



MEMORANDUM

TO: Idaho National Laboratory/Argonne National Laboratory–West Work Group
FROM: SC&A, Inc.
DATE: August 3, 2017
SUBJECT: Update on Validation and Verification of INL CPP Temporary Badge Database – Expansion of Claimant Pool (1963–1970)

Introduction

SC&A delivered its proposed path forward and proof-of-concept for the verification and validation (V&V) of a newly developed Idaho National Laboratory (INL) database covering temporary and/or visitor badges (SC&A 2016), in particular, the proposal covered non-routine external badging at the Chemical Processing Plant (CPP) from January 1, 1963, to February 28, 1970. SC&A's proposal was discussed during the INL/Argonne National Laboratory–West (ANL-W) Work Group meeting on May 16, 2017. During that meeting, SC&A was instructed to expand its pool of claimants (32 claimants covering 51 visitor badges) to include additional cases pulled from temporary badge reports for the years 1963–1967. This memo provides an update on the expanded group of claimants identified for potential inclusion in the V&V analysis.

Discussion

It is important to note that temporary badge reports (unlike visitor cards) do not contain security numbers for each worker. Therefore, potential matches between the temporary badge reports and claimant files were made based on the worker's name, date of the temporary badge, covered employment, and specific employer. Similar to the original V&V proposal, claims were selected based on the necessity of a dose reconstruction (i.e., the claim does not meet the Special Exposure Cohort [SEC] criteria). This was done to avoid unnecessary work by the INL site in compiling the dosimetry histories for individuals who would not otherwise require such research.

Furthermore, it is recognized that the process of researching relatively large groups of individual workers can often take months.¹ Therefore, SC&A used professional judgment to divide the identified claimants into three groups based on their likely usefulness to the V&V analysis. The criteria used to divide the identified claimants included:

- Number of samples that directly identify the claimant via security number

¹ During the May 2017 Work Group meeting, it was estimated that researching the complete dosimetry history for approximately 40 individuals may take up to 2 months based on past experience (ABRWH 2017, page 42).

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- Total number of samples available for verification (visitor badges and temporary badges combined)
- Diversity of employer (i.e., inclusion of a sufficient number of prime and subcontract workers)
- Observed variations in name spellings (this is particularly important when dose records do not contain a security number to directly connect the badge report and claimant)

Based on a combination of the above criteria, SC&A delineated three potential groups in order of importance for the V&V analysis: Group 1, Group 2, and the Remainder Group. It is recommended that the dosimetry history for each group be requested in a sequential manner as the research of the previous group has been completed (or as otherwise directed by the Work Group). A fourth group (designated as the “SEC Group”) is also described in this memorandum; that group contains those workers who would not require a dose reconstruction. While this fourth group is not ideal to include in any V&V activity, this group could be added to the analysis if the first three groups proved inconclusive for the purposes of the Work Group.

SC&A’s expansion of potential V&V candidates identified a total of 137 claimants in available temporary badge reports and/or visitor cards found in the Site Research Database. If the SEC Group claims are included, this number rises to 228. Table 1 shows the totals by each Group and includes the total number of non-routine badges available for verification. As Table 1 demonstrates, Group 1 contains the largest portion of visitor badges identifying S# and also the largest proportion of temporary badges to check.

Table 1. Overview of Expanded Claimant Population for V&V Analysis

Group Designation	Total Claimants	Visitor Badges Including S#	Temporary Badges (No S# Available)	Total Non-Routine Badges to Check
Group 1	30	34	688	722
Group 2	30	1	353	354
Remainder Group	77	2	184	186
SEC Group	91	19	516	535

Table 2 shows the proportion of each group that was employed by the site’s prime contractors (Aerojet Nuclear Corporation, Phillips Petroleum Corporation, or Idaho Nuclear Corporation) versus various subcontractors at INL. Also shown in Table 2 are the number of claims in each group for which variations on name spelling were observed. For Group 1, approximately one quarter of the 30 claims were subcontract employees, and half of the claims in this group had observed name variations among the non-routine badges reviewed. The Remainder Group had a slightly higher percentage of subcontract employees among the three groups; however, this benefit is offset by the lower percentage of observed name variations and significantly lower number of non-routine badges per worker (as shown in Table 1).

Table 2. Expanded Claimant Population by Employer and Observed Name Variations

Group Designation	Total Claimants	# Prime Contract Employees (% of Total)	# Subcontract Employees (% of Total)	# Employees with Name Variations (% of Total)
Group 1	30	23 (76.7%)	7 (23.3%)	15 (50.0%)
Group 2	30	26 (86.7%)	4 (13.3%)	11 (36.7%)
Remainder Group	77	53 (68.8%)	24 (31.2%)	22 (28.6%)
SEC Group	91	60 (65.9%)	31 (34.1%)	36 (39.6%)

Conclusion

SC&A recommends that the identifying information for the 30 claimants in Group 1 be transmitted to the appropriate INL site personnel to obtain the full set of applicable dosimetry records as soon it has been determined that the coding and indexing of non-routine badges has been completed by DOE.

References

ABRWH 2017. Transcript of the Teleconference Meeting of the Advisory Board on Radiation Worker Health, Idaho National Laboratory/Argonne National Laboratory–West Work Group. May 16, 2017.

SC&A 2016. *Verification and Validation (V&V) Plan for Temporary Badges at CPP (1963–1970)*, Memorandum from SC&A, Inc., Vienna, VA, to the Idaho National Laboratory Work Group. September 29, 2016.