	H&N	X	X	X
Wanniski, Terry	Manager, NV Operations	H&N			X
Wilmot, Ed	Department Manager	YMPO			X
Wright, Carl O.	Chief, QA	H&N	X	X	X
Yelvington, Tom	Manager, Tech. Services	H&N	X		
Zimmerman, S. W.	QA Manager	State of NV	X		x

**ENCLOSURE 3**  
**SDRs**

# YMPO STANDARD DEFICIENCY REPORT

N-QA-038  
4/89

Completed by Originating QA Organization

1 Date 4-27-89	2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2
3 Discovered During Audit 89-2	3a Identified By S. Hans		4 SDR No. 332 Rev. _____
5 Organization Holmes & Narver	6 Person(s) Contacted C. Wright		7 Response Due Date is 20 Working Days from Date of Transmittal
8 Requirement (Audit Checklist Reference, if Applicable) NNWSI/88-9, Rev. 2, Sec. 1, Para. 1.0, Organization, Audit Checklist Reference 1-1, states in part: The organizational structure, lines of communication, authority, and duties of persons or organizations performing activi-			
9 Deficiency Contrary to the above requirement, H&N's QAPP does not address the organizational structure, lines of communication, and authority and duties of the NTSO organization or the EGG organization. Both organizations perform QA			
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective Develop a method of identifying and defining the NTSO and EG&G functions.			

Completed by Organization in Block 5

11 QAE/Lead Auditor/Date <i>Frederick J. Ruth 5/2/89</i>	12 Division Manager/Date <i>A. J. Caldwell 2 May 89</i>	13 Project Quality Mgr./Date <i>William B. McNeal 05/10/89</i>
14 Remedial/Investigative Action(s)		15 Effective Date _____
16 Cause of the Condition & Corrective Action to Prevent Recurrence		17 Effective Date _____
18 Signature/Date		

Comp. by Orig. QA Org.

19 Response Accepted	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
20 Corrective Action Verif. Satisfactory	QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date
21 Remarks			

22 QA CLOSURE	QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date
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YMPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET

N-QA-038  
12/88

SDR No. 332

Rev.

Page 2 of 2

8 Requirement ( continued )

ties affecting quality shall be clearly established and delineated in writing.

9 Deficiency ( continued )

functions on the Project, and both are referenced in H&N implementing procedures.

# YMPO STANDARD DEFICIENCY REPORT

N-QA-038  
4/89

Completed by Originating QA Organization	1 Date 4-27-89		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
	3 Discovered During Audit 89-2		3a Identified By S. Hans		4 SDR No. 333 Rev. _____	
	5 Organization YMP		6 Person(s) Contacted W. B. Mansel/J. Blaylock		7 Response Due Date is 20 Working Days from Date of Transmittal	
	8 Requirement (Audit Checklist Reference, if Applicable) Audit checklist, Ref. 1-2, NNWSI/QAP, Rev. 2, Sec. II, Para. 2.0, QA Functions states in part, The persons and organizations performing QA functions shall have sufficient authority...and organizational freedom to...assure that fur-					
Completed by Originating QA Organization	9 Deficiency Contrary to the above requirement, H&N (the inspection organization) does not have sufficient authority or organizational freedom to assure the control of nonconforming or unsatisfactory conditions until proper					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective The Project Office should provide a method to control the further processing of nonconforming items in accordance with the requirements of NNWSI/					
	11 QAE/Lead Auditor/Date <i>Fredrick J. Rust 5/2/89</i>		12 Division Manager/Date <i>W. B. Mansel 2 May 89</i>		13 Project Quality Mgr./Date <i>Wendell B. Mansel 05/2/89</i>	
Completed by Organization in Block 5	14 Remedial/Investigative Action(s)				15 Effective Date _____	
	16 Cause of the Condition & Corrective Action to Prevent Recurrence				17 Effective Date _____	
	18 Signature/Date					
Comp. by Orig. QA Org.	19 Response Accepted		QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date	
	20 Corrective Action Verif. Satisfactory		QAE/Lead Auditor/Date	Division Manager/Date	Project Quality Mgr./Date	
	21 Remarks					
	22 QA CLOSURE		QAE/Lead Auditor/Date	Division Manager/Date	PQM/Date	

**YMPO STANDARD DEFICIENCY REPORT  
CONTINUATION SHEET**

**N-QA-038  
12/88**

**SDR No. 333**

**Rev.**

**Page 2 of 2**

**8 Requirement ( continued )**

ther processing, delivery, installation, or use is controlled until proper disposition of a nonconformance, deficiency, or unsatisfactory condition has occurred. This includes the ability to stop (or cause to be stopped) unsatisfactory work through established channels.

**9 Deficiency ( continued )**

disposition has occurred. Additionally, no other organization or person that performs QA functions have been identified or documented as controlling the further processing of nonconforming items.

**10 Recommended Actions ( continued )**

88-9, Rev. 2.

**ENCLÔSURE 4  
OBSERVATIONS**

WMPO OBSERVATION NO. 89-2-01

N-CA-312  
8/88

Completed by Originating QA Organization

Noted During:  
Audit 89-2

Identified By:  
S. Hans

Date:  
4-27-89

Organization:  
Holmes & Narver

Person(s) Contacted:  
C. Wright

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

H&N has not established channels for the resolution of disputes to progressively higher organization levels including the WMPO, PQM. A draft procedure covering this area was reviewed during the audit.

QAE/Lead Auditor

*Fredrick J. Rutt*

Date

*5/5/89*

Branch Manager

*A. A. Caldwell*

Date

*5 May 89*

Completed By Respondee

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Completed By QA Org.

Remarks:

WMPO OBSERVATION NO. 89-02-02

N-QA-012  
8/88

Completed by Originating QA Organization

Noted During:

H&N-Audit 89-2

Identified By:

N. D. Cox

Date:

4-25-89

Organization:

Holmes & Narver

Person(s) Contacted:

Randolph Schreiner  
Twyla Smith

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

The QA record package on the code Traverse was examined prior to its submittal to RIS (records storage). This package did not include any documentation from the software supplier, nor a verification/validation report, nor a software requirements review. NNWSI/88-9 requires these (Appendix H). Also, there was no H&N work initiation form for approval activity per YMP-013, Para. 6.2.2. If a software Quality Assurance Plan were in effect, any one of the above omissions would have resulted in a finding.

QAE/Lead Auditor

*Frederick J. Keith*

Date

*5/5/89*

Branch Manager

*RAA Caldwell*

Date

*5 May 89*

Completed By Responses

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Completed By QA Org.

Remarks:

WMPO OBSERVATION NO. 89-2-03

N-QA-012  
8/88

Noted During:  
Audit 89-2

Identified By:  
S. Hans

Date:  
4-27-89

Organization:  
Holmes & Narver

Person(s) Contacted:  
C. Wright

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

H&N does not have procedures for conducting Readiness Reviews prior to starting major activity. Draft procedures were reviewed during the audit.

OAE/Lead Auditor

Date

Branch Manager

Date

*Fredrick J. Rittch*

*5/5/89*

*AAA Caldwell*

*5 May 89*

Response:

Signature:

Date:

Response Receipt Verified/Closed



OAE/Lead Auditor

Date

Branch Manager

Date

Remarks:

Completed By Originating OA Organization

Completed By Responder

Completed By OA Org.

WMPO OBSERVATION NO. 89-02-04

NQA-012  
8/88

Completed By Originating QA Organization

Noted During: Audit-89-2	Identified By: S. Crawford	Date: 5/4/89
Organization: Holmes & Narver	Person(s) Contacted: Jan Verden	Response Due Date is 20 Days from Date of Transmittal

On ~~5/4/89~~

The H&N QAPP, Rev. 2, Section 6, Para. III.B.2, allows minor changes to be processed without the same level of review and approval as the original document. H&N procedure YMP-001, Rev. 2, Para. 6.5.3 provides for issuance of minor changes without changing revision level of procedures. H&N procedure transmittal 41 issued four (4) procedures, fully in accordance with YMP-001, without changing revision or date or indicating the reissue as a "corrected copy". As a result, it is very difficult to assure distributed procedures are, in fact, the current version. Minor procedure changes should be identified on the first page as "corrected copy, issued xx/xx/xx".

QAE/Lead Auditor <i>Shedrick J. Ruth</i>	Date 5/5/89	Branch Manager <i>AA Caldwell</i>	Date 5 May 89
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Completed By Responses

Response:

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Response Receipt Verified/Closed

QAE/Lead Auditor	Date	Branch Manager	Date
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Completed By QA Org.

Remarks:

**WMPO OBSERVATION NO. 89-02-05**

**N-QA-012  
8/88**

Completed By Originating QA Organization

<b>Noted During:</b> Audit 89-2	<b>Identified By:</b> J. C. Friend	<b>Date:</b> 5/4/89
<b>Organization:</b> Holmes & Narver	<b>Person(s) Contacted:</b> Ron Sabol	<b>Response Due Date is</b> 28 Days from Date of Transmittal

**Discussion:**

NWWSI/QAP 88-9, Rev. 2, Section IX, Para. 2.2.1, "Responsibility", states, "It is the responsibility of the Participating Organization and Nevada Test Site (NTS) Support Contractor that is performing the work to identify which portions of its activities involve the use of special processes. A special process is a process in which the results are highly dependent on either the control of the process or the operator's skill, or both, and in which the specified quality cannot be readily determined by inspection or testing of the item." H&N performs nondestructive testing services for the YMP. These services require H&N to develop NDT procedures and to have qualified/

<b>QAE/Lead Auditor</b> <i>Fredrick J. Rath</i>	<b>Date</b> <i>5/5/89</i>	<b>Branch Manager</b> <i>J. A. Caldwell</i>	<b>Date</b> <i>5 May 89</i>
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Completed By Responder

**Response:**

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Response Receipt Verified/Closed**

<b>QAE/Lead Auditor</b>	<b>Date</b>	<b>Branch Manager</b>	<b>Date</b>
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Completed By QA Org.

**Remarks:**

certified NDT personnel. Nondestructive testing is considered a special process; however, H&N has not identified in its program which NDT will be performed. H&N's contention is that NDT services do not apply to the reference section.

WMPO OBSERVATION NO. 89-02-06

N-QA-012  
8/88

Completed By Originating QA Organization

Noted During:  
Audit 89-2

Identified By:  
S. Crawford

Date:  
5/4/89

Organization:

Holmes & Narver

Person(s) Contacted:

R. Schreiner

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

NWWSI/88-9, Revision 2, Section III, Para. 2.6.2 requires "Design information transmitted across interfaces shall be documented and controlled." H&N procedures do not contain specific measures for the control of design information received and transmitted by H&N. Previous SDR 293, 3/13/89, identifies a related deficiency of noncompliance with NWWSI/88-9, Section III, Para. 2.6.1. Observation S89-1-03 is also related to this area. The H&N response to SDR 293 should also address compliance with Para. 2.6.2 of NWWSI/88-9, Section III.

QA/Lead Auditor

*Frederick J. Rust*

Date

*5/5/89*

Branch Manager

*ART C. Howell*

Date

*5 May 89*

Response:

Completed By Responses

Signature:

Date:

Response Receipt Verified/Closed

QA/Lead Auditor

Date

Branch Manager

Date

Remarks:

Completed By QA Org.

WMPO OBSERVATION NO. 89-02-07

N-QA-012  
8/89

Completed by Organizing QA Organization

Noted During:

Audit 89-2

Identified By:

J. Friend

Date:

5/4/89

Organization:

Holmes & Narver

Person(s) Contacted:

C. Wright/R. Sabol

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

A review of H&N's report to management issued 4/19/89 contained a section on trending that contained combined data from YMP and the weapons activities. It could not be determined from this data what applied to which project.

QAE/Lead Auditor

*Fredrick G Ruth*

Date

5/5/89

Branch Manager

*John C. Shell*

Date

5 May 89

Completed By Responsee

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Completed By QA Org.

Remarks:

WMPO OBSERVATION NO. 89-02-08

N-QA-012  
8/88

Completed by Originating QA Organization

Noted During:  
Audit 89-2

Identified By:  
J. C. Friend

Date:  
5/4/89

Organization:  
Holmes & Narver

Person(s) Contacted:  
R. Sabol/W. Cotter

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

H&N NDT personnel have not been certified to H&N procedure NNWSI-022, Rev. 0, "NDT Personnel Certification". A review of NDT personnel files that H&N maintains for weapons programs do not currently contain sufficient documentation to support certification to SNT-TC-1A (1980).

QAE/Lead Auditor

Date

*Frederick J. Ruch*

*5/5/89*

Branch Manager

Date

*W.A. Caldwell*

*5 May 89*

Response:

Completed By Responder

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Remarks:

Completed By QA Org.

WMPO OBSERVATION NO. 89-02-09

N-QA-012  
8/88

Completed by Originating QA Organization

Noted During:

Audit 89-2

Identified By:

S. Crawford

Date:

5-4-89

Organization:

Holmes & Narver

Person(s) Contacted:

C. Wright/R. Sabol

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

The H&N QAPP, Rev. 2, Section 8, Para. III.A.2.b, provides, "If it is impractical to place the identification on the sample, methods shall be described and implemented to ensure that samples are mixed with like samples...". This is in contradiction to NNWSI/88-9, Rev. 2, Section VIII, Part B, Para. 1.1, which requires measures to "assure that samples are not mixed with like samples". Although this may have been an inadvertent omission in the QAPP, the result is that the QAPP is in direct conflict with NNWSI/88-9 in this area.

QAE/Lead Auditor

*Frederick J. Ruth*

Date

*5/5/89*

Branch Manager

*John A. Quinn*

Date

*5 May 89*

Completed By Responses

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Completed By QA Org.

Remarks:

**YUCCA MOUNTAIN PROJECT OFFICE**  
**1 YMPO OBSERVATION NO. 89-02-10**

N-QA-012  
4/89

<b>Completed by Originating Organization</b>	<b>2</b> Noted During: Audit 89-2	<b>3</b> Identified By: S. Crawford	<b>4</b> Date: May 11, 1989
	<b>5</b> Organization: Holmes & Narver	<b>6</b> Person(s) Contacted: R. Schreiner	<b>7</b> Response Due Date is 20 Days from Date of Transmittal
	<b>8</b> Discussion:  H&N Procedures YMP-018, Rev. 0 and NNWSI-015, Rev. 0 (with ICN-001) identify measures for the development and control of a Design Basis Document (DBD) and Design Input Control Document (DICD), respectively. Both the DBD and DICD are derived from the ESF Subsystem Design Requirements Document (SDRD), but the H&N procedures do not clearly denote the relationship between the DBD and the DICD, or the relationship of DBD and DICD to the "ESF Basis for Design Document" (AP-5.18Q), the SDRD, and the Reference Information Base (RIB).		
<b>Completed by Respondee</b>	<b>9</b> QAE/Lead Auditor <i>Fredrick J. Keith</i>		<b>10</b> Branch Manager <i>J. H. Caldwell</i>
	Date 5/11/89	Date 5/11/89	
<b>Completed by QA Org.</b>	<b>11</b> Response:		
	<b>12</b> Signature: _____ Date: _____		
<b>Completed by QA Org.</b>	<b>13</b> Response Receipt Acceptable <input type="checkbox"/>		
	Initiator _____ Date _____	QA/Lead Auditor _____ Date _____	
<b>14</b> Remarks:			

8 Discussion: ( continued )

NNWSI-015 was revised during the audit (as YMP-015) to cross reference YMP-018, and add clarification of design input sources.

**YUCCA MOUNTAIN PROJECT OFFICE**  
**1 YMPO OBSERVATION NO. 89-02-11**

N-QA-012  
4/89

<b>Completed by Originating Organization</b>	2 Noted During: Audit 89-2	3 Identified By: S. Crawford	4 Date: May 11, 1989
	5 Organization: Holmes & Narver	6 Person(s) Contacted: R. Schreiner	7 Response Due Date is 20 Days from Date of Transmittal
	8 Discussion:  H&N Procedure YMP-014, Rev. 2 provides for design verification of specifications (YMP-003) and drawings (YMP-005). Although YMP-005, Para. 6.4.1.2 requires design verification of drawings prior to QA and TPO approval, YMP-003 does not contain similar provisions for design verification of specifications. Also, YMP-006 does not provide for design verification to be accomplished per YMP-014 for design analyses to justify assumptions, or confirm the adequacy of analyses.		
<b>Completed by Respondee</b>	9 QAE/Lead Auditor <i>Frederick J. Ruth</i>	Date 5/11/89	10 Branch Manager <i>John J. H. Caldwell</i>
	11 Response:		
	12 Signature: _____ Date: _____		
<b>Completed by QA Org.</b>	13 Response Receipt Acceptable <input type="checkbox"/>		
	Initiator _____ Date _____	QA/Lead Auditor _____	Date _____
14 Remarks:			

WMPO OBSERVATION NO. 89-2-12

N-QA-012  
6/88

Completed by Originating QA Organization

Noted During:  
Audit 89-2

Identified By:  
S. Crawford

Date:  
5/4/89

Organization:  
Project Office

Person(s) Contacted:  
R. Schreiner

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

The ESF Subsystem Design Requirements Document (SDRD) was issued 4/11/89 as Revision 0, by YMP Change Directive 89/023. Rev. 0 is the same document as previous Benchmark 4, 1/31/89, without incorporating several hundred resolved comments from the Benchmark 4 review cycle. As a result, H&N is preparing the Design Basis Document (DSD), and Design Input Control Document (DICD), using incomplete or incorrect design requirements. H&N should not release the DBD or DICD for final review and approval until receipt of the revised SDRD and incorporation of the changes and clarification into the DBD and DICD.

QAE/Lead Auditor

*Frederick J. Ruth*

Date

*5/5/89*

Branch Manager

*W.A. [Signature]*

Date

*5 May 89*

Completed by Responder

Response:

Signature:

Date:

Response Receipt Verified/Closed

QAE/Lead Auditor

Date

Branch Manager

Date

Completed by QA Org.

Remarks:

WMPO OBSERVATION NO. 89-2-13

N-QA-012  
8/89

Completed By Originating QA Organization

Noted During:  
Audit 89-2

Identified By:  
S. Crawford

Date:  
5-4-89

Organization:  
Project Office

Person(s) Contacted:  
Carl Wright

Response Due Date is  
20 Days from Date of  
Transmittal

Discussion:

H&N QAPP, Rev. 2, Section 3, Para. II.B, excludes "Scientific Investigations" (Criterion III) from the scope of H&N responsibility, testing is conducted under "Test Control, Section 11 (Criterion XI). Much of the testing performed at the H&N Material Test Lab (MTL)/(Prototype testing to date) is done to USGS direction with USGS supplied samples. However, the USGS QAPP-01, Rev. 5, excludes the requirements of Criterion XI (Para. 11.2) and conducts all test activities as "Scientific Investigations" per Criterion III. H&N and USGS should mutually resolve the basis under which tests for the ESF are conducted, with Project Office assistance if necessary.

OAE/Lead Auditor Date

*Nedrick J. Ruth* 5/5/89

Branch Manager Date

*W. A. Dwell* 5 May 89

Completed By Responder

Response:

Signature:

Date:

Response Receipt Verified/Closed

OAE/Lead Auditor

Date

Branch Manager

Date

Completed By QA Org.

Remarks:



YUCCA MOUNTAIN PROJECT  
AUDIT OBSERVER INQUIRY

N-QA-084  
4/89

Audit No. 89-2

Log No. 12

Name SUSAN ZIMMERMAN Organization State of Nevada

YMP Requirement Reference \_\_\_\_\_

Question/Concern The State would like written documentation of the  
determination of, according to 88-9, Rev 2 and the H+N CAPP, Part  
ESF  
Title II design is considered a major activity. If Title II  
is not considered a major activity, the State would like written  
justification of why not

Response \_\_\_\_\_

Observer's Acknowledgement

Cleared for Submittal to YMP Participant

Frederick J. Ruth  
Lead Auditor / Lead Technical Specialist

Incorporated in YMP Audit Checklist...Ref

22 - Page 10 of 123

Frederick J. Ruth  
Audit Team Leader