

**Department of Energy**  
 Office of Civilian Radioactive Waste Management  
 Yucca Mountain Site Characterization Office  
 P.O. Box 98608  
 Las Vegas, NV 89193-8608  
**DEC 14 1995**

L. Dale Foust  
 Technical Project Officer  
 for Yucca Mountain Site  
 Characterization Project  
 TRW Environmental Safety Systems, Inc.  
 101 Convention Center Drive, Suite P-110  
 Las Vegas, NV 89109

**VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF DEFICIENCY  
 REPORT (DR) YMQAD-95-D012 RESULTING FROM YUCCA MOUNTAIN QUALITY  
 ASSURANCE DIVISION'S (YMQAD) AUDIT YM-ARP-95-19 OF SANDIA  
 NATIONAL LABORATORIES (SCPB: N/A)**

The YMQAD staff has verified the corrective action to DR  
 YMQAD-95-D012 and determined the results to be satisfactory.  
 As a result, the DR is considered closed.

If you have any questions, please contact either Robert B.  
 Constable at 794-7945 or Richard L. Weeks at 794-7853.

*Robert B. Constable* \_\_\_\_\_

Richard E. Spence, Director  
 Yucca Mountain Quality Assurance Division

YMQAD:RBC-766

Enclosure:  
 YMQAD-95-D012

- cc w/encl:  
 T. A. Wood, HQ (RW-14) FORS  
 J. G. Spraul, NRC, Washington, DC  
 S. W. Zimmerman, NWPO, Carson City, NV  
 R. L. Strickler, M&O/TRW, Vienna, VA  
 R. P. Ruth, M&O/TRW, Las Vegas, NV

- cc w/o encl:  
 W. L. Belke, NRC, Las Vegas, NV  
 D. G. Sult, YMQAD/QATSS, Las Vegas, NV

180088

*NH03/11  
 102.7  
 WM-11*

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

8  Performance Report  
 Deficiency Report  
NO. YMDAD-95-D-012  
PAGE 1 OF 2  
QA: L

**PERFORMANCE/DEFICIENCY REPORT**

|  |  |  |  |
|--|--|--|--|
| 1 Controlling Document:<br>YAP-SIII.3Q, Revision 0   |  | 2 Related Report No.<br>YM-ARP-95-19   |  |
| 3 Responsible Organization:<br>M&O/SNL   |  | 4 Discussed With:<br>Michael Brady   |  |
| 5 Requirement/Measurement Criteria:<br><br>Section 5.2.2, NOTE states, Preliminary data provided to other YMP investigators are to be transferred under a cover letter, which includes the following statements; "The data provided herein have not received complete technical and quality checks and, therefore, are considered to be preliminary. These data are for information only and cannot be used for licensing activities until recorded in the ATDT and all technical and quality checks are complete." In addition, all data sheets are to be stamped "PRELIMINARY-INFORMATION ONLY".   |  |  |  |
| 6 Description of Condition:<br>Contrary to the above requirement, there is no objective evidence that technical data provided to the M&O for scoping analyses studies for the "Design Support Analyses: North Ramp Design Package 2C" was transferred to the M&O in compliance with the above stated requirement. Specifically, preliminary data was transferred to the M&O and subsequently utilized as design input without including the following statements, "The data provided herein have not received complete technical and quality checks and, therefore, are considered to be preliminary. These data are for information only and cannot be used for licensing activities until recorded in the ATDT and all technical and quality checks are complete. In addition, all data sheets are to be stamped "PRELIMINARY-INFORMATION ONLY." Additionally, corrections were made to the technical data by SNL personnel after the technical data was sent to the M&O. The M&O was not made aware of the corrections and continued to use the incorrect data throughout Revision 2 of the scoping analyses. |  |  |  |
| 7 Initiator <i>John F. Pelletier</i><br>John Pelletier   |  | 9 QA Review <i>Richard L. Weeks</i> 2/31/95<br>QAR Richard L. Weeks Date 08/31/95          |  |
| 10 Response Due Date<br>20 days after issuance   |  | 11 QA Issuance Approval<br><i>Richard L. Weeks</i> for Date 9.5.95<br>QAR (PRI)/AOQAM (DR) |  |
| 12 Remedial Actions:<br><br>See continuation page  |  |  |  |
| 13 Remedial Action Response By:<br><i>Michael C. Brady</i> Date 10/6/95  |  | 14 Remedial Action Due Date<br>N/A Date  |  |
| 15 Remedial Action Response/Acceptance<br>QAR <i>Richard L. Weeks</i> Date 10/9/95   |  | 16 PR Verification/Closure<br>QAR N/A Date   |  |

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DR NO. Y179AD-95-D-012  
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QA: L

**DEFICIENCY REPORT**

**17 Recommended Actions:**

- 1) Investigate to determine the extent of deficiency identified in Block 6.
- 2) Provide objective evidence that identified deficient condition has been corrected.
- 3) Provide a corrective action plan to ensure that when preliminary data is forwarded to a data user prior to being recorded in the ATDT, the data is appropriately identified as required in YAP-SIII.3Q.

**18 Investigative Actions:**

*see continuation page*

**19 Root Cause Determination:**

*see continuation page*

**20 Action to Preclude Recurrence:**

*see continuation page*

**21 Response by:**

*Michael C. Brady* Date *10/6/95*

**22 Corrective Action Completion Due Date:**

*November 27 1995*

**23 Response Accepted**

QAR *Richard L. Mundy* Date *10/9/95*

**24 Response Accepted**

AOQAM *R. Blount* for Date *10.24.95*

**25 Amended Response Accepted**

QAR Date

**26 Amended Response Accepted**

AOQAM Date

**27 Corrective Actions Verified**

QAR *Richard L. Mundy* Date *12/12/95*

**28 Closure Approved by**

AOQAM *R. Blount* for Date *12.13.95*

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RADIOACTIVE WASTE MANAGEMENT  
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8  Performance Report  
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QA: L

**PR/DR CONTINUATION PAGE**

Corrective Action Response for Deficiency Report YMQAD-95-D-012

12. Remedial Action: The response to YMQAD-95-D-011 commits the M&O A/E organization to requesting the data (contained in TDIF 303124, Rev. 1) associated with the condition reported in this DR from the TDB using YAP-SIII.2.Q. In the response to YMQAD-95-D-013, the M&O A/E organization concludes that "An evaluation of the consequences of initially using preliminary data concluded that there was no impact on the results of the analysis". No further remedial action is considered necessary.

18. Investigative Action:

1. SNL will request that Agapito Associates examine outgoing correspondence relating to WA 130 "Design Package 2C Support" to determine if other cases exist wherein preliminary data was forwarded to the M&O prior to SNL submitting a TDIF.
2. SNL will investigate SNL work performed under Work Agreements 110 & 114 to determine if interfaces with the M&O provided "preliminary-data".
3. If other deficiencies are found as a result of these examinations (18.1 & 18.2), a plan for further corrective actions and a statement of impact to quality will be submitted as an amendment to this response.

19. Root Cause: The contractor was aware of the requirement. Under the conditions that the recipient of the data knew that the information was incomplete and preliminary and the submittal was remarkably casual, the contractor did not mark the information preliminary. This was an error of omission.

20. Actions to Prevent Recurrence:

The SNL Lab Lead will draft a memorandum to staff members including contractors describing this incident and emphasizing the importance of clearly identifying the status of information provided to other M&O and DOE participants.

Training being developed for CAR No. YM-95-14 to improve staff awareness and utilization of WA's as controlling documents, will clearly identify that the issue of interface control should be routinely addressed and requirements for the trainee to use YAP SIII.3Q are clearly identified when appropriate.

21. Overall Responsible Individual: Michael C. Brady

*Michael C. Brady*  
10/6/95

| 22. Action<br>para. above | Responsible<br>Party | Anticipated<br>Completion Date |
|---------------------------|----------------------|--------------------------------|
| 18.1 to 18.3              | Eric Ryder           | Nov. 27, 1995                  |
| 20.1                      | Michael C. Brady     | Nov. 1, 1995                   |

10/6/95 Brady to Spence

Documentation for verification and closure of YMQAD-95-D-12:

12. Remedial Actions: None required.

18. Investigative Actions: Letter from E. Ryder dated 11/21/95

19. Root Cause: None Required.

20. Actions to Prevent Recurrence:

Memorandum from M.Brady dated 11/27/95.

Hard Copy of Computer Based Training screens related to interface controls.

12/10/95

Brady & Spence

**ATTACHMENT 18.**

**INVESTIGATIVE ACTIONS**

date: November 21, 1995

to: Claudette Jaramillo



from: Eric Ryder, 6852

subject: Investigative Action for CAR YMQAD-95-D-012

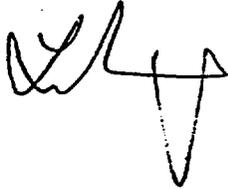
Agapito Associates, Inc. examined their records for WA-130 and found no additional instances where preliminary information was transmitted to the M&O designers. Ming Lin performed this examination and documented his findings in the attached memo transmitted to E. Ryder on November 14, 1995.

WA-110 and WA-114 were examined by E. Ryder. The records indicate that no preliminary information generated under these work agreements was provided to the M&O.

Based on the above findings, no additional actions are required.

Attachment

## *Memorandum*

**DATE:** November 14, 1995  
**TO:** Eric Ryder, Sandia National Laboratories  
**FROM:** Ming Lin   
**RE:** CAR YM-95-D-012  
**CC:**

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The task files for Contract No. AB-9836 relating to WA-130 "Design Package 2C Support" was examined upon your request. No other case was found wherein preliminary data was forwarded to the M&O prior to SNL submitting a TDIF.

The file list for WA-130 is enclosed to support the above statement.

SANDIA NATIONAL LABORATORIES  
CONTRACT NO. AB-9836  
(WA-0130)

| FILE NO.  | DATE     | SUBJECT  | RELATED<br>ACTIVITY |
|-----------|----------|--|---------------------|
| 88-201-01 | 02/01/94 | Design Package 2C Support<br>FROM: Hardy MP (JFTA)<br>MEM TO: SNL YMP CDC  |                     |
| 88-201-02 | 01/28/94 | Draft WA-0130 and Related Procedures<br>FROM: Jung J (SNL)<br>FAX TO: Hardy MP (JFTA)  |                     |
| 88-201-03 | 01/28/94 | WA-0130 Acceptance of Design Package 2C<br>Support<br>FROM: Hardy MP (JFTA)<br>LTR TO: Jung J (SNL)  |                     |
| 88-201-04 | 03/04/94 | Accelaration and Associated Velocity<br>Histories<br>FROM: Hardy MP (JFTA)<br>FAX TO: Jung J (SNL)   |                     |
| 88-201-05 | 03/08/94 | Attachments: Input file for SIMQKE<br>Accelaration History Velocities Response<br>Spectra<br>FROM: Hardy MP (JFTA)<br>FAX TO: Jung J (SNL) |                     |
| 88-201-06 | 01/28/94 | Draft of WA and Latest QA Requirements<br>FROM: Jung J (SNL)<br>FAX TO: Hardy MP (JFTA)  |                     |
| 88-201-07 | 03/10/94 | Draft of A5<br>FROM: Jung J (SNL)<br>FAX TO: Lin M (JFTA)  |                     |
| 88-201-08 | 03/11/94 | Reply to Jung's FAX re Fourier Transform of<br>the Accelaration Time History using MathCad<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)   |                     |
| 88-201-09 | 03/14/94 | Notes to use for rewrite of 2C report<br>FROM: Jung J (SNL)<br>FAX TO: Hardy M (JFTA)  |                     |
| 88-201-10 | 03/14/94 | Notes to use for rewrite of 2C report (were<br>not attached to the first fax)<br>FROM: Jung J (SNL)<br>FAX TO: Hardy M (JFTA)              |                     |

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(WA-0130)

| FILE NO.  | DATE     | SUBJECT   | RELATED<br>ACTIVITY |
|-----------|----------|---|---------------------|
| 88-201-11 | 03/16/94 | Attached boundary conditions used in DYNA3D and UDEC analyses<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)   |                     |
| 88-201-12 | 03/16/94 | Attached preliminary results presented in local coordinate system of STRES3D analysis<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)                   |                     |
| 88-201-13 | 03/17/94 | Latest results on stress analysis - lower - need for discussion - ? Thermal Expansion Coefficient used?<br>FROM: Jung J (SNL)<br>FAX TO: Lin M (JFTA) |                     |
| 88-201-14 | 03/17/94 | Uncorrected stress results and the material properties calculations<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)                                     |                     |
| 88-201-15 | 03/21/94 | Request for North Ramp Stress Results (SNL finite element results are not sufficiently defensible)<br>FROM: Jung J (SNL)<br>FAX TO: Hardy/Lin (JFTA)  |                     |
| 88-201-16 | 01/14/94 | Minutes of 10/19/93 meeting with attached agenda<br>FROM: Pye J (SNL)<br>FAX TO: Carlisle S (JFTA)  |                     |
| 88-201-17 | 03/21/94 | Attached updated analysis results w/ higher number of Gauss point calculation (9 figures and data)<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)      |                     |
| 88-201-18 | 03/23/94 | Confirmation of receipt and acceptance of Work Agreement 0130 Veb 1<br>FROM: Hardy M (JFTA)<br>LTR TO: Jung J (SNL)                                   |                     |
| 88-201-19 | 03/23/94 | Attached analysis results for Main Ramp<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)   |                     |

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(WA-0130)

| FILE NO.  | DATE     | SUBJECT   | RELATED<br>ACTIVITY |
|-----------|----------|---|---------------------|
| 88-201-20 | 03/24/94 | Attached analysis results for the South Ramp<br>wout consideration of stratigraphy<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)  |                     |
| 88-201-21 | 03/25/94 | Attached analysis figures<br>FROM: Lin/Hardy (JFTA)<br>FAX TO: Ryder E (SNL)  |                     |
| 88-201-22 | 03/28/94 | Attached text portion of report<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)   |                     |
| 88-201-23 | 03/28/94 | Attached figure 4-15 for report<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)   |                     |
| 88-201-24 | 03/23/94 | Power Density: 100KW/Acre, Main Ramp - Plot<br>FROM: Hardy M (JFTA)<br>FAX TO: Jung J (SNL)   |                     |
| 88-201-25 | 03/28/94 | Cover ltr-Section 4.4 / 4.5, Input files for<br>NR Stress3D Analysis, Vertical Displacement<br>Contours, Temp & Stress Results N M & S R<br>FROM: Lin M (JFTA) <i>(see separate folder)</i><br>LTR TO: Jung J (SNL) |                     |
| 88-201-26 | 03/29/94 | TSw1 - attached UCS test results for TSw1<br>unit from NRG-6 and NRG-4<br>FROM: Hardy M (JFTA)<br>FAX TO: Jung J (SNL)  |                     |
| 88-201-27 | 03/29/94 | Displacement Contours, Temperature & Stresses<br>Histories, Heated Room Layout<br>FROM: MPH/ML (JFTA)<br>FAX TO: Jung J (SNL)   |                     |
| 88-201-28 | 03/30/94 | Attached- Table, 12 Figures, page from World<br>Tunneling (11/94)<br>FROM: Hardy M (JFTA)<br>FAX TO: Pye J (M&O)  |                     |
| 88-201-29 | 03/30/94 | Attached- Revised Section 7 w/ minor change<br>in Table 7.1<br>FROM: Hardy M (JFTA)<br>FAX TO: Jung J (SNL)   |                     |

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(WA-0130)

| FILE NO.  | DATE     | SUBJECT  | RELATED<br>ACTIVITY |
|-----------|----------|--|---------------------|
| 88-201-30 | 03/31/94 | Attached- Revised Figure 7-10<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)              |                     |
| 88-201-31 | 03/31/94 | Attached- Rvised Section 7<br>FROM: MPH/ML (JFTA)<br>FAX TO: Jung J (SNL)                |                     |
| 88-201-32 | 03/31/94 | Revision of Section 8<br>FROM: Hardy M (JFTA)<br>FAX TO: Jung J (SNL)                    |                     |
| 88-201-33 | 03/31/84 | Revised Table 7.1 and Table 7.2<br>FROM: MPH/ML (JFTA)<br>FAX TO: Jung J (SNL)           |                     |
| 88-201-34 | 04/04/94 | Attached FYI received 3/22/94 from Saeed<br>FROM: Hardy M (JFTA)<br>FAX TO: Jung J (SNL) |                     |

goto next folder

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| FILE NO.  | DATE     | SUBJECT   | RELATED<br>ACTIVITY |
|-----------|----------|---|---------------------|
| 88-201-35 | 02/07/94 | Cover letter w/ enclosed drawings from M&O and disks containing the acceleration records from University of California, Santa Barbara<br>FROM: Jung J (SNL)<br>LTR TO: Hardy M (JFTA) |                     |
| 88-201-36 | 02/09/94 | Second review of paper with editorial comments<br>FROM: Jung J (SNL)<br>FAX TO: Lin M (JFTA)  |                     |
| 88-201-37 | 03/22/94 | Output of data file: TUDIST.OTP distance along the ramp for indexed output point. Curve section begins at point 70.<br>FROM: Lin M (JFTA)<br>FAX TO: Jung J (SNL)                     |                     |
| 201-38    | 03/22/94 | Listing of points along the entire ramp system<br>FROM: Jung J (SNL)<br>FAX TO: Lin M (JFTA)  |                     |
| 88-201-39 | 03/22/94 | Software Use Form - STRES3D<br>FROM: Jung J (SNL)<br>FAX TO: Lin M (JFTA)   |                     |
| 88-201-40 | 03/22/94 | FYI only - Ground Motion Parameters at Earth's Surface and Depth Attention Factors for Ground Motion at Earth's Surface<br>FROM: Bonabian S (M&O)<br>FAX TO: Hardy M (JFTA)           |                     |
| 88-201-41 | 03/24/94 | Changes for 80 KW/acre case<br>FROM: Ryder E (SNL)<br>FAX TO: Hardy M (JFTA)  |                     |
| 88-201-42 | 03/31/94 | Section 4.0 Thermal Loads paper for comments<br>FROM: Jung J (SNL)<br>FAX TO: Hardy M (JFTA)  |                     |
| 88-201-43 | 04/04/94 | Review of Technical Report: Revised Seismic Design Criteria for the Exploratory Studies Facility - QAP 3-5<br>FROM: Quittmeyer R (M&O)<br>MEM TO: Hardy M (JFTA)                      |                     |

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| FILE NO.  | DATE     | SUBJECT  | RELATED<br>ACTIVITY |
|-----------|----------|--|---------------------|
| 88-201-44 | 04/14/94 | Review of Technical Report: Revised Seismic Design Criteria for the Exploratory Studies Facility - April 4th Draft<br>FROM: Hardy M (JFTA)<br>FAX TO: Quittmeyer R (M&O)           |                     |
| 88-201-45 | 04/15/94 | Cover letter for Calculations Notebook<br>WA-0130<br>FROM: Lin M (JFTA)<br>LTR TO: Jung J (SNL)  |                     |
| 88-201-46 | 04/06/94 | Check of distinct block analysis and paper "Verification of input parameters for distinct element analysis of jointed rock mass"<br>FROM: Lin M (JFTA)<br>FAX TO: Bonabian S (M&O) |                     |
| 201-47    | / /      | Design Support Analyses: North Ramp Design Package 2C (see separate folder)<br>FROM:<br>RPT TO:  |                     |
| 88-201-48 | 03/14/94 | Notes for changes to the North Ramp 2C Report<br>FROM: Jung J (SNL)<br>FAX TO: Hardy M (JFTA)  |                     |
| 88-201-49 | 04/04/94 | Review of "Technical Report: Revised Seismic Design Criteria for the Exploratory Studies Facility"<br>FROM: Quittmeyer R (M&O)<br>MEM TO: Distribution                             |                     |
| 88-201-50 | 04/14/94 | Letter re Review of Technical Report: Revised Seismic Design Criteria for the Exploratory Studies Facility - 4/4/94 draft<br>FROM: Hardy M (JFTA)<br>FAX TO: Nolting/Quittmeyer    |                     |
| 88-201-51 | 05/10/94 | DRC Forms from Ray Finley re North Ramp Seismic Analysis YMSCP<br>FROM: Jung J (SNL)<br>FAX TO: Lin M (JFTA)   |                     |

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| FILE NO.  | DATE     | SUBJECT  | RELATED<br>ACTIVITY |
|-----------|----------|--|---------------------|
| 88-201-52 | 07/05/94 | Cover letter for seismic reports SAND93-2438 and DRC forms from Pott & Finley & folder w/ original figures (see separate folder)<br>FROM: Lin M (JFTA)<br>LTR TO: Jung J (SNL) |                     |
| 88-201-53 | 06/27/94 | Workshop on Rock Mechanics Issues in Repository Design and Performance Assessment - withdrawal of paper<br>FROM: Jung J (SNL)<br>LTR TO: Hsuing (CNWRA)                        |                     |
| 88-201-54 | 07/21/94 | Response to request for : References for SAND93-2438<br>FROM: McKenna N (JFTA)<br>LTR TO: Gerstner-Miller SNL  |                     |
| 201-55    | 07/20/94 | Topical Report: CSC invited as potential reviewer w/ attached annotated outline, sections 3, 6, and 7 and Appendix B<br>FROM: Hardy M (JFTA)<br>FAX TO: St. John C (PDA)       |                     |
| 88-201-56 | 07/18/94 | Rock Mass Characterization Meeting - 7/18-19/94 - w/ SNL General Plan, Agenda, and Overheads (see separate folder)<br>FROM:<br>DOC TO:   |                     |
| 88-201-57 | 07/21/94 | North Ramp Seismic Analysis - cover letter for enclosed SAND93-2438 Rev 1<br>FROM: Lin M (JFTA)<br>LTR TO: Jung J (SNL)  |                     |
| 88-201-58 | 07/21/94 | SAND93-2438 Rev 1 - North Ramp Seismic Analysis (original doc, diskettes, figures - see separate folder)<br>FROM:<br>DOC TO:   |                     |
| 88-201-59 | 07/22/94 | Response to Comments by Prof D Bieniawski 7/18/94 on Characterization of Rock Mass Properties<br>FROM: Hardy M (JFTA)<br>LTR TO: Jung J (SNL)                                  |                     |

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| FILE NO.  | DATE     | SUBJECT  | RELATED<br>ACTIVITY |
|-----------|----------|--|---------------------|
| 88-201-60 | 06/29/94 | Request for Programmatic Review of<br>SAND93-2438 North Ramp Seismic Analysis by ML<br>MPH JJ<br>FROM: Shephard L (SNL)<br>LTR TO: Nelson R (SNL)  |                     |
| 88-201-61 | 09/08/94 | attached 3 pages from Bieniawski - will<br>forward copy<br>FROM: Hardy M (JFTA)<br>FAX TO: Jung J (SNL)  |                     |
| 88-201-62 | 09/09/94 | Workshop on Rock Mechanics Issues in<br>Repository Design and Performance Assessment<br>- Preliminary Program<br>FROM: Jung J (SNL)<br>FAX TO: Hardy M (JFTA)                                |                     |
| 201-63    | 09/09/94 | Hoek, E., D. Wood, & S. Shah (1992). "A<br>Modified Hoek-Brown Failure Criterioin for<br>Jointed Rock Masses," ISRM Symposium: Eurock<br>'92<br>FROM: Hardy M (JFTA)<br>FAX TO: Jung J (SNL) |                     |
| 88-201-64 | 09/09/94 | Fax to Bieniawski and his reply<br>FROM: Jung J (SNL)<br>FAX TO: Hardy M (JFTA)  |                     |
| 88-201-65 | 09/14/94 | Attached paper and abstract related to Expert<br>Systems and Tunnel Design - review for<br>applicability to design process at Yucca Mtn.<br>FROM: Hardy M (JFTA)<br>FAX TO: Jung J (SNL)     |                     |
| 88-201-66 | 09/02/94 | Rock Mechanics Per Review Comments<br>FROM: Jung J (SNL)<br>LTR TO: Bieniawski (PSU)   |                     |
| 88-201-67 | 10/13/94 | Seismic Topical Report #2 Working Group<br>Conference Call October 12, 1994 - Discussion<br>Notes<br>FROM: Stepp C (M&O)<br>FAX TO: Hardy M (JFTA)   |                     |

SANDIA NATIONAL LABORATORIES  
CONTRACT NO. AB-9836

| FILE NO.  | DATE     | SUBJECT   | RELATED<br>ACTIVITY |
|-----------|----------|---|---------------------|
| 88-201-68 | 03/30/95 | Attached revised Section 7.0 w/minor change in Table 7.1 w/the addition of a q in the intact column (refaxed from Ming to CEB 4/6/95)<br>FROM: Hardy M (AAI GJ)<br>FAX TO: Jung J (SNL) |                     |
| 88-201-69 | 04/24/95 | transmittal letter for VEC/DNYA3D Manual and UDZC 1.8 Manual for SAND93-2438<br>FROM: Lin M (AAI)<br>LTR TO: Crawford C (SNL)   |                     |

**ATTACHMENT 20.**

**ACTIONS TO PREVENT RECURRENCE**

date: November 27, 1995  
to: YMP Staff and Contractors

from:   
M. C. Brady, 6850 (MS-1399)

subject: Transmittal of Preliminary Data

YAP-SIII.3Q addresses transmittal of data among YMP participants. Section 5.2.2 is specifically concerned with the transmittal of preliminary data. There are two specific requirements that are explicitly stated:

1. Preliminary data are to be transferred under a cover letter which includes the following statements: "The data provided herein have not received complete technical and quality checks and, therefore are considered to be preliminary. These data are for information only and cannot be used for licensing activities until recorded in the ATDT and all technical and quality checks are complete."
2. All data sheets are to be stamped "PRELIMINARY - INFORMATION ONLY."

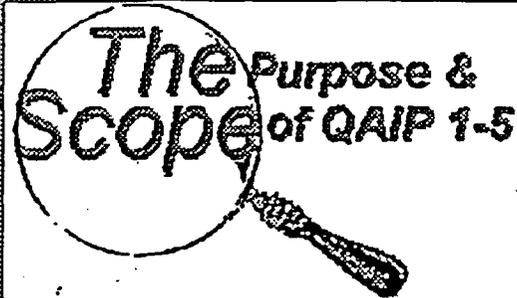
In the course of a recent audit it was found that in an attempt to respond quickly to an informal request from an M&O teammate, a draft data table being prepared for publication was faxed to the requester. The data table was not marked (neither as DRAFT or PRELIMINARY). The data table was found to contain several errors as the final document underwent the review and approval process.

Since there was no record of having transmitted the preliminary data, no attempts were made to notify the requester of the error. In this specific instance, the analyses that had used the erroneous data had evolved and the specific data are no longer being used in the current analysis methodology. As you can well imagine, the impact could have been quite serious.

I believe the best practice is to clearly mark all data sheets to identify the status of information regardless of whether that piece of paper or data file is for use by the SNL PI, other Sandians, M&O teammates, or project participants.

cc: L. Shephard, 6800  
L. Costin, 6852  
H. Dockery, 6851

## The Purpose & Scope of QAIP 1-5



Quality Assurance Implementing Procedure (QAIP) 1-5, Establishing Work Agreements, implements Quality Assurance Requirements and Description (QARD) requirements for organization interface control, work instructions, and planning.

The procedure specifies the method of establishing Work Agreements (WAs), which are used for planning and directing Yucca Mountain Site Characterization Project (YMP) work assigned to the YMP Technical Project Officer (TPO) for Sandia National Laboratories (SNL).

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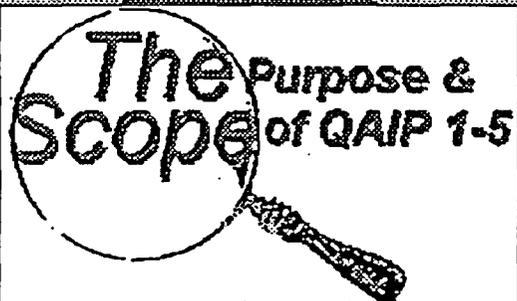
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## The Purpose & Scope of QAIP 1-5



QAIP 1-5 applies to the following cases or activities:

- Establishing communication and direction between the TPO and Task Leaders for all WBS elements (via upper tier WAs)
- Activities subject to the QA program
- Organizational interfaces requiring documentation
- Work specified via approved written procedures or instructions

Contracts issued to Suppliers in accordance with QAIP 4-1 (Procurement) can be used instead of a WA if they contain an equivalent level of detail.

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## Interface

A means of connection at the place at which independent and often unrelated systems (i.e., activities, organizations, or disciplines) meet or communicate with each other <data gathering activities - data development activities - design activities>.

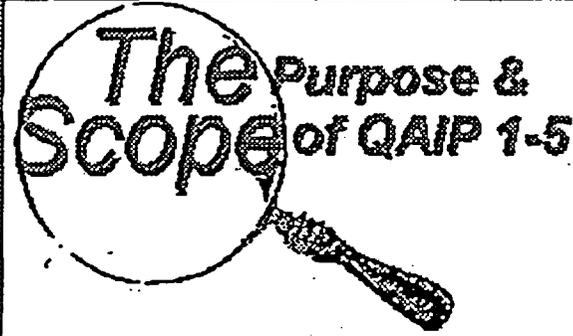
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## Interface Control

A system to provide positive control over the interface which exists when one organization prescribes an activity or requirement to, or shares an activity or requirement with, another organization.

*Click to Close*

## The Purpose & Scope of QAIP 1-5



The Work Agreement is intended to be used as the positive control over internal interfaces within an organization.

A Work Agreement may be used for external interfaces when no other mechanism exists.

YAP SIII.3Q is the procedure used to provide interface control over the transfer of technical data. There are many other APs and YAPs that serve as interface control documents for other topics. Task Leaders should consult with Quality Assurance staff to determine the need to reference other interface controlling procedures when creating Work Agreements.

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## **YAP SIII.3Q**

YAP SIII.3Q covers the following Technical Data Interfaces:

1. Submittals of acquired or developed technical data to the participant Data Archive
2. Transfers of technical data from the Technical Database to an Affected Organization
3. Providing preliminary data to the other project investigators
4. Transfers of technical data from an Affected Organization to the Technical Database.

*Click to Close*

Verification Statement - YMQAD-95-D-012

SNL provided a package of objective evidence which will be included with this Deficiency Report (DR) record package. This objective evidence was generated to specifically address deficient conditions identified in this DR.

18. Investigative Action:

1. It was verified that a Memorandum was generated by Agapito Associates, Inc stating that there were no additional instances in which "preliminary information" was sent to the M&O in violation of procedural requirements.
2. Additionally, SNL personnel provided a letter that stated that no "preliminary information" generated under WA's 110 and 114 was submitted to the M&O.

20. Action to Preclude Recurrence:

It was verified that a memorandum to staff was generated by SNL management to describe the incident and emphasize the importance for clearly identifying the status of data that is provided to project participants.

It was verified that a computer based training program was developed to address the requirements of QAIP 1-5.

Verified by:

Richard L. Weeks  
Richard L. Weeks

Date:

12/12/95