



Department of Energy

Nevada Operations Office
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WBS #1.2.9.3
"QA"

JUN 06 1989

Joseph C. Calovini
Technical Project Officer for Yucca Mountain Project
Holmes & Narver, Inc.
101 Convention Center Drive
Phase II, Suite P-280
Las Vegas, NV 89109

CLOSURE OF STANDARD DEFICIENCY REPORT (SDR) 258 RESULTING FROM YUCCA MOUNTAIN PROJECT OFFICE QUALITY ASSURANCE AUDIT S89-01 OF HOLMES & NARVER, INC.

SDR 258 has been closed based on satisfactory verification of completed corrective actions. A copy of the SDR is enclosed for your files.

If you have any questions, please contact Wendell B. Mansel of my staff at 794-7945, or Stephen R. Dana of Science Applications International Corporation at 794-7176.

Edwin L. Wilmot, Acting Director
Quality Assurance Division
Yucca Mountain Project Office

YMP:WBM-4194

Enclosure:
SDR 258

cc w/encl:

Ralph Stein, HQ (RW-30) FORS
Dwight Shelor, HQ (RW-3) FORS
A. E. Gurrola, H&N, Las Vegas, NV
Richard Ivy, H&N, Las Vegas, NV
S. R. Dana, SAIC, Las Vegas, NV
J. J. Brogan, SAIC, Las Vegas, NV
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S. W. Zimmerman, NWPO, Carson City, NV
J. E. Kennedy, NRC, Washington, DC

cc w/o encl:

C. O. Wright, H&N, Las Vegas, NV
Stephen Metta, SAIC, Las Vegas, NV
H. H. Caldwell, SAIC, Las Vegas, NV
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WMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization

1 Date November 29, 1988		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 3	
3 Discovered During H&N Audit S89-01		3a Identified By J. Jardine	3b Branch Chief Concurrence Date		4 SDR No. 258 Rev. 0
5 Organization Holmes & Narver		6 Person(s) Contacted R. Schreiner, D. Brown		7 Response Due Date is 20 Working Days from Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) (Audit Checklist Items 1-10, 1-12, 1-13 and 1-34) H&N QAPP, Rev. 1, Section 5, Para. III.C. states:					
9 Deficiency Contrary to the cited requirements, appropriate quality requirements have not been included in H&N procedures and where omissions have been corrected, the effort to correct these omissions has not been timely. The following examples					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective See SDR No. 257					

Aprvl.

11 QAE/Lead Auditor Date <i>S. Davis 12-10-88</i>		12 Branch Manager Date <i>Alvin 12/12/88</i>		13 Project Quality Mgr. Date <i>Jane Blaylock 12/19/88</i>	
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Completed by Organization in Block 5

14 Remedial/Investigative Action(s) See Attached Sheet		15 Effective Date _____	
16 Cause of the Condition & Corrective Action to Prevent Recurrence See Attached Sheet		17 Effective Date _____	
18 Signature/Date <i>Joseph C. Galimini 1/20/89</i>			

Comp. by Orig. QA Org.

19 Response <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date <i>S. Davis 2/19/89</i>		Branch Manager/Date <i>W. W. Estelle 10 Feb 89</i>	
20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
21 Verification <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date <i>S. Davis 3/14/89</i>		Branch Manager/Date <i>J. W. Estelle 5/24/89</i>	
22 Remarks <u>See Attachment A</u>					
23 QA CLOSURE		QAE/Lead Auditor/Date <i>S. Davis 3/14/89</i>		Branch Manager/Date <i>J. W. Estelle 5/24/89</i>	
		PQM/Date <i>Wendell B. Marsel 05/24/89</i>			

ENCLOSURE

WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

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8 Requirement (continued)

"A review of all instructions, procedures, plans and drawings shall be made to assure technical adequacy and inclusion of appropriate quality requirements."

H&N QAPP Rev. 1, Section 6, Para. III.A.3 states:

"The [document control] procedure shall provide for implementation of the following:

Review of documents for technical adequacy, completeness, correctness, and inclusion of appropriate quality requirements prior to approval and issuance."

9 Deficiency (continued)

indicate the areas where H&N procedural reviews have failed to assure proper and timely translation of QA requirements from the H&N QAPP into procedures.

1. Rev. 0 of the H&N QAPP, approved for use by the Project Office on 2/29/88, contained a requirement in Section 3, Para. III.B.1. directing the review and approval by the responsible design organization and the QA organization regarding the selection of design inputs. This requirement did not appear in Rev. 0 of H&N NNWSI-007 "Work Initiation, Criteria Gathering, and Reporting," (effective date, 4/3/87). Approximately, 115 days after the requirement appeared in Rev. 0 of the H&N QAPP, ICN-001, Rev. 0 to NNWSI-007, Rev. 0, corrected the omission. In the interim period, several Work Initiation Forms were generated that did not require such a review.
2. Rev. 0 and Rev. 1 of the H&N QAPP contained a requirement in Section 3, Para. III.D.5.a(6), directing design reviews to consideration of "necessary design inputs and verification requirements for interfacing organizations [to be] specified in design documents or in supporting procedures or instructions ." This requirement appears in Para. 6.3.1.4 of H&N NNWSI-014, Rev. 0 as, "Have the design interface requirements been satisfied?" This translation eliminated the emphasis on the necessity to identify and verify design inputs that establish a common basis for the design of systems, structures and components for which more than one design organization has responsibility for verification of the interfacing design.
3. Rev. 0 and Rev. 1 of the H&N QAPP contained a requirement in Section 3, Para. C.1., directing that calculations shall be identifiable by subject (including structure, system, or component). Rev. 1 of H&N NNWSI-006, "Design Analysis" does not contain provisions for implementation of this requirement.

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9 Deficiency (continued)

4. Rev. 0 and Rev. 1 of the H&N QAPP contained a requirement in Section 3, Para. C.1.a., directing design analysis to contain a definition of the objective of the analysis. This requirement did not appear in H&N NNWSI-006, "Design Analysis", until ICN-001, Rev. 0, was issued approximately seven months later in September, 1988. In the interim period, analysis was being performed to support the Title I design effort that did not benefit from this requirement.
5. Rev. 0 and Rev. 1 of the H&N QAPP contained a requirement in Section 3, Para. C.2.g., directing a QA review be performed on design analyses. NNWSI-006, Rev. 1, does not contain provisions to implement this requirement.
6. Rev. 0 and Rev. 1 of the H&N QAPP contains a requirement in Section 3, Para. D.5.a.(6), directing design verification efforts to assure that the necessary design input and verification requirements were specified for interfacing organizations. H&N NNWSI-029, "Design Interface Control," does not contain provisions to implement this requirement. Hence, no common design input has been established for areas in the ESF design where responsible design organizations interface.
7. Rev. 0 and Rev. 1 of H&N QAPP, Section 3, Para. C.2.g., contains a requirement that signatures and dates of review and approval shall be provided by appropriate personnel on design analysis documents. NNWSI-006, Rev. 1, refers only to "concurrence" by the Design Section Chief.

WMPO STANDARD DEFICIENCY REPORT

Holmes & Narver, Inc.
Response to SDR No. 258

Block 14

Investigative:

No special investigative action is required.

As required by the Yucca Mountain Project (YMP), a matrix to identify where the requirements of the QAP are reflected in implementing procedures is prepared for each revision of the QAP. This document is utilized to identify where changes to existing procedures are required.

Remedial:

Deficiency 1:

It was never the intent of NNWSI-007 to have QA review the Work Initiations before issuance. The QA review was intended to comply with the requirements of NVO-196-17, Section 2.2.4 and 2.3.2, relating to QA approval of design input and design analysis.

NOTE: At the time of this audit, NNWSI-007, Rev. 1, was effective and no longer covered the subject of design input control. See SDR-119 from WMPO Audit 88-02.

Deficiency 2:

It is H&N's responsibility to assure that their design output documents adequately specify the necessary inputs for those organizations who utilize the H&N output documents for further design, construction, fabrication, etc. NNWSI-014, Paragraph 6.3.1.4, adequately depicts this requirement.

Deficiency 3:

NNWSI 006 requires that each analysis have a cover sheet which includes the identification of the "subject." This in compliance with the YMP QA plan and the H&N QAPP.

Deficiency 4:

Also, NNWSI 006 did not contain these words until September 1988. The calculations prepared by H&N do include a statement relating to the objective. The proposed revision to 006 will require a more explicit definition of objective.

Deficiency 5:

NNWSI 006 is being revised to include this requirement. It should be noted that no calculations/analysis have been finalized as of this date. A QA review, as required by the QAP and the H&N QAPP, will be accomplished after the calculations/analysis are final.

Deficiency 6:

See response to deficiency 2 above.

NNWSI 029 is an administrative tool to identify interfaces between organizations. Each organization uses these tools (SIDs/CIDs) to assure that their output documents adequately address the interface requirements.

Deficiency 7:

Although H&N uses the terms "approval" and "concurrence" to imply the same meaning, NNWSI 006, Paragraph 6.2.5, will be revised from "concurrence" to "approval."

15. Effective date: 2/1/89

16. Cause of the Condition & Corrective Action to Prevent Recurrence

Each procedure issued has been reviewed for technical adequacy, correctness, completeness, and inclusion of applicable quality requirements prior to approval and issuance. The omission of the sentences quoted in Block 8 of this SDR have little or no affect on assuring full compliance. The omissions/errors noted were due to interpretations of requirements specified and not because procedures were not appropriately reviewed and approved.

The volatility of the NNWSI/YMP Quality Assurance Plan has been a significant factor in the volatility of the H&N QA Program. H&N will attempt to upgrade the QA program in a more timely fashion in the future.

17. Effective Date: N/A

VERIFICATION OF CORRECTIVE ACTION, SDR 258

1. SDR Example 1

No corrective action necessary

2. SDR Example 2

Reviewed H&N procedure YMP-014, Rev. 2, and verified that the procedure revision adequately addresses the deficiency.

Verified training is complete for the above noted procedure revision.

3. SDR Example 3

No corrective action is necessary.

4. SDR Example 4

Reviewed H&N procedure YMP-006, Rev. 2, and verified that the procedure revision adequately addresses the deficiency.

Verified training is complete for the above noted procedure revision.

5. SDR Example 5

(See No. 4 above)

6. SDR Example 6

(See No. 2 above)

7. SDR Example 7

(See No. 4 above)