



MEMORANDUM

TO: INL/ANL-W Work Group
FROM: SC&A, Inc.
DATE: February 25, 2019
SUBJECT: Verification and Validation Proposal for the SEC-00238 83.14 Period at the Chemical Processing Plant (1975–1980)

Introduction and Background

On July 20, 2017, the National Institute for Occupational Safety and Health (NIOSH) released its evaluation report for Special Exposure Cohort (SEC) Petition-00238, which covers the Chemical Processing Plant (CPP) at Idaho National Laboratory (INL) under the 83.14 process for the years 1975–1980¹ (NIOSH 2017). NIOSH presented its evaluation report for SEC-00238 to the INL/Argonne National Laboratory – West (ANL-W) Work Group on August 14, 2017, and to the full Advisory Board on Radiation and Worker Health on August 23, 2017.

The proposed class definition is as follows (NIOSH 2017, page 1):

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. [Emphasis added.]

SEC-00238 shares an important similarity with the first portion of SEC-00219, which covers CPP for the period January 1963–February 1970. Namely, the class definition requires evidence of external monitoring at CPP to be considered part of the class. For SEC-00219, the INL/ANL-W Work Group voiced concerns that such an external monitoring requirement might inadvertently exclude workers from the SEC class if the dosimetry indexing system in place at INL did not correctly identify claimants with their appropriate external dosimetry records. Of particular import, concerns were raised over temporary badges, which were often a handwritten record that was not always migrated to INL’s dosimetry indexing system (for an example of a temporary badge record, refer to Figure 1 in the next section). Such handwritten records could

¹ This memorandum refers to this SEC-00238 period as the “83.14 period.”

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pose a variety of potential issues, including name misspellings, name variations, use of nicknames, legibility issues, and/or human error in the actual coding of these temporary badges into the INL dosimetry indexing system. For SEC-00219, SC&A was tasked with developing and performing a verification and validation (V&V) study to assure that temporary badges were correctly associated with the appropriate energy employee (EE).

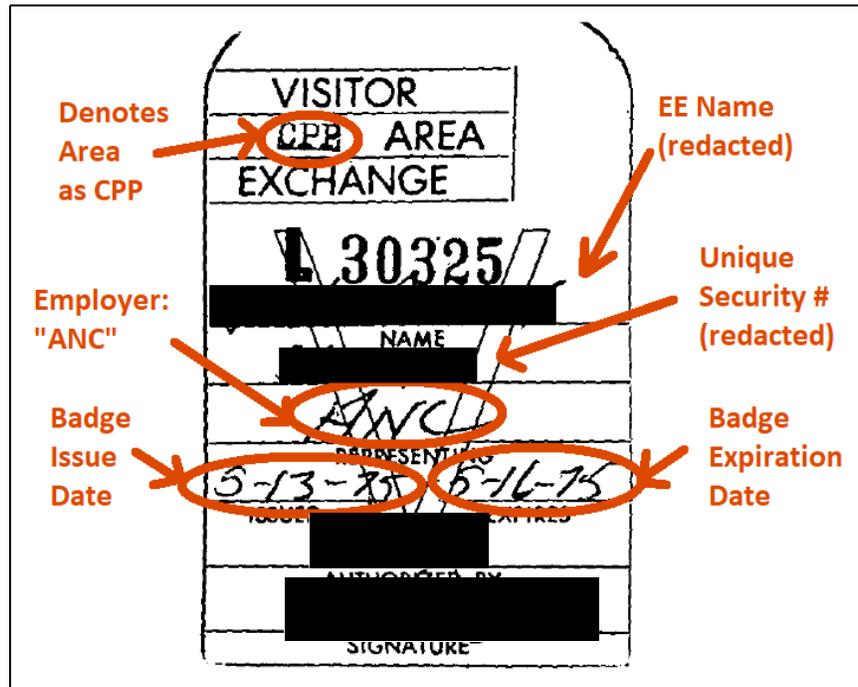
The concerns expressed by the INL/ANL-W Work Group for SEC-00219 were also expressed for SEC-00238. Therefore, SC&A was tasked with performing a V&V study similar to the evaluation completed for SEC-00219 (SC&A 2019). In February 2018, SC&A produced its initial review of available external dosimetry records during the 83.14 period (SC&A 2018). Among the conclusions of that report was the finding that temporary badges available in the Site Research Database (SRDB) for review by SC&A were severely limited (SC&A 2018, Finding 2, page 19). Thus, development of a V&V study of those badges would not likely result in any meaningful conclusions.

As a result, the INL/ANL-W Work Group tasked NIOSH, in conjunction with SC&A, to perform an onsite data capture at the INL records facility to ascertain if additional badges existed and to capture those badges so that a more comprehensive V&V proposal could be developed. This data capture occurred in September 2018, with the documents cleared and made available for use by SC&A in late November 2018. This memorandum presents SC&A's initial review of those captured temporary badges as well as SC&A's V&V proposal for the 83.14 period.

Overview and Characterization of Temporary Badges during the 83.14 Period

Temporary badges were used at INL for workers who were not on a routine monitoring program for a given facility but entered the facility to perform a given task. Figure 1 shows an example of a temporary badge for CPP. One thing to note from Figure 1 is that a unique security number (known at INL as an "S#") is included along with the EE's name and employer. SC&A observed that S#s were included on nearly all temporary badges reviewed during the 83.14 period. This is in contrast to temporary badges that were reviewed for SEC-00219 (January 1963–February 1970), which rarely included the S#. Inclusion of the S# during the 83.14 period partially mitigates some of the main concerns, such as name variations/misspellings, since the S# provides another identifier that can be used to correctly identify the badge with the appropriate EE.

Figure 1. Example of a Temporary Badge at CPP from 1975



As noted in the introduction of this memorandum, NIOSH and SC&A performed an onsite data capture during September 2018 to identify and capture temporary badges during the 83.14 period. The captured badges were cleared and made available for review by late November 2018 and are contained in 705 separate PDF files that generally contained approximately 160 pages on average. In order to assess whether any significant temporal gaps existed in the set of captured temporary badges, SC&A examined each file to get a rough count of the number of badges per month during the 83.14 period. The results of this rough tally are shown in Figure 2 (by month) and Figure 3 (by year).

As seen in the figures, the approximate number of temporary badges issued by month varied from a minimum of 375 in August 1975 to a maximum of 1,336 in September of 1978. The average over all months was 674 temporary badges issued. Approximate month-to-month totals could vary by hundreds of issued badges per month with a maximum difference of 352 badges, which occurred between September and August 1978. The average difference in issued badges by month was approximately 100 badges. Although the number of issued badges can vary significantly, this could be explained by the startup of larger-scale construction and modification operations, which were often monitored by temporary badges rather than the routine badging system. The general trend by year (Figure 3) shows that the number of badges increased from 1975 to 1978 and decreased in the subsequent two years. Based on this manual tabulation, SC&A does not believe there is compelling evidence of significant temporal gaps in the recently captured temporary badges.

However, unlike the available documentation covering the SEC-00219 period (January 1963–February 1970), no summary documents have yet been identified for the 83.14 period that

provide the actual number of temporary badges that were documented to have been issued during each monthly badging cycle. Therefore, there is no currently feasible way to definitively evaluate the completeness of the set of captured temporary badges for the 83.14 period.

Figure 2. Approximate Number of Temporary Badges Issued by Month (1975–1980)

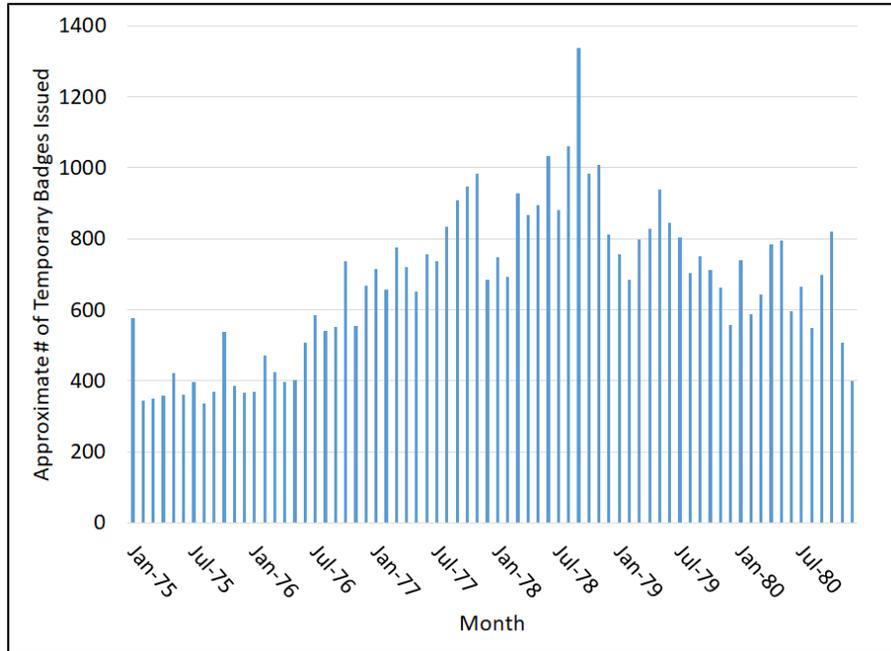
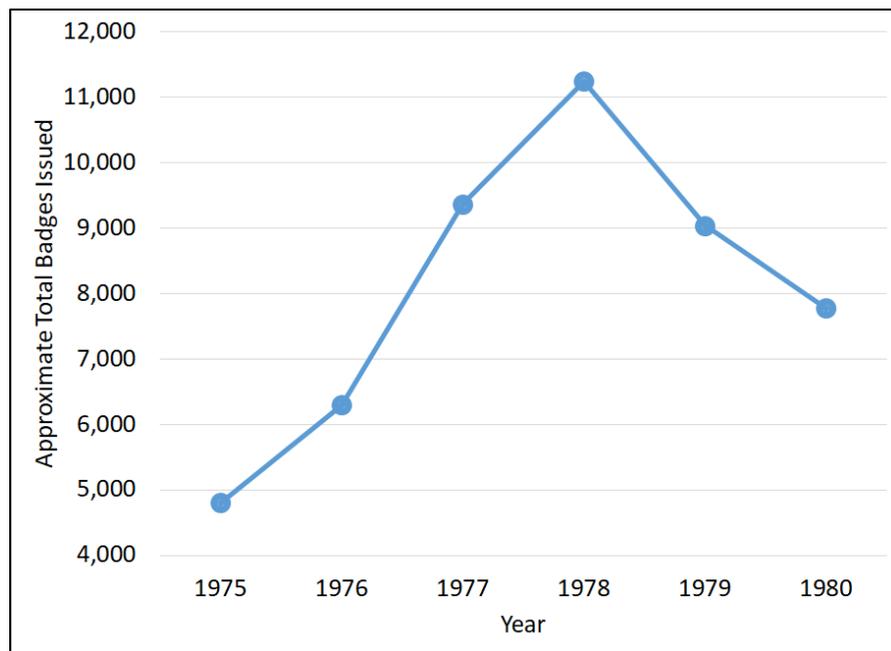


Figure 3. Approximate Total Number of Temporary Badges Issued by Year (1975–1980)



Suggested Claims for New Records Requests and V&V Evaluation

Selection of claimants for this V&V study followed a similar method that was proposed for the SEC-00219 V&V evaluation as described in SC&A (2016) and SC&A (2017). Specifically, a set of claimants would be selected with known temporary badges during the period of interest. Once that subset of claimants was selected, a full set of dosimetry records would be requested from INL/U.S. Department of Energy (DOE) to determine if those identified temporary badges were correctly being included in the EE's monitoring file. In order to select an appropriate subset of claimants with known temporary badges, SC&A examined the claimant population for workers who fit two additional criteria:

1. The current dose reconstruction for the claimant derived a probability of causation that was less than 50%.
2. The covered illness for the claimant included at least one non-SEC cancer.

The purpose of the selection criteria is to identify cases that would eventually require a revised dose reconstruction regardless of the final SEC adjudication. Therefore, any requests for updated dosimetry records from INL/DOE would already be required in the future, and undue effort and resources would not be wasted in researching the records for these individuals.

As of the writing of this memorandum, a total of 1,100 claims have covered employment during the 83.14 period. Of those claims, 407 (37%) fit the above two criteria and formed the pool of EEs for potential V&V selection. SC&A then randomly selected 240 of the 705 temporary badge PDF files for the 83.14 period described in the previous section. SC&A reviewed those files and visually matched claimant names in the pool of potential V&V candidates to the captured temporary badges. Surprisingly, almost 50% of the 407 claimants in the potential V&V pool appear to have at least 1 temporary badge in the files reviewed.²

SC&A then began the selection process to identify a group of 30 claimants for updated dosimetry requests. Initially, SC&A targeted claims that had significant covered employment under SEC-00219 but still less than 250 days. These claims were targeted, as they are representative of the worst-case example in which an EE could potentially be inadvertently left out of the SEC if the EE's temporary badges were missed. Four claims fit this characteristic. For the remaining 26 of 30 claims, SC&A simply selected the claims with the most identified temporary badges. Once the 30 claimants for V&V review were selected, SC&A reviewed the remainder of the 705 temporary badge documents (465 in total) for additional matches.

In total, SC&A identified 639 captured temporary badges with the subset of 30 claimants. Table 1 describes all 30 claims suggested for new records requests and V&V evaluation.

² It should be noted that since the matches are based solely on the EE names, there are likely several false positives included in this initial estimate.

Table 1. Overview of Suggested Claims for V&V Evaluation

Case ID*	Total # of Temporary Badges Identified by SC&A	Case Notes and Comments
1	45	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Aerojet Nuclear Company (ANC) • Other Comments: EE had several routine CPP badges both during and after the 83.14 period. Computer-assisted telephone interview (CATI) with the EE indicates the main job duties were to transport [REDACTED] to different areas of the site.
2	18	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Allied Chemical Corporation (ACC), Exxon Nuclear Idaho Company, Inc. (ENIC), Westinghouse Idaho Nuclear Corporation • Other Comments: EE was routinely badged at CPP during the 83.14 period with no other work areas identified. CATI with the survivor does not contain any specific information about job duties.
3	9	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): ANC, Edgerton, Germeshausen, and Grier (EG&G) • Other Comments: Current dosimetry records indicate the EE did not require radiation monitoring during the 83.14 period. CATI with the EE indicates work inside CPP for several hours a day but does not provide the exact time frame.
4	22	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Idaho Supreme • Other Comments: EE was routinely badged at CPP with occasional badging at Test Area North (TAN). CATI with the EE notes there were contamination incidents in the EE's work area, and on at least one occasion the EE had contamination detected as they were exiting CPP.
5	23	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): EG&G • Other Comments: The EE only had one routine badge at CPP during the 83.14 period; most other badging was associated with the Test Reactor Area (TRA) and Power Burst Facility (PBF). CATI with the EE indicates the main job duties included the [REDACTED] electrical systems and equipment in the vicinity of radioactive material.

Case ID*	Total # of Temporary Badges Identified by SC&A	Case Notes and Comments
6	78	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Don Reid Pest Control, Pest Control Services • Other Comments: Current dosimetry records indicate the EE was not monitored externally until 1981. CATI with the EE indicates they were monitored externally at all times during employment.
7	4	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): miscellaneous contractors • Other Comments: The Location File Card (LFC) indicates assignment to CPP construction (CX) during the 83.14 period. CATI with the survivor does not mention CPP.
8	28	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Arrington Construction Company, other miscellaneous contractors • Other Comments: The EE had regular external dosimetry associated with CX, Material Test Reactor construction (MTX), and the Experimental Breeder Reactor II (EBR-II) during the 83.14 period. CATI with the survivor does not mention CPP.
9	13	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): C&L Electric, Jones/Boecon • Other Comments: Current dosimetry records indicate the EE was not monitored during the 83.14 period.
10	19	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Idaho Nuclear Corporation, ANC • Other Comments: The EE was monitored externally at the Technical Support Facility (TSF), TAN, and the Auxiliary Reactor Area I (ARA-I). The CATI was declined by the claimant/survivor.
11	13	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Mountain Bell • Other Comments: The EE was monitored externally at EBR-II during the 83.14 period. The CATI with the EE notes that [REDACTED] were sometimes utilized at CPP. The EE also notes an incident occurring at CPP where the EE entered an area they were not supposed to enter. Although the EE wore a "full protective suit that was taped...hood, gloves and shoe covers," the EE was sent to Central Facilities Area (CFA) where [REDACTED] provided a urine sample. The date of the incident was not provided.

Case ID*	Total # of Temporary Badges Identified by SC&A	Case Notes and Comments
12	11	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Atomic Energy Commission (AEC) • Other Comments: The current monitoring record indicates the EE was only monitored in 1963. CATI with the claimant survivor did not mention CPP, nor did they have any knowledge of radiological conditions experienced by the EE.
13	38	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Biggers Construction Company, Morrison/Knudsen-Ferguson Company • Other Comments: The EE was externally badged routinely as part of [REDACTED] operations at CPP (CX) and MTX. CATI with the EE mentions working in hot cells and [REDACTED] high-radiation vaults but does not mention CPP specifically.
14#	13	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Morrison/Knudsen-Ferguson Company • Other Comments: The EE had routine external dosimetry from CPP CX. All CATIs with the survivors were declined.
15	26	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Morrison/Knudsen-Ferguson Company • Other Comments: The EE had routine external dosimetry from CPP CX. The CATI with the EE describes several jobs involving high-radiation areas at CPP but does not provide specific dates.
16	7	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): ANC • Other Comments: The EE was monitored routinely at PBF, EBR-II, and TRA during the 83.14 period. The CATI with the EE does not mention CPP specifically but describes their work as occurring in the “reactor building.”
17	23	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Morrison/Knudsen-Ferguson Company, Ormond Construction Company, Waters Building and Supply, Atlas Mechanical Inc., Bingham Mechanical and Metal Works Inc. • Other Comments: The EE had routine external dosimetry from CPP CX. The CATI with the survivor did not mention CPP.

Case ID*	Total # of Temporary Badges Identified by SC&A	Case Notes and Comments
18	22	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Eastern Idaho Technical College • Other Comments: Current dosimetry records indicate the EE was not monitored during the 83.14 period. CATI with the EE states that they worked in almost every area of CPP.
19	18	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): EG&G, ENIC • Other Comments: Only annual summaries of external dosimetry results are provided during the 83.14 period. The LFC for the EE indicates assignment to CFA, TRA, and CPP. The CATI with the EE states that their job duties included modification of all facilities within the "Chem. Plant." The EE also noted that they were evacuated from CPP due to a spill and not allowed back for a full week; however, the time frame was not provided.
20	24	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Miscellaneous contractors • Other Comments: The EE had routine external dosimetry from CPP CX. The CATI with the claimant survivor mentions CPP as a work location but does not provide a time frame or further information.
21	34	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Mountain States Telephone and Telegraph • Other Comments: Current dosimetry files indicate that there were [REDACTED] intermittent visitor badges at INL from [REDACTED] and that no external dose was accrued. CATI with the EE indicates work performed at EBR, TRA, TAN, CPP, Storage Areas, Waste Processing Areas, and the Naval Reactor Facility but does not provide specific dates. The EE mentions an incident at CPP; however, it occurred outside the 83.14 period.
22	18	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Ormond Construction Company, Atlas Mechanical Inc., Morrison/Knudsen-Ferguson Company • Other Comments: The current dosimetry record for the EE only contains annual summaries. The CATI with the EE notes work in CPP, TRA, TAN, CFA, and "ABR2" (assumed by SC&A to mean EBR-II). Routine duties included [REDACTED].

Case ID*	Total # of Temporary Badges Identified by SC&A	Case Notes and Comments
23	4	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): EG&G • Other Comments: The EE was routinely monitored at TAN during the 83.14 period. The CATI with the EE only discusses work that occurred at TAN.
24	59	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Arrington Construction Company, Bingham Mechanical & Metal Works Inc. • Other Comments: The EE had routine external monitoring at TAN, TRA, EBR-II, and CX. The CATI with the claimant survivor does not mention CPP specifically but indicates the EE worked all over the INL site.
25	17	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): ANC, EG&G, ENIC, ACC • Other Comments: The current dosimetry file for the EE contains visitor badges at EBR-II during the 83.14 period. The CATI with the claimant survivor notes that the EE primarily performed [REDACTED] inspections at CPP.
26	10	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): ENIC • Other Comments: CATI with the EE mentions an incident in CPP in 1978 that involved a criticality event.
27	17	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): EG&G • Other Comments: The LFC for the EE indicates assignment to TRA, ARA, and TAN. The EE also had routine external monitoring for these locations. In addition, the dosimetry file contains temporary badges for EBR-II. No CATI is available for this claimant.
28	9	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): ANC, EG&G • Other Comments: The CATI indicates that regular duties included [REDACTED] of hot shops and glove boxes, hot waste areas, reactors, and burial grounds. The EE further stated that they worked in “all areas, especially Chemical Processing Plant (653, 609, 601).”

Case ID*	Total # of Temporary Badges Identified by SC&A	Case Notes and Comments
29	14	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): EG&G • Other Comments: The EE's LFC indicates assignment to TAN, PBF, and TRA. The EE's dosimetry file also has numerous visitor badges for TRA, CPP, and Special Power Excursion Reactor Test. Three CATIs with the EE lists numerous facilities at INL but does not mention CPP.
30	3	<ul style="list-style-type: none"> • Name: [REDACTED] • Job Title: [REDACTED] • Relevant Covered Employment: [REDACTED] • Employer(s): Morrison/Knudsen-Ferguson Company • Other Comments: The EE's dosimetry file contains routine badges for EBR-II and CX. The CATI with the EE noted job assignments inside CPP, including [REDACTED].

* Case ID is an arbitrary designation that does not have any direct connection to the claimant. Attachment A provides the actual NIOSH/Office of Compensation Analysis and Support Claims Tracking System (NOCTS) claim numbers associated with each case ID designation for reference.

In addition to the suggested cases for new dosimetry requests shown in Table 1, SC&A has identified temporary badges for seven of the original cases from the SEC-00219 V&V evaluation (SC&A 2019). These cases would not require new records requests and could be used to augment the 30 new cases suggested above. SC&A identified 105 temporary badges with the previously researched SEC-00219 V&V cases. If accepted by the INL//ANL-W Work Group, the combined V&V evaluation for the 83.14 period would involve a total of 37 claimants and 744 individual badges.

Summary Conclusions

SC&A's V&V proposal evaluation identified the following summary conclusions:

- The overwhelming majority of reviewed temporary badges for the 83.14 period (1975–1980) contain a unique security number for the worker. These unique identifiers provide another method to correctly identify the EE with the badge. Such identifiers were rarely observed for temporary badges during the previous SEC-00219 period V&V evaluation (January 1963–February 1970).
- SC&A's review and rough tally of recently captured temporary badges during the 83.14 period did not identify any temporal gaps that directly indicate a significant portion of badges may be missing or unavailable during a given time period.
- No documentation, in the form of dosimetry branch summary reports, is currently available that identifies how many temporary badges were issued during the 83.14 period.

Therefore, a more definitive completeness analysis of the captured temporary badges is not currently feasible.

- SC&A identified 200 claimants that appear to have been temporarily badged at CPP based on a match in the name. This represents just under 50% of the claims that fit SC&A's V&V pool criteria.
- SC&A recommends the 30 claims described in the previous section for updated dosimetry records requests from INL/DOE for the purpose of V&V evaluation. A total of 639 temporary badges are associated with these 30 claims.
- An additional seven claims (representing 105 temporary badges) were identified during the 83.14 period that were part of the previous SEC-00219 V&V evaluation (SC&A 2019). These claims could be used to augment the 30 suggested claims for updated dosimetry requests and would not require any additional research from DOE/INL.

References

NIOSH 2017. *SEC Petition Evaluation Report – Petition SEC-00238 – Idaho National Laboratory*, National Institute for Occupational Safety and Health, Cincinnati, OH. July 20, 2017.

SC&A 2016. *Memorandum: Verification and Validation (V&V) Plan for Temporary Badges at CPP (1963–1970)*, SC&A, Inc., Vienna, VA. September 29, 2016.

SC&A 2017. *Memorandum: Update on Validation and Verification of INL CPP Temporary Badge Database – Expansion of Claimant Pool (1963–1970)*, SC&A, Inc., Arlington, VA. August 3, 2017.

SC&A 2018. *Review of External Dosimetry Records for the Chemical Processing Plant 83.14 SEC Period (1975–1980)*, SCA-TR-2018-SEC002, Revision 0, SC&A, Inc., Arlington, VA. February 20, 2018.

SC&A 2019. *Verification and Validation of Temporary Badges at the Chemical Processing Plant (1963–1970)*, SCA-TR-2019-SEC-001, Revision 0, SC&A, Inc., Arlington, VA. February 25, 2019.

Attachment A: NOCTS Claim Numbers Associated with 30 Cases Suggested for Updated Monitoring Records Requests

Case ID	NOCTS Claim #
1	[redacted]
2	[redacted]
3	[redacted]
4	[redacted]
5	[redacted]
6	[redacted]
7	[redacted]
8	[redacted]
9	[redacted]
10	[redacted]
11	[redacted]
12	[redacted]
13	[redacted]
14	[redacted]
15	[redacted]
16	[redacted]
17	[redacted]
18	[redacted]
19	[redacted]
20	[redacted]
21	[redacted]
22	[redacted]
23	[redacted]
24	[redacted]
25	[redacted]
26	[redacted]
27	[redacted]
28	[redacted]
29	[redacted]
30	[redacted]

Attachment B: NOCTS Claim Numbers Associated with 10 Relevant Claims Identified from Previous SEC-00219 V&V Evaluation (SC&A 2019)

Case ID	NOCTS Claim #
P	[redacted]
Q	[redacted]
B	[redacted]
L	[redacted]
S	[redacted]
W	[redacted]
X	[redacted]
AA	[redacted]
AD	[redacted]
G	[redacted]