



Department of Energy

Washington, DC 20585

QA: QA

APR 11 2002

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U.S. DEPARTMENT OF ENERGY OFFICE OF CIVILIAN RADIOACTIVE WASTE
MANAGEMENT OFFICE OF QUALITY ASSURANCE (OQA) ISSUANCE OF
SURVEILLANCE RECORD OQA-02-S-11 OF BECHTEL SAIC COMPANY, LLC (BSC)

Enclosed is the Surveillance Record, OQA-02-S-11, conducted by representatives of OQA on March 4 through 15, 2002, at BSC's facilities in Las Vegas, Nevada.

The purpose of the surveillance was to observe the current effectiveness of Scientific Notebook (SN) compliance in accordance with AP-SIII.1Q, Revision 1, ICN 1, *Scientific Notebooks*.

The surveillance team determined the results of the surveillance to be satisfactory. The general condition of SNs in use on the Project is considered greatly improved. There were no conditions adverse to quality noted. Two recommendations cited in this report have been entered into Conditions/Issue Identification and Reporting/Resolution System.

This surveillance is considered complete and closed as of the date of this letter. No response is required to this surveillance record and any recommendations.

If you have any questions, please contact either James Blaylock at (702) 794-1420 or Samuel E. Archuleta at (702) 794-1476.

James Blaylock for
Ram Murthy, Acting Director
Office of Quality Assurance

OQA:JB-1012

Enclosure:
Surveillance Record OQA-02-S-11



James Blaylock
4/11/02

APR 11 2002

cc w/encl:

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**OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
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WASHINGTON, D.C.**

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Surveillance No.
OQA-02-S-11

QA: QA

**QUALITY ASSURANCE SURVEILLANCE RECORD
SURVEILLANCE PLAN**

1. ORGANIZATION/LOCATION: Bechtel SAIC Company, LLC (BSC)	2. SUBJECT: Scientific Notebooks (SN)	3. DATE: March 4 - 15, 2002
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4. SURVEILLANCE OBJECTIVE:
Review current effectiveness of SN compliance in accordance with AP-SIII.1Q, Revision 1, ICN 1, *Scientific Notebooks*.

5. SURVEILLANCE SCOPE: Review new proposed draft AP-SIII.1Q, Revision 2, ICN 0, to ensure that past corrective actions and U.S. Nuclear Regulatory Commission commitments are still incorporated in the procedure revision. Review ongoing activities with respect to past deficiency documents to determine effectiveness of corrective actions related to SNs.	6. SURVEILLANCE TEAM: Team Leader: <u>Samuel E. Archuleta</u>
	Team Member: <u>Christian M. Palay</u> _____ _____

7. PREPARED BY: (Surveillance Team Leader) <u>Samuel E. Archuleta</u> Samuel E. Archuleta	DATE: <u>2-26-02</u>	8. CONCURRENCE: (Acting Director, OQA) <u>James Blaylock for Ram Murthy</u>	DATE: <u>2/27/02</u>
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SURVEILLANCE RESULTS

9. BASIS OF EVALUATION / DESCRIPTION OF OBSERVATIONS:

See page 2

10. SURVEILLANCE CONCLUSIONS:

See pages 2 - 4

11. COMPLETED BY: (Surveillance Team Leader) <u>Samuel E. Archuleta</u>	DATE: <u>4-10-02</u>	12. APPROVED BY: (Director, OQA) <u>James Blaylock for</u>	DATE: <u>4/11/02</u>
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9. BASIS OF EVALUATION/DESCRIPTION OF OBSERVATIONS: (Cont)

NOTE: Because this surveillance was initiated on March 4, 2002, under LP-2.3Q, Revision 0, ICN 0, *Surveillance*, which was the governing procedure at the time, the surveillance was completed and documented under LP-2.3Q rather than transitioning to the replacement procedure, AP-2.26Q, Revision 0, *Quality Assurance Surveillance*.

The basis of evaluation and observations during this surveillance was structured around predetermined questions. The questions were developed to guide the assessment of ongoing activities with respect to use and maintenance of SNs at Lawrence Livermore National Laboratories (LLNL), and the U.S. Geological Survey (USGS). Questions were also developed to assess the effectiveness of corrective actions taken in response to the following Deficiency Reports (DR): BSC-01-D-087, SNL-01-D-123, BSC-01-D-096, USGS-01-D-030, SNL-01-D-012, and LANL-02-D-060. Also evaluated were recommendations contained in the White Paper titled "Report on the Increase in Problems with Scientific Notebooks" for the Director, Office of Quality Assurance, dated February 13, 2002, and the Morgan, Lewis, and Bockius report titled "Safety Conscious Work Environment," dated August 28, 2001. Personnel contacted were as follows:

LLNL: Martha Kohler, Charlie Warren, Victor Barish, Pamela Stanworth, and John Estill
USGS: Tom Chaney, Pamela Motyl, Mark Kurzmack, Jackie Lossaso, and John Earl
Las Vegas: Tom Rodgers and Jon Zeisloft

The following notebooks were reviewed during this surveillance:

SN-LLNL-SCI-355-V1	SN-USGS-SCI-118-V1
SN-LLNL-SCI-426-V1	SN-USGS-SCI-001-V1
SN-LLNL-SCI-471-V1	SN-USGS-SCI-089-V2
SN-USGS-SCI-001-V3	SN-USGS-SCI-118-V1

10. SURVEILLANCE CONCLUSIONS: (Cont)

Based on observations and interviews, the following conclusions were reached:

1. The accuracy and rigor of the maintenance of the Scientific Notebook Register (SNR) were found to be adequate as evidenced by the review of the notebooks cited above.
2. Training records of a sampling of managers indicated that all had had the standard AP-SIII.1Q training. There are actions to develop and conduct specialized training tailored for managers. Development of the special training module is being managed under corrective actions for BSC-01-D-087. Corrective actions will also include amendment of Scientific Training Matrices to show this new training as a mandatory requirement for managers.
3. It was verified that the BSC Chief Science Officer's (CSO) Scientific Training Requirements Matrix (TRM) requires Principal Investigators (PI) to take the AP-SIII.1Q classroom-training course. The USGS TRM has also been verified to require the classroom training. The PI awareness of the training requirement was verified by interviews with the LLNL PI, USGS PI, and USGS Contractor Scientific Investigator.
4. Currently, there is no BSC-approved refresher training. However, the USGS SN Coordinator does have a process to brief PIs of the current requirements for a SN when issuing a new book. Additionally, she keeps all USGS SN owners aware of new lessons learned regarding the use and control of SNs (e.g., DRs, Conditions/Issue Identification and Reporting/Resolution System (CIRS), procedure revisions, etc.) via this process. It is recommended that this process be formally integrated into a project-wide refresher module for PIs. It is also recommended that USGS SN Coordinator be designated as a Subject Matter Expert and be allowed to conduct accredited training for the USGS in Denver.
5. The original scope of this surveillance included plans to assess the development of a revision to the current SN procedure. While the development of this revision is in process, there was no final draft of the revision available for assessment to ensure that recommendations and corrective action commitments were still in the procedure. The planned assessment questions that were to have been used in the assessment will be entered into CIRS in the form of recommendations. Recommendations have been discussed with the individual who is responsible for the procedure revision. The author was receptive to the recommendations discussed.

Continued from Block 10: Surveillance Conclusions:

6. As part of the corrective actions for DR BSC-01-D-087, the SNR has been upgraded to produce e-mail notification to inform management of upcoming review deadlines at intervals of two months, one month, and two weeks in advance. There is an additional e-mail that notifies responsible managers and PIs of overdue actions. Tracking of review status and management notification is deemed adequate. Recommend that the revised procedure continue with controls for tracking and notifications.
7. As a result of DR BSC-01-D-087 corrective actions, there are currently no inactive SNs. All of the inactive SNs (i.e. no activity documented in the SNs after their last review and with no additional activity planned) were closed as a result of remedial actions for the cited DR. It is recommended that consideration be given to inclusion of provisions to exclude inactive SNs from the technical/compliance review cycles be written into the revised procedure.
8. Compliance Reviews are being conducted with the use of the review worksheets and the procedure. The reviews conducted at LLNL and USGS show evidence of thorough assessment. Most noteworthy were reviews conducted by the LLNL Technical Reviewer. His reviews show evidence of meticulous attention to detail. His comments clearly explain the responses to all questions on the review worksheet, including "yes" answers, which are not required by procedure. Additionally, although technical reviews are not procedurally required to be guided by worksheets, LLNL has developed a worksheet for use in technical reviews. One procedural noncompliance was noted: AP-SIII.1Q, Section 5.5.5b) requires that all "N/A" responses on the worksheet be given justification. One compliance review was observed not to have the required justification statements; however, a subsequent compliance review had also formally noted the problem and the corrective action was under management through the comment/ resolution process. This problem was noted in other SNs at both LLNL and USGS. Recommend that management reconsider the requirement vis-à-vis the value added, and if warranted, remove the requirement from the procedure. If the requirement is justifiable, then management should apply action to achieve consistency among all SN owners at all locations where SNs are used. In general, technical and compliance reviews were deemed to be more than just adequate. The newly assigned Engineering Assurance Manager and the on-site BSC/QA Representative at LLNL, and the SN Coordinator at USGS, have made marked improvements in the use of SNs. These individuals have gained recognition as the "Resident SN Experts" and are consistently sought out for advice and assistance on SNs.
9. A number of SNs were observed with references to supplemental notebooks; however, primary work is being documented in the SN with references to supplemental notebooks documented in the SN. No deficiencies in implementation were noted in the field. Recommend that the revision to the procedure continues to avoid unnecessary commitment with respect to how supplemental notebooks should be referenced (i.e., the supplemental record only needs to have the SN identification number. Page numbering is not necessary).
10. It is recommended that the new revision contain a compliance worksheet that includes, as a minimum, all the elements from the worksheet in Revision 0 of AP-SIII.1Q.
11. Through interviews with PIs, it was evident that their investigations were being documented directly into the SNs. No other uncontrolled media are being used. No deficiencies were noted with respect to applicable criteria. One PI related that when his SN is not in his possession, due to a review, for example, he actually retrieves the SN and makes his entry back at his lab, then returns the SN to the reviewer. Another PI keeps his SN in the field in an approved fire safe and makes his entries in the field without having to transport the SN back and forth at the risk of forgetting the SN, and being tempted to write on loose leaf paper and transcribe it to the SN.
12. Confirmed, in SNs reviewed, that work was conducted in accordance with Yucca Mountain Project approved procedures. No external documents were used to control work. The owner of SN-LLNL-SCI-356-V1 had photocopied and pasted a sample preparation process from an outside source into her SN, but in the pages preceding and following she adequately integrated it such that sufficient detail was provided to permit an independent, qualified individual to retrace the investigation and confirm results.

Continued from Block 10: Surveillance Conclusions:

13. Conditions observed at LLNL and USGS indicate that SN users are taking sufficient precautions to guard against loss or damage to notebooks. It is recommended that the revision to AP-SIII.1Q expand upon section 5.1.9 of the current procedure to specify some minimum acceptable methods for storage of notebooks.
14. To assess a concern identified in the Morgan, Lewis, Bockius report titled "Safety Conscious Work Environment," interviews were conducted with PIs and Management personnel at LLNL and USGS to determine if "deficiencies" are being documented in SNs. The concern in the report was that conditions adverse to quality were being documented in SNs only, and not being entered into some program-approved, managed corrective action process. No evidence of that violation was found. In all cases, interviewees articulated that when deficiencies are discovered, they are indeed written in the SN, but are also identified in a managed process such as the review comment and resolution process, Nonconformance Reports (NCR), or DR as is the program-approved process. Examples were cited that indicated that when certain deficiencies with data were discovered, an immediate NCR was generated to flag the data. Other problems were identified in DRs. We are confident that this is not, in fact, a concern at either LLNL or USGS. It is recommended, however, that the revised procedure more adequately indicate the requirement for handling conditions adverse to quality via applicable procedures.

LAUDATORY COMMENTS:

1. The assistance and responses to this surveillance were exemplary at both LLNL and USGS. Personnel were very forthcoming in their responses, and were able to produce requested material quickly. In all cases, questions were answered fully and with complete candor.
2. The efforts to address DR BSC-01-D-087 were reviewed very closely. It was evident at both locations that aggressive corrective actions had been taken and that management was well informed of the activities and efforts to respond to the deficient condition described in the DR.
3. It was evident that there is full management support at both locations for the personnel being tasked to ensure that SNs are being appropriately used and maintained.
4. All personnel contacted are to be commended for the manner in which they have discharged the duties involved in the use and maintenance of SNs, including management, QA Representatives, SN Coordinators, Training Coordinators, and PIs.

CONCLUSION:

Overall, the Surveillance Team considers the results of the surveillance to be satisfactory. There were no conditions adverse to quality noted. The general condition of SNs in use on the Project is considered to greatly improved, especially since work to correct DR BSC-01-D-087 conditions was started. The recommendations cited in this report have been entered into CIRS. The following CIRS Item Numbers apply:

Recommendations pertaining to revision of the existing procedure (see CIRS Item 2482).

Recommendations pertaining to designation of Subject Matter Expert (see CIRS Item 2483).