

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

MAR 1 0 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

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

Verification has been completed on the remedial actions for CAR YM-93-015 (i.e., issuance of a Document Action Request and reissuance of the data in question as "Preliminary"). Based on the verification, no further action on the part of USGS is necessary at this time. The revision to Administrative Procedure (AP) 5.10 is the responsibility of Yucca Mountain Site Characterization Project Office (YMPO) and as such, will be tracked through them. A letter will be written to YMPO personnel indicating the actions necessary to prevent recurrence. However, CAR YM-93-015 will remain open until AP-5.10 is revised and an evaluation performed to determine the change and its affect on USGS's processing of data.

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

- Sphee

Richard E. Spence, Director Yucca Mountain Quality Assurance Division

YMOAD:RBC-2912

Enclosure: CAR YM-93-015

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303170082 930310 PDR YMP-5

ADD: Ken Hooks Liv. Enl.

MAR 1 0 1993

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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
R. L. Maudlin, MACTEC, Las Vegas, 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
P. G. Jones, M&O/TRW, Las Vegas, NV
A. V. Gil, YMP, NV
A. M. Simmons, YMP, NV

B. J. Verna, YMP, NV

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	DACTIVE WAS S. DEPARTME	F CIVILIAN STE MANAGEM ENT OF ENERG TON, D.C.		CAR NO.: 202-93-015 DATE: 10-22-92 SHEET: 1 OF 2 QA
СО	RRECTIVE A	CTION REQUES	ST	
1 Controlling Document AP 5.190, R2 AP5.10, R2			2 Related F YMP-93-(•
³ Responsible Organization USGS		Discussed With Ardell Whiteside, I	R. Spangler	
USGS Ardell Whiteside, R. Spangler 5 Requirement: 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 to the processor." AP 5.190, Step 11, states in part: "Data Supplier-Compile and send data to the requester (send and control data per AP-5.10)" AP 5.10, Step 2, states in part: "YMP Participant- Submit the DPS to the appropriate participant data archive Include a TDIF" AP 5.10, Section 3.12 states in part: "The TDIF is used to provide input to the ATDT System. The form is included with DPSs and Data Transmittal Packages." 6 Adverse Condition: Contrary to the above: (A) Acquired Data has been transmitted to LANL without documented evidence of processed IMOU. (B) Acquired Data has been transmitted to LANL without evidence of a TDIF being prepared and Data entered into the Participant Data Archive. Example: 6-10-91 "Potental Sr-Isotope Stratigraphy High-Silca Rhyolite." 10-12-92 "Isotope Stratigraphy in the Topopah Springs High-Silica Rhyolite."				
⁹ Does a significant condition		work condition exist?		11 Response Due Date:
adverse to quality exist? YesNo <u>X_</u> If Yes, Circle One: A B C		; if Yes - Attach cop One: A B C D		20 working days from issuance
¹² Required Actions: X Remedial X	Extent of Deficience	y X Preciude Re	currence	Root Cause Determination
13 Recommended Actions: (A) Process IMOU and get number a (B) Transmit Acquired Data to PDA	with TDIF			
(C) Evaluate status of all IMOUS been processed and have been	Detween USGS and assigned a numbe	r per AP 5.190		all have
7 Initiator R. L. Maudlin Annault. 15 Response Accepted	/0-28-92 Date	14 Issuance Approv QADD . 16 Response Accep	Johnes	Date 11/3/92
	Data		7~	
QAR 17 Amended Response Accepted	Date	QADD 18 Amended Bespo	hse Accepte	Date
OAR Grande	Date 02-18-93	QADD A	Anna	Date 23/13
19 Corrective Actions Verified		20 Closure Approve	d/by:	6
QAR	Date	QADD	<u> </u>	Date

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REV. 08/91

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

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DATE:	10-22-92
SHEET:	2 OF 2
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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

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

CAR NO.	YM-93-015
DATE:	
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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 <u>product</u> 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 8.3.1.3.2.2, History of mineralogical and geochemical alteration of Yucca Mountain). Likewise, geological interpretations from this study are essential

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			CTION REQUEST tion sheet)	
1. \	MP-USGS CORREC	CTIVE ACTION RESPONSE	E FOR CAR # YM-93-015	(Continued)
	for ade elsewhe with scie diagenes	ative Action (Continued) - equate characterization o ere. Therefore, we envision entists at Los Alamos in are sis) so that data sets nentary."	of the transport pathwa n close communication ar eas of potential overlap (m	nd information exchange ineralogy, petrology and
	existed t Laborato control t was nev	DOE Audit 93-01 discussion to address scientific exchar ory (LANL). Subsequent this exchange was canceled ver fully approved. During vas inappropriate.	nges between the USGS a investigations confirmed d by the USGS ICWG Repr	and Los Alamos Nationa that the draft IMOU to esentative and therefore
		use Determination - The re	equirements of AP-5.19Q	were misunderstood by
	YMP-US requirem involvem commun	ve Action to Preclude Rect GGS Data Management (nents pertaining to AP-5.10 nent with this CAR th nications should have a sta used in quality affecting wo	Coordinator have receiv 2 and AP-5.190 from YM e investigator is awar tement such as, "data are	ed clarification of the PO officials. 2) Through e that future writter
2.		n above, identify the name the anticipated (or actual,		
	•	mpleted investigative actio completed investigative ac	•	
		# -		
3. Fe	Response Appro	oved: Ountain [®] Project Branch	12/1/9 Date	2



Department of Energy

Yucca Mountain Site Characterization Project Office P. O. Box 98608 Las Vegas, NV 89193-8608 WBS 1.2.11 OA: N/A

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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:

- 1. 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 <u>preliminary</u> 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-5.1Q.

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. Larry R. Hayes

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.

R.C. Spince

Richard E. Spence, Director Yucca Mountain Quality Assurance Division

YMQAD:RBC-1856

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

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

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CORRECTIVE ACTION REQUEST (Continuation Page)

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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		
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CORRECTIVE ACTION REQUEST (Continuation Page)

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

B. Investigative Action (Continued) -

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. <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." 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. Haves, Chief? Lucca Mountain Project Branch

Chaney, YMP-USGS Quality Assurance Manager



United States Department of the Interior

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



IN REPLY REFER TO:

INFORMATION ONLY

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 5.1Q

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,

Lan R

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

YMP-108-R1 YUCCA MOUNTAIN SITE CH	ARACTERIZATION PRO	JECT mhm 1:25-93
	CTION REQUEST	Page 1 of
	AR) Date	DAR No
Signatures on this document represent signers' acknowledgeme complied with.	nt that the applicable procedure has be	en read, understood, and
SECTION I - ACTION REQUEST	·	
1. DOCUMENT TITLE: CONTROL AND TRANSFER OF	2. DOCUMENT NO .: 3. REVAC	N: (current) 4. 🖾 Q
TECHNICAL DATA ON THE YM SITE CHARACTERIZATION PROTECT	AP 5.10 REV.2/I	CN 1 ONON-O
5. TYPE OF ACTION REQUESTED: Develop New Doct		
6. DESCRIPTION OF ACTION REQUESTED:	7. DOCUMENTS AFFECTED:	
SEE ATTACHED	N/A	
8. REASON FOR ACTION REQUEST:	10. RELATED REPORT NUMBER	B,
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To provide the allowance for the collegial exchange of data prior to	CAR YM-93-015	· · · · · · · · · · · · · · · · · · ·
data being checked and entered into TD	11. REQUESTED BY:	
data being checked and entered into its	TOM CHANEY	
	Print Nam	8
	USGS	(303)-236-1418
Additional Material Attached	m Grganization	Phone No.
9. DELIVERABLE DUE DATE:	Marka A-Musta	
02/15/93	for T.H. Chaney	Date
SECTION II - ACTION INITIATION		
12. REQUEST: Approved Rejected 13. MAJOR CHANK	SES: Yes No 14. PRIORIT	Y: Immediate Hold
	Cancel N/A 16. CCB AC	
17. TRAINING RECOMMENDATION: Self-Study	Classroom Trng.	
18. COMMENTS		
19. PREPARER ASSIGNED:	20. RESPONSIBLE DIRECTOR:	
	20. RESPONSIBLE DIRECTOR.	
	Cierchart	
SECTION III - ACTION CONCURRENCE	Signature	Data
	.	
21. PROJECT CONTROL BRANCH CHIEF CONCURRENC Request Approved Rejected		
	Signature	Date
COMMENTS:		• • • •
SECTION IV - ACTION REVIEW		
		·
22. TRAINING REQUIREMENTS: N/A* [COMMENTS:	Yes - Number of Days Required	nor Img.:
	Requires Justification	in Comment Section
23. Training Officer/Training Manager:	24. CRWMS M&O PLANS AND F	ROCEDURES
	(DAR Completion)	
Signature Date	Signature	Date

AP-6.1Q

Page 2 of 2

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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