



Department of Energy

Washington, DC 20585

QA: QA

AUG 08 2002

P. R. Dixon
Bechtel SAIC Company, LLC
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**VERIFICATION OF CORRECTIVE ACTIONS AND CLOSURE OF DEFICIENCY REPORT
(DR) LBNL-02-D-079**

The Office of Quality Assurance staff has evaluated the corrective actions of DR LBNL-02-D-079 and determined the results to be satisfactory. As a result, the DR is considered closed.

Upon completion of the final Data Confirmation Checklists, no impact or change existed to affect the final technical results. One Impact Review Action Notice (#722) was initiated for DTN LB0010NICH4LIQ.001 but concerned six editorial corrections to the TDMS-SEP database with no impact to the posted data.

If you have any questions, please contact either James Blaylock at (702) 794-1420 or James V. Voigt at (702) 794-1487.


Ram B. Murthy, Acting Director
Office of Quality Assurance

OQA:JB-1390

Enclosure:
DR LBNL-02-D-079



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MmSS07
Lm-11

AUG 08 2002

cc w/encl:

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Robert Latta, NRC, Las Vegas, NV
S. W. Lynch, State of Nevada, Carson City, NV
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ORIGINAL

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WASHINGTON, D.C.

8. IS A RED STAMP
DEFICIENCY REPORT
 CORRECTIVE ACTION
REPORT
NO LBNL-02-D-079
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DEFICIENCY/CORRECTIVE ACTION REPORT

1. Controlling Document:
Quality Assurance Requirements and Description, Revision 10

2. Related Report No.:
DTN LB00090012213U.001

3. Responsible Organization:
LBNL

4. Discussed With:
Gerald Neider-Westermann/Robert Terberg

5. Requirement:
• Supplement III section III.2.3.A Data shall be identified in a manner that facilitates traceability to associated documentation

6. Description of Condition: Contrary to the above the following problems were found in verifying traceability and accuracy of data from a Post PVAR AP-3.15Q review of a submitted DTN. Review was a response to findings in self assessment SA-DQP-2001-001.

• Contrary to above bullet one, raw data (MOL. 20001122.0132) is not included in the raw data CD, and the duplicate TDMS data (MOL. 20001122.0131) is not on the Data CD files. The RIS documents used as a reference for the DTN do not contain the proper files to establish a document traceability trail.

MOL. 20001122.0132 indicates it contains the raw data files, however those files are not on this CD (It actually contains the files that should be in MOL. 20001122.0131). The notebook YMP-LBNL-JSW-YWT-1 (MOL.20001016.0017) RISweb page 30 indicates raw data files are labeled "systematic raw dataxxx.csv." And then the data is reduced to a file labeled "sytematic converted dataxxx.csv". The final product that duplicates TDMS and should be included in the data CD (MOL. 20001122.0131) is labeled air permeability May 10, 2000.csv. Data CD (MOL. 20001122.0131) contains interim files. "sytematic converted dataxxx.csv" which do correspond to TDMS data.

MOL. 20001122.0131 should contain files "air permeability May 10, 2000.csv. MOL. 20001122.0132 should contain files "systematic raw dataxxx.csv." and "sytematic converted dataxxx.csv" and any other needed interim files for data reduction.

Please note that all of these problems are already resolved.
Recommendations: (1) Revise raw data and data CD submittals to contain the proper files.

7. Initiator: *Charles D. Beach*
Charles D. Beach Date *2-26-02*

9. Does a stop work condition exist? (Not required for a DR)
 Yes No
If Yes, Check One: A B C D

10. Recommended Actions:
NONE.

11. QA Review: *James V. Voigt*
QAR *James V. VOIGT* Date *21 March 2002*

12. Response Due Date:
10 Working Days From Issuance

13. DOQA Issuance Approval:
Printed Name *Ram Murthy* Signature *James Blaylock Jr* Date *4/3/02*

22. Corrective Actions Verified:
QAR *James V. Voigt* Date *6-25-2002*

23. Closure Approved by:
DOQA *[Signature]* Date *8/7/02*

Submittal Page _____ of _____

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DR/CAR/QO
 SWO

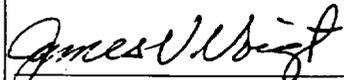
NO. LBNL -02-D-079

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CONDITION ADVERSE TO QUALITY CONTINUATION PAGE

Two additional adverse conditions (1) LBNL-02-D-078 and (2) LBNL-02-D-080 were defined in addition to this deficiency and addressed similar adverse conditions concerning data traceability and accuracy deficiencies. Upon review of this condition the QAR decided to attach DRs (1) LBNL-02-D-078 and (2) LBNL-02-D-080 using the Deficiency Identification and Referral system. These DIRs (1) DIR 02-5 and (2) DIR 02-6 are attached to this DR for corrective action consideration.



QAR Signature: James V. Voigt

28 March 2002

Date

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DIR 02-5

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QA: *Y QA*

DEFICIENCY IDENTIFICATION AND REFERRAL

*YV
3-20-02*

Date: 20 March 2002	DR/CAR Referred to: LBNL-02-D-079
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Description of Deficiency:

DTN (LB0010NICH4LIQ.001) submitted for Project Office acceptance by Lawrence Berkeley National Laboratory (LBNL) contained data traceability and data accuracy errors. This DTN is a Post PVAR submittal.

How Identified:

Deficient condition was identified as a result of follow-up actions to an investigation initiated by Self-Assessment SA-DQP-2001-001. Post PVAR DTN submittals were selected for review, a significant proportion were found to exhibit similar data traceability and accuracy deficiencies as the Pre-PVAR DTNs identified in the Self-Assessment.

This condition was originally identified in DR LBNL-02-D-078 which is being DIR'd to DR LBNL-02-D-079.

Existing Open DR/CAR:
DR LBNL-02-D-079

Open DR/CAR QAR's Concurrence: James V. Voigt <i>James V. Voigt</i>	Date: 20 March 2002
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Initiator: James V. Voigt <i>James V. Voigt</i>	Date: 20 March 2002
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RADIOACTIVE WASTE MANAGEMENT
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8. ORIGINAL DEFICIENCY REPORT
 CORRECTIVE ACTION REPORT
 NO. LBNL-02-D-078
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DEFICIENCY/CORRECTIVE ACTION REPORT

1. Controlling Document:
Quality Assurance Requirements and Description. Revision 10

2. Related Report No.:
DTN LB0010NICH4LIQ.001

3. Responsible Organization:
LBNL

4. Discussed With:
Gerald Neider-Westermann/Robert Terberg

5. Requirement:

- Supplement III section III.2.3.A Data shall be identified in a manner that facilitates traceability to associated documentation
- Supplement III section III.2.4.A Data reduction shall be described to permit independent reproducibility by another qualified individual.

6. Description of Condition: Contrary to the above the following problems were found in verifying traceability and accuracy of data from a Post PVAR AP-3.15Q review of a submitted DTN. Review was a response to findings in self assessment SA-DQP-2001-001.

- Contrary to bullet one above, Videotapes were not in Records that were used to verify wetting front arrival times. The tapes have since been added to RIS as a result of this review.
- Contrary to bullet one above, there are discrepancies between TDMS data and the Scientific notebook
 - a) 01/24/00 – Final mass end of recovery, YMP-LBNL-RCT-RH-1 (MOL.20001128.0063) RISweb page 18 is 6.4771. TDMS S00429_003 says 6.7719. Note in TDMS says end of recovery estimated using line storage. Calculated using end of test mass of 6477.1 from notebook minus 294.8. Notebook end of test mass is 6477.1 (RISweb page 18) and data disk file Niche 4788 seepage data summary.xls does perform this subtraction to get TDMS value. Line storage from s00429_001 does not contain this 294.8 number.
 - b) 3/14/00 – Initial Mass start of test, YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) RISweb page 28 is stated as 9608.3, however, TDMS S00429_003 and data disk used start of test mass from 3-10-00 test 11.7428.

Continued on continuation page

7. Initiator: *Charles D. Beach*
 Charles D. Beach Date *2-26-02*

9. Does a stop work condition exist? (Not required for a DR)
 Yes No
 If Yes, Check One: A B C D

10. Recommended Actions:
DIR-02-5 TO DR LBNL-02-D-079 us.
4/2/02

11. QA Review:
 QAR *NA* Date

12. Response Due Date:
 10 Working Days From Issuance

13. DOQA Issuance Approval:
 Printed Name Robert W. Clark *NA* Signature Date

22. Corrective Actions Verified:
 QAR *William J. Blam for Jim Voigt* Date *4/2/02*

23. Closure Approved by:
 DOQA *Jane Blaylock for* Date *4/2/02*

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8. DR/CAR
 Stop Work Order

NO LBNL-02-D-078

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DEFICIENCY/CORRECTIVE ACTION REPORT/STOP WORK ORDER CONTINUATION PAGE

Continuation page 1 of block 6

- c) 06/08/00 - Final mass end of recovery, YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) RISweb page 51 is 10.0004, but TDMS S00429_003 says 10.0611. Notebook entry (6/26/00) accounts for note in TDMS that says end of recovery adjusted for not blowing line down on 6/21/00). Data disk file balance entries end before blowing down lines is complete; therefore no reference to data file is possible.
- d) 3/14/00 - Pump stop, YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) RISweb page 38 corrected to 10:46:00 in notebook. TDMS S00429_004 says uncorrected value of 9:46:00.
- e) 6/08/00 - Pump stop, notebook YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) RISweb page 49, says 6/21/00 11:35:00. TDMS S00429_004 says value is 6/15/00 17:43:21. This is almost a six day error.
- f) 6/08/00 - Start recovery, notebook YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) RISweb page 49, says 6/21/00 11:40:40, TDMS S00429_004 says value is 6/21/00 11:35:00.
- g) 6/08/00 - Stop recovery, notebook YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) RISweb page 49, says 6/21/00 11:49:30, TDMS S00429_004 says value is 6/21/00 12:00:00.
- h) 12/7/99 - Error in Second pump stop time - TDMS S00429_004 says 12/09/1999 10:13:59 and notebook YMP-LBNL-RCT-2 (MOL.20000817.0007) RISweb page 143 says 12/09/1999 10:13:55. 4 second difference.
- i) 11/3/99 - Pumped mass notebook YMP-LBNL-RCT-2 (MOL.20000817.0007) RISweb page 114 vs. TDMS S00429_003 (9.2454/9.2444) 1 gram difference.
- j) 11/30/99 - Pumped mass notebook YMP-LBNL-RCT-2 (MOL.20000817.0007) RISweb page 136 vs. TDMS S00429_003 (8.5430/8.8542), 311.2 gram difference.
- k) 01/24/00 - Pumped mass notebook YMP-LBNL-RCT-RH-1 (MOL.20001128.0063) RISweb page 15, vs. TDMS S00429_003 (11.0034/10.7293) 274.1 gram difference.
- l) 11/16/99 - Pumped mass notebook YMP-LBNL-RCT-2 (MOL.20000817.0007) RISweb page 126, vs. TDMS S00429_003 (23.195/23.1868) 8.2 gram difference.
- m) 12/7/99 - Pumped mass notebook YMP-LBNL-RCT-2 (MOL.20000817.0007, RISweb page 144, vs. TDMS S00429_003 (22.8387/23.0231) 184.4 gram difference.
- n) 1/5/00 - Pumped mass notebook YMP-LBNL-RCT-3 (MOL.20010201.0425) RISweb page 24, vs. TDMS S00429_003 (26.6803/27.2875) 607.2 gram difference.
- Contrary to bullet one above, there are discrepancy between TDMS data and the Data CD(MOL.20010622.0274)
 - a) 6/26/00 - Initial Mass start of test, from file Niche 4788 UL 7.62-7.93m 6-26-00.csv corresponding to just prior to filling line storage 6/26/00 14:48:00 states 12.015, however, TDMS S00429_003 says 12.0152. This would be a rounding problem if it were reversed.
 - b) 3/10/00 - TDMS S00429_003 value 9.6083 is not in the notebook, and file (Niche 4788 UM 6.10-6.40 m 03-10-00.csv (MOL.20010622.0274)) value corresponding to end of release s00429_004 (9:04:04) is 9.6122
 - c) 11/16/99 - Discrepancy in Dripping ends time. TDMS S00429_004 and data disk indicates time is from file, however, Dripping ends is 11/19/1999 14:52:08 from Niche 4788 UM 6.10-6.40 m 11-16-99.csv (MOL.20010622.0274). TDMS is 11/19/1999 14:42:10. Difference is 9 minutes 58 seconds.
 - d) 12/7/99 - Dripping ends is 12/10/99 11:01:40 by file Niche 4788 UR 5.18-5.48m 12-7-99.csv not 12/10/99 10:51:40 as stated in TDMS S00429_004. Final capture weight verifies this time in the file.
 - e) 02/14/00 - TDMS S00429_004 in comments says Dripping begins unknown, but gives a value of 02/16/00 08:27:00 in column dripping begins. Review of file Niche 4788 UR 5.18-5.48m 02-14-00.csv (MOL.20010622.0274) indicates 02/16/00 10:39:26 to be better choice.
 - f) For test 2900 the data disk (MOL.20010622.0274) has a note that they used pumping rate in lieu of released rate. This note is not in TDMS S00429_006.

Continued on second continuation page

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- g) 6/26/00 - From SN YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) (Capture mass empty weight, RISweb page 52), (before and after first emptying Captured mass from SN YMP-LBNL-RCT-3 (MOL.20010201.0425), RISweb page 99). (before and after second emptying Captured mass from SN YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) RISweb page 60) (final capture mass from file Niche 4788 UL 7.62-7.93m 6-26-00 #2.csv (MOL.20010622.0274), however, dripping ends time of 07/20/00 16:18:31 corresponds to 3175.6 not 3175.8, which makes final captured mass 5.7092 versus 5.7094 in TDMS S00420_006.
- Contrary to bullet one above, there are the following notebook problems
 - a) 3/14/00 - YMP-LBNL-JSW-L-J-1 (MOL.20001128.0064) Pumped mass was not calculated on RISweb page 39, but notebook used values in summary that were a mixture of 3-10-00 and 3-14-00 values.
 - b) 01/24/00 YMP-LBNL-RCT-RH-1 (MOL.20001128.0063) RISweb page has a .1 gram math error in the Start mass minus mass before filling reservoir calculation, 11910.1-9268.4 should be 2641.7 not 2641.6.
 - c) 1/5/00 - YMP-LBNL-RCT-3 (MOL.20010201.0425) also calculates returned mass but uses the capture empty weight instead of the return empty weight on RISweb page 24. The data disk and TDMS calculation are correct.
 - Contrary to bullet one above, there is the following TDMS problem
 - a) Table S00429_006 actually substituted Pump stop time for the start recovery time on tests 3/10/2000, 3/14/2000, and 6/08/2000. According to the data disk table there was a power outage during the 2/9/2000 and 3/10/2000 tests. Therefore, this substitution makes sense for the 3/10/2000 and 3/14/2000 tests but not for the 6/8/2000 tests. The correction to the 6/8/2000 test is .04433 days or 3830 seconds
 - Contrary to bullet two above, there are the following Data Reduction problems. These are data reduction problems that may be caused by the previous (above) discrepancies.
 - (a) Data Reduction Problem - Pumped mass (S00429_003) calculated two different ways. In the notebooks pumped mass = Initial mass start of test minus final mass end of recovery plus mass of water added during test. In TDMS and the Data CD (MOL.20010622.0274) file Niche 4788 seepage data summary.xls, pumped mass = Initial mass start of release minus final mass end of release plus mass of water added during test. Tests affected are 11/3/99, 11/30/99, 01/24/00, 11/16/99, 12/7/99, and 1/5/00.
 - (b) TDMS Table S00429_002 - Pumping rate = Pumped mass from s00429_003 divided by Pumping time from s00429_002. Data reduction method shown in Table 2-3 of file Niche 4788 seepage data summary.xls on Data CD (MOL.20010622.0274). Affected by potential discrepancy in how pumped mass calculated for tests 11/03/99, 11/30/99, 01/24/99, 11/16/99, 03/10/00, 12/7/99, and 1/5/00. Affected by possible error in pumping time for tests 3/14/00 and 6/08/00. Affected by possible error in fill time for test 12/7/99.
 - (c) TDMS Table S00429_002 - Pumping Time = Pumping time from s00429_005 minus fill time from s00429_005. Data reduction method shown in Table 2-3 of file Niche 4788 seepage data summary.xls on Data CD (MOL.20010622.0274). Affected by possible error in pumping time for tests 3/14/00 and 6/08/00. Affected by possible error in fill time for test 12/7/99.
 - (d) TDMS Table S00429_002 - Liquid release rate = Released mass from s00429_003 divided by Liquid release time from s00429_002. Data reduction method shown in Table 2-3 of file Niche 4788 seepage data summary.xls on Data CD (MOL.20010622.0274). Affected by possible error in released mass for test 01/24/99, 6/26/00, 03/14/00, and 6/08/00. Affected by possible error in Liquid release time for test 11/03/99, 11/30/99, 01/24/99, 11/16/99, 03/14/00, 6/08/00, 12/7/99, and 1/5/00.
 - (e) TDMS Table S00429_002 - Time (Time to fill line storage) = Line storage deficit from s00429_001 converted to kg times the pumping rate from s00429_002. Data reduction method shown in Table 2-3 of file Niche 4788 seepage data summary.xls on Data CD (MOL.20010622.0274). Affected by potential discrepancy in how pumped mass calculated for tests 11/03/99, 11/30/99, 01/24/99, 11/16/99, 03/10/00, 12/7/99, and 1/5/00. Affected by possible error in pumping time for tests 3/14/00 and 6/08/00. Affected by possible error in fill time for test 12/7/99.
 - (f) TDMS Table S00429_002 - Liquid release time = Pumping time from s00429_002 minus time to fill line storage, both from s00429_002. Data reduction method shown in Table 2-3 of file Niche 4788 seepage data summary.xls on Data CD (MOL.20010622.0274). Affected by possible error in Liquid release time for tests 11/03/99, 11/30/99, 01/24/99, 11/16/99, 03/14/00, 6/08/00, 12/7/99, and 1/5/00.

Continued on third continuation page

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(g) TDMS Table S00429_003 - Released mass = Initial mass start of test minus final mass end of recovery minus return mass

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plus mass of water added during test. Data reduction method shown in Table 2-4 of file Niche 4788 seepage data summary.xls on Data CD (MOL.20010622.0274). Affected by possible error in mass start of test for tests 6/26/00, 3/14/00. Affected by possible error in mass end of recovery for tests 1/24/00, 6/08/00.

- (h) TDMS Table S00429_003 - Pumped mass = Calculated two different ways. In the notebook pumped mass = Initial mass start of test minus final mass end of recovery plus mass of water added during test. In TDMS and the Data CD (MOL.20010622.0274) file Niche 4788 seepage data summary.xls, pumped mass = Initial mass start of release minus final mass end of release plus mass of water added during test. Data reduction method shown in Table 2-4 of file Niche 4788 seepage data summary.xls on Data CD (MOL.20010622.0274). Affected by possible errors in end of release mass for test 3/10/00.
- (i) TDMS Table S00429_005 - Pumping time = Pump stop time minus Pump start time from s00429_004. Affected by possible errors in Tests 3/14/00 and 6/08/00.
- (j) TDMS Table S00429_005 - Time standby = Start of recovery time minus Pump stop time from s00429_004. Affected by possible errors in Tests 3/14/00 and 6/08/00.
- (k) TDMS Table S00429_005 - Recovery time = Stop recovery time minus start recovery time from s00429_004. Affected by possible errors in Test 6/08/00.
- (l) TDMS Table S00429_005 - Fill time = standby to fill reservoir end minus standby to fill reservoir begin (may be several fills) from s00429_004. Affected by 4-second error in test 12/7/99.
- (m) TDMS Table S00429_005 - Test duration begins = elapsed time from pump start to dripping begins from s00429_004. Affected by possible errors in Test 2/14/00.
- (n) TDMS Table S00429_005 - Test duration ends = elapsed time from pump stop to dripping ends from s00429_004. Affected by possible errors in Tests 11/16/99, 12/7/99, 3/14/00 and 6/08/00.
- (o) TDMS Table S00429_005 - Dripping duration = dripping ends minus dripping begins from s00429_004. Affected by possible errors in Tests 11/16/99, 12/7/99 and 2/14/00.
- (p) TDMS Table S00429_006 - Mass captured = Captured mass minus Captured mass empty weight. NOTE: These values are not in the TDMS table, but are found in the notebook. There also may be more than one filling. Data reduction shown in segment of YMP-LBNL-RCT-4 (MOL.20001121.0082) RISweb page 44. Affected by possible error for test 06/26/00
- (q) TDMS Table S00429_006 - Seepage percent = Mass captured divided mass released times 100 from s00429_006. Affected by possible error for test 06/26/00

Please note that most of these problems are already resolved.

Recommendations (1) Put videotapes in Records. (Already accomplished) (2) Resolve problems, discrepancies. Revise or supersede documents. TDMS as necessary.

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

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DEFICIENCY IDENTIFICATION AND REFERRAL

gww
3-20-02

Date:

20 March 2002

DR/CAR Referred to:

LBNL-02-D-079

Description of Deficiency:

DTN (LB00090012213U.002) submitted for Project Office acceptance by Lawrence Berkeley National Laboratory (LBNL) contained data traceability and data accuracy errors. This DTN is a Post PVAR submittal.

How Identified:

Deficient condition was identified as a result of follow-up actions to an investigation initiated by Self-Assessment SA-DQP-2001-001. Post PVAR DTN submittals were selected for review, a significant proportion were found to exhibit similar data traceability and accuracy deficiencies as the Pre-PVAR DTNs identified in the Self-Assessment.

This condition was originally identified in DR LBNL-02-D-080 which is being DIR'd to DR LBNL-02-D-079.

Existing Open DR/CAR:

DR LBNL-02-D-079

Open DR/CAR QAR's Concurrence:

James V. Voigt



Date:

20 March 2002

Initiator:

James V. Voigt



Date:

20 March 2002

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8. ORIGINAL DEFICIENCY REPORT
 CORRECTIVE ACTION REPORT
 NO. LBNL-02-D-080
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DEFICIENCY/CORRECTIVE ACTION REPORT

1. Controlling Document:
Quality Assurance Requirements and Description, Revision 10

2. Related Report No.:
DTN LB00090012213U.002

3. Responsible Organization:
LBNL

4. Discussed With:
Gerald Neider-Westermann/Robert Terberg

5. Requirement:

- Supplement III section III.2.3.A Data shall be identified in a manner that facilitates traceability to associated documentation.
- Supplement III section III.2.4.A Data reduction shall be described to permit independent reproducibility by another qualified individual.

6. Description of Condition: Contrary to the above the following problems were found in verifying traceability and accuracy of data from a Post PVAR AP-3.15Q review of a submitted DTN. Review was a response to findings in self assessment SA-DQP-2001-001.

- Contrary to bullet one above, raw data (MOL. 20001122.0132) is not included in the raw data CD, and the duplicate TDMS data (MOL. 20001122.0131) is not on the Data CD. The RIS documents used as a reference for the DTN do not contain the proper files to establish a document traceability trail.

 MOL. 20001122.0132 indicates it contains the raw data files, however those files are not on this CD (It actually contains the files that should be in MOL. 20001122.0131). The notebook YMP-LBNL-JSW-YWT-1 (MOL.20001016.0017) RISweb page 30 indicates raw data files are labeled "systematic raw dataxxx.csv." and then the data is reduced to a file labeled "systematic converted dataxxx.csv". The final product that duplicates TDMS and should be included in the data CD (MOL. 20001122.0131) is labeled "annotate Zone x xxxx.csv". Data CD (MOL. 20001122.0131) contains interim files, "systematic converted dataxxx.csv" which do correspond to the TDMS data.

 MOL. 20001122.0131 should contain files "annotate Zone x xxxx.csv". MOL. 20001122.0132 should contain files "systematic raw dataxxx.csv", "systematic converted dataxxx.csv" and any interim files to show complete data reduction
- Contrary to bullet two above, rows of data in TDMS linked to DTN LB00090012213U.002 have the same day and time to the minute. The seconds are truncated from the data. This is due to a quirk in EXCEL when date and time to the second appear in the same cell. The data is in a ".csv" file. When brought into EXCEL the seconds do not show (or copy or print) in the cell, unless highlighted and then only in the data window. However, if the same file is viewed in word as text the times appear to the second. NOTE: The duplicate file in RIS indicates the submitted data has truncated seconds. It does not appear to be a TDMS translation problem.

Continued on continuation page

7. Initiator: *Charles D. Beach*
 Charles D. Beach Date *2-26-02*

9. Does a stop work condition exist? (Not required for a DR)
 Yes No
 If Yes, Check One: A B C D

10. Recommended Actions:
DIR 02-6 Processed to DR LBNL-02-D-079 w/ 4/2/02

11. QA Review:
 QAR *N/A* Date

12. Response Due Date:
 10 Working Days From Issuance

13. DOQA Issuance Approval:
 Printed Name *Ram Murthy* Signature *N/A* Date

22. Corrective Actions Verified:
 QAR *William J. Homan for Jim Voigt* Date *4/2/02*

23. Closure Approved by:
 DOQA *James Blaylock for* Date *4/2/02*

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8. DR/CAR
 Stop Work Order
NO LBNL-02-D-080
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DEFICIENCY/CORRECTIVE ACTION REPORT/STOP WORK ORDER CONTINUATION PAGE

Continuation of block 6

- Contrary to bullet two above, there is a discrepancy in collector diameter. The notebook YMP-LBNL-JSW-YWT-1 (MOL.20001016.0017) RISweb page 15 gives the diameter of this collector as 17.84 cm; but the software routine report included in the notebook on RISweb page 31 gives the diameter of the collector as 20 cm (radius 10 cm). The 21999 conversion is based on a diameter of 20 cm.

Please note that all of these problems are already resolved.

Recommendations: (1) Revise raw data and data CD submittals to contain the proper files, including files necessary to show data reduction. (2) Revise TDMS to show data to the second. (3) Resolve collector diameter discrepancy. If diameter is not 20 cm, revise data accordingly.

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1st 5/7/02 *2nd 5/7/02*

2. Check if Amended
 Check if also Initial Response

3. Extended Processing
 No Yes (If yes, submit Extended Processing request)

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1. DR/CAR NO. LBNL-02-D-079
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DEFICIENCY REPORT/CORRECTIVE ACTION REPORT COMPLETE RESPONSE

4. Extent of Condition: (Amended response will be required if all Extent of Condition investigations are not complete and documented herein)
 Since the Apparent Cause (item 7 below) is learning curve-related, the extent of condition is bounded by evidence of subsequent satisfactory data submittals. DTNs: LB00090012213U.001, LB0010NICH4LIQ.001, LB00090012213U.002 and LB0010NICH3LIQ.001 were the first field data DTNs submitted by the LBNL Technical Data Coordinator, since coming on the project in October 2000.

As a part of the corrective action to findings identified in Self-Assessment of Post-PVAR DTN (SA-DQP-2001-001), the above four DTNs were coincidentally chosen for verification by the Bechtel SAIC, LLC (BSC) Integrated Management of Technical Product (See Addendum 1)

5. Impact: (Provide an impact statement relative to waste isolation and safety, and impact to other work, if any)
 All resolved issues as identified in the Data Confirmation Checklists did not change or affect final technical results.
 DR-079:
 No Impact Review Action Notice was given or required for the effect of an augmented raw data submittal to the data posted in TDMS-SEP.
 DIR 02-5:
 Impact Review Action Notices (IRAN #722-A-F; MOL.20020206.0219-.0221) for LB0010NICH4LIQ.001 concerning 6 editorial corrections to TDMS-SEP data, found no impact to data posted in TDMS-SEP.
 DIR 02-6: (See Addendum 2)

6. Remedial Actions: (Document all actions necessary to address the results of the Extent of Condition)
 The following corrective actions were taken to LBNL-02-D-079, and the Document Identification Referrals (DIR) 02-5 and DIR 02-6. As noted in this DR, all actions were completed prior to the issuance of this DR, as part of the Data Confirmation Checklist and associated Record Road Map requirements described in AP-3.15Q (Rev.3, ICN 1); all records associated with these actions were submitted to the RPC, and are appropriately referenced below.
 DR-079:
 The following items are listed in the Record Road Map section of the completed and approved Data Confirmation Checklist for DTN: LB00090012213U.001 (MOL.20020314.0168)
 - MOL.20020227.0268 - Two CD-ROMS containing corrected raw data for the YMP-ESF air k/seepage test data, DTNS (See Addendum 3)

16th 5/7/02

7. Root Cause (For a significant CAQ, attach results of formal root cause determination prepared in accordance with AP-16.4Q)
 Apparent Cause
 The subject DTNs were submitted by the LBNL Technical Data Coordinator who was new to the project at that time and had not completely mastered the data submittal process. Furthermore, the Technical Data Coordinator's schedule of work during the checklist process for the three DTNs subject of this DR precluded immediate response to traceability issues.

8. Action to Preclude Recurrence: (Address those actions necessary to prevent the identified cause from recurring)
 As noted above, the Data Confirmation Checklists and associated Record Road Maps were completed for these three DTNs. Further training and interaction with BSC technical data personnel has resulted in the LBNL Technical Data Coordinator having since submitted 85 DTNs and bringing LBNL's verification rate from 75% to 91%.
NO FURTHER ACTIONS REQUIRED. JMS 5/14/02

9. Due Date for Completion of Corrective Action:
 Completed 2/20/02
5/09/02 JMS 5/10/02

10. Responsible Manager: *BSC QA JEB 5/19/02*
 Paul Dixon *E. Hardin 5/16/02*
 Printed Name *E. Hardin* Signature Date

11. QAR Evaluation: Accept Partially Accept Reject
Not significant given 7-18-02
 James V. Voigt *James V. Voigt 5/16/2002*
 Printed Name Signature Date

12. QAM Concurrence:
 Sam Murray *James B. Boyd for 5/30/02*
 Printed Name Signature Date

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CONDITION ADVERSE TO QUALITY CONTINUATION PAGE

Addendum 1

Input Department (IMTPID). Of those four, LB0010NICH3LIQ.001 was verified and accepted by Charles Beach in July 2001. This would suggest that within the span of the first four DTNs submitted, and coincidentally chosen for verification, there is evidence of satisfactory data submittal improvement.

Addendum 2

Impact Review Action Notice for LB00090012213U.002 (MOL.20020125.0137) concerning change of units expression in TDMS-SEP, found no impact to affected DTNs.

Addendum 3

LB00090012213U.001 and LB00090012213U.002 (includes detailed explanatory document for file generation sequence and names).

DIR 02-5:

The following items are listed in the Record Road Map section of the Data Confirmation Checklist for DTN: LB0010NICH4LIQ.001 (MOL.20020318.0075).

- MOL.20020104.0010-.0025 - Video tapes containing raw data for Niche 4788 Seepage Test
- MOL.20020206.0219-.0221 - OCRWM Impact Review Action Notice (IRAN #722-A-F) for Niche 4788 Seepage Test, DTN: LB0010NICH4LIQ.001, concerning 6 null-impact editorial corrections to TDMS-SEP data.

DIR 02-6:

The following items are listed in the Record Road Map section of the completed and approved Data Confirmation Checklist for DTN: LB00090012213U.002 (MOL.20020327.0393).

~~DEFICIENCY REPORT/CORRECTIVE ACTION REPORT COMPLETE RESPONSE~~

Addendum 3, *page 3 of 3 continued* *WDDW 5/7/02*

- MOL.20020227.0268 - Two CD-ROMS containing corrected raw data for the YMP-ESF air k/seepage test data, DTNS: LB00090012213U.001 and LB00090012213U.002 (includes detailed explanatory document for file generation sequence and names).
- MOL.20020125.0137 - Impact Review Action Notice for LB00090012213U.002, Liquid Release Tests From Borehole SYBT-ECRB-LA#2 AT CS 17+26 In Cross Drift (concerning change of units expression in TDMS-SEP).
- MOL.20020227.0267 - YMP-LBNL memorandum from R Terberg to file, corrective entry to closed out notebook YMP-LBNL-JSW-YWT-1 (concerning 20 cm diameter of collector).

All of the other line item discrepancies were resolved by LBNL's Technical Data Coordinator, with available TDMS archived data, in the completed and approved Data Confirmation Checklists.

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CONDITION ADVERSE TO QUALITY CONTINUATION PAGE

VERIFICATION OF CORRECTIVE ACTIONS FOR DEFICIENCY REPORT (DR) LBNL-02-D-079

BLOCK 4 – IMMEDIATE ACTIONS/EXTENT OF CONDITION

Immediate Action Commitment: (1) None specified.

Verification: (1) Concur with no immediate action. DR was written several months after the specific conditions had been identified and resolved by LBNL. LBNL Technical Data Coordinator received on-the-job training that resolved inadequate submittals.

Verification satisfactory.

Extent of Condition Commitment: Four DTNs had been submitted by the new LBNL Technical Data Coordinator, the first three DTNs were returned to LBNL for clarification and needed additions. The last DTN BSC found to be acceptably completed.

Verification: Concur with Extent of Condition assessment.

BLOCK 5 – IMPACT

Impact Actions: Final Technical results did not change relative to resolved issues identified in the Data Confirmation Checklists. DIR 02-05 Impact Review Action Notices (MOL.20020206.0219 to.0221) were issued with a result of no impact. DIR 02-06 Impact Review Action Notices (MOL.20020206.0221) was issued with a result of no impact.

Verification: Verified impact actions listed above and verification is satisfactory.

BLOCK 6 – REMEDIAL ACTIONS

Commitment: (1) Complete the Data Confirmation Checklists and the Record Road Maps for the DTNs identified in this DR .

Verification: (1) The remedial actions were completed prior to the issuance of this DR. Specific actions were the completion of the Data Confirmation Checklists and the Record Road Maps for the DTNs identified in this DR. These checklists were submitted to the Records Processing Center and have the following Records Information System (RIS) accession numbers:

LB00090012213U.001 MOL.20020314.0168

LB0010NICH4LIQ.001 MOL.20020318.0075 and

LB00090012213U.002 MOL.20020327.0393

The Checklists were verified as being complete in the RIS and the verification is satisfactory.

BLOCK 7 – CAUSE

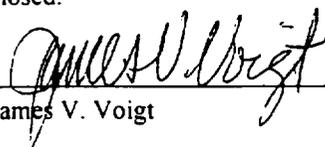
The cause of the deficient condition identified in this DR is reasonable based upon the 5/9/02 response.

BLOCK 8 – ACTION TO PRECLUDE RECURRENCE

Commitment: (1) Provide LBNL Technical Data Coordinator with necessary on-the-job training.

Verification: (1) Per e-mail from Nancy Aden-Gleason dated 6/17/2002 LBNL committed to further on-the-job training and increased interaction with BSC personnel experienced in the data submission process. The LBNL Technical Data Coordinator's new understanding of the process was verified by way of reviewing the data submittals that occurred after the initiation of this DR. There were no further occurrences of problems that would have warranted a change in the qualification status changes of the submitted data.

Based upon the satisfactory verification of corrective action commitments described above, it is recommended that this DR be closed.


James V. Voigt

6-25-2002
Date