



# Idaho National Laboratory SEC Petition-00219 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

# Background – INL SEC Petition-00219

- July 8, 2014: INL Petition Received
  - Job Titles and/or Job Duties: All employees who worked in any area
  - Period of employment: January 1, 1949, through December 31, 1970
- September 16, 2014: Petition Qualifies for Evaluation
- March 12, 2015: NIOSH Petition Evaluation Report Rev. 00 Completed
  - NIOSH original proposed SEC class included all workers with evidence of external dosimetry at the Idaho Chemical Processing Plant (CPP) for the period January 1, 1963–December 31, 1974
  - CPP Post-1974 period held in reserve for potential 83.14 evaluation
  - Original proposed class discussed by the Advisory Board on Radiation and Worker Health (ABRWH) at the regular semi-annual meeting in March 2015

## Background – INL SEC Petition-00219 (cont.)

- July 21, 2015: NIOSH Petition Evaluation Report Rev. 01 Completed
  - Documentation was captured that suggests that for the period from March 1, 1970, to December 31, 1974, a worker could enter the CPP with any INL dosimetry badge (i.e., a CPP-specific dosimetry badge was not required)
  - Class definition revised to effectively split the SEC into two time periods (Part A and Part B) based on the site-wide badging policies
  - Revised Class Definition: *“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 (a) 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, 1963 and February 28, 1970; or (b) who were monitored for external radiation at INL (e.g., at least one film badge or TLD dosimeter) between March 1, 1970 and December 31, 1974 for a number of work days aggregating at least 250 work days, occurring either 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.”*

## Background – INL SEC Petition-00219 (cont.)

- July 21, 2015: NIOSH Petition Evaluation Report Rev. 01 (cont.)
  - Revised class discussed by the ABRWH at the regular meetings in July 2015 and March 2016
  - INL/ANL-W Work Group discussions in July 2015, November 2015, January 2016, and March 2016
- Discussion by the ABRWH at the regular semi-annual meeting in March 2016.
  - INL/ANL-W Work Group recommended the ABRWH accept “part B” of the proposed class definition (i.e., “[workers] *who were monitored for external radiation at INL (e.g., at least one film badge or TLD dosimeter) between March 1, 1970 and December 31, 1974*”)
  - The ABRWH voted to accept the INL/ANL-W recommendation for acceptance of “part B” of the class definition while “part A” (i.e., “[workers] *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, 1963 and February 28, 1970*” continued to be evaluated

# Primary Issue Under Consideration for Part A

- Part A of the proposed definition requires evidence of external dosimetry specific to the CPP
- During the course of NIOSH, SC&A, and the Work Group review of the proposed class definition, it was discovered that temporary/visitor badge records were not always migrated to the main INL dosimetry system
  - Temporary/Visitor badges with positive recorded external dose were transferred to the official dosimetry database
  - Temporary/Visitor badges with no recorded dose were generally not included in the official dosimetry database
  - SEC Implication: Workers who were monitored via temporary/visitor badge at CPP and did not accrue a recorded dose could be inadvertently excluded from Part A of the proposed SEC class
- In response, DOE and INL conducted a significant coding and indexing effort to assure that all temporary/visitor badges were correctly migrated to the INL dosimetry system and available for individual SEC determination

## Primary Issue Under Consideration for Part A (cont.)

- INL/ANL-W Work Group remained concerned that difficulties might arise concerning the implementation of the temporary/visitor badge coding effort, including (but not limited to):
  - Name misspellings on original records
  - Name variations used for the same individual
  - Human error associated with the coding/indexing effort
- INL/ANL-W Work Group requested that SC&A develop a verification and validation (V&V) strategy to evaluate the effectiveness of the newly coded temporary/visitor badges in identifying workers who entered the CPP during the remaining portion of the proposed SEC class (January 1, 1963–February 28, 1970)

# Verification and Validation Strategy

- Initial SC&A V&V strategy outlined in a memorandum delivered to the Work Group on September 29, 2016:
  - SC&A method identified 32 individual claimants with a total of 51 temporary/visitor badges that were not included with the energy employees' monitoring record to date
  - NIOSH could then request the dosimetry records for these 32 individuals to verify that the missing temporary/visitor badges had been correctly migrated to the INL dosimetry system and were included in the energy employees' updated monitoring records
  - Initial V&V proposal was discussed during the Work Group meeting on May 16, 2017, at which time the Work Group requested that SC&A expand the number of claimants and associated temporary/visitor badges for V&V evaluation

# Verification and Validation Strategy (cont.)

- Revised SC&A V&V strategy delivered to the Work Group on August 3, 2017
  - 228 total claimants identified with nearly 1800 associated temporary/visitor badges
  - Claimants sorted/ranked into four separate groups based on the significance to V&V activities, factors considered include:
    - Inclusion of various subcontract workers in addition to prime contract workers
    - Observed name or spelling variations
    - Necessity of a future dose reconstruction (this criterion was included so that DOE would not expend resources to research the monitoring records for energy employees who would not require a revised partial dose reconstruction)
- Work Group discussed the revised V&V approach during the Work Group meeting on August 17, 2017
  - Work Group elected to proceed with the monitoring records requests for the first group of claimants identified in the revised SC&A methodology (30 energy employees in total)
  - Record requests for the second group of claimants (Group 2) to proceed after the records had been received for Group 1

## Verification and Validation Progress To Date

- NIOSH requested the external dosimetry records for the first 30 claimants (Group 1) in August 2017
- Due to a miscommunication with DOE, the temporary/visitor badges were still not being included with the claimant monitoring records
- After clarification of the issue, NIOSH resubmitted the requests for external dosimetry records in March and May 2018
- As of July 2018, revised monitoring records had been received for 18 of the original 30 claims in Group 1
- SC&A reviewed the revised monitoring record for the 18 available claims and submitted its interim results to the Work Group on July 26, 2018

## Verification and Validation Progress To Date (cont.)

- SC&A had identified 420 temporary/visitor badges among the 18 reviewed claims.
- Review of the updated external dosimetry files found that 332 of the 420 badges (~79%) had been correctly migrated into the INL dosimetry system and were appropriately included in the individual's monitoring record.
- In one case, none of the 31 identified temporary/visitor badges had been included.
- In addition to the 420 temporary/visitor badges attributed to the Group 1 claims, SC&A identified an additional 32 temporary badges that appeared to have name variations/misspellings. Only 3 of these 32 temporary badges (~10%) were included in the updated DOE monitoring record.

# Discussion and Path Forward – Part A of SEC-00219

- SC&A's interim V&V results as well as NIOSH response/discussion points were discussed during the INL/ANL-W Work Group meeting on August 9, 2018
- Work Group voted to continue gathering and evaluating DOE-supplied monitoring files for the remaining 12 of 30 claimants originally selected for V&V activities
- NIOSH to work with DOE-INL personnel to determine the root cause for observed missing temporary badge records among the 18 of 30 claims currently evaluated by SC&A



# Questions?