



### 9.5.3 ALARA Audit Procedure

#### 1. Purpose

1.1 To provide the appropriate person with instructions to perform audits on the Department ALARA Program and its implementation.

#### 2. Responsibilities

2.1 The C-A Department Quality Representative shall perform an audit on the ALARA Program at least every three years. The audit is designed to ensure the ALARA program effectively complies with federal and SBMS requirements, as well as with appropriate good practices.

#### 3. Prerequisites

3.1 The C-A Quality Representative shall have knowledge of C-A policies and procedures relating to ALARA, DOE Order 414.1, and SBMS requirements.

#### 4. Precautions

None

#### 5. Procedure

5.1 The auditor will make comparisons between actual operations and established requirements in the following areas:

5.1.1 Changes, additions, and deletions to ALARA Program documents. Purchase specifications and procurement documents associated with major ALARA initiatives.

5.1.2 Laboratory and field notebooks, logbooks, and data sheets associated with radiological surveys.

5.1.3 Dosimetry (TLD) records.

5.1.4 Dosimeter test records.

5.1.5 Radioactive inventories and control documents, if appropriate.

5.2 The auditor may use the checklist in Attachment 8.1 or an equivalent.

5.2.1 If equivalent audits have been performed, such as a self-assessment, then the C-A Quality Representative may take credit and substitute for this ALARA audit.

5.3 Within one month of the audit, the auditor shall report the findings to the Chairman of the ALARA Committee and the C-A Department Chairman.

5.4 The Department Chairman, or designee, shall track all recommendations until they are resolved.

## **6. Documentation**

6.1 The results of the audit shall be shown in the standard C-A QA reports and a copy placed into the ALARA Committee files.

6.2 ALARA records associated with C-A experiments shall be maintained by the ALARA Committee Chair through the life of the experiment.

6.3 Records associated with radiological conditions shall be maintained by the ALARA Chair for two years, the current and past fiscal years.

6.4 ALARA records not identified in paragraphs 6.2 and 6.3 shall be stored in one central location in accordance with the SBMS Records Management Subject Area requirements.

## **7. References**

7.1 DOE PNL-6577 "Health Physics Manual of Good Practices for reducing Radiation Exposure to levels that are As Low As Reasonably Achievable (ALARA)".

7.2 DOE/EH Appendices, "Occupational Dose Reduction at Department of Energy Contractor Facilities: Study of ALARA Programs - Good Practice Documents," (draft) July 1991 Appendix F.

7.3 HP-SOP-020, ALARA Program

## **8. Attachments**

8.1 Example Audit Checklist for the ALARA Program.

Attachment 8.1  
Example Audit Checklist for the C-A ALARA Program

REQUIREMENT	AUDIT FINDING
ALARA records are maintained to demonstrate the adequacy of the program, especially those records and procedures dealing with: <ul style="list-style-type: none"> <li>• Dose authorization</li> <li>• Dose investigation</li> <li>• Radiological goals</li> <li>• Annual ALARA reports</li> <li>• ALARA training and exams</li> <li>• ALARA audit responses</li> <li>• ALARA meeting minutes</li> <li>• ALARA design reviews</li> <li>• Cost/benefit analysis</li> <li>• RWPs</li> <li>• ALARA job/experiment reviews</li> </ul>	
Training and retraining of C-A Radiation Workers is in accordance with the BNL RadCon Manual, and is conducted at a sufficient frequency not to exceed a period of 2 years.	
Training and retraining of Radiological Control Technicians (RCTs) is in accordance with the BNL RadCon Manual, and is conducted at a sufficient frequency not to exceed a period of 2 years.	
Appropriate ALARA training for ALARA Committee members, liaison physicists/engineers, project physicists/engineers is in accordance with established procedure and frequency.	
Dosimeter issue, recall and testing is performed according to established procedure and frequency.	
TLD issue and recall is performed according to established procedure and frequency.	
Standard RCD Radiation Survey Forms are used by C-A RCTs.	
C-A RCTs are performing routine surveys in radiological areas according to established frequencies.	
The C-A FS Representative according to established procedure maintains area radiation surveys from both fixed and portable monitoring instruments.	
TLD and dosimeter reports are distributed to supervisors according to established frequencies.	
Each respective Department defines radiological areas.	
Sealed source inventories are maintained according to C-A procedure.	
Detailed and specific ALARA procedures are formalized in the respective Department manuals, and provisions are made for periodic review and update.	
Management responsibilities for reviewing, auditing, and evaluating the ALARA program are documented.	
Specific and formal assignments of ALARA responsibilities exist in the respective Department procedures.	
The activities and results of the ALARA program are reported to Department Chairmen annually by the ALARA Committee.	
The ALARA Committee keeps accurate records of its deliberations and operations, documenting all significant actions (see Sect. 6.0, Documentation).	