



8:00 – 8:45..... *The Online Application Process*

8:45 – 11:00..... *Assessment Checklist*

9:45 – 10:00..... Break

11:00 – 12:00..... *Dosimetry Assessment Report*

12:00 – 1:30..... Lunch

1:30 – 3:20..... *Review of Findings*

3:20 – 3:30..... Break

3:30 – 4:30..... *Oversight Board & Panel Discussion, Question & Answer Period*



U.S. DEPARTMENT OF
ENERGY

Nuclear Energy

DOELAP Assessor Training

The Assessment Report

David Jones
Salt Lake City, UT
September 24, 2012

- YOU ARE THE EYES AND THE EARS OF THE OVERSIGHT BOARD...rarely are your findings changed
- Avoid the trivial
- Focus on issues
- The report is for management (both site and field office); tell them what they need to know about improving their system or where the system's credibility is "dented" or "damaged".

- Cover page
- Introduction
- Status of corrective actions for past deficiencies and concerns
- Individualized sections
 - General
 - Quality Assurance
 - Personnel
 - Facilities and Equipment
 - Equipment Maintenance and Calibration
 - Processing Procedures
 - Dosimeters
 - Reports
 - Testing

Assessment Report Format

■ Cover Page

- Important information: laboratory's name, assessment dates, DOELAP policy for reporting concerns and deficiencies
- Must have signatures by the assessors and authorized management representative



Assessment Report Format



Department of Energy
Laboratory Accreditation Program (DOELAP)
External Personnel Dosimetry

ONSITE ASSESSMENT REPORT

Organization: Idaho National Laboratory

Onsite Assessment Dates: February 17 – 18, 2009

Date Report Reviewed with Management: February 18, 2009

Assessors:
Mark Prather *Mark Prather* February 18, 2009
Printed Name/Signature Date

Bob Flood *Bob Flood* February 18, 2009
Printed Name/Signature Date

Information for the Recipient

You are asked to respond in writing within 45 days, detailing the actions you have taken or plans you have for resolving the deficiencies and concerns identified in this report and your reasons for feeling any reported deficiencies are unwarranted. Failure to respond may delay an accreditation decision. Please obtain concurrence by your DOE field office. It should then be forwarded by the field office with a cover letter indicating concurrence to:

Laird C. Bean
DOELAP Performance Evaluation Program Administrator
U.S. Department of Energy, Idaho Operations Office
1955 Fremont Avenue, MS 4149
Idaho Falls, ID 83415-4149

You are reminded that this Onsite Assessment Report conveys the opinions of the assessors as representatives of DOELAP. The final evaluation of your facilities for the purpose of recommending accreditation will be conducted by a DOELAP oversight board. They will review this report, your response to it, other written information submitted by you and the performance test results for your dosimetry system in making a decision.

Signed Statement

The assessors have discussed the contents of this Report with members of management who agree to respond in writing to the DOELAP Performance Evaluation Program Administrator within 45 days of the date of this Report (with concurrence by the local DOE Office), regarding correction of deficiencies and concerns noted herein.

Laurie Kornacki
Printed Name

Laurie Kornacki
Signature of Authorized Representative of Management

■ Introduction (summary)

- Identify assessed organization (site)
- Identify interviewees
- Assessment scope
- Assessment team
- Identify number and type of findings (i.e., 0 def., 4 conc., 8 obs. 2 of ...)



Assessment Report Format

INTRODUCTION

A DOELAP onsite assessment of the Idaho National Laboratory dosimetry program was conducted to assure routine practices comply with criteria contained in DOE/EH-0026, "Department of Energy Laboratory Accreditation Program (DOELAP) Handbook." The DOELAP assessors were Mark G. Prather and John R. Flood. The following people were interviewed in the course of the assessment: Ron Perry, Technical Director; Keith Branter, Manager, Radiation Dosimetry Operations and Radiological Engineering; Laurie Kornacki, Radiation Dosimetry Technical Manager; Keith Young and Brian Andersen, Technical Support; Michele Brewer, Dosimetry Operations Foreman; Robert Hoffman, Quality Assurance Officer; and Karen Abbott, Helen Bailley, Case Baker, Brandon McNeel, and Jeri Wasi, Dosimetry Technicians. Other staff contributed to the assessment process, but were not interviewed directly. All of the INL staff involved in the assessment were competent, conscientious, and cooperative.

The resolution of the single concern identified in the previous DOELAP assessment was evaluated as well as compliance of the current program with DOELAP requirements. Six findings were identified, including zero deficiencies, one concern and five observations. One of the observations constituted favorable commendations to the INL dosimetry program and are noted as noteworthy practices.

The assessment was conducted February 17 and 18, 2009 and the following report summarizes the findings identified.

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- Status of Corrective Actions for Past Deficiencies or Concerns
- Must include the following:
 - Statement of finding
 - Summary of resolution/lab response
 - Status line (closed or elevated to deficiency)



STATUS OF CORRECTIVE ACTIONS FOR PAST DEFICIENCIES OR CONCERNS

Concern #1 Procedure TPR-7549 is lacking several quality control related items. Examples include: no method for verifying that a QC card was used to begin each rack of TLDs, not requiring that some system checks be performed if minor maintenance is performed on the reader (due to a jammed card, for instance) and the reader is restarted, no steps for ensuring the reject bin is checked or what to do if cards are found in bin 8, or the reading of background TLDs during or after personnel dosimeters are worn. These steps need to be included in the procedure as they can affect system quality. A thorough revision of the Harshaw procedures is required. (PR1, PR8, & PR9)

INL Response to DOELAP

"Background

TPR-7549 is the only procedure used for operating the INL personnel neutron monitoring program using the model 6776 dosimeter and Harshaw 8800 reader system. As such, it is the only procedure requiring revision to provide corrective action for Processing Concern #1. References to PR1, PR8 and PR9 are internal DOELAP assessment checklist references which address the following items:

PR1 - Processing protocol must be documented in sufficient detail that it can be followed by a competent technician;

*PR8 - All protocols must be audited to ensure no degradation of performance occurs;
and*

PR9 - Use of quality control dosimeters shall include: calibration traceability; sources;



Assessment Report Format

reproducibility; evaluation of QC data at the appropriate management level; frequency of blank and QC dosimeter placement.

For each example and checklist item listed in the concern, all sections of TPR-7549 were reviewed to ensure revisions addressed all appropriate sections throughout the procedure. TPR-7549 has been thoroughly reviewed and extensively revised to address the different elements of the concern and to improve the documentation of our personnel neutron dosimeter processing. The specific DOELAP concern items are outlined in the following response section.

Response

Example Item 1 - "no method for verifying that a QC card was used to begin each rack of TLDs"

Response - TPR-7549 has been modified to include several methods for verifying QC cards are properly installed in the processing job. Steps 4.10.1.5 and 4.10.1.6 have been modified to include QC card verification as well as color coding the QC cards for ease of identification. In addition, the procedure includes a program modification to change the acquisition set-up to require program verification of a QC card within every one-hundred card reads. Two notes have been added to procedure Step 4.5.15 that also require an after-the-fact review of processing results that ensures QC cards were included in all personnel TLD card reads in accordance with criteria in Step 4.10.1.6. Section 4.5 has also been modified to reference Section 4.10.1.10 which specifies QC criteria and recovery for Out-of-Specification QC results when processing personnel TLD cards.

- **Status:** TPR-7549 has been reviewed and verified to contain the corrective action steps listed above. This finding is considered closed.

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- **DOELAP Citation Policy:** Prior to categorizing findings, the findings should be rated as whether they are required in the DOELAP Checklist. That is, if there is a requirement in the Checklist for which the participant has not demonstrated compliance, then that finding will either be a Deficiency or a Concern. At the end of the finding, cite the section in the Checklist where the requirement is stated.
- **Example:**
 - Personnel
 - Concern 1: The group leader for dosimetry does not have a bachelor's degree in a related physical science field. According to the position description in the organization chart, this person shall have as a minimum, a bachelor's degree in a field related to the physical sciences (i.e., physics, health physics, radiological physics.) P.2
 - If a finding is not specifically required in the Checklist, it must be noted as an Observation, no matter how serious. If serious enough, the Senior Technical Manager (STM) will forward it to the Oversight Board for review and action.

■ Individual Sections

- Include a General Description in the comment section. List and serialize findings (C1, C2, C3, etc.)
 - General
 - Quality Assurance
 - Personnel
 - Facilities and Equipment
 - Equipment Maintenance and Calibration
 - Processing Procedures
 - Dosimeters
 - Reports
 - Testing



GENERAL

Comments

The program is documented with an external dosimetry quality assurance manual (PLN-371), numerous operating procedures, technical basis documents for each of its dosimeters, and other technical reports. Additional documentation such as reader logbooks and other pertinent programmatic records are maintained.

Deficiencies

None.

Concerns

None.

Observations

None.



QUALITY ASSURANCE PROGRAM

Comments

The quality assurance manual and operating procedures delineate the quality assurance requirements for the program. The quality assurance program includes written instructions, a comprehensive training program, daily QC checks, on-line process QC TLDs, and the use of blind audit dosimeters.

Deficiencies

None.

Concerns

Concern #1 Quality program documents should define records and practices. This objective is not completely met when abnormal conditions are encountered. Existing procedures identify circumstances in which additional data reviews are required and where corrective actions may be necessary, but expectations for documenting these decisions and actions taken are not established, nor are the locations where such items are to be documented. INL should review its procedures and establish clear instructions to ensure consistent documentation of the resolution of off-normal conditions. (Q.6, PR.1, PR.3, PR.4, R.2)

Observations

Observation #1 Calibration records should include a unique identifier for the gamma irradiator to improve traceability. (E.11)



PERSONNEL

Comments

The program staff consists of a Technical Director, a Radiation Dosimetry Technical Manager, a Radiation Dosimetry Operations and Radiological Engineering Manager, two Technical Support persons, a Quality Assurance Officer, five Dosimetry Technicians, a Dosimetry Operations Foreman, an IMS Records Management Liaison, and a Software Support person. The Technical Director is responsible for establishing resources and achieving performance standards. A Technical Support person is responsible for final review and approval of processing results. Communications appear to flow freely among all members of the program staff. The qualifications of incumbents are consistent with position descriptions in the quality manual.

Deficiencies

None.

Concerns

None.

Observations

- Observation #2 The description of maintenance and repairs for processing equipment is unclear in program documents. Formal program documentation does not describe the contracts with the reader manufacturers for parts and repairs, although TPR-7549 mentions that a contract exists for scheduled preventive maintenance at annual and longer intervals for the Harshaw readers. Omitting the use of these contracts implies in program documentation that dosimetry staff are doing repairs when no specific procedures or training exist. Program documentation would be improved by including a description of the repair, maintenance, and hardware parts requirements of the service contracts. (P.11)
- Observation #3 Technician training and qualification reviews are particularly well documented and the records well organized for review. This is a noteworthy practice. (P.15, P.16, P.17)



FACILITIES AND EQUIPMENT

Comments

The program operates two Panasonic UD-710A Automatic TLD readers for personnel dosimetry. A UD-7900M is also available, but is not currently being utilized for processing dose-of-record TLDs. A Harshaw 8800 reader is used for reading the neutron portion of the beta/gamma/neutron dosimeter. Program personnel, in conjunction with factory service personnel, ensure that maintenance is performed and records are maintained on all processing equipment. A UD-710A reader is maintained for backup processing capability at a remote facility in the event of catastrophic equipment failure. An agreement with Harshaw provides a similar function for the Harshaw reader. Backups of data on computer-controlled processing systems are performed routinely.

Deficiencies

None.

Concerns

None.

Observations

None.



EQUIPMENT MAINTENANCE AND CALIBRATION

Comments

Program personnel perform exposures for the purposes of daily QC reader checks and ECF generation using a Panasonic UD-794A automatic TLD irradiator. Traceable exposures for periodic reader calibrations are made by the Health Physics Irradiation Laboratory (HPIL).

Deficiencies

None.

Concerns

None.

Observations

None.



PROCESSING PROCEDURES

Comments

Technicians process UD-808 and UD-814 TLDs on the Panasonic UD-710A readers. The neutron portion of the neutron dosimeter is processed on a Harshaw 8800 reader. Neutron doses from the Harshaw dosimeter is combined with the beta/gamma doses from the UD-808 dosimeter using The Doctor's Software. Technicians follow the prescribed quality control requirements and generate interim processing reports. Technical Support reviews and approves final dose results.

Deficiencies

None.

Concerns

None.

Observations

Observation #4 Intermediate processing records are not retained for personnel monitoring. The records may provide additional useful information in the event that re-processing is necessary or may contain information that is not otherwise available.



DOSIMETERS

Comments

Deficiencies

None.

Concerns

None.

Observations

None.



REPORTS

Comments

Routine dose reports were reviewed and found to meet expectations.

Deficiencies

None.

Concerns

None.

Observations

Observation #5 The accreditation program requires that the laboratory maintain a method for resolving contested dosimetry data. The INL program includes an investigation process that uses the Personnel Exposure Questionnaire (PEQ) to document the resolution of its investigations, but does not explicitly require initiation of a PEQ if a wearer contests the validity of an assigned dose. There is no indication that INL Dosimetry has failed or refused to conduct such an investigation. The program's documentation should be expanded to include this activity. (R.1)



TESTING

Comments

INL's program documentation satisfactorily describes performance testing. INL participated in performance testing in 2008, failing in Category IIIA, largely because of a problem with one x-ray beam code. Efforts to identify and remedy the cause were ongoing at the time of the assessment.

Deficiencies

None.

Concerns

None.

Observations

None.



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DOELAP On-Site Assessment Requirements Checklist

Participant: Idaho National Laboratory

Requirements Fulfilled?

Section and Requirements

General Requirements	Y, N, N/A	Demonstration of Conformance
G.1 Latest version of protocols or procedures	Yes	<i>Though procedures are in need of better review before issued.</i>
G.2 Latest version of dosimeter specifications	Yes	<i>Tech Basis docs.</i>
G.3 Latest version of TBM and QA manual	Yes	<i>By inspection.</i>
G.4 Latest version of equipment manuals	Yes	<i>Vendor provided manuals plus in-house procedures.</i>
G.5 Other pertinent documentation	Yes	<i>Fairly extensive program documentation.</i>



DOELAP On-Site Assessment Requirements Checklist
Participant: Idaho National Laboratory

Section and Requirements	Requirements Fulfilled?	Demonstration of Conformance
Q.1 Technicians familiar with and implement quality control program	Y	Required reading, annual reviews.
Q.2 Quality control program organized to assess variability of test results among staff (processor) – if applicable to the system	Y	QC data can be traced to operator, but largely N/A on automated systems.
Q.3 Supervisor examines all required QA system audit results, takes action to correct deficiencies (processor and oversight)	Y	QA Manual
Q.4 Records of laboratory's participation in intercomparison programs/external measurement assurance programs consistent with QA manual	Y	only DOELAP in recent years
Q.5 Comparative tests assess consistency of dosimetry data	Y	QA dosimeter program
Q.6 QA system clearly describes records and practices through entire dosimetry cycle	N	Concern



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DOELAP On-Site Assessment Requirements Checklist
Participant: Idaho National Laboratory

Section and Requirements	Requirements Fulfilled?	Demonstration of Conformance
T.1 Protocols for proficiency testing in accordance with the DOE Standard must be defined and be consistent with routine processing procedures.	Y	Inspection
T.2 A written test plan for each radiation category for which accreditation is sought must be available to the processing staff.	Y	Inspection

John R. Hood
Assessor

2/18/09
Date

Thom Prater
Assessor

2-18-2009
Date

Assessment Report Format

- Send completed assessment report, assessment checklist and attendance sheets to the STM
 - Hardcopy – original assessment report, assessment checklists, and attendance sheets
 - Electronic copy (word document) – assessment report without signatures

■ Remember

- The STM and OB were not at the assessment
- The site's accreditation depends, in part, on how well you communicate the seriousness of findings
- The STM has the discretion to recommend changing the status of a finding to the Oversight Board (policy is to support your observations)