



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

WBS 1.2.9.3
QA N/A

NOV 20 1992

Carl P. Gertz, Project Manager, YMP, NV

VERIFICATION OF CORRECTIVE ACTION OF CORRECTIVE ACTION REQUEST (CAR)
YM-93-001, YM-93-002, AND YM-93-003 RESULTING FROM YUCCA MOUNTAIN QUALITY
ASSURANCE DIVISION (YMQAD) AUDIT YMP-92-24

The YMQAD staff has verified the corrective actions to CARs YM-93-001 through
YM-93-003 and determined the results to be unsatisfactory for the following
reasons:

1.0 Corrective Action Response for CAR YM-93-001

- B. First line - need to explain why investigations were made since July
1991 (i.e., explain the significance of that date).

Second sentence - since there were only 15 Field Change Requests
(FCR) identified, they should be specifically identified with a
status matrix of each, and this should be included in this CAR.

Next to last sentence - need to clarify the difference between
urgent and minor. Urgent FCRs do not necessarily waiver the
requirement for a technical evaluation.

- B. This section should state that the FCRs identified in Section B
above will be technically evaluated. Copies of these evaluations
shall be completed and maintained with the corresponding FCR. An
impact of those implemented FCRs that had no technical evaluation
will also be performed. If impacts exist, the extent and
disposition of these impacts shall be identified in this CAR.

1.0 Corrective Action Response for CAR YM-93-002

- A. At the end of this paragraph, a statement should be made to provide
an attachment to this CAR to show this action has been or will be
completed.

- D. Fourth line - delete the phrase starting with the word
"submits . . . baseline," and insert "notifies the Change Control
Board (CCB) in writing of document acceptance, (d) CCB updates the
technical baseline." Also, in the old (d), delete the phrase "After
CCB approval" and make the rest of the statement item (e).

WM-11
NH03/11
102.7
Add: Ken Hooks Hc Encl
1 1

9212040142 921120
PDR WASTE PDR
WM-11

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

6 CAR NO.: YM-93-001
DATE: 10/6/92
SHEET: 1 OF 1
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document AP-3.5Q, Revision 1		2 Related Report No. YMP-92-24					
3 Responsible Organization YMPO		4 Discussed With C. Gertz/W. Wilson/B. Cruz					
5 Requirement: AP-3.5Q, Revision 1, Paragraph 4.0, Step 4 (A), requires that if a change is scientific, design or quality-affecting, that a technical evaluation be performed by the affected participant (i.e., YMPO or other participant) per the participants' procedure or the requirements identified within Attachment 4 of AP-3.5Q.							
6 Adverse Condition: Contrary to the above, during Audit YMP-92-24, no objective evidence could be produced to show that the technical evaluations had been performed for the following Field Change Requests (FCRs): <table border="0" style="width: 100%;"> <tr> <td style="text-align: center;">FCR 92/089</td> <td style="text-align: center;">FCR 92/092</td> </tr> <tr> <td style="text-align: center;">FCR 92/058</td> <td style="text-align: center;">FCR 92/061</td> </tr> </table>				FCR 92/089	FCR 92/092	FCR 92/058	FCR 92/061
FCR 92/089	FCR 92/092						
FCR 92/058	FCR 92/061						
9 Does a significant condition adverse to quality exist? Yes ___ No <u>X</u> If Yes, Circle One: A B C		10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Circle One: A B C D					
		11 Response Due Date: 20 Working days from issuance					
12 Required Actions: <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Extent of Deficiency <input checked="" type="checkbox"/> Preclude Recurrence <input type="checkbox"/> Root Cause Determination							
13 Recommended Actions: Identify the remedial actions to be taken to correct the deficiencies note in Block 6. Investigate the program processes, activities or documentation to determine the extent and depth of similar conditions as noted in Block 6. Identify these deficiencies and provide the measures to correct them.							
7 Initiator Sam H. Horton <i>Sam Horton</i> Date <i>10/06/92</i>		14 Issuance Approved by: QADD <i>[Signature]</i> Date <i>10/8/92</i>					
15 Response Accepted QAR _____ Date _____		16 Response Accepted QADD _____ Date _____					
17 Amended Response Accepted QAR _____ Date _____		18 Amended Response Accepted QADD _____ Date _____					
19 Corrective Actions Verified QAR _____ Date _____		20 Closure Approved by: QADD _____ Date _____					

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WASHINGTON, D.C.

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DATE: _____
PAGE: _____ OF _____
QA

CORRECTIVE ACTION REQUEST (Continuation Page)

1.0 Corrective Action Response for CAR # YM-93-001

A. Remedial Action

For remedial purposes, an FCR Processing Checklist, as shown in Attachment 1, has been implemented to assure that the technical evaluation required in Step 4 of AP-3-5Q is included, if appropriate.

B. Investigative Action

Investigation was made of all FCRs processed since July, 1991, and then reviewing those that involved scientific, design or quality affecting changes. From this review, 15 FCRs lacking objective evidence of technical evaluation were identified. These 15 FCRs which include the four mentioned in this CAR are annotated in a copy of the Change Request Status Log Report, and is shown in Attachment 2. An analysis of these FCRs showed that: technical evaluations were performed for FCRs 92/089 and 92/092; technical evaluations were not found in the files for FCRs 92/058 and 92/061; and all of the FCRs annotated in Attachment 2 were of the urgent or minor nature and a technical evaluation was not applicable. Procedure AP-3.5Q was interpreted as not requiring a technical evaluation for FCRs of a minor or urgent nature.

C Root Cause Determination

Not Applicable

D. Corrective Action to Preclude Recurrence

The FCR Processing Checklist shown in Attachment 1 was implemented as an internal CM desk top instructions. To bring the FCRs noted in Attachment 2 into compliance, copies of technical evaluations were requested of the Participants to complete the files.

lth dtd 11/9/92 - EDD:BDH-829

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CAR NO. YM-93-001
DATE: _____
PAGE: _____ OF _____
QA

CORRECTIVE ACTION REQUEST (Continuation Page)

CAR # YMP-93-001 (continuation)

2. Assigned Responsibility

Action	Individual	Completion
1.A	B. G. Cruz	Completed October 7, 1992
1.B	B. G. Cruz	Completed October 23, 1992
1.C	N/A	
1.D	B. G. Cruz	Completed October 30, 1992

3. Response Approved: Winifred A. Wilson Date: 11-4-92
W. A. Wilson

FCR Processing Checklist (REV. 0)

Processor _____

FCR # _____

Date received: _____

All document impacts are listed _____

Document to be changed is properly categorized _____

Correct Processing Priority _____

Correct Change impacts _____

If applicable, correct Cost/Schedule impacts _____

Correct TPO/DD signature obtained _____

Originators procedural training concurrence _____

If applicable, prepare and distribute CEs _____

If applicable, receipt of all CEs obtained _____

Correlation between section II and section III _____

Complete and/or disposition FCR _____

CDIA prepared _____

CM Document Receipt Acknowledgment complete and signed _____

Submit original package to DRC for distribution _____

Receive original package with DRCs concurrence for site file _____

Copy package for Las Vegas file _____

Complete FCR Transmittal form, initial and date _____

If applicable, attach FCCB meeting minutes and/or CEs
to FCR package for site file _____

Submit form to B. Cruz for initials,
receive form from B. Cruz and send to distribution _____

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DATE: _____
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CORRECTIVE ACTION REQUEST (Continuation Page)

Attachment 2
CAR YM-93-001

Annotated Change Request Status Log Report 32 pages

Copies of Related Technical Evaluations 36 pages

These documents are available for review in the YMP CM offices. Please make arrangements to see these by contacting B. G. Cruz at 794-1851

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

8 CAR NO.: YM-93-002
DATE: 10/6/92
SHEET: 1 OF 1
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document AP-5.24Q, Revision 0		2 Related Report No. YMP-92-24	
3 Responsible Organization YMPO		4 Discussed With C. Gertz/W. Wilson/B. Cruz	
5 Requirement: AP-5.24Q, Revision 0, Paragraph 4.0, Step 5 and Step 5 Note, require the submittal of as-built drawings and specifications from the affected participants to the CCB for incorporation into the technical baseline. In addition, the CCB is required to notify the Architect Engineer (A/E) of the CCB's acceptance of as-built drawings and specifications, and the CCB Secretary is required to send as-builts to the LRC and the DCC.			
6 Adverse Condition: Contrary to the above, during Audit YMP-92-24, the following deficient conditions were identified: <ol style="list-style-type: none"> 1. Trench 14 as-built drawings and specifications were submitted to the CCB but were not shown in the technical baseline as being as-built. 2. The CCB did not notify the A/E of the CCB's acceptance of Trench 14 as-built drawings and specifications. 3. The Trench 14 as-built drawings and specifications were not sent to the LRC (however, investigation has provided evidence that they were sent to the DCC). 			
9 Does a significant condition adverse to quality exist? Yes ___ No <u>X</u> If Yes, Circle One: A B C		10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Circle One: A B C D	
		11 Response Due Date: 20 Working days from issuance	
12 Required Actions: <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Extent of Deficiency <input checked="" type="checkbox"/> Preclude Recurrence <input type="checkbox"/> Root Cause Determination			
13 Recommended Actions: Identify the remedial actions to be taken to correct the deficiencies note in Block 6. Investigate the program processes, activities or documentation to determine the extent and depth of similar conditions as noted in Block 6. Identify these deficiencies and provide the measures to correct them.			
7 Initiator Sam E. Borton <i>Sam E. Borton</i> Date <u>10/06/92</u>		14 Issuance Approved by: QADD <i>R.C. Spruce</i> Date <u>10/8/92</u>	
15 Response Accepted QAR _____ Date _____		16 Response Accepted QADD _____ Date _____	
17 Amended Response Accepted QAR _____ Date _____		18 Amended Response Accepted QADD _____ Date _____	
19 Corrective Actions Verified QAR _____ Date _____		20 Closure Approved by: QADD _____ Date _____	

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WASHINGTON, D.C.

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DATE: _____
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QA

CORRECTIVE ACTION REQUEST (Continuation Page)

1.0 Corrective Action Response for CAR # YM-93-002

A. Remedial Action

Remedial action will be taken regarding the Trench 14 as-built drawings and specifications. The CCB will handle these documents in accordance with AP-5.24Q, Preparation and Submittal of As-Built Drawings and Specifications, and notify the A/E of the CCB's acceptance of these documents.

B. Investigative Action

Investigation has shown that this has been a one-time occurrence. The Trench 14 as-built drawings and specifications were submitted to the CCB in June, 1992. Since there were no applicable CM procedures regarding these documents, they were sent to the FCCB. The FCCB submitted the documents to the DRC as additional records to the corresponding Job Package. Two procedures apply to as-built drawing: AP-5.24Q and AP-6.22. The AP-6.22Q, Job Package and Completion Records, requires as-built drawings and specifications to be submitted by the A/E to the DRC. AP-5.24Q is applicable to Participants and A/Es, and requires as-built drawings and specifications to be submitted to the CCB. These two procedures are not identified as CM procedures.

C. Root Cause Determination

Not Applicable

Ltr dtd 11/9/92 - EDD: BDH-829

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WASHINGTON, D.C.

CAR NO. YM-93-002
DATE: _____
PAGE: _____ OF _____
QA

CORRECTIVE ACTION REQUEST (Continuation Page)

CAR # YM-93-002 (continuation)

D. Corrective Action to Preclude Recurrence

AP-5.24Q will be revised to replace the current text in Step 5 and the Step 5 Note with text that includes the following sequence: (a) A/E and Participants submit as-built documents to EDD/YMPO for acceptance; (b) EDD/YMPO notifies the A/E of document acceptance or rejection; (c) after EDD/YMPO acceptance of documents, A/E submits a change request for incorporation of documents into the technical baseline; (d) After CCB approval, A/E submits documents to DRC for distribution and the LRC for records turnover. Also, the current text in Step 9, AP-6.22Q will be revised to cite AP-5.24Q as the link to as-built drawings rather than AP-6.22Q.

2. Assigned Responsibility

Action	Individual	Completion
1.A	B. G. Cruz	By December 11, 1992
1.B	B. G. Cruz	Completed October 30, 1992
1.C	N/A	
1.D	J. T. Gardiner	DAR will be submitted by December 18, 1992

3.

Response Approved:

W. B. Simecka
W. B. Simecka

Date: 11/6/92

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

8 CAR NO.: YM-93-003
DATE: 10/6/92
SHEET: 1 OF 1
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document AP-3.6Q, Revision 1		2 Related Report No. YMP-92-24	
3 Responsible Organization YMPO		4 Discussed With C. Gertz/B. Cruz	
5 Requirement: AP-3.6Q, Revision 1, Paragraph 5.1.3.2 requires that data that has not been (1) verified or (2) validated per NUREG 1298 or (3) is dependent on software that has not been validated, is identified and tracked in the same manner as to be determined data (TBD). Paragraph 5.1.3.1 requires that to be determined data (TDB) must have a scheduled resolution date and be tracked in a log associated with the document which contains the data to be verified.			
6 Adverse Condition: Contrary to the above; Table 1 (page TBV-3) of Document YMP/CM-0006, Revision 2, does not delineate a scheduled resolution of data to be verified.			
9 Does a significant condition adverse to quality exist? Yes ___ No <u>X</u> If Yes, Circle One: A B C		10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Circle One: A B C D	
11 Response Due Date: 20 Working days from issuance			
12 Required Actions: <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Extent of Deficiency <input checked="" type="checkbox"/> Preclude Recurrence <input type="checkbox"/> Root Cause Determination			
13 Recommended Actions: Identify the remedial actions to be taken to correct the deficiency note in Block 6. Investigate the program processes, activities or documentation to determine the extent and depth of similar conditions as noted in Block 6. Identify these deficiencies and provide the measures to correct them.			
7 Initiator Sam H. Horton <i>Sam Horton</i> Date <u>10/26/92</u>		14 Issuance Approved by: QADD <i>R.C. Spence</i> Date <u>10/8/92</u>	
15 Response Accepted QAR Date		16 Response Accepted QADD Date	
17 Amended Response Accepted QAR Date		18 Amended Response Accepted QADD Date	
19 Corrective Actions Verified QAR Date		20 Closure Approved by: QADD Date	

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U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

CAR NO. YM-93-003
DATE: _____
PAGE: _____ OF _____
QA

CORRECTIVE ACTION REQUEST (Continuation Page)

1. Corrective Action Response for CAR # YM-93-003

A. Remedial Action

No remedial action is to be taken regarding the requirements documents in the current document hierarchy. These are shown in Attachment 1, an annotated version of the CCB Register Report, under the "Level 2-CCB Baseline" portion of the Report. The annotations indicate applicability and status of logs. These annotated documents will be superseded by others currently in preparation for the new MGDS document hierarchy.

B. Investigative Action

Investigation has shown that 5 of the 8 documents of a requirements or configuration data nature noted in Attachment 1 do not include the TBD/TBV logs. The status is annotated on the right hand margin of Attachment 1. The need for TBD/TBV logs is not specified in an existing procedure that pertains to document preparation such as OCRWM QAP 3.5, Technical Document Preparation. The current description of a log in AP-3.6Q, Configuration Management, is somewhat hidden in a procedure concerning the management of configuration items and documents. Also, the purpose of a TBD/TBV log is to summarize required technical information. Information concerning management prerogatives relative to organizational responsibilities and schedule tracking/control considerations are not appropriate in a technical document since they are subject to a different set of changing priorities. The absence of a TBD/TBV log is not adverse to quality since the TBD/TBV information is integral within the text of a requirements document.

C. Root Cause Determination

Not Applicable

Stc dtd 11/9/92 - EDD:BDH-829

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

CAR NO. YM-93-003
 DATE: _____
 PAGE: _____ OF _____
 QA

CORRECTIVE ACTION REQUEST (Continuation Page)

CAR # YM-93-003 (continuation)

D. Corrective Action to Preclude Recurrence

The corrective action is in three parts: (a) A DAR regarding AP-3.6Q will be submitted to delete TBD/TBV logs, for the reasons noted in paragraph 1.B above. (b) A DAR regarding OCRWM QAP-3-5, Preparation of Technical Documents, will be submitted to add the need of TBD/TBV/TBR logs for requirement documents. The logs will take the form of summary tables that show section numbers and TBD/TBV/TBR entries. No need for schedule or responsibility data will be included. (c) Project level documents for the new MGDS document hierarchy will include TBD/TBV/TBR logs. These documents are the Repository Design Requirements, Site Design and Test Requirements, Engineered Barrier Design Requirements, ESF Design Requirements and Surface Based Test Facility Design Requirements.

22. Assigned Responsibility

Action	Individual	Completion
1.A	N/A	
1.B	T. C. Geer	Completed October 30, 1992
1.C	N/A	
1.D (a)	T. C. Geer	Submit DAR by December 15, 1992
1.D (b)	T. C. Geer	Submit DAR recommendation to OCRWM Hq. by December 15, 1992
1.D (c)	T. C. Geer	Complete logs by March 31, 1993

3. Response Approved: W.B. Simecka Date: 11/6/92
 W. B. Simecka

CCB REGISTER REPORT

DOCUMENT NUMBER	DOCUMENT TITLE	REV. NUMBER	CHANGE NUMBER	EFFECTIVE DATE	RESPONSIBLE ORGANIZATION	
POCB - Level 1 - INFO ACCEPTED						
DOE/RW-0043	OCRWM Program Management System Manual	04	DCP-057	07/31/91	PCB	
DOE/RW-0223	Program Change Control Procedure (PCCP)	04	DCP-037	03/31/92	PCB	
DOE/RW-0313P	YMP Site Characterization Project Plan	00	DCP-041	01/28/92	PCB	
DOE/RW-0334	Physical System Requirements - Overall System	00	DCP-044	01/17/92	EDD	
DOE/RW-0319	Physical System Requirements - Store Waste for SCP Conceptual Design	00	DCP-046	01/17/92	EDD	
DOE/RW-0253	Program Cost and Schedule Baseline (PCSB)	02	DCP-050	01/14/92	PCB	
DOE/RW-0335	Interim Approach to MRS Facility Design	00	DCP-051	01/22/92	PCB	
DOE/RW-0270P	Waste Management System Description (WMSD)	01	DCP-056	02/06/92	EDD	
DOE/RW-0264	Waste Management System Requirements (WMSR) Vol. 1	02	DCP-056	02/06/92	EDD	
DOE/RW-0268P	Waste Management System Requirements (WMSR) Vol. IV	02	DCP-056	02/06/92	EDD	
Level 2 - CCB Baseline						
YMP/CM-0006	Exploratory Shaft Facility Subsystem Design Requirements Document (ESF SDRD) for Title II ***	02	90/023	10/24/90	EDD	<u>LOGS EXIST (?)</u> NO
YMP/CM-0007	Technical Requirements for the Yucca Mountain Site Characterization Project Surface - Based Testing	07	92/088	06/15/92	EDD	YES
YMP/CM-0008	Yucca Mountain Site Description (Basis for SCP Chapter 8)	00	91/015	04/10/91	RSED	N/A
YMP/CM-0009	Conceptual Design of a Repository (Basis for SCP Chapter 8)	00	91/016	04/10/91	EDD	N/A
YMP/CM-0010	Waste Package Design Basis (Basis for SCP Chapter 8)	00	91/017	04/10/91	EDD	NO

OCB REGISTER REPORT

DOCUMENT NUMBER	DOCUMENT TITLE	REV. NUMBER	CHANGE NUMBER	EFFECTIVE DATE	RESPONSIBLE ORGANIZATION
Level 2 - OCB Baseline					
YMP/CT-0011	Yucca Mountain Site Characterization Program Baseline	09	92/140	09/12/92	M&O
YMP/CT-0015	YMP Cost and Schedule Baseline	03	92/031	02/26/92	PCB
YMP/CT-0016	Yucca Mountain Site Characterization Project Exploratory Studies Facility - Title I Technical Baseline. **** Vols I and III	00	92/082	06/15/92	EDO
YMP/CT-0017	Yucca Mountain Mined Geologic Disposal System Description****	01	92/106	07/15/92	EDO
YMP/CT-0018	Yucca Mountain Mined Geologic Disposal Repository Design Requirements****	00	92/105	07/15/92	EDO
YMP/CT-0019	Yucca Mountain M&OS Exploratory Studies Facility Design Requirements****	01	92/103	07/15/92	EDO
YMP/CT-0020	Yucca Mountain M&OS System Requirements Document****	01	92/132	09/21/92	EDO
YMP/CC-0001	Work Breakdown Structure, Index and Dictionary - Annex II to the Project Management Plan *	N/A	93/033	10/28/92	M&O
YMP/CC-0002	Reference Information Base, Version 4.000	06	92/079	07/09/92	RSED
YMP/CC-0004	Yucca Mountain Project Quality Assurance Level Assignment (QALA) Records	02	00	06/21/89	RSED
YMP/CC-0006	Environmental Management Plan	00	91/027	01/18/91	P&OCD
YMP/CC-0007	Systems Engineering Management Plan	03	91/042	04/10/91	EDO

~~OCB CONTROLLED~~

LOGS EXIST (?)

YES

N/A

NO

N/A

NO

YES

NO

(

NOV 20 1992

Note: The CCB should not be accepting technical documents. Its function is to update the technical baseline after acceptance by the Engineering & Development Division/Yucca Mountain Site Characterization Project Office.

1.0 Corrective Action Response for CAR YM-93-003

- D. (b) A statement should be added to take into consideration what to do in case the Office of Civilian Radioactive Waste Management does not agree.

The next to last sentence should be clarified as to where will schedule information be officially shown (proceduralized).

Your response, indicating the appropriate corrective action completion dates, is required to be submitted to this office within ten working days of the date of this letter. Verification of completion of the required corrective actions will be performed after the dates provided.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Sam H. Horton at 794-7399.



Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

YMQAD:RBC-1085

Enclosure:
CAR YM-93-001 through YM-93-003

cc w/encl:

- K. R. Hooks, NRC, Washington, DC
- S. W. Zimmerman, NWPO, Carson City, NV
- S. D. Johnson, PSDO/RECo, Las Vegas, NV
- J. W. Estella, SAIC, Las Vegas, NV, 517/T-22
- J. H. Rusk, MACTEC, Las Vegas, NV
- W. B. Simecka, YMP, NV
- A. V. Gil, YMP, NV
- B. J. Verna, YMP, NV

cc w/o encl:

- J. W. Gilray, NRC, Las Vegas, NV
- N. J. Brogan, SAIC, Las Vegas, NV, 517/T-12
- S. H. Horton, SAIC, Las Vegas, NV, 517/T-12