



Department of Energy

Washington, DC 20585

QA: QA


APR 10 2003

S. L. Sethi
Bechtel SAIC Company, LLC
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VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF DEFICIENCY REPORT (DR) BSC(O)-03-D-060 INADEQUATE IDENTIFICATION OF DRAWING REFERENCE INPUTS

The Office of Civilian Radioactive Waste Management staff has verified completion of the corrective actions of DR BSC(O)-03-D-060 and determined the results to be satisfactory. As a result, the DR is considered closed.

If you have any questions, please contact either Kerry M. Grooms at (702) 794-1367 or James V. Voigt at (702) 794-1487.


R. Dennis Brown, Director
Office of Quality Assurance

OQA:KMG-0981

Enclosure:
DR BSC(O)-03-D-060

cc w/encl:
N. K. Stablein, NRC, Rockville, MD
Robert Latta, NRC, Las Vegas, NV (2 cys)
S. W. Lynch, State of Nevada, Carson City, NV
L. W. Bradshaw, Nye County, Pahrump, NV
M. J. Mason, BSC, Las Vegas, NV
L. J. Trautner, BSC, Las Vegas, NV
W. J. Glasser, NQS, Las Vegas, NV
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W. J. Arthur, III, DOE/ORD (RW-2W), Las Vegas, NV
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IS A RED STAMP

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8. ☒ DEFICIENCY REPORT
☐ CORRECTIVE ACTION
REPORT
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DEFICIENCY REPORT/CORRECTIVE ACTION REPORT

1. Controlling Document. (Document ID and Revision or Date)
AP3.24Q/R0/15 - "Drawings"

2. Related Report No .

Surveillance Number OQA-SI-03-008

3. Responsible Organization:

BSC Repository Design Project

4. Discussed With:

L. Abernathy, E. Thomas, C. Hastings, B. Stanley

5 Requirement:

AP3.24Q/R0/15 Paragraph 5.2.3 f)

" ... As appropriate to the drawing, the following items shall be addressed ... Correct selection, incorporation in to the design, and appropriate use of design inputs. ... Adequate identification requirements for control of items and materials are specified "

5.2.3 j) "Clearly identify any portion of a drawing issued for procurement, fabrication, or construction that must not be implemented due to lack of information (e.g., awaiting vendor information, pending design verification, etc.) by placing a HOLD on that portion of the drawing."

Continued on Page 2

6. Description of Condition

Contrary to the above requirements, the following nonconforming issues were identified:

Drawing 800-IED-MGR0-00100-000-00A -"Repository/PA IED Geotechnical and Thermal Parameters"

Reference 2 is for report MDL-NBS-GS-000005 that provides dry bulk density and porosity for the repository horizon The DIRS (Item 3) lists this report, however, reference DTNs for these parameters could not readily be determined and the DIRS column 6 row 3 does not identify dry bulk density and porosity as inputs. Thermal conductivity is already listed. Difficulty is that data is no longer identified in a manner that facilitates traceability to associated documentation such as DTNs provide. The same condition exists for 'Thermal Conductivity For Repository Layers' where MDL-NBS-GS-000005 is identified as the data source and DTN SN0208T0503102.007 should be referenced.

Continued on Page 2

Has work been stopped? ☐ Yes ☒ No

7. Initiator:

James V. Voigt

Printed Name

James V. Voigt

Signature

12-16-2002

Date

9. Does a stop work condition exist?

☐ Yes ☒ No ☐ N/A

If Yes, Check One:

☐ A

☐ B

☐ C

☐ D

10 Recommended Actions

No recommended actions.

11. QA Review:

James V. Voigt

Printed Name

James V. Voigt

Signature

1-2-3

Date

12. Response Due Date:

10 Working Days after Issuance

13. QAM Issuance Approval:

Printed Name R. Dennis Brown

Signature

James Blyskal for

Date 1/10/03

14. Corrective Actions Verified/Closure

James V. Voigt

QAR Printed Name

James V. Voigt

Signature

3/27/2003

Date

15. QAM Closure Approval:

K.M. Grooms

Printed Name

K.M. Grooms

Signature

4/10/03

Date

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CONDITION ADVERSE TO QUALITY CONTINUATION PAGE

5. Requirement continued

5.3.4 a) "For drawings subject to QARD requirements, perform a quality review of the drawing for compliance to procedural requirements, for assignment of the correct QL, and for incorporation of appropriate QA requirements."

6. Description of Condition: continued

Drawing 800-IED-MGR0-00100-000-00A - continued

The GEOTECH block for 'Thermal Properties' references DTN SN0206T0503102.005 that provides dry bulk density and porosity values for non-repository layers. The DIRS, Item 7, lists this scientific data as Reference Only, this is incorrect, per the ATDT this DIRS entry should be TBV as the technical data is unqualified and preliminary. In addition, reference to this data is not defined at the point of use on the drawing as 'Preliminary' or HOLD which may create a potential for the use of unqualified scientific data.

Drawing 100-IED-WRP0-00100-000-00A - "Repository/PA IED Surface Facility"

The drawing published the quality level for the Waste Treatment Building as QL-1; this is incorrect, the quality level is QL-2 per the Q-List. The initial drawing issued for BSC review had the correct designated level; subsequent changes and reviews did not identify the change and subsequent error. Also the Quality Level box names a building, the Waste Treatment Building which does not align with the surface facility described in the drawing, the "Idealized Waste Transfer Building." No entry from the Q-List could be found for a Waste Transfer Building. In addition the DIRS for this drawing row 2, column 6, incorrectly references QL-1.

100-IED-WTS0-00100-000-00A - "Repository/PA IED Overall Site Plan"

This drawing provides a general site plan with a grid defining the EW/NS coordinates. It could not be determined from the DIRS listings the origins for defining the grid system. It is not clear how the grid layout was verified by the checker during the review.

The "ACC:" notation used in the DIRS (NNA.19900112.0341) is an obsolete reference; the Data/Source pointer listed on the drawing box as "Science and Testing" entitled Volcano Ash Fall Amount references TWS-EES-13-LV-07-91-16, this also is an obsolete reference. The document identifier should be the DTN developed in response to results of MOL.19980407.0902, the current Document Identifier.

Submittal Page 1 of 1

2. Check if Amended ☐

3 Extended Processing

☒ No ☐ Yes (if yes, submit
Extended Processing request)

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DEFICIENCY REPORT/CORRECTIVE ACTION REPORT INITIAL RESPONSE

4. Immediate Actions Necessary to Bring the Process Under Control: (If none, provide justification statement)

The DR-60 will be reviewed with RDP Mechanical and Plant Design Groups at staff meetings held the week of 1/27/03

IEDs that are currently being revised or developed are incorporating DR-60 issues.

Obtain clarification from Engineering with respect to interpretation and use of "Reference Only" when a document is referenced for general use and no technical input or data is cited. Pending the result of the clarification an e-mail would be issued to RDP personnel.

Date when process will meet requirements: To be determined in the complete response

5. Immediate Remedial Actions Completed:

None. Actions will be defined in the complete response.

6. Plan for Determining the Extent of Condition:

There have been nine (9) IEDs issued and one (1) IED is under development. Each issued IED will be evaluated with respect to the quality level designation, status of DTNs, and correct or missing reference sources. The IED under development will be issued with the same concerns addressed prior to release.

Pending clarification of how the IEDs use the "Reference Only" status, all IEDs may need to be evaluated once clarification has been obtained.

7. Due Date Submittal of Completed Response:

February 28, 2003

8. Response by: (Responsible Manager)

Surendra Sethi

Printed Name

Signature

Date

1/28/03

9. QAR Evaluation: ☒ Accept ☐ Partially Accept ☐ Reject

JAMES V. VOIGT

Printed Name

Signature

1-30-2003

Date

10. QAM Concurrence:

DENNIS BROWN

Printed Name

Signature

Date

1/30/03

Submittal Page 1 of 2

2. Check if Amended ☐
Check if also Initial Response ☐

3. Extended Processing

☒ No ☐ Yes (if yes, submit
Extended Processing request)

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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)

The nine (9) Interface Exchange Drawings (IEDs) and corresponding DIRS were evaluated to determine the extent of condition for "Reference Only" citations, Quality Level designations, DTN qualification status, and appropriate use of DIRS input status for reference sources. The IEDs reviewed were 800-IED-EBS0-00400-000-00B, 800-IED-EBS0-00100-000-00A, 800-IED-TE00-00100-000-00A, 800-IED-EBS0-00200-000-00A, 100-IED-WTS0-00100-000-00A, 100-IED-WRP0-00100-000-00A, 800-IED-TUC0-00100-000-00A, 800-IED-PCS0-00100-000-00A, and 800-IED-PCS0-00100-000-00A. The review resulted in four IED revisions and four DIRS updates. A meeting was held to obtain clarification for the use of DIRS input status with respect to IEDs.

5. Impact: (Provide an impact statement relative to waste isolation and safety, and impact to other work, if any)

There is no impact relative to waste isolation and safety or other work. Revisions were primarily to the DIRS input status classifications, QL classification, or notes on the drawing. These changes do not impact the interface content of the IEDs. Three of the four revised drawings did not require impact reviews due to no citations, and the fourth revised drawing had two citations that are 'under development'. One IED interface reference was changed from the originally cited AMR document to its output DTN but there were no citations to this drawing, therefore, no impact. There were no impacts that resulted from the drawing revisions.

6. Remedial Actions: (Document all actions necessary to address the results of the Extent of Condition)

The remedial actions are documented on page 2.

7. ☐ Root Cause (For a significant CAQ, attached results of formal root cause determination prepared in accordance with AP-16.4Q)
☒ Apparent Cause

The apparent cause is failure to follow the procedure by providing inadequate detail in the DIRS input/description column and the use of the AP-3.15Q "reference only" input status for IED general citations. Though "reference only" is a valid input status, it was agreed the "reference only" status would be revised to another DIRS input status classification that would trigger an impact review when cited sources are revised.

8. Action to Preclude Recurrence: (Address those actions necessary to prevent the identified cause from recurring)

An e-mail was issued to Repository Design Personnel providing guidance for the appropriate input status in the DIRS, issues pertaining to both BSC(O)-03-D-059 and BSC(O)-03-D-060.

Presentations concerning the causes and resolutions to BSC(O)-03-D-060 were made to RDP Mechanical and Plant Design Staff.

A note was added to IEDs that cite DTNs for the user to access the TDMS for current qualification status of information.

9 Due Date for Completion of Corrective Action:

02/28/03

10 Responsible Manager

Surendra Sethi

Printed Name

Signature

02/28/03

Date

11. QAR Evaluation: ☒ Accept ☐ Partially Accept ☐ Reject

☒ Re-evaluated for significance: Not Significant

Printed Name

Signature

Date

12. QAM Concurrence:

DENNIS BROWN

Printed Name

Signature

3/21/03

Date

AP-16.1Q.8

Rev. 03/25/2002

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CONDITION ADVERSE TO QUALITY CONTINUATION PAGE

Remedial Actions (Continued):

A. Reviewed IED drawings and their DIRS with actions as follows:

Repository/PA IED Subsurface Facilities Plan 800-IED-EBS0-00400-000-00B

- Revised drawing W/R quality level classification (Page 1 of 3)
- DIRS revised per QL classification, no "Reference Only" citations existed

Repository/PA IED Typical Waste Package Components Assembly 800-IED-EBS0-00100-000-00A

- Revised DIRS to remove "Reference Only" citation by removing cancelled TWP reference ("Reference Only")

Repository/PA IED Interlocking Drip Shield and Emplacement Pallet 800-IED-TE00-00100-000-00A

- No "Reference Only" citations existed, no revisions required to the drawing or the DIRS

Repository/PA IED Emplacement Drift Configuration for PA 800-IED-EBS0-00200-000-00A

- Revised DIRS to remove "Reference Only" citations that included removing cancelled TWP references ("Reference Only")

Repository/PA IED Overall Site Plan 100-IED-WTS0-00100-000-00A

- Revised drawing coordinate grid information and DIRS reference accordingly
- Removed volcanic ash fall reference source (TWS-EES-LV-07-91-16)
- Revised DIRS to remove "Reference Only" citations that included removing cancelled TWP references ("Reference Only")

Repository/PA IED Surface Facility 100-IED-WRP0-00100-000-00A

- Revised drawing QL note
- Revised "Reference Only" citations in DIRS that included removing cancelled TWP ("Reference Only")

Repository/PA IED Closure and Sealing Typical Details 800-IED-TUC0-00100-000-00A

- No drawing revision required
- Revise DIRS to remove cancelled TWP references ("Reference Only")

Repository/PA IED Geotechnical Parameters 800-IED-MGR0-00100-000-00A

- Revised drawing. Changed reference source from MDL-NBS-GS-000005 to its associated DTN:SN0208T0503102.007.
- Added note to IED to direct user to access TDMS for correct qualification status
- Obtained TBV for DTN:SN0206T0503102.005. DTN is already identified as preliminary on the IED
- Revised DIRS to remove "Reference Only" citations
- Updated DIRS reference source description to identify dry bulk density and porosity

Repository/PA IED Subsurface Test Facility 800-IED-PCS0-00100-000-00A

- No drawing revision required
- Revised DIRS to remove cancelled TWP reference source ("Reference Only")

B. Other remedial action items:

A meeting was held on 2/17/03 with OQA, PATI, PA and RDP to address the IED DRs and resolve DIRS input status issues.

Weekly Staff Meeting presentations to review DR-060

- 1/29 with RDP Mechanical
- 2/26 with RDP Plant Design

Issued memo to RDP (and PA personnel) concerning the use of "Reference Only" DIRS status.

Where applicable, a drawing note was added to direct the user to check TDMS for correct qualification status of DTNs.

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BLOCK 4 – IMMEDIATE ACTIONS/EXTENT OF CONDITION

Immediate Corrective Action: (1) Project Manager (L. Trautner) to issue a memo to staff providing guidance on appropriate use of DIRS input status. (2) Project Manager (R. Andrews) to issue a memo to staff providing interpretation on appropriate use of DIRS input status.

Verification: (1) Verified issuance of e-mail by Larry Trautner dated 2/28/2003 to RDP Mechanical and Plant Design Staff entitled . (2) Verified issuance of e-mail by Robert Andrews dated 2/14/2003 to RDP Mechanical and Plant Design Staff entitled GUIDANCE – Appropriate referencing of DOE Spent Nuclear Fuel Information in AMRs. Verification satisfactory.

Extent of Condition Investigation: Examine 10 IEDs for quality level designation, DTN status, and DIRs references.

Verification: Discussed with Ed Thomas and confirmed completion, see Block 6 – Remedial Actions item for details.

Verification satisfactory.

BLOCK 5 – IMPACT

Impact Actions: No actions were initiated, assessment reached a conclusion that there was no impact relative to waste isolation, safety or technical work.

Verification: Agree with assessment of no impact on quality of products or data, as current action status was being investigated and not technical adequacy.

BLOCK 6 – REMEDIAL ACTIONS

Corrective Action: (1) Immediate actions involved assessing IEDs for correct DIRS details and obtaining Engineering clarification with respect to applying "Reference Only" DIRS input status.

Verification: (1) Examined Memo Robert Andrews to RDP Mechanical and Plant Design Groups dated 2/14/2003 providing guidance on DIRS inputs. Examined the 3 IEDs (Contacted Larry Abernathy, Roger Keller and Reggie Chestney) and respective DIRS listed in Section 6 (Description of Condition) of the initial DR issue. Examined 6 other IEDs from the DR responses Section 6 (Remedial Actions) and confirmed committed corrective actions incorporated. Specific drawings as follows: 800-IED-PCS0-00100-000-00A, 800-IED-TUC0-00100-000-00A, 100-IED-WRP0-00100-000-00B, 100-IED-WTS0-00100-000-00B, 800-IED-EBS0-00401-000-00C, 800-IED-MGR0-00100-000-00B, 800-IED-EBS0-00100-000-00A, 800-IED-EBS0-00200-000-00B, and 800-IED-TE00-00100-000-00A. All DIRS entries were accessed on 3/27/03 to verify effective corrective actions.

Verification satisfactory.

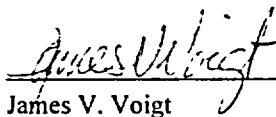
BLOCK 7 – CAUSE

The cause of the deficient condition identified in this DR – failure to follow procedure steps resulting in inadequate DIRS details - is reasonable based upon the 2/28/03 response.

BLOCK 8 – ACTION TO PRECLUDE RECURRENCE

Action to preclude recurrence consisted of three steps: 1) Issue an e-mail to staff providing guidance for the DIRS input status, (applied to both DR 59 and 60). E-mail issued 2/26/2003 from Larry Trautner to RDP Mechanical and Plant Design Staff. 2) Make presentation to RDP Mechanical and Plant Design Staff discussing causes and fixes for DR issues. Discussed staff meeting presentation with Ed Thomas, activity was adequately met. 3) Add a note to IEDs. Confirmed note added prompting user to access DTN to confirm data quality status.

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

 3/27/2003
James V. Voigt Date