

### Department of Energy

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

WBS 1.2.11 QA: N/A

FEB 2 4 1993

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

EVALUATION OF AMENDED RESPONSE TO CORRECTIVE ACTION REQUEST (CAR) YM-93-015 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) AUDIT YMP-93-01 OF U. S. GEOLOGICAL SURVEY

The YMQAD staff has evaluated the amended response to CAR YM-93-015. The response has been determined to be satisfactory. Verification of completion of the corrective action will be performed after the effective date provided. Any extension to this date must be requested in writing with appropriate justification prior to the date. Please send a copy of extension requests to Nita J. Brogan, Science Applications International Corporation, Las Vegas, Nevada.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Richard L. Maudlin at 794-7290.

Richard E. Spence, Director

Yucca Mountain Quality Assurance Division

YMOAD: RBC-2686

Enclosure: CAR YM-93-015

cc\_w/encl:

CK. R. Hooks, NRC, Washington, DC

S. W. Zimmerman, NWPO, Carson City, NV

T. H. Chaney, USGS, Denver, CO

R. W. Craig, USGS, Las Vegas, NV

R. L. Maudlin, MACTEC, Las Vegas, NV

C. J. Henkel, EEI, Las Vegas, NV

A. V. Gil, YMP, NV

B. J. Verna, YMP, NV

cc w/o encl:

J. W. Gilray, NRC, Las Vegas, NV

D. D. Porter, USGS/SAIC, Golden, CO

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

Add: Ur. Ed Ken Heal(SII WH

9303020563 930224

**CORRECTIVE ACTION REQUEST** 

8	DATE:	10-22-92		
		1 OF	2	
		QA		

1 Controlling Document AP 5.190, R2 AP5.10, R2	2 Related Report No.  YMP-93-01				
3 Responsible Organization	4 Discussed With		$\dashv$		
USGS	Ardell Whiteside,	rdell Whiteside, R. Spangler			
5 Requirement:			$\neg$		
AP 5.190, Step 8b, stated in part: "Data Supr controlled documents and are acceptable, sign to the processor."	AP 5.190, Step 8b, stated in part: "Data Supplier-If IMOU and/or PIRN have no impact on controlled documents and are acceptable, sign and return original signature document				
AP 5.190, Step 11, states in part: "Data Supprequester (send and control data per AP-5.10.	plier-Compile and send	data to the			
AP 5.1Q, Step 2, states in part: "YMP Partic participant data archive Include a TDIF		to the appropriate			
AP 5.1Q, Section 3.12 states in part: "The TI System. The form is included with DPSs and Da	OIF is used to proveta Transmittal Packag	ride input to the ATDT res."			
6 Adverse Condition: Contrary to the above:					
(A) Acquired Data has been transmitted to Li	ANL without documented	evidence of processed IMOU.	l		
(B) Acquired Data has been transmitted to Li prepared and Data entered into the Parti	ANL without evidence of icipant Data Archive.	of a TDIF being			
Example: 6-10-91 "Potental Sr-Isotope S	Stratigraphy High-Silo	a Rhyolite."			
10-12-92 "Isotope Stratigraphy Rhyolite"	y in the Topopah Sprin	ngs High-Silica			
•					
<sup>9</sup> Does a significant condition <sup>10</sup> Does a	stop work condition exist?	11 Response Due Date:			
adverse to quality exist? YesNo_x Yes	No <u>x</u> ; if Yes - Attach co Circle One: A B C D				
12 Required Actions: X Remedial X Extent of Defi	iciency 🗓 Preclude Re	ecurrence X Root Cause Determinati	ion		
13 Recommended Actions: (A) Process IMOU and get number assigned prior to transmittal of Data					
(B) Transmit Acquired Data to PDA with TDIF					
(C) Evaluate status of all IMOUS between USGS and other participants. Assure all have been processed and have been assigned a number per AP 5.190					
7 Initiator 14 Issuance Approved by:					
R. L. Maudlin Contamble Date	QADD AC.	Salute Date 11/3/9	22		
15 Response Accepted	16 Response Acce				
QAR Date	QADD	Date			
17 Amended Response Accepted	18 Amended Besp	phse Accepted			
QAR March. Date 02-18.	93 QADD/9C	AAM Date 23/1	3		
19 Corrective Actions Verified	20 Closure Approv	ed/by:			
QAR Date	QADD	Date			

8		>>> <->>> 10.29-57 →>>= -93-015		
		10-22-92		
	SHEET: _	2 OF	2	
		QA		

### **CORRECTIVE ACTION REQUEST (Continuation Page)**

- 13 Recommended Action(s) (continued)

  - (D) Evaluate all Data Transmitted to date and determine:
    (1) is there a valid IMOU for transmittal of this data
    (2) has data been transmitted to PDA via TDIF prior to being sent to participant
  - (E) Determine cause of condition and what action would be taken to preclude recurrance

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DATE:	
SHEET: _	OF

### CORRECTIVE ACTION REQUEST (continuation sheet)

#### 1. YMP-USGS CORRECTIVE ACTION RESPONSE FOR CAR # YM-93-015

- A. <u>Remedial Actions</u> Remedial actions are not necessary for Corrective Action Request (CAR) YM-CAR-93-015.
- B. <u>Investigative Action</u> In order to examine the extent of the potential deficiency, the YMP-USGS has reevaluated the requirements of AP-5.19Q and AP-5.1Q; investigated various types of data releases; and coordinated and confirmed the results of the evaluation with the USGS Interface Control Working Group Representative (ICWG), USGS Data Management Coordinator, and Deputy Director of Regulatory and Site Evaluation Division, Yucca Mountain Project Office.

AP-5.19Q only applies to the identification, development, approval, control, and changes to Level C & D interfaces. This procedure addresses the control and release of a very specific type of data. An appropriate application of AP-5.19Q is when a product from one Level C and/or D system is requested as input to another Level C and/or D system or subsystem. A product can be defined as a final data package that is formal input to another investigation that can not proceed without the information (data) provided. For example, soil and rock properties data must be provided to RSN prior to the design of the surface facilities. AP-5.19Q does not apply to the collegial exchange of scientific information.

AP-5.1Q is utilized to control and ensure technical data to support the license application for repository construction are complete and retrievable. Technical data are defined in AP-5.1Q as data resulting from data acquisition or data development activities. Acquired technical data are further defined to be data that have been recorded and checked. Developed technical data are the results of reducing, analyzing, or interpreting acquired data. AP-5.1Q addresses the control and release of these specific types of data. AP-5.1Q does not apply to the data exchange cited in the CAR because the data were raw and unchecked. AP-5.1Q requires that data be checked before they are submitted to the Participant Data Archive (PDA).

There are additional types of data and data releases that do not fall under the control of AP-5.1Q or AP-5.19Q. Investigative actions have identified various types of data releases and their controls. It has been determined that the exchange of information cited in YM-CAR-93-015 fall under a category of preliminary scientific exchange. This type of scientific exchange is specified in Study Plan (SP) 8.3.1.4.2.1. The SP Section 1.1 (Information to be obtained and how that information will be used) states in part, "Some of the data necessary to determine rock correlation and spatial variability in this study plan is similar to data being collected at Los Alamos National Laboratory (Study 8.3.1.3.2.1, Mineralogy, petrology and rock chemistry of transport pathways; Study 8.3.1.3.2.2, History of mineralogical and geochemical alteration of Yucca Mountain). Likewise, geological interpretations from this study are essential

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DATE:	
SHEET: _	OF

### CORRECTIVE ACTION REQUEST (continuation sheet)

- 1. YMP-USGS CORRECTIVE ACTION RESPONSE FOR CAR # YM-93-015 (Continued)
  - B. <u>Investigative Action (Continued)</u> -

for adequate characterization of the transport pathways being investigated elsewhere. Therefore, we envision close communication and information exchange with scientists at Los Alamos in areas of potential overlap (mineralogy, petrology and diagenesis) so that data sets collected by each group are unique and complementary."

During DOE Audit 93-01 discussions, the YMP-USGS stated that an AP-5.19Q IMOU existed to address scientific exchanges between the USGS and Los Alamos National Laboratory (LANL). Subsequent investigations confirmed that the draft IMOU to control this exchange was canceled by the USGS ICWG Representative and therefore was never fully approved. During the approval process it was determined that the IMOU was inappropriate.

- C. <u>Root Cause Determination</u> The requirements of AP-5.19Q were misunderstood by YMP-USGS staff.
- D. <u>Corrective Action to Preclude Recurrence</u> 1) The YMP-USGS QA Manager and the YMP-USGS Data Management Coordinator have received clarification of the requirements pertaining to AP-5.1Q and AP-5.19Q from YMPO officials. 2) Through involvement with this CAR the investigator is aware that future written communications should have a statement such as, "data are preliminary and should not be used in quality affecting work".
- 2. For each action above, identify the name of the individual assigned responsibility for completion and the anticipated (or actual, if complete) completion date.

T.H. Chaney completed investigative actions November 3, 1992. P.W. McKinley completed investigative actions November 4, 1992.

YMP-USGS Quality Assurance Manager



### **Department of Energy**

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

WBS 1.2.11 QA: N/A

JAN 25 1993

**QARECEIVED** 

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

JAN 2 1993

EVALUATION OF RESPONSE TO CORRECTIVE ACTION REQUEST (CAR) YM-93-015 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) AUDIT YMP-93-01 OF U.S. GEOLOGICAL SURVEY (USGS)

The YMQAD staff has evaluated the response to CAR YM-93-015. The response to Parts A, B, and C has been determined to be unsatisfactory because:

- Part A states that there is no remedial action necessary. Based on Items 2 through 3 below, USGS must provide remedial actions to resolve the noted conditions described in CAR YM-93-015.
- 2. Part B of your response states in part: (1) that a product can be defined as a final data package that is formal input to another investigation, that cannot proceed without the information (data) provided; (2) Administrative Procedure (AP) 5.19Q does not apply to the collegial exchange of scientific information; (3) AP-5.1Q does not apply to the data exchange as cited in the CAR because it is considered raw data and is unchecked; and (4) the exchange cited in the CAR falls under the category of preliminary scientific exchange.

The definitions (i.e., final data package, collegial exchange, and preliminary scientific exchange) for the data which you provided to Los Alamos National Laboratory (LANL) can not be found in either AP-5.1Q or AP-5.19Q.

AP-5.1Q is explicit as to its applicability for the control of technical data. AP-5.1Q, Section 1.1 (Purpose) states: "This procedure establishes requirements and assigns responsibilities for the control and transfer of Yucca Mountain Site Characterization Project (YMP) technical data. Data control and transfer begin at data acquisition, through measurement by YMP Participant Staff, . . . or any other means except for data generated outside the YMP." Section 2.0 (Applicability) states in part: "This procedure applies to the Yucca Mountain Site Characterization Project Office (YMPO) and all YMP Participants who acquire, manipulate, or disseminate technical data."

Based on the statement above, any technical data in any form shall comply with the controls specified in AP-5.1Q. Any interpretations to the intent of the requirements in YMPO APs must be established in writing by those who have authority to make the interpretations. AP-5.1Q is clear that data shall be controlled at the beginning of data acquisition. There are no stipulations that data need not be controlled until after the participant makes the decision that it is complete and is checked as stated in AP-5.1Q, Section 3.3 (Data Acquisition). USGS should take immediate action to transmit the data referenced in CAR YM-93-015 to the Participant Data Archive via a Technical Data Information Form as required by AP-5.10.

Part B of your response states in part that the data transferred to LANL was unchecked. It appears that another potential violation exists in that the data transferred to LANL was not checked as required by AP-5.1Q, Section 3.3 (Data Acquisition). If this is the case, USGS should take the necessary action to document this condition adverse to quality and implement the necessary corrective action.

3. Part B of your response states in part that AP-5.19Q only applies to the identification, development, approval, control, and changes to Level C and D interfaces. This procedure addresses the control and release of a very specific type of data.

AP-5.19Q, Section 3.3 (Informational/Organizational Interface) states in part: "An informational interface, also referred to as an organizational interface, is a controlled process used to officially request, document, and transfer information between various YMP organizations (Participant) that must share and/or transfer information. This information is usually technical in nature (e.g., scientific data) and is used in technical studies . . . ."

AP-5.19Q does not make any reference to the specific type of data you refer to in your response. USGS should take immediate action to finalize the Interoffice Memorandum of Understanding between USGS and LANL for the exchange of technical data.

4. Part D of your response discusses the use of a statement regarding preliminary data. This is not consistent with current requirements. Neither AP-5.1Q nor AP-5.19Q discuss preliminary data.

Based on the YMPO-approved requirements stated in the AP-5.1Q and AP-5.19Q, USGS should take immediate action to bring the transmittal of technical data, as referenced in CAR YM-93-015, into compliance with these requirements or request a revision to AP-5.1Q and AP-5.19Q to be consistent with present practices.

It is requested that USGS management reevaluate their response in light of the aforementioned options, and respond indicating the action taken.

An amended response to Parts A, B, and C is required to be submitted to this office within ten working days of the date of this letter. Send the original of your response to Nita J. Brogan, Science Applications International Corporation, Las Vegas, Nevada. If an extension to the due date is necessary, it must be requested in writing, with appropriate justification, prior to that date.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Richard L. Maudlin at 794-7290.

RC. Spence

YMOAD:RBC-1856

Richard E. Spence, Director Yucca Mountain Quality Assurance Division

Enclosure: CAR YM-93-015

#### cc w/encl:

K. R. Hooks, NRC, Washington, DC

S. W. Zimmerman, NWPO, Carson City, NV

T. H. Chaney, USGS, Denver, CO

R. W. Craig, USGS, Las Vegas, NV

B. J. Verna, YMP, NV

A. V. Gil, YMP, NV

#### cc w/o encl:

J. W. Gilray, NRC, Las Vegas, NV

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

D. D. Porter, SAIC, Golden, CO

CAR NO.	YM-93-015		
DATE:			
SHEET:			

### CORRECTIVE ACTION REQUEST (Continuation Page)

### 1. YMP-USGS CORRECTIVE ACTION RESPONSE FOR CAR #YM-93-015

- A. <u>Remedial Actions</u> Remedial actions are not necessary for Corrective Action Request (CAR) YM-CAR-93-015 because AP-5.1Q is to be modified.
- B. <u>Investigative Action</u> In order to examine the extent of the potential deficiency, the YMP-USGS has re-evaluated the requirements of AP-5.19Q and AP-1Q; investigated various types of data releases; and coordinated and confirmed the results of the evaluation with the USGS Interface Control Working Group Representative (ICWG), USGS Data Management Coordinator, and Deputy Director of Regulatory and Site Evaluation Division, Yucca Mountain Project Office.

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CAR NO.	YM-93-015		
DATE:			
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### CORRECTIVE ACTION REQUEST (Continuation Page)

### 1.YMP-USGS CORRECTIVE ACTION RESPONSE FOR CAR #YM-93-015 (Continued)

B. <u>Investigative Action (Continued)</u> -

Yucca Mountain). Likewise, geological interpretations from this study are essential for adequate characterization of the transport pathways being investigated elsewhere. Therefore, we envision close communication and information exchange with scientists at Los Alamos in areas of potential overlap (mineralogy, petrology and diagenesis) so that data sets collected by each group are unique and complementary."

During DOE Audit 93-01 discussions, the YMP-USGS stated that an AP-5.19Q IMOU existed to address scientific exchanges between the USGS and Los Alamos National Laboratory (LANL). Subsequent investigations confirmed that the draft IMOU to control this exchange was canceled by the USGS ICWG Representative and therefore was never fully approved. During the approval process it was determined that the IMOU was inappropriate.

- C. <u>Root Cause Determination</u> The requirements of AP-5.19Q were misunderstood by YMP-USGS staff and its relationship to AP-5.1Q are not clear.
- D. Corrective Action to Preclude Recurrence 1) The YMP-USGS QA Manager and the YMP-USGS Data Management Coordinator have received clarification of the requirements pertaining to AP-5.1Q and AP-5.19Q from YMPO officials. 2) Through involvement with this CAR the investigator is aware that future written communications should have a statement such as, "data are preliminary and should not be used in quality affecting work." 3) Submit a DAR to YMPO to clarify AP-5.1Q.
- 2. For each action above identify the name of the individual assigned responsibility for completion and the anticipated (or actual, if complete) completion date.
  - T. H. Chaney completed investigative actions November 3, 1992.
  - P. W. McKinley completed investigative actions November 4, 1992.

DAR submitted to YMPO, letter Hayes to Gertz, January 25, 1993. DAR accepted or rejected by YMPO, and an ICN issued March 1, 1993.

3. Responses Approved:

L.R. Hayes, Chief Aucca Mountain Project Branch

Date

T.H. Chaney, YMP-VSGS Quality Assurance Manager

Date



### United States Department of the Interior

TAKE PRIDE IN AMERICA

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

INFORMATION ONLY

IN REPLY REFER TO:

January 25, 1993

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

ATTENTION: Russ Dyer, Director,

Regulatory and Site Evaluation Division

SUBJECT: Transmittal of Document Action Request Regarding AP 5.10

Enclosed please find a document control request (DAR) concerning Administrative Procedure AP 5.1Q, Control and Transfer of Technical Data on the Yucca Mountain Site Characterization Project.

Sincerely,

L. R. Hayes, Technical Project Officer, Yucca Mountain Project Branch

MHM/LRH/aa Enclosure

cc: T. H. Chaney

P. W. McKinley

A. W. Whiteside

M. H. Mustard

A. M. Simmons

44.00.00		ARACTERIZATIO		THE LAND
11/30/32		TION REQUEST	· -	1 or 2
		AR) Date		
Signatures on this document represent sign complied with.	ners' acknowledgement	that the applicable proce	dure has been read, unde	rstood, and
SECTION I - ACTION REQUEST				
1. DOCUMENT TITLE: CONTROL AN TECHNICAL DATA ON THE YM	SITE	2. DOCUMENT NO.: AP 5.1Q	3. REV/ICN: (current) REV. 2/ICN 1	4. ⊠Q □ NON-Q
5. TYPE OF ACTION REQUESTED:		ment XI Change Existi	ng Document Cance	- Document
3: 111 2 31 X3113.11.12.23.13.13.	Review Only (attack	_		or Document
6. DESCRIPTION OF ACTION REQUE	STED:	7. DOCUMENTS AFF	ECTED:	
SEE ATTACHED		N/A		
TO THE PARTY OF TH		44 051 4753 05005		
8. REASON FOR ACTION REQUEST:		10. RELATED REPOR		
To provide the allowance collegial exchange of dat		CAR YM-93-01		
data being checked and en				
		TOM CHANEY		
		USGS	Print Name (303) -23	6-1418
☐ Additional Material Attached		- Organizat		one No.
9. DELIVERABLE DUE DATE:		Markant		25-93
02/15/93		FOR T.H. Signatur	ney	Date
SECTION II - ACTION INITIATION	•		7	
12. REQUEST: Approved Rejecte	d 13. MAJOR CHANG	ES: Yes No	14. PRIORITY: Imme	diate  Hold
15. MODIFICATION METHOD: CN	☐ Revision ☐ 0	Cancel N/A	16. CCB ACTION:	es No
17TRAINING RECOMMENDATION:	Self-Study C	Classroom Tmg.	□ N/A	
18. COMMENTS				
19. PREPARER ASSIGNED:		20. RESPONSIBLE D	RECTOR:	
•		<b>^</b>	<del></del>	
SECTION III - ACTION CONCURRE	NCE	Signature	<u> </u>	ato
21. PROJECT CONTROL BRANCH CHI		··	<del> </del>	
Request Approved	Rejected	•		
, –		Signature		Date
COMMENTS:				
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SECTION IV - ACTION REVIEW	<del></del>			Ĭ,
22. TRAINING REQUIREMENTS: COMMENTS:		1 162 - MONDELOLDA	As wadanag iot tilig.	
		* Requires J	lustification in Commen	Section
23. Training Officer/Training Manager:		24. CRWMS M&O PL (DAR Completion)	ANS AND PROCEDUR	ES .
Signature	Date	Signatur	9	Date

#### 6. DESCRIPTION OF ACTION REQUESTED:

The following statements in AP-5.1Q, Rev. 2 need to be clarified. These statements also appear in AP-5.1Q, Rev. 3, Draft D.

### Section 1.0 Purpose

current wording: Data control and transfer begin at data acquisition, through measurement by YMP Participant staff, procurement through subcontractors, interagency agreements, or any other means except for data generated outside the YMP.

suggested change: Data control begins at the completion of data acquisition. Data are obtained through measurements by YMP Participant staff, procurement through subcontractors, interagency agreements, or any other means except for data generated outside the YMP.

#### Section 3.0 Definitions

3.3 Data Acquisition current wording: Data acquisition is complete when the data have been recorded and checks can be performed to determine that the data have been acquired according to applicable technical procedures and instrumentation used

in collection was operating properly.

suggested change: Data acquisition is complete when the data have been recorded and checks <u>have been</u> performed to determine that the data have been acquired according to applicable technical procedures and instrumentation used in collection was operating properly.

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