



Department of Energy

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

WBS 1.2.9.3
"QA"

NN1.881221.0009

DEC 21 1988

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

YUCCA MOUNTAIN PROJECT OFFICE (PROJECT OFFICE) QUALITY ASSURANCE (QA) STANDARD DEFICIENCY REPORTS (SDRS) RESULTING FROM AUDIT S89-01 OF HOLMES & NARVER, INC. (H&N), SUPPORT OF THE YUCCA MOUNTAIN PROJECT (NN1-1989-0679)

Enclosed are 10 SDRs, Nos. 249 through 258, which were generated during the course of Project Office QA Audit S89-01 of the H&N Yucca Mountain Project QA Program Plan and technical activities. Please note that you are required to provide responses to each SDR by completing blocks 14 through 18 as appropriate on the first page of each SDR. Be advised that the audit checklist references provided on each SDR are for Project Office internal use and should have no bearing on your ability to respond to the cited deficiencies.

A copy of your response is due back to this office 20 working days from the date of this letter. You are asked to concurrently send the original of each SDR response to Nita J. Brogan of Science Applications International Corporation (SAIC), Las Vegas, Nevada.

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

James Blaylock
James Blaylock
Project Quality Manager
Yucca Mountain Project Office

YMP:JB-1113

Enclosures:
SDRs 249-258

8812290071 881221
PDR WASTE
WM-11 PDC

NH03
WM-11 102.7

DEC 21 1988

cc w/encls:

Ralph Stein, HQ (RW-30) FORS
L. H. Barrett, HQ (RW-3) FORS
A. E. Gurrola, H&N, Las Vegas, NV
R. M. Ivy, H&N, Las Vegas, NV
C. O. Wright, H&N, Las Vegas, NV
S. H. Klein, SAIC, Las Vegas, NV
H. H. Caldwell, SAIC, Las Vegas, NV
E. P. Ripley, SAIC, Las Vegas, NV
O. D. Smith, SAIC, Las Vegas, NV
J. W. Estella, SAIC, Las Vegas, NV
S. R. Dana, SAIC, Las Vegas, NV
F. J. Ruth, SAIC, Las Vegas, NV
W. H. Camp, SAIC, Las Vegas, NV
M. C. Brake, SAIC, Las Vegas, NV
J. A. Jardine, SAIC, Las Vegas, NV
B. A. Tabaka, SAIC, Las Vegas, NV
N. J. Brogan, SAIC, Las Vegas, NV
J. J. Holonich, NRC, Washington, D.C.
John Gilray, NRC, Las Vegas, NV
P. T. Prestholt, NRC, Las Vegas, NV
Robert Clark, W, Washington, D.C.
S. W. Zimmerman, NWPO, Carson City, NV
R. W. Gray, MED, NV
V. F. Witherill, NTSO
A. R. Veloso, NTSO
C. P. Gertz, YMP, NV
M. B. Blanchard, YMP, NV
W. R. Dixon, YMP, NV
L. P. Skousen, YMP, NV
N. A. Voltura, YMP, NV
W. B. Mansel, YMP, NV
A. C. Williams, YMP, NV
C. E. Hampton, YMP, NV
E. L. Wilmot, YMP, NV

WMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization	1 Date Nov 29, 1988		2 Severity Level <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3		Page 1 of 2	
	3 Discovered During H&N Audit S89-01		3a Identified By W.B. Mansel		3b Branch Chief Concurrence Date	
	5 Organization Holmes & Narver		6 Person(s) Contacted H. Tuthill/C. Wright/D. Brown		7 Response Due Date is 20 Working Days from Date of Transmittal	
	8 Requirement (Audit Checklist Reference, if Applicable) (Audit Checklist Item 2-6) 1. Reference: WMPO letter JB-1158, dated 3/20/87, Vieth to TPOs, page 2, last paragraph, requires H&N to issue revised procedures upon receipt of WMPO					
Completed by Organization in Block 5	9 Deficiency Contrary to the above, H&N has not developed and issued a procedure covering procurement of QA Level I & II activities. This deficiency was previously identified in WMPO Audit 88-1, Observation No. 7. H&N committed to producing					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective 1. Prepare a procurement procedure for YMP QA Level I & II activities. 2. Train appropriate personnel to procedural requirements.					
	11 QAE/Lead Auditor Date		12 Branch Manager Date		13 Project Quality Mgr. Date	
	14 Remedial/Investigative Action(s)		15 Effective Date			
Comp. by Org. QA Org.	16 Cause of the Condition & Corrective Action to Prevent Recurrence					
	17 Effective Date					
	18 Signature/Date					
Comp. by Orig. QA Org.	19 Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		<input type="checkbox"/> Amended Response		QAE/Lead Auditor/Date	
	20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject				QAE/Lead Auditor/Date	
	21 Verifi- cation <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory				QAE/Lead Auditor/Date	
	22 Remarks					
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date		PQM/Date

ENCLOSURE



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-038
10/86

SDR No. 249

Rev. 0

Page 2 of 2

8 Requirement (continued)

approval of the H&N QAPP.

2. Reference: WMPO Audit 88-1, Observation No. 7, "As of the date of this audit, H&N has not issued a procedure covering procurement of QA Level I and II activities".

9 Deficiency (continued)

a procurement procedure in their observation response by 06/30/88.

N-QA-038
3/87

Page 1 of 2

4 SDR No.
250 Rev. 0

7 Response Due Date is
20 Working Days from
Date of Transmittal

PQM/Date

are sufficient to have originated the original work and did not originate the original work".

2. Develop a plan to investigate what impact the lack of a drafting check has had on the drawings. The plan should be provided with response to the SDR.

WMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization	1 Date NOV 29, 1988		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
	3 Discovered During H&N AUDIT S89-01		3a Identified By M. Brake		3b Branch Chief Concurrence Date	
	5 Organization Holmes & Narver		6 Person(s) Contacted R. Schreiner/D. Brown		4 SDR No. 251 Rev. 0	
	7 Response Due Date is 20 Working Days from Date of Transmittal					
Completed by Organization in Block 5	8 Requirement (Audit Checklist Reference, if Applicable) (Audit Checklist Item T-9) H&N Procedure NNWSI-007, Rev. 1, "Work Initiation", Sections 6.4.1 & 6.4.2, "Any revision of criteria or work scope changes from the original WI requires					
	9 Deficiency 1. WIs 88-15, 88-16, 88-17, 88-19, 88-21, 88-22, 88-27, 88-31, 88-32, and 88-33 have not been revised when criteria or work scope were revised. 2. In the same WIs, the references to the Design Basis Document (DBD), Rev 2,					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1. Revise the WIs to reference the latest criteria documents when revisions are received/made to the criteria documents.					
	11 QAE/Lead Auditor Date <i>S. Jones</i> 12-12-88		12 Branch Manager Date <i>R. Schreiner</i> 12/12/88		13 Project Quality Mgr. Date <i>James Blaylock</i> 12/19/88	
Completed by Orig. QA Org.	14 Remedial/Investigative Action(s)					
	15 Effective Date _____					
	16 Cause of the Condition & Corrective Action to Prevent Recurrence					
	17 Effective Date _____					
Comp. by Orig. QA Org.	18 Signature/Date					
	19 Response <input type="checkbox"/> Accept <input type="checkbox"/> Amended <input type="checkbox"/> Reject <input type="checkbox"/> Response		QAE/Lead Auditor/Date		Branch Manager/Date	
	20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
	21 Verifi- cation <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
	22 Remarks					
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date		
				PQM/Date		



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-038
10/86

SDR No. 251

Rev. 0

Page 2 of 2

8 Requirement (continued)

that it be revised, using the same number", and "Attach or reference the approved criteria revision to the revised WI".

9 Deficiency (continued)

and the SDRD, Rev 1, are incorrect.

10 Recommended Actions (continued)

2. Provide a management control system to ensure that when design information changes, the effected documents are revised accordingly.
3. Develop a plan to investigate what impact the incorrect design information identified in block 9 has had on the quality of design output documents.
The plan should be provided with response to the SDR.
4. Train appropriate personnel to revised procedural requirements.

N-QA-038
3/87

Page 1 of 2

4 SDR No.
252 Rev. 0

7 Response Due Date is
20 Working Days from
Date of Transmittal

1. Verify that all calculations (design analysis) are complete and can stand alone without the originator.

James Blaylock 12/19/88

15 Effective Date _____

17 Effective Date _____

18 Signature/Date

Branch Manager/Date

Branch Manager/Date

Branch Manager/Date

22 Remarks

PQM/Date



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-038
10/86

SDR No. 252

Rev. 0

Page 2 of 2

8 Requirement (continued)

in sufficient detail...such that a technically qualified person may review, understand and verify the analysis without recourse to the originator".

9 Deficiency (continued)

addition, one civil calculation does not meet the above requirement [C-0005]. It should be noted that H&N Surveillance N88-5-0011 covered many of the items that lead up to the above deficiency, but it does not cover the above stated requirement.

The design analyses cannot be checked without the originator because they are incomplete. The analyses do not contain a definition of the objective of the analysis, a definition of design input and their sources, a listing of applicable references, results of literature searches or other background data, identification of assumptions and indication of those which require verification as the design proceeds, and major equation sources. If these items were available the analyses could stand alone and be reviewed, understood, and verified.

10 Recommended Actions (continued)

2. Develop a plan to investigate what impact the lack of sufficient detail has had on the quality of the calculations. The plan should be provided with response to the SDR.
3. Take action to assure future calculation packages are generated to meet program requirements.

WMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization	1 Date Nov 29, 1988		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
	3 Discovered During H&N Audit S89-01		3a Identified By S. Dana		3b Branch Chief Concurrence Date	
	5 Organization Holmes & Narver		6 Person(s) Contacted C. Wright/R. Schreiner		4 SDR No. 253 Rev. 0	
	5 Organization Holmes & Narver		6 Person(s) Contacted C. Wright/R. Schreiner		7 Response Due Date is 20 Working Days from Date of Transmittal	
Completed by Organization in Block 5	8 Requirement (Audit Checklist Reference, if Applicable) (Audit Checklist Item 1-45) H&N NNWSI Quality Assurance Program Plan, Rev. 1, Section 6, "Document Control", para. III.A, "The document control system shall be prescribed by					
	9 Deficiency Contrary to the above requirement, document control activities for the H&N Design Basis Document (DBD) have not provided for the following: 1. A procedure that identifies assignment of responsibility for preparing,					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1. Prepare a procedure that addresses the requirements of the QAPP, Section 6, para. III.A for the DBD.					
	11 QAE/Lead Auditor Date S. Dana 12-12-88		12 Branch Manager Date Schreiner 12/12/88		13 Project Quality Mgr. Date James Blaylock 12/19/88	
Completed by Org. QA Org.	14 Remedial/Investigative Action(s)					15 Effective Date _____
	16 Cause of the Condition & Corrective Action to Prevent Recurrence					17 Effective Date _____
	18 Signature/Date					
	19 Response <input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
Comp. by Orig. QA Org.	20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
	21 Verification <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
	22 Remarks					
	23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date	



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-038
10/86

SDR No. 253

Rev. 0

Page 2 of 2

8 Requirement (continued)

written procedures appropriately reviewed and concurred with by Quality Assurance. The procedure shall provide for implementation of the following:

1. Identification of documents to be controlled.
2. Identification of assignment of responsibility for preparing, reviewing, approving, and issuing documents.
3. Review of documents for technical adequacy, completeness, correctness, and inclusion of appropriate quality requirements prior to approval and issuance."

9 Deficiency (continued)

approving, and issuing the DBD.

2. A procedure that addresses review of the DBD for technical adequacy, completeness, correctness, and inclusion of appropriate quality requirements prior to approval and issuance.

10 Recommended Actions (continued)

2. Train appropriate personnel to new procedural requirements.

WMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization	1 Date Nov 29, 1988		2 Severity Level <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3		Page 1 of 2	
	3 Discovered During H&N Audit S89-01		3a Identified By B. Camp/C. Hampton		3b Branch Chief Concurrence Date	
	5 Organization Holmes & Narver		6 Person(s) Contacted R. Sabol		4 SDR No. 254 Rev. 0	
	5 Organization Holmes & Narver		6 Person(s) Contacted R. Sabol		7 Response Due Date is 20 Working Days from Date of Transmittal	
Completed by Organization in Block 5	8 Requirement (Audit Checklist Reference, if Applicable) NNWSI-SOP-17-01, Rev. 0, para. 5.4.4, "Project participants are responsible for performing the following activities in support of the QARMS: Collect QA Records as soon as possible after records completion, not to exceed 30 days."					
	9 Deficiency Contrary to the above requirement, closed Corrective Action Reports (CARs 1, 5 through 10, 36, 46, and 47) have not been transmitted to Records Management processing. Reports are being stored in 2-drawer file cabinets by H&N					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective 1. Transmit the identified completed (closed) QA Records to Records Management as required.					
	11 QAE/Lead Auditor Date <i>S. Davis</i> 12-12-88		12 Branch Manager Date <i>Atticus for</i> 12/12/88		13 Project Quality Mgr. Date <i>James Blaylock</i> 12/19/88	
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 <input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
	20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
	21 Verifi- cation <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
	22 Remarks					
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date		PQM/Date



WMPO STANDARD DEFICIENCY REPORT CONTINUATION SHEET

N-QA-038
10/86

SDR No. 254

Rev. 0

Page 2 of 2

8 Requirement (continued)

9 Deficiency (continued)

personnel. In addition, H&N NNWSI QAPP, Section 17, and H&N procedure NNWSI-008, Rev. 2, do not address the 30 day requirement specified in NNWSI-SOP-17-01, Rev. 0.

10 Recommended Actions (continued)

2. Revise the appropriate procedures to address the current Project Office requirements.
3. Train appropriate personnel to revised procedural requirements.

WMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization	1 Date Nov 29, 1988		2 Severity Level <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3		Page 1 of 2	
	3 Discovered During H&N Audit S89-01		3a Identified By B. Camp/C. Hampton		3b Branch Chief Concurrence Date	
	4 SDR No. 255		Rev. 0			
	5 Organization Holmes & Narver		6 Person(s) Contacted R. Sabol		7 Response Due Date is 20 Working Days from Date of Transmittal	
Completed by Organization in Block 5	8 Requirement (Audit Checklist Reference, if Applicable) (Audit Checklist Item 1-72) H&N NNWSI Quality Assurance Program Plan, Rev. 1, Section 18, "Audits", para. III.E.4, "Audit report shall contain summary of the audit results, including					
	9 Deficiency Contrary to the above requirement, audit reports No. 87-02 and 87-10 do not address the effectiveness of each element audited.					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective 1. Revise the audit report format to include a statement of effectiveness for each element audited.					
	11 QAE/Lead Auditor Date <i>S. Dene</i> 12-12-88		12 Branch Manager <i>St. Huns for</i> 12/12/88		13 Project Quality Mgr. Date <i>James Blaylock</i> 12/19/88	
Completed by Org. QA Org.	14 Remedial/Investigative Action(s)					
	15 Effective Date _____					
	16 Cause of the Condition & Corrective Action to Prevent Recurrence					
	17 Effective Date _____					
Comp. by Orig. QA Org.	18 Signature/Date					
	19 Response <input type="checkbox"/> Accept <input type="checkbox"/> Amended <input type="checkbox"/> Reject <input type="checkbox"/> Response		QAE/Lead Auditor/Date		Branch Manager/Date	
	20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
	21 Verifi- cation <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
	22 Remarks					
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date		PQM/Date



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-038
10/86

SDR No. 255

Rev. 0

Page 2 of 2

8 Requirement (continued)

a statement of the effectiveness of the QA program elements audited".

10 Recommended Actions (continued)

2. Train Audit personnel to the revised procedural requirements.

WMPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization	1 Date Nov 29, 1988		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 2	
	3 Discovered During H&N Audit S89-01		3a Identified By W. Mansel		3b Branch Chief Concurrence Date	
	5 Organization Holmes & Narver		6 Person(s) Contacted C. Wright/R. Sabol		4 SDR No. 256 Rev. 0	
	7 Response Due Date is 20 Working Days from Date of Transmittal					
Completed by Organization in Block 5	8 Requirement (Audit Checklist Reference, if Applicable) (Audit Checklist Item 1-64) 1. H&N NNWSI Quality Assurance Program Plan, Rev. 1, Section 18, "Audits", para. III.A.3, "Internal and external audits shall be scheduled in a manner					
	9 Deficiency Contrary to the above requirement, H&N is not auditing criteria 18 (Audits) and criteria 16 (Corrective Action).					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective 1. Develop a plan which describes how H&N will provide coverage of criteria 16 and 18. The plan should be provided with response to the SDR.					
	11 QAE/Lead Auditor Date <i>SD</i> 12-10-88		12 Branch Manager <i>Manuel</i> 12/12/88		13 Project Quality Mgr. Date <i>James Blaylock</i> 12/19/88	
Comp. by Orig. QA Org.	14 Remedial/Investigative Action(s)					
	15 Effective Date _____					
	16 Cause of the Condition & Corrective Action to Prevent Recurrence					
	17 Effective Date _____					
18 Signature/Date						
19 Response <input type="checkbox"/> Accept <input type="checkbox"/> Amended <input type="checkbox"/> Reject <input type="checkbox"/> Response		QAE/Lead Auditor/Date		Branch Manager/Date		
20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date		
21 Verifi- cation <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date		
22 Remarks						
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date		
				PQM/Date		



WMPO STANDARD DEFICIENCY REPORT CONTINUATION SHEET

N-QA-038
10/86

SDR No. 256

Rev. 0

Page 2 of 2

8 Requirement (continued)

to provide coverage of all applicable elements of this QAPP or the organizations's QA Manual, as appropriate, commensurate with ongoing activities..."

2. H&N Procedure NNWSI-031, Rev. 0, "Audits", para. 6.1.2, "Audits shall be scheduled in a manner to provide coverage of all applicable elements of the QAPP or the organization's QA Manual commensurate with ongoing activities."

10 Recommended Actions (continued)

2. Revise the current audit schedule to include criteria 16 and 18.

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. 257		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	
Completed by Organization in Block 5	8 Requirement (Audit Checklist Reference, if Applicable) (Audit Checklist Items 1-10, 1-11, 1-12, 1-14, 1-19, 1-20 and 1-22) H&N QAPP, Rev. 1, Section 5, Paragraph III.B.1 states:					
	9 Deficiency Contrary to the cited requirement, H&N procedures do not contain appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished. The following					
	10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective 1. Revise procedures to correct cited deficiencies.					
	11 QAE/Lead Auditor Date <i>James 12-12-88</i>		12 Branch Manager <i>Alanus for</i>		Date <i>12/12/88</i>	
Completed by Org. QA Org.	13 Project Quality Mgr. Date <i>James Blaylock 12/19/88</i>					
	14 Remedial/Investigative Action(s)					
	15 Effective Date _____					
	16 Cause of the Condition & Corrective Action to Prevent Recurrence					
Comp. by Orig. QA Org.	17 Effective Date _____					
	18 Signature/Date					
	19 Response <input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
	20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
Comp. by Orig. QA Org.	21 Verifi- cation <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
	22 Remarks					
23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date		PQM/Date

WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-038
10/86

SDR No. 257

Rev. 0

Page 2 of 3

8 Requirement (continued)

"Instructions, plans, procedures, etc., shall:

Include or reference appropriate quantitative or qualitative acceptance criteria for determining that prescribed activities have been satisfactorily accomplished."

9 Deficiency (continued)

examples indicate the areas in which H&N procedures fail to provide a sufficient level of detail or guidance to those responsible for implementation.

1. H&N NNWSI-007, Rev. 0, with ICN-002, Rev. 0, "Work Initiation, Criteria Gathering, and Reporting," and NNWSI-015, Rev. 0, "Design Input Control", do not instruct those responsible for implementation with regard to what aspects of design input must be reviewed in order to arrive at acceptance of the input. Instructions directing such a review should, at a minimum, include the following:
 - 1) a comparison of subject input with known values, standard tables, information, and codes;
 - 2) a check to determine if the input is complete such as a reference to Attachment 8.1 of NNWSI-015;
 - 3) a check to confirm accuracy of the input;
 - 4) a check to determine if the input requires a change to established input and an assessment of related input that requires a change and;
 - 5) an assessment of whether the input will result in the use of standard available technology and equipment or some arrangement that is beyond the state of the art.
2. H&N NNWSI-006, Rev. 1, "Design Analysis," does not impart the message that an analysis is more than a set of calculations. This procedure concentrates heavily on who prepares, where the analyses are sent to next, etc...but fails to convey the fundamental purpose of an analysis. That is, an analysis must prove through use of progressive and orderly logic that the design of the item will serve safely and effectively under the established design conditions. The designer must postulate what the design conditions are, including worse case conditions, and prove or disprove that design objectives of safety and effectiveness can be met.
3. H&N NNWSI-029, Rev. 1, "Design Interface Control," does not contain provisions to assure that traceability is achieved between Design Interface



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

N-QA-038
10/86

SDR No. 257

Rev. 0

Page 3 of 3

9 Deficiency (continued)

Identification Sheets, Component Interface Drawings, System Interface Drawings and the Design Output Drawings used for procurement and construction.

4. H&N NNWSI-015, Rev. 0, does not provide instructions on how comments are documented, see Para. 6.3.2.
5. H&N NNWSI-014, Rev. 0, does not provide instructions on how those responsible are expected to assess whether design inputs have been selected correctly, whether assumptions are valid, whether a proper design method was used etc....The procedure does not explain how these questions are to be incorporated into the Design Verification Report nor how those responsible indicate their satisfaction or dissatisfaction with what they have learned of the design. Further, the procedure does not provide instructions regarding resolutions of comments made by the verifier that indicate dissatisfaction with the design.
6. H&N NNWSI-005, Rev. 1, does not contain instructions regarding which engineering disciplines are required to review a drawing. No instructions are provided to indicate how review comments are resolved.

10 Recommended Actions (continued)

2. Perform and document QA review to determine extent and depth of similar deficiencies.
3. Determine the adequacy of past QA reviews of subject procedures. Revise procedures to reinforce requirements for QA reviews including documentation of comments and resolutions: will result in the use of standard.
4. Train appropriate personnel to revised procedural requirements.

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	
	5 Organization Holmes & Narver		6 Person(s) Contacted R. Schreiner, D. Brown		4 SDR No. 258 Rev. 0	
	7 Response Due Date is 20 Working Days from Date of Transmittal					
Completed by Organization in Block 5	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					
Completed by Organization in Block 5	11 QAE/Lead Auditor Date <i>S. Davis 12-12-88</i>		12 Branch Manager Date <i>Starr 12/12/88</i>		13 Project Quality Mgr. Date <i>Jane Blaylock 12/19/88</i>	
	14 Remedial/Investigative Action(s)					
	15 Effective Date _____					
Completed by Organization in Block 5	16 Cause of the Condition & Corrective Action to Prevent Recurrence					
	17 Effective Date _____					
	18 Signature/Date					
Comp. by Orig. QA Org.	19 Response <input type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
	20 Amended Response <input type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date		Branch Manager/Date	
	21 Verifi- cation <input type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date		Branch Manager/Date	
	22 Remarks					
	23 QA CLOSURE		QAE/Lead Auditor/Date		Branch Manager/Date	
				PQM/Date		

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.



WMPO STANDARD DEFICIENCY REPORT CONTINUATION SHEET

N-QA-038
10/86

SDR No. 258

Rev. 0

Page 3 of 3

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.