



U.S. DEPARTMENT OF
ENERGY

Office of
Nuclear Energy

DOELAP Webinar

February 28, 2023

WebEx

Agenda

- DOE-STD-1095-2018 revision status
- Backup/continuity requirements
- Assessment guidance for continuity requirements in current standards
- Summary of updates to ANSI N13.11
- DOELAP travel topics
- Upcoming external dosimetry assessor training in Sept. 2023 in Idaho Falls
- Questions



DOELAP Continuity of Accreditation

DOELAP Assessor Webex – 28 February 2023

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Continuity of Accreditation

- DOE-STD-1095(2018), *DOELAP for Personnel Dosimetry*
 - 4.2(h) A program shall have a documented plan for continuity of operations. This includes service contracts, in-house maintenance, spare parts capabilities, and unexpected loss of key personnel.
 - 4.7(c) Adequate backup equipment shall be possessed and maintained in the event the primary systems fail. If backup equipment or systems are not available, the program shall have documented provisions to utilize the services of another DOELAP accredited laboratory in an emergency.

DNFSB Staff Report (Jan 2022) sent to Secretary Granholm on May 10, 2022

- DOE's standard for external dosimetry programs, DOE-STD-1095-2018, *Department of Energy Laboratory Accreditation Program for Personnel Dosimetry* contains a weakness...
 - Compliance requires “documented provisions to utilize the services of another DOELAP accredited laboratory in an emergency.” However, there is no requirement that those provisions be periodically exercised to ensure compatibility between the two programs.
 - “If the site had tested and demonstrated its emergency backup plan..., it could have identified the weakness that, if corrected, could have reduced the negative impact of the external dosimetry equipment failures.”

DOE Response to DNFSB on October 7, 2022

- Office of Environment, Health, Safety and Security committed to:
 - Further clarify several provisions of DOE-STD-1095, including backup processor requirements for continuity of operations.
 - Initiating changes to DOE-STD-1095 in Fall of 2022
 - Project Justification Statement approved in November 2022
 - Modifying assessor training for both external dosimetry and radiobioassay programs to increase focus on the examination of the backup processor and continuity of operations plans.

Historical Perspective

- DOE EH-0026 (1986), *Handbook for DOELAP for Personnel Dosimetry Systems*
 - Section 4.3.3.3 Facilities and Equipment, “Adequate backup equipment or systems for key processing steps should be available for use in the event the primary systems fail. The backup system could be arranging for the services of another DOE-accredited contractor on an emergency basis.”
- DOE-STD-1095(2011), DOELAP for Personnel Dosimetry
 - Requirement removed, but remained an assessor checklist item.

Continuation of Accredited Activities (STD-1095 pre-REVCOM draft)

- A program shall have a documented plan to ensure continuation of accredited activities in the event of a temporary and unexpected loss of capability, up to 6 months. The documented plan shall include contingencies for maintaining redundant accredited measurement capabilities and unexpected loss of key personnel.

Pre-decisional
Information only

Redundant Measurement Capabilities

(STD-1095 pre-REVCOM draft)

- a) Examples of redundant capabilities include:
- Spare parts and maintenance
 - Duplicate measurement systems
 - Backup service provider
- b) Programs shall identify essential materials that can be serviced or replaced and are necessary to maintain operations of systems.

Redundant Measurement Capabilities

(STD-1095 pre-REVCOM draft)

- c) Programs that utilize duplicate measurement system capabilities for continuation of accredited activities shall:
- Maintain calibration of measurement systems;
 - Perform annual blind audit testing of all accredited categories; and
 - Identify contingencies for catastrophic loss (e.g., natural disaster, power surge, building fire).

Redundant Measurement Capabilities

(STD-1095 pre-REVCOM draft)

- d) Programs that utilize backup service providers shall have a documented agreement in place that includes processing equipment types, dosimeter types, accredited categories, and number of expected measurements. Backup service providers shall:
- Maintain a DOELAP accreditation or vendor qualification;
 - Have demonstrated acceptable performance in all accredited categories identified in the agreement; and
 - Perform annual blind audit testing of all categories identified in the agreement.

Unexpected Loss of Key Personnel

(STD-1095 pre-REVCOM draft)

- Key personnel are those who have assigned duties and functions necessary to implement the accredited program defined by this standard.
- A plan shall document contingencies for loss of key personnel until a backfill can be established. Examples may include staff reassignment (permanent or temporary), consultant agreement, or corporate reach-back program.

Other Updates

(STD-1095 pre-REVCOM draft)

- Example Management Review Template added to Appendix
- Continuation of Accredited Activities added to Management Review requirements
- Clarification of Blind audit program requirements

Pre-decisional
Information only

Contact Information

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<https://www.energy.gov/ehss/worker-safety-and-health-policy>

<https://www.energy.gov/ehss/wsh-webex-series-archives>

PCPortal.doe.gov

Assessing to current continuity requirements

- 1095 and 1112 4.2 (h) A program shall have a documented plan for continuity of operations. This includes service contracts, in-house maintenance, spare parts capabilities, and unexpected loss of key personnel.
- 1095 4.7 (c) Adequate backup equipment shall be possessed and maintained in the event the primary systems fail. If backup equipment or systems are not available, the program shall have documented provisions to utilize the services of another DOELAP accredited laboratory in an emergency.

Assessing to current continuity requirements – considerations

- How to meet requirements
 - MOAs
 - On site backup
 - Personnel cross training, corporate reach back, etc.
- Concern
 - No plan, Agreement not renewed within accreditation period (if utilizing backup agreement), Agreement in place but no testing of backup capability (i.e., accredited in category, testing of system), spare parts capability not in place.
- Observation
 - Plan in place, some testing done but not comprehensive, plans may lack detail

ANSI N13.11-2022

■ Notable Changes

- Category VD is a new neutron category using $^{241}\text{Am}/\text{Be}$ source
 - Not included in VA (General)
 - Allows alternative to ^{252}Cf
- Category II the “S” Special series x-ray beams, S60 & S75 have been removed from testing
- Category II clarifications on energy range irradiations
 - At least 3 but no more than 5 Low energy <70 keV
 - At least 3 Mid energy <70 – 500> keV
 - At least 3 High energy, ^{137}Cs or ^{60}Co
 - 3-5 Angles and 5-10 Mixtures remain unchanged

ANSI N13.11-2022

- New Appendices Added
 - Appendix H – LLD Guidance removed from 2009 version added back in along with two alternate methods
 - Appendix I – Angular Response Study added back in and made consistent with guidance in ANSI N13.32
 - Appendix J – Lens Of The Eye Dosimetry
- VOID requirements expanded
 - Only one void allowed per round
 - When void occurs in rounds 1 or 2, participant may request replacement irradiation(s) in subsequent rounds (at discretion of the IL)

ANSI N13.11-2022

■ VOID requirements continued

- For any dosimeters that are voided without replacement irradiations, the participant shall retain objective evidence of the technical justification, and a succinct explanation of why the void was necessary shall be provided to the IL for inclusion in the summary report.
- All categories contain one (1) or more subcategories that require a minimum number of dosimeters to be exposed using a specified condition (e.g., irradiated at angles, under mixtures of radiation energies, within specific energy bounds, etc.). Under some conditions, voiding dosimeters may result in not reaching these minimum criteria. If this occurs, replacement irradiations shall suit the requirement of the subcategory to the extent possible.

DOELAP travel topics

- Assessors need to make sure that we have hotel price per night **prior** to completing the travel authorization (the reason is that if we don't have over per diem approved prior to going on travel)
- Need to know when a Rental Car needs to be put on assessor (they are assuming I know and automatically book it – this needs done prior to departing on travel)
- Need to know if they will have airport parking fees, hotel parking fees, taxi, uber, etc.
- Privately Owned Vehicle (POV) mileage from home to airport (however many times it is)
- Combining personal and business (need to show this up front so a theoretical can be run if the airfare is cheaper for them to do actual travel then nothing more needs to be done. If the Theoretical is the “would have been” without personal time then the traveler is required to pay the difference)
- Be specific when travel request is sent in (ex; taxi, uber, shuttle)

If they have questions please call at (208) 716-0808. **(New phone number)**

Assessor Training

- On-site assessor training resumes this year
- Will be alternating external dosimetry and radiobioassay
- External dosimetry training Sept. 11-12, 2023 in Idaho Falls
- Radiobioassay training Sept. 2024 in Idaho Falls

Final thoughts

- Level of detail in findings statements
 - More explanation is generally better – to a point
 - Examples are good, but be cautious
- Thoughts for sites
 - CAs go to FO, STM, assessors, etc.
 - Leave plenty of time
 - Draft to STM?

Questions?