



Department of Energy

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

WBS #1.2.9.3
"QA"

AUG 16 1989

Larry R. Hayes
Technical Project Officer for Yucca Mountain Project
U.S. Geological Survey
101 Convention Center Drive
Suite 860
Las Vegas, NV 89109

CLOSURE OF STANDARD DEFICIENCY REPORTS (SDRs) 146, 148, AND 152, REVISION 0, RESULTING FROM YUCCA MOUNTAIN PROJECT OFFICE QUALITY ASSURANCE AUDIT 88-4 OF U.S. GEOLOGICAL SURVEY

SDRs 146, 148, and 152, Revision 0, have been closed based on satisfactory verification of completed corrective actions. Copies of the SDRs are enclosed for your files.

If you have any questions, please contact James Blaylock of my staff at 794-7913 or Daniel A. Klimas of Science Applications International Corporation at 794-7881.

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

YMP:JB-5399

Enclosure:
SDRs 146, 148, and 152, Revision 0

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PDR WASTE PDC
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WM-11
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Larry R. Hayes

-2-

AUG 16 1989

cc w/encl:

Ralph Stein, HQ (RW-30) FORS
Dwight Shelor, HQ (RW-3) FORS
J. R. Willmon, USGS, Denver, CO
J. J. Brogan, SAIC, Las Vegas, NV, 517/T-12
L. G. Scherr, SAIC, Las Vegas, NV, 517/T-06
D. A. Klimas, SAIC, Las Vegas, NV, 517/T-08
S. W. Zimmerman, NWPO, Carson City, NV
J. E. Kennedy, NRC, Washington, DC

cc w/o encl:

K. G. Sommer, HQ (RW-3) FORS
Alan Flint, USGS, NTS
G. P. Fehr, SAIC, Las Vegas, NV, 517/T-12
V. D. Hedges, SAIC, Las Vegas, NV, 517/T-06
R. J. Bahorich, W, Las Vegas, NV, 517/T-37
D. O. Porter, SAIC, Golden, CO
J. W. Gilray, NRC, Las Vegas, NV

V:MPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization Aprvl
Completed by Organization in Block 5
Comp. by Orig. QA Org.

1 Date June 16, 1988		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 3	
3 Discovered During WMPO Audit-88-4		3a Identified By S.P. Hans/J. Clark/K.		3b Branch Chief Concurrence Date	
4 SDR No. 146		Rev. 0			
5 Organization USGS-DENVER		6 Person(s) Contacted Tom Chaney/Mark Meremonte		7 Response Due Date is 20 Working Days from Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) (3-3) NNWSI-USGS-QMP-3.02, R1, Para. 6.1.3 states in part, "Data, documents, and computer codes shall have the same quality levels as the items or activities on which they are to be used or from which they result, unless					
9 Deficiency Contrary to the above, no objective evidence was provided during the audit to demonstrate compliance with the above requirement for items or activities within the scope of the SIPs audited (eg. 3343G-01; 3331G-01; 3370G-02;					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective (1) Review all data, documents and computer codes identified in all USGS SIPs for NNWSI work and assure that completed work to date is identified with					
11 QAE/Lead Auditor Date <i>Daniel Klumias 7/25/88</i>		12 Branch Manager Date <i>Tom Chaney 7/26/88</i>		13 Project Quality Mgr. Date <i>James Blaylock 7/25/88</i>	
14 Remedial/Investigative Action(s) See attached response for Blocks 14-17.					
15 Effective Date _____					
16 Cause of the Condition & Corrective Action to Prevent Recurrence					
17 Effective Date _____					
18 Signature/Date <i>James R. [Signature] 8/31/88</i> <i>J.W. Estelle 8/31/88</i>					
19 Response <input type="checkbox"/> Accept <input checked="" type="checkbox"/> Amended Response <input type="checkbox"/> Reject		QAE/Lead Auditor/Date <i>Dan Klumias 12-5-88</i>		Branch Manager/Date <i>J.W. Estelle 5/2/89</i>	
20 Amended Response <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date <i>Dan Klumias 5-19-89</i>		Branch Manager/Date <i>J.W. Estelle 19/11/89</i>	
21 Verification <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date <i>Dan Klumias 8/1/89</i>		Branch Manager/Date <i>J.W. Estelle 8/2/89</i>	
22 Remarks Verified that USGS performed remedial actions by changing QA level from QAL III to QAL I on all Software Summary Forms for SIP 3233G-03. In addition, QMP 3.03 has been revised to require that appropriate QA levels are identified for software that affect quality related activities.					
23 QA CLOSURE		QAE/Lead Auditor/Date <i>Dan Klumias 8/2/89</i>		Branch Manager/Date <i>J.W. Estelle 8/2/89</i>	
				RQM/Date <i>James Blaylock 8/2/89</i>	

ENCLOSURE

**APO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET**

**N-QA-038
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Rev. 0

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8 Requirement (continued)

specifically exempted..."

9 Deficiency (continued)

3233G-03; 3310G-01. NOTE: Reports USGS-OFR-76-408 and 596 were issued as a result of SIP-3233G-02 Node T509 and T511. These documents have no quality level physically identified on the documents. All activities of SIP-3233G-03 are QA Level I.

The Software Summary Forms (Attachment 1 of QMP-3.03) do identify quality levels. However, during the audit, no traceability was established from the Software Summary Forms to the SIP they support. Additionally, all five SIPs within the scope of this audit were reviewed to determine what software was required by each SIP. Although software needs were identified within the SIP, no specific software was identified. All of the needed software in the SIPs was TBD.

Forty-three (43) auxiliary software programs resulting from SIP 3233G-03 are currently assigned QA Level III, although SIP-3233G-03 has no QA Level III activities and was classified by the WMPO as QA Level I.

DISCUSSION

According to the USGS QA Program Plan, Section 3.1.1.1, prior to the start of any scientific investigation, the SIP shall contain a description of the work to be performed...and...shall identify all factors...that relate to the...performance of the scientific investigation. Section 3.1.2 also states that QA levels need to be assigned to the items and activities in a plan that was prepared earlier. It is clear that extensive use of software is being made by USGS for this SIP without required reviews and approvals in an updated SIP. If this work were appropriately included in the SIP, proper assignment of QA levels would likely have occurred. Unfortunately, this is not the case with the foregoing software, most of which has been prepared earlier outside the NNWSI Project. SIP 3233G-03, Rev. 0 should be updated promptly.

The root cause of the deficiency is not the improper use of software forms but the inadequate control over scientific investigations which include software use. USGS should determine whether or not other scientific work, other software and other data processing activities are being performed to support quality level I or II work without proper QA level assignment to the work per an approved SIP.

10 Recommended Actions (continued)

the appropriate QA level.



WMPO STANDARD DEFICIENCY REPORT
CONTINUATION SHEET

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10 Recommended Actions (continued)

- (2) Develop and implement measures to assure compliance with this requirement in the future.
- (3) Determine the impact on quality of work done to date on NNWSI Project.
- (4) Reissue the SSF for the forty-three (43) software program versions currently covered by SIP 3233G-03.
- (5) Modify QMP-3.03 attachment no. 1 and 2, to provide traceability to applicable SIPs and require a QA approval signature to ensure that appropriate QA levels are identified for software affecting quality.

AMENDED RESPONSE TO SDR-143, -144, -145, -146,
-147, -148, -155, -156, and -157
February 10, 1989

BLOCK 14: REMEDIAL/INVESTIGATIVE ACTION(S):

Part of the "fully qualified QA program" described in block 16 will be the establishment of a qualification process for data that is intended for use in the Project Office licensing process and that had been developed by the USGS before the implementation of this "fully qualified QA Program". This process will be consistent with the Project Office AP-5.9Q.

BLOCK 15: EFFECTIVE DATE:

Thirty days subsequent to issuance of AP-5.9Q.

BLOCK 16: CAUSE OF THE CONDITION AND PREVENTIVE ACTION TO PREVENT RECURRENCE:

The USGS is currently in the process of establishing a Quality Assurance Program which meets the requirements of NNWSI/88-9, Rev.2. The establishment, implementation, and verification of this "fully qualified QA Program" will provide the corrective action to prevent recurrence for the SDRs.

BLOCK 17: EFFECTIVE DATE:

Progress on the "fully qualified QA Program" is tracked for the Project Office bi-weekly and reported as part of the "Gold Star Schedule". Please refer to this schedule for current dates. A specific date cannot be accurately projected at this time because parts of the USGS QA Program are dependent upon Project Office APs.

YMPO verification of the USGS Program is scheduled by the Project Office.



United States Department of the Interior



GEOLOGICAL SURVEY
BOX 25046 M.S. 421
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY REFER TO:

WBS 1.2.9.3
QA: "QA"

February 10, 1989

Carl P. Gertz
Project Manager
Yucca Mountain Project Office
U.S. Department of Energy
P.O. Box 98518
Las Vegas, NV 89193-8518

Atten: James Blaylock

SUBJECT: AMENDED RESPONSES TO SDRs -143, -144, -145, -146, -147,
-148, -151, -153, -154, -155, -156, -157, -161, and
-162

REFERENCE: James Blaylock letter to Larry R. Hayes, dated
January 17, 1989, subject: YMPO Evaluation of USGS
Response to SDRs issued from Quality Assurance Audit
88-04

In response to the referenced letter, the USGS has amended the responses to the subject Standard Deficiency Reports (SDRs). Individual amendments are attached for each SDR.

If you have any questions concerning this matter, please contact the Quality Assurance Office at FTS 776-1418.

Sincerely,

Larry R. Hayes,
Chief, Branch of YMP

LRH/MMH

2

44

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cc: Ralph Stein, DOE-HQ, (RW-30) FORS
L.H. Barrett, DOE-HQ (RW-3) FORS
K.G. Sommer, DOE-HQ (RW-3) FORS
J.R. Willmon, USGS, QA
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
K.E. Schwartztrauber, SAIC, Las Vegas, NV
C.M. Thompson, SAIC, Las Vegas, NV
B.A. Tabaka, SAIC, Las Vegas, NV
J.J. Brogan, SAIC, Las Vegas, NV
P.T. Prestholt, NRC, Las Vegas, NV
R.W. Gray, MED, NV
A.D. Boyce, MED, NV
M.B. Blanchard, YMP, NV
L.P. Skousen, YMP, NV
W.R. Dixon, 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
E.H. Roseboom, USGS, Reston, VA
M.W. Reynolds, USGS, Reston, VA
V.R. Schneider, USGS, Reston, VA
D.C. Jorgensen, USGS, Lakewood, CO
R.B. Raup, USGS, Golden, CO
K.W. Causseaux, USGS, Lakewood, CO
J.B. Woolverton, USGS, Lakewood, CO
J.J. Barth, USGS, Golden, CO
QA Logbook
QA File 3.16.01 YMPO SDRs
USGS Local Records Center

WMPO STANDARD DEFICIENCY REPORT

N-QA-031
3/87

Completed by Originating QA Organization

1 Date June 22, 1988		2 Severity Level <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3		Page 1 of 3	
3 Discovered During WMPO Audit 88-4		3a Identified By S.B. Mattson/K. D. Klimas		3b Branch Chief Concurrence Date	
5 Organization USGS-Denver		6 Person(s) Contacted J. Stuckless, J. Evans, R. Luckey,		4 SDR No. 148 Rev. 0	
7 Response Due Date is 20 Working Days from Date of Transmittal					
8 Requirement (Audit Checklist Reference, if Applicable) The USGS QAPP, Section 3.3.1 states in part that computer software used to support a high level nuclear waste repository license application shall be documented and controlled. Section 3.3.2 also states that Users Manuals, code					
9 Deficiency Contrary to the above requirement, USGS QMP-3.03, Section 6.3.1.1 states that "No documentation is required for auxiliary software".					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Investigative <input checked="" type="checkbox"/> Corrective (1) Modify USGS QMP-3.03 to require documentation for all QA Level I and II activities for which auxiliary software is required to conduct the work.					

Completed by Organization in Block 5

11 QAE/Lead Auditor Date <i>Daniel Klimas 7-25-88</i>		12 Branch Manager Date <i>John Williams 8/31/88</i>		13 Project Quality Mgr. Date <i>James Blaylock 7/25/88</i>	
14 Remedial/Investigative Action(s) See attached response for Blocks 14-17.					
15 Effective Date _____					
16 Cause of the Condition & Corrective Action to Prevent Recurrence					
17 Effective Date _____					
18 Signature/Date <i>Dan R. Klimas 8/31/88</i> <i>John Williams 8/31/88</i>					

Comp. by Orig. QA Org.

19 Response <input type="checkbox"/> Accept <input checked="" type="checkbox"/> Amended Response		QAE/Lead Auditor/Date <i>Dan Klimas 12-5-88</i>		Branch Manager/Date <i>John Williams 5 Dec 88</i>	
20 Amended Response <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject		QAE/Lead Auditor/Date <i>Dan Klimas 5-11-89</i>		Branch Manager/Date <i>John Williams 19 May 89</i>	
21 Verification <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory		QAE/Lead Auditor/Date <i>Dan Klimas 8-1-89</i>		Branch Manager/Date <i>J.W. Estelle 8/2/89</i>	
22 Remarks USGS has issued QMP 3.03, Rev. 1, to identify the documentation requirements for software identified as critical, (used directly to support repository design and performance.)					
23 QA CLOSURE		QAE/Lead Auditor/Date <i>Dan Klimas 8/1/89</i>		Branch Manager/Date <i>J.W. Estelle 8/2/89</i>	
				PGM/Date <i>James Blaylock 3/1</i>	



WMPO STANDARD DEFICIENCY REPORT
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10/86

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6 Persons contacted (continued)

Z. Petermann, M. Meremonte, B. Szabo

8 Requirement (continued)

assessment and support, and continuing documentation and code listings shall be included as a minimum. Also QAPP, Section 3.3.3 states in part, "A software configuration management program shall be instituted for software including listings, chronology of revisions and descriptions of changes made".

Furthermore, Section III, Part 1.4 of the NNWSI QA Plan, states that "computer programs that are used for analysis shall be verified and controlled as specified in NNWSI Project...procedures..."

9 Deficiency (continued)

DISCUSSION

Objective evidence of documentation for USGS QA Level I auxiliary software and data reduction software prepared for SIPs 3370G-02 (codes ANALYST, SR and CONTROL), SIP 3331G-01 (codes CVXYLL, REFORM1, CORALL, CORMP and NHP.HYDRO), and SIP 3233G-03 (codes INPUT.FOR, PTBPT, and 43 other codes), could not be provided by USGS staff. Minimum documentation of codes may consist of detailed user manuals, summaries of code verification and methods of calculation, or brief code descriptions depending upon the complexity of the method or code, or the number of users. The documentation should be complete enough to ensure that a knowledgeable person in the field could reapply the data reduction process or model effort and obtain consistent results. The documentation should also provide verification that the software performs the desired calculations correctly (i.e., computer codes for SR-isotope analysis, U-trend U-series dating, and Fission Track analysis, were apparently never verified) and changes made to existing codes for use on the NNWSI Project. Furthermore, no objective evidence was presented during the audit to document that software configuration changes are documented.

The NNWSI QA Plan (NVO-196-17) and the USGS QA Program Plan (NNWSI-USGS-QAPP-01) are consistent and congruent with respect to software documentation, but the authors of the USGS-QMP have taken exception with the requirements of the NNWSI QA Plan and the USGS QAPP. However, this exception is neither noted in the USGS QAPP nor recorded on checklists required by NVO-196-17, Section II, Parts 1.1, 1.2 and 1.3.

There is no justification why USGS-QMP-3.03 deviates from these requirements. Section II, Part 1.0 of the NNWSI QA Plan states that where deviations from the NNWSI QA Plan and Participant Plans/procedures exist, NVP-196-17 requirements shall prevail. Therefore, the USGS-QMP is not in compliance with the two controlling QA Plans. Such exceptions along with appropriate justification for non-compliance with



WMPO STANDARD DEFICIENCY REPORT
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10/86

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Rev. 0

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9 Deficiency (continued)

the NNWSI QA Plan requirements should have been reviewed by the WMPO prior to their implementation.

The NNWSI QA Plan (NVO-106-17) and the USGS QA Program Plan (NNWSI-USGS-QAPP-01), are very clear regarding the minimum requirements for software configuration management. These include:

- (1) Use of a unique identification, including version numbers, in the output.
- (2) Listings of the software.
- (3) A chronology of versions and description of changes made between versions.

The WMPO audit staff was provided no objective evidence that these minimum requirements were being met for the computer codes investigated.

10 Recommended Actions (continued)

- (2) Determine the impact on quality of results/data published by USGS based on the use of auxiliary software without the required documentation.
- (3) Complete the required documentation for all auxiliary software in use which has resulted in publication of data/results obtained from USGS software.
- (4) Develop measures to assure that auxiliary software used by USGS will be documented in accordance with the QA requirements.
- (5) Institute a software configuration management program for all software developed or modified by USGS.
- (6) Document all software changes or modifications currently in use for NNWSI activities per QA software requirements.

BLOCK 14: REMEDIAL/INVESTIGATIVE ACTION(S):

The USGS investigation reveals there is no deficiency and no remedial actions are warranted. NNWSI-USGS-QMP-3.03 is in compliance with the NNWSI-USGS-QAPP-01, R4. The QAPP agrees with the WPMO requirements specified in the QA Plan and the SOP-03-02. SDR recommended actions 1, 2, 3, and 4 are not appropriate because documentation requirements for auxiliary software are already established and followed. The recommended actions 5 and 6 are already in effect. Additional information is provided below:

- a) Block 9 of the SDR misquotes QMP-3.03. The reference actually states "... no other documentation is required for auxiliary software." A Software Summary Form (SSF) is required for auxiliary software.
- b) Objective evidence of documentation for the codes cited is available in the form of SSFs. These SSFs are on file in the QA Office and available on request. According to personnel identified in Box 6 of the SDR, this documentation was not requested during the audit. In addition, the deficiency statement on page 2 of the SDR relates to "auxiliary software and data reduction software". Data reduction software is not a pertinent classification but only a keyword to describe the software. Software identified on SSFs are classified as either Scientific and Engineering Software (SES) or auxiliary.
- c) The minimum documentation stated in the deficiency refers to SES, not auxiliary software. All the software cited in this SDR is auxiliary.
- d) SSFs provide objective evidence of software configuration changes.
- e) NNWSI-USGS-QAPP-01, R4, Section 3.3 identifies requirements for Scientific and Engineering Software and not for auxiliary software. The QMP exceeds the QAPP requirements by defining auxiliary software and requiring an SSF as the minimum documentation for USGS auxiliary software.

NNWSI-USGS-QAPP-01, R4, paragraph 3.3.1 states that requirements will be implemented in accordance with the NNWSI Administrative Procedures Manual. To date, there is no Administrative Procedure in place for software. SOP-03-02, R0, Software Quality Assurance remains in effect. SOP-03-02 states that it applies only to scientific and engineering software (Section 1.0, Purpose and Scope).

NNWSI-USGS-QAPP-01, R4, Paragraph 3.3.1 also states that software documentation and control measures shall be consistent with the NUREG-0856. NUREG-0856 also states requirements for only scientific and engineering software. The treatment of auxiliary software in NNWSI-USGS-QMP-3.03, R0 is in full compliance with NNWSI-USGS-QAPP-01, R4.

BLOCK 15: EFFECTIVE DATE: Not applicable.

BLOCK 16: CAUSE OF THE CONDITION & CORRECTIVE ACTION TO PREVENT RECURRENCE:

Not applicable.

BLOCK 17: EFFECTIVE DATE: Not applicable.

AMENDED RESPONSE TO SDR-143, -144, -145, -146,
-147, -148, -155, -156, and -157
February 10, 1989

BLOCK 14: REMEDIAL/INVESTIGATIVE ACTION(S):

Part of the "fully qualified QA program" described in block 16 will be the establishment of a qualification process for data that is intended for use in the Project Office licensing process and that had been developed by the USGS before the implementation of this "fully qualified QA Program". This process will be consistent with the Project Office AP-5.9Q.

BLOCK 15: EFFECTIVE DATE:

Thirty days subsequent to issuance of AP-5.9Q.

BLOCK 16: CAUSE OF THE CONDITION AND PREVENTIVE ACTION TO PREVENT RECURRENCE:

The USGS is currently in the process of establishing a Quality Assurance Program which meets the requirements of NNWSI/88-9, Rev.2. The establishment, implementation, and verification of this "fully qualified QA Program" will provide the corrective action to prevent recurrence for the SDRs.

BLOCK 17: EFFECTIVE DATE:

Progress on the "fully qualified QA Program" is tracked for the Project Office bi-weekly and reported as part of the Gold Star Schedule. Please refer to this schedule for current dates. A specific date cannot be accurately projected at this time because parts of the USGS QA Program are dependent upon Project Office APs.

YMPO verification of the USGS Program is scheduled by the Project Office.

MPO STANDARD DEFICIENCY REPORT

N-QA-038
3/87

Completed by Originating QA Organization

1 Date June 16, 1988		2 Severity Level <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3		Page 1 of 2	
3 Discovered During Audit 88-4		3a Identified By S.P. Hans/J. Clark	3b Branch Chief Concurrence Date		4 SDR No. 152 Rev. 0
5 Organization USGS-Denver		6 Person(s) Contacted Tom Chaney		7 Response Due Date is 20 Working Days from Date of Transmittal	
8 Requirement (Audit Checklist Reference, if Applicable) NNWSI-USGS-QMP-3.04, R1, Para. 6.5.1 - A printed copy of the document together with copies of supporting documents (Manuscript Routing Sheet, reviewers comments and author response, DOE/NV approval) shall be maintained in a					
9 Deficiency The actual comments generated for technical review of publications by the Geologic Division are not available in the QA records file.					
10 Recommended Action(s): <input checked="" type="checkbox"/> Remedial <input type="checkbox"/> Investigative <input type="checkbox"/> Corrective (1) Obtain the actual comments generated as a result of the technical review done by the Geologic Division.					

Apr 88

11 QAE/Lead Auditor Date <i>Daniel Klemas 7-25-88</i>		12 Branch Manager Date <i>Tom Chaney 7/25/88</i>		13 Project Quality Mgr. Date <i>James Blayford 7/25/88</i>	
--	--	---	--	---	--

Completed by Organization in Block 5

14 Remedial/Investigative Action(s) See attached response for Blocks 14-17.		15 Effective Date _____	
16 Cause of the Condition & Corrective Action to Prevent Recurrence		17 Effective Date _____	

Comp. by Orig. QA Org.

18 Signature/Date <i>James R. Hans 8/31/88</i> <i>J. Willmon 8/31/88</i>	
19 Response <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Amended Response <input type="checkbox"/> Reject <input type="checkbox"/> Requested	
20 Amended Response <input checked="" type="checkbox"/> Accept <input type="checkbox"/> Reject <input type="checkbox"/> Unrequested	
21 Verification <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory	
22 Remarks Reviewed the following file documentation to verify that all documents required by QMP 3.04, Rev. 2, are being maintained in the designated QA file: Published Report OFR-88-560, Open File Report GS-88-M-009, Published Report OFR-87-199	

23 QA CLOSURE		QAE/Lead Auditor/Date <i>Dan Klemas 8-1-89</i>		Branch Manager/Date <i>J.W. Estelle 8/2/89</i>		PQM/Date <i>James Blayford 8/2/89</i>	
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**WMPQ STANDARD DEFICIENCY REPORT
CONTINUATION SHEET**

**N-QA-038
10/86**

SDR No. 152

Rev. 0

Page 2 of 2

8 Requirement (continued)

designated QA file in accordance with QMP-17.01.

9 Deficiency (continued)

Basis for SDR:

All documents which meet the definition of QA records must be maintained in the QA records system. The documents involved with this SDR do in fact meet the definition of QA records. However, they are not included in the QA records system at USGS.

Rationale for SDR:

QA records included in the QA records system are maintained in a retrieval system for specified periods of time. The records in question were not subjected to any analysis as to the specific time period these records should be maintained.

10 Recommended Actions (continued)

(2) Establish a method to assure continual compliance.

USGS RESPONSE TO WMPO STANDARD DEFICIENCY REPORT (SDR) NO. 152

BLOCK 14: REMEDIAL/INVESTIGATIVE ACTION(S):

The SAIC-Golden Records Coordinator will coordinate with the appropriate Geologic Division personnel to assure that the supporting documents, such as Manuscript Routing Sheets, reviewer's comments, authors' responses, etc., are collected and on file to support the published reports as stipulated in QMP-3.04, R1. This record processing activity will be an integral part of the USGS Records Management System. Refer to SDR 161 for actions.

BLOCK 15: EFFECTIVE DATE: See SDR 161 for actions.

BLOCK 16: CAUSE OF THE CONDITION & CORRECTIVE ACTION TO PREVENT RECURRENCE:

Not applicable.

BLOCK 17: EFFECTIVE DATE: Not Applicable.



United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25046 M.S. 425
DENVER FEDERAL CENTER
DENVER, COLORADO 80225



IN REPLY REFER TO:

WBS #: 1.2.9.3
QA: "QA"
July 26, 1989

Carl P. Gertz
Project Manager
Yucca Mountain Project Office
U.S. Department of Energy
P.O. Box 98518
Las Vegas, NV 89193-8518

ATTEN: Ed Wilmot, Acting PQM

SUBJECT: AMENDED RESPONSE TO STANDARD DEFICIENCY REPORT (SDR) 152

Dear Carl:

The USGS would like to amend its response to Standard Deficiency Report 152 by deleting the last two sentences of Block 14. In reviewing the response, it was determined that these two sentences were not necessary. In line with this change, Block 15 can now be updated to indicate a completion date of July 25, 1989.

Sincerely,

J.R. Willmon,
Quality Assurance Manager,
Yucca Mountain Project

MHM/JRW/aa

cc: J.W. Estella, SAIC/T&MSS Project QA Engineering
R.W. Gray, IMD, NV
S. Berkel, IMD, NV
J.J. Brogan
USGS LRC
QA File 3.16.01 SDR-152
QA logbook