



Department of Energy
Office of Civilian Radioactive Waste Management
Office of Repository Development
P O Box 364629
North Las Vegas, NV 89036-8629

QA QA

JAN 30 2003

L. J. Trautner, Manager
Repository Design Project
Bechtel SAIC Company, LLC
1180 Town Center Drive, M/S 423
Las Vegas, NV 89144

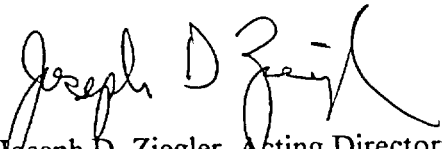
SURVEILLANCE REPORT OQA-SI-03-008 OF BECHTEL SAIC COMPANY, LLC (BSC)

Surveillance Report OQA-SI-03-008 conducted by representatives of the Office of Quality Assurance is enclosed. The surveillance was performed at BSC's offices in Las Vegas, Nevada, on November 20 through December 13, 2002, to review the BSC science/design interface for inputs, preparation, and review of design interface exchange drawings

Two Deficiency Reports (DR) were initiated as a result of this surveillance:
DR BSC(O)-03-D-059 concerns the incorrect technical product input status assignment for several types of technical products DR BSC(O)-03-D-060 concerns incorrect selection and use of design inputs in design drawings

This surveillance is considered complete and closed as of the date of this letter. A response to this surveillance report is not required, however, the DRs will continue to be tracked until closed

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


Joseph D. Ziegler, Acting Director
Office of License Application and Strategy

OQA:JB-0591

Enclosure
Surveillance Report OQA-SI-03-008

NM5507
WmH

JAN 30 2003

L. J. Trautner

-2-

cc w/encl:

Margaret Chu, DOE/HQ (RW-1), FORS
N. K. Stablein, NRC, Rockville, MD
Robert Latta, NRC, Las Vegas, NV
R. R. Loux, State of Nevada, Carson City, NV
S. W. Lynch, State of Nevada, Carson City, NV
Alan Kalt, Churchill County, Fallon, NV
Irene Navis, Clark County, Las Vegas, NV
George McCorkell, Esmeralda County, Goldfield, NV
Leonard Fiorenzi, Eureka County, Eureka, NV
Andrew Remus, County of Inyo, Independence, CA
Mickey Yarbrow, Lander County, Battle Mountain, NV
Lola Stark, Lincoln County, Caliente, NV
Linda Mathius, Mineral County, Hawthorne, NV
L. W. Bradshaw, Nye County, Pahrump, NV
Josie Larson, White Pine County, Ely, NV
Mifflin and Associates, Las Vegas, NV
K. G. Hess, BSC, Las Vegas, NV
R. W. Andrews, BSC, Las Vegas, NV
G. K. Beall, BSC, Las Vegas, NV
R. F. Hartstern, BSC, Las Vegas, NV
D. T. Krishna, BSC, Las Vegas, NV
B. T. Stanley, BSC, Las Vegas, NV
W. W. Watson, BSC, Las Vegas, NV
N. H. Williams, BSC, Las Vegas, NV
P. V. Auer, NQS, Las Vegas, NV
J. V. Voigt, NQS, Las Vegas, NV
L. W. Wagner, NQS, Las Vegas, NV
File, NQS, Las Vegas, NV (original)
W. J. Arthur, III, DOE/ORD (RW-2W), Las Vegas, NV
B. V. Hamilton-Ray, DOE/ORD (RW-31W), Las Vegas, NV
S. P. Mellington, DOE/ORD (RW-50W), Las Vegas, NV

NM5507
Wm11

**OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT**

QA QA
Page 1 of 3

QA Surveillance Number
OQA-SI-03-008

Complete only applicable items

1. Organization/Location Bechtel SAIC Company, LLC (BSC), Las Vegas, NV	2 Subject Science and Design Interface for Drawings	3. Date(s) Performed 11/20 - 12/13/02
4. Surveillance Scope Review BSC science/design interface for inputs, preparation, and review of design interface exchange drawings		
5 Requirement(s) (Procedure, Specification, Drawings, etc.) AP-3.24Q, Revision 0, ICN 5, <i>Drawings</i> AP-3.15Q, Revision 3, ICN 4, <i>Managing Technical Product Inputs</i> YMP/90-55Q, Revision 7, <i>Q-List</i>	6 Originator <u>James V Voigt</u> Team Member <u>N/A</u>	

SURVEILLANCE RESULTS

7. Description/Details

The following five (5) Information Exchange Drawings (IED) were examined during this surveillance

- 1) 800-IED-MGR0-00100-000-00A, Revision A, *Repository/PA IED Geotechnical and Thermal Parameters*
- 2) 100-IED-WRP0-00100-000-00A, Revision A, *Repository/PA IED Surface Facility*
- 3) 100-IED-WTS0-00100-000-00A, Revision A, *Repository/PA IED Overall Site Plan*
- 4) 800-P00-MGR0-00100-000-00A, Revision A, *Subsurface Facilities Layout*
- 5) 800-IED-TED0-00100-000-00A, Revision A, *Repository/PA IED Interlocking Drip Shield and Emplacement Pallet*

No comments were generated for examined drawings 800-P00-MGR0-00100-000-00A and 800-IED-TED0-00100-000-00A

The following summarizes the observations made for the remaining three (3) drawings that were examined Two Deficiency Reports (DRs) were written documenting the deficient conditions encountered

(Continue on pages 2 and 3)

8 Persons (and their organizations) Contacted Judith Shipman, BSC/Quality Assurance (QA) Verification Ed Thomas, BSC/Design Larry Abernathy, BSC/Quality Engineering Representative Cheryl Hastings, BSC/Performance Assessment Technical Information (PATI) Kathleen Thompson, BSC/Record Retrieval Bruce Stanley, BSC/Repository Design Project Mohammad Nash, BSC/PATI	9 CAQ/NCR/TE Issued CAQ/NCR/TE Number(s) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <u>BSC(O)-03-D-059 & 060</u> Recommendation Issued CIRS Number(s) <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No _____
--	---

10 Surveillance Conclusions SAT UNSAT

(Continue on page 3)

11 Completed By (Originator) (Print Name) James V Voigt	Signature <i>James V. Voigt</i>	Date 01/06/03
12 Reviewed By (Appropriate QA Manager) (Print Name) DENNIS BROWN	Signature <i>James Blaylock for</i>	Date 1/27/03
13 Approved By (QVM) (Print Name) JAMES BLAYLOCK	Signature <i>James Blaylock</i>	Date 1/27/03

**OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT**

QA QA

Page 2 of 3

QA Surveillance Number
OQA-SI-03-008

Complete only applicable items

1. Organization/Location Bechtel SAIC Company, LLC (BSC), Las Vegas, NV	2 Subject Science/Repository Design Project Interface and Drawings	3 Date(s) Performed 11/20 - 12/13/02
---	---	---

7. Description/Details: (Continued)

DR BSC(O)-03-D-060 was issued to document the inappropriate DIRS input statuses that are discussed below

Drawing 100-IED-MGR0-00100-000-00A, Revision A

- a) Geotechnical parameters for the repository and non-repository stratigraphic layers are keyed to specific 'Reference Sources' on this drawing which are herein discussed

Reference Source #1 is for Document Transmittal Notice (DTN) MO0012MWGFM02 002 that is the source input for lithostratigraphic thickness details. The Document Input Reference Sheet (DIRS) identifies the 'Input Status' of this scientific data as "N/A – Reference Only."

Reference Source #3 is for DTN SN0206T0503102 005 that is the source input for dry bulk density and porosity values outside of the repository horizon. The DIRS identifies the 'Input Status' of this scientific data as "N/A – Reference Only."

Reference Source #4 is for report MOL.19980429 0512 (No DTN was identified) that provides particle density for the lithostratigraphic layers. The DIRS identifies the 'Input Status' of this scientific data as "N/A – Reference Only."

- b) In addition, this drawing has a table entitled 'GEOTECH - Thermal Properties'. The second listing "Thermal Conductivity for Non-Repository Layers" references DTN SN0206T0503102 005 that provides dry bulk density and porosity values for non-repository layers. The DIRS identifies the 'Input Status' of this scientific data as "N/A – Reference Only."

Drawing 100-IED-WTS0-00100-000-00A, Revision A

- a) This drawing has a table entitled 'SCIENCE AND TESTING – Site Characterization.' The last listing "Volcano Ash Fall Amount" references document TWS-EES-13-LV-07-91-16 that provides ash fall amounts. The DIRS identifies this document as ACC NNA.19900112 0341 and the 'Input Status' of this scientific data as "N/A – Reference Only." Please note the ATDT does not list this document, as it has not been submitted, nor does the reference have an associated DTN.

- b) This drawing is a site layout plan. The DIRS listing for the site plan is an input document numbered TDR-WHS-MD-000001. The DIRS identifies the 'Input Status' of this information as "N/A – Reference Only." Note, the input document Section 7.0 states "Use of any data from this report for input into documents supporting procurement, fabrication, or construction is required to be controlled as to be verified (TBV)."

In summary, the above describes the inappropriate DIRS input statuses, the correct status for the above DIRS entries are Technical Product Output or TBV based on information obtained from the Automated Technical Data Tracking (ATDT) data base or the specific input document. DR BSC(O)-03-D-060 was issued to document the inappropriate DIRS input statuses.

DR BSC(O)-03-D-059 was issued to document the inadequate implementation of AP-3 24Q, the specifics are discussed below.

Drawing 100-IED-WRP0-00100-000-00A, Revision A

This drawing records the quality level for the Waste Treatment Building as QL-1. The quality level per the Q-List is QL-2. In the drawing there is an information box listing the quality level which identifies a "Waste Treatment Building." This entry does not align with the drawing "SURFACE FACILITY" which identifies the building as "Idealized Waste Transfer Building." No entry from the Q-List could be found for a Waste Transfer Building.

Drawing 100-IED-MGR0-00100-000-00A, Revision A

Geotechnical parameters for the repository and non-repository stratigraphic layers are keyed to specific 'Reference Sources' on this drawing. Reference Source #2 is for report MDL-NBS-GS-000005 that provides dry bulk density and porosity for the repository horizon. The DIRS lists this report; however, reference DTNs for these parameters could not readily be determined, and the DIRS does not identify dry bulk density or porosity as inputs. The data is no longer identified in a manner that facilitates traceability through the ATDT to associated documentation such as DTNs.

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA

Page 3 of 3

QA Surveillance Number
OQA-SI-03-008

Complete only applicable items

1 Organization/Location
Bechtel SAIC Company, LLC (BSC),
Las Vegas, NV

2. Subject
Science/Repository Design Project Interface and Drawings

3 Date(s) Performed
11/20 - 12/13/02

7. Description/Details: (Continued)

In addition, this drawing has a table titled 'GEOTECH - Thermal Properties'. The first listing of this table for "Thermal Conductivity for Repository Layers" references report MDL-NBS-GS-000005 that provides thermal conductivity values for repository layers. This data also is not traceable to an appropriate DTN.

The second listing for the GEOTECH table, "Thermal Conductivity for Non-Repository Layers," refers to DTN SN0206T0503102 005. At this location this reference is not defined as "PRELIMINARY" which is critical because this information is unqualified and preliminary. This omission is particularly egregious in that opportunities for using unqualified scientific data are presented.

Drawing 100-IED-WTS0-00100-000-00A, Revision A

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 required review.

In summary the above describes the incorrect implementation of AP-3 24Q. DR BSC(O)-03-D-060 was issued to document this condition.

10. Surveillance Conclusions: (Continued)

Severe implementation/interpretation problems with the definition of appropriate DIRS input status exist. Engineering can no longer assure traceability of retrieved scientific data because DTN references are not consistently provided. In-depth final drawing reviews may be insufficient and confidence in the adequacy of other issued drawings is in question.

Two DRs were initiated as a result of this surveillance.

DR BSC(O)-03-D-059 concerns the incorrect technical product input status assignment for several types of technical products.

DR BSC(O)-03-D-060 concerns incorrect selection and use of design inputs in design drawings.