



Idaho National Laboratory SEC Petition-00238 Status Update

Presented by:

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Meeting of the Advisory Board on Radiation and Worker Health
Providence, Rhode Island
August 22–23, 2018

INL SEC Petition-00238

- July 20, 2017: NIOSH Petition-00238 Evaluation Report is released as part of the 83.14 process
- NIOSH recommends an addition to the SEC Class for workers at the CPP for the period 1975–1980:

All employees of the Department of Energy, its predecessor agencies, and their contractors and subcontractors who worked at the Idaho National Laboratory (INL) in Scoville, Idaho, and who were monitored for external radiation at the Idaho Chemical Processing Plant (CPP) (e.g., at least one film badge or TLD dosimeter from CPP) between January 1, 1975 and December 31, 1980 for a number of work days aggregating at least 250 work days, occurring solely under this employment, or in combination with work days within the parameters established for one or more other classes of employees in the Special Exposure Cohort.

- August 23, 2017: Advisory Board discusses proposed class during regular meeting in Santa Fe, New Mexico
 - ABRWH votes to accept the proposed 83.14 class definition
 - SC&A tasked with performing an evaluation of CPP dosimetry completeness for this period (1975–1980)

SC&A Approach to Completeness Evaluation of SEC-00238

- **SC&A Review Item 1:** Evaluation of the completeness and availability of routine area exposure reports and construction exposure reports.
- **SC&A Review Item 2:** Evaluation of the completeness and availability of temporary/visitor badges.
- **SC&A Review Item 3:** Identification of claimants who could be used to verify and validate that dosimetry records have been correctly coded and identified with the individual worker to allow for SEC determinations.
- **SC&A Review Item 4:** Review of a subset of claimant files to assess the practice of requiring a separate dosimetry badge for each area entered during a single monitoring cycle during the period of interest. This practice is often referred to as “multiple badges for multiple areas.”

SC&A Evaluation of SEC-00238: Review Item 1 – Completeness of Routine Dosimetry Records

- Completeness of dosimetry records established by comparing the number of monitored workers per badging cycle reported by INL to the actual dosimetry records captured by NIOSH.
- **SC&A Observation 1:** A comparison of the expected number of monitored workers listed in the Dosimetry Branch activity reports to those tabulated in the available dosimetry logbooks contained in area and construction exposure reports was only available for 49 of the 72 months of interest (~68%). The largest temporal gap observed was 11 months; all others were 3 months or less.
- For months in which the number of monitored workers reported per badging cycle was not available, SC&A compared the total number of dosimeters processed against the actual dosimetry records captured by NIOSH.
- **SC&A Observation 2:** SC&A's analysis of the total number of dosimeters in available records compared to the total number of dosimeters that were reported to have been processed during the observed temporal gaps showed reasonable agreement for both regular badges and construction badges. SC&A found no indication that available dosimetry logbooks for regular and construction badges are incomplete during these periods.

SC&A Evaluation of SEC-00238: Review Item 2 – Completeness of Temporary/Visitor Badges

- **Finding 1:** SC&A located temporary badge reports during the period of interest; however, it is apparent that the currently available records are incomplete. Additional temporary badge reports are available at the site but have not been captured due to the focus of previous data capture efforts. It would be beneficial that such reports be obtained and reviewed to assure completeness of dosimetry records for use in potential SEC adjudication.
- **Finding 2:** Based on a review of the limited available temporary badge reports from 1975 and 1980, workers who accrued zero measured dose and did not have a permanent Health Physics badge indicated in the temporary badge report do not appear to be consistently migrated into the official area exposure reports for CPP. This does not necessarily indicate that such temporary badge entries are unavailable for dose reconstruction and/or SEC adjudication. However, it does indicate that determinations of the completeness of records using area exposure reports are likely based on incomplete data and information.
- **August 2018 Path Forward on Findings 1 and 2:** NIOSH to perform additional data capture at INL to obtain the full set of temporary badges for completeness evaluation. SC&A to participate in data capture efforts with NIOSH as appropriate.

SC&A Evaluation of SEC-00238: Review Item 3 – Identification of Verification and Validation Cases

- SC&A evaluated the potential for verification and validation (V&V) cases among the claimant population to assure temporary/visitor badges are included with current DOE-supplied monitoring records for individual energy employees.
- **Observation 4:** Based on its review of limited temporary badges and dosimetry entries designated as “visitor” in the main area/construction exposure reports, SC&A was able to identify just 18 external dosimetry entries from the claimant population that could be used for future V&V review. However, when the full set of temporary badge reports is captured at INL, the available population of V&V candidates would likely increase markedly.

SC&A Evaluation of SEC-00238: Review Item 4 – Multiple Badging for Multiple Area Policy

- SC&A reviewed a semi-random set of the claimant population comprising ~25% of the relevant claimant population (115 claims in total).
- Review consisted of examination of a sufficient cross section of job titles and time periods to determine if separate dosimetry badges were required for separate INL site areas.
- **SC&A Observation 5:** With the exception of one job category, all sampled job categories showed evidence of multiple area badges during a single dosimetry cycle. The maximum number of observed area badges during a single dosimetry cycle was six (i.e., the energy employee was badged in six separate areas at INL during the same time period).
- **SC&A Observation 6:** The practice of multiple area badges during a single dosimetry cycle was observed for at least some sampled claims during every month during the period of interest. Furthermore, there does not appear to be a discernable temporal trend in the percentage of claims exhibiting multiple area badges per dosimetry cycle; thus, the use of multiple area badges appears to be a consistent policy.

SC&A Evaluation of SEC-00238: Conclusions and Path Forward

- Evidence strongly suggests that routine badging records for regular CPP employees as well as CPP employees designated as construction workers are complete and available (Review Item 1).
- All available temporary/visitor badges have not yet been captured by NIOSH; therefore, determinations related to the completeness of temporary/visitor badges and potential V&V evaluations are not currently feasible (Review Items 2 and 3).
- SC&A's analysis of a significant portion of the INL claimant population concluded that workers were required to obtain area-specific badges when moving among the major site locations at INL (Review Item 4).
- **August 2018 Work Group Path Forward:** NIOSH to perform additional data capture at INL to obtain the full set of temporary badges for completeness evaluation. SC&A to participate in data capture efforts with NIOSH as appropriate.



Questions?