



Department of Energy  
Yucca Mountain Site Characterization  
Project Office  
P. O. Box 98608  
Las Vegas, NV 89193-8608

WBS 1.2.9.3  
QA


APR 15 1991

Carl P. Gertz, Project Manager, YMP, NV

VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF CORRECTIVE ACTION REQUEST  
(CAR) YM-91-008 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION  
(YMQAD) AUDIT 90-I-01

The YMQAD staff has verified the corrective action to CAR YM-91-008 and determined the results to be satisfactory. As a result, the CAR is considered closed.

If you have any questions, please contact either Catherine E. Hampton at 794-7973, or Martha J. Mitchell at 794-7852.

  
Donald G. Horton, Director  
Yucca Mountain Quality Assurance Division

YMQAD:CEH-3233

Enclosure:  
YM-91-008

cc w/encl:  
K. R. Hooks, NRC, Washington, DC  
S. W. Zimmerman, NWPO, Carson City, NV  
N. J. Brogan, SAIC, Las Vegas, NV, 517/T-08

cc w/o encl:  
J. W. Gilray, NRC, Las Vegas, NV

YMP-5

21

9104230446 910415  
PDR WASTE  
WM-11 PDR

ADD: Ken Hooks

102.7  
WM-11  
NH03 11

**OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.**

14 CAR NO.: YM-91-008  
DATE: 11/09/90  
SHEET: 1 OF 2  
QA  
WBS No.: 1.2.9.3

**CORRECTIVE ACTION REQUEST**

1 Controlling Document EDD-001, Revision 0		2 Related Report No. Audit 90-I-01
3 Responsible Organization Engineering & Development Division	4 Discussed With G. Dymmel and J. Waddell	
10 Response Due 11/29/90	11 Responsibility for Corrective Action E. Petrie	12 Stop Work Order Y or N N

5 Requirement:  
QA Grading Report No. EDD-001, Page 4, Items B and C states, "All inputs shall be documented. Use of inputs shall be documented and traceable."

6 Adverse Condition:  
Inputs in Revision 1 of YMP/CM-0007, "Technical Requirements for the Yucca Mountain Project (Midway Valley Trenching and Calcite/Silica Activities)" are not always traceable. Examples are as follows:

1. The source of functional requirements on pages III-8, 10, and 11 is not apparent.
2. References on page IV-5 to Ross, 1987, and DOE, 1986, are not traceable.
3. Page IV-B-1 references 42USC9601 as the emergency planning and community Right-to-Know Act and a source of input. The reference is not traceable to the Act nor is it traceable to a requirement in Section III.
4. Page IV-B-1 references "N49602 Spang to Gertz 10/10/89" as a source of input. The letter does not exist. A letter dated 10/10/89 from Spang to the DOE Nevada Operations Office exists;

7 Recommended Action(s):  
Identify the remedial actions to be taken to correct the deficiencies noted in Block 6. Investigate the program, process, activities, or documentation to determine the extent and depth of similar conditions to those listed on the CAR. Identify these deficiencies and provide the measures

8 Initiator Marc Meyer	Date: 10/26/90	9 Severity Level - 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/>	13 Approved By: OQA <u>James Blaylock for</u>	Date: <u>11/9/90</u>
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15 Verification of Corrective Action:  
*See attached page H.J. Mitchell 5 April 91*

16 Corrective Action Completed and Accepted: OAR <u>Mitchell</u> Date <u>5 April 91</u>	17 Closure Approved By: OQA <u>Robert H. [Signature]</u> 4-5-91
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OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

CAR NO.: YM-91-008  
DATE: 11/09/90  
SHEET: 2 OF 2

**CORRECTIVE ACTION REQUEST**  
**(continuation sheet)**

6 Adverse Condition (continued)

however, the letter number is N48602.

5. None of numerous references to "[NEV]" are traceable because no such source of input exists.

6. Requirements in Section IV, Paragraph 2.8, are not traceable.

7 Recommended Action(s) (continued)

required to correct them. Identify the cause of the condition and the planned corrective action to prevent recurrence.

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CAR NO. YM-91-008

DATE: 11/29/90

SHEET: 3 OF 6

CORRECTIVE ACTION REQUEST  
(continuation sheet)

CORRECTIVE ACTION RESPONSE

EXTENT OF DEFICIENCY:

The requirements document (CM-0007) is a unique, one-of-a-kind document that was prepared to temporarily take the place of portions of several higher tier documents that were or still are in preparation.

ROOT CAUSE:

An independent Root Cause Analysis disclosed the following root causes for the identified deficiencies:

1. Project documents addressing development of the Requirements Document (development criteria contained in the QA grading package and the Development Plan) lacked sufficient direction to preparers regarding format and methods of depicting traceability.
2. Inadequate recognition by preparers of their responsibility and accountability for the quality of their document.
3. Fundamental purpose of Project Office reviews not clearly defined by procedures for special cases where the Project Office is the preparer of the document (versus performing an acceptance review on a document that has been prepared under a Participant's QA program).
4. Project documents addressing development and review of the Requirements Document, including QMP-06-04, lacked sufficient information and criteria for reviewers regarding format, flowdown, and traceability.

REMEDIAL ACTION:

Additional regulatory, technical, management, and quality assurance reviews conducted in accordance with QMP-06-04 have been completed on YMP/CM-0007. The review criteria (see attached), under general guidance states in part:

ENCLOSURE 2

REV. 10/90

**OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.**

CAR NO. YM-91-008

DATE: 11/29/90

SHEET: 4 OF 6

**CORRECTIVE ACTION REQUEST  
(continuation sheet)**

"Since this is a pruned set of requirements, the sub-tier does not need to be sufficient to satisfy the upper tier requirements. However, the requirement must be derivable from the upper tier requirement or requirements starting with WMSR IV and must be sufficient with respect to the activities titled Midway Valley/Calcite Silica.

Inputs developed under other QA programs must be determined to be acceptable. Successful resolution of any comments generated during this review will serve as the basis for acceptance of inputs developed under other QA programs."

Regulatory review criteria number 4 states: "Are the sources of information and data referenced and traceable?"

Technical review criteria number 1 states: "Are inputs and input sources current correct, and adequate for the intended use?"

Technical review criteria number 6 states: "Is there clear and unambiguous flow down and linkage among all requirements?"

Response to review comments have ensured that the input traceability was clarified, reviewed, and corrected when necessary.

The specific examples given in the CAR were corrected as follows:

1. Specific references to WMSR IV sections have been added to all functional requirements in this section.
2. These were secondary references which are given in the SCP sections which were referenced. These references have been added.
3. The "et seq." needed to be added to the references. The references have been corrected and reformatted for consistency.
4. This has been changed to the BLM references. Note this reference is now in Section V-B-1.

OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

CAR NO. YM-91-008  
DATE: 11/29/90  
SHEET: 5 OF 6

**CORRECTIVE ACTION REQUEST**  
(continuation sheet)

5. "NEV" has been replaced with explicit citations to higher tier requirements.

6. The "site specific" constraints derive from the "general environmental constraints" provided in the prior sections. Specific citations are now provided. Note this was moved to Section V.

Please note that on page 1 of the Review Instructions it states that a hold on the completion of verification of H&N design products until the new revision of the requirements document was completed. That hold was never assigned. The document was released for use on November 28, 1990 and the verification of the design products is not scheduled for completion until the first week of December. Therefore, the hold is no longer necessary.

CORRECTIVE ACTION TO PREVENT RECURRENCE:

As stated previously, CM-0007 is a unique, one-of-a-kind document. Even though there are no plans to prepare additional, similar documents, we have taken or are taking the following actions to ensure the quality of other types of documents that may be prepared by the Project Office in the future. The actions are numbered to coincide with the root causes that they address.

1. QMP-06-04 will be revised to provide additional guidance regarding the specificity of instructions that should be provided to the preparers of documents.
2. QMP-06-04 will be revised to include more specific direction to document preparers regarding their responsibility for the quality of the documents they prepare.
3. QMP-06-04 will be revised to be more specific regarding the purpose and scope of Project Office reviews in those special cases where the Project Office acts as the preparer of a document as opposed to reviews of documents prepared by Participants.

OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
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DATE: 11/29/90

SHEET: 6 OF 6

CORRECTIVE ACTION REQUEST  
(continuation sheet)

4. BTP-EDD-002 has been issued to provide more specific review criteria for document reviewers in the EDD. In addition, when the uniqueness of a document requires it, we will exercise additional care in identifying more specific supplemental guidance to the assigned reviewers.

The revisions to QMP-06-04 will be completed by 1/30/91 (Petrie/Alderson).

Edgar H Petrie 11/30/90  
RESPONSIBLE MANAGER DATE

S. Dan 12/18/90  
QAR DATE

Robert H. Hapke 12-19-90  
OQA DATE

T&MSS PLANS AND PROCEDURES DIVISION (PPD)  
DOCUMENT TRANSMITTAL/ACKNOWLEDGMENT RECORD

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DATE: October 30, 1990  
FROM: Vincent F. Iorii, Project Control  
Branch Chief  
Return to Mailstop 517/T-26

DT/AR:VFI:leb:1130  
WBS #1.2.1.2.5  
QA

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DOCUMENT IDENTIFICATION NUMBER: YMP/CM-0007 REVISION: 2  
TITLE: Technical Requirements for the Yucca Mountain Project (Midway  
Valley Trenching and Calcite/Silica Activities)  
AUTHOR/REQUESTER/CONTACT: George D. Dymmel, YMP, NV  
DRAFT: H DATED: 10/30/90  
ACTION REQUESTED: QMP-06-04 Review  
ACTION RETURN DATE: 11/2/90  
REVIEW AND COMMENT RESOLUTION MEETING:  
TUESDAY: 10/30/90 8:00 A.M. Training Center Room 10

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Distribution:

R. B. Barton, YMP, NV  
W. R. Dixon, YMP, NV  
W. A. Girdley, YMP, NV  
D. G. Horton, YMP, NV  
V. F. Iorii, YMP, NV  
S. B. Jones, YMP, NV  
E. H. Petrie, YMP, NV  
A. C. Robison, YMP, NV  
R. J. White, YMP, NV  
W. A. Wilson, YMP, NV  
R. C. Greenwold, H&N, Las Vegas, NV  
J. A. Catozzi, REECO, Las Vegas, NV  
H. Z. Dokuzoguz, SAIC, Las Vegas, NV, 517/T-39  
G. A. Fasano, SAIC, Las Vegas, NV, 517/T-11  
M. A. Glora, SAIC, Las Vegas, NV, 517/T-27  
T. A. Grant, SAIC, Las Vegas, NV, 517/T-13  
J. L. King, SAIC, Las Vegas, NV, 517/T-03  
K. T. McFall, SAIC, Las Vegas, NV, 517/T-06  
C. G. Pflum, SAIC, Las Vegas, NV, 517/T-27  
J. N. Stellavato, SAIC, Las Vegas, NV, 517/T-32  
T. E. Hinkebein, SNL, 6315, Albuquerque, NM

---

DOCUMENT RECEIVED FOR PROCESSING BY:

DATE



T&MSS PLANS AND PROCEDURES DIVISION (PPD)  
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Branch Chief  
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TUESDAY: 10/30/90 8:00 A.M. Training Center Room 10

cc w/encl: (for information purposes)

Dwight Shelor, HQ (RW-3) FORS  
G. D. Dymmel, YMP, NV  
Helen S. Matthews, SAIC, Las Vegas, NV, 517/T-19  
J. D. Waddell, SAIC, Las Vegas, NV, 517/T-21

cc w/o encl: (for status purposes)

C. P. Gertz, YMP, NV  
J. R. Dyer, YMP, NV  
F. R. Maxwell, YMP, NV  
J. C. Calovini, H&N, Las Vegas, NV  
R. E. Lowder, MACTEC, Las Vegas, NV  
J. C. Mattimoe, MACTEC, Las Vegas, NV  
R. F. Pritchett, REECO, Las Vegas, NV  
D. M. Boak, SAIC, Las Vegas, NV, 517/T-43  
E. H. Cathey, SAIC, Las Vegas, NV, 517/T-43  
E. M. Cikanek, Harza, Las Vegas, NV, 517/T-39  
George Derner, Harza, Las Vegas, NV, 517/T-39  
T. E. Blejwas, SNL, 6313, Albuquerque, NM  
Rich Kalinski, SNL, 6311, Albuquerque, NM  
L. J. Klamerus, SNL, 6316, Albuquerque, NM  
A. C. Matthusen, SAIC, Las Vegas, NV, 517/T-10  
J. K. Prince, SAIC, Las Vegas, NV, 517/T-14  
T. H. Pysto, SAIC, Las Vegas, NV, 517/T-11  
R. R. Schneider, SAIC, Las Vegas, NV, 517/T-43  
G. K. Beall, SAIC, Las Vegas, NV, 517/T-36  
M. M. Dussman, SAIC, Las Vegas, NV, 517/T-14  
R. G. Helms, SAIC, Las Vegas, NV, 517/T-24  
J. H. Nelson, SAIC, Las Vegas, NV, 517/T-04  
S. C. Matthews, SAIC, Las Vegas, NV, 517/T-07  
T. D. Tait, SAIC, Las Vegas, NV, 517/T-40  
J. L. Younker, SAIC, Las Vegas, NV, 517/T-10  
L. R. Hayes, USGS, Denver, CO

T&MSS PLANS AND PROCEDURES DIVISION (PPD)  
DOCUMENT TRANSMITTAL/ACKNOWLEDGMENT RECORD

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Branch Chief

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DRAFT: H DATED: 10/30/90  
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ACTION RETURN DATE: 11/2/90  
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TUESDAY: 10/30/90 8:00 A.M. Training Center Room 10

NOTE: A format and content check on this document was not performed by the Technical and Management Support Services Plans and Procedures Division.

Enclosed is a copy of the YMP/CM-0007, Technical Requirements for the Yucca Mountain Project (Midway Valley Trenching and Calcite/Silica Activities) (Rev. 2), for an QMP-06-04 review. Per Section 5.0, Step 10, of QMP-06-04, the persons listed in the distribution of this transmittal are responsible for reviewing the enclosed document.

Complete the enclosed Document Review Sheets (DRS) and return to Elaine L. Spangler, SAIC, by the scheduled review comment completion date of Friday, November 2, 1990. Per QMP-06-04, Section 5.0, Step 14, comments received after the comment due date will be held and considered for the next revision if extension of due date is not requested from reviewer(s) and approved by the PCB manager.

If the responsible reviewer determines that a review by his organization is not desired or required, then he is to return the DRS with that indicated on the DRS. Should a review not produce any comments, the reviewer is to return the DRS form marked "No Comments." The original signed and dated DRS form must be returned and should be completed in black ink. Please note that if you line through any information, you must initial and date that line-through per QMP-17-01.

All reviewers must attend, or have representatives present at, the review and comment meeting to be held beginning at 8:00 a.m. on Tuesday, October 30, 1990, in Training Center Room 10. Those representatives must have authority to resolve comments. Designees should be so noted on the Document Review Sheet.

Should you have any questions regarding the document under review, please get in touch with the Author/Requester/Contact, or John D. Waddell at 794-7828, or Deidre M. Boak at 794-7268. If you have any questions about the review process, contact Elaine L. Spangler at 702) 794-7640, or FTS 544-7640.

**T&MSS PLANS AND PROCEDURES DIVISION (PPD)  
DOCUMENT TRANSMITTAL/ACKNOWLEDGMENT RECORD**

DATE: October 30, 1990 *leb for*  
FROM: Vincent F. Iorii, Project Control  
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TUESDAY: 10/30/90 8:00 A.M. Training Center Room 10

**REVIEW CRITERIA:** Complete the review pursuant to the specific criteria for your type of review contained in Attachment 2, 3, 4, or 5 and to the general criteria provided below:

**General Guidance:** Since this is a pruned set of requirements, the sub-tier does not need to be sufficient to satisfy the upper tier requirement. However, the requirement must be derivable from the upper tier requirement or requirements starting with WMSR IV and must be sufficient with respect to the activities titled Midway Valley/Calcite Silica.

Inputs developed under other QA programs must be determined to be acceptable. Successful resolution of any comments generated during this review will serve as the basis for acceptance of inputs developed under other QA programs.

Checklists shall be prepared to show that all review criteria were evaluated.

**Example Checklist:**

Reviewer \_\_\_\_\_ Date \_\_\_\_\_

**Criterion: Technical #6**

Section	Derivation Traceable	Logic/Rationale Acceptable	References Correct
_____	_____	_____	_____

In addition to these criteria, the technical review should cover the consistency of the document with the following:

1. The Office of Civilian Radioactive Waste Management system requirements document - Waste Management Systems Requirements, Rev. 1.
2. The applicable study plans (Midway Valley-"Study Plan for Evaluating the Location and Recency of Faulting Near Prospective Surface Facilities," 8.3.1.17.4.2; and, Calcite/Silica, Trench 14 -"Characterization of the Yucca Mountain Quaternary Regional Hydrology," Activity 8.3.1.5.2.1).
3. Functional analysis supporting the Midway Valley and Calcite/Silica activities.
4. Test and Evaluation Plan

10/29/90

REVIEW INSTRUCTIONS FOR REVIEW OF  
TECHNICAL REQUIREMENTS FOR THE YUCCA MOUNTAIN PROJECT  
REV. 1 TO BECOME REV. 2

1.0 GOAL

Issue Rev. 2 of the Technical Requirements for the Yucca Mountain Project.

2.0 THEME

To provide a document with zero defects where all inputs from laws and regulations been identified and there is clear and unambiguous flow down linkage among all requirements.

3.0 PROCESS

The major steps are shown below:

3.1. The EDD will place a hold on completion of verification of H&N design products (AP-5.20)

3.2. The review will be conducted under the QAG numbered EDD-001, Rev. 1. The review process will comply with QMP-06-04, Rev. 1. On October 29, 1990, a background briefing will be provided and all reviewers are to assure that their training records are current for QMP-06-04, Rev. 1. The review will start October 30, 1990. The end of the review comment period is targeted for completion by November 2, 1990.

The lead organization for the review is the System Branch. The coordinators will be G. Dymmel, J. Waddell, D. Boak, and E. Spangler.

3.3. REVIEW ASSIGNMENTS

Regulatory Review

SPECIALTY

NWPA/NRC  
NEPA  
DOE Orders and others  
Safety Regulations

REVIEWERS

M. Glora  
G. Fasano  
C. Pflum  
R. White

## Technical Review

### SPECIALTY

Engineering and Construction  
Seismic  
Faulting Hazards  
Sample Management  
Environmental  
Construction  
Systems  
Performance Assess.\*  
TE Process  
Testing Linkage

### REVIEWERS

R. White, R. Greenwold, W. Wilson  
J. King  
T. Grant  
N. Stellavato  
G. Fasano  
J. Catozzi  
H. Dokozoguz  
T. Hinkebein  
S. Jones  
A. Girdley

Only Criteria  
1, 5, and 6

- \* Assess magnitude of potential adverse impact of site activity and establish controls placed on the activity.

## Management Review

### AREA

EDD  
POCD  
Site Operations  
RSED  
POCD  
Quality Assurance

### REVIEWERS

Ted Petrie  
Wendy Dixon  
Winn Wilson  
Bob Barton  
Ace Robison, Vince Iorii  
Don Horton

## Quality Assurance Review

### AREA

QA

### REVIEWERS

Ken McFall

3.4. After comment resolution the document will be revised and issued as a controlled document.

### 3.5. AUTHORS AND SUPPORT

George Dymmel, Lead Author  
John Waddell  
Ed Cikanek  
George Derner  
Hank Cathey  
Tom Pysto  
Rayce Prince  
Frank Maxwell  
Russ Dyer  
Augie Matthusen  
Rich Kalinski, SNL (LATA)  
Leo Klamerus, SNL  
Ralph Schneider  
Deirdre Boak

### 3.6 REVIEW SCHEDULE

Background briefing	10/29/90
<ul style="list-style-type: none"><li>- Review instructions</li><li>- QARD and QAPD</li><li>- QA Grading Package</li><li>- QMP-06-04</li></ul>	
Document overview	10/30/90
<ul style="list-style-type: none"><li>- Review package handout</li></ul>	
Perform review	10/30/90 - 11/2/90
Comment resolution	11/3/90 - 11/9/90
Document revision	Goal to be complete mid November

MANAGEMENT REVIEW CRITERIA

1. Does any change to existing policy expressed in the document represent a conscious decision at the appropriate management level?
2. Does any condition with, or change to, organizational responsibility assignments represent a conscious decision at the appropriate management level?
3. Where the document affects the reviewing organization, are management and administrative impacts acceptable?
4. If interfaces between U.S. Department of Energy and participants are involved, is the interface consistent with existing contracts or agreements?
5. Is document content consistent with established HQ and Project Office objectives?

REGULATORY REVIEW CRITERIA

1. Is the document content consistent with applicable regulatory requirements, if any?
2. Does the document content affect existing regulatory commitments and, if so, is it consistent with such commitments?
3. If the document makes any commitments or addresses a topic of regulatory interest, is it consistent with existing or intended Program and Project policy?
4. Are the sources of information and data referenced and traceable?
5. Is there any contradiction between DOE Orders and regulatory requirements or commitments, and if so, what will be the method of resolution?



TECHNICAL REVIEW CRITERIA (S. Jones and A. Girdley only review to criteria  
1, 5, and 6)

1. Are inputs and input sources current, correct, and adequate for the intended use?
2. Are those assumptions within the scope of responsibility of this organization stated explicitly? Are they reasonable?
3. Where applicable and where checked, are analytical approaches and results appropriate?
4. Is the document consistent with prescribed systems engineering requirements as defined in the Yucca Mountain Project Systems Engineering Management Plan?
5. Were potential interfaces or interactions, such as Environmental, adequately addressed?
6. Is there clear and unambiguous flow down and linkage among all requirements?

QUALITY ASSURANCE REVIEW CRITERIA

1. Does the document contain those QA requirements applicable to the controls or processes it addresses? (A flowchart or checklist of applicable QA requirements for the specific topic may be desirable for QA reviews).
2. Are responsibilities clearly delineated?
3. Are specified responsibilities and authority consistent with Project policy?
4. Where applicable, does the document clearly distinguish between performing, review, and verification activities?
5. Where verification activities are involved, does the document adequately address mechanisms for ensuring the necessary independence and technical competence of the verifier(s)?
6. If the document expresses requirements that exceed established QA program requirements, do such additional requirements reflect Project Office policy?
7. Does the document contain qualitative and or quantitative data, and if so, are tolerance and parameters provided for this data?
8. Based on the source requirements, is there a need to provide QA interpretations or clarifications to the document requirements?

YUCCA MOUNTAIN PROJ  
DOCUMENT ACTION REQUEST

Y-AD-125  
9/90

TO: PROJECT OFFICE, PROJECT CONTROL BRANCH

Document Title/Subject/Type: Technical Requirements for the Yucca Mountain Project  
(Midway Valley Trenching and Calcite/Silica Activities); all sections

Document Number/Revision: (if any) YMP/CM-0007, Rev. 1 to become Rev. 2. Review copy  
marked Draft H.

Action Requested: (check only one entry)

[NA] Development of new document

[NA] Change to existing document

[X] Review of attached document

[NA] Other: (specify) \_\_\_\_\_

Reason for Request: (briefly identify need, i.e., implements requirement, order, policy; in response to  
SDR (identify SDR number(s), error or missing information, etc.) \_\_\_\_\_

The prior review was identified as inadequate during the October audit.

Therefore, a complete review of the incomplete document is requested.

*CTH*  
*10/29/90*

[ ] Additional information/supporting material attached

FROM: George D. Dymmel

Requestor (print name)

Systems Branch

Organization

Phone No.: ext. 4-7577 Mailstop: P.O.

Request Date: 10/29/90 Requested Action Completion Date: 10/30/90  
Completion by mid November

Manager Concurrence:

*Edgar H. Peltier*  
Signature

10/29/90  
Date

TPO Approval: (if required)

N/A

Signature

*EHP*  
10/29/90

N/A

Date

PROJECT OFFICE USE ONLY

Date received: 10/29/90

Request No.: 156

**YUCCA MOUNTAIN PROJECT  
DOCUMENT ACTION INITIATION**

Y-AD-124  
9/90

Requested Document Action: *(PCB make appropriate entries)*

Document Title/Subject/Type: Technical Requirements for the Yucca Mountain Project;  
(Midway Valley Trenching and Calcite/Silica Activities)

[ X ] Request action per attached YMP Document Action Request (Request No. 156 )

[ ] Other: \_\_\_\_\_

Responsible DD: E. H. Petrie, Director EDD

Print Name and Title

**DD DOCUMENT ACTION INSTRUCTIONS**

1. [ X ] CONCUR WITH REQUEST

[ ] REJECT REQUEST

Justification \_\_\_\_\_

[ ] Continued on attached sheet(s)

2. Document is: [ X ] Quality Related [ ] Not Quality Related

3. Change status: (if applicable) N/A [ ] Major change [ ] Minor change

4. Assigned Originating Organization(s): *(if applicable)* Systems Branch of EDD with support by  
SNL, T&MSS, USGS, RSED, and POCD

5. Assigned Reviewing Organization(s): EDD, RSED, POCD, YMP QA Division, Site Manager's  
Office, SAIC (T&MSS), H&N, REECO, SNL

6. Type of review(s) to be performed: Management, Regulatory, QA, and Technical

7. Approval/Acceptance Signatures required: *(names and titles)* E. H. Petrie, Acting Director, EDD,  
YMP; D. G. Horton, Director QA Div., YMP; C. P. Gertz, Asst. Director, Office of  
Geologic Disposal

[ X ] Additional Instructions continued on attached sheets(s) Attachment #1 Review instructions for  
Review of Technical Requirements for the Yucca Mountain Project, Rev. 1, to  
become Rev. 2.

Edgar H. Petrie  
Responsible DD Signature

-10/29/90  
Date

DOCUMENT REVIEW  
COVER SHEET

Y-AD-116  
8/90

SECTION I. (PCB make appropriate entries)

Document Title/Subject: Technical Requirements for the Yucca Mountain Project (Midway Valley Trenching and Calcite/Silica Activities)

Document ID No: YMP/CM-0007 Draft No: H Revision No: 2 ☒ Q ☐ Non-Q

Technical Writer: John D. Waddell SME: George D. Dymmel  
Print Name Print Name if other than Technical Writer

Primary Reviewer: \_\_\_\_\_  
Print Name Title

Type Review(s) assigned: ☐ Management ☐ Regulatory ☐ QA ☐ Technical

Review Criteria supplied by: E. H. Petrie  
Print Name

Review(s) recommended by Reviewer: ☐ Technical ☐ Peer

Review Package to Reviewer: 10/30/90 Review Package received: \_\_\_\_\_  
Date Date

Comments due: 11/2/90 ☐ No comments ☐ Comments to Author: \_\_\_\_\_  
Date Date

☐ All comments responded to ☐ Comment response(s) disputed

☐ Disputed comments resolved: \_\_\_\_\_ ☐ Disputed sheet(s) attached  
Date

SECTION II. (Primary Reviewer or equivalent, complete when applicable)

Secondary Reviewer assigned: \_\_\_\_\_  
Print Name

Secondary Reviewer is qualified and authorized to conduct review:

Primary Reviewer: \_\_\_\_\_  
Signature Date

SECTION III. (DRS instructions)

- a. Use black ink; number each comment; enter section or step number comment applies to; place \* to left of Major Comments.

NOTE: A Major Comment is a comment that the reviewer has determined requires resolution prior to document acceptance. A Minor Comment is a comment other than a major comment.

- b. If a technical or peer review is recommended, enter recommendation as a Major Comment and reason in Comments column along with document section(s) review recommended on.
- c. Reviewer indicate acceptance of responses by checking "Yes" or "No" and initialing and dating adjacent to response. "No" checks shall be considered "Disputed" and shall be resolved by next higher level of management.
- d. Reviewer verify final draft and sign acceptance in statement below:

I verify that all comment dispositions and/or dispute resolutions have been incorporated satisfactorily.

\_\_\_\_\_  
Reviewer Signature Date

**DOCUMENT REVIEW SHEET  
(DRS)**

N-QA-041  
10/90

Document ID No.:

**TMP/CM-0007**

If "NO" checked in acceptance column, see  
attached CDRS  
(\* Denotes Major Comment)

Page      of

**REVIEW COMMENTS**

**RESPONSE**

**ACCEPTANCE**

YES	NO	INITIAL/DATE
-----	----	--------------

**REVIEWED BY:**

**RESPONSE BY:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

**YUCCA MOUNTAIN PROJECT  
COMMENT DISPUTE RESOLUTION SHEET**

Y-AD-117  
8/90

Document ID No. YMP/CM-0007

Page \_\_\_\_ of \_\_\_\_

Document Title/Subject: Technical Requirements for the Yucca Mountain Project (Midway Valley Trenching and Calcite/Silica Activities)

**DISPUTED COMMENT/REASON**

**RESOLUTION**

**Submitted by:**

**Resolved by:**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date



**Department of Energy**

Yucca Mountain Project Office

P. O. Box 98608

Las Vegas, NV 89193-8608

WBS 1.2.9.3

QA

**QA RECEIVED**

DEC 11 1990

DEC 14 1990

Donald G. Horton, Director, Yucca Mountain Quality Assurance Division, YMP, NV

**ADDITIONAL INFORMATION ON THE RESPONSE TO CORRECTIVE ACTION REPORTS (CARs)  
YM-91-008 AND YM-91-009**

Please add the information given below to the response dated November 30, 1990, for the subject CARs.

**ROOT CAUSE:**

Inadequate emphasis on the fact that each employee has the responsibility and obligation to provide feedback and seek clarification from management anytime he has questions regarding the scope, schedule, or methods to be used in accomplishing assigned tasks.

**REMEDIAL ACTION:**

The Director, Engineering and Development Division (EDD), will hold discussions with all EDD personnel to ensure that they understand what management wants; and it is their obligation to provide feedback and seek clarification from their managers anytime they have questions regarding the scope, schedule, or methods to be used in accomplishing assigned tasks. (To be completed 12/14/90, Petrie.)

**CORRECTIVE ACTION:**

There will be a section added to the Yucca Mountain Site Characterization Project Orientation that will emphasize the points made in the remedial action section of this letter. (To be completed 1/31/90, Petrie/Alderson.)

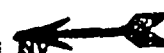
If you have any questions on this matter, please contact me at 794-7961 or Roxanne D. Edwards at 794-7999.

Edgar H. Petrie, Acting Director  
Engineering and Development Division  
Yucca Mountain Site Characterization  
Project Office

EDD:RDE-1168

cc:

N. J. Brogan, SAIC, Las Vegas, NV





## Verification of Correction CAR-91-008

Note: The document has undergone significant structural change, and editing. This makes identification of some specific items from Rev. 1 going to Rev. 2 in response to CARs 91-007 through 009.

Note: The response to CAR-91-007 changing the requirements for the flowdown of requirements impacts the extent and quantity of information required for traceability.

### Adverse Condition Item 1.

Page III-4 contains explanation and examples of References for Section III. References for elements from pages III-8, 10, and 11 in rev. 0 are referenced in the stated format. Verification of this item, and similar items sampled in the text, is satisfactory. All 22 items have references and the document contains explanation and examples for references.

### Adverse Condition Item 2.

References to Ross, 1987 and DOE, 1986 present and are complete in Section IV.

Verification of item 2 is satisfactory.

### Adverse Condition Item 3.

Reference 42USC9601 is no longer identified in IV-B. Traceability to Section III is no longer required. Verification of this item is satisfactory.

### Adverse Condition Item 4.

N49602 Spang to Gertz is not referenced in Section IV-B. No letters are referenced in this section. Verification of this item is satisfactory.

### Adverse Condition Item 5.

Reference [NEV] is not used in the document. [SR, Y, CA] is used this traces to Section III Constraint A and explained on page VI-3 of rev. 2. Constraint A is referenced to 10CFR60 and 40CFR191 and WMSR. Verification of this item is satisfactory.

### Adverse Condition Item 6.

Paragraph 2.8 and all of Section 2 in Section IV (Site Requirements Document) have been deleted. Verification of this item is satisfactory.

Verification for closure of CAR-91-008 is complete and satisfactory.

*M. J. McNeill 5 April 91*