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RADIATION AND WORKER HEALTH

National Institute for Occupational Safety and Health

Evaluation of New Claims Filed Since the Summer of 2015 for Idaho National Laboratory – Executive Summary

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0 (Draft)	7/06/2016	Initial issue. This report consists of the "Background and Introduction" and "Summary Conclusions" sections of SCA-TR-2016-SEC004, Revision 00, which have been edited and reviewed for compliance with the Privacy Act 5 U.S.C. § 552a and have been cleared for distribution. The body of SCA-TR-2016-SEC004 is predominantly information protected by the Privacy Act and, therefore, not available for proactive release.

This report consists of the "Background and Introduction" and "Summary Conclusions" sections of SCA-TR-2016-SEC2004, which have been edited and reviewed for compliance with the Privacy Act 5 U.S.C. § 552a and have been cleared for distribution. The body of SCA-TR-2016-SEC004 is predominantly information protected by the Privacy Act and, therefore, not readily available for proactive release. Individuals may obtain the full document by submitting a document request to the Designated Federal Official for the Advisory Board on Radiation and Worker Health:

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ABBREVIATIONS AND ACRONYMS

ABRWH	Advisory Board on Radiation and Worker Health
CATI	computer-assisted telephone interview
CPP	Chemical Processing Plant
Cx	construction at CPP
DOE	U.S. Department of Energy
DOL	U.S. Department of Labor
EE	energy employee
INL	Idaho National Laboratory
LFC	Location File Card
NIOSH	National Institute for Occupational Safety and Health
SEC	Special Exposure Cohort
SRDB	Site Research Database
TLD	thermoluminescent dosimeter
WG	Work Group

1.0 BACKGROUND AND INTRODUCTION

During the summer and early fall of 2015, both SC&A, Inc. and the National Institute for Occupational Safety and Health (NIOSH) undertook an evaluation of the Idaho National Laboratory (INL) claimant population as it relates to the proposed Special Exposure Cohort (SEC) class definition as amended on July 21, 2015[1] (NIOSH 2015a):

> *The NIOSH-proposed class includes 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.* (NIOSH 2015a)

This claimant evaluation performed in tandem by NIOSH and SC&A involved simulating the implementation of the proposed class definition to determine if the dosimetry requirements would inadvertently exclude a claimant who was likely exposed at the CPP. The results of this simulated implementation were reported in SCA-SEC-2015-0074-D, *Evaluation of the Revised SEC Class Definition for the Idaho National Laboratory Chemical Processing Plant (1963–1974)* (SC&A 2015) and an August 21, 2015, email from NIOSH to the INL Work Group (WG) (NIOSH 2015b). These companion reports identified 18 individual claims that appeared to be problematic and required follow-up data requests to INL. The supplemental data were transmitted directly from the site throughout November and December 2015. SC&A and NIOSH delivered their evaluation of the supplemental data for the 18 identified claims in January 2016 (SC&A 2016; NIOSH 2016). These 18 claims were discussed during the INL WG teleconference on January 15, 2016, and again during the WG meeting on March 1, 2016.

At the latter meeting, it was noted that 881[2] total claims had been evaluated during the simulated SEC implementation and subsequent supplemental data capture on 18 individual claimants. At that time, the WG requested that both NIOSH and SC&A examine newly filed claims that had not been part of the original 881. In total, 32 claims with covered employment at INL from 1963 to 1974 have been filed since NIOSH's simulated implementation report was produced (NIOSH 2015b). This white paper represents SC&A's evaluation of these 32 claims. Note that for several claims, computer-assisted telephone interview (CATI) reports had not been finalized and/or U.S. Department of Energy (DOE) monitoring records had not been received. While these claims can

[1] Note that the Advisory Board on Radiation Worker Health (ABRWH) voted to accept the latter part of the SEC definition (March 1, 1970–December 31, 1974) at ABRWH Meeting 11 held on March 24, 2016

[2] Note that due to the separate timing of the NIOSH and SC&A work products on simulated SEC implementation, SC&A had evaluated slightly more claims than the 881 reported by NIOSH (898 in total). For consistency with NIOSH's current review of the 32 claims filed since the summer of 2015, the 17 extra claims reviewed as part of SC&A 2015 are also discussed in this report.

be considered incomplete for the purposes of this review, relevant information contained in the partially completed files was noted for discussion. The review of the 32 additional claims resulted in eight Observations, as follows:

Observation 1: The energy employee (EE) indicated several times that they would conduct tours of "uncleared" personnel through CPP and has evidence of assignment to CPP in both 1964 and 1974. Individual dosimetry associated with CPP was not located in the EE's individual DOE monitoring records for 1964. A manual search of captured dosimetry records for the individual turned up multiple entries for the claimant. The uncovered badges were not associated with a subcontractor or construction work (e.g., "Cx"), nor were they temporary/visitor records. It is unknown why these records were not included in the DOE response. It is possible that the claim was researched utilizing the efficiency process that was in use earlier in the dose reconstruction program.

Observation 2: While the majority of the EE's work appears to be related to reactor operations, the EE does describe having to go into CPP to clean up spills on at least a few occasions. One such occasion resulted in the claimant being restricted from radiation work. While it is apparent the EE was monitored externally throughout the SEC period, individual dosimeter information is lacking.

Observation 3: The EE describes performing maintenance work at CPP in which he had to wear anti-contamination clothing and was badged externally. The approximate date of the work was not provided. The EE did have temporary badges associated with CPP from 1983 to 1985. However, the EE was also monitored externally from 1963 to 1964, and individual dosimeter results are not available to allow for the location to be identified.

Observation 4: The Location File Card (LFC) for the claimant indicates that the EE was assigned to "All Areas" from 1970 to 1974. This is a broad example of the badging policies at INL changing in 1970 from "one badge, one area" to "one badge, multiple areas." It is not clear if any "All Areas" badges were issued prior to 1970, though INL 2011 does indicate the use of an Area Code 123 (which represents an "All Area Badge") at some point at INL.

Observation 5: SC&A observed visitor badges for which the "Area Designation" was illegible or cut off in the DOE response records. It is SC&A's understanding that the individual visitor cards are grouped by site area; therefore, DOE will be able to identify the work area even if that section of the individual visitor card is illegible or unable to be read in the transmitted monitoring records.

Observation 6: SC&A observed that many visitor cards contain an "[redacted]," which is a unique identifier for an individual worker. This allows for a second piece of information beyond the name of the worker to allow for identification of a specific worker with a given work area.

Observation 7: Correspondence with the EE's survivor indicated three different name variations, two of which were observed on the available visitor cards. While nearly all the visitor cards also included an "[redacted]" to allow for positive identification, at least one example only contained the EE's name.

Observation 8: The U.S. Department of Labor (DOL) initial case for this claim appears to indicate there was a medical incident for the EE occurring at CPP in 1966. The CATI and DOE monitoring response are not yet available for this claimant. Follow-up for this claimant may be beneficial once those additional documents are made available to NIOSH and the WG.

It is important to note that the analysis contained in the full version of this document contains information on individual workers at INL, including interview statements, radiological exposure records, medical histories, and other information protected by the Privacy Act of 1974. Due to the nature of the individual information contained in this report, only the "Background and Introduction" and "Summary Conclusions" section are provided to the public.

2.0 SUMMARY CONCLUSIONS

The review of newly filed cases (32 total) since the summer of 2015 yielded eight observations. It is important to emphasize that approximately one-third of the case files contained CATI reports that had yet to be finalized by the claimant and/or the claims had not yet received DOE monitoring records.[3] Nonetheless, these claims often contained relevant information related to the proposed SEC class definition and were discussed in the full report where applicable.

Some observations reported in this white paper related to cases for which more circumstantial evidence suggested potential exposure at CPP (Observations 1–3 and 8). For example, one case contained direct evidence of assignment to CPP in 1964 via the EE's LFC. This claimant reported performing tours of CPP with uncleared personnel on occasion and also indicated that cohort-style badging may have been employed. No external dosimetry was found in the DOE response files related to CPP in 1964 as would have been expected. A line-by-line search of captured dosimetry records uncovered several dosimeter entries for the individual. The claimant was employed by Phillips Petroleum (the prime contractor), was not involved in construction work (i.e., not designated "Cx"), and was on a regular badging program (not designated temporary or visitor badging). While it is not known why these records were not included in the DOE response files, it is possible this case was evaluated by DOE using efficiency measures enacted early in the dose reconstruction program that are no longer being used.[4]

One case (the subject of Observation 2) describes having to enter CPP to aid in spills and cleanups though the EE's regular work area was in the reactor facilities. This claimant reported being restricted in one such instance after just a few minutes of exposure at CPP. Although the claimant's monitoring records do contain visitor badges for CPP that are outside of the SEC period, none of the years in which these badges occur show a non-zero dose accrued as would be expected if the EE had been restricted.

In another case (the subject of Observation 3), the EE describes performing maintenance work at CPP but does not specify individual dates. It is possible this work was performed outside the SEC period when temporary badges were observed. However, it is not possible to determine the work location while the EE was monitored externally in 1963–1964 because individual dosimeter results are currently not available. Therefore, it cannot be ruled out that the EE performed maintenance activities at CPP during these years.

Finally, one claimant's records contain a medical incident report that appears to be from CPP in 1966. While this would qualify as definitive evidence of assignment to CPP, DOE monitoring records have not yet been transmitted to NIOSH and so it is not possible to determine with certainty if the EE was badged externally at CPP during this period. For this reason, the case was classified as an observation (Observation 8) and not a finding. Additional follow-up once monitoring records are received from DOE would confirm whether monitoring occurred.

[3] Specifically, 3 of the 32 cases had not yet received DOE monitoring records to date.
[4] The DOE response records were transmitted to NIOSH in April 2015.

The remaining observations are related to characteristics of the dosimetry records and relevant monitoring practices at INL that are germane to SEC class definition discussions (Observations 4–6). Observation 4 indicated that the EE was assigned an "All Areas" badge during the 1970s. While it has been established that the site had transitioned to a "one badge, multiple area" policy during this time, it is unknown if such badges could have been issued prior to 1970. This would be especially pertinent to emergency response-type personnel. The issue of the badging of personnel such as firefighters is currently being investigated by NIOSH.

One case inspired two observations (Observations 5 and 6) that provided characteristics of the visitor badging cards in the context of potential implementation issues. One example was provided in which the area designation on the visitor card was illegible. In another example, the area had been cut off from the scanned record provided to NIOSH. It is SC&A's understanding that these situations are not problematic because the visitor cards are organized by specific site area. Therefore, an illegible or cut-off area designation on a visitor card could still be identified with the correct work area for SEC determination. This same case also had examples showing that a site-specific identifier (known as the "[redacted]") was found on several visitor badge cards. This allows for a second piece of evidence, beyond the EE's written name, to correctly identify the worker with the dosimetry record and associated work area.

Finally, one case provides an example where multiple name variations could refer to the same person. Specifically, the EE's survivor wrote a letter to DOL explaining that at least three different name variations were used by the EE on different official forms. This was somewhat reflected in the names written on the visitor cards. In this specific case, the potential to miss the claimant due to name variations was largely obviated by the inclusion of an "[redacted]" on most of the individual visitor cards. However, one visitor card included in the file did not contain an "[redacted]," although DOE was able to match the dosimetry record by name alone. This was the subject of Observation 7.

3.0 REFERENCES

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