

efficiency bulletin

February 2, 2016

Color Code: Blue
Due: June 2016

Efficiency Bulletin: 16-04 Source Checking Personnel and Tool Contamination Monitors

Change the frequency for performing source checks at radiological exits on personnel & tool contamination monitors with enhanced technology from daily to weekly, consistent with industry standards.

Addressees: Chief nuclear officers, NEI and INPO APCs

Issue: RP-05, Change Frequency of Personnel and Tool Contamination Monitor Checks at the Radiologically Controlled Area (RCA) Exit from Daily to Weekly

Summary of Efficiency Opportunity

- Desired end-state—Contamination monitors with enhanced technology at RCA exits are source-checked weekly.
- Value proposition (vision of excellence)—Reduce resources committed to daily source checks of contamination monitors. The impact on a site depends on the number of personnel monitors, portal monitors and gamma-sensitive tool monitors at the RCA exits.
- Why it is important?— Aligning contamination monitor source checks with industry guidance taking advantage of newer technologies will provide efficiencies in radiation protection and maintenance activities. It will allow personnel to provide focus on activities with worker and public health risks.
- Industry benchmark values—The number of events involving radioactive material outside of the RCA resulting from reduced monitoring remains at zero.
- Monitor the number of failures that are detected by weekly source



NUCLEAR ENERGY INSTITUTE

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checks compared to failures that should have been detected automatically.

Relevant Standards

- ANSI N323D-2002, American National Standard for Installed Radiation Protection Instrumentation.
- Performance Objectives and Criteria (INPO) - RP.3, Radioactive contamination is controlled to prevent the spread of contamination to personnel, areas and equipment.
- Performance Objectives and Criteria (INPO) - RP.4, Radioactive material controls are implemented to protect the health and safety of workers and the public.

Relevant Regulatory Requirement

- Sites will review the FSAR to identify any conflicting regulatory commitments.

Guidance

- INPO 05-008, Guidelines for Radiological Protection at Nuclear Power Stations, will be changed to read:

If authorized by committed ANSI standards, an instrument's (personnel monitor, portal monitor and gamma-sensitive tool monitor) response to ambient background radiation may be used instead of a daily check source provided that:

- The instrument's application primarily involves a point of interest that is near the level of ambient background radiation;
- The instrument's response to ambient background radiation is characterized and documented;
- The instrument's response to background radiation is routinely monitored;
- Provisions are made for removing the instrument from service in the event the instrument's response to ambient background radiation changes by an amount that cannot be attributed to expected changes in the background level;
- Beta foot detectors are inspected frequently to prevent degraded performance due to the shielding effect created by an accumulation of dirt/dust, particularly during high use periods such as outages;
- At least weekly, a response check is performed on each detector, using a source with activity at the desired set point for the alarm and reasonably approximating the station isotopic mix; and
- The instrument is operating with enhanced technology, capable of self-tests sufficient to monitor and automatically remove from service when an instrument failure is detected which would adversely degrade performance (e.g., detecting a fault if a detector is disconnected from the system).

Recommend Industry Actions

- Review FSARs to identify any conflicting regulatory commitments.
- Revise source check procedures for personnel and tool monitors with enhanced technology to require weekly, vs. daily source checks.

Key to Color Codes:

Red: NSIAC initiative – full participation required for viability

Blue: Action expected at all sites, but is not needed for broad industry viability

Green: Utility discretion to implement, consistent with its business environment

- Perform and document a one-time assessment to ensure the enhanced technology is functional and maintained post-calibration and instrument set-up.

Change Management Considerations

Industry Activities

- Industry webinar to provide background for initiative, INPO discussion, and provide an open forum to clarify expectations and ask questions.
- Discuss at regional RPM meetings and routine industry conference calls.
- Update and discuss during the May 2016 RP manager meeting at INPO.

Company Actions

- Review FSAR for commitments to relevant ANSI standards and source check requirements.
- Trend instrument source check failures to validate monitor performance.

Report Your Site's Results

Please report your company's implementation of this improvement opportunity, including the date of completion. Send this information along with your company point of contact to EfficiencyBulletin@NEI.org.

Industry Contacts

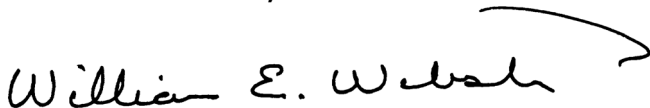
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