

**U.S. DEPARTMENT OF ENERGY  
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT  
OFFICE OF QUALITY ASSURANCE**

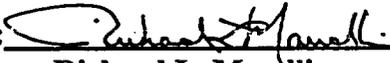
**SUPPLIER AUDIT REPORT**

**OF**

**SANDIA PRIMARY STANDARDS LABORATORY**

**ALBUQUERQUE, NEW MEXICO**

**REPORT NUMBER OQA-SA-96-011  
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Enclosure

## 1.0 EXECUTIVE SUMMARY

The results of the supplier audit of Sandia Primary Standards Laboratory (PSL) revealed unsatisfactory conditions resulting in the issuance of one Deficiency Report to Lawrence Livermore National Laboratory (LLNL) for action which relates to the Quality Assurance (QA) Program for the Office of Civilian Radioactive Waste Management (OCRWM) activities. The deficiency report reflects: inadequacies in operating procedures, lack of documented approved calibration procedures, and inadequate calibration documentation (i.e., missing references to standards used in calibration). The majority of calibrations performed by PSL are accomplished using internally developed calibration procedures. The QA Program is implemented through the requirements established in the Sandia National Laboratories Measurement Standards Program (MSP) Quality/Business Plan, dated May 1995. The PSL is in the process of consolidating the Sandia Standards Laboratories (SSL) with the PSL. In this process, former SSL personnel are being indoctrinated into the PSL QA Program. Also, the PSL is preparing for certification by National Institute of Standards and Technology's (NIST). Changes are in progress to unify the program and assure that all departments are working to the program. Also, PSL management is developing an internal audit program for self-assessment on how well the program is working.

Due to the present status and the conditions found during the audit, the QA Program and implementation as it relates to the Quality Assurance Requirements and Description (QARD) is considered marginal. Technically, all work performed to date is considered acceptable, but the administrative controls of the program need work. It is recommended that a re-audit/surveillance be performed at the earliest practical time to determine if the changes being made are effective and if the QA procedures are being satisfactorily implemented.

The unsatisfactory conditions identified during the audit were discussed with PSL management who agreed to resolve the unsatisfactory conditions upon receipt of the reported conditions adverse to quality. None of the conditions found appear to have a technically adverse impact on the activities associated with the PSL's scope of work.

## 2.0 SCOPE

The supplier audit was conducted to evaluate the adequacy, implementation, and effectiveness of PSL's quality program. This was accomplished by determining if the PSL's program satisfies the QA requirements (i.e., QARD) as specified by LLNL and Sandia National Laboratory (SNL), the SNL Measurement Standards Quality/Business Plan, dated May 1995 as accepted by the LLNL/SNL, and the OCRWM QARD for the scope of work. The QA program elements determined to be applicable are: Organization; QA Program; Implementing Documents; Document Control; Measuring and Test Equipment; Nonconformance Control; Corrective Action; QA Records; Audits; and Software Control.

### 3.0 AUDIT TEAM AND OBSERVERS

Richard L. Maudlin, Audit Team Leader, Office of Quality Assurance (OQA), Yucca Mountain Quality Assurance Division (YMQAD)  
James Blaylock, Auditor, OQA, YMQAD

### 4.0 PERSONNEL CONTACTED DURING FACILITY AUDIT

R. Pettit, Manager, Sandia Primary Standards Laboratory  
D. Braudaway, Quality Coordinator, Sandia Primary Standards Laboratory  
L. Azevedo, Technical Manager, Sandia Primary Standards Laboratory  
M. Benner, PVL Project Leader, Sandia Primary Standards Laboratory  
R. Romero, Project Leader, Sandia Primary Standards Laboratory  
G. Weebothee, Technician, Sandia Primary Standards Laboratory  
T. Wunsch, Senior Technician, Sandia Primary Standards Laboratory  
L. Holmes, Team Supervisor, Sandia Primary Standards Laboratory  
R. Moyer, Project Leader, Sandia Primary Standards Laboratory  
R. Richards, QA Manager, Sandia National Laboratory

### 5.0 SUMMARY OF AUDIT RESULTS

The PSL's Measurement Standards Program Quality/Business Plan, dated May 1995, addresses the applicable elements of the OCRWM QARD as required by LLNL/SNL for the intended scope of work. Calibration procedures were in place. Implementation of the Operations & Procedures (O&P) procedures was considered marginally effective in producing the desired results. Specifics of the unsatisfactory conditions are described in Section 6.0 of this report "Deficiencies/Recommendations."

The details of the audit, along with the objective evidence reviewed, are contained within the audit checklist which is available from OQA's supplier evaluation files.

### 6.0 DEFICIENCIES/RECOMMENDATIONS

The unsatisfactory conditions have been documented on the respective corrective action document and submitted to LLNL for resolution. Recommendations have been provided for PSL's management consideration and action and are offered as suggestions to improve your processes and are not required to be acknowledged unless otherwise stated.

## DEFICIENCIES

DR. YMQAD-96-P043 - The QARD requires that implementing documents include a sequential description of the work to be performed including qualitative and quantitative acceptance criteria; requires that implementing documents be reviewed and approved in accordance with document control criteria; and that Measuring and Test Equipment (M&TE) calibration documentation include traceability to the calibration standards used for calibration. Contrary to these requirements, several instances of vague, ambiguous or non-existent implementing procedures were found; technical calibration procedures did not, in all cases, indicate a documented approval; and there were no documented requirements for identification of the standards used to perform the calibration on the record of calibration.

## RECOMMENDATIONS

1. As presently depicted, the Document Hierarchy does not include the MSP Quality/Business Plan. It is recommended that the Document Hierarchy be updated to reflect where the MSP Quality/Business Plan fits in with the overall PSL program.
2. To date, all documented procedural deviations are maintained in the calibration file. It is recommended that the MSP Quality/Business Plan be revised to require, as a minimum, that project leaders approve deviations prior to implementation.