

ANSI N42.317

A Work in Progress
(LA-UR-05-2056)

History

- Original standard completed in 1978, published 1980
- Included performance specs for fixed (CAMS/PCMs) and portable instrumentation, capable of measuring photon, neutron, and alpha radiations, used in Pu facilities
- Did not include personnel dosimeters, effluent monitoring, or bioassay instrumentation
- Appendix discussed Pu Radiation Characteristics

Near-term History

- Spring of 2003, I was asked to lead effort to revise/update standard.
- Recruited volunteers from Hanford, LLNL, Savannah River, Rocky, Instrument companies, Pantex, LANL (10 volunteers)
- First meeting at HPS Annual meeting in San Diego
 - Made list of all instruments used in Pu Facilities
 - Assigned instruments to committee members
 - Is it appropriate to discuss the instrument in the standard
 - Use in Pu facility
 - Not addressed in other standards
 - Determine if instrument criteria adequately described in other standards
 - Are the factors associated with use in Pu facility addressed (Rn interference, remote monitoring requirements)
 - Is there anything this standard should add

Development of first draft

- All available standards (IEEE, ANSI, ASTM, ASME...) were researched.
- Standards germane to each instrument ided and reviewed.
- Judgment made on completeness of existing (including draft) standards for identifying Pu facility instrument criteria
 - If current standards complete, reference in N42-317
 - If current standards not complete, develop criteria
- Discussion of approach with Faust/Selby
- Mini-meeting at LANL in January 2004
- Identification of instruments selected for inclusion and reason for selection complete 2/1/04.

Near-term history (cont)

- Imposition of deadline with deliverable caused committee membership changes
 - from 10 members to 5
 - Sites represented, LANL, LLNL, Rocky, Hanford
- Deadline extended to 3/30.
- First draft complete on 5/9
- Sent to 30 reviewers from LANL, SRS, Instrument companies, LLNL, Rocky, and Hanford (only 13 responded with comments)

Instruments discussed in revision

- Air samplers (need for flow rate measurement)
- Area Monitors (photon and neutron) – need for remote monitoring of dose rate/fault indicators
- CAMs
 - Portable vs fixed
 - Placement
 - Remote indicators
- PCMs – challenges of alpha detection
- HEPA filter monitors – dP device providing means for diversion of airflow
- Lapel sampler – issues regarding use

Changes to 1st Draft

- Comments received on 6/28
- Comment resolution performed at the HPS meeting in DC.
- Decided to add annexes to properties of Pu and Radon interferences
- Annexes due by 12/04

Current status

- Annexes added
- Review of second draft by committee completed at HPS meeting in New Orleans
- Minor changes and addition of relevant references performed
- Document ready for RPI review

Schedule

- Out to RPI by end of month
- Comments back from RPI by May 15
- Incorporate comments/review at HPS meeting in Spokane
- Out to ANSI for publication by 7/05