



Department of Energy

Washington, DC 20585

QA: QA

NOV 06 2002

Distribution

THIRD QUARTER 2002 VERIFICATION ACTIVITIES

Enclosed are the audit and surveillance reports performed by Bechtel SAIC Company, LLC for the third quarter (July 1 - September 30) of calendar year 2002 for information purposes.

Should you have any questions, please do not hesitate to contact me at (702) 794-1460.

A handwritten signature in black ink that reads "R. Dennis Brown".

R. Dennis Brown, Director
Office of Quality Assurance

OQA:JB-0116

Enclosure:
Copies of audit/surveillance reports

cc w/encl:
File, NQS, Las Vegas, NV
Records Processing Center = "126"



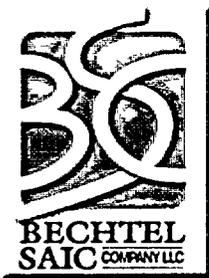
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BECHTEL SAIC COMPANY, LLC

QUARTERLY SUMMARY REPORT ON VERIFICATION ACTIVITIES

JULY 1 – SEPTEMBER 30, 2002



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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 2

QA Surveillance Number:
BSCQA-02-S-08

Complete only applicable items.

1. Organization/Location LANL / Los Alamos, NM	2. Subject Records Road-Mapping	3. Date(s) Performed 05/21/2002
4. Surveillance Scope Observe Records Road-Mapping activities performed by Los Alamos National Laboratories (LANL) personnel in support of the Yucca Mountain Site Characterization Project (YMP)		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) Administrative Procedure (AP) AP-3.15Q, Revision 3, ICN 2, "Managing Technical Product Inputs"		6. Originator James F. Graff Team Members N/A

SURVEILLANCE RESULTS

7. Description/Details

The purpose of this surveillance was to observe process being implemented by LANL/YMP staff for the preparation of YMP Data Confirmation Checklists and Record Road Maps in accordance with AP-3.15Q Attachments 5 & 6.

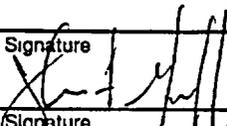
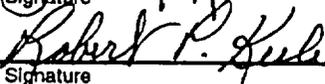
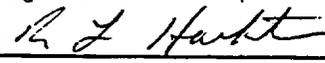
On 05/21/2002, the surveillance team visited the LANL in Los Alamos, New Mexico. During interviews with responsible LANL staff and after reviewing completed checklists and road maps, it was established that required checklist responses appropriately identified records by accession number and page number, and/or unique identifying number. Responses additionally explained how each record responded to the applicable question and any relationships between multiple records identified as responsive to one question. All Record Road Maps reviewed exhibited objective evidence of the appropriate identification of required Record Accession Number, Record Title, Document Type, Record Type, and Contents of Record.

(Continued on Page 2)

8. Persons (and their organizations) Contacted Dan Stone, LANL/YMP Technical Assurance Staff Jim Young, LANL/YMP Technical Assurance Staff	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s): N/A CIRS Number(s): N/A
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10. Surveillance Conclusions SAT UNSAT

The results of this surveillance indicated that Data Confirmation Checklists and Record Road Maps are being completed by LANL/YMP personnel in compliance with the applicable requirements of AP-3.15Q.

11. Completed By (Originator) (Print Name) James F. Graff	Signature 	Date 09/11/2002
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert P. Keele	Signature 	Date 9/2/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 9/18/02

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 2 of 2

Complete only applicable items

QA Surveillance Number:
BSCQA-02-S-08

1. Organization/Location
LANL / Los Alamos, NM

2. Subject
Records Road-Mapping

3. Date(s) Performed
05/21/2002

BLOCK 7 Description/Details (Continued):

The following Data Confirmation Checklists and Record Road Maps were examined during this surveillance:

LA0106ZW831234.001

Alkalinity Data for the Engineered Barrier System Thermal-Hydraulic-Chemical Column Test #3.

LA0005NL831352.001

The KD Values of 243Am on Colloids of Hematite, Montmorillonite and Silica in Natural and Synthetic Groundwater.

LA003NL831352.001

Experimental Data on Sorption and Desorption Amounts for Plutonium onto Clay Colloids

LA0002MCG12213.001

Pore Size Distributions for Core Samples From TSW4, CHV, and CHZ, Yucca Mountain, Nevada.

LA0002JF831222.001

Apparent Infiltration Rates in Alluvium from USW UZ-N37, USW UZ-54, USW UZ-14, and UE-25 UZ-16, Calculated by Chloride Mass Balance Method.

LA0001JC831361.001

Radionuclide Transport Through Saturated Fractures.

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 3

Complete only applicable items

QA Surveillance Number:
BSCQA-02-S-10

1. Organization/Location BSC Site Operations/Area 25	2. Subject Work Request/Work Order (WO) Process	3. Date(s) Performed 06/18/2002
4. Surveillance Scope Evaluate the implementation of Administrative Procedure (AP) AP-2.23Q, "Work Request/Work Order Process", Paragraphs 5.5.2, 5.4.1 and 5.6.3.		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) AP-2.23Q, Revision 0, ICN 1, Paragraphs 5.5.2 "Implementation", 5.4.1 "Work Order Package Development", and 5.6.3 "WO Revisions"		6. Originator <u>Charles T. Taylor</u> Team Members <u>Jerry Heaney</u>

SURVEILLANCE RESULTS

7. Description/Details
The purpose of this surveillance was to evaluate the implementation of AP-2.23Q, Paragraph 5.5.2. During this surveillance, the scope was expanded to include AP-2 23Q, Paragraphs 5.4.1 and 5.6.3.

Two Non-Q Work Orders were reviewed to determine if they met the procedural requirements for compliance with AP-2.23Q: (1) Original WO 14450, "Support In-situ Slot Tests", dated 06/13/2002, and (2) Copy 2 of 2 of Standing Work Order (SWO) 13231, "Electrical Inspection, Walkdowns, and Verification of YMP Electric", dated 05/14/2002.

The surveillance team attended the 7:00 A.M Daily Brief conducted for all craft. The agenda for this Daily Brief included a safety topic, generic topics of interest to employees, WOs intended to be worked that day, and a question and answer period.

Following this Daily Brief, the surveillance team attended the Pre-Work Briefing for WO 14450 conducted by the Person in Charge (PIC), Ron Schutt. This Pre-Work Briefing is required by AP-2.23Q, Subparagraph 5.5.2.1 c) There was no Pre-Work Briefing conducted at this time for SWO 13232; however, documentation in the WO package reflects that eight previous Pre-Work Briefings had been conducted.

8. Persons (and their organizations) Contacted BSC Site Operations: Lee Fossum, Site Manager; Nelson O'Connor, Construction Manager; Ron Schutt, Superintendent; David Hill, Superintendent; Dave Koonce, Craft Foreman; Tony Myatt; Bob Joyce (Continued on Page 2)	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s) <u>N/A</u> CIRS Number(s) <u>3023, 3024, 3025, 3026, 3045</u>
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10. Surveillance Conclusions SAT UNSAT

A Close-Out Meeting was conducted on 07/02/2002 with Site Operations personnel to discuss the conditions identified below:

1. AP-2.23Q, Paragraph 5.4.1 h), requires the Planner ensure action steps include reference to the controlled implementing document, as applicable. During the Close-Out Meeting, it was determined that Quality Assurance/Quality Control (QA/QC) and Site Operations could not agree on the interpretation of the phrase "as applicable", as used in the context of AP-2.23Q. QA/QC interprets "as applicable" to mean the Planner is responsible to identify and document, within the action step, all controlled implementing documents necessary to perform the step Site Operations suggests that the "as applicable" provides the flexibility for the Planner to determine when to identify applicable documents.

(Continued on Page 2)

11. Completed By (Originator) (Print Name) Charles T. Taylor	Signature <u>Charles T. Taylor</u>	Date <u>8/27/02</u>
12. Reviewed By (Appropriate QA Manager) (Print Name) John S. Martin	Signature <u>[Signature]</u>	Date <u>8-22-02</u>
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature <u>[Signature]</u>	Date <u>8/22/02</u>

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 2 of 3

QA Surveillance Number:
BSCQA-02-S-10

Complete only applicable items

1. Organization/Location
BSC Site Operations/Area 25

2. Subject
Work Request/Work Order (WO) Process

3. Date(s) Performed
06/18/2002

BLOCK 8 Persons Contacted (Continued):

Angela Bass, Area 25, Document Control; and Richard Foster, Field Engineering

BLOCK 10 Surveillance Conclusions (Continued):

2. AP-2.23Q, Paragraph 5.4.1 1), requires the Planner ensure any required attachments (e.g., drawings, sketches, vendor manuals, etc.) are referenced and available, or included with the WO. QA/QC interprets this requirement to mean the attachments identified above shall be included in the reference section of the WO and be available at the work location, or included as part of the WO package.

As a result of the above, the following five conditions were identified and documented in Condition/Issue Identification and Reporting/Resolution System (CIRS) items:

CONDITION 1 documented in CIRS # 3023:

A. The WOs reviewed do not, in all cases, identify the required implementing documents in the action steps. Examples:

- WO 14450 action steps 4 and 5 call for "survey", but do not identify implementing documents to be used to perform this action
- WO 14450 action steps 8, 9, 30, 31, and 32 address "rockbolt installation or removal", but do not identify implementing documents to be used to perform this action.
- WO 13231 action step 2 calls for a walkdown and visual inspection of the electrical system, but does not identify implementing documents to be used to perform this action.

Recommendation: Clarify when it is, or is not, necessary to identify controlled implementing documents within the action steps as required by AP-2.23Q, Paragraph 5.4.1 h).

B. In some cases, the documents referred to in the reference section of the WO are not available at the work location and are not identified within the body of the WO. The WO checklist prepared by the Planner identifies activities to be performed and refers to Specifications 02165 and 16122 to be used during execution of the WO; however, these documents are not identified in the reference section of the approved WO. Examples:

- WO 14450 has 7 out of 14 documents referred to in the reference section that are not available at the work location.
- WO 13231 has 9 out of 10 documents referred to in the reference section that are not available at the work location.

Per discussions with Site Operations personnel, documents may be referred to in the reference section that are not intended to be used to implement the WO.

Recommendations: Clarify when it is, or is not, necessary to identify controlled implementing documents within the reference section and have implementing documents available at the work location as required by AP-2.23Q, Paragraph 5.4.1 1). Consider dividing the reference section of the WO into two or more categories, such as: (1) "Documents Required for Implementation" and (2) "Other Documents", and define the intent of each section in the instructions of the attachment.

CONDITION 2 documented in CIRS # 3024:

There is no positive method to identify the current revision of the WO. It is difficult, at best, to determine what revision of the WO was in effect during the performance of activities, which may be performed at different times. There is no positive method to determine what revision of the WO was in place when the Pre-Work Briefings were conducted, since the forms contain no ties to the WO other than the date of the Briefing. The Pre-Work Briefing date may differ from the date of the WO. When reviewing the WO, one cannot determine the revision of the WO in effect on the date of the Pre-Work Briefing. Example:

WO 14450. During the Pre-Work Briefing, it was determined by the PIC and craft that the WO was not adequate to perform the work intended and needed to be revised. Some of the craft suggested that they could start their portion of the work since their scope was not affected by the needed revision. The PIC suggested that this was not possible since the WO would not be available until after it was revised. If the original WO had been assigned a revision number, it is suggested that any work could start/continue except for that affected by the needed change. The revised WO could then be added to the package and the Pre-Work Briefing(s) conducted to the new revision for the affected personnel. The work would not necessarily have to stop in order to revise the WO.

Recommendations: WO process system should be revised to reflect a revision number versus a date. The Pre-Work Briefing form should include the date or revision of the Work Instruction/Work Order. (Continued on Page 3)

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 3 of 3

Complete only applicable items

QA Surveillance Number:
BSCQA-02-S-10

1. Organization/Location BSC Site Operations/Area 25	2. Subject Work Request/Work Order (WO) Process	3. Date(s) Performed 06/18/2002
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BLOCK 10 Surveillance Conclusions (Continued):

CONDITION 3 documented in CIRS # 3025.

The referenced documents in the WO do not contain revision numbers.

Recommendation: Referenced documents should include revision numbers, since the intent is to identify implementing documents and implementing document numbers are incomplete if they do not contain revision numbers

CONDITION 4 documented in CIRS # 3026

WO 14450 action steps 15, 17, 19, and 28 address Lockout/Tagout (Lo/To) requirements and identify the LoTo to be performed in accordance with Line Procedure (LP) LP-OM-040Q-BSC. The procedure for LoTo, in place at the time the WO was developed, is identified in the OCRWM Program Documents database as LP-OM-001-M&O.

Recommendation: Revise WO 14450 to indicate correct procedure.

CONDITION 5 documented in CIRS # 3045:

The Pre-Work Briefing Checklist for WO 13231 includes a space in the "Special" Block to verify the core and special training of each worker identified. The WO package includes eight copies of the Pre-Work Briefing Checklist. Five of these eight checklists are blank for this verification. It could not be determined if all of the workers had their core and special training verified.

Recommendation: Verify that all workers had their core and special training verified prior to performing the work. Include in the instruction for Pre-Work Briefing Checklist, a positive method to assure the responsible individual(s) either verifies the required training or marks the requirement "N/A".

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 3

QA Surveillance Number
BSCQA-02-S-11

Complete only applicable items

1. Organization/Location BSC Manager of Projects, CSO, Engineering/Las Vegas, NV	2 Subject Implementation of AP-2.20Q, "Self-Assessments"	3. Date(s) Performed 06/12-13/2002
4 Surveillance Scope Implementation of Administrative Procedure AP-2.20Q, "Self-Assessments"		
5. Requirement(s) (Procedure, Specification, Drawing, etc) AP-2.20Q, "Self-Assessments," Rev. 1/ICN 0	6 Originator <u>C. Duane Allred</u>	
	Team Members <u>Kenneth O Gilkerson</u> <u>Pamila R West-Thompson</u>	

SURVEILLANCE RESULTS

7. Description/Details
This surveillance was conducted with the following areas of interest: a) Benefits realized from Self-Assessments, b) Scheduling/ Re-Scheduling of Self-Assessments, c) Training of Responsible Managers and Self-Assessment Leads, d) Self-Assessment Reports approved from 03/01/2002 through 05/31/2002, and e) Follow-up Actions from Self-Assessments

During this surveillance, the following documents were examined.

General: Administrative Procedure AP-2.20Q, "Self-Assessments," Rev. 1/ICN 0; Deficiency Reports (DRs) BSC-02-D-057 and BSC-01-D-129 and Corrective Action Report (CAR) BSC-02-C-001; Online Self-Assessment Schedule dated 06/06/2002; TrainServe Database for training status of Responsible Managers and Self-Assessment Leads.

BSC Chief Science Officer (CSO). Self-Assessment Reports SA-CSO/LBNL-02-001 and SA-PAP-2002-003.

BSC Engineering: Self-Assessment Reports SA-ENG-2002-001, SA-ENG-2002-003 and SA-ENG-2002-004 and CIRS Items 2476 and 2477.

(Continued on Page 2)

8 Persons (and their organizations) Contacted Jean Younker, BSC CSO Steve Swenning, BSC CSO BSC Engineering: James Whitcraft Charles Bartley (Continued on Page 3)	Joe Archuleta, BSC SNL Mary McDaniel Dean Kunihiro	9 CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Recommendation Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s). OO BSC(B)-02-O-056 OO BSC(B)-02-O-057 CIRS Number(s): 2909, 2910 and 2911
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10 Surveillance Conclusions SAT UNSAT

BSC CSO: Implementation of AP-2.20Q by BSC CSO is adequate, effective and in compliance with the procedural controls of AP-2.20Q. No Conditions Adverse to Quality were identified.

BSC Engineering: Implementation of AP-2.20Q by BSC Engineering is adequate, effective and in compliance with the procedural controls of AP-2.20Q. No Conditions Adverse to Quality were identified.

(Continued on Page 3)

11 Completed By (Originator) (Print Name) C. Duane Allred	Signature <u>C. Duane Allred</u>	Date 07/18/02
12 Reviewed By (Appropriate QA Manager) (Print Name) John W. Carter	Signature <u>John W. Carter</u>	Date 7/18/02
13 Approved By (QVM) (Print Name) Robert F. Hartstern	Signature <u>R. F. Hartstern</u>	Date 7/18/02

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 2 of 3

QA Surveillance Number:
BSCQA-02-S-11

Complete only applicable items

1 Organization/Location BSC Manager of Projects, CSO, Engineering/Las Vegas, NV	2 Subject Implementation of AP-2.20Q, "Self-Assessments"	3. Date(s) Performed 06/12-13/2002
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BLOCK 7 Description/Details (Continued):

Documents Examined (Continued)

BSC Manager of Projects:

1. Self-Assessment Reports:

SA-LAP-2002-001	SA-LAP-2002-002
SA-LAP-2002-003	SA-PAP-2002-001
SA-PAP-2002-002	SA-PAP-2002-004
SA-PAP-2002-005	SA-PAP-2002-006
SA-PROJ-2002-006	SA-PROJ-2002-007
SA-RDP-2002-003	SA-SOP-2002-006

2. Condition/Issue Identification and Reporting/Resolution System (CIRS) Item Numbers:

2435, 2436, 2437
2444, 2447, 2448, 2449, 2450, 2451, 2452, 2453; 2214, 2439
2487, 2488, 2489, 2493, 2420
2524
2530, 2531
2580, 2581
2587, 2588
2632, 2633
2636, 2637, 2638; 2659, 2660, 2661, 2662

3. E-mail from Don Pearman dated 06/27/2002, "Resolution of CIRS 2418".

For the Manager of Projects organization, the surveillance determined that:

1. The Self-Assessment Program has adequate support and the benefits of self-assessments are recognized at the upper levels of management. This is not the case with some individuals at lower levels of the organization, where self-assessments are perceived to be of little benefit and interfere with other assigned work (refer to item 4 below regarding resolution of this item as a training related issue).
2. In Fiscal Year 2002 (FY02), four DRs were identified by self-assessments, whereas a total of 64 DRs were assigned to the Manager of Projects organization. Failure to self-identify CAQs has been previously addressed in CIRS #2418 and actions to resolve this issue are ongoing per e-mail from Don Pearman dated 06/27/2002, "Resolution of CIRS 2418".
3. 33 of 45 scheduled self-assessments, or 73%, have been completed. Two self-assessment reports had not been issued by 06/28/2002, even though they were scheduled for completion in March. Lack of adherence to schedules has been previously addressed in CIRS #2489 and actions to resolve this issue are ongoing per e-mail from Don Pearman dated 06/27/2002, "Resolution of CIRS 2418".
4. All managers and self-assessment leads have received Self-Assessment Training, although not all have attended the updated training, which is more comprehensive and reflects the current version of AP-2 20Q, as well as the Self-Assessment Handbook. The need for self-assessment training has been previously addressed in CIRS #2420, which was closed based on issuance of a memo from the BSC General Manager dated 04/03/2002, requiring Team Leads to attend Self-Assessment Training. Actions to resolve training related issues are ongoing per e-mail from Don Pearman dated 06/27/2002, "Resolution of CIRS 2418".
5. Some individuals are not aware of the General Manager's expectations regarding self-assessments. This finding has been previously addressed in CIRS #2419, which was closed based on issuance of a memo from the BSC General Manager dated 04/03/2002, distributing management expectations. Actions to resolve this issue are ongoing per e-mail from Don Pearman dated 06/27/2002, "Resolution of CIRS 2418".
6. Actions to address conditions identified by self-assessments are being adequately conducted and/or tracked to completion.
7. There is a lack of awareness that support from BSC Quality Assurance (QA) is available for self-assessment planning and performance (refer to item listed 4 above regarding resolution of this item as a training related issue)

(Continued on Page 3)

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 3 of 3

QA Surveillance Number.
BSCQA-02-S-11

Complete only applicable items

1 Organization/Location BSC Manager of Projects, CSO, Engineering/Las Vegas, NV	2 Subject Implementation of AP-2.20Q, "Self-Assessments"	3 Date(s) Performed 06/12-13/2002
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BLOCK 7 Description/Details (Continued).

For the Manager of Projects organization, the surveillance identified the following:

1. Potential enhancements to the self-assessment process (refer to recommendation in Block 10 for changes to AP-2.20Q to resolve this issue).
2. Self-Assessment Reports with incorrect QA designators: SA-PAP-2002-001 (QA:NA should be QA:QA) and SA-PROJ-2002-007 (QA:QA should be QA:NA) Correctness of QA designators has been previously addressed in CIRS #2422, which has been closed based on a memo from the BSC General Manager dated 04/03/2002. Actions to prevent recurrence are ongoing per e-mail from Don Pearman dated 06/27/2002, "Resolution of CIRS 2418", (refer to recommendation in Block 10 for resolution of issues with these specific reports)
3. Self-Assessment Reports containing Good/Adverse Practices for which no Lessons Learned were initiated: SA-LAP-2002-001, SA-LAP-2002-003 and SA-PAP-2002-001. Failure to initiate Lessons Learned has been previously addressed in CIRS #2417, which was closed based on issuance of a memo from the BSC General Manager dated 04/03/2002. Actions to prevent recurrence are ongoing per e-mail from Don Pearman dated 06/27/2002, "Resolution of CIRS 2418" (refer to recommendation in Block 10 to resolve issues with these specific reports).

BLOCK 8 Persons (and their organizations) Contacted (Continued):

BSC Manager of Projects:

Ken Beall, Commitments Management
Steve Cereghino, License Application Project
Sounia Darnell, Commitments Management
Al Eddebarh, Department Head, Saturated Zone, LANL
Robert Garrett, Integrated Safety Analysis - PMR
Norman Graves, TSPA Model Design/Analysis
Norman Kramer, EBS/Materials Testing
Steve Mahler, Engineering Assurance, LLNL
Larry Trautner, Repository Design Project
Ron Vigue, Commitments Management
Donald Watkins, Regulatory Programs
Jeff Weaver, Performance Assessment Project
Nancy Williams, Manager of Projects

BLOCK 10 Surveillance Conclusions (Continued)

BSC Manager of Projects:

1. The results of this surveillance are considered satisfactory, except for 2 isolated Conditions Adverse to Quality (CAQ) which was identified. Quality Observation (QO) BSC(B)-02-O-056 was initiated for Self-assessment Report SA-PAP-2002-004, which failed to include criteria used to conduct the Self-Assessment. Quality Observation (QO) BSC(B)-02-O-057 was initiated for Self-assessment Report SA-PAP-2002-001, which was issued with an incorrect QA designator on the title page.
2. This surveillance identified the following recommendations:
 - a. AP-2.20Q should be modified to:
 - permit use of a form for Self-Assessment Reports with appropriate blocks for required information to facilitate report preparation and provide consistency
 - require Self-Assessment Report scope to identify whether the activity is Q or non-Q in accordance with the action to prevent recurrence stated in DR BSC-02-D-057
 - remove definition of the term "deficiency" and its use in AP-2.20Q, since AP-16.1Q no longer uses this term
 - require initiation of at least one Lessons Learned from each self-assessment or a justification for not doing so in accordance with the management expectation for Lessons Learned (This recommendation is addressed by CIRS 2909)
 - b. The QA designator should be corrected on the record copy of Self-Assessment Reports SA-PAP-2002-001 and SA-PROJ-2002-007 (This recommendation is addressed by QO BSC(B)-02-O-057 and CIRS 2910, respectively).
 - c. Lessons Learned should be initiated for Good/Adverse Work Practices discussed in Self-Assessment Reports SA-LAP-2002-001, SA-LAP-2002-003 and SA-PAP-2002-001 (This recommendation is addressed by CIRS 2911).

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QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA

Page 1 of 2

QA Surveillance Number:
BSCQA-02-S-20

Complete only applicable items

1. Organization/Location Sandia National Laboratory (SNL) / Alcove 5/ESF	2. Subject Water Sampling Activities in Alcove 5/ESF in Support of Drift Scale Test (DST) Activities	3. Date(s) Performed 05/29/2002 through 06/11/2002
4. Surveillance Scope Evaluate water sampling activities as documented in Scientific Notebook (SN) SN-SNL-SCI-023, "Water Sampling in Support of Thermal Testing"		
5. Requirement(s) (Procedure, Specification, Drawing, etc) a. AP-SIII.1Q, Revision 1, ICN 1, "Scientific Notebooks", Sections 5.1.1, 5.1.2, 5.1.3, 5.1.6, 5.1.7, 5.1.10, and 5.4 b. TIP-NF-33, Revision 0, "Collection and Field Analysis of Water Samples from Boreholes in the Exploratory Studies Facility", Section 2.2.1.2 c. AP-12.1Q, Revision 0, ICN 2, "Control of Measuring and Test Equipment and Calibration Standards", Sections 5.1.1, 5.1.2, 5.3.1, 5.3.4, and 5.6 (Continued on Page 2)		6. Originator Richard L. Weeks Team Members John K Devers

SURVEILLANCE RESULTS

7. Description/Details

The purpose of this surveillance was to evaluate the implementation of selected procedures for water sampling activities in the DST. This activity is described in Scientific Investigation Test Plan (SITP) SITP-02-UZ-012, Revision 00, "Drift Scale Test", and performed in accordance with procedures identified in Block 5 above. Additional requirements and work controls are described in Field Work Plan (FWP) FWP-ESF-96-003, Revision 3, "Thermal Testing in the Exploratory Studies Facility - Phase I", and Work Instruction (WI) TCO-WI-CAL-0085r01, "Water Sampling for Thermal Testing in the ESF."

A visit was made to Alcove 5, located in the Exploratory Studies Facility (ESF), on 05/29/2002 for the purpose of evaluating implementation of selected requirements for collection of water samples. The purpose for gathering the water samples is to obtain an understanding of the changes in water chemistry due to heating and cooling. The activity evaluated was documented in SN-SNL-SCI-023, Volume 3, "Water Sampling in Support of Thermal Testing at the ESF."

a. SN-SNL-SCI-023, Volume 3, was evaluated during this surveillance. The SN was pre-bound and paginated, taped-in materials were signed across the boundary and all entries were signed and dated by personnel making entry, and the Table of Contents was up-to-date. In-process entries included description of work, Measuring and Test Equipment (M&TE) utilized and a list of samples collected. Deficiency Report BSC(B)-02-D-118 was issued regarding SN entries and is discussed in BLOCK 10.
(Continued on Page 2)

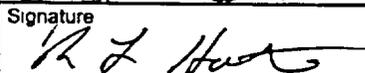
8. Persons (and their organizations) Contacted John Kelly, SNL, Technician Robert Jones, SNL, Principal Investigator Brenda McGonigle, BSC, Office Assistant Gene Griego, LANL, Field Representative Bruce Reinert, LANL, Field Representative	9. CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s) DR BSC(B)-02-D-118
	Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CIRS Number(s) N/A

10. Surveillance Conclusions SAT UNSAT

Except as identified in Deficiency Report (DR) BSC(B)-02-D-118, procedural requirements were being effectively implemented. The SN was on location and up-to-date. M&TE utilized for the sampling activities were properly labeled and calibration was current. Documentation associated with the collection and transfer of custody of samples collected during this surveillance were complete.

Discussion regarding DR BSC(B)-02-D-118 (previously USGS(B)-02-D-118):

(Continued on Page 2)

11. Completed By (Originator) (Print Name) Richard L. Weeks	Signature 	Date 6-27-02
12. Reviewed By (Appropriate QA Manager) (Print Name) John S Martin	Signature 	Date 6-27-02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 6-27-02

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Complete only applicable items

QA Surveillance Number:
BSCQA-02-S-20

1. Organization/Location Sandia National Laboratory (SNL) / Alcove 5/ESF	2. Subject Water Sampling Activities in Alcove 5/ESF in Support of Drift Scale Test (DST) Activities	3. Date(s) Performed 05/29/2002 through 06/11/2002
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BLOCK 5 Requirement(s) (Procedure, Specification, Drawing , etc.) (Continued):

d. YAP-SII.4Q, Revision 2, ICN 1, "Collection, Submission, and Documentation of Non-Core and Non-Cuttings Samples to the Sample Management Facility", Sections 5.1.1 and 5.2.1

BLOCK 7 Description/Details (Continued)

b. The method for water collection is performed in accordance with Technical Implementing Procedure (TIP) TIP-NF-33 and SN SN-SNL-SCI-023. TIP-NF-33 describes the general method for collecting the water samples with variations from the TIP documented in the SN. A current copy of the TIP was available at the work location

c. One piece of M&TE is utilized for the test activity examined. Myron L. Company, pH meter, Model Ultrameter 6P, serial number 606098 was in use during this surveillance. The pH meter's calibration was current and the calibration label attached to the meter contained the instrument identification, date of calibration, date of recalibration, and initials of person applying label. A copy of the Bechtel Nevada Calibration Report, Report Number 1000025428 was taped into the SN. The technician performed a performance check for pH and conductivity in accordance with the Ultrameter Operating Manual. The results were acceptable. A copy of the Operating Manual was at the work location. The lot numbers for the conductivity standards that were used are as follows:

Lot #	Concentration	Expiration Date	Manufacturer
2598	6.84 ppm	09/14/2002	Fisher Scientific
2614	67.3 ppm	10/17/2002	Fisher Scientific
2616	663 ppm	10/17/2002	Fisher Scientific

d. The Sample Collection Reports for the specimens (SPC) identified below were examined and complete and included required information. Labels containing the specimen number, which is also the bar code number, were attached to the Sample Collection Reports. Additionally, a visit was made to the Sample Management Facility (SMF) to verify that Sample Collection Reports were submitted. Copies of the Sample Collection Reports were on file at the SMF. The following list of samples were collected during this surveillance:

SPC #	Borehole #	Zone Within the Borehole
SPC01016640	76	4
SPC01016641	59	4
SPC01016642	59	4
SPC01016643	75	2
SPC01016644	77	3

Transfer of Custody and Receipt form, dated 06/06/2002 for samples collected on the date of this surveillance, was completed. A copy of this form is taped into SN-SNL-SCI-023, Volume 3, and the original copy was submitted to the SMF.

BLOCK 10 Surveillance Conclusions (Continued):

While examining the SN it was determined that entries were not made in a timely manner as required in AP-SIII.1Q, Revision 1, ICN 1, Section 5.1.6, which states: "Entries shall be recorded in the scientific notebook, preferably on the date the work is performed, but no later than the next business day or workday. All scientific notebook entries will be made prior to beginning the next workday's activities. Each entry that is not entered into the scientific notebook on the date the work is performed will display the date on which the work was done, and the date of its entry into the notebook."

Contrary to the above requirement, it was determined that entries made to SN-SNL-SCI-023-V3 did not meet the stated requirement. Summaries of water sampling activities performed and documented on 04/04/2002 and 04/25/2002 were entered into the SN on 05/02/2002 and 05/09/2002, respectively. This Condition Adverse to Quality (CAQ) will be addressed in DR BSC(B)-02-D-118 that was previously designated USGS(B)-02-D-118. The CAQ identified during this surveillance is identical to the condition identified in DR USGS(B)-02-D-118. Management of the DR by BSC will allow a Project-wide evaluation of the CAQ to determine the extent of condition.

The activities evaluated by this surveillance are considered satisfactory overall; however, an unsatisfactory condition was identified. Although the SN entries were not made in a timely manner as required by the procedure, the information provided in the late entries is complete and represents the work that is performed. There is no impact to the quality of the work performed. Other work activities that were observed as a part of this surveillance were performed as specified in the requirements. Documentation that was generated for this work activity was complete.

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QA Surveillance Number:
BSCQA-02-S-28

Complete only applicable items

1. Organization/Location Sample Management Facility (SMF)/ Exploratory Studies Facility	2. Subject Sample Collection Activities in the Enhanced Characterization Repository Block (ECRB)	3. Date(s) Performed 06/10-17/2002
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4. Surveillance Scope
Observe and evaluate SMF sample collection and drilling activities in the ECRB.

5 Requirement(s) (Procedure, Specification, Drawing, etc.) a. LP-SMF-001Q-BSC, Revision 0, Field Drilling Support Activities, Sections 5.1, 5.2 & 5.3 b. LP-SMF-002Q-BSC, Revision 1, Field, Logging, Handling, and Documenting Borehole Samples, Sections 5.1, 5.2, 5.3, 5.4, 5.5, & 5.8 c. FWP-ESF-96-009, Revision 5, Consolidated Sampling in the ESF and Work Instruction, TCO-WI-0015r03, Field Drilling Engineering & Processing Borehole Core Samples at Underground Drill Hole Locations, Section 1.5	6 Originator <u>Richard L. Weeks</u>
	Team Members <u>John K. Devers</u>

SURVEILLANCE RESULTS

7. Description/Details
The purpose of this surveillance was to observe sample collection activities and verify effective implementation of specified requirements identified in procedures listed in Block 5 above. This activity is further described in Field Work Package (FWP) FWP-ESF-96-009, Revision 5. The rock core samples collected support the Active Fracture Model (AFM) Block studies.

A visit was made to the ECRB on 06/10/2002 for the purpose of observing implementation of requirements that govern sample collection activities. Borehole ECRB-AFM #6, located at approximately 17+06, was observed during drilling operations. Prior to beginning work, the Person in Charge conducted a Tool Box Safety Meeting.

a. The work activities observed during this surveillance were documented on the forms identified in the procedures listed in Block 5 above. The forms were complete and up-to-date. The Daily Operations Reports (DORs) being completed for the day of this surveillance provided appropriate information as the drilling activities proceeded throughout the work shift. The following information was documented on the form: borehole identification, type of drill rig, SMF personnel and driller performing work, time breakdown of work activities, and other information as appropriate. In addition to examination of the DORs being completed on the day of this surveillance, the DOR for 06/06/2002 was examined and found to be complete. The Drilling/Coring Data Sheet, dated 06/06/2002 was examined and found to be complete and up-to-date.

(Continued on Page 2)

8. Persons (and their organizations) Contacted Bobby Hungerford, BSC, Drill Foreman Gary Olson, BSC, Engineer/Scientist Easte Warnick, BSC, Geologist	9 CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s) <u>QO BSC(B)-02-O-042</u>
	Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CIRS Number(s) <u>N/A</u>

10. Surveillance Conclusions SAT UNSAT

The sample collection and drilling support activities evaluated during this surveillance were performed in a satisfactory and effective manner. Documentation of drilling and sample collection activities were complete and in accordance with requirements identified in the documents listed in Block 5 above.

Quality Observation (QO) BSC(B)-02-O-042 was issued to address forms not being properly identified. AP-5.1Q, Revision 3, ICN 1, Plan and Procedure Preparation, Review and Approval, Attachment 6, Section 8, states: "Each form controlled by the procedure shall be uniquely identified with the procedure number and sequential number and be assigned an effective date." Contrary to this requirement, forms identified in procedure LP-SMF-002Q, Revision 1, were not uniquely identified and did not include sequential number and effective date. A random sample of other Project procedures was performed to determine if this condition was more prevalent. (Continued on Page 2)

11. Completed By (Originator) (Print Name) Richard L. Weeks	Signature 	Date 6-27-02
12. Reviewed By (Appropriate QA Manager) (Print Name) John S. Martin	Signature 	Date 6-28-02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 6/28/02

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1. Organization/Location Sample Management Facility (SMF)/ Exploratory Studies Facility	2. Subject Sample Collection Activities in the Enhanced Characterization Repository Block (ECRB)	3. Date(s) Performed 06/10-17/2002
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BLOCK 7 Description and Details (Continued):

The following information was documented on the form. borehole identification, type of drill rig, core bit manufacturer including size, type and serial number, drilling method, core/drill string data and run data, identification of geologic formation, and additional information as required.

b. It was verified that required information was being documented on the Geologic Log which was up-to-date at the time of this surveillance. Core run interval 5.0 ft. to 5.9 ft. was observed. The following information was documented on the Geologic Log: date drilled, depth, core piece length, rock type symbol, and description of rock material recovered. Collected core was properly marked when possible. The core that was broken-up and reduced to rubble was not marked. Small pieces and cuttings are placed in labeled, plastic bags. Core Run Markers were filled out as the core run was being completed. The Core Run Summary form was complete. The Field Video Log was completed and core run was video taped as required. There were no special packaging requirements and collected core was placed in labeled core boxes for shipment to the SMF.

c. Water considered lost in the hole was recorded on the DOR. The DOR on the day of this surveillance was not examined because work was not complete; however, DORs for 06/04/2002, 06/05/2002 and 06/06/2002 were examined and documentation of water lost in the hole was provided on the respective DOR forms.

BLOCK 10 Surveillance Conclusions (Continued):

One other procedure, LP-SMF-003Q, Revision 0, "Transport, Receipt, Admittance, and Processing of Borehole Samples for the Sample Management Facility", was found to be deficient for unique form identification. Since the condition adverse to quality (CAQ) was limited to two SMF procedures, this is considered an isolated condition. Due to the isolated nature of the CAQ, the issuance of a QO is justified.

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Complete only applicable items

QA Surveillance Number:
BSCQA-02-S-32

1. Organization/Location Lawrence Berkeley National Laboratory (LBNL), Berkeley, CA	2. Subject Completion of Out of Calibration Reports (OCRs)	3. Date(s) Performed 06/03-06/2002
4. Surveillance Scope Evaluate compliance of LBNL OCRs generated from 2001 through 2002 to requirements of Administrative Procedure (AP) AP-12.1Q		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) AP-12.1Q, Revision 0, ICN 2, Control of Measuring and Test Equipment and Calibration Standards, Sections 5.7 & 6.0 and Attachment 6		6. Originator <u>Stephen D Harris, BSC/QA</u> Team Members <u>N/A</u>

SURVEILLANCE RESULTS

7. Description/Details
This surveillance included evaluation of all OCRs issued for 2002 to date, LBNL-2002-001 through LBNL-2002-016, and the following OCRs issued in 2001:

LBNL-2001-04 LBNL-2001-09 LBNL-2001-11 LBNL-2001-12 LBNL-2001-17 LBNL-2001-20

Two OCRs, LBNL-2002-008, List of Pressure Transducers, and LBNL-2002-016, Temperature Probe, were found to need more explanation included in the justification given for the position of no impact on data. Each original position was correct, such that there was no impact to the results of the report and there did not appear to be a condition adverse to quality. The added justification did not change the position but only added additional clarification.

In each case, additional information related to the justification of the technical position was appended to the report and the record package was resubmitted to the Records Processing Center (RPC).

Attachment 1 of this Surveillance Report includes the OCRs examined and the notes related to each one.

8. Persons (and their organizations) Contacted Nancy Aden-Gleason, LBNL Robert Terberg, LBNL Melani Menendez-Barreto, LBNL Tim Kneafsey, LBNL Ivelina McClung, LBNL Rob Trautz, LBNL Rohit Salve, LBNL	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s): <u>N/A</u> CIRS Number(s): <u>2773</u>
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10. Surveillance Conclusions SAT UNSAT

The OCRs examined were satisfactory for use. A condition/issue (proposed opportunity for improvement) was submitted to the Condition/Issue Identification and Reporting/Resolution System, CIRS #2773. The issue was about adding additional information in block 11 of the OCR when justifying the Condition Impact Evaluation

11. Completed By (Originator) (Print Name) Stephen D. Harris	Signature <i>Stephen D. Harris</i>	Date June 17, 2002
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert P. Keele	Signature <i>Robert P. Keele</i>	Date 6/21/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature <i>R F Hartstern</i>	Date 6/24/02

Attachment 1

OCR#	Description	Serial #	Notes
Issued in 2002:			
LBNL-2002-001	Sierra Mass Flow Controller	C22518	used only on 5/17/01. Data determined not to be used. Note added to Scientific Notebook.
LBNL-2002-002	Pressure Transducer 75psi	E1497-003	transducer lost. Evaluation performed indicated no impact to data.
LBNL-2002-003	Pressure Transducer 75psi	E1497-023	transducer lost. Evaluation performed indicated no impact to data.
LBNL-2002-004	Pressure Transducer 75psi	E1497-007	transducer lost. Evaluation performed indicated no impact to data.
LBNL-2002-005	Pressure Transducer 75psi	E1497-022	transducer lost. Evaluation performed indicated no impact to data.
LBNL-2002-006	Pressure Transducer 30psi	E2198-021	transducer lost. Evaluation performed indicated no impact to data.
LBNL-2002-007	Pressure Transducer 30psi	E2198-010	transducer lost. Evaluation performed indicated no impact to data.
LBNL-2002-008	Pressure Transducers – see list in OCR	Listed in OCR	list of instruments that were lost. Stated no data had been submitted to TDMS, therefore no impact. A reference to this list of lost equipment that was in the Scientific Notebook and was added to the OCR for clarification.
LBNL-2002-009	Temperature Probe – broken	BN inst ID 008744	temperature probe not used since last calibration. Tagged as broken and held in PI's office.
LBNL-2002-010	Oven Thermometer	F14559	thermometer not used since last calibration. – destroyed.
LBNL-2002-011	Oven Thermometer	F22717	used for non-Q work. No impact to data.
LBNL-2002-012	Humid/Temp Probe HMP 45 AC	V1240030	pending evaluation (still in progress).
LBNL-2002-013	Pressure Transducer (PTB101B)	V1320007	pending evaluation (still in progress).
LBNL-2002-014	Multimeter Dig (Model #2001)	546109	states limitation of peak voltage is known. It is being used with this known limitation. Any use of this M&TE would require a look at the current calibration report. - OK
LBNL-2002-015	Sierra Mass Flow Controller	C25252	no data taken since last calibration.
LBNL-2002-016	Temperature Probe	2-4 or (008746)	no impact to data since the data curve showed acceptable data.. Clarification of this position was added to the record package – a data curve was available from the M&TE generated prior to removal from the borehole when it was broken.
Issued in 2001:			
LBNL-2001-04	Pressure Transducer	790410	error within accepted limit stated in TWP
LBNL-2001-09	Pressure Transducer	1156580	error within accepted limit stated in TWP
LBNL-2001-11	Pressure Transducer	1156573	error within accepted limit stated in TWP
LBNL-2001-12	Digital Multimeter Model 2000	605481	function found inoperable. Was not used to collect data.
LBNL-2001-17	Wind Speed Sensor Model 014A	Y2236	not used for quality affecting data since last calibration.
LBNL-2001-20	Wind Speed Sensor Model 014A	Y2244	not used for quality affecting data since last calibration.

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QA Surveillance Number.
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Complete only applicable items

1. Organization/Location Science and Engineering Testing/ Las Vegas, Nevada	2. Subject Breached Waste Package Testing	3. Date(s) Performed 06/11-12/2002
4. Surveillance Scope Evaluate compliance with selected requirements of Administrative Procedures AP-12.1Q, "Control of Measuring and Test Equipment and Calibration Standards", and AP-SIII.1Q, "Scientific Notebooks"		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) a.) AP-12.1Q, Revision 0, ICN 2, Sections 5.1.1.b, 5.1.2, 5.3.1.b, and 5.3.2.c b.) AP-SIII.1Q, Revision 1, ICN 1, Sections 5.1.2, 5.1.3, 5.1.5, 5.1.8, 5.1.10, 5.3.1.a.1, 3, 5, 6, & 7, 5.3.1.b, c & d, 5.3.2.a, and 5.4.a.3, 4, 5, 8, & 9		6. Originator Kenneth T. McFall Team Members Kenneth O. Gilkerson Ajulena T. Barnes

SURVEILLANCE RESULTS

7. Description/Details
The purpose of this surveillance was to verify compliance with the selected requirements listed in Block 5 above. The activity evaluated was the "Breached Waste Package Test and Drip Shield Experiments" being conducted by Science and Engineering Associates (SEA) of Santa Fe, New Mexico in conjunction with Sandia National Laboratories (SNL). The purpose of the work is to provide input to the "Flux Splitting Model". The test configuration consists of a repository scale simulated drip shield with apertures located at the crown and 16.5, and 33 degrees down slope from the crown. Deionized water is weighed and applied to an aquarium diffuser and dripped onto the "drip shield" from a predetermined height at a rate of 3.8 grams/minute. The object is to gain information on the splash and rivulet patterns which occur when the water contacts the shield. The results obtained provide model input. The testing is being performed in the Low Bay Facility at the Atlas Complex at the Department of Energy facilities on Losee Road, Las Vegas, Nevada.

The Measuring and Test Equipment (M&TE) listed below comprise the full extent of the M&TE used in these studies and was examined to verify calibration compliance to AP-12.1Q.

(Continued on Page 2)

8. Persons (and their organizations) Contacted Zane Walton, SEA, Principal Investigator Clifford Howard, SNL, Manager EBS/Geotechnical Engineering	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s) N/A
	Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CIRS Number(s): N/A

10. Surveillance Conclusions SAT UNSAT

Based on the examination of objective evidence and interviews with knowledgeable personnel, the results of this surveillance indicate, that for the attributes examined, the activities associated with the Breached Waste Package Test and Drip Shield Experiments are being conducted in accordance with the Quality Assurance Program. There were no deficiency documents issued as a result of this surveillance.

11. Completed By (Originator) (Print Name) Kenneth T. McFall	Signature <i>Kenneth T. McFall</i>	Date 6/27/02
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert P. Keele	Signature <i>Robert P. Keele</i>	Date 7/1/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature <i>R F Hartstern</i>	Date 7/1/02

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Complete only applicable items

QA Surveillance Number.
BSCQA-02-S-34

1. Organization/Location Science and Engineering Testing/ Las Vegas, Nevada	2. Subject Breached Waste Package Testing	3. Date(s) Performed 06/11-12/2002
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BLOCK 7 Description/Details (Continued)

Manufacturer	Bechtel Control #	Last Calibration	Calibration Due Date
Humidity and Temperature Transmitters:			
Vaisala	998256	05/07/2002	05/07/2003
Vaisala	315820	07/25/2001	07/25/2002
Vaisala	9988236	05/07/2002	05/07/2003
Pressure Transducer:			
SETRA	007763	05/07/2002	05/07/2003
Scales:			
Mettler PJ360	301293	02/06/2002	08/06/2002
Mettler PM4000	307277	12/27/2001	06/27/2002
Multimeter:			
Fluke 702	007462	06/11/2001	06/11/2002

Note The Fluke multimeter was withdrawn from service prior to 06/11/2002.

All the required calibration certificates were contained in the Scientific Notebook (SN) SN-M&O-SCI-043-VI (Volume 1). The documentation on the calibration certificates includes: unique identifiers, date calibrated, calibration due date, calibration data including calibration results for specific ranges and tolerances, procedure used to calibrate the M&TE including applicable standards, and personnel performing the calibrations. Calibration stickers or labels were attached to each M&TE item and contained the M&TE identifier, last calibration date, and calibration due date. The use and documentation of M&TE, as examined, for this investigation meet the reviewed requirements of AP-12.1Q.

Scientific Notebook SN-M&O-SCI-043-VI, "Breached Waste Package Test and Drip Shield Experiments", was examined for compliance with appropriate requirements from AP-SIII.1Q. The SN was located at the work site at the Atlas Complex and readily available for inspection. The SN complies with all of the requirements for physical structure, pagination, signatures and dates, table of contents, and corrections/changes to text and data. There were no loose materials or supporting addendum that required the use of a SN attachment. All SN initial entry information was included as required, including: work scope, objectives, primary tasks, methods, (M&TE), software, applicable standards and criteria, special skills and training, environmental conditions, accuracy and precision, and sources of error. A list of personnel anticipated to make entries in the SN along with examples of their signatures and initials was provided. An initial entry compliance review was performed and approved by the Responsible Manager. Ongoing/in-process entries to the SN comply with requirements for documenting the processes and results of the investigation. The SN was completed during the course of the investigations and SN-M&O-SCI-043-V2 was initiated. The SN V1 contains the required completion information and is ready for technical and compliance reviews. V1 of the SN instructs the reader to go to V2 of the SN for the continuation of the documentation of the scientific investigation. V2 of the SN references the reader back to V1 for specific traceability and initial entry information. The SN, as examined, meets the reviewed requirements of AP-SIII.1Q.

The following individuals' training records were examined to assure that they were trained to the two primary procedures involved with the conduct and documentation of this investigation:

Personnel	Date of AP-SIII.1Q Training	Date of AP-12.1Q Training
Sandra Dalvit-Dunn	05/06/1999	None *
John Del Mar	10/11/2001	None *
Zane Walton	02/16/2000	None *

* Training to AP-12.1Q for these SEA personnel has not occurred. John Del Mar and Zane Walton are actively performing and documenting the investigation's activities including the use of M&TE. They have not been trained to the M&TE procedure, nor are they required to be by their supervisor. The supervisor has not assigned the training because YMP has no training course for the implementation of AP-12.1Q as it applies to M&TE users. The investigators' lack of training to AP-12.1Q has not impacted their investigations because it is apparent from this surveillance's results that they have read the procedure and are aware of and are following the procedure's requirements.

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QA Surveillance Number.
BSCQA-02-S-35

Complete only applicable items

1 Organization/Location Site Operations/Area 25	2 Subject BSC YMP Exploratory Studies Facility (ESF) Site Welding Program	3 Date(s) Performed 06/10-25/2002
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4 Surveillance Scope
Evaluate the Site Welding Program to determine the capability to adequately support current and future Yucca Mountain Site Characterization Project (YMP) needs

5 Requirement(s) (Procedure, Specification, Drawing, etc) a. NWI-ESF-026Q, Revision 0, "Welding Procedure Specifications 98Q" b. NWI-ESF-027Q, Revision 0, "Welder/Welding Operator Performance Qualification" c. LP-OM-51Q-BSC, Revision 0, "Welding Electrode Control for 'Q' Welding" d. Specification Sections 2341, 2342, 2665, 5120, 5121, 11500, 11911, 13120, 14554, 14555, 14556, 14557, 14558, 14630, 14640, 14650, 15061, 15310, 15410, 15480, 15486, 15487, 15489, 15530, 15891, 16050, 16152, 16461, 16466, 16631 (See Attachment 1 for Specification titles) (Continued on Page 2)	6. Originator <u>Howard R. Cox</u> Team Members <u>N/A</u>
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SURVEILLANCE RESULTS

7. Description/Details
This surveillance was conducted at the request of Site Engineering to evaluate the current status of the BSC YMP Site Welding Program. The welding program was evaluated for adequacy for current work activities as well as for anticipated needs.

During the course of this surveillance, a review was performed of all current site-specific specifications to ascertain those specifications that delineated welding requirements. As a result of this review, it was found that thirty specifications include and or cite a welding code and/or standard.

Attachment 1 compiles a listing of the thirty specifications as well as detailing applicable codes and or standards and provides identification of thirteen different codes/standards referenced within these specifications.

A review of procedures was also performed to determine the adequacy of the documented welding program to support the codes and standards referenced within specifications listed in Attachment 1.

(Continued on Page 2)

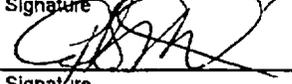
8 Persons (and their organizations) Contacted B. Newman, BSC, Site Engineering J. Bartlett, BSC, Iron Worker S. Swartzbaugh, BSC, Iron Worker	9 CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s) <u>N/A</u> CIRS Number(s) <u>2774, 2958, & 2959</u>
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10 Surveillance Conclusions SAT UNSAT

As a result of this surveillance it was determined that the documented welding program is adequate for providing welding to pre-qualified welding specifications in accordance with AWS D1.1; therefore, providing coverage for any "Q" structural welding that may be required.

However, the current program does not address the requirements for any other welding standard and or code that may be required if welding was needed in support American National Standards Institute (ANSI), American Water Works Association (AWWA) and American Society of Mechanical Engineers (ASME). These additional codes and standards may be required if welding is performed in support of specifications noted in Attachment 1.

CIRS item # 2958 has been initiated to address this issue. (Continued on Page 2)

11 Completed By (Originator) (Print Name) Howard R. Cox	Signature 	Date <u>7/29/02</u>
12 Reviewed By (Appropriate QA Manager) (Print Name) John S. Martin	Signature 	Date <u>7/29/02</u>
13 Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date <u>8/1/02</u>

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 2 of 2

QA Surveillance Number
BSCQA-02-S-35

Complete only applicable items

1. Organization/Location Site Operations/Area 25	2. Subject BSC YMP Exploratory Studies Facility (ESF) Site Welding Program	3. Date(s) Performed 06/10-25/2002
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BLOCK 5 Requirements (Continued):

Specification Sections 2341, 2342, 2665, 5120, 5121, 11500, 11911, 13120, 14554, 14555, 14556, 14557, 14558, 14630, 14640, 14650, 15061, 15310, 15410, 15480, 15486, 15487, 15489, 15530, 15891, 16050, 16461, 16466, 16631 (See Attachment 1 for Specification titles)

BLOCK 7 Description/Details (Continued):

Currently, three procedures exist which support the BSC YMP Site Welding Program. These procedures are:

- NWI-ESF-026Q, Welding Procedure Specifications 98Q,
- NWI-ESF-027Q, Welder/Welding Operator Performance Qualification, and
- LP-OM-051Q-BSC, Welding Electrode Control For "Q" Welding

In review of NWI-ESF-026Q, it was found that this procedure contains ten weld procedure specifications (WPSs) which cover selected Shielded Metal Arc Welding (SMAW) and Flux Core Arc Welding (FCAW) processes. These WPSs are pre-qualified in accordance with AWS D1.1. It was also found that to date there has been no need for weld procedure qualification for any welding process other than those designated as pre-qualified by AWS D1.1.

As a result of this review, it was determined that no WPSs exist for welding to other codes and or standards other than AWS D1.1 pre-qualified welding processes. However, shown in review of Attachment 1, other WPSs will be required by YMP specifications when work to those specifications is performed.

In review of NWI-ESF-027Q, it was found that this procedure contains less than two pages of actual instruction and relies on reference to the AWS D1.1 code for supplying necessary welder qualification requirements. The AWS code addresses many facets of a welding program; such as, welder qualification, joint design, filler metal specifications and a host of other requirements but does not meet the definition of an implementing document for conducting welder qualifications and or certifications.

In addition, as found in NWI-ESF-026Q, procedure NWI-ESF-027Q does not address any other welding codes and or standards for the qualification of welders other than AWS D1.1 and will not support future needs of YMP.

In review of LP-OM-051Q-BSC, it was found that this procedure references six codes and or standards for implementation. Examination of the procedure provides evidence that procurement, receipt, storage and use of filler metals are addressed, but it was determined that the procedure falls considerably short of providing sufficient guidance and direction for an effective nuclear related filler metal control program.

Similar to NWI-ESF-027Q, which refers to the AWS D1.1 code for implementation of the procedure, LP-OM-051Q-BSC also refers the user to the code for requirements without selecting and or delineating what portions of the code to implement (i.e., go implement the code). In addition, the procedure repeats the requirements of the code without providing specifics details of who, what, where and/or when.

During the course of this surveillance interviews with site personnel were also conducted. As a result of these interviews a concern arose relative to the YMP site electrical supply as the site experiences frequent power outages. During these occasions the weld filler metal heating ovens are shut down for an indeterminate amount of time over weekends and holidays with no recording devices to verify maintenance of required temperatures during these outages. Since it is the practice to open new hermetically sealed containers for "Q" welding with low hydrogen weld rods, there is no impact to Quality Assurance Requirements and Description (QARD) governed work. There were no instances noted during conduct of the surveillance that indicated problems with non-Q welding activities as a result of this observation. As a result Condition/Issue Identification and Reporting/Resolution System (CIRS) item #2774 has been initiated to resolve this issue.

An evaluation of welding equipment found that for the limited welding being performed by the site at this time, the equipment on hand would be adequate to cover any current welding needs of YMP, but would be insufficient to support multiple field construction locations.

BLOCK 10 Surveillance Conclusions (Continued):

CIRS item # 2959 was initiated to address programmatic issues relative to referring to the code for implementation without providing the selected requirements within NWI-ESF-027Q and LP-OM-051Q-BSC.

SPECIFICATION WELDER/PROCEDURE REQUIREMENTS

07/23/2002

QA, QA

Specification Section	Specification Title	Code/Standard	Existing Program
02341, Rev 01	ESF GROUND SUPPORT-STRUCTURAL STEEL AND ACCESSORIES	AWS D1.1	Yes*
02342, Rev. 00	ECRB CROSS DRIFT GROUND SUPPORT-STRUCTURAL STEEL AND ACCESSORIES	AWS D1 1	Yes*
02665, Rev. 03	WATER DISTRIBUTION AND SUBSURFACE WASTEWATER SYSTEM	AWWA C206	No
05120, Rev. 00	METAL FABRICATIONS	AWS D1 1	Yes*
05121, Rev. 03	STRUCTURAL STEEL AND MISCELLANEOUS METAL	AWS D1.1 & AWS B2.1	Yes*
11500, Rev. 05	ROCK DRILLS AND ASSEMBLIES.	AWS D14.3	No
11911, Rev 01	ADDITIONAL TRAILING FLOOR WITH GEOLOGIC MAPPING GANTRY (FOR PROCUREMENT ONLY).	AWS D1.1 & AWS D1.2 (Aluminum)	Yes* & No ***
13120, Rev. 00	PRE-ENGINEERED STRUCTURES.	AWS D1.1	Yes*
14554, Rev 04	RADIAL STACKER	AWS D1.1	Yes*
14555, Rev. 04	SURFACE BELT CONVEYORS FOR OVERLAND MUCK HANDLING	AWS D1.1	Yes*
14556, Rev. 03	WEIGH SCALES FOR SURFACE BELT CONVEYORS.	AWS D1.1	Yes*
14557, Rev. 03	CONVEYOR CHUTES, HOPPERS, AND BINS.	AWS D1.1	Yes*
14558, Rev. 04	SUBSURFACE BELT CONVEYOR SYSTEM.	AWS D1.1	Yes*
14630, Rev. 00	CRANE – OVERHEAD BRIDGE.	AWS D14.1	No
14640, Rev. 00	CRANE – OVERHEAD MONORAIL.	AWS D 14.1	No
14650, Rev 00	JIB CRANE.	AWS D14.1	No
15061, Rev. 01	SUBSURFACE UTILITY PIPING.	ANSI B31 3** (ASME IX)	No
15310, Rev 00	FIRE PROTECTION PIPING	AWS D10.9	No ***
15410, Rev 01	PLUMBING PIPING.	ANSI B31.1** & ASME IX	No
15480, Rev. 03	COMPRESSED AIR SYSTEM	ASME SEC. VIII, DIV 1 (ASME IX)	No

SPECIFICATION WELDER/PROCEDURE REQUIREMENTS

07/23/2002

QA, QA

Specification Section	Specification Title	Code/Standard	Existing Program
15486, Rev. 01	CHEMICAL TRACER INJECTION SYSTEM FOR CONSTRUCTION PROCESS AND FIREWATER USAGE.	AWS D1.1	Yes*
15487, Rev. 01	CHEMICAL TRACER INJECTION SYSTEM FOR CONSTRUCTION COMPRESSED AIR USAGE	AWS D1.1	Yes*
15489, Rev. 03	CHEMICAL TRACER INJECTION SYSTEM FOR COMPRESSED AIR USAGE IN TEST RELATED DRILLING (FOR PROCUREMENT ONLY)	AWS D1.1	Yes* ***
15530, Rev. 00	REFRIGERANT AND PIPING SPECIALTIES	ANSI B31.5 (Brazing)	No ***
15891, Rev. 00	ESF VENTILATION DUCTS AND FITTINGS (FOR PROCUREMENT ONLY).	AWS D1.3	No ***
16050, Rev. 03	BASIC ELECTRICAL MATERIALS AND METHODS.	AWS QC3	No
16152, Rev. 04	PACKAGED MECHANICAL EQUIPMENT.	AWS QC3	No ***
16461, Rev. 01	LIQUID IMMERSED TRANSFORMER	AWS D1.1 & AWS QC3	Yes* & No ***
16466, Rev. 00	SUBSURFACE ELECTRIC TROLLEY SYSTEM (FOR PROCUREMENT ONLY)	AWS D1 1	Yes* ***
16631, Rev. 03	DC BATTERY SYSTEM	AWS QC3	No* ***
*Covered for AWS Pre-qualified structural weld procedures only			
**May also require specific visual/NDE examinations			
*** May be needed for maintenance activities			

- ANSI B31 1 –Power Piping (invokes ASME Section IX for welding) (this code is now ASME B31.1, Power Piping)
- ANSI B31.3 – Chemical Plant and Petroleum Refinery Piping (invokes ASME Section IX for welding) (this code is now ASME B31.3, Process Piping)
- ASME B31.5 – Refrigeration Piping and Heat Transfer Components
- ASME Section IX – Welding and Brazing Qualifications
- AWS B2 1 – Standard for Welding Procedure and Performance Qualification.
- AWS D1.1 – Structural Welding Code – Steel.
- AWS D1.2 – Structural Welding Code – Aluminum.
- AWS D1.3 - Structural Welding Code – Sheet Steel
- AWS D10 9 – Specification for Qualification of Welding Procedures and Welders for Piping and Tubing.
- AWS QC3 – Standard for AWS Certified Welders (this standard is now AWS QC7).
- AWS D14.1 – Specification for Welding of Industrial and Mill Cranes and Other Material Handling Equipment.
- AWS D14.3 – Specification for Welding Earthmoving and Construction Equipment.
- AWWA C206 – Field Welding of Steel Water Pipe

ORIGINAL OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
 red QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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QA Surveillance Number:
 BSCQA-02-S-36

Complete only applicable items

1. Organization/Location YMSCO / BSC, Las Vegas, NV	2. Subject Review of Committed Corrective Actions for Deficiency Report (DR) YMSCO-01-D-064	3. Date(s) Performed 07/03-05/2002
4. Surveillance Scope Review of the committed corrective actions for Yucca Mountain Site Characterization Office (YMSCO) DR YMSCO-01-D-064 prior to request for closure verification		
5. Requirement(s) (Procedure, Specification, Drawing, etc) a AP 16.1Q, Revision 5, ICN 0 b AP 5.1Q, Revision 3, ICN 1 c. Specific requirements/commitments made in the responses for DR YMSCO-01-D-064		6. Originator <u>Sam H. Horton</u> Team Members <u>N/A</u>

SURVEILLANCE RESULTS

7. Description/Details
 This surveillance was performed to review the corrective actions associated with DR YMSCO-01-D-064, hereafter referred to as DR-064, prior to requesting formal closure verification by the Department of Energy (DOE) Office of Quality Assurance (OQA). The scope of this surveillance was divided into the following three sections.

SECTION I - Review OQA's Quality Assurance Representative (QAR) Rejection of the Complete/Amended Response dated 08/22/2001. This review summarized the QAR's Issues and provided a Surveillance Verification Response or Results, as appropriate, to each issue

SECTION II - Identify OQA's Verification of Corrective Action Response dated 01/23/2002 as divided into three sections, A, B & C. This Surveillance review summarized the QARs reason for Failure and provided corresponding Verification Results

SECTION III - Included taking a sample of the procedures provided in the Corrective Action Matrix, provided as part of the corrective action taken, for review. The verification review consisted of two activities: 1) Ensure that DR-064 is referenced in the Change History of the procedure as required by procedure AP-5.1Q, Attachment 6, under the "Change History" section, and 2) verify that there are no Notes in the procedure as required by AP-5.1Q, paragraph 5.1b. The sampling process scheme is described on page 5 on this Surveillance Report.
 (Continued on Page 2)

8. Persons (and their organizations) Contacted Catherine Hampton, DOE, Office of Project Execution James Whitcraft, BSC, Engineering Manager Mary McDaniel, BSC, Engineering John Clark, BSC, Engineering	9. CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s) <u>QO BSC(B)-02-O-055</u> CIRS Number(s) <u>N/A</u>
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10. Surveillance Conclusions SAT UNSAT

A total of 41 procedures associated with DR-064 were reviewed. All of the procedures, with the exception of one, were found to be in compliance with the corrective actions. Procedure AP-SIII.8Q, Revision 0 /ICN 1, had Notes in the procedure after the procedure was revised. This revision took place 06/14/2002, after the AP-5.1Q requirement was inserted to remove Notes from procedures, Revision 3/ICN 0, dated 01/07/2002. This problem was corrected during this Surveillance and noted on a Quality Observation (QO) BSC(B)-02-O-055

It is noted that procedures LP-EM-001Q-BSC, Revision 0, and AP-2.27Q, Revision 0, did not have a reference to DR-064 in the Change History. These recently issued procedures were prepared in accordance with AP-5.1Q, Revision 3/ICN 1, and contain no Notes, thus it was considered that a reference to DR-064 was not necessary.

Overall, the implementation of corrective actions is effective with exception of the condition described above.

11. Completed By (Originator) (Print Name) Sam H. Horton	Signature <u>Sam Horton</u>	Date <u>7/16/02</u>
12. Reviewed By (Appropriate QA Manager) (Print Name) Donald T. Krisha	Signature <u>D. T. Krisha</u>	Date <u>7/16/02</u>
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature <u>R. F. Hartstern</u>	Date <u>7/16/02</u>

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QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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QA Surveillance Number:
BSCQA-02-S-36

Complete only applicable items

1. Organization/Location
YMSCO / BSC,
Las Vegas, NV

2 Subject
Review of Committed Corrective Actions for Deficiency
Report (DR) YMSCO-01-D-064

3 Date(s) Performed
07/03-05/2002

BLOCK 7 Description/Details (Continued):

The review of Sections I and II addressed 21 procedures that are included in the Corrective Action Matrix as Line Items 3, 4, 5, 6, 11, 12, 13, 16, 17, 19, 20, 21, 22, 26, 27, 28, 29, 30, 41, 66, and 70.

SECTION I

Rejection of Complete/Amended Response dated 08/22/2001 and Surveillance Response/Results.

Issue 1. The number of procedures noted in the original matrix did not match the number stated in the written response
Verification Response: Since the original response, the population of procedures to be included in the DR Matrix has changed
At the time of this Surveillance, the number of procedures is currently 71.

Issue 2 Literal application of the Request for Document Action Request (DARs) will disrupt the processes of the three procedures that were changed because of potential immediate safety implications.

Verification Response The 3 procedures in questions were immediately corrected to remove actions steps from Notes to address personal safety concerns This rejection is an opinion and has no factual basis for rejection

Issue 3. The review of 11 Q procedures was not included in the Extent of Condition These procedures were AP-16 1Q, AP-16 3Q, AP-16 4Q, AP-18 2Q, LP-1.1Q-OCRWM, LP-2.2Q-OCRWM, LP-2 4Q-OCRWM, LP-2.5Q-OCRWM, QAP-2.8, QAP-18.1, and QAP-18 2.

Verification Results:

AP-16 1Q, Revision 5/ICN 0, refers to DR-064 in the Change History and it was verified that there are no Notes in the procedure This procedure is included in the Matrix as Line Item #20.

AP-16.3Q, Revision 3/ICN 0, refers to DR-064 in the Change History and it was verified that there are no Notes in the procedure This procedure is included in the Matrix as Line Item #22.

AP-16.4Q, Revision 2, was verified that there are no Notes in the procedure.

AP-18.2Q, Revision 0/ICN 1, was verified there are no Notes in the procedure.

LP-1 1Q-OCRWM, Revision 0/ICN 0, Page 34 of 4,1 shows a Note, but it is not an Action Statement. This procedure has not been revised since AP-5.1Q was revised to disallow Notes in procedures.

LP-2 2Q-OCRWM, Revision 0/ICN 0, shows no Notes in the procedure.

LP-2 4Q-OCRWM, Revision 0/ICN 0, shows three Notes in this procedure, one on Page 5 and two on Page 6. The initial OQA evaluation indicated that these Notes did not contain Action Steps.

LP-2 5Q-OCRWM, Revision 0/ICN 0, shows no Notes in the procedure.

QAP-2 8 was superseded by LP-2.3Q-OCRWM, which was superseded by AP-2 26Q It was verified that this procedure had no Notes.

QAP 18.1, Revision 6/BSCN 1 was superseded by AP 18.1Q, Rev. 0, and this procedure refers to DR-064 in the Change History It was verified there are no Notes in the procedure. This procedure is noted in the Matrix as Line Item #21.

QAP-18 2, Revision 8, was superseded by AP-18 3Q, Revision 0. It was verified there are no Notes in the procedure and is compliant.

Issue 4 The Complete Response should address definitions of terms, action specification, and sampling plan.

Verification Response: The request or recommendation to provide definitions is not a program requirement, but a personal preference that is not subject to compliance determination.

Issue 5. AP-3.9Q was noted with the wrong sponsor.

Verification Results: The appropriate DOE sponsor of AP-3.9Q has now been corrected to show OATI as the appropriate owner, and this procedure is shown in the Matrix as Line Item #13. Also, it was verified that DR-064 was referenced in the Change History and there were no Notes in the procedure for Revision 0/ICN 1.

(Continued on Page 3)

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QA Surveillance Number.
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Complete only applicable items

1. Organization/Location YMSCO / BSC, Las Vegas, NV	2. Subject Review of Committed Corrective Actions for Deficiency Report (DR) YMSCO-01-D-064	3. Date(s) Performed 07/03-05/2002
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BLOCK 7 Description/Details (Continued)

SECTION II

Verification of Corrective Action for DR-064 by OQA Dated 01/23/2002 and the Surveillance Verification to Each of the Associated Notes that showed Rejection/Failed Status in Sections A, B, and C.

Section A

Section A of the corrective action performed by OQA on 01/23/2002 indicated 11 procedures verified with two failures.

Note 1: AP-3.4Q, Revision 2/ICN 2, Attachment 5, Paragraph C, was deleted. Should this paragraph be added back?
Verification Results: The procedure in question was cancelled on 12/22/2001 stating there are other BSC processes in place. This deals with Level 3 Change Control

Note 8 LP-OM-027-M&O There is no reference made to DR-064 in the Change History Also, there are three Notes in Attachment 2 and one Note in Attachment 8 that were still in the procedure
Verification Results: Revision 0/ICN 2 references DR-064 in the Change History and it was verified that all Notes were removed from the procedure This procedure is shown in the Matrix as Line Item #66.

Section B

Section B of the corrective action performed by OQA on 01/23/2002 indicated 15 procedures verified with three failures and one indeterminate.

Note 12: Evaluate Notes in AP-2.23Q to determine if the Description of Condition of the DR exists
Verification Results Revision 0/ICN 1 refers to DR-064 in the Change History. It was also verified that Notes have been removed from the procedure. This is shown in the Matrix as Line Item #70.

Note 15: AP-SIII 3Q Change History for Revision 1 does not reference DR-064. Revision 1 should be reviewed to determine if Note or Notes were corrected in the Revision 1 development and review process
Verification Results Revision 1/ICN 1 (revised to AP-5.1, Revision 3/ICN 1) of AP-SIII.3Q does not reference DR-064 in the Change History; however, it was verified that there are no Notes in the procedure This is noted in the Matrix as Line Item #3.

Note 17: (Indeterminate Status) LP-MM-002Q-M&O, Revision 0/ICN 1, contained approximately 40 Notes, and there is no reference to DR-064 in the Change History.
Verification Results: Revision 0/ICN 2 of LP-MM-002Q-M&O refers to DR-064 in the Change History. Also, it was verified that no Notes were in the procedure. This is shown in the Matrix as Line Item #30.

Note 19. NLP-2-0Q, Revision 5/ICN 4, No DAR was filed to identify the discrepant Notes Revision 5/ICN 4 - the four Notes were incorporated, however, the Change History does not reference DR-064.
Verification Results: NLP-2-0Q was replaced by LP-SA-001Q-BSC which references DR-064 in the Change History. It was also verified that there are no Notes in the procedure. This procedure is noted in the Matrix as Line Item #6

Section C Other Performance Issues (Noted by the QAR)

1. AP-3.10Q, Revision 2, ICN 4 was revised to Revision 2, ICN 5. There was no reference to DR-064 in the Change History. There were also six DARs open to this procedure that were not rolled up in Revision 2/ICN 5 revision.
Verification Results: AP 3 10Q, Revision 2/ICN 5 was superseded by AP-SIII.9Q. This procedure is not shown on the Matrix, nor does Revision 0/ICN 1 reference DR-064 in the Change History; however, it was verified that no Notes exist in AP-SIII 9Q, Revision 0/ICN 1.

2. LP-4.1Q-OCRWM, Revision 1/ICN 1, DARs D782 and D945 were ignored when the procedure was revised. Also, DAR D945 was not specific in identifying DR-064 issues
Verification Results: LP-4 1Q-OCRWM, Revision 2/ICN 0 references DR-064 in the Change History and it was verified there were no Notes in the procedure. This is noted in the Matrix as Line Item #19.

3. LP-SMF-002Q-M&O, Revision 0/ICN 0, DAR D1226 stated, "Remove action statements from Notes and place them in the body of the procedure". DAR D1226 is not specific
Verification Results: Revision 0/ICN 0 references DR-064 in the Change History and it was verified there are no Notes in the procedure. This is Line Item #11 of the Matrix.

(Continued on Page 4)

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QA Surveillance Number
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Complete only applicable items

1. Organization/Location
YMSCO / BSC.
Las Vegas, NV

2 Subject
Review of Committed Corrective Actions for Deficiency
Report (DR) YMSCO-01-D-064

3 Date(s) Performed
07/03-05/2002

BLOCK 7 Description/Details (Continued)

4 The following Document Action Requests (DARs) have been deferred:
DAR D811 to procedure LP-CAL-004Q, DAR D-930 to procedure LP-3 24Q-M&O, and DAR D956 to procedure LP-MM-001Q-M&O. Supposedly, these procedures have at least one action step and the action to address it has been deferred. This is unacceptable to the QAR.

Verification Response:

LP-CAL-004Q, Revision 0/ICN 1 references DR-064 in the Change History and it was verified there are no Notes in the procedure. This is in the Matrix as Line Item #28.

LP-3.24Q-M&O has been cancelled by Revision 0/BSCN 1.

LP-MM-001Q-M&O, Revision 0/ICN 1 references DR-064 in the Change History and it was verified that no Notes are in the procedure. This is in Matrix as Line Item #29.

5. NWI-SMF-002Q contains Notes in paragraph 3.4.1 and 3.5.2. No DAR has been filed to correct those statements.

Verification Results: This procedure was superseded by LP-SME-003Q, references DR-064 in the Change History and verified that there were no Notes in the procedure.

6. The following procedures did not reference DR-064 in the Change History as required by AP-5.1Q, Attachment 6:

AP-2.12Q, AP-3.10Q; AP-3.12Q, AP-3.19Q, AP-7.5Q, AP-10.3Q; AP-SI.1Q, AP-SII.2Q, AP-SIII.8Q; and NWI-ESF-049Q.

AP-2.12Q

Verification Results: Revision 0/ICN 4 shows that DR-064 is referenced in the Change History and is included in the Matrix as Line Item #5.

AP-3.10Q

Verification Results: Revision 2/ICN 4 was superseded by AP-SIII.9Q, Revision 0/ICN 1. This procedure does not refer to DR-064 in the Change History, however, it was verified that no Notes were in the procedure.

AP-3.12Q

Verification Results: Revision 1/ICN 1 references DR-064 in the Change History and it was verified that no Notes are in the procedure.

This is noted in the Matrix as Line Item #26.

AP-3.19Q

Verification Results: Revision 1/ICN 3 references DR-064 in the Change History and it was verified that no Notes are in the procedure. This is shown in the Matrix as Line Item #27.

AP-7.5Q

Verification Results: Revision 1/ICN 0 references DR-064 in the Change History and it was verified that no Notes are in the procedure. This is shown in the Matrix as Line Item #16.

AP-10.3Q, Revision 2 references to DR-064 in Change History and it was verified that there are no Notes in procedure. This is shown in the Matrix as Line Item #41.

AP-SI.1Q

Verification Results: Revision 3/ICN 4 references DR-064 in the Change History and it was verified that there are no Notes in the procedure. This is shown in the Matrix as Line Item #4.

AP-SII.2Q

Verification Results: Revision 0/ICN 1 references DR-064 in the Change History and it was verified there are no Notes in the procedure.

AP-SIII.8Q

Verification Results: Revision 0/ICN 1 dated 6/14/02 does not reference DR-064 in the Change History and on page 38 of 38, there are two Notes that exist. These do not appear to be Action Steps; however, this procedure was revised 06/14/2002 after the requirement to remove Notes from the procedures was placed in AP-5.1Q, Revision 3/ICN 0, dated 01/07/2002. This is noted in the Matrix as Line Items #12 and #17.

NWI-ESF-049Q

Verification Results: Revision 0/ICN 1 was issued 06/02/2001. It was then superseded by LP-OM-034Q-BSC, Revision 0, which references DR-064 in the Change History and removed the Notes from the procedure.

(Continued on Page 5)

AP-2.26Q 1

Rev 03/25/2002

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QA: QA

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QA Surveillance Number
BSCQA-02-S-36*Complete only applicable items*

1. Organization/Location YMSCO / BSC, Las Vegas, NV	2. Subject Review of Committed Corrective Actions for Deficiency Report (DR) YMSCO-01-D-064	3. Date(s) Performed 07/03-05/2002
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BLOCK 7 Description/Details (Continued)

SECTION III

In addition to the 21 procedures reviewed that are noted in Sections I and II of this Surveillance Report, an additional 20 procedures were sampled and reviewed. A sample of every numerically third procedure was taken for review. If the third matrix Line Item procedure # was addressed in Sections I or II of this Surveillance, then a procedure closest to the next sequential number was selected for review. These 20 procedures were reviewed to ensure that their Change History referenced DR-064, and that there were no Notes in the procedure themselves. The listing of procedures sampled are noted below. It was verified that all of the below listed procedures are compliant with regard to the review criteria.

MATRIX #	PROCEDURE #
#1	LP-17.1Q-BSC, Revision 0/ICN 3
#7	AP-12.1Q, Revision 0/ICN 2
#10	AP-2.17Q, Revision 1
#14	LP-4.2Q-OCRWM, Revision 0/ICN 1
#18	AP-SII.1Q, Revision 0
#21	AP-18.1Q, Revision 0
#25	AP-3.11Q, Revision 3/ICN 2
#31	LP-MM-003Q-BSC, Revision 0/ICN 1
#34	AP-2.20Q, Revision 1
#37	LP-QC-005Q-BSC, Revision 1
#40	LP-SPP-015Q-BSC, Revision 1/ICN 1
#43	AP-2.23Q, Revision 0/ICN 1
#47	NLP-5.3Q, Revision 1/ICN 3
#48	NWI-ESF-019Q, Revision 1/ICN 1
#50	LP-OM-035Q-BSC, Revision 0/ICN 1
#53	LP-CON-001Q-BSC, Revision 0/ICN 1
#57	LP-OM-039Q-BSC, Revision 0/ICN 1
#60	LP-OM-049Q-BSC, Revision 0
#63	LP-OM-042Q-BSC, Revision 0/ICN 1
#67	LP-EM-001Q-BSC, Revision 0
#71	LP-OM-055Q-BSC, Revision 0

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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QA Surveillance Number.
BSCQA-02-S-37

Complete only applicable items

1. Organization/Location BSC / Las Vegas, NV	2 Subject Control of Technical Product Errors Reporting (TER) Process	3. Date(s) Performed 07/08-12/2002
4. Surveillance Scope Conduct a performance based surveillance to evaluate the effectiveness of the TER process described in Administrative Procedure (AP) AP-15.3Q.		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) AP-15.3Q, "Control of Technical Product Errors", Revision 0, ICN 0		6. Originator <u>Jerry Heaney</u> Team Members <u>Jeff Weaver, Technical Specialist</u> <u>Robert Latta, NRC, Observer</u>

SURVEILLANCE RESULTS

7. Description/Details
BSC QA performed this performance based surveillance to evaluate the effectiveness of TER process. This relatively new process has been in effect since 02/11/2002. TERs were reviewed for conformance to the current AP-15.3Q procedural requirements.

The surveillance team reviewed the total population of 94 TERs generated at the time this surveillance was performed. A minimum of 11 TERs were not validated until five months after initiation, 17 TERs were not dispositioned until four months after initiation, and 18 TERs were not dispositioned until five months after initiation. It was observed during this surveillance that the validation and disposition of many TERs was delayed until a decision was made regarding which Analysis and Modeling Reports (AMRs) were to be completed and which AMRs were to be canceled. However, the surveillance team issued Condition/Issue Identification and Reporting Resolution System (CIRS) Item 2975 as a TER process improvement recommendation. AP-15.3Q should be revised to incorporate a time frame to validate and disposition TERs. If a disposition cannot be provided until other issues are settled, a cause for the delay should be included on the TER and a projected date of disposition should be provided.

AP-15.3Q does not contain or refer to an action tracking system to ensure actions associated with TERs are identified and tracked. The team issued CIRS Item 2976 as a TER process improvement recommendation to revise AP-15.3Q for the tracking of TER action items in the CIRS database. The CIRS database provides a mechanism to identify when a TER validation, disposition, or completion action is due. In addition, actions to revise documents resulting from a TER disposition of "Correct" can also be identified and tracked until completion.

(Continued on Page 2)

8. Persons (and their organizations) Contacted BSC: Bill Watson Marco Lee Steve Dana Steve Swenning Jim Graff Donna Sinks Larry Abernathy Ken Gilkerson Tom Thornton SNL: Bob Richards	9. CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Recommendation Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s). <u>QO BSC(B)-02-O-067</u> CIRS Number(s): <u>2975, 2976, 2977, 2978</u>
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10. Surveillance Conclusions SAT UNSAT

The current TER process described in AP-15.3Q could be more effective if process improvements addressing time frames for the validation, disposition, and disposition completion of TERs were made. Once due dates for TER action items are assigned, these actions must be identified in a tracking database such as CIRS to ensure scheduled TER actions are identified and addressed. Objective evidence reviewed during this surveillance showed that actions to validate and disposition TERs exceeded four months for the majority of TERs reviewed.

(Continued on Page 2)

11. Completed By (Originator) (Print Name) Jerry Heaney	Signature <u>Jerry Heaney</u>	Date 8/13/02
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert P. Keele	Signature <u>Robert P. Keele</u>	Date 8/14/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature <u>R F Hartstern</u>	Date 8/15/02

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QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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QA Surveillance Number.
BSCQA-02-S-37

Complete only applicable items.

1. Organization/Location BSC / Las Vegas, NV	2. Subject Control of Technical Product Errors Reporting (TER) Process	3. Date(s) Performed 07/08-12/2002
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BLOCK 6 Team Members (Continued):

Harvey Dove, Navarro Quality Services, Observer

BLOCK 7 Description/Details (Continued)

The "Technical Error Report Log" maintained by the TER Coordinator should be accessible as a database on the Lotus Notes Database System enabling Responsible Managers to status TERs without having to contact the TER Coordinator. Other deficiency reporting system databases such as DRs, CARs, and NCRs are currently on the Lotus Notes Database System enabling BSC staff to obtain the status of these documents. The surveillance team issued CIRS Item 2977 as a TER process improvement recommendation to place the "Technical Error Report Log" on the Lotus Notes Database System.

The surveillance team reviewed several TERs dispositioned "Use-As-Is" which clearly indicate that errors are present in some approved documents. AP-15.3Q does not require TERs dispositioned "Use-As-Is" to have an errata sheet generated and posted to approved documents identifying the errors listed in the TER. If the TER technical justification for a "Use-As-Is" disposition provides an explanation that the identified errors do not affect the results achieved by the document, no further action is required for the document. Users of these documents receive no notification that the documents contain errors.

The concern is that if these same errors are discovered during licensing by Nuclear Regulatory Commission (NRC) or other overview organizations, time and resources will be expended by the Yucca Mountain Site Characterization Project (YMP) to investigate that these errors were already reviewed and dispositioned not to have an adverse impact on the product. If errata sheets were posted to documents containing errors, the YMP already has provided evidence that the errors were previously discovered and appropriately dispositioned. The surveillance team issued CIRS Item 2978 as a TER process improvement recommendation to post errata sheets to documents identified on TERs that have been dispositioned "Use-As-Is".

The team reviewed TER files to ensure Deficiency Document Encoding Forms (DDEFs) were being completed for the trending of TERs. DDEFs for four validated and dispositioned TERs could not be located. The responsible Quality Engineering Representatives were contacted during this surveillance and DDEFs were generated and submitted to the Trend Coordinator as required. Quality Observation (QO) BSC(B)-02-O-067 was generated for this issue. It should be noted that trend codes are not yet fully established for TERs and therefore have not yet been trended.

BLOCK 10 Surveillance Conclusions (Continued):

The surveillance team recommends that errata sheets be posted to documents listed in TERs that are dispositioned "Use-As-Is". The concern is that if these same errors are discovered during licensing by the NRC or other overview organizations, time and resources will be expended by YMP to investigate that these errors were already reviewed and dispositioned not to have an adverse impact on the product.

QO BSC(B)-02-O-067 was issued to document an isolated case of noncompliance with the procedure concerning the processing of DDEFs that was corrected during this surveillance.

The four CIRS items issued as a result of this surveillance address proposed TER process improvements. These CIRS Items were discussed with the current and future authors responsible for AP-15.3Q. A draft revision of AP-15.3Q was available at the end of this surveillance. The draft did contain time restraints for the validation and dispositioning of TERs. The processing of errata sheets for TERs dispositioned "Use-As-Is" was also added as a requirement in the draft.

See Pages 3 & 4 for listing of objective evidence reviewed during this surveillance.

(Continued on Page 3)

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QA: QA
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QA Surveillance Number:
BSCQA-02-S-37

Complete only applicable items

1. Organization/Location
BSC / Las Vegas, NV

2. Subject
Control of Technical Product Errors Reporting (TER)
Process

3 Date(s) Performed
07/08-12/2002

BLOCK 10 Surveillance Conclusions (Continued):

The following Objective Evidence was reviewed during this surveillance.

Open TERs validated, but not dispositioned: No DDEFs

TER #	DATE GENERATED	DATE VALIDATED
TER-02-0003	02/20/2002	04/10/2002
TER-02-0004	02/20/2002	04/10/2002
TER-02-0005	02/20/2002	04/10/2002
TER-02-0006	02/20/2002	04/10/2002
TER-02-0014	02/20/2002	03/05/2002
TER-02-0035	02/26/2002	07/03/2002
TER-02-0037	02/26/2002	04/08/2002
TER-02-0038	02/26/2002	07/03/2002
TER-02-0039	02/26/2002	07/03/2002
TER-02-0040	02/26/2002	07/03/2002
TER-02-0043	02/27/2002	07/03/2002
TER-02-0044	02/27/2002	07/03/2002
TER-02-0045	02/27/2002	07/03/2002
TER-02-0046	02/27/2002	07/03/2002
TER-02-0047	02/27/2002	07/03/2002
TER-02-0048	02/27/2002	07/03/2002
TER-02-0068	02/27/2002	07/03/2002
TER-02-0070	02/27/2002	03/05/2002

TERs invalidated and reviewed by Technical Specialist for adequacy of technical justification:
TER-02-0007

Closed TERs dispositioned C/R ending with Errata being generated:
TER-02-0001 Errata posted
TER-02-0008 Errata posted - No DDEF

Closed TERs dispositioned UAI, that the surveillance team believes is candidate for an Errata Sheet to be posted to the subject document:
TER-02-0012

Closed/Dispositioned TERs with DDEFs sent to the Trend Coordinator:
TER-02-0001
TER-02-0002
TER-02-0014
TER-02-0016
TER-02-0017
TER-02-0069
TER-02-0087
TER-02-0091

Closed/Dispositioned TERs with no DDEF forms generated (Corrected during Surveillance):
TER-02-0008
TER-02-0009
TER-02-0010
TER-02-0012

(Continued on Page 4)

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QA: QA
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QA Surveillance Number:
BSCQA-02-S-37

Complete only applicable items.

1. Organization/Location
BSC / Las Vegas, NV

2. Subject
Control of Technical Product Errors Reporting (TER)
Process

3. Date(s) Performed
07/08-12/2002

BLOCK 10 Surveillance Conclusions (Continued):

Open TERs dispositioned C/R:

TER-02-0087 Errata being generated by USGS

TERs reviewed that were dispositioned four months after initiation:

TER #	DATE GENERATED	DATE VALIDATED
TER-02-0027	02/26/2002	06/30/2002
TER-02-0028	02/26/2002	06/30/2002
TER-02-0029	02/26/2002	06/30/2002
TER-02-0030	02/26/2002	06/30/2002
TER-02-0031	02/26/2002	06/30/2002
TER-02-0032	02/26/2002	07/01/2002
TER-02-0033	02/26/2002	07/01/2002
TER-02-0034	02/26/2002	06/30/2002
TER-02-0042	02/27/2002	07/01/2002
TER-02-0049	02/27/2002	06/30/2002
TER-02-0063	02/27/2002	06/30/2002
TER-02-0064	02/27/2002	06/27/2002
TER-02-0065	02/27/2002	06/30/2002
TER-02-0066	02/27/2002	07/01/2002
TER-02-0067	02/27/2002	06/30/2002
TER-02-0071	02/27/2002	06/30/2002
TER-02-0076	02/27/2002	06/30/2002

DDEFs reviewed that were generated during this surveillance:

TER-02-0003
TER-02-0004
TER-02-0035
TER-02-0036
TER-02-0037
TER-02-0038
TER-02-0039
TER-02-0040
TER-02-0043
TER-02-0045
TER-02-0047
TER-02-0048
TER-02-0068

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QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 2

QA Surveillance Number:
BSCQA-02-S-38

Complete only applicable items

1. Organization/Location Environment Field Support (EFS), Area 25	2. Subject Borehole Protection and Access	3. Date(s) Performed 07/08-17/2002
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4. Surveillance Scope
Evaluate the process for the protection and access control of the surface boreholes at the Yucca Mountain Site Characterization Project (YMP).

5. Requirement(s) (Procedure, Specification, Drawing, etc) AP-2.28Q, "Borehole Protection and Access", Revision 0, ICN/0, Sections 5.1, 5.2, 5.3, 5.4, & 5.6	6. Originator John K. Devers
	Team Members Richard L. Weeks

SURVEILLANCE RESULTS

7. Description/Details
There are currently 267 boreholes at YMP. This surveillance evaluated 18 boreholes, that are located leading up to and on top of the Yucca Mountain Crest, for protection and access control as addressed in procedure AP-2.28. These boreholes were inspected to determine if they had (1) secure cap/enclosure, (2) legible identification marks, and (3) evidence of tampering/damage.

Borehole No.	Inspection Criteria			*= Condition adverse to quality identified by Department of Energy (DOE) at a prior date. ** = Borehole is identified as H-3, but EFS sketch shows H-4. *** = Borehole cover has a cut-out section where objects could fall into the hole on top of the instruments located inside. **** = Borehole has no markings/hole designator on hole. ***** = Borehole markings/hole designator found in field was different than what was documented on the Borehole Protection Master Status List (FY2002). A = Accept
	(1)	(2)	(3)	
G-03	A	A	A	
GU-3	A	A	A	
H-3	A	**	A	
* H-5	A	A	***	
S-1	A	*****	A	
*SD-6	A	****	A	
*SD-7	A	A	A	
UZN-62, 66, 72, 73, 74, 75, 76	A	A	A	
UZ-13, 69	A	A	A	
WT-17	A	A	A	
WT-3	A	****	A	

(Continued on Page 2)

8. Persons (and their organizations) Contacted John W. West, BSC, Environmental Field Support Alan Mitchell, LANL, Test Coordination Office Richard Kovack, LANL, Test Coordination Office	9 CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s) DR BSC(B)-02-D-160
	Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CIRS Number(s) N/A

10 Surveillance Conclusions SAT UNSAT

The conclusion of this surveillance is that the conditions adverse to quality documented in Deficiency Report (DR) BSC(B)-02-D-160 need to be improved as follows:

- Control processes for the access to the surface-based boreholes need to be implemented consistently in accordance with YMP requirements.
- All boreholes should have secure caps or enclosures
- All boreholes should have legible markings/hole designators.
- Each borehole should have casing stickup and general collar assembly configuration.
- Eliminate tampering or damage to boreholes.

11. Completed By (Originator) (Print Name) John K. Devers	Signature 	Date 08/01/02
12. Reviewed By (Appropriate QA Manager) (Print Name) John S. Martin	Signature 	Date 08/01/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 8/1/02

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QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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Complete only applicable items

QA Surveillance Number
BSCQA-02-S-38

1. Organization/Location
Environment Field Support (EFS),
Area 25

2. Subject
Borehole Protection and Access

3. Date(s) Performed
07/08-17/2002

BLOCK 7. Description/Details: (Continued)

A discussion with a representative of EFS revealed that the keys to 30 boreholes (see list below) were transferred from U.S. Geological Survey (USGS), who had been authorized access to the boreholes, to the University of Nevada, Las Vegas (UNLV) who did not document a request for a borehole access authorization. USGS, the authorized borehole key holder, was required by procedure to return the keys to EFS personnel upon completion of their activities at the boreholes.

List of Boreholes

USW Wt-1, 2, 7, 10, 24
UE-25 WT-3, 4, 6, 12 - 17
UE-25 c-2
UE-25 p-1
USW G-2
USW H-1, 3 - 6
USW VH-1
UE-25 J-11, 12, 13
USW SD-1 ST1
UE-29 a-1, a-2
UE-29-UZN 91

This surveillance identified that EFS personnel have divided the 267 boreholes into 7 sections and have scheduled those sections to be inspected on a quarterly basis to assure that all boreholes have been inspected in a year's time period. EFS personnel maintain the YMP Borehole Access and Completion Log satisfactorily, with the exception of the 30 borehole keys listed above. The borehole keys were properly labeled and controlled in a key box located in the EFS trailer #7003. The key box had a list of EFS personnel authorized to distribute keys. The EFS representative stated that the need for an "exemption" letter had been reduced significantly due to the reduced borehole activity and stated that the last time an "exemption" letter was written was in 1997.

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QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 1
QA Surveillance Number
BSCQA-02-S-40

Complete only applicable items

1. Organization/Location BSC Repository Design/ Las Vegas, NV	2 Subject Design Drawings Process & Control	3. Date(s) Performed 07/17-25/2002
4 -Surveillance Scope To verify that Site Recommendation Preliminary Design Drawings are being processed and controlled in accordance with Administrative Procedure (AP) AP-3.24Q "Drawings" Revision 0, ICN 4		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) AP-3.24Q "Drawings" Revision 0, ICN 4		6. Originator Jerry Heaney Team Members Ajulena T Barnes

SURVEILLANCE RESULTS

7. Description/Details
BSC QA conducted this surveillance to review that Site Recommendation Preliminary Design Drawings are being processed and controlled in accordance with AP-3.24Q "Drawings" Revision 0, ICN 4, paragraphs 5.2, 5.3 & 5.5 requirements.

This surveillance was performed by review of the OCRWM Program Controlled Documents Database and the Records and Information System (RIS) network database of records packages submitted to the Records Processing Center (RPC). Repository Design personnel responsible for the design drawings were contacted for a list of design drawings. From this list, six drawings were chosen and records packages were requested for these design drawings.

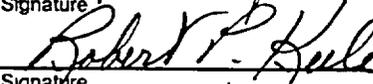
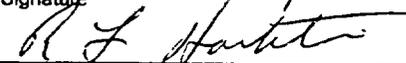
The design drawings that were reviewed are listed below:

DWG-ATS-ME-000004
DWG-VDC-ME-000002
DWG-VDC-ME-000003
DWG-WES-ME-000005
DWG-EDS-ME-000003
DWG-DCH-ME-000005

8. Persons (and their organizations) Contacted Larry Abernathy, BSC QA Dan Tunney, BSC QA Don Trujillo, BSC Michael Anderson, BSC Edward Thomas, BSC	9 CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s) QQ BSC(B)-02-O-070 CIRS Number(s) N/A
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10. Surveillance Conclusions SAT UNSAT

A thorough review of the records packages for four of the six drawings indicated that the drawings are being processed and controlled in accordance with procedural requirements. Implementation of the requirements was determined to be effective with the exception of the following isolated conditions adverse to quality: the record packages for drawings DWG-VDC-ME-000002 "Naval Long Waste Package" sheets 1, 2 & 3 and DWG-VDC-ME-000003 "Naval Short Waste Package" sheets 1, 2 & 3 do not contain objective evidence of a Navy review as required by AP-3.24Q paragraph 5.2.3.K. The drawings contain information regarding weights of Naval fuel assembly packages. This condition is isolated to the drawings contained in the Site Recommendation Design Drawings list. This condition was documented in Quality Observation (QO) BSC(B)-02-O-070.

11. Completed By (Originator) (Print Name) Jerry Heaney	Signature 	Date 9/9/02
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert P. Keele	Signature 	Date 9/9/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 9/9/02

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 2

Complete only applicable items

QA Surveillance Number:
BSCQA-02-S-44

1. Organization/Location BSC/Las Vegas, NV	2. Subject Specification Document Control	3 Date(s) Performed 08/06-14/2002
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4. Surveillance Scope
Verification of selected controlled distribution of design specifications

5. Requirement(s) (Procedure, Specification, Drawing, etc.) a. Quality Assurance Requirements and Description (QARD), Section 6.0, Revision 2, Subsection 6.2.5 b. Administrative Procedure (AP) AP-3.19Q, Revision 2, ICN 1, Section 5.5.5 c. AP-6.1Q, Revision 6, ICN 4, Sections 5.2 and 5.4	6 Originator <u>Stephen F. Schuermann</u> Team Members <u>John K Devers</u>
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SURVEILLANCE RESULTS

7. Description/Details
The purpose of this surveillance was to verify that current, approved design specifications were available at appropriate work locations as identified on Controlled Document Distribution lists (obtained from Document Control), which involved activities at the Summerlin complex and at the Yucca Mountain Site Characterization Project (YMP) site. This surveillance involved obtaining a complete listing of design specifications from Document Control developed to date on YMP. The surveillance lead then selected the following specifications from this list to determine identified controlled distribution.

SPEC 02120
SPEC 02224
SPEC 02230
SPEC BAB000000-01717-6300-01400
SPEC BAB000000-01717-6300-01501
SPEC BAB000000-01717-6300-03300
SPEC BAB000000-01717-6300-03301
SPEC BABEAF000-01717-6300-01502
SPEC BABEE0000-01717-6300-02165
SPEC SPC-MGR-PC-000001
SPEC SPC-MGR-OA-000001

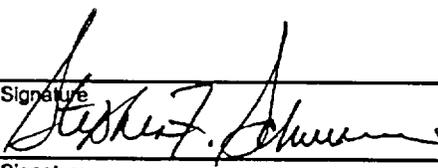
(Continued on Page 2)

8 Persons (and their organizations) Contacted All BSC: Marty Johnson, Document Control Scott Bowlinger, Document Control Christine Drummond, Training (Continued on Page 2)	9 CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s) <u>QO BSC(B)-02-O-069</u> CIRS Number(s). <u>N/A</u>
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10. Surveillance Conclusions SAT UNSAT

The surveillance lead has concluded that the overall results of this surveillance indicate that design specification document control activities are being implemented in an effective manner. The condition identified on QO BSC(B)-02-O-069 appears to be an isolated instance.

The surveillance lead also verified that the document control personnel contacted had completed training for AP-6.1, Controlled Distribution.

11. Completed By (Originator) (Pnnt Name) Stephen F. Schuermann	Signature 	Date 8/26/02
12. Reviewed By (Appropriate QA Manager) (Pnnt Name) Robert P. Keele	Signature 	Date 8/27/02
13. Approved By (QVM) (Pnnt Name) Robert F. Hartstern	Signature 	Date 8/28/02

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QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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Complete only applicable items.

QA Surveillance Number:
BSCQA-02-S-44

1. Organization/Location BSC/Las Vegas, NV	2. Subject Specification Document Control	3. Date(s) Performed 08/06-14/2002
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BLOCK 7 Description/Details (Continued):

Document Control personnel then provided the surveillance lead with the controlled distribution for the above listed specifications. All identified document holders did have the documents as identified on the Controlled Document Distribution lists with the following exceptions:

Specifications 02120, 02224, and 02230 were not available at the two locations identified on the distribution lists. Document Control personnel took immediate action (the same day) to make these specifications available at the required locations (Test Facilities Design Library in Summerlin and the Site Document Library). This condition is identified and documented on Quality Observation (QO) BSC(B)-02-O-069.

BLOCK 8 Persons Contacted (Continued):

Heidi Neff, Document Control
Debbie Lawson, Document Control
Judy Wetzel, Document Control
Deidre Maestas, TCO
Tom Reynolds, Natural Systems
Jerry Steinhoff, HVAC
Jerry Keifer, Subsurface Design
Larry McGrath, QA
John Timmons, QA
Howard Cox, QA
Nelson O'Connor, Site Operations
Dave Osborne, QA
Randy Cunningham, Field Construction

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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QA Surveillance Number:
BSCQA-02-S-57

Complete only applicable items.

1. Organization/Location BSC Performance Assessment. Engineered Systems / Las Vegas, NV	2. Subject Oak Ridge National Laboratory (ORNL), Waste Package Neutronics	3. Date(s) Performed 08/02-09/06/2002
4. Surveillance Scope Verify that the work performed by ORNL in support of BSC Yucca Mountain Site Characterization Project (YMP) work was not subject to the Quality Assurance Requirements and Description (QARD) document.		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) a. BSC Memorandum Purchase Order (MPO) B001891CM2X with ORNL b. Technical Work Plan (TWP) TWP EBS MD-00004, "Waste Package Design Description for LA" c. Records Package: Software Qualification Package for SCALE V4.4A, STN 10129-4.4A-00		6. Originator <u>Robert D. Habbe</u> Team Members <u>N/A</u>

SURVEILLANCE RESULTS

7. Description/Details

This surveillance was conducted to verify that work being performed on BSC MPO B001891CM2X by ORNL in support of YMP work was not subject to the QARD.

An interview with Dan Thomas, BSC Responsible Individual for ORNL work, was conducted to focus on the type of work ORNL performed for BSC over the past several years. During the interview, Dan Thomas explained that ORNL personnel were the developers of "SCALE" and other software programs that are currently used by BSC for YMP work. The original MPO authorized the Management and Operating Contractor (M&O) to obtain the software program "SCALE" and other software programs from ORNL. ORNL personnel also provided consulting services to the M&O.

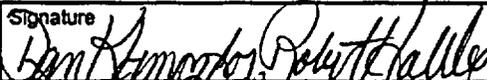
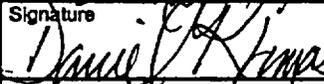
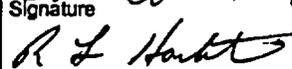
Review of the TWP identified that the ORNL work had been classified as "Not subject to the QARD Requirements".

Review of the Records Package: Software Qualification Package for SCALE V4.4A, STN 10129-4.4A-00 identified that only BSC personnel performed the validation/verification requirements of AP-SI.1Q. No ORNL personnel performed any of the requirements of Administrative Procedure (AP) AP-SI.1Q "Software Management". A search of the RISWeb (Records and Information System Web) did not identify any documents prepared by ORNL that were subject to the QARD Requirements.

8. Persons (and their organizations) Contacted Dan Thomas, BSC, Engineered Systems	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s): <u>N/A</u>
	Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CIRS Number(s): <u>N/A</u>

10. Surveillance Conclusions SAT UNSAT

This surveillance determined that the activities performed by ORNL in support of BSC were not required to be subject to the QARD Requirements.

11. Completed By (Originator) (Print Name) Robert D. Habbe	Signature 	Date 9/17/02
12. Reviewed By (Appropriate QA Manager) (Print Name) Daniel A. Klimas	Signature 	Date 9/17/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 9/18/02

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 2
QA Surveillance Number:
BSCQA-02-S-60

Complete only applicable items.

1. Organization/Location SNL / Albuquerque, NM	2. Subject SNL Technical Procedure (TP) -202	3. Date(s) Performed 08/08/2002
4. Surveillance Scope Verify the implementation of Sandia National Laboratories (SNL) TP-202		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) Sandia National Laboratories, Civilian Radioactive Waste Management, Technical Procedure TP-202, Revision 03, "Measurement of Thermal Conductivity of Geologic Specimens Using the Guarded Heat-Flow Meter Method"		6. Originator James F. Graff Team Members N/A

SURVEILLANCE RESULTS

7. Description/Details

This surveillance was conducted at the SNL Rock Mechanics Laboratory in Albuquerque, New Mexico on 08/08/2002 to verify the implementation of SNL TP-202.

Test measurements being made in support of the Yucca Mountain Site Characterization Project had been completed at the time of this surveillance; however, post-test calibration verifications were in progress. It was also possible to review a sampling of documentation generated as a result of the implementation of TP-202. It was verified that a current controlled copy of the TP was available and that personnel implementing the TP had been appropriately trained and qualified. A Memorandum of Instruction was available identifying specimen identification, special handling instructions and test temperatures to be used. Chain-of-Custody forms and Specimen Data Sheets were examined and found to be in compliance with TP-202 requirements.

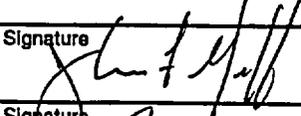
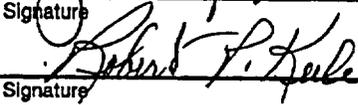
Each instrument and piece of equipment, subject to calibration requirements, was noted as having current and complete calibration documentation. Review of completed test records indicated that prescribed steps of TP-202 had been appropriately implemented and that test record entries were completed, signed, dated, and had received the required reviews.

(Continued on Page 2)

8. Persons (and their organizations) Contacted David Boronowski, SNL Geomechanics 6117	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s): N/A CIRS Number(s): N/A
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10. Surveillance Conclusions SAT UNSAT

Overall, this surveillance found effective implementation of the procedural requirements of SNL TP-202.

11. Completed By (Originator) (Print Name) James F. Graff	Signature 	Date 08/11/2002
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert P. Keele	Signature 	Date 9/19/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 9/18/02

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 2 of 2

QA Surveillance Number:
BSCQA-02-S-60

Complete only applicable items.

1. Organization/Location
SNL / Albuquerque, NM

2. Subject
SNL Technical Procedure (TP) -202

3. Date(s) Performed
08/08/2002

BLOCK 7 Description/Details (Continued):

The following documentation was examined during this surveillance:

Qualification and Training Documentation
N. Brodsky
D. Boronoski

Chain-Of-Custody and Sample Data Sheet Documentation

ECRB-THERMK-001-3.9-SNL-A (ECRB = Enhanced Characterization of the Repository Block)
ECRB-THERMK-003-41.1-1-SNL-A
ECRB-THERMK-005-36.8-SNL-A
NRG-6-926.3-SNL-D (NRG = North access Ramp Geologic)
USW-NRG-6-1084.2-2-SNL-A (USW = Underground, Southern Nevada, Waste)

Calibration Documentation

Guarded Heat-Flow Meter, Model TCA-200-LT, Serial Number (S/N) SA-0693-SAD
Lawson Labs 140 A/D Board, Model 140, S/N -03
Lawson Labs 20B Thermocouple Board, Model 20B, S/N -03
Fluke DC Voltage Calibrator, S/N 2061008
Ohaus Standard Balance, S/N SNC11222942
Omega Type K Thermocouple, S/N TCA-01-103
Omega Type K Thermocouple, S/N TCA-01-107
Omega Type K Thermocouple, S/N TCA-01-112
Omega Type K Thermocouple, S/N TCA-01-114

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 1
QA Surveillance Number:
BSCQA-02-S-61

Complete only applicable items.

1. Organization/Location LANL / Los Alamos, NM	2. Subject Out-of-Calibration Reports (OCRs)	3. Date(s) Performed 07/29/2002
4. Surveillance Scope Evaluate the process of documenting and controlling Out-of-Calibration Conditions of Measuring and Test Equipment (M&TE) at LANL/YMP for Calendar Year 2002.		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) Administrative Procedure (AP) AP-12.1Q, Revision 0, ICN 2, "Control of Measuring and Test Equipment and Calibration Standards", Section 5.7 "Out-of-Calibration Conditions"		6. Originator James F. Graff Team Members L. (Paul) Buenviaie

SURVEILLANCE RESULTS

7. Description/Details

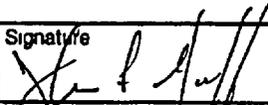
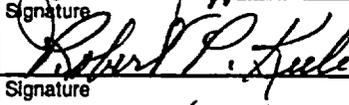
The purpose of this surveillance was to evaluate the methods being implemented by Los Alamos National Laboratory (LANL)/ Yucca Mountain Site Characterization Project (YMP) personnel to document Out-of-Calibration Conditions of M&TE and to evaluate the impact to data collection, process monitored, or items evaluated as a result of using out-of-calibration M&TE.

On 07/29/2002, the surveillance team visited LANL in Los Alamos, New Mexico. During interviews with responsible LANL staff, it was established that there had been a total of three Out-of-Calibration Conditions, to date during Calendar Year 2002. It was noted that these conditions had been appropriately documented on M&TE OCRs, identified as LANL-2002-001, LANL-2002-002 and LANL-2002-003, in accordance with AP-12.1Q requirements. In addition, it was verified that a log of unique M&TE OCRs is being maintained by LANL. Review of the M&TE OCRs indicated that tagging or segregation was not required in any of these Out-of-Calibration Conditions, in that equipment adjustments were made at the time the conditions were identified. Further review of the M&TE OCRs indicated that the required impact evaluations had been performed and that appropriately justified no impact determinations had been provided for all three conditions. M&TE OCRs also exhibited objective evidence of appropriate reviews and approvals. Appropriate submittal of completed M&TE OCRs to the Records Processing Center was also verified at this time.

8. Persons (and their organizations) Contacted Jim Young, LANL/YMP Technical Assurance Staff	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s): N/A CIRS Number(s): N/A
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10. Surveillance Conclusions SAT UNSAT

The results of this surveillance activity indicated that Out-of-Calibration Conditions at LANL/YMP are being appropriately controlled, documented and evaluate in accordance with the applicable requirements of AP-12.1Q.

11. Completed By (Originator) (Print Name) James F. Graff	Signature 	Date 09/11/2002
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert F. Keele	Signature 	Date 9/18/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 9/19/02

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

QA: QA
Page 1 of 5
QA Surveillance Number:
BSCQA-02-S-62

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Complete only applicable items.

1. Organization/Location BSC / Las Vegas, NV	2. Subject Corrective Actions for CAR BSC-02-C-001	3. Date(s) Performed 07/31-08/14/2002
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4. Surveillance Scope
Determine if BSC is ready for the Department of Energy Office of Quality Assurance (OQA) verification of implementation of corrective action associated with Corrective Action Report (CAR) BSC-02-C-001.

5. Requirement(s) (Procedure, Specification, Drawing, etc.) a. Corrective action commitments in response to CAR BSC-02-C-001. Refer to CAR Amended Response accepted by OQA on 05/13/2002. b. AP-2.1Q, Revision 2/ICN 0, "Indoctrination and Training of Personnel" c. AP-2.2Q, Revision 1/ICN 0, "Establishment and Verification of Required Education and Experience of Personnel" d. Selected portions of LP LP-4.3Q-BSC, Revision 0/ICN 3, "Subcontracts" e. LP-4.4Q-BSC, Revision 0/ICN 3, "Technical Service Agreements"	6. Originator <u>Richard E. Powe</u> Team Members <u>David Z. Hathcock (in training)</u> <u>James V. Voigt-Observer</u>
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SURVEILLANCE RESULTS

7. Description/Details
This surveillance was a follow-up to Surveillance BSCQA-02-S-09 conducted by BSC on May 20-30, 2002 and included a limited review of training and, if appropriate, Verification of Education and Experience (VoEE).

BACKGROUND

CAR BSC-02-C-001 was generated as a result of Surveillance BSC-SR-02-02 conducted by OQA in November 2001. The CAR identified that multiple individuals were listed as "Unassigned" in the Training Department Training Server database, and that it was unknown if these individuals had been performing quality-related work. The CAR indicated that it could not be determined if the requirements of Administrative Procedures (AP) AP-2.1Q "Indoctrination and Training of Personnel" and AP-2.2Q "Establishment of Required Education and Experience of Personnel" were being implemented.

A root cause analysis determined that "no process existed to ensure that the status of all subcontractor personnel is shared by Project Managers and Functional Managers".

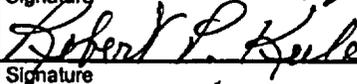
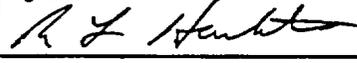
(Continued on Page 2)

8. Persons (and their organizations) Contacted Deidre Barney - BSC Human Resources Christine Drummond - BSC Training Mike Eldred - BSC Procurement Gloria Ferreiro - BSC Training (Continued on Page 5)	9. CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Recommendation Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	CAQ/NCR/TE Number(s) <u>DIR 02-16</u> CIRS Number(s): <u>3072</u>
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10. Surveillance Conclusions SAT UNSAT

Although there were some communication issues dealing with informing appropriate personnel about changes in procedures that add new responsibilities, the BSC is ready for verification of corrective action associated with CAR BSC-02-C-001. The communication issues have been documented in CIRS Item 3072 as an opportunity to improve.

A DIR 02-16 to DR BSC(B)-02-D-159 was also generated to document that there are some additional contractor personnel for which no record of VoEE could be located.

11. Completed By (Originator) (Print Name) Richard E. Powe	Signature 	Date 9/3/02
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert P. Keele	Signature 	Date 9/3/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 9/3/02

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 2 of 5
QA Surveillance Number:
BSCQA-02-S-62

Complete only applicable items

1. Organization/Location
BSC / Las Vegas, NV

2. Subject
Corrective Actions for CAR BSC-02-C-001

3. Date(s) Performed
07/31-08/14/2002

BLOCK 7 Description/Details (Continued):

The Actions to Preclude Recurrence were:

- 1) Revise subcontracts to address requirements for training and VoEEs; and
- 2) Revise two Line Procedures (LP), LP-4.3Q-BSC "Subcontracts" and LP-4.4Q-BSC "Technical Service Agreements, to require monthly reports from Procurement to Functional Managers regarding subcontractor employees to ensure that subcontractor employees are identified, appropriate training assigned and if needed VoEEs completed.

Deficiency Identification and Referral (DIR) 02-01 was issued to CAR BSC-02-C-001 as a result of OQA Surveillance BSC-SR-02-01. The DIR, issued in November 2001, identified that three employees had not been provided with their training matrix.

Surveillance Activity:

In May 2002, BSC performed Surveillance BSCQA-02-S-09 to determine if CAR BSC-02-C-001 was ready for verification. BSCQA-02-S-09 did not investigate remedial/extent of condition issues. BSCQA-02-S-09 determined that the subcontracts and the procedures had been revised; however, there was a lack of objective evidence of implementation of the revised procedures. BSCQA-02-S-09 identified two concerns as follows:

- 1) Condition/Issue Identification and Reporting/Resolution System (CIRS) 2708 documented that there are multiple inconsistent databases within the Procurement organization to identify subcontractors and Functional Managers
- 2) Document Action Request (DAR) D4271 to LP-1.0Q-BSC "Organization" documented that it is not clear and appears to cause confusion among personnel as to who is a Functional Manager.

Surveillance BSCQA-02-D-09 concluded that CAR BSC-02-C-001 was not ready for verification. BSC has been issuing an Overdue Action Report for this CAR every week since June 2002 with an expected completion date of 08/16/2002.

SURVEILLANCE DETAILS

Remedial Action:

During this surveillance, the training and VoEE for the three employees identified in DIR 02-01 were reviewed and the following status was determined:

Training Server ID No.	Status
6461 (subcontractor)	has VoEE (MOL.19990303.0588), all training complete except three "IP" (Initial-Prior to performing specific work activities) assignments, AP-2.20Q, AP-SIII.1Q, Design Control Process, not performing activities that require this training. Employee was contacted during this surveillance and he was aware of his training assignment.
13749 (LANL employee)	has VoEE (MOL.20011129.0306), all training complete.
12250 (SNL employee)	has VoEE (MOL.20010212.0433), all training complete except two "IP" assignments (AP-SIII.1Q, and AP-SI.1Q SW Developer/User, not performing the activities.

The conclusion was that Remedial Action was complete concerning DIR 02-01.

During this surveillance, a comparison was made between the latest Engineering Job Function Matrix, and the 158 employees included in Self-Assessment (SA) SA-ENG-2002-004 to determine which Engineering employees had not been included in the Investigative Actions. The result was that there were 155 contractor employees on the latest Engineering Job Function Matrix that were either added after the SA was completed, or they were already on the Engineering Job Function Matrix in November 2001. The training and, if applicable, VoEE for a sample of 15 individuals from these 155 contractor employees was investigated during this surveillance. The results were:

(Continued on Page 3)

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 3 of 5
QA Surveillance Number:
BSCQA-02-S-62

Complete only applicable items

1. Organization/Location
BSC / Las Vegas, NV

2. Subject
Corrective Actions for CAR BSC-02-C-001

3. Date(s) Performed
07/31-08/14/2002

BLOCK 7 Description/Details (Continued):

Training Server ID No.	Organization	VoEE
14113	IBEX	MOL.19991213.0154
15126	IBEX	MOL.20001006.0189
14321	DESI (now Framatome ANP, Inc.)	DIR 02-16 to DR BSC(B)-02-D-159
14466	DESI (now Framatome ANP, Inc.)	MOL.20011120.0935
14821	Framatome ANP, Inc.	DIR 02-16 to DR BSC(B)-02-D-159
8240	DESI (now Framatome ANP, Inc.)	MOL.19981109.0120
16295	ITASCA	MOL.20011126.0024
11940	Beckman & Associates	MOL.19990119.0251
13435	Beckman & Associates	No Q-work performed
14708	DESI (now Framatome ANP, Inc.)	DIR 02-16 to DR BSC(B)-02-D-159
14710	Beckman & Associates	No Q-work performed
15080	Beckman & Associates	No Q-work performed
6461	DESI (now Framatome ANP, Inc.)	MOL.19990303.0588
15354	Beckman & Associates	No Q-work performed
15770	Framatome ANP, Inc.	DIR 02-16 to DR BSC(B)-02-D-159

Some of the employees listed above had "IP" training not taken; however, a review of that training assignment with regard to the employees work activity did not reveal any problems. Deficiency Report (DR) BSC-01-D-129 concerning lack of training is still open and any problems with implementation of training will be addressed in that DR. DIR 02-16 was generated to assure remedial action for DR BSC(B)-02-D-159 includes the individuals identified above.

Training Server ID No.	Organization	Comments
4744	ISSI	works for CIO VoEE MOL.19990212.0045, Training current.
15629	ISSI	works for CIO Administrative, no Q-related work activity.
16870	XRON	works for Site Operations, Administrative, no Q-related work activity.

No attempt was made during this surveillance to evaluate the SA for accuracy.

Action to Preclude Recurrence:

During this surveillance, evidence of implementation of LP-4.3Q-BSC and LP-4.4Q-BSC was found in the form of an e-mail from Mike Eldred, Procurement to Functional Managers (see attached Exhibit A) and Engineering also produced evidence of implementation in the form of an e-mail to Project personnel (see attached Exhibit B).

When other Functional Managers outside of the Engineering organization were approached to determine if they had implemented the requirements of the LPs, it was quickly determined that these Functional Managers and key personnel within their organizations were not aware of the requirements of the LPs. After becoming aware of the requirements, Chief Information Officer (CIO) and Computer Security Operation Manager (CSO) took action during this surveillance to comply. This communication issue is documented in CIRS 3702 as described on page 4 and block 10. Construction indicated that they had no subcontractors performing quality-related activities.

CIRS 2708: A review of the status of CIRS 2708 during this surveillance revealed that this CIRS Item was still open and being worked by BSC Procurement, Robert Henderson. The database, that Procurement updates monthly, no longer has a column labeled "Functional Managers". The database identifies "Responsible Manager/Technical Point of Contact".

DAR D4271: DAR action has been "deferred until the next revision". A discussion with the LP-1.0Q-BSC author revealed that a revision to the procedure was just started and it may be delayed due to commitments made in PLN-CRW-AD-000009, Revision 0, "Management Improvement Initiatives".

(Continued on Page 4)

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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Complete only applicable items.

QA Surveillance Number:
BSCQA-02-S-62

1. Organization/Location
BSC / Las Vegas, NV

2. Subject
Corrective Actions for CAR BSC-02-C-001

3. Date(s) Performed
07/31-08/14/2002

BLOCK 7 Description/Details (Continued):

FUNCTIONAL MANAGERS

LP-1.0Q-BSC , Revision 1/CN 1, effective 02/18/2002, "Organization" has the following definitions:

Functional Manager - The Technical Support and Business Support Managers. These Managers, who report to the Deputy General Manager and General Manager, provide resources to Project Managers to facilitate work completion including people, procedures, training, and technical approaches specific to a particular discipline. In addition, Functional Managers are responsible for employee career development, hiring, and compensation. Functional Managers' responsibilities are further described in Paragraphs 5.6.5 for Technical Support and 5.6.6 for Business Support."

Laboratory Leads - The highest-ranking managerial position at each of the four laboratories that report to the Chief Science Officer. These Laboratory Leads represent Lawrence Livermore National Laboratory (LLNL), Lawrence Berkeley National Laboratory (LBNL), Los Alamos National Laboratory (LANL), and Sandia National Laboratory (SNL). These Leads have responsibilities comparable to BSC Functional Managers.

Discussions with the Engineering organization representative and the Procurement representatives revealed that they consider the following BSC Managers as Functional Managers for purposes of implementing LP-4.3Q-BSC and LP-4.4Q-BSC:

General Manager, Ken Hess
Deputy General Manager, Don Pearman
Environmental Safety & Health, Dennis Sorensen
Quality Assurance, Don Krishna

Technical Support Managers

- CSO, Michael Voegelé
- Engineering, James Whitcraft
- Project Controls, Scott Hajner
- Procurement and Property, Darell von der Linden
- CIO, David Tommela
- Construction, Thom Peterson

Business Support and Operations

- Business Management, Pete Maxfield
- Human Resources & Training, Mary O'Donnell
- CFO, Eric Koppitsch
- Administrative and Technical Support Services, Melinda d'Ouille
- Prime Contract Administration, Wiley Wells
- Communications, Bea Reilly
- Internal Audit, Rick Saval
- Legal, Jeff Halliday

Manager of Projects, Nancy Williams (for her four direct reports)
Site Operations, Leon Fossum

Although the following Managers may be considered Functional Managers in accordance with LP-1.0Q-BSC, they have not been included in the implementation of LP-4.3Q-BSC and LP-4.4Q-BSC:

Laboratory Leads

- LANL, Paul Dixon
- LBNL, Yvonne Tsang
- LLNL, Martha Kohler
- SNL, Andrew Orrell

There was an opportunity for improvement identified during this surveillance that has been documented as CIRS Item 3072 that, in summary, states that when procedures are revised/changed to add new "organizations or positions having responsibility for implementing the procedure", there needs to be a method established to communicate this change to these newly added "organizations or positions".

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
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Complete only applicable items

QA Surveillance Number:
BSCQA-02-S-62

1. Organization/Location
BSC / Las Vegas, NV

2. Subject
Corrective Actions for CAR BSC-02-C-001

3. Date(s) Performed
07/31-08/14/2002

BLOCK 8 Persons Contacted (Continued):

Lee Fossum - BSC Site Operations
Carolyn Gardner - Beckman & Associates
Robert Henderson - BSC Procurement
Marty Johnson - BSC CIO
Dean Kunihiro - BSC Engineering
Randy Mackie - BSC CIO
Jeff McCleary - BSC ISSI
Jerry McNeish - Framatome ANP, Inc. (formally DESI)
Sunil Mehta - Framatome ANP, Inc. (formally DESI)
Terry Rathgeb - BSC Engineering
Janice Roberson - BSC CSO
Eric Siegmann - Framatome ANP, Inc. (formally DESI)
Mike Sparks - BSC Construction
Steve Splawn - BSC CIO
Bob Stoner - BSC CIO
Steve Swenning - BSC CSO
Carolyn Tabor - BSC Records Administration
Dave Tommela - BSC CIO
Mike Voegelé - BSC CSO

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OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 2

QA Surveillance Number:
BSCQA-02-S-65

Complete only applicable items.

1. Organization/Location Sample Management Facility(SMF) / ECRB, Nevada	2. Subject Core Drilling and Sampling Activities in the Enhanced Characterization of the Repository Block(ECRB)	3. Date(s) Performed 08/21-09/16/2002
4. Surveillance Scope Evaluate core drilling and sample collection activities in the ECRB.		
5 Requirement(s) (Procedure, Specification, Drawing, etc.) a. Implementation of Line Procedures (LP) LP-SMF-001Q-BSC, "Field Drilling Support Activities", Revision 0, ICN 0, Sections 5.1a, 5.1c, 5.2a, 5.2b, 5.3a, 5.3c, 5.3g, & 6.0 b. LP-SMF-002Q-BSC, "Field Logging, Handling, and Documenting Borehole Samples" Revision 1, ICN 0, Sections 5.2b, 5.2c, 5.2d, 5.2j, 5.3a, 5.3e, 5.4a, 5.5e, 5.5f, 5.7d & 5.9c c. Work Instructions, TCO-WI-0015, Revision 03 and TCO-WI-0017, Revision 01		6. Originator Richard L. Weeks Team Members John K. Devers

SURVEILLANCE RESULTS

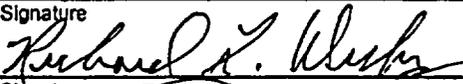
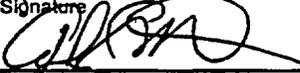
7. Description/Details
The purpose of this surveillance was to evaluate drilling and sampling activities performed in the ECRB on 08/21/2002. The evaluated activities support scientific investigations described in Scientific Investigation Test Plan SITP-02-SSD-002, Revision 0, "Mechanical Properties Laboratory Investigations". The following is a discussion of the specific activities evaluated and documents examined.

LP-SMF-001Q-BSC requirements implementation:
Borehole ECRB-GTEC-CS2150-02 was being drilled during this surveillance. The Daily Operations Report (DOR), dated 08/21/2002, was examined and found to be complete. Required information was found to be documented and included: borehole name, drill rig used, and names of personnel working at the site. Core run data for shift included: starting depth, end depth, length of core, core recovery, and time of core run. Drill cycle data included: start depth, end depth, length drilled and actual time for drill cycle, drilling parameters for each core run drill cycle including average weight on bit, average revolutions per minute on bit, estimates of water loss, and notes on variations in drilling parameters. Bit data included: manufacturer, type, outside diameter, inside diameter, and description. The drilling staff was maintaining control of depth. A Drilling/Coring Datasheet was being completed and included the following information: borehole name, drill rig type, core bit manufacturer, type, size (OD/ID), serial number, shift, activity drilling method, tracer used, core/drill string data to nearest 1/100th of a foot, and core/drill run to nearest 1/10th of a foot. (Continued on Page 2)

8. Persons (and their organizations) Contacted Steve Hopkins, BSC, Drilling Engineer Walter Slack, BSC, Geologist Easte Warnick, BSC, Geologist	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s): N/A CIRS Number(s): N/A
--	---	--

10. Surveillance Conclusions SAT UNSAT

The sample collection and drilling support activities evaluated during this surveillance were performed in a satisfactory and effective manner. Documentation of drilling and sample collection activities were complete and in accordance with requirements identified in the documents identified in Block 5 above.

11. Completed By (Originator) (Print Name) Richard L. Weeks	Signature 	Date 9-24-02
12. Reviewed By (Appropriate QA Manager) (Print Name) John S. Martin	Signature 	Date 9-24-02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 9-24-02

ORIGINAL
red

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 2 of 2

Complete only applicable items.

QA Surveillance Number:
BSCQA-02-S-65

1. Organization/Location Sample Management Facility(SMF) / ECRB, Nevada	2. Subject Core Drilling and Sampling Activities in the Enhanced Characterization of the Repository Block(ECRB)	3. Date(s) Performed 08/21-09/16/2002
---	---	--

BLOCK 7 Description/Details (Continued):

LP-SMF-002Q-BSC requirements implementation:

The Core Run Summary Log, Geologic Log and Field Video Log were complete and up-to-date at the time of this surveillance. The following core run was observed and the following information was video taped and documented: Run #1, Depth interval = 0.0 to 1.4, amount of core recovered = 1.2 feet and amount of core not recovered = 0.2 feet. Structural and lithologic features were documented on the Geologic Log. The collected sample was staged properly. Core was labeled and video taped in accordance with specified requirements. Sample was packaged and labeled for shipment. The Field Container Summary and Transmittal form was completed as required.

It was verified that correct revisions of procedures being implemented were on location during drilling operations. The following documents were examined:

- LP-SMF-001Q-BSC, Revision 1, ICN 0
- LP-SMF-002Q-BSC, Revision 0, ICN 0
- TCO-WI-0015, Revision 03
- TCO-WI-0017, Revision 01

Titles and descriptions of documents that control the work evaluated during this surveillance are listed below:

- FWP-ESF-02-001, Revision 1, "Geotechnical Rock Properties Testing"
- LP-SMF-001Q-BSC, Revision 0, ICN 0, "Field Drilling Support Activities"
- LP-SMF-002Q-BSC, Revision 1, ICN 0, "Field Logging, Handling and Documenting Borehole Samples"
- Work Instruction, TCO-WI-0015, Revision 03, "Field Drilling Engineering & Processing Borehole Core Samples at Underground Drill Hole Locations"
- Work Instruction, TCO-WI-0017, Revision 01, "Sample Management & Drilling Handling, Processing, and Packaging of Core and Cuttings Samples from YMP Boreholes, and Handling/Processing of all other YMP Samples, Specimens and Remnants"

Personnel interviewed during this surveillance were very cooperative and displayed a thorough knowledge of the work being performed.



QA: QA

Vince Gaeta, Chief Operations Officer
Info Stor
1428 Pama Lane
Las Vegas, NV 89119

**BECHTEL SAIC COMPANY, LLC (BSC) QUALITY ASSURANCE (QA) SUPPLIER AUDIT
REPORT BSC-SA-02-026 OF INFO STOR**

Enclosed is the Supplier Audit Report BSC-SA-02-026 of Info Stor that was performed on June 25-26, 2002, in Las Vegas, Nevada. The audit evaluated Info Stor's implementation and the effectiveness of the BSC Quality Program as invoked by the BSC procurement document.

The audit revealed Info Stor's effective implementation of the BSC Quality Program.

As a result of the audit, Info Stor will remain on the Office of Civilian Radioactive Waste Management Qualified Suppliers List. Info Stor will continue to be on an annual audit schedule for records storage services. Additionally, audits or surveillances prior to the next scheduled audit may be performed based upon QA program changes, scope of work changes, and/or supplier performance as deemed necessary.

This audit is considered complete and closed as of the date of this letter.

If you have any questions, please contact either Michael A. Goyda at (702) 295-2797 or Daniel A. Klimas at (702) 295-2665.

A handwritten signature in black ink that reads 'D. T. Krisha'.

Donald T. Krisha, Manager
Quality Assurance

7/3/02
Date Signed

MAG:ml-0701023190

Enclosure:
Supplier Audit Report BSC-SA-02-026

July 3, 2002
Page 2

cc w/encl:

P. V. Auger, NQS, North Las Vegas, NV
G. K. Beall, BSC, Las Vegas, NV
L. W. Bradshaw, Nye County, Pahrump, NV
David Chavez, Nye County, Tonopah, NV
Margaret Chu, DOE/HQ (RW-1) FORS
J. R. Dyer, DOE/YMSCO, Las Vegas, NV
Leonard Fiorenzi, Eureka County, Eureka, NV
Arlo Funk, Mineral County, Hawthorne, NV
Birdie Hamilton-Ray, DOE/YMSCO, Las Vegas, NV
Alan Kalt, Churchill County, Fallon, NV
D. A. Klimas, BSC, Las Vegas, NV
D. T. Krishna, BSC, Las Vegas, NV
Josie Larson, White Pine County, Ely, NV
Robert Latta, NRC, Las Vegas, NV
M. E. Lobo, BSC, Las Vegas, NV
R. R. Loux, State of Nevada, Carson City, NV
S. W. Lynch, State of Nevada, Carson City, NV
George McCorkell, Esmeralda County, Goldfield, NV
Mifflin and Associates, Las Vegas, NV
Ram Murthy, DOE/OQA, Las Vegas, NV
Irene Navis, Clark County, Las Vegas, NV
Andrew Remus, County of Inyo, Independence, CA
N. K. Stablein, NRC, Rockville, MD
Lola Stark, Lincoln County, Caliente, NV
D. D. vonderLinden, BSC, Las Vegas, NV
N. H. Williams, BSC, Las Vegas, NV
Mickey Yarbrow, Lander County, Battle Mountain, NV

cc w/encl:

L. L. Colehour, BSC, Las Vegas, NV
M. A. Goyda, BSC, Las Vegas, NV
J. L. Harding, BSC, Las Vegas, NV
R. L. Maudlin, BSC, Las Vegas, NV
Kathleen Steel, BSC, Las Vegas, NV
C. T. Taylor, BSC, Las Vegas, NV

**BECHTEL SAIC COMPANY, LLC (BSC)
QUALITY ASSURANCE (QA)
SUPPLIER AUDIT REPORT**

QA:QA

1. **SUPPLIER AUDIT NUMBER:** BSC-SA-02-026
2. **DATES PERFORMED:** June 25-26, 2002
3. **SUPPLIER NAME:** Info Stor
4. **SUPPLIER LOCATION:** Las Vegas, Nevada
5. **SERVICES/ITEMS PROVIDED:** Record Storage Services
6. **AUDIT SCOPE:** An evaluation of Info Stor's implementation and effectiveness of the BSC Quality Program meet BSC procurement documents.
7. **QA PROGRAM ELEMENTS EVALUATED:** QA Program, Document Control, Corrective Action, and QA Records.
8. **SUPPLIER QUALITY PROGRAM DOCUMENT AND REVISION AUDITED:**
BSC Quality Program requirements as delineated in
BSC Purchase Order 24540-010-PO-13499 (which invokes the use of Office of
Civilian Radioactive Waste Management Procedures as applicable to records storage)
9. **BSC APPLICABLE PROCUREMENT DOCUMENTS:**
BSC Purchase Order 24540-010-PO-13499
10. **AUDIT TEAM MEMBERS:**
LEAD: Michael A. Goyda, BSC QA
MEMBERS: Charles T. Taylor, BSC QA
11. **OBSERVERS:** John Cox, BSC
12. **PERSONNEL CONTACTED DURING AUDIT:**
Vince Gaeta, Chief Operations Officer, Info Stor
13. **OVERALL EFFECTIVENESS OF THE SUPPLIERS QA PROGRAM IMPLEMENTATION:**
SATISFACTORY X **UNSATISFACTORY** _____
IF CONSIDERED UNSATISFACTORY—DESCRIBE QA ELEMENT AND CAUSE: N/A

14. FOLLOW-UP REQUIRED:

- NO FOLLOW-UP AUDIT OR SURVEILLANCE REQUIRED
 SURVEILLANCE
 FOLLOW-UP AUDIT
 DETERMINATION BASED ON IMPACT WHEN CAR/DR CLOSED

15. SUPPLIER STATUS:

AUDIT SCHEDULE

- REMAIN ON QSL WITH TRIENNIAL AUDIT SCHEDULE
 REMAIN ON QSL WITH ANNUAL AUDIT SCHEDULE

Audits or surveillances prior to the next scheduled audit may be performed based on QA program changes, scope of work changes, and/or supplier performance as deemed necessary.

RESTRICTIONS

- NONE YES

IF YES – RESTRICTION IS: N/A

16. AUDIT DETAILS:

Details of the audit, along with the objective evidence reviewed are contained within the audit checklist, which is available from the BSC Records Processing Center.

17. AUDIT FINDINGS:

TOTAL CONDITIONS ADVERSE TO QUALITY: None

CONDITIONS ADVERSE TO QUALITY BRIEF DESCRIPTION:

Document Type and Number	Description
N/A	N/A

TOTAL RECOMMENDATIONS FOR IMPROVEMENT: None

RECOMMENDATIONS FOR IMPROVEMENT BRIEF DESCRIPTION: N/A

This audit is considered closed.

Prepared by: Michael A. Goyda
Michael A. Goyda
Audit Team Leader
BSC Quality Assurance

Date: 6/27/02

Approved by: D. T. Krishna
Donald T. Krishna, Manager
BSC Quality Assurance

Date: 7/3/02



QA: QA

Dr. Peter L. Andresen, Sr. Scientist
General Electric Corporate Research
and Development Center
1 Research Circle
Schenectady, NY 12309

**BECHTEL SAIC COMPANY, LLC (BSC) QUALITY ASSURANCE (QA) SUPPLIER AUDIT
REPORT BSC-SA-02-028 OF GENERAL ELECTRIC CORPORATE RESEARCH AND
DEVELOPMENT CENTER (GE)**

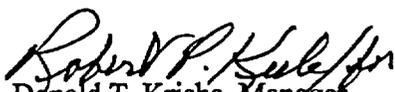
Enclosed is the Supplier Audit Report BSC-SA-02-028 of GE that was performed on June 25-26, 2002, in Schenectady, New York. The audit evaluated the implementation and effectiveness of the GE Quality Program in meeting the requirements of the BSC procurement documents.

The audit revealed effective implementation of the GE Quality Program with the exception of two conditions adverse to quality in the areas of Procurement Document Control and Control of Measuring and Test Equipment. These conditions adverse to quality are documented in Quality Observation (QO) Reports BSC(V)-02-O-053 and -054. There were two Recommendations for Improvement identified. No response to the recommendations is required.

As a result of the audit, GE will remain on the Office of Civilian Radioactive Waste Management Qualified Suppliers List on a triennial audit schedule.

This audit is considered complete and closed as of the date of this letter.

If you have any questions, please contact either Daniel A. Klimas at (702) 295-2665 or Robert F. Hartstern at (702) 295-2675.


Donald T. Krishna, Manager
Quality Assurance

7-24-02
Date Signed

DAK:bw-0724023493

Enclosure:
Supplier Audit Report BSC-SA-02-028

July 24, 2002

Page 2

cc w/encl:

P. V. Auer, NQS/YMSCO, North Las Vegas, NV
G. K. Beall, BSC, Las Vegas, NV
J. R. Dyer, DOE/YMSCO, North Las Vegas, NV
Birdie Hamilton-Ray, DOE/YMSCO, North Las Vegas, NV
D. A. Klimas, BSC, Las Vegas, NV
D. T. Krisha, BSC, Las Vegas, NV
Ram Murthy, DOE/OQA/YMSCO, North Las Vegas, NV
D. D. von der Linden, BSC, Las Vegas, NV
N. H. Williams, BSC, Las Vegas, NV
B. L. Wilson, BSC, Las Vegas, NV

cc w/encl:

R. W. Andrews, BSC, Las Vegas, NV
T. W. Doering, BSC, Las Vegas, NV
J. C. Estill, BSC/LLNL, Livermore, CA
G. M. Gordon, BSC, Las Vegas, NV
R. D. Habbe, BSC, Las Vegas, NV
Tammy Summers, BSC/LLNL, Livermore, CA
C. C. Warren, BSC/LLNL, Livermore, CA

**BECHTEL SAIC COMPANY, LLC (BSC)
QUALITY ASSURANCE (QA)
SUPPLIER AUDIT REPORT**

1. **SUPPLIER AUDIT NUMBER:** BSC-SA-02-028
2. **DATES PERFORMED:** June 25-26, 2002
3. **SUPPLIER NAME:** General Electric Corporate Research and Development Center (GE)
4. **SUPPLIER LOCATION:** Schenectady, New York
5. **SERVICES/ITEMS PROVIDED:** Stress Corrosion Crack Growth Rate Analysis
6. **AUDIT SCOPE:** An evaluation of the implementation and effectiveness of the GE Quality Assurance Program to meet BSC procurement documents.
7. **QA PROGRAM ELEMENTS EVALUATED:** Organization, Quality Assurance Program, Procurement Document Control, Implementing Documents, Document Control, Control Of Purchased Items and Services, Test Control, Control Of Measuring and Test Equipment, Corrective Action, QA Records, Audits, Software, Sample Control, and Scientific Investigation.
8. **SUPPLIER QUALITY PROGRAM DOCUMENT AND REVISION AUDITED:**
GE Quality Assurance Program, Corrosion Program, Revision 1.1, dated 12/20/1996.
This manual is based on the requirements of 10CFR 50, Appendix B.
9. **BSC APPLICABLE PROCUREMENT DOCUMENTS:**
BSC Purchase Order 24540-100-PO-10508
10. **AUDIT TEAM MEMBERS:**
LEAD: Daniel A. Klimas, BSC QA
MEMBERS: Robert D. Habbe, BSC QA
11. **OBSERVERS:** Tammy Bloomer, U.S. Nuclear Regulatory Commission (NRC)
Tom Trbovich, Southwest Research Institute/NRC
Frank Wong, Management & Technical Services

12. PERSONNEL CONTACTED DURING AUDIT:

Peter Andresen, Senior Scientist, GE
Larry Nelson, Laboratory Manager, GE
Bill Catlin, QA Administrator, GE
Gregory Catlin, Technician, GE
Lisa Young, Staff Scientist, GE
Young-Jin Kim, Staff Scientist, GE
Mike Pollick, Technician, GE
Paul Emigh, Technician, GE

13. OVERALL EFFECTIVENESS OF THE SUPPLIERS QA PROGRAM IMPLEMENTATION:

SATISFACTORY UNSATISFACTORY _____

IF CONSIDERED UNSATISFACTORY –DESCRIBE QA ELEMENT AND CAUSE: N/A

14. FOLLOW-UP REQUIRED:

NO FOLLOW-UP AUDIT OR SURVEILLANCE REQUIRED
_____ SURVEILLANCE
_____ FOLLOW-UP AUDIT
_____ DETERMINATION BASED ON IMPACT WHEN CAR/DR CLOSED

15. SUPPLIER STATUS:

AUDIT SCHEDULE

REMAIN ON QSL WITH TRIENNIAL AUDIT SCHEDULE
_____ REMAIN ON QSL WITH ANNUAL AUDIT SCHEDULE

Audits or surveillances prior to the next scheduled audit may be performed based on QA program changes, scope of work changes, and/or supplier performance as deemed necessary.

RESTRICTIONS

NONE _____ YES

IF YES – RESTRICTION IS: N/A

16. **AUDIT DETAILS:**

Details of the audit, along with the objective evidence reviewed are contained within the audit checklist, which is available from the BSC Records Processing Center.

17. **AUDIT FINDINGS:**

TOTAL CONDITIONS ADVERSE TO QUALITY: Two

CONDITIONS ADVERSE TO QUALITY BRIEF DESCRIPTION:

Document Type and Number	Description
Quality Observation (QO) BSC(V)-02-O-053	<p>GE Quality Assurance Administrative Procedure (QAAP) 12-1, Section 4.1.2 states: "Each item of M&TE listed shall have a unique identification."</p> <p>GE QAAP 12-1, Section 4.1.3 states: "The completed M&TE listing shall include as a minimum...the unique identification...and the calibration frequency."</p> <p>GE QAAP 12-1, Section 4.1 states: "The individual staff members shall complete a master list of equipment used to take measurements and perform tests for activities affecting quality."</p> <p>Contrary to these requirements, it was found that the following thermocouples currently being used in tests conducted by GE for OCRWM were labeled with the unique identification of TC-011, TC-014, TC-016, TC-017, TC-019 and TC-020. A review of the Master List of Equipment and the corresponding calibration certificate identified that the thermocouples were listed with unique identification of: K-011, K-014, K-016, K-017, K-019 and K-020.</p> <p><u>Action Taken:</u> GE investigated the situation and determined that the thermocouples were incorrectly tagged with the prefix "TC". Additionally, there were no other thermocouples tagged with either the "TC" or "K" prefix and serial number. GE decided to remove the tags from the thermocouples, make new calibration tags and attached the new tags to the thermocouples identifying the thermocouples as K-011, K-014, K-016, K-017, K-019 and K-020 to match the Master List of Equipment and the calibration certificates. QAR verified that the old tags were removed and the new tags attached.</p> <p>No other M&TE was found to be incorrectly tagged. This QO is closed.</p>

Document Type and Number	Description
Quality Observation (QO) BSC(V)-02-O-054	<p>GE Quality Assurance Administrative Procedure (QAAP) 4.1, Paragraph 4.1 states: "In general, all procurement documents for materials and services affecting quality shall include the following information as a minimum:</p> <ul style="list-style-type: none"> a. A clear description of the materials or services being procured, including names, model numbers, etc. b. Technical requirements, including regulatory requirements, design bases, or other applicable codes and standards, c. The quantity/amount being procured d. The quality program requirements being imposed, and 10CFR50 Appendix B applicability e. Applicability of 10CFR21 reporting requirements f. Documentation/certifications to be supplied with the order g. Records to be retained by the supplier h. Rights of access to the suppliers's facilities for audit/surveillances i. Provisions for extending applicable requirements of 10CFR50, Appendix B and 10CFR21 to lower tier suppliers as appropriate." <p>In addition, for calibration services, the procurement documents shall require the supplier to establish controls meeting the requirements of MIL-STD-45662A, and shall include the following specific requirements from paragraphs:</p> <p>4.4.1 The calibration of the equipment shall be checked prior to making any adjustments (as found). If out of tolerance readings are found, the as found data shall be included with the calibration report.</p> <p>4.4.2 Calibration reports shall include the identification of the specific standards used for calibration, and shall state the traceability of those standards.</p> <p>(and)</p> <p>4.4.3 If any standards used for the calibration are subsequently found out-of-tolerance, the supplier shall promptly evaluate the condition, and shall notify the purchaser of any impact on the stated accuracy of their equipment.</p> <p>Contrary to these requirements, all YMP related GE purchase order documents to GE calibration suppliers, did not contain all of the specified information in paragraph 4.1 f, g, h, i, and paragraphs 4.4.1, 4.4.2 and 4.4.3.</p> <p><u>Action Taken:</u> A review of all purchase orders to GE calibration suppliers supporting Yucca Mountain Site Characterization Project (YMP) activities revealed that this condition was prevalent among all GE purchase orders. Further evaluation of the calibration certificates provided by GE suppliers revealed that although all information was not requested, all required information was provided to GE. GE personnel contend that by imposing MIL-STD-45662A on their suppliers, they meet this requirement. The information omitted by GE in their procurement documents, nonetheless, exceeds what is required by the BSC purchase order. By imposing MIL-STD-45662A in GE procurement documents, GE has met the BSC purchase order requirements for Procurement Document Control. This QO is closed.</p>

TOTAL RECOMMENDATIONS FOR IMPROVEMENT: Two

RECOMMENDATIONS FOR IMPROVEMENT BRIEF DESCRIPTION:

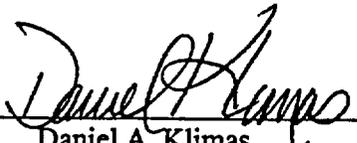
Recommendation 1: During the evaluation and review of GE internal audits, it wasn't always apparent by review of the audit reports that all QA Program elements were being audited annually. GE internal audits are divided into project, program and group audits that are performed by auditors independent of the activity. Further review of the internal audit reports revealed that all of the QA Program elements are audited annually.

It is recommended that GE develop an internal audit schedule that identifies the specific QA Program elements that will be audited for each project, program and group to assure that each QA Program element is scheduled for audit and to document and track completion of each QA program element.

Recommendation 2: GE has initiated five different tests to investigate the BSC Task 3 Scope of Work titled *Passive Film Characteristics and Long Term Stability*. The GE Principal Investigator (PI) for these five tests prepared two different logbooks to record the test set up, test data and any other testing anomalies. One logbook was used to record test data and the other logbook was used to record PI activities performed on a specific date, such as, "Samples CP1 and CP2 removed from autoclave CYM-Pb on 08/23/2001 for testing". During review of the logbooks, the auditor was having a difficult time tracing exactly what had happened for each different test. The GE PI provided a table of the different tests and corresponding pages of the logbooks that provided the details of each test. In addition, the GE PI was recording support data on Excel spreadsheets. After a thorough review of the table of contents, logbooks, recorded data, and spreadsheets, it was concluded that an independent technically qualified individual could 1) retrace the tests and confirm the results, or 2) repeat the investigation and achieve comparable results, without recourse to the original investigator.

The recommendation is that GE should consider using a separate logbook for each of the different tests so the tests could be easily understood, easily retraced and the test easily repeated without recourse to the original investigator.

This audit is considered closed.

Prepared by: 
Daniel A. Klimas
Audit Team Leader
BSC Quality Assurance

Date: 7/22/02

Approved by: 
Donald T. Krishna, Manager
BSC Quality Assurance

Date: 7-24-02



QA: QA

Richard Sherman, Quality Engineer
Setra Systems, Inc.
159 Swanson Road
Boxborough, MA 01719-1304

BECHTEL SAIC COMPANY, LLC (BSC) QUALITY ASSURANCE (QA) SUPPLIER AUDIT REPORT BSC-SA-02-029 OF SETRA SYSTEMS, INC.

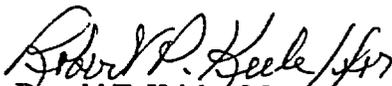
Enclosed is the Supplier Audit Report BSC-SA-02-029 of Setra Systems, Inc. that was performed on June 18-19, 2002, in Boxborough, Massachusetts. The audit evaluated the implementation and effectiveness of the Setra Systems, Inc. Quality Program in meeting the requirements of the U.S. Geological Survey (USGS) procurement documents.

The audit revealed ineffective implementation of the Setra Systems, Inc. Quality Program. The audit revealed a condition adverse to quality in the failure to adequately implement the Quality Program. This is based on conditions adverse to quality identified in eight of the eleven QA Program elements required to meet the Office of Civilian Radioactive Waste Management (OCRWM) QA requirements. These elements include QA Program, Implementing Documents, Document Control, Control of Purchased Items and Services, Control of Measuring and Test Equipment, Corrective Action, Audits, and Software. The conditions adverse to quality are documented in Corrective Action Report (CAR) USGS(V)-02-C-161.

As a result of the audit, Setra Systems, Inc. was found to be ineffectively implementing its Quality Program and will remain on the OCRWM Qualified Suppliers List with restriction prohibiting the release of any work to Setra Systems, Inc. Currently, there is no work being performed for the Yucca Mountain Site Characterization Project. Setra Systems, Inc. will be placed on an annual audit schedule for calibration services. A follow-up audit will be scheduled upon closure of the CAR.

This audit is considered complete and closed as of the date of this letter.

If you have any questions, please contact either Richard L. Maudlin at (702) 295-2961 or Daniel A. Klimas at (702) 295-2665.


Donald T. Krishna, Manager
Quality Assurance

7-31-02
Date Signed

RLM:bw-0731023620

Enclosure:
Supplier Audit Report BSC-SA-02-029

July 31, 2002

Page 2

cc w/encl:

P. V. Auer, NQS/YMSCO, North Las Vegas, NV

G. K. Beall, BSC, Las Vegas, NV

J. R. Dyer, DOE/YMSCO, North Las Vegas, NV

Birdie Hamilton-Ray, DOE/YMSCO, North Las Vegas, NV

D. A. Klimas, BSC, Las Vegas, NV

D. T. Krisha, BSC, Las Vegas, NV

Ram Murthy, DOE/OQA/YMSCO, North Las Vegas, NV

D. D. von der Linden, BSC, Las Vegas, NV

N. H. Williams, BSC, Las Vegas, NV

B. L. Wilson, BSC, Las Vegas, NV

cc w/encl:

R. W. Craig, USGS, Las Vegas, NV

Robert Donoghue, Setra Systems, Inc., Boxborough, MA

R. D. Habbe, BSC, Las Vegas, NV

Barbara Hersh, USGS, Denver, CO

R. L. Maudlin, BSC, Las Vegas, NV

M. H. Mustard, USGS, Denver, CO

Bruce Parks, USGS, Denver, CO

D. J. Sinks, BSC, Denver, CO

**BECHTEL SAIC COMPANY, LLC (BSC)
QUALITY ASSURANCE (QA)
SUPPLIER AUDIT REPORT**

1. **SUPPLIER AUDIT NUMBER:** BSC-SA-02-029
2. **DATES PERFORMED:** June 18-19, 2002
3. **SUPPLIER NAME:** Setra Systems, Inc.
4. **SUPPLIER LOCATION:** Boxborough, Massachusetts
5. **SERVICES/ITEMS PROVIDED:** Calibration of Pressure Transducers
6. **AUDIT SCOPE:** An evaluation of the implementation and effectiveness of the Setra Systems, Inc. Quality Program to meet USGS procurement documents. The audit also evaluated sustained corrective action for previously closed conditions adverse to quality resulting from the previous Office of Quality Assurance (OQA) Supplier Audit OQA-SA-99-013.
7. **QA PROGRAM ELEMENTS EVALUATED:** Organization, Quality Assurance Program, Procurement Document Control, Implementing Documents, Document Control, Control of Purchased Items and Services, Control of Measuring and Test Equipment, Corrective Action, Quality Assurance Records, Audits, and Software.
8. **SUPPLIER QUALITY PROGRAM DOCUMENT AND REVISION AUDITED:**
Setra Systems, Inc. Quality Policy Manual (QPM), Revision 6.8, dated 09/07/2001
9. **BSC APPLICABLE PROCUREMENT DOCUMENTS:**
USGS Purchase Order 02CRSA0245
10. **AUDIT TEAM MEMBERS:**
LEAD: Richard L. Maudlin, BSC QA
MEMBERS: None
11. **OBSERVERS:** None
12. **PERSONNEL CONTACTED DURING AUDIT:**
Robert Donoghue, Quality Control Manager, Setra Systems, Inc.
Richard Sherman, Quality Engineer, Setra Systems, Inc.
John Marengi, Purchasing Manager, Setra Systems, Inc.

Jose Rodriguez, Calibration Technician, Setra Systems, Inc.

Lisa Keohavong, Calibration Technician, Setra Systems, Inc.

Wei Li, Software Engineer, Setra Systems, Inc.

13. **OVERALL EFFECTIVENESS OF THE SUPPLIERS QA PROGRAM IMPLEMENTATION:**

SATISFACTORY _____ UNSATISFACTORY X

IF CONSIDERED UNSATISFACTORY –DESCRIBE QA ELEMENT AND CAUSE: Of the eleven QA Program elements evaluated during this audit, only three QA elements were found to have no conditions adverse to quality. In addition, four of the conditions adverse to quality are repetitive to those identified in the previous audit OQA-SA-99-013. Setra Systems, Inc. was recently purchased by another company and major changes have occurred in Setra Systems, Inc. management. Part of the problems relates to an ineffective transition of information between previous QA Management and the current QA Management. Current QA Management is attempting to assemble documentation to demonstrate compliance with previous requirements. A new QA Engineer was hired 30 days prior to the audit to assist in effective implementation of the Quality Program.

14. **FOLLOW-UP REQUIRED:**

_____ NO FOLLOW-UP AUDIT OR SURVEILLANCE REQUIRED
_____ SURVEILLANCE
 X FOLLOW-UP AUDIT
_____ DETERMINATION BASED ON IMPACT WHEN CAR/DR CLOSED

15. **SUPPLIER STATUS:**

AUDIT SCHEDULE

_____ REMAIN ON QSL WITH TRIENNIAL AUDIT SCHEDULE
 X REMAIN ON QSL WITH ANNUAL AUDIT SCHEDULE

Audits or surveillances prior to the next scheduled audit may be performed based on QA program changes, scope of work changes, and/or supplier performance as deemed necessary.

RESTRICTIONS

_____ NONE X YES

IF YES – RESTRICTION IS: No new purchase orders shall be issued to Setra Systems, Inc. until all of the conditions adverse to quality identified as a results of BSC Audit BSC-SA-02-029 have been satisfactorily resolved.

16. AUDIT DETAILS:

Details of the audit, along with the objective evidence reviewed are contained within the audit checklist, which is available from the BSC Records Processing Center.

17. AUDIT FINDINGS:

TOTAL CONDITIONS ADVERSE TO QUALITY: Eight (documented in one CAR)

CONDITIONS ADVERSE TO QUALITY BRIEF DESCRIPTION:

Document Type and Number	Description
<p>Corrective Action Report (CAR) USGS(V)-02-C-161</p>	<p><u>Requirements:</u></p> <p>A. The Setra Systems, Inc. QPM, Section 18, Paragraph 2.3 states: "Training in skills and knowledge required to perform specific tasks is administered to employees directly by their departments. The supervisors or designated trainers will qualify individuals in these skills." Paragraph 2.4 states: "All employees must be certified for the task they are performing or have additional quality monitoring on the critical elements of the task."</p> <p>B. The Setra Systems, Inc. Quality System Procedure (QSP) QSP QL2-11-1, Paragraph 10.1 states: "All outside calibration facilities other than National Institute of Standards and Technology (NIST) will be audited for conformance to ANSI-Z540-1 or equivalent to provide confidence in the quality of the laboratory's calibrations."</p> <p>C. The Setra Systems, Inc. QPM, Section 5, Paragraph 2.1 states: "Documents may be initiated by anyone in the organization but must be reviewed and approved by a designated authority prior to release." Paragraph 3.1 states: "Document changes may be initiated by anyone in the organization but must be reviewed and approved by a designated authority prior to release."</p> <p>Setra Systems, Inc. QSP QL2-11-1, Paragraph 5.1, states in part: "Calibration procedures will exist for all measurement and test equipment (M&TE), and standards used in production.... These procedures will specify the following: Test equipment and standards to be used; What is to be tested; The acceptable limits; Any special conditions of the test...."</p> <p>D. The Setra Systems, Inc. QSP QL2-11-1, Paragraph 2.1 states: "The Standards and M&TE used shall be a minimum of four times more accurate than the tolerance allowed for the unit being calibrated." Paragraph 8.1 states: "Any equipment found to be out-of-tolerance in calibration shall have a "Failure Report" filled out. The quality manager will decide the appropriate disposition."</p> <p>USGS PO 02CRSA0245, QA Requirements, Section IV states in part: "Certificate of Calibration...along with any pertinent calibration data sheets which supplement required documentation including: ...F. Identification of the</p>

Document Type and Number	Description
	<p>calibration standard...and calibration procedure or method used (including revision number of effective date)."</p> <p>E. The Setra Systems, Inc. QSP QL2-14-1, Paragraph 3.1 states in part: "...The control system ensures effectiveness of implemented corrective actions."</p> <p>F. The Setra Systems, Inc. QSP QL2-17-1, Paragraph 2.2 states: "Minimum training requirements for internal auditors are familiarity with the ISO standard and an understanding of the auditing process." Paragraph 4.3 states in part: "An audit report is prepared within two weeks after the audit is completed. The audit team will present the report to the Lead Auditor , along with any areas of concern that are entered into the Internal Audit Concerns database...."</p> <p>G. The Setra Systems, Inc. QPM, Section 11, Paragraph 1.3 states: "Measurement and test software is certified prior to release and is identified as a recognized calibration or test method."</p> <p><u>Contrary to the above requirements:</u></p> <p>Implementation of the Setra Systems, Inc. Quality Program is ineffective. Conditions adverse to quality were found in 8 of the 11 QA elements audited. The conditions adverse to quality are as follows:</p> <p>A. No documentation could be provided to identify who performed the training for two individuals performing calibrations of standards and pressure transducers in support of Yucca Mountain Site Characterization Project (YMP) activities and no documentation could be provided to support the certification for the individual responsible for the calibration of standards used to calibrate pressure transducers in support of YMP activities.</p> <p>B. No documentation could be provided to support that Pre-Cal Services, Inc. and Troemner had been audited to the requirements of ANSI Z-540-1 or equivalent standard.</p> <p>C. No documentation could be provided to reflect the signature of the designated authority for the following Setra Systems, Inc. Quality Systems Procedures (QSP):</p> <p style="padding-left: 40px;"> QL2-05-1, Revision 1.2 Authority - VP Engineering QL2-06-1, Revision 1.8 Authority - VP Manufacturing QL2-11-1, Revision 7.2 Authority - VP Manufacturing </p> <p>Setra Systems, Inc. Manufacturing Procedure P270100,104-XX, Revision D, titled "270 Final Assembly and Calibration" failed to reference all of the test equipment (i.e.; HP 34401 Multimeter) which is used to verify the nominal 12 Volts operating range and to identify the acceptable limits for acceptance of the</p>

Document Type and Number	Description
	<p>calibration; and the Level III procedure, CALSUPAP.doc, Revision 3.0, Paragraph 1 conflicts with the requirements in the Level II procedure QL2-11-1 in that the Level II procedure requires audits of suppliers to the requirements of ANSI Z-540-1; however, the Level III procedure provides alternatives which do not require audits of suppliers.</p> <p>D. No documentation could be provided to support the 4:1 ratio between the standard and the item under calibration for the following standards: 2kg-1g weight set, Serial Number I/N 930800; Dead Weight Tester Weight Set, Serial Number I/N 940205; Dead Weight Tester Piston, Serial Number P2-325; and HP3404 Multimeter, Serial Number I/N 880204; the Dead Weight Tester Piston, Serial Number P2-325 was found by Pre-Cal Services, on 06/08/2001, to be out-of-tolerance; however, no failure report could be provided to document the out-of-tolerance condition; and Setra Systems, Inc. Certificates of Calibration and associated documentation for the calibrations of USGS Model 270 Pressure Transducers, Serial Numbers 873823, 873824 and 538725 failed to include all of the standards used in the performance of the calibration and reference all of the procedures and appropriate revisions used in the performance of the calibrations.</p> <p>E. Corrective Action Requests (CARs) are not being responded to and implementation of corrective action verified in a timely manner. There are 58 CARs open as a result of audits, 175 CARs open as a result of vendor deficiencies and 305 CARs open resulting from general deficiencies dating back to 1999.</p> <p>F. No documentation could be provided to support the auditor training for one auditor who participated in Setra Systems, Inc. Internal Audit #48, and no objective evidence in the form of Setra Systems, Inc. Internal Audit Reports could be provided for internal audit numbers 25 through 46 which covers the period from 07/05/2000 through 04/07/2002. Also, no evidence could be provided that Setra Systems, Inc. Internal Audits 37 through 42 were ever performed as scheduled.</p> <p>G. No documentation could be provided for software application WinGennts, TD000801-32, Revision F, used in the calibration of the Model 270 Pressure Transducer, that the software had been certified to perform its intended function prior to release. Also, there was no ability to identify what changes to the software had been made since 1999 to date and that documentation exists to support certification of previous revisions prior to release.</p> <p>It should be noted that adverse conditions B, C, D, and G above are repetitive conditions which were identified during the Office of Quality Assurance Supplier Audit of Setra Systems, Inc. OQA-SA-99-013 on 04/07-08/1999.</p>

TOTAL RECOMMENDATIONS FOR IMPROVEMENT: None

RECOMMENDATIONS FOR IMPROVEMENT BRIEF DESCRIPTION: N/A

This audit is considered closed.

Prepared by: 
Richard L. Maudlin
Audit Team Leader
BSC Quality Assurance

Date: 07-31-02

Approved by: 
Donald T. Krishna, Manager
BSC Quality Assurance

Date: 7-31-02



QA: QA

Marie Marawi, QA Administrator
Lambda Research, Inc.
5521 Fair Lane
Cincinnati, OH 45227-3467

**BECHTEL SAIC COMPANY, LLC (BSC) QUALITY ASSURANCE (QA) SUPPLIER
AUDIT REPORT BSC-SA-02-030 OF LAMBDA RESEARCH, INC.**

Enclosed is the Supplier Audit Report BSC-SA-02-030 of Lambda Research, Inc. that was performed on June 25-26, 2002, in Cincinnati, Ohio. The audit evaluated the implementation and effectiveness of the Lambda Research, Inc. Quality Program in meeting the requirements of the BSC procurement documents and sustained corrective actions which resolved the closed conditions adverse to quality identified as a result of the previous BSC Supplier Audit, BSC-SA-01-030.

The audit revealed effective implementation of the Lambda Research, Inc. Quality Program. Corrective actions for the previously closed conditions adverse to quality were found to be effective. As a result of the audit, Lambda Research, Inc. will remain on the Office of Civilian Radioactive Waste Management Qualified Suppliers List on a triennial audit schedule with the previously identified restriction.

This audit is considered complete and closed as of the date of this letter.

If you have any questions, please contact either Kenneth O. Gilkerson at (702) 295-5763 or Daniel A. Klimas at (702) 295-2665.


Donald T. Krishna, Manager
Quality Assurance

7-19-02
Date Signed

KOG:ml-0703023219

Enclosure:
Supplier Audit Report BSC-SA-02-030

July 19, 2002

Page 2

cc w/encl:

P. V. Auer, NQS/YMSCO, North Las Vegas, NV
G. K. Beall, BSC, Las Vegas, NV
J. R. Dyer, DOE/YMSCO, North Las Vegas, NV
Birdie Hamilton-Ray, DOE/YMSCO, North Las Vegas, NV
D. A. Klimas, BSC, Las Vegas, NV
D. T. Krisha, BSC, Las Vegas, NV
Ram Murthy, DOE/OQA/YMSCO, North Las Vegas, NV
D. D. von der Linden, BSC, Las Vegas, NV
N. H. Williams, BSC, Las Vegas, NV
B. L. Wilson, BSC, Las Vegas, NV

cc w/encl:

R. W. Andrews, BSC, Las Vegas, NV
J. A. Cogar, BSC, Las Vegas, NV
T. W. Doering, BSC, Las Vegas, NV
K. O. Gilkerson, BSC, Las Vegas, NV
R. L. Hand, BSC, Las Vegas, NV
M. E. Lobo, BSC, Las Vegas, NV
O. D. Smith, BSC, Las Vegas, NV
Roxanna VanDillen, BSC, Las Vegas, NV

**BECHTEL SAIC COMPANY, LLC (BSC)
QUALITY ASSURANCE (QA)
SUPPLIER AUDIT REPORT**

QA:QA

1. **SUPPLIER AUDIT NUMBER:** BSC-SA-02-030
2. **DATES PERFORMED:** June 25-26, 2002
3. **SUPPLIER NAME:** Lambda Research, Inc.
4. **SUPPLIER LOCATION:** Cincinnati, Ohio
5. **SERVICES/ITEMS PROVIDED:** Residual Stress Measurements and Analysis by the following methods: 1) X-ray Defraction; 2) Hole Drilling (Center Hole); and 3) Ring Core Drilling.
6. **AUDIT SCOPE:** An evaluation of the implementation and effectiveness of the Lambda Research, Inc. Quality Assurance Program to meet BSC procurement documents and sustained corrective action resolving the closed conditions adverse to quality identified as a result of the previous BSC Supplier Audit BSC-SA-01-030.
7. **QA PROGRAM ELEMENTS EVALUATED:** Organization, Quality Assurance Program, Procurement Document Control, Implementing Documents, Document Control, Control of Purchased Items and Services, Control of Measuring and Test Equipment, Corrective Action, Quality Assurance Records, Audits, Software, Sample Control, and Control of the Electronic Management of Data.
8. **SUPPLIER QUALITY PROGRAM DOCUMENT AND REVISION AUDITED:**
Lambda Research, Inc. Quality Assurance Manual 1M1000_9, Revision 9, 01/07/2002.
This manual is based on the requirements of ISO 9002-1994 and ISO Guide 25-1990.
9. **BSC APPLICABLE PROCUREMENT DOCUMENTS:**
BSC Purchase Order 24540-160-TSA-0109, Waste Package Materials
10. **AUDIT TEAM MEMBERS:**
LEAD: Kenneth O. Gilkerson, BSC QA
MEMBERS: Richard L. Hand, BSC QA
11. **OBSERVERS:** None
12. **PERSONNEL CONTACTED DURING AUDIT:**
Marie Marawi, QA Administrator, Lambda Research, Inc.
Doug Hornbach, Director of Laboratory Operations, Lambda Research, Inc.

Tom Lachtrupp, Engineering Assistant (Project Engineer), Lambda Research, Inc.

Corey Salyer, Laboratory Technician, Lambda Research, Inc.

Jason Grossnickle, Laboratory Technician, Lambda Research, Inc.

Sherry Frank, Administration, Lambda Research, Inc.

13. **OVERALL EFFECTIVENESS OF THE SUPPLIERS QA PROGRAM IMPLEMENTATION:**
SATISFACTORY UNSATISFACTORY _____
IF CONSIDERED UNSATISFACTORY - DESCRIBE QA ELEMENT AND CAUSE: N/A

14. **FOLLOW-UP REQUIRED:**
 NO FOLLOW-UP AUDIT OR SURVEILLANCE REQUIRED
_____ SURVEILLANCE
_____ FOLLOW-UP AUDIT
_____ DETERMINATION BASED ON IMPACT WHEN CAR/DR CLOSED

15. **SUPPLIER STATUS:**

AUDIT SCHEDULE

- REMAIN ON QSL WITH TRIENNIAL AUDIT SCHEDULE
_____ REMAIN ON QSL WITH ANNUAL AUDIT SCHEDULE

Audits or surveillances prior to the next scheduled audit may be performed based on QA program changes, scope of work changes, and/or supplier performance as deemed necessary.

RESTRICTIONS

- _____ NONE YES

IF YES - RESTRICTION IS: Continued previous restriction - BSC procurement documents shall require that precision strain gages shall be procured in a single lot/batch for each type/series, and in quantities large enough to allow a minimum of ten percent (10%) of total to be destructively tested for determining compliance with applicable manufacturers' specifications. All strain gage data and test results shall be submitted to Yucca Mountain Site Characterization Project (YMP) with the Residual Stress Measurements and Analysis report, which certifies that strain gages meet the manufacturers' specifications.

16. **AUDIT DETAILS:**

Details of the audit, along with the objective evidence reviewed are contained within the audit checklist, which is available from the BSC Records Processing Center.

17. **AUDIT FINDINGS:**

TOTAL CONDITIONS ADVERSE TO QUALITY: None

CONDITIONS ADVERSE TO QUALITY BRIEF DESCRIPTION:

Document Type and Number	Description
N/A	N/A

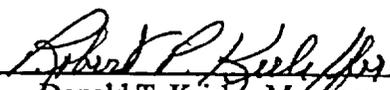
TOTAL RECOMMENDATIONS FOR IMPROVEMENT: None

RECOMMENDATIONS FOR IMPROVEMENT BRIEF DESCRIPTION: N/A

This audit is considered closed.

Prepared by: 
Kenneth O. Gilkerson
Audit Team Leader
BSC Quality Assurance

Date: 7/16/2002

Approved by: 
Donald T. Krishna, Manager
BSC Quality Assurance

Date: 7-19-02



SEP 20 2002

QA: QA

Scott Anderson
QA Manager Western Region
Scott Specialty Gases, Inc.
500 Weaver Park Road
Longmont, CO 80501

BECHTEL SAIC COMPANY, LLC (BSC) QUALITY ASSURANCE (QA) SUPPLIER AUDIT REPORT BSC-SA-02-031 OF SCOTT SPECIALTY GASES, INC. (SSG)

Enclosed is the Supplier Audit Report BSC-SA-02-031 of SSG that was performed on August 27-28, 2002 in Longmont, Colorado. This audit evaluated the implementation and effectiveness of the SSG Quality Program in meeting the requirements of the BSC procurement documents.

This audit revealed effective implementation of the SSG Quality Program. There were no conditions adverse to quality identified during this audit.

As a result of this audit, SSG will remain on the Office of Civilian Radioactive Waste Management Qualified Suppliers List on an annual audit schedule.

This audit is considered complete and closed as of the date of this letter.

If you have any questions, please contact either Daniel A. Klimas at (702) 295-2665 or Robert F. Hartstern at (702) 295-2675.

A handwritten signature in black ink that reads 'D. T. Krishna'.

Donald T. Krishna, Manager
Quality Assurance

9/20/02
Date Signed

DAK:bw-0919024311

Enclosure:
Supplier Audit Report BSC-SA-02-031

SEP 20 2002

September 20, 2002

Page 2

cc w/encl:

P. V. Auer, NQS/YMSCO, North Las Vegas, NV
G. K. Beall, BSC, Las Vegas, NV
J. R. Dyer, DOE/YMSCO, North Las Vegas, NV
Birdie Hamilton-Ray, DOE/YMSCO, North Las Vegas, NV
D. A. Klimas, BSC, Las Vegas, NV
D. T. Krishna, BSC, Las Vegas, NV
Ram Murthy, DOE/OQA/YMSCO, North Las Vegas, NV
D. D. von der Linden, BSC, Las Vegas, NV
N. H. Williams, BSC, Las Vegas, NV
B. L. Wilson, BSC, Las Vegas, NV

cc w/encl:

P. R. Dixon, BSC, Las Vegas, NV
T. W. Doering, BSC, Las Vegas, NV
M. A. Goyda, BSC, Las Vegas, NV
D. Z. Hathcock, BSC, Las Vegas, NV
D. A. Klimas, BSC, Las Vegas, NV
R. L. Maudlin, BSC, Las Vegas, NV
M. H. Mustard, USGS, Denver, CO
T. B. Reynolds, BSC, Las Vegas, NV
C. C. Warren, BSC, Las Vegas, NV

**BECHTEL SAIC COMPANY, LLC (BSC)
QUALITY ASSURANCE (QA)
SUPPLIER AUDIT REPORT**

1. **SUPPLIER AUDIT NUMBER:** BSC-SA-02-031
2. **DATES PERFORMED:** August 27-28, 2002
3. **SUPPLIER NAME:** Scott Specialty Gases, Inc. (SSG)
4. **SUPPLIER LOCATION:** Longmont, Colorado
5. **SERVICES/ITEMS PROVIDED:** Gas standards and custom gas mixes
6. **AUDIT SCOPE:** An evaluation of the implementation and effectiveness of the SSG Quality Assurance Program to meet BSC procurement documents.
7. **QA PROGRAM ELEMENTS EVALUATED:** Organization, Quality Assurance Program, Procurement Document Control, Implementing Documents, Document Control, Control of Purchased Items and Services, Control of Measuring and Test Equipment, Nonconformances, Corrective Action, Quality Assurance Records, and Audits.
8. **SUPPLIER QUALITY PROGRAM DOCUMENT AND REVISION AUDITED:**
SSG Quality Manual, Revision 5, dated 05/20/2002
This manual is based on the requirements of ISO 9002:1994.
9. **BSC APPLICABLE PROCUREMENT DOCUMENTS:**
BSC Purchase Orders A17372GJOB and BA001375
10. **AUDIT TEAM MEMBERS:**
LEAD: Daniel A. Klimas, BSC QA
MEMBERS: Michael A. Goyda, BSC QA
David Z. Hathcock, BSC QA
11. **OBSERVERS:** None

12. PERSONNEL CONTACTED DURING AUDIT:

Scott Anderson, Quality Assurance Manager, SSG

Chuck Carlson, Plant Manager, SSG

Richard Schmeltkopf, Vice President, SSG

Kathy Schulze, Customer Service Representative, SSG

David VonFeldt, Laboratory Supervisor, SSG

13. OVERALL EFFECTIVENESS OF THE SUPPLIERS QA PROGRAM IMPLEMENTATION:

SATISFACTORY UNSATISFACTORY _____

IF CONSIDERED UNSATISFACTORY –DESCRIBE QA ELEMENT AND CAUSE: N/A

14. FOLLOW-UP REQUIRED:

NO FOLLOW-UP AUDIT OR SURVEILLANCE REQUIRED

_____ SURVEILLANCE

_____ FOLLOW-UP AUDIT

_____ DETERMINATION BASED ON IMPACT WHEN CAR/DR CLOSED

15. SUPPLIER STATUS:

AUDIT SCHEDULE

_____ REMAIN ON QSL WITH TRIENNIAL AUDIT SCHEDULE

REMAIN ON QSL WITH ANNUAL AUDIT SCHEDULE

Audits or surveillances prior to the next scheduled audit may be performed based on QA program changes, scope of work changes, and/or supplier performance as deemed necessary.

RESTRICTIONS

_____ NONE YES

IF YES – RESTRICTION IS: The previously identified restriction remains. Weight sets used for gravimetric mixing of gases must be calibrated by a calibration service listed on the Office of Civilian Radioactive Waste Management Qualified Suppliers List.

16. AUDIT DETAILS:

Details of the audit, along with the objective evidence reviewed are contained within the audit checklist, which is available from the BSC Records Processing Center.

17. **AUDIT FINDINGS:**

TOTAL CONDITIONS ADVERSE TO QUALITY: None

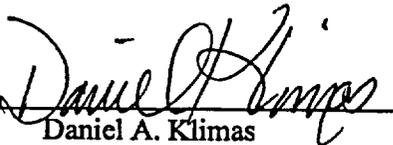
CONDITIONS ADVERSE TO QUALITY BRIEF DESCRIPTION:

Document Type and Number	Description
N/A	N/A

TOTAL RECOMMENDATIONS FOR IMPROVEMENT: None

RECOMMENDATIONS FOR IMPROVEMENT BRIEF DESCRIPTION: N/A

This audit is considered closed.

Prepared by: 
Daniel A. Klimas
Audit Team Leader
BSC Quality Assurance

Date: 9/18/02

Approved by: 
Donald T. Krishna, Manager
BSC Quality Assurance

Date: 9/20/02

ORIGINAL
red

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 2

QA Surveillance Number:
BSCQA-02-S-12

Complete only applicable items

1. Organization/Location Ajax Magnethermic Corporation (AJAX) / Warren, Ohio	2. Subject Surveillance of implementation of AJAX Quality Program	3. Date(s) Performed 08/29/2002
4. Surveillance Scope Verify implementation of the AJAX Quality Program to support BSC project work and continued implementation of corrective actions for the previously closed Deficiency Report (DR) BSC(V)-01-D-122.		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) AJAX Quality Manual, Revision 9, dated 05/17/2001 and supporting procedures	6. Originator Robert D. Habbe	
	Team Members N/A	

SURVEILLANCE RESULTS

7. Description/Details

This surveillance was performed by review of AJAX documents that support implementation of the AJAX Quality Program specified in BSC Purchase Order (PO) TA002805.

The following requirements of the AJAX procurement process were evaluated for PO 25360-001 with Watlow, Richmond, Illinois:

1. Verification that technical and quality requirements were included in the AJAX Purchase Order.
2. Verification that Watlow, Richmond, Illinois was on the OCRWM Qualified Suppliers List.
3. Verification that AJAX continues to implement the corrective actions of DR BSC(V)-01-D-122.

The following requirements of the AJAX internal audit process were evaluated for the Fiscal Year 2001 and 2002 internal audits:

1. Verification that all QA elements that support OCRWM work were assessed.
2. Verification that audit deficiencies are followed up and verified.

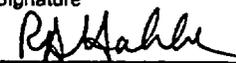
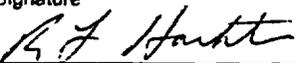
(Continued on Page 2)

8. Persons (and their organizations) Contacted Robert Lowe, AJAX Quality Assurance Manager George Welsh, AJAX Project Manager Christopher Clark, AJAX Engineer Jerry Cogar, BSC Project Manager Candy Choisser, BSC Property Manager	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s) N/A CIRS Number(s) N/A
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10. Surveillance Conclusions SAT UNSAT

Overall, this surveillance found effective implementation of the AJAX Quality Program in the areas of QA Program (Qualification of Personnel), Procurement Document Control, Control of Purchased Items and Services, Control of Measuring and Test Equipment, Internal Audits, and Scientific Investigations. The continued implementation of corrective actions for the previously closed DR BSC(V)-01-D-122 have been satisfactorily implemented.

Based on the recent change in ownership of the company, it is recommended that a surveillance or audit of AJAX be performed during the final testing of the mock assembly to ensure that the AJAX Quality Program was implemented for the BSC task.

11. Completed By (Originator) (Print Name) Robert D. Habbe	Signature 	Date 9-6-02
12. Reviewed By (Appropriate QA Manager) (Print Name) Daniel A. Klimas	Signature 	Date 9/6/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 9/6/02

ORIGINAL
red

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 2 of 2

QA Surveillance Number:
BSCQA-02-S-12

Complete only applicable items

1. Organization/Location Ajax Magnethermic Corporation (AJAX) / Warren, Ohio	2. Subject Surveillance of implementation of AJAX Quality Program	3. Date(s) Performed 08/29/2002
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BLOCK 7 Description/Details (Continued):

Note: AJAX was performing internal audits until May 2002 when the facility was shut down. Since the restart of the facility, no internal audits have been performed. The AJAX QA Manager indicated that they will prepare an audit schedule for 2003 and submit to management for approval.

The following requirements of the AJAX Control of Measuring and Testing Equipment (M&TE) were evaluated for various pieces of M&TE that will be used for the BSC task:

1. Traceability of Standards to NIST,
2. M&TE is calibrated at appropriate intervals,
3. Calibration Reports are issued to support the M&TE calibrated,
4. M&TE is identified with suitable indicators to show the calibration status,
5. Out-of-Tolerance conditions are documented and evaluated.

The following requirements of the AJAX process for qualification and training of personnel were evaluated for the personnel that will be working on the BSC task:

1. Verification that all personnel were appropriately qualified.
2. Verification that all personnel were appropriately trained to the QA Program and applicable procedures.

The following requirements of the AJAX process for Scientific Investigation were evaluated for the work completed on the BSC task:

1. Verification that the Scientific Notebooks have been completed per AJAX Procedure SU-33-502-02, Revision 05/11/2002.
2. Verification that the recommendations identified during BSC Supplier Audit BSC-SA-01-027 were implemented.

ORIGINAL
red

OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
QUALITY ASSURANCE SURVEILLANCE REPORT

QA: QA
Page 1 of 1

QA Surveillance Number:
BSCQA-02-S-29

Complete only applicable items

1. Organization/Location Argonne National Laboratory (ANL), Argonne, IL	2. Subject Procurement and Supplier Qualification	3. Date(s) Performed 06/03/2002
4. Surveillance Scope Evaluate ANL's procedures and processes for Procurement Document Control and Control of Purchased Items and Services		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) a. Civilian Radioactive Waste Management System (CRWMS) Bechtel SAIC Company, LLC (BSC) ANL Fiscal Year (FY) 2002 Statement of Work (SOW) 03/01/2002 Statement of Quality Assurance Requirements, Elements 4 Procurement Document Control and 7 Control of Purchased Items and Services b. ANL Procedure YMP-AP-012, Revision 7, "Administrative Procedure for Control of Procurement Documents and Control of Purchased Items and Services", Section 3.0		6. Originator <u>Daniel A. Klimas</u> Team Members <u>N/A</u>

SURVEILLANCE RESULTS

7. Description/Details
This surveillance was performed to review the procurement practices and the evaluation and qualification of suppliers by ANL in order to remove the restriction noted on the Office of Civilian Radioactive Waste Management (OCRWM) Qualified Suppliers List (QSL) placed upon them due to inadequacies in these areas.

The following documentation and procedures were reviewed during this surveillance:

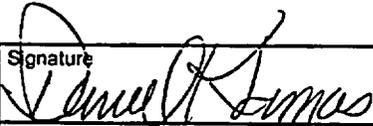
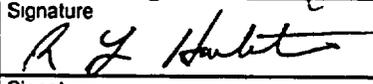
CRWMS BSC ANL FY2002 SOW dated 03/01/2002
ANL Procedure YMP-AP-012, Revision 7, "Administrative Procedure for Control of Procurement Documents and Control of Purchased Items and Services", Section 3 and Draft Revision 8
ANL Procedure YMP-AP-018, Draft Revision 3, "Administrative Procedure for Performing Audits"
ANL Purchase Order 2A-04596 dated 01/28/2002 for Ultra Scientific and ANL Acceptance Report dated 07/06/2002
ANL Purchase Order 2A-00396 dated 10/24/2001 for Heusser Neweigh and ANL Acceptance Report dated 01/16/2002
ANL Purchase Order 1A-21187 dated 09/05/2001 for Ultra Scientific and ANL Acceptance Report dated 09/02/2002
ANL Purchase Order 2A-08777 dated 03/04/2002 for Heusser Neweigh and ANL Acceptance Report dated 03/04/2002

The purchase orders reviewed above were found to contain all appropriate quality and technical requirements. There have been no supplier qualifications performed by ANL to date. The suppliers noted above have all been qualified by OCRWM OOA.

8. Persons (and their organizations) Contacted Roberta Riel, ANL, QA Program Manager Jim Cunnane, ANL, Project Functional Administrator	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No CAQ/NCR/TE Number(s) <u>N/A</u> Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No CIRS Number(s): <u>N/A</u>
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10. Surveillance Conclusions SAT UNSAT

As a result of this surveillance, the procurement documentation reviewed was found to be acceptable. A Supplier Evaluation Report will be prepared to remove the restriction in the OCWRM QSL. ANL is no longer required to submit procurement documents to BSC QA as noted in the surveillance cover letter.

11. Completed By (Originator) (Print Name) Daniel A. Klimas	Signature 	Date <u>7/10/02</u>
12. Reviewed By (Appropriate QA Manager) (Print Name) Robert F. Hartstern	Signature 	Date <u>7/10/02</u>
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date <u>7/10/02</u>

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Complete only applicable items.

QA Surveillance Number:
BSCQA-02-S-30

1. Organization/Location ULTRA Scientific, Inc., North Kingston, RI	2. Subject Evaluate Implementation of Selected Elements of ULTRA Scientific, Inc.'s QA Program	3. Date(s) Performed 06/20/2002
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4. Surveillance Scope
Evaluate Elements: Procurement Document Control, Control of Purchased Items & Services, Inspection, Test Control, Control of Measuring & Test Equipment, Nonconformances, Corrective Action, and Audits

5. Requirement(s) (Procedure, Specification, Drawing, etc.) a. BSC Purchase Order (PO) 24540-100-PO-17369, Statement of Work (SOW) for Analysis and Certification of Laboratory Chemicals, Revision 07, dated 08/02/2001. b. ULTRA Scientific, Inc. Quality Assurance (QA) Manual, Revision 5.4, dated 10/1999, and associated Standard Operating Procedures (SOPs).	6. Originator <u>Richard L. Maudlin</u> Team Members <u>N/A</u>
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SURVEILLANCE RESULTS

7. Description/Details

This surveillance was performed by reviewing objective evidence in the form of records that would support the effective implementation of the ULTRA Scientific, Inc. Quality Program and the BSC PO.

The following requirements of BSC PO 24540-100-PO-17369 and SOW and ULTRA Scientific, Inc. SOP 3-003, QA Manual, Section 11, and SOP 1-003 were evaluated:

- The pass down of technical and quality requirements in ULTRA Scientific Inc. POs
- The qualification of ULTRA Scientific, Inc. sub-tier suppliers
- Documentation supporting ULTRA Scientific, Inc. Analysis of BSC purchased chemicals
- Documentation supporting the calibration of balances and thermometers
- Documentation supporting control of nonconforming chemicals
- Documentation supporting implementation of effective corrective action
- Documentation supporting the performance of ULTRA Scientific, Inc. internal audits and resolution of deficiencies

(Continued on Page 2)

8. Persons (and their organizations) Contacted Edward Martz, QA Manager, ULTRA Scientific, Inc. William Leary, Laboratory Director, ULTRA Scientific, Inc. Claudia Russo, Purchaser, ULTRA Scientific, Inc. Ruth Toolan, Business Manager, ULTRA Scientific, Inc. John Russo, Quality Control Manager, ULTRA Scientific, Inc.	9. CAQ/NCR/TE Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s): <u>N/A</u> CIRS Number(s): <u>N/A</u>
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10 Surveillance Conclusions SAT UNSAT

Overall, this surveillance found effective implementation of the BSC PO 24540-100-PO-17369, ULTRA Scientific, Inc. QA Manual and associated SOPs.

11. Completed By (Originator) (Print Name) Richard L. Maudlin	Signature 	Date 07/29/02
12. Reviewed By (Appropriate QA Manager) (Print Name) Daniel A. Klimas	Signature 	Date 7/29/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 7/29/02

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Complete only applicable items.

QA Surveillance Number:
BSCQA-02-S-30

1. Organization/Location
ULTRA Scientific, Inc.,
North Kingston, RI

2. Subject
Evaluate Implementation of Selected Elements of ULTRA
Scientific, Inc.'s QA Program

3. Date(s) Performed
06/20/2002

BLOCK 7 Description/Details (Continued):

As of the date of this surveillance, ULTRA Scientific, Inc. was found to be effectively implementing the BSC PO and the ULTRA Scientific, Inc. Quality Program. Review of the following objective evidence was performed to establish effective implementation of the ULTRA Scientific, Inc. Quality Program.

- ULTRA Scientific, Inc. PO 031502WJL on 03/15/2002 for the procurement of balance calibration services
- Current ULTRA Scientific, Inc. Qualified Suppliers List maintained electronically
- Documentation supporting the qualification of Essco Calibration Laboratory
- ULTRA Scientific, Inc. Inorganic Standard DataPak for Catalog No. IMS-115, Lot No. IH-0185
- Documentation supporting the calibration of ULTRA Scientific, Inc. balance Serial Numbers 3410098, 13505514, P39535, 13505513, 1320188, 1320194, and 12844420LTI
- Lot Failure List dated 06/19/2002
- Technical Service Meeting Minutes for meetings held to discuss corrective action open items and assignments for 05/28/2002, 06/03/2002, 06/10/2002, 06/17/2002
- ULTRA Scientific, Inc. Internal Audit Schedule for 2001 and 2002
- ULTRA Scientific, Inc. Internal Audit Reports for audits of Organic/Inorganic Production Area, 01/04/2002; Organic/Inorganic Quality Control, 11/06/2001, and Contracts, 01/15/2002
- ULTRA Scientific, Inc. Audit Finding on missing Thermometer Log Book, Audit of Organic and Inorganic Production Area dated 01/04/2002

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QA Surveillance Number:
BSCQA-02-S-31

Complete only applicable items

1. Organization/Location Laboratory Testing, Inc. (LTI) Hatfield, PA	2. Subject Fabrication, Final Inspection and Packaging of Metal Specimens - Follow-up	3. Date(s) Performed 06/26-27/2002
4. Surveillance Scope Follow-up evaluation of Fabrication, Final Inspection and Packaging of Metal Specimens		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) a. BSC Purchase Order (PO) 24540-160-PO-01195, List of Items for LTI Fabrication of Specimens from Alloy 22 Customer Supplied Material, dated 02/14/2002 b. LTI Quality System Program Manual, Revision 16, dated 09/01/2001		6. Originator <u>Richard L. Maudlin</u> Team Members <u>Roxanna VanDillen</u> (Subject Matter Expert)

SURVEILLANCE RESULTS

7. Description/Details
This surveillance was performed by observing the fabrication of metal specimens and the review of documentation to support the final inspection.

The following requirements of BSC PO 24540-160-PO-01195, List of Items, and the applicable requirement of the LTI Quality System Program Manual were reviewed:

- Maintenance of specimens in acceptable containers.
- Training and qualification of machining and inspection personnel.
- Corrections to QA records.
- Work being performed to the latest drawings.
- In-process dimensional checks of at least 10% of samples being fabricated.
- Grinding and polishing in accordance with drawing requirements.
- Specimen traceability during fabrication.
- Final inspection reports reference serial numbers of Measuring and Test Equipment (M&TE) used.
- Specimen tabs are permanently marked with an automatic typeset engraver in accordance with List of Items.

(Continued on Page 2)

8. Persons (and their organizations) Contacted Arnold Horoff, QA Manager, LTI Doug Holloway, Supervisor, LTI Rob Schmidt, Machine Technician, LTI Andrew Giordano, Machine Operator, LTI	9. CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s): <u>DR BSC(V)-02-D-152</u> CIRS Number(s): <u>N/A</u>
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10. Surveillance Conclusions SAT UNSAT

Overall, this surveillance found effective implementation of the BSC PO 24540-160-PO-01195 and the LTI Quality System Program Manual except for the conditions adverse to quality identified in DR BSC(V)-02-D-152. Since conditions adverse to quality were found in the process prior to shipment, it is recommended that another BSC surveillance be performed prior to the next shipment of specimens to LLNL.

DR BSC(V)-02-D-152 identified conditions adverse to quality as follows: failure to follow the finish and dimensional requirements of the specimen drawing and final inspection documentation did not include all of the information required by the list of items.

(Continued on Page 2)

11. Completed By (Originator) (Print Name) Richard L. Maudlin	Signature 	Date 07/31/02
12. Reviewed By (Appropriate QA Manager) (Print Name) Daniel A. Klimas	Signature 	Date 7/31/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 7/31/02

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QA: QA
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QA Surveillance Number:
BSCQA-02-S-31

Complete only applicable items.

1. Organization/Location Laboratory Testing, Inc. (LTI) Hatfield, PA	2. Subject Fabrication, Final Inspection and Packaging of Metal Specimens - Follow-up	3. Date(s) Performed 06/26-27/2002
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BLOCK 7 Description/Details (Continued):

- Adequacy of Fabrication Process Travelers.
- Packaging of metal specimen.
- Traceability of the M&TE to the inspection reports.

As of the date of this surveillance, LTI had completed final inspection and packaged 60 metal specimens for shipment to Lawrence Livermore National Laboratory (LLNL). During this surveillance, a review was performed of the remaining in process specimens for traceability and marking of the containers. Accountability of the remaining 240 specimens was verified. Traceability, final inspection and packaging of the specimens were accomplished by review of the following supporting documentation:

- Specimens not ready for shipment were being stored in cardboard boxes containing appropriate traceability identification.
- Training and qualification records for machining and inspection personnel.
- Metal specimens ready to ship were packaged and identified in accordance with the List of Items.
- Corrections to LTI Shop Technique and Inspection Record Package.
- Review of the Shop Technique and Inspection Record Package revealed the latest LLNL Drawings were being used.
- Documentation to support the dimensional check of 10% of the pieces cut from each of the four plates (D1A.1, D1A.2, D4B.1, and D4B.2).
- Final Inspection documentation supporting the inspection of 60 metal specimens for dimensions and surface finish prior to shipment.
- A sample of physical specimens was examined for identification and location in accordance with drawings.

BLOCK 10 Surveillance Conclusions (Continued):

The nonconforming conditions related to finish and dimensional requirements not meeting the specimen drawing were documented by LTI on Corrective Action Request 062602-1, dated 06/26/2002. As of the date of this surveillance, LLNL had not issued LTI a release to ship the 60 specimens.

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QA: QA
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QA Surveillance Number:
BSCQA-02-S-33

Complete only applicable items

1. Organization/Location Sierra Instruments, Inc. Monterey, CA	2. Subject Verify Continued Implementation of Corrective Action for Closed DRs and Review of Selected Elements	3. Date(s) Performed 06/13/2002
4. Surveillance Scope Follow-up verification for closed Deficiency Reports (DRs) LVMO(V)-00-D-64 through -68 from OQA Supplier Audit OQA-SA-00-11 of sustained corrective action plus selected QA Program elements.		
5. Requirement(s) (Procedure, Specification, Drawing, etc.) a. Sierra Instruments Quality Assurance Manual, Revision K, dated May 2001, Sections 3.5.1 and 3.17.1 b. Sierra QAP-005, Sierra Procedure 1019, "Validation of the Cal-Bench Software" c. BSC Purchase Order 24540-100-BA-01408, SOW, Revision 3, dated 10/9/2000 Subsection VI, Item o). d. The listed requirements include the QA Requirements referenced in the closed DRs.		6. Originator <u>Michael A. Goyda</u> Team Members <u>N/A</u>

SURVEILLANCE RESULTS

7. Description/Details
This surveillance activity at the Sierra Instruments, Inc. facility in Monterey, CA was conducted to assess implementation of selected areas of the Sierra Instruments, Quality Assurance Manual, Revision K, dated May 2001, and as a follow-up to verify continued implementation of corrective action for closed DRs LVMO(V)-00-D-064, LVMO(V)-00-D-065, LVMO(V)-00-D-066, LVMO(V)-00-D-067, and LVMO(V)-00-D-068 from the previous OCRWM Office of Quality Assurance (OQA) Supplier Audit OQA-SA-00-11 conducted 03/21-22/2000.

This Surveillance included interviews with Sierra Instruments personnel, documentation reviews and walkdown verifications at the Sierra Instruments facilities.

At the onset of this Surveillance activity, the Sierra Instruments Quality Manager revealed that due to personnel reductions at Sierra Instruments, he had been assigned to perform the duties of the Manufacturing Manager as well as the duties of the Quality Manager. Although this condition is not depicted in the Sierra Instruments current organization chart, the condition was verified by interview with the Sierra Instruments President who attributed the current arrangement as a function of personnel reductions at Sierra Instruments. The unsatisfactory nature of this current condition was discussed with the Sierra Instruments President and the Quality Manager.

This condition is addressed in BSC DR BSC(V)-02-D-153.

(Continued on Page 2)

8. Persons (and their organizations) Contacted Howard Hatton, Quality Manager, Sierra Instruments Rob Stump, President, Sierra Instruments James Oswald, Technical Support Supervisor, Sierra Instruments Robin McBride, Supervisor Order Administration, Sierra Instruments	9. CAQ/NCR/TE Issued <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Recommendation Issued <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	CAQ/NCR/TE Number(s) <u>DR BSC(V)-02-D-153</u> CIRS Number(s): <u>N/A</u>
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10. Surveillance Conclusions SAT UNSAT

Sierra Instruments has shown effective implementation of some QA program areas that were previously found unsatisfactory and addressed by OCRWM DRs; however, BSC will issue a new DR to Sierra Instruments for conditions adverse to quality that include:

a. A conflict of interest in that the QA Manager is currently performing the duties of the Manufacturing Manager at Sierra Instruments.

b. A failure of Sierra Instruments to perform follow-up of conditions adverse to quality identified on their own internal audit reports. This represents a recurrence of a condition identified in a previously closed OCRWM DR LVMO(V)-00-D-067, closed on 07/12/2000.

11. Completed By (Originator) (Print Name) Michael A. Goyda	Signature 	Date 07/16/02
12. Reviewed By (Appropriate QA Manager) (Print Name) Daniel A. Klimas	Signature 	Date 07/16/02
13. Approved By (QVM) (Print Name) Robert F. Hartstern	Signature 	Date 7/16/02

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QA: QA
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QA Surveillance Number:
BSCQA-02-S-33

Complete only applicable items

1. Organization/Location Sierra Instruments, Inc. Monterey, CA	2. Subject Verify Continued Implementation of Corrective Action for Closed DRs and Review of Selected Elements	3. Date(s) Performed 06/13/2002
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BLOCK 7 Description/Details (Continued):

Interview with the Sierra Instruments Quality Manager revealed that Sierra Instruments utilizes Simco Electronics as their primary calibration supplier for Sierra Instruments Measuring and Test Equipment. The Sierra Instruments Quality Manager was able to provide Audit Report correspondence from Sierra Instruments to Simco Electronics, dated March 2000, to substantiate the qualification of Simco Electronics to support their qualification as a calibration supplier. A review of the current Sierra Instruments Blanket Purchase Order Agreement No. 14882 to Simco Electronics, effective 02/12/2002 revealed that the procurement document contained an addendum for the inclusion of technical and quality requirements to Simco Electronics. In addition, the Sierra Instruments Quality Manager provided an Approved Vendor List (AVL), dated January 2002, that included Simco Electronics as an approved supplier for calibration services.

The review of this area concluded satisfactory continued corrective action results with no adverse conditions noted.

DR LVMO(V)-00-D-064, closed on 07/05/2000, addressed a failure of Sierra Instruments to complete an annual review of the training status of employees. A sample of Sierra Instruments personnel "Annual Training Review" forms were examined for:

D. Nguyen, Capillary Calibration Technician, form dated 06/04/2002 by Supervisor, H. Gutierrez

Y. Arreguin, Capillary Assembly Technician, form dated 06/12/2002 by Supervisor, H. Gutierrez

L. Welch, Capillary Lead Calibration Technician, form dated 12/12/2001 by Supervisor, H. Gutierrez

Each of the sampled personnel files contained the required form as maintained by the Quality Manager in accordance with Sierra Instruments Procedure QAP-005, Revision E, dated 01/25/2001.

The review of this area concluded satisfactory continued corrective action results with no adverse conditions noted.

DR LVMO(V)-00-D-065, closed on 05/18/2000, addressed a failure of Sierra Instruments to control obsolete documents from use in work locations at the Sierra Instruments facilities. A sample of Sierra Instruments controlled documents was reviewed as listed upon the "Approved Procedures" listing dated 06/04/2002. Listed procedures were compared to the actual controlled procedure as maintained in the Quality Manager's access controlled cabinet. A walkdown review of the same procedures was performed at the Sierra Instruments Capillary Assembly and Calibration Department in an adjacent building. The following Sierra Instruments procedures were found to match the "Approved Procedures" listing dated 06/04/2002, as compared to the actual controlled procedure and the copy of the controlled procedure in use at the Sierra Instruments Capillary Assembly and Calibration Department:

Sierra Procedure No. 1019, Revision G, dated 05/24/2000, "Validation of the Cal-Bench for Side-Trak Calibration"

Sierra Procedure No. 8103, Revision C, dated 03/04/2002, "810 Calibration"

Sierra Procedure No. 8202, Revision E, dated 05/13/2002, "Calibration Procedure for the Top-Trak Series"

Sierra Procedure No. 8318, Revision D, dated 12/13/2001, "Calibration of Low and Medium Flow 830/840 Mass Flow Meters"

Sierra Procedure No. 8319, Revision G, dated 07/23/1997, "Calibration of High Flow 830/840 Mass Flow Meters"

The review in this area concluded satisfactory continued corrective action results with no adverse conditions noted.

DR LVMO(V)-00-D-066, closed on 06/13/2000, addressed a failure of Sierra Instruments to include "As-found and As-left" data upon calibration certifications provided to the Yucca Mountain Site Characterization Project (YMP). A sample of completed Sierra Instruments Calibration Reports were reviewed for the following Measuring and Test Equipment provided to BSC under Purchase Order 24540-100-BA-01408:

Model # 840H-4-OV1-SV1-E-V1-S1, Serial # C22518, Calibration Report, dated 10/10/2001

Model # 840L-4-OV1-SV1-E-V1-S1-MP, Serial # C25254, Calibration Report, dated 04/25/2002

Model # 840-2-OV1-SV1-E-V1-S1-MP, Serial # C26817, Calibration Report, dated 04/25/2002

Model # 840L-2-OV1-SV1-E-V1-S1-MP, Serial # C28827, Calibration Report, dated 05/06/2002

In each case, the Sierra Instruments Calibration Reports were found to contain "As -found" data noted as "Indicated Flow". "As -left" data is provided as necessary when initial "As-found" data indicates the need to calibrate the instrument.

The review in this area concluded satisfactory continued corrective action results with no adverse conditions noted.

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QA Surveillance Number.
BSCQA-02-S-33

Complete only applicable items

1. Organization/Location
Sierra Instruments, Inc.
Monterey, CA

2. Subject
Verify Continued Implementation of Corrective Action for
Closed DRs and Review of Selected Elements

3. Date(s) Performed
06/13/2002

BLOCK 7 Description/Details (Continued):

DR LVMO(V)-00-D-067, closed on 07/12/2000, addressed the failure of Sierra Instruments to perform annual internal audits and follow-up to conditions identified in previous internal audit reports at Sierra Instruments. The Sierra Instruments Quality Manager presented objective evidence in the form of a series of internal audits (numbers 0101 through 0120) conducted during the month of November 2001. Each audit is represented by a Sierra Instruments Audit Checklist document that provides evidence for conducting the internal audit activities as required by the Sierra Quality Assurance Manual, Section 3.17.1. A review of the audit checklists revealed that the audits were conducted by personnel who were not responsible for the work activities being audited. Sierra Instruments Audit Checklists numbers 0114, 0117, 0118, and 0119 each reflect the need for follow-up to findings identified by the Sierra Instruments Auditor. In each case noted, interview with the Sierra Instruments Quality Manager revealed that no follow-up actions have occurred. This is a recurrence of the condition adverse to quality that was originally identified in DR LVMO(V)-00-D-067.

The review of documentation for this activity is unsatisfactory and this condition is addressed in BSC DR BSC(V)-02-D-153.

DR LVMO(V)-00-D-068, closed on 06/06/2000, addressed a failure of Sierra Instruments to complete validation of the Cal-Bench Software. Based upon an interview with the Quality Manager, Version 8.00.06 of the "Cal-Bench Software" is the current validated version of the software in use at Sierra Instruments. A walkdown and observation was performed at the Sierra Instruments Capillary Assembly and Calibration Department to the calibration bench of L. Welch, Capillary Lead Calibration Technician. The technician's in service computer terminal displayed the Cal-Bench Software as Version 8.00.06. This version of the Cal-Bench Software is the same as the previously validated version as documented in a Sierra Instruments Internal Memo dated 05/09/2000 and accepted as corrective action for DR LVMO(V)-00-D-068. The software has remained unchanged.

The review in this area concluded satisfactory continued corrective action results with no adverse conditions noted.