SC&A S. Cohen & Associates
An Employee-Owned Company

September 20, 2007

Mr. David Staudt
Center for Disease Control and Prevention
Acquisition and Assistance Field Branch
Post Office Box 18070
626 Cochrans Mill Road – B-140
Pittsburgh, PA 15236-0295

Re: Contract No. 200-2004-03805, Task Order 3: Transmittal of Draft SCA-TR-TASK3-0005, Rev. 0, *Review of Close-Out Interview Procedure, ORAUT-PROC-0092*

Dear Mr. Staudt:

SC&A is pleased to submit to NIOSH and the Board its review of ORAUT-PROC-0092, *Review of Close-Out Interview Procedure, ORAUT-PROC-0092*, SCA-TR-TASK3-0005, Rev. 0, dated September 20, 2007. This report has been subjected to a review for Privacy Act-related information and has been edited accordingly.

Though this SC&A report is part of our deliverable under Task Order 3, it is being submitted under separate cover because, like our review of ORAUT-OTIB-0052 (dealing with reconstructing doses to construction workers), the review of PROC-0092 required extensive analysis, and we believe it is especially important to the program.

If you have any comments or questions, please contact me at 732-530-0104.

Sincerely,

John Mauro, PhD, CHP
Project Manager

cc: P. Ziemer, PhD, Board Chairperson
Advisory Board Members
L. Wade, PhD, NIOSH
L. Elliott, NIOSH
J. Neton, PhD, NIOSH
S. Hinnefeld, NIOSH
L. Homoki-Titus, NIOSH
A. Brand, NIOSH
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C. Ellison, NIOSH
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Project File (ANIOS/003)

Draft Report

NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

ADVISORY BOARD ON RADIATION AND WORKER HEALTH

TASK 3: REVIEW OF NIOSH/ORAUT PROCEDURES AND METHODS USED FOR DOSE RECONSTRUCTION

Review of Close-Out Interview Procedure, ORAUT-PROC-0092

Contract No. 200-2004-03805
SCA-TR-TASK3-0005, Revision 0

Prepared by

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September 2007

Disclaimer

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S. Cohen & Associates: ***Technical Support for the Advisory Board on Radiation and Worker Health Review of NIOSH Dose Reconstruction Program***	Document No. SCA-TR-TASK3-0005 Effective Date: Draft – September 20, 2007 Revision No. 0 - Draft
Review of Close-Out Interview Procedure, ORAUT-PROC-0092	Page 2 of 67
Task Manager: _____ Date: _____ Arjun Makhijani, PhD Project Manager: _____ Date: _____ John Mauro, PhD, CHP	Supersedes: N/A

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EXECUTIVE SUMMARY

The close-out interview is a critical time in the process of adjudication of a claim. It is the last time that the claimant can provide substantive information that could affect dose reconstruction during the NIOSH dose reconstruction process. It is the time when the claimant must sign the OCAS-1 form stating that they understand the implications and finality of the stage of the process as regards the dose reconstruction. If they do not sign it within 60 days, National Institute for Occupational Safety and Health (NIOSH) may administratively close the case. The claimants are so informed.

The facts provided by the claimant prior to and during the close-out interview process set the stage for any administrative review that may occur if the claim is denied. The administrative review is submitted to the Department of Labor (DOL) and not to NIOSH or the Department of Health and Human Services.[1]

In view of the crucial nature of the close-out interview, SC&A has carefully reviewed the procedure for conducting these interviews (ORAUT-PROC-0092, Rev. 00). SC&A observed, firsthand, three close-out interviews (one with an energy employee and two with survivor claimants) for claims that were still being processed, on condition that SC&A personnel make no comment whatsoever during the interview. SC&A also drew on close-out interview information in another case that came to its attention during a site expert interview. SC&A would like to thank NIOSH and the Oak Ridge Associated Universities Team (ORAUT) for arranging the complex process of close-out interview observation, as well as access to the site expert, whom SC&A contacted and advised that SC&A was using this site expert's close-out interview information in this report (with the site expert's name, site, job type, and other identifying information redacted to protect privacy).

SUMMARY OF FINDINGS

Finding 1: The close-out interview procedure does not ensure that the HP Reviewer and dose reconstruction group fully address claimant concerns raised during the close-out interview. The procedure has many gaps relating to response to claimant concerns. The gaps identified in regard to response to claimant concerns are as follows:

(1) ORAUT-PROC-0092 has serious gaps related to a lack of specificity about what information should be referred to an HP Reviewer and to the dose reconstruction department of ORAU. It also lacks specificity in the level of detail that claimant concerns should be researched. For instance, there is no explicit requirement to carefully check whether all information corresponding to the concerns has been appropriately taken into account in the dose reconstruction.

[1] SC&A was informed by OGC that DOL regulations do not have an "appeals" process, it is an administrative review. OGC editorial comment for clarification of September 12, 2007, made to SC&A as part of the PA review of the draft of this report. However, SC&A notes that ORAUT used the term "appeal" as part of one of the close-out interviews observed by SC&A (see Attachment B).

(2) The procedure also has no specifications or examples of what kinds of follow-up are to be expected when detailed information is provided. In two cases examined by SC&A, the claimants provided specific information. Yet, the evidence is that the underlying data were not reviewed in one case and no attempt was made to obtain the relevant reports in the other. In the latter case, the date on the final dose reconstruction actually predates the close-out interview, despite the fact that the employee provided detailed new information during the close-out interview.

(3) The level of detail in documenting the close-out interview process during the follow-up call was very different in the two cases discussed above. In the first case, the HP Reviewer provided a much more detailed summary in the close-out interview record than in the second case. The lack of specific documentation procedures for research and for the communication of the resolution of concerns creates the potential for inconsistency and arbitrariness in how concerns are researched, communicated, and resolved.

(4) In both cases, substantive information provided by the claimant was not addressed by a dose reconstructor. In one case, SC&A is aware that the information was not referred to the dose reconstructor. In the second case, this can be inferred from the identical language in and dates on the draft and final dose reconstructions.

(5) The HP Reviewers, who make key decisions about researching claimants' concerns and who communicate with the claimants, do not have health physics qualifications or experience in dose reconstruction, according to the managers of the program..

Finding 2: The procedure makes no substantive provision for ensuring that the claimant actually understands the dose reconstruction and its implications for compensation prior to signing the OCAS-1 form, even when the claimant complains that they do not understand the "lingo."

Finding 3: The fact that the signing of the OCAS-1 form (if it has not been signed before) occurs in the context of the close-out interview may create pressures on ORAUT personnel to get the signature before being certain that all issues of concern to the claimant have been fully addressed.

Finding 4: The procedure does not ensure that the claimant has all the information that was essential to the dose reconstruction prior to the close-out interview. This can hamper the claimant in deciding whether or not to submit additional data or information at the close-out interview stage.

SUGGESTIONS FOR IMPROVEMENT

(1) Claimants should be informed that HP Reviewers are not health physicists. The term "HP Reviewer" should not be used to refer to personnel without qualifications or experience in Health Physics.

(2) The potential for inconsistency and for arbitrary judgments by HP Reviewers should be significantly decreased by detailed written guidelines for and examples of how concerns

should be researched and when they should be referred to the dose reconstruction group. The two examples discussed in this review can be used as case studies for lessons learned in developing those guidelines.

(3) The procedure should include instructions that HP Reviewers should make detailed notes about what was done to address claimant concerns and how they were resolved. This should include specific references to documents reviewed, personnel consulted, and details of how the issues were resolved during the follow-up call.

(4) All claimant concerns relating to dose, data, intakes, exposure, or incidents should be referred to the dose reconstruction group for a response. The response should fully address the concern and should be in writing. The written document should be provided to the claimant as part of the follow-up process.

(5) The interviewer should clearly communicate to the claimant the implication of the dose reconstruction for compensation with a declarative statement. Claimants should be told, according to the dose reconstruction, whether the claim is likely to be compensated or not compensated, with the caveats that (1) DOL may return the dose reconstruction for re-evaluation, and (2) the decision on compensation is made by DOL. Qualified health physics personnel who are trained to communicate non-technical information to the general public or have a track record of doing so successfully should answer the claimant's questions during all follow-up calls and in cases where the claimant states that they do not understand the information in the draft dose reconstruction.

(6) A health physics professional should be available in real-time during the initial close-out interview (though not necessarily be on the line) in case there are concerns or questions that the interviewer cannot address, but that could be resolved relatively expeditiously by a health physicist familiar with the claimant's file.

(7) Claimants should be given access to the records, documents, and procedures pertaining to their dose reconstructions without having to request them. The specific Workbook version used for the dose reconstruction should be noted in the draft dose reconstruction report sent to the claimant. The draft dose reconstruction report should offer to make that Workbook and other materials available to the claimant, should they wish to have them. SC&A notes that the Workbook is now a part of the claimant's file.

(8) All Workbooks used in dose reconstructions should be archived.

SC&A observed three close-out interviews and examined two cases of close-out interviews in which the claimant provided information and expressed concerns that required follow-up. The fact that substantial issues arose in the small number of cases sampled would raise questions about the extent of the problems, even without further information. In these cases, however, the problems appear to arise largely from gaps in the existing procedure and from technical judgments by HP Reviewers, who have no health physics qualifications or dose reconstruction experience, according to the managers of the program (see Attachment B). This raises a clear possibility that the problems regarding lack of adequate follow-up to the claimant concerns may

be systemic. This needs to be further investigated by NIOSH, given the crucial nature of the close-out interview in the dose reconstruction and compensation process. Likewise, it would be highly desirable for the Advisory Board on Radiation and Worker Health (Advisory Board), directly or via the Working Group, to investigate how widespread the problems identified above may be.

A part of this investigation might consist of re-interviews by the Advisory Board or through the Working Group of the two claimants' cases discussed above, provided they are amenable to that, of course. This would help in evaluating the adequacy of changes in the close-out interview procedure that NIOSH/ORAUT might propose. It would also throw some light on the worker interview and site expert documentation procedure, and the ways in which that information, as well as information in the Computer-Assisted Telephone Interviews (CATIs), is being used. SC&A recognizes that the site expert documentation is being reviewed separately by the Advisory Board, and is making this comment here in the interest of facilitating a coordinated review of various kinds of input provided to NIOSH and ORAUT.

1.0 ORAUT-PROC-0092 — CLOSE-OUT INTERVIEW PROCESS

This review is part of SC&A's Task Order 3, under which procedures relating to dose reconstruction for energy employees and associated tasks, such as interviews with claimants, used by NIOSH and its contractor, ORAUT, are evaluated at the direction of the Advisory Board. This report provides a review of the ORAUT procedure for conducting close-out interviews, *Close-Out Interview Process*, ORAUT-PROC-0092, Rev. 00, August 17, 2005 (Shatto and Hawkins 2005a). This report should be read in conjunction with the review of the procedures for conducting CATIs with claimants, which is to be found in Chapter 5 of *The Review of NIOSH/ORAUT Procedures and Methods Used for Dose Reconstruction* (SC&A 2005a).

The close-out interview is the last step in the process of dose reconstruction prior to NIOSH's finalization of a dose reconstruction report, which is sent to the DOL to provide dose estimates necessary for adjudication of a claim under Part B of the Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA). ORAUT-PROC-0092 describes the purpose of the procedure as follows:

> *The purpose of this procedure is to provide the process requirements for the scheduling, performance, and follow-up of a Close-Out Interview(COI) for the Oak Ridge Associated Universities (ORAU) Team Dose Reconstruction Project for the National Institute for Occupational Safety and Health (NIOSH).* [Shatto and Hawkins 2005a, p. 4]

1.1 BACKGROUND INFORMATION: INTERVIEW OBJECTIVES

NIOSH offers the claimant two opportunities to provide input to their dose reconstruction. The first is the CATI. This interview process allows claimants the opportunity to provide NIOSH with additional information relating to individual job responsibilities; the potential for exposure to various radionuclides and materials; the frequency of dosimeter changes; the methods and frequency of various types of bioassay monitoring of internal burdens of radionuclides; the type of workplace monitoring, such as air sampling, survey, and area access controls; and involvement in incidents or unusual events. By design, the interview process is, therefore, an integral part of the dose reconstruction process.

To ensure completeness of the dose reconstruction process, NIOSH must also conduct a closing interview after a draft dose reconstruction has been reviewed by the claimant. The closing interview (which may take more than one session to complete) provides the claimant an opportunity to ask questions about the dose reconstruction, and a final opportunity to provide additional information that may be pertinent to the claim. Key elements of the closing interview are specified in 42 CFR 82.10(l) and (m):

> *(l) After providing the claimant with a copy of a draft of the dose reconstruction report to be provided to DOL, NIOSH will conduct a closing interview with the claimant to review the dose reconstruction results and the basis upon which the results were calculated. This will be the* ***final opportunity during the dose***

> ***reconstruction process for the claimant to provide additional relevant information that may affect the dose reconstruction***. *The closing interview may require multiple sessions, if the claimant requires time to obtain and provide additional information, and to allow* ***NIOSH time to integrate the new information into a new draft of the dose reconstruction report***. *NIOSH will determine whether to grant requests for time to provide additional information, based on whether the requests are reasonable and the claimant is actively seeking the information specified.*
>
> *(m) Subject to any additional information provided by the claimant and revision of the draft dose reconstruction report under § 82.10(l), the claimant is required to return form OCAS-1 to NIOSH, certifying that the claimant has completed providing information and that the record for dose reconstruction should be closed. Upon receipt of the form, NIOSH will forward a final dose reconstruction report to DOL, DOE, and to the claimant.* [Emphasis added.]

Some initial comments about dose estimates and probability of causation (POC) are important, since clarity about these values is critical to a clear communication with the claimant during the close-out interview.

NIOSH does not do the final calculation of the POC on which the compensation decision is based or make the compensation decision. That estimate is made by the DOL and communicated to the claimant as part of the final decision made by the government. (The claimant has a right to an administrative review of that decision.) However, a large part of NIOSH's dose reconstruction procedure is based on estimates of which claims are likely to be compensated and which are likely to be denied. In the former case, a "minimum" dose estimate is made, because in NIOSH's judgment, the POC would already be greater than 50%t at that dose. Since the case is likely to be compensated, an additional expenditure of resources is deemed to be unwarranted. For all such minimum dose estimates, NIOSH's professional and technical judgment is that the case would be compensated, though as a procedural matter, the DOL can, and sometimes does, send the case back for re-evaluation.

Similarly, a large number of dose reconstructions are based at least partly on efficiency procedures for making maximum dose estimates. Such procedures are supposed to ensure that the resulting estimates are at the upper limit of scientifically plausible values, generally well above what the claimant's own dosimetry information and work history would yield if used to estimate dose. NIOSH adopts such an efficiency procedure only in cases where NIOSH estimates that the POC is likely to be below 50% at this maximum dose value.

Furthermore, the DOL's probability of causation calculation is based on the NIOSH dose reconstruction, unless the DOL sends the dose reconstruction back to NIOSH for re-work, which it has done in a small minority of cases. At least in those cases where NIOSH uses minimum or maximum efficiency procedures for all or part of a dose reconstruction, NIOSH has an understanding of the implications of the dose estimate for the DOL's probability of causation calculation, should the DOL accept the dose reconstruction as sent by NIOSH. These facts are

important to this review insofar as they impact the claimant's understanding of the draft dose reconstruction, which is a principal objective of the procedure.

An OCAS-1 form accompanies the dose reconstruction report sent to the claimant. The OCAS-1 form is provided in Attachment A for reference. By signing the form, the claimant indicates that they do not have any more information to share with NIOSH that might be relevant to the dose reconstruction. A signature on this form does not mean the claimant agrees with the dose reconstruction. The OCAS-1 form must be signed within 60 days from the time that the claimant receives the draft dose reconstruction report; a failure to do so enables NIOSH to administratively close the case (NIOSH 2006a, NIOSH 2006b). This is stated in the letter to the claimant accompanying the draft dose reconstruction:

> *Once we receive the signed OCAS-1 form from you, we will send the final copy of the dose reconstruction report to the DOL for adjudication of your claim. We will also send you and the Department of Energy a copy of the final dose reconstruction report. It is important that you return the properly signed OCAS-1 to us within the above-described timeframe so that there is no delay in the adjudication of your claim. We will not forward the dose reconstruction report to DOL for adjudication without receipt of a properly signed OCAS-1. If we do not receive the OCAS-1 within the timeframe described above [60 days], we may administratively close the dose reconstruction and notify DOL of this action.*

The close-out interview, therefore, serves not only to give the claimant an opportunity to provide more information, should they have it, but also as a marker in the process of NIOSH's completion of the dose reconstruction.

Given all of the above, the close-out interview is a critical point in the claims process.

1.2 REVIEW TIMELINE

February 13, 2006 – A work group meeting was held in Cincinnati that included discussions related to the CATI and close-out interview processes. Key items discussed included the following:

- NIOSH/ORAUT development of a new introductory packet for the claimant containing a two-page introduction letter and several fact sheets, including "Review of the Claims Process," "Detailed Steps in the Claims Process," "Dose Reconstruction – Frequently Asked Questions," "Employment History and Verification," "Glossary of Terms," and "Overview of the Claims Process Under the Act."

- SC&A requested a copy of this packet to assist in the review of ORAUT-PROC-0090.

- SC&A requested that NIOSH/ORAU provide a copy of the training manual given to interviewers.

Since ORAUT-PROC-0090, which covers the initial telephone interview (the CATI), is not substantially different from the prior procedures that it consolidates, the work group removed this item from the SC&A procedures review list. SC&A's review of the CATI procedures is in

Chapter 5 of SC&A 2005a. However, the close-out interview procedure has not been reviewed before by SC&A. The timeline for that review has been as follows:

- October 11, 2006 – SC&A observed three close-out interviews to evaluate this interview process.
- October 13, 2006 – As a result of questions raised in the close-out interview by one of the claimants, a follow-up interview was conducted with an HP Reviewer. SC&A also observed this follow-up interview. SC&A was provided with an opportunity to ask questions to those involved in interviewing the claimant, as well as their supervision, before and after the follow-up call.
- October 16, 2006 – SC&A forwarded a follow-up question to NIOSH/ORAUT related to statements made by a claimant regarding employment at additional sites. NIOSH/ORAUT spoke with the claimant and provided a summary to SC&A.
- July 26, 2007 – NIOSH provided to SC&A a copy of an information packet available to claimants that explains the dose reconstruction process and also provides a glossary of terms.

1.3 CONTENT AND ORGANIZATION

This portion of the Task Order 3 report is limited to the review of procedures pertaining to the close-out interview process for claimants. This review is represented below in Sections 2.0 through 5.0, which are followed by a list of references and two attachments:

- Section 2.0 provides a brief description of the procedures under evaluation
- Section 3.0 identifies those elements of the procedure that SC&A considers positive strong points
- Section 4.0 consists of a summary review of findings (or checklist)
- Section 5.0 describes significant findings pertaining to applicable procedures, summary conclusions, and suggestions for improvements
- Section 6.0 provides a list of references
- Attachment A: OCAS-1 Form
- Attachment B: Close-out Interview Observation Notes

The format of the checklist in Section 4.0 and the scoring system follows the procedures for this task approved by the Advisory Board.

SC&A notes that comments regarding the qualifications of the ORAUT interview personnel are based on the interview with ORAUT. That interview is documented in Attachment B.

2.0 OVERVIEW OF PROCEDURE USED IN THE CLOSE-OUT TELEPHONE INTERVIEW

To comply with the objectives specified in 42 CFR 82.10(c), NIOSH developed a formal step-by-step process for conducting close-out interviews. The procedures set forth in ORAUT-PROC-0092 have the objective of enabling the interviewer to review the draft dose reconstruction report with the claimant, and offer them an opportunity to discuss additional relevant information that may affect the dose reconstruction. The purpose of ORAUT-PROC-0092 is to provide the process requirements for the scheduling, performance, and follow-up of a close-out interview for the dose reconstruction project. After completion of the close-out interview, the claimant is asked to sign and send in the OCAS-1 form to NIOSH within 60 days of the date of receipt of the draft dose reconstruction indicating that they have no other information to present. NIOSH has established a Close-Out Tracking Utility used to schedule the date and time for the close-out interviews (Hawkins and Shatto 2005). Specific comments from claimants are documented in the NIOSH OCAS Claims Tracking System (NOCTS) telephone log. The OCAS-1 form and the Authorization for Representation (if necessary) represent the only paper records generated in this process. A biweekly process quality review is conducted to identify and resolve close-out interview discrepancies.

When the claimant asks technical questions or expresses concerns about the dose reconstruction report (DRR) that the interviewer cannot address, or provides additional information that may be relevant to the dose reconstruction, the interviewer documents the information "in as much detail as possible" (ORAUT-PROC-0092, p. 9) in the telephone log. The claimant's questions are entered into the "Task 5 Feedback Loop." [Note: Task 5 refers to the ORAU Team Dose Reconstruction group.] An HP Reviewer then researches the claimant's concerns and questions, and arranges a follow-up call with the claimant. At this stage, the procedure does not require a contact with the dose reconstruction group; it assumes that the call back will be made by the HP Reviewer without such contact (ORAUT-PROC-0092, p. 10). SC&A notes that the procedure does not prohibit the HP Reviewer contacting the dose reconstruction group before the first follow-up call. However, according to the steps in the procedure, a health physicist would become involved only if the claimant continues to have concerns after two close-out interview calls:

6.4 ***Follow-up for a close-out interview***

HP Reviewer

6.4.1 *Obtains claim numbers for follow-up calls from the Close-Out Tracking Utility.*

6.4.2 *Researches the claimant's concerns and questions.*

6.4.3 *When the interview is ready to be scheduled, sends a request to the Schedulers.*

Scheduler

6.4.3.1 Schedules a follow-up close-out interview in accordance with step 6.1.

HP Reviewer

6.4.4 Conducts the follow-up close-out interview at the scheduled time.

6.4.5 If the claimant is satisfied with the responses and has no further questions:

6.4.5.1 Completes the steps in step 6.3.3.

6.4.5.2 Sends an e-mail to the designated Group Leader as well as the original Interviewer to notify them that the close-out interview has been completed.

6.4.5.3 Enters responses to the claimant's questions and concerns into the "Task 5 Feedback Loop" tab in the Close-Out Tracking Utility.

6.4.5.4 If the claimant has additional questions that need research, explains to the claimant that the ORAU Team will call them back at another time.

6.4.5.4.1 Details the additional questions in another "Task 5 Feedback Loop" request.

6.4.5.4.2 Repeats the above steps starting from step 6.4.2.

6.4.5.5 If the claimant has questions in which [sic] *the HP Reviewer cannot answer and that need to be answered by Task 5, goes* [sic] *to step 6.4.6.*

The first time that the procedure requires a contact with the Task 5 group is if the follow-up call did not resolve concerns and the claimant had "additional questions that need research." Therefore, the claimant would get indirect feedback from the dose reconstruction group only on the third call, according to this procedure. A dose reconstructor or other health physicist never actually places the call himself/herself.

For questions outside the purview of NIOSH, including questions about the POC, the claimant is asked to contact the Department of Labor (DOL). The close-out interview is completed after the DOL sends its response.

In addition to its designated function of reviewing the dose reconstruction report with the claimants and giving the claimants an opportunity to provide additional information, the close-out interview is a means of interaction between NIOSH and the claimants, allowing NIOSH the opportunity to engender confidence in the dose reconstruction process. It is, therefore, an

important element in the relationship that NIOSH establishes with the public. Effective close-out interviews must consider both elements.

SC&A requested that Arjun Makhijani and Kathryn Robertson-DeMers (two members of the SC&A team) be allowed to observe three close-out interviews (one with an energy employee and two with survivor claimants). In the course of the third close-out interview, technical questions were raised by the claimant that had to be referred to an HP Reviewer for a response. SC&A also requested that they be allowed to observe the follow-up close-out interview conducted by the HP Reviewer. Although the claimant was informed that members of the SC&A team were listening in on the interview, SC&A was not allowed to address NIOSH or the claimant during the interview. In addition, SC&A was not permitted to make any follow-up calls to, or other form of contact with, the claimant, because these cases had not yet been adjudicated and any comments or contact might affect that process in an impermissible way. SC&A also discussed the three interviews with the personnel who conducted them and their management. Because of their relevance to SC&A's review of the procedure, the reader is strongly encouraged to carefully examine the compilation of the aforementioned interviews and the follow-up discussion with staff in Attachment B.

3.0 STRENGTHS OF ORAUT-PROC-0092

The following strengths were noted in the procedure, OCAS-1 form, and the dose reconstruction report letter:

- The logistical aspects of scheduling close-out interviews appear to be appropriately laid out. For the initial close-out interview, the scheduler calls the claimant to schedule the close-out interview 2 weeks after the draft dose reconstruction report is mailed to the claimant. Individuals are assigned as "floaters" on a weekly basis to conduct close-out interviews on the spot when requested by the claimant. Adequate Privacy Act protections are built into the interview process. The interviewers exhibit both good telephone etiquette and sensitivity to the claimant in going through the dose reconstruction step by step. The interviewers verify demographic data and document any discrepancies in the telephone log.

- The latest revision of the dose reconstruction report is more understandable than previous versions in presenting issues in layman's terms. This makes it easier for the interviewer to walk the claimant through the key parts of the draft dose reconstruction report.

- Provisions are made for the examination of questions raised by the claimant, and for re-contacting the claimant with answers. These include referral of questions to an HP Reviewer and potentially also to the dose reconstruction group.

- Provisions are made for quality assurance checks on discrepancies identified in the Close-out Tracking Utility and for the subsequent correction of these discrepancies. There is a staff person designated to do "overall quality control reviews" ORAUT-PROC-0092, p. 4).

4.0 PROCEDURE REVIEW CHECKLIST

SC&A evaluated ORAUT-PROC-0092 in its entirety. Table 1 is a checklist of objectives that SC&A designed under the first phase of Task Order 3 to evaluate whether the procedure adequately supports the dose reconstruction process.

Table 1. Procedure Review Outline/Checklist

Document No.: ORAUT-PROC-0092	**Effective Date: 8/17/2005**
Document Title: Close-Out Interview Process	
Reviewer: Arjun Makhijani/Kathryn Robertson-DeMers	

No.	Description of Objective	Rating 1-5*	Comments
1.0	**Determine the degree to which the procedure supports a process that is expeditious and timely for dose reconstruction.**		
1.1	Is the procedure written in a style that is clear and unambiguous?	3	The portions regarding documentation of the close-out interview are very clear. The term "Health Physics Reviewer" is misleading and connotes that a qualified health physicist will address technical questions raised by the claimant, whereas this is frequently not the case. Critical decisions about what should be referred to a health physicist are made by the HP Reviewers, none of whom have qualifications in health physics.
1.2	Is the procedure written in a manner that presents the data in a logical sequence?	5	
1.3	Is the procedure complete in terms of required data (i.e., does not reference other sources that are needed for additional data)?	5	
1.4	Is the procedure consistent with all other procedures that are part of the hierarchy of procedures employed by NIOSH for dose reconstruction?	3	There is no requirement to connect the closing interview to the CATI. The rationale for not using specific information provided from the CATI in the dose reconstruction is not required to be explained to the claimant.
1.5	Is the procedure sufficiently prescriptive in order to minimize the need for subjective decisions and data interpretation?	2 for interview steps and 1 for follow-up to claimant questions	The procedure does not give examples of substantive information that must be documented in detail. The procedure does not provide information on how claimant questions are researched and

* Rating system of 1 through 5 corresponds to the following: 1=No (Never) or Poor, 2=Infrequently or inadequate, 3=Sometimes or adequate with deficiencies, 4=Frequently or good, 5=Yes (Always) or excellent. N/A indicates not applicable.

Table 1. Procedure Review Outline/Checklist

Document No.: ORAUT-PROC-0092	**Effective Date: 8/17/2005**
Document Title: Close-Out Interview Process	
Reviewer: Arjun Makhijani/Kathryn Robertson-DeMers	

No.	Description of Objective	Rating 1-5*	Comments
			answers determined. Procedure does not provide guidance for documentation of the close-out interview, leaving much room for subjective judgment (see Finding 1).
2.0	**Determine whether the procedure provides adequate guidance to be efficient in instances where a more detailed approach to dose reconstruction would not affect the outcome.**		
2.1	Does the procedure provide adequate guidance for identifying a potentially high POC as part of an initial dose evaluation of a claim?	N/A	
2.2	Conversely, for claims with suspected cumulative low doses, does the procedure provide clear guidance in defining worst-case assumptions?	N/A	
3.0	**Assess the extent to which the procedure accounts for all potential exposures and ensures that resultant doses are complete and based on adequate data in instances where the POC is not evidently clear.**		
3.1	Assess quality of data sought via interview:	----	
3.1.1	Is scope of information sufficiently comprehensive?	2	All claimants are at a disadvantage when reviewing the DRR provided from NIOSH. This report is highly technical and difficult for a layman to understand. Terms such as underestimate and overestimate are not adequately defined. Claimants do not have access to the DOE medical and dosimetry files for comparison to the DRR. Some claimants appear to be confused between POC and the dose numbers and the significance of each. The term "claimant favorable" may imply that a person is going to be compensated, when the contrary may be true. (See Attachment B and below.) Dose reconstructor or a qualified HP is never directly available to the claimant to fill the gaps. See Findings 2, 3, and 4.
3.1.2	Is the interview process sufficiently flexible to permit unforeseen lines of inquiry?	4 for initial close-out interview and 1	Claimants are offered the opportunity to ask questions of the interviewer, and if there is a follow

* Rating system of 1 through 5 corresponds to the following: 1=No (Never) or Poor, 2=Infrequently or inadequate, 3=Sometimes or adequate with deficiencies, 4=Frequently or good, 5=Yes (Always) or excellent. N/A indicates not applicable.

Table 1. Procedure Review Outline/Checklist

Document No.: ORAUT-PROC-0092	**Effective Date: 8/17/2005**
Document Title: Close-Out Interview Process	
Reviewer: Arjun Makhijani/Kathryn Robertson-DeMers	

No.	Description of Objective	Rating 1-5*	Comments
		for follow up close-out interview	up, the HP Reviewer. Technical questions are not answered in real time, and a follow-up interview must be scheduled. The nature of the follow-up is not explained well. This unavailability of an HP in real time further detracts from the process because the claimant cannot pursue a certain line of thinking or determine the usefulness of additional information being offered. Retaining a thread of thought for days or weeks even with all the paperwork would be difficult for anyone, but would be especially difficult for claimants who usually do not have all the relevant documentation before them. Survivor claimants are at a particular disadvantage.
3.1.3	Does the interview process demonstrate objectivity, and is it free of bias?	3 for employees and 2 for survivors	Process is objective in going through the dose reconstruction report. The procedure has no specific provision for responding to complaints about the difficulty that claimants have in understanding the dose reconstruction report. The procedure leaves room for undue and substantial subjectivity in addressing technical information provided by claimants. This problem is general, but it would be expected to affect survivor claimants more.
3.1.4	Is the interview process sensitive to the claimant?	5 for etiquette and 2 for substance of the communication	The interviewers conducting the close-out interviews exhibit good telephone etiquette and try to answer the claimant questions to the best of their ability. The procedure does not have a

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No.	Description of Objective	Rating 1-5*	Comments
			specific way to respond to frequent statements of claimants that dose reconstructions are difficult to understand. This puts the claimant at a serious disadvantage because they don't know what to ask or what information may influence the dose reconstruction outcome. The absence of a thorough procedure to resolve issues can make the discussion of signing the OCAS-1 form in the same phone call complex and confusing for the claimant. See Findings 2 and 3.
3.1.5	Does the interview process protect information as required under the Privacy Act?	5	
3.2	Assess whether the procedure adequately addresses generic as well as site-specific data pertaining to:	----	
3.2.1	Personal dosimeters (e.g., film, TLD, PICs)	N/A	
3.2.2	In vivo/In vitro bioassays	N/A	
3.2.3	Missing dosimetry data	N/A	
3.2.4	Unmonitored periods of exposure	N/A	
4.0	**Assess procedure for providing a consistent approach to dose reconstruction regardless of claimants' exposures by time and employment locations.**		
4.1	Does the procedure support a prescriptive approach to dose reconstruction?	N/A	
4.2	Does the procedure adhere to the hierarchical process as defined in 42 CFR 82.2?	N/A	
5.0	**Evaluate procedure with regard to fairness and giving the benefit of the doubt to the claimant.**		
5.1	Is the procedure claimant favorable in instances of missing data?	N/A	
5.2	Is the procedure claimant favorable in instances of unknown parameters effecting dose estimates?	N/A	
5.3	Is the procedure claimant favorable in instances where claimant was not monitored?	N/A	
6.0	**Evaluate procedure for its ability to adequately account for the uncertainty of dose estimates.**		
6.1	Does the procedure provide adequate guidance for selecting the types of probability distributions (i.e., normal, lognormal)?	N/A	
6.2	Does the procedure give appropriate guidance in the use of random sampling in developing a final	N/A	

* Rating system of 1 through 5 corresponds to the following: 1=No (Never) or Poor, 2=Infrequently or inadequate, 3=Sometimes or adequate with deficiencies, 4=Frequently or good, 5=Yes (Always) or excellent. N/A indicates not applicable.

NOTICE: This document has been reviewed for Privacy Act information and has been edited accordingly.

Table 1. Procedure Review Outline/Checklist

Document No.: ORAUT-PROC-0092	**Effective Date: 8/17/2005**
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No.	Description of Objective	Rating 1-5*	Comments
	distribution?		
7.0	**Assess procedure for striking a balance between the need for technical precision and process efficiency.**		
7.1	Does the procedure require levels of detail that can reasonably be accounted for by the dose reconstructor?	N/A	
7.2	Does the procedure avoid levels of detail that have only limited significance to the final dose estimate and its POC?	N/A	

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5.0 SIGNIFICANT FINDINGS PERTAINING TO PROCEDURES

5.1 REVIEW OF FINDING 1

Finding 1: The close-out interview procedure does not ensure that the HP Reviewer and dose reconstruction group fully address claimant concerns raised during the close-out interview. The procedure has many gaps relating to response to claimant concerns.

The gaps identified in regard to response to claimant concerns are as follows:

(1) The procedure does not prescribe how claimant questions should be researched and how answers should be determined.

(2) There are no clear criteria for the type of claimant information that would require a review by a health physicist, or for a review of the CATI or dose data in the claimant file.

(3) There is no explicit requirement to carefully check whether all information corresponding to the concerns has been appropriately taken into account in the dose reconstruction.

(4) There are no clear criteria for documentation of the close-out interview or of the follow-up calls. This creates the potential for inconsistencies between interviewers and for omission of important information.

(5) The HP Reviewers, who make key decisions about research of the claimants' concerns and who communicate with the claimants, do not have health physics qualifications or experience in dose reconstruction, according to interviews with their managers (see Attachment B).[2]

(6) There are no specific requirements for documentation of the response provided by the dose reconstruction group when concerns are referred to them. This creates the potential for inconsistency in how concerns are addressed and prevents holding the dose reconstruction group accountable in cases where the concerns were not fully addressed.

As noted above, ORAUT-PROC-0092 provides the interviewer with a step-by-step process for setting up and going through the interview. When the claimant asks questions about the DRR that cannot be answered by the interviewer, or additional information is provided, the interviewer documents the concern or information "in as much detail as possible" in the telephone log. The claimant's questions are entered into the "Task 5 Feedback Loop." However, the procedures do not require the interviewer to inform the claimant about the qualifications of the HP Reviewers who respond to technical questions that cannot be answered by the interviewer or provide clear information on how claimant questions are answered and researched.

[2] The SC&A observers requested that ORAUT provide them with the qualifications of the HP Reviewers, but due to procedural issues, they were not available in time.

According to the procedure, the HP Reviewer does the research on the concerns and makes the follow-up call; contact with a health physicist is not required at this stage. But the procedure does not provide the HP Reviewer with examples, specific guidance about what to research, or when it may be necessary to refer to the dose reconstructor before calling the claimant back. On the contrary, the procedure implicitly assumes that the HP Reviewer will be able to resolve all concerns without resorting to contact with, or information from, the dose reconstructor.

If the claimant still has concerns during the follow-up interview that the HP Reviewer cannot address, the HP Reviewer documents these concerns and requests a response from the Dose Reconstruction Group Manager. The latter then provides a response, which the HP Reviewer must understand and communicate it to the claimant. **Neither the dose reconstructor nor any other member of the dose reconstruction group ever speaks directly to the claimant.** For questions outside the purview of NIOSH, including questions about the POC, the claimant is asked to contact DOL and is provided with the contact information to do so.

These procedural steps require the HP Reviewer to make substantive decisions on what information is relevant to the concerns expressed by the claimant and whether those concerns could affect the particular dose reconstruction. Guidelines on or examples of when claimant concerns might affect a dose reconstruction, and hence require the input of the dose reconstructor or other health physicist, are not provided in the procedure.

The lack of specific guidelines and examples is a particular problem, because none of the four HP Reviewers is a health physicist or has experience in dose reconstruction, according to their managers (Attachment B). Without defined criteria, there is unlikely to be consistency in the way in which technical information provided by the claimant during the close-out interview is handled, with the likelihood that it could be mishandled. This appears to have been the case in the following two instances that SC&A examined, where the claimant expressed technical concerns during the initial portion of the close-out interview:

(1) Information given during one of the close-out interviews observed by SC&A on October 11, 2006 (Case #3).

(2) Information provided by an employee during a site expert interview done by SC&A while reviewing a TBD.

We will review the specifics of each case to illustrate the critical importance of having a specified procedure to evaluate the technical information provided by claimants during the close-out interview and to report back to them once the investigation is complete.

5.1.1 Close-Out Interview Observation (Case #3)

In the close-out interview observed by SC&A (conducted by Rachel Hume, ORAUT), the claimant described a situation where the energy employee (claimant's spouse) was sent to other facilities for in-vivo counting. In the initial submittal of the claim, the claimant provided a letter from a national laboratory indicating that the results of the in-vivo testing from the national laboratory were not in agreement with the in-vivo counts from the facility where the employee

worked (home facility). The claimant was concerned about the discrepancy mentioned in the correspondence from the host facility, and asked whether this information was taken into account in the dose reconstruction. The claimant raised serious concerns regarding the accuracy of the data from the home facility, and specifically stated that the readings in the home facility were "low" and "false:"

> *Rachel Hume (ORAUT): Did he work there at [the national lab] or was he just tested there?*
>
> *Claimant: He was just being tested there. The letter showed that readings at [the site where he worked] were way off.*
>
> *Rachel: I am making handwritten notes. I want to send this over so reviewers can look at it. So they said records of [the site where he worked] were off?*
>
> *Claimant: Yes, Low. Very low. [Sentence deleted regarding matter not concerning dose reconstruction.] He visited [the national lab] once. They said his readings were all wrong. I know he went to another place too and I don't have anything on that. I don't have any information on the other facility.*
>
> *Rachel: Is there something else you want to go over or specific questions?*
>
> *Claimant: No, a lot of this I don't understand. I just don't understand how you came to this conclusion [about probability of causation] based on false information.*

In response to this question, the interviewer documented the details of the concern and forwarded the question to an HP Reviewer.

SC&A's review of the claimant's DOL and DOE file identified the letter submitted by the claimant, in addition to external, urinalysis, and in-vivo monitoring data (DOL file, pp. 72-83). The letter and a corresponding incident report were not available in the DOE file. The national laboratory in-vivo monitoring data was listed under the mobile unit data in the energy employee's dosimetry record. Sending individuals to other sites for in-vivo counting is usually the result of an incident. The claimant did state that the employee was "constantly hot" and that other employees were sent with him to the national laboratory. Furthermore, the national laboratory recommended that the individuals be counted at Battelle Pacific Northwest Laboratory, since the discrepancies had not yet been resolved. There are no data available in either the DOE or DOL file related to further in-vivo counts at Battelle, although the claimant indicated that the energy employee was sent for monitoring at more than one offsite location. Not only are there questions related to whether the national laboratory information was used in the dose reconstruction, but the completeness of the dosimetry file is also in question. There is a letter in the file indicating the date that the employee was to be sent to Battelle, but there are no actual measurements from Battelle in the file.

The information provided by the claimant was specific (including the name of the national laboratory). The letter relating to that laboratory's measurements was also provided by the claimant. The allegations made by the claimant based on the claimant's understanding of the material were of the most serious kind – false information in the dose record and systematically low in-vivo counts. The claimant was emphatic and repeated the problem many times.

After the follow-up call, SC&A asked questions of the HP Reviewer regarding the process and how the HP Reviewer responded to the claimant's question.

> *SC&A: Did you look at the [national lab] data she was talking about before making the call?*
>
> *Brian Kaske (ORAUT): No. That was the DR's decision as to whether to look at it or not. I did not look it.*
>
> *SC&A: Brian represented that the DR was claimant favorable. She had mentioned that the [national lab] lung count was higher than the [site name] count. But you did not look at [national lab] data or verify with DRist?*
>
> *Brian: No, I did not. We assume that all data was used.*
>
> *SC&A: But Rachel told her that she would refer the specific issue of the [national lab] measurement to the HP Reviewer. The claimant mentioned it at least a dozen times, that the [national lab] measurement being higher was the critical problem in how she viewed the dose reconstruction. She said that the higher measurement from [national lab] was the issue for her. Do you agree that she mentioned it at least a dozen times between the close-out interview and the reviewer call?*
>
> *Ray: Yes, she did mention it at least a dozen times.*
>
> *SC&A: I just want to make sure. Did you look at all at the [national lab] data before assuring her that the dose reconstruction was claimant-favorable, given that that was her main problem?*
>
> *Brian: I looked at a letter in the claim file.*
>
> *SC&A: Did you look at any data from [the national lab]? Any measurement to check if the actual value of lung burden or intake used from the urine data in the dose reconstruction was claimant favorable compared to the measurement from [national lab] she was putting before you?*
>
> *Brian: I did not look at any numbers. I looked at the letter from [the DOE contractor] stating that [national lab's] measurements were different than [those of the site].*

SC&A: Yes, I heard you read that to the claimant. Thanks. I just wanted to verify whether you looked at the [national lab] data, because that is what the claimant put forward.

There were data available and clearly identified as national laboratory in-vivo data in the DOL file immediately following the letter referenced in the above discussion. Furthermore, the site was unable to explain the discrepancy between the site measurement and the national laboratory measurement, which is why the matter appears to have been referred to Battelle Pacific Northwest Laboratory (Battelle). No information from Battelle is in the DOE or DOL files. SC&A is not making any comment about the alleged discrepancies or the dose reconstruction. SC&A notes the following as relevant to this review of the close-out interview procedure:

- The claimant raised what appear to SC&A to be substantial and technically difficult issues
- In the view of SC&A, a referral of the matter to the dose reconstruction section appears to have been warranted, given the nature and timing of the measurements (in-vivo and bioassay)

However, the dose reconstruction group was not contacted as part of the review of the claimant's concerns. This means that neither the dose reconstructor nor any other HP became aware of the claimant's concerns during the close-out interview process. The HP Reviewer who responded simply assumed that the dose reconstruction was claimant favorable, without any technical review of the data. He also assumed, without checking with the dose reconstructor, that all relevant information, including the data that the claimant was referring to, had been taken into account. He did not look at any data himself before recontacting the claimant. Nor did he clarify any of the other issues raised by the claimant, such as whether the data were "false" or "wrong," or the possibility that the employee had been moved about from one area to another, including to chemical operator work. According to notes on the follow-up interview prepared by the HP Reviewer, the in-vivo results were not used in the dose reconstruction. The HP Reviewer explained that the urinalysis records were used to assign missed internal dose. It was explained to the claimant that the assumptions made were claimant-favorable and took into account the potential for exposure that may not have been captured in the energy employee's record. It was noted that the claimant understood and accepted these responses (Kaske 2006). Despite the fact that the claimant accepted the responses, it is clear that the in-vivo results were not re-considered after the claimant raised concerns, and that the claimant concern related to "false" data was not specifically addressed. The HP Reviewer did not discuss the incompleteness of the DOE file with the claimant. SCA's review of the DOL and DOE files indicate letters relating to inconsistent in-vivo count data were absent from the DOE dosimetry file, but present in the DOL file. As noted, the employee appears to have been sent to Battelle, but those data were not available at all.

SC&A observed that the initial interviewer's notes were rather brief, but were substantive enough (including the use of the term "false" to describe the allegation about the on-site in-vivo data) to have communicated the gravity of the allegations to the HP Reviewer. Hence, the first part of the procedure appears to have been successful, so far as summarizing the main issue,

though we note that there was an error in the notes of the call. (The notes state that the employee was sent to the national laboratory for "medical testing," whereas the employee was sent for in-vivo counting. However, the letter about the in-vivo counting in the claim file would have cleared up any confusion on this count).

SC&A has concluded that the concerns raised by the claimant were not adequately researched and evaluated by the HP Reviewer. The actual research done by the HP Reviewer to respond to the claimant's concerns, such as the names of the documents reviewed and names of the people who were contacted, is not documented and not required by the procedure to be documented. The HP reviewer affirmed that use of urine data was clamaint favorable without actually reviewing either the urine data or the in-vivo data, or getting the opinion of the dose reconstructor to check out that issue.

Given information observed in the file by SC&A and the statements of the HP Reviewer himself, it is evident that the HP Reviewer did not conduct an evaluation of the claimant's question that could be described as careful or responsive to the claimant's core technical concerns about "false" data, "wrong" data, and contradictions between the site data and the national laboratory data.

Furthermore, SC&A has concluded that the concerns raised by the claimant were serious enough to have merited a review by a health physicist of the data provided by the national laboratory, and a check to see whether the dose reconstruction was actually claimant favorable. In any case, the matter should have been referred to the dose reconstructor (via the Manager of the dose reconstruction task – Task 5 for the ORAUT). It would have been the responsibility of the dose reconstructor or another health physicist to decide whether the data were "false" or not, and whether the dose reconstruction could be reaffirmed to be claimant favorable without addressing the unresolved issue of the specific in-vivo counts of concern to the claimant. It was inappropriate for the HP Reviewer to reaffirm that technical judgment to the claimant without any reference to the dose reconstructor or to the underlying data.

The procedural root of this problem is the lack of specific guidance, with examples, for the HP Reviewer as to when to refer a case to the dose reconstruction part of the ORAUT. The HP Reviewer makes the first determination whether the information provided by the claimant affects dose reconstruction and if it should be referred to the dose reconstructor, although they are not trained in dose reconstruction. There is a mechanism in place to refer questions to the dose reconstruction group, but this is only required if a second follow-up call is deemed necessary by the HP Reviewer.

5.1.2 Close-Out Interview Information Gathered during Site Expert Interview

SC&A conducts site expert interviews in the course of preparing for a TBD review. The SC&A procedure includes interviews with workers representing various job types, so that SC&A can benefit from the different kinds of experience and expertise of the workers at the site. This interview was with an employee whose job likely required presence during and after incidents. The energy employee had a skin cancer on a part of the body that would be expected to be vulnerable to deposited radionuclides, notably in the absence of anti-contamination clothing. In

the CATI, the employee indicated that he used respirators and anti-contamination clothing "only in the 1990s." The employee started work in the 1970s, and indicated being involved in many incidents with radiological materials present. It is clear that this was in the nature of the energy employee's job. No specific dates were offered, but the employee did list one specific radioactive element involved.

The draft dose reconstruction was sent to the energy employee in 2005. It contained the following about the use made of the CATI (redacted for privacy):

> *The record of the telephone interview was evaluated carefully by the dose reconstructor. During the interview, it was mentioned that several tasks or locations associated with* [redacted] *job assignments involved radiological material or areas. This is typical for radiation workers at DOE facilities, and the dosimetry practices are designed to record exposures associated with these environments. There were no specific events mentioned that indicate* [redacted] *was involved in a radiological incident. In addition, no radiological incidents were reported by the Department of Energy. Therefore, no additional information affecting the dose reconstruction was identified.*

The draft dose reconstruction failed even to mention that the claimant had asserted involvement in many incidents or that the nature of his job made it likely that he would be involved in incidents. Moreover, the skin cancer involved a part of the body that is not normally monitored for external exposure. The draft dose reconstruction does not refer to any method that was used to relate the dose recorded on the badge to the site of the cancer. The job descriptions in the draft dose reconstruction did not accurately reflect those in the Employer data header in the CATI. The employee was advised not to sign the OCAS-1 form and that ORAUT would get back to him.

SC&A is not providing this background information as a comment on the dose reconstruction, but as a reflection of important gaps in the interview procedure and in connecting the substantive technical information in interviews (both the CATI and the close-out interview) to the dose reconstruction. Given that the employee was evidently very knowledgeable, he raised objections during the close-out interview and again stated he had been involved in incidents. This time, he was able to provide very substantial details about one incident and a 5-year time window during which the incident occurred. He named three co-workers who were involved with him. He provided information on where the incident files were likely to be located, and stated that such records would not be in the employee's DOE file. It would be surprising if the type of incident he described did not have an incident report associated with it, even if it was not in the individual's DOE file. There is no record in the close-out interview log that any attempt was ever made to locate the incident report or contact any of the coworkers.

The close-out interview follow-up interview notes are sparse. In fact, the HP Reviewer's follow-up comments merely indicate that an explanation of the claimant's questions regarding his work was provided, and that the claimant was satisfied. During the site expert interview, this individual expressed misgivings towards the method of internal dose assignment, which indicates the claimant was not satisfied (Walsh 2005). The follow-up notes do not have any substantive

information on how the matter of incidents was resolved. The employee did sign the OCAS-1 form and was denied.

These details are also relevant to this procedure review because of events subsequent to the first close-out interview. The paper trail indicates that the dose reconstruction was not changed at all. ***Further, the date on the final dose reconstruction predates the close-out interview*** and is the same as the draft dose reconstruction. The language regarding use of claimant information in the final dose reconstruction is identical to that in the draft dose reconstruction and does not refer to the information provided by the employee on the specific incident. In other words, the draft dose reconstruction was made final as it was prior to the close-out interview, and it was sent to the claimant and DOL with a cover letter following the date of the close-out interview.

From the above facts, one may infer that both the information in the CATI and the much more specific information in the close-out interview about incidents were not adequately researched or completely ignored. Since the date of the final dose reconstruction letter precedes the close-out interview, and since it is identical to the draft that was sent prior to the close-out interview, there is no documented record that any attempt was made to recover the files from the department referred to by the claimant. The close-out interview record does not even indicate that an HP Reviewer looked at the information, nor does it indicate that the dose reconstructor was informed about the specific data provided about an incident, including a rather narrow timeframe for the type of incident that occurred, which was an unusual occurrence.

This reinforces the conclusion from the first example discussed above that the close-out interview procedure has a serious gap regarding what information from the claimant must be referred to the HP Reviewer and then, in turn, to the dose reconstruction department of ORAUT.

The following conclusions emerge from the two case studies where SC&A examined documentation of the follow-up to the initial close-out interview because the claimant provided information relevant to dose reconstruction:

(1) ORAUT-PROC-0092 has serious gaps related to a lack of specificity about what information should be referred to an HP Reviewer and to the dose reconstruction department of ORAUT.

(2) The procedure also has no specifications or examples of what kinds of follow-up are to be expected when detailed information is provided. In both cases examined, the claimants provided specific information, yet the evidence is that the underlying data were not reviewed in one case and no attempt was made to obtain the relevant reports in the other. In one case, the date on the final dose reconstruction actually predates the close-out interview, despite the fact that the employee provided detailed, new information during the close-out interview.

(3) The level of detail in documenting the close-out interview process during the follow-up call was very different in the two cases discussed above. In the first case, the HP Reviewer provided a much more detailed summary in the close-out interview record than

in the second case. The lack of specific documentation procedures for research and for the communication of the resolution of concerns creates the potential for inconsistencies and arbitrariness in how concerns are researched, communicated, and resolved.

(4) In both cases, substantive information provided by the claimant was not addressed by a dose reconstructor. In one case, SC&A is aware that the information was not referred to the dose reconstructor. In the second case, this can be inferred from the identical language in and dates on the draft and final dose reconstruction letters.

5.1.3 Suggestions for Improvement related to Finding 1

The following suggestions for improvement relate to Finding 1:

(1) Claimants should be informed that HP Reviewers are not Health Physicists. The term "HP Reviewer" should not be used to refer to personnel without qualifications or experience in health physics.

(2) The potential for inconsistencies and for arbitrary judgments by HP Reviewers should be significantly decreased by detailed written guidelines for and examples of how concerns should be researched and when they should be referred to the dose reconstruction group. The two examples discussed above can be used as case studies for lessons learned in developing those guidelines.

(3) The procedure should include instructions that HP Reviewers should make detailed notes about what was done to address claimant concerns and how they were resolved. This should include specific references to documents reviewed, personnel consulted, and details of how the issues were resolved during the follow-up call.

(4) All claimant concerns relating to dose, data, intakes, exposure, or incidents should be referred to the dose reconstruction group for a response. The response should fully address the concern and should be in writing. The written document should be provided to the claimant as part of the follow-up process.

SC&A has observed three close-out interviews and examined two cases of close-out interviews in which the claimant provided information and expressed concerns that required follow-up. The fact that very substantial issues arose in this small number of cases would raise questions about the extent of the problems, even without further information. But in these cases, the problems appear to arise largely from the gaps in the procedure, and from the technical decisions about what to review and not to review by HP Reviewers, who have no health physics qualifications or dose reconstruction experience, according to ORAUT (see Attachment B). This raises a clear possibility that the lack of adequate follow-up of claimant concerns is systemic. This needs to be determined, given the crucial nature of the close-out interview in the dose reconstruction and compensation process. Therefore, it would be highly desirable for the Advisory Board directly or via the Work Group to investigate how widespread these problems may be.

A part of this investigation might consist of re-interviews by the Board, directly or through the Work Group, of the two claimants' cases discussed above, provided they are amenable to that, of course. This would help in evaluating the adequacy of changes in the close-out interview procedure that NIOSH/ORAUT might propose. It would also throw some light on the worker-interview and site-expert documentation procedure and the ways in which that information, as well as information in the CATIs, is being used. SC&A recognizes that the site expert documentation is being separately reviewed by the Advisory Board and is making this comment here in the interest of assisting a coordinated review of various kinds of input provided to NIOSH and ORAUT.

5.2 REVIEW OF FINDING 2

Finding 2: The procedure makes no substantive provision for ensuring that the claimant actually understands the dose reconstruction and its implications as part of DOL's compensation decision prior to signing the OCAS-1 form, even when the claimant complains that they do not understand the "lingo."

The interviewers exhibited good telephone etiquette and sensitivity to the claimant in going through the dose reconstruction step by step. However, during the course of the close-out interview observations, comments were made by claimants indicating that they did not understand the dose reconstruction report. Examples are presented below:

Claimant 1 Close-Out Interview

> *Gwen Knox (ORAUT): Radiation exposure is measured in rem – that is a unit of radiation. We use it in calculating Probability of Causation (POC). We only looked at dose to the lung. The estimated dose of* [redacted] *rem produced more than 50%; once this threshold is crossed we do not consider the case any farther. This case used a partial estimation of dose. Do you have any questions at this point?*
>
> *Claimant: A lot of it I don't really understand.*
>
> and
>
> *Claimant: So he was exposed to radiation?*
>
> *Gwen: Yes.*
>
> *Claimant: I thought when he wore the badge it would tell you the dose.*
>
> *Gwen: His badge measured external radiation. He did wear a badge.*
>
> *Claimant: I don't really know because my guy never spoke about it. I am kind of left in the dark. He never really talked to us about anything. I was pretty young at the time.*

Gwen: This is common due to security at this time. That's why we don't just rely on interviews, but we rely on several sources of information, including site records and technical basis documents.

Claimant: As far as I understand, which is not a lot of it. My guy was exposed to at least 50%.

Gwen: That is the probability of causation. It was greater than 50%, so his cancer was more likely than not caused by radiation. However, NIOSH does not make the formal determination. The DOL is responsible for determining the Probability of Causation.

Claimant 3 Close-Out Interview

Rachel Hume (ORAUT): Is there something else you want to go over or specific questions?

Claimant: No, a lot of this I don't understand. I just don't understand how you came to this conclusion [about probability of causation] based on false information.

Rachel: This needs to be looked into, but for now let's go on to the bottom of page 4. The information used for the dose reconstruction included dosimetry results from the Department of Energy, technical basis documents, and procedures.

and

Rachel: Let's talk about ambient dose. Though he was monitored, onsite ambient dose, that's a dose that he might have received while outside, was assigned to him.

Claimant: I don't understand that.

Rachel: Is this something you want me to go over?

Claimant: I don't understand it. I don't understand the lingo. This is not in the medical records.

Rachel: This is dose that is added that may not have been recorded. Onsite ambient dose would not be in his medical records.

Claimant: So that is separate from the mobile unit that was completely off?

Rachel: Yes. Let's go to internal dose.

The interchanges illustrate the attempts that interviewers make to clear up misunderstandings; however, the nature of the information is so complex that essential issues may still not be understood or even properly addressed. For instance, in the case of Claimant 3, the term "ambient dose" was briefly explained, but the claimant did not appear to understand it. Claimant 1 was confused between probability of causation and dose.

The second concern of Claimant 3 about "false information" was referred to the HP Reviewer. The issue of the probability of causation came up in that context. It provides further evidence that claimants may be confused between POC calculated by DOL and the dose estimates compiled by NIOSH, and the significance of each. The interchange between the HP Reviewer and the claimant in Claimant 3 is very instructive on this point. The claimant stated during the close-out interview and then during the follow-up interview that he/she did not trust the site, that the site data were "wrong" or "false," and that a national laboratory had produced higher readings. The HP Reviewer reviewed a letter, but did not review the underlying data prior to the call. The interviewer also stated that the claim was likely to be less than 50% POC. That is the context of the following exchange (Attachment B, emphasis added):

> *Brian Kaske (ORAUT): On page 8, it says that recycled uranium was processed at [site name] and that was assumed also. It has plutonium, neptunium, and technetium in it. These were included also. He had confirmed positive dose since his urinalysis did show that his measurements were greater than the minimum detection limit. A* ***claimant-favorable*** *assumption of Type S was used for the [Cancer type], and Type F was used for the [cancer type]. He has multiple acute intakes, which were assigned for the [organ name] system and a concurrent dose for [organ name]. The dates are there for assumed acute intake dates. They also used an assumption that the uranium was enriched. This is also* ***claimant favorable****. The dose was assigned beyond that in the records.*
>
> *Claimant:* ***That's good. That's what was bugging me****. I sent the records in, including his appointment log.*
>
> *Brian: Yes, we have his appointment logs. Any other questions?*
>
> *Claimant: I think that is what was bugging me. Also the notes I sent by Dr. [redacted]. His appointment log is in the claimant file. I sent it in, because we could not get in touch with Dr. [redacted].*
>
> *Brian: All those materials will be sent to the Department of Labor when the dose reconstruction report is forwarded. Anything else?*
>
> *Claimant: If you need anything else? I guess that was it. It was just bugging me that all this was wrong. I wouldn't trust anything from [site name].*
>
> *Brian: Okay. Acute intakes were assigned based on [Name's] positive urinalysis results. In addition to this, a chronic exposure was assigned to account for missed dose. All of these assumptions made this DR* ***claimant-favorable****.*

Claimant: Yes

Brian: The next step is to send in the form if you feel all your questions have been answered.

Claimant: In other words, all this is ***favorable.*** *Where do we go from here?*

Brian: We need the OCAS-1 signed and returned, as long as we have covered all your questions.

Claimant: If you think all this is favorable, I will go ahead and sign it. I don't know where we go from here. ***[My daughter] did not think it was very favorable. She said they really worked him over. I was very skeptical.***

Brian: I do want to confirm a couple of things. On page 4 under the dose reconstruction overview, it says that even under these [claimant-favorable] assumptions, NIOSH has determined that with ***further research and analysis, the probability of causation won't be 50% or greater.***

Claimant: How much does it have to be?

Brian: That's a good question. *This is individual-specific and is based on the person's date of birth, hire date, termination date, cancer type, and unique monitoring history. The dose reconstruction report does not provide a percentage, but it provides a dose. [redacted] rem was received by the [redacted] and [redacted] rem was received by the [redacted]. This is not a POC.*

Claimant: So what does it mean?

Brian: It's the amount of radiation energy that NIOSH assumed he could have received. ***They are amounts of energy. This is not a decision.***

Claimant: I don't see how the Department of Labor could be any different. There is enough evidence here to prove the claim.

Brian: The Department of Labor determines claim outcome. NIOSH does not adjudicate claims. ***If they deny*** *you, you can appeal.*

Claimant: I don't know how they could come up with another decision. [Sentences not related to dose reconstruction deleted.]

Brian: It's OK to be skeptical.

Claimant: I am an old lady and I have seen a lot of dishonesty.

Brian: Let me give you my number, so you can contact me if you have any questions.

Claimant: Is this the same as Rachel's?

Brian: As you continue through the process, feel free to call me or the DOL. It will take about 2-8 months for a decision. Claimants have said it is closer to 2 months.

Claimant: Very good.

Brian: You can call the DOL Cleveland office to find out the status of the claim. You can call to ask them anything.

Claimant: They are good at providing me with a note.

Brian: The contact information for DOL is on any correspondence. Are there any other questions?

Claimant: No

Brian: Two things will be different on the final DRR. First, the DRAFT will be changed to final. Second, there will be nothing included to sign. Once you receive this report, this indicates the DR has been sent to DOL.

Claimant: That will be good.

Brian: Labor will provide a decision.

Claimant: ***With all this information, I don't see how they can deny it. It was enough to kill him.***

Brian: ***If you are denied****, there is a process to appeal the claim.* ***Best of luck!*** *Give me a call if you need further assistance.*

The above interchange is illustrative of the potential for confusion between a "claimant-favorable" dose reconstruction and a favorable result regarding compensation in the absence of a clear distinction between the two being made in the context of the discussion. SC&A notes that the NIOSH Glossary of Terms sent to the claimant does state that the dose reconstruction is used to determine the POC. Furthermore, the HP Reviewer made a statement about probability of causation being less than 50%, but made no clear statement that a determination of less than 50% POC would mean denial if the DOL accepted the NIOSH dose reconstruction report.

The claimant's next question, "How much does it have to be?," appeared to be related to a threshold for compensation. It was perhaps not understood that way. But the issue of outcome,

given the dose estimate, was not addressed. Rather, the answer was about the variation in level of dose required for different organs for a 50% POC.

The claimant apparently continued to believe that the claim was likely to be compensated ("With all this information I don't see how they can deny it."). This impression was not corrected by the HP Reviewer, but followed with a conditional statement ("if you are denied") and a "best of luck!"

The claimant was apparently convinced enough by this interchange to set aside his/her skepticism that she/he signed the OCAS-1 form the same day as the above interchange. It is unknown if she contacted her daughter, who "did not think it was very favorable," prior to signing the form. The radiation-related claim (Part B claim) was denied.

42 CFR 82 states that the closing interview should "review the dose reconstruction results and the basis upon which the results were calculated" with the claimant. If the claimant cannot understand the basis of the dose reconstruction, a significant part of the purpose is defeated. This is made more problematic by the fact that the close-out interview is the last opportunity for the claimant to provide information during the NIOSH dose reconstruction process that could affect their claim.

5.2.1 Suggestion for Improvement related to Finding 2

(1) The interviewer should clearly communicate to the claimant the implication of the dose reconstruction for compensation with a declarative statement. Claimants should be told, according to the dose reconstruction, whether the claim is likely to be compensated or not compensated, with the caveats that (1) DOL may return the dose reconstruction for re-evaluation, and (2) the decision on compensation is made by DOL.

5.3 REVIEW OF FINDING 3

Finding 3: The fact that the signing of the OCAS-1 form (if it has not been signed before) occurs in the context of the close-out interview may create pressures on ORAUT personnel to get the signature before being certain that all issues of concern to the claimant have been fully addressed.

As noted above, the claimant has a 60-day period after receipt of the draft dose reconstruction report in which to sign the OCAS-1 form. If the claimant does not sign it in that time period, NIOSH may administratively close the case. The claimant, therefore, faces considerable pressure to sign this form.

At the same time, the close-out interview is the last time that the claimant can provide more information for the dose reconstruction during the NIOSH process or get concerns resolved about whether and how information previously supplied was used. This creates a pressure on the claimant in the opposite direction—of making sure that all information has, in fact, been given to NIOSH, and that it has been taken into account properly.

SC&A understands the need for a time limit to sign the OCAS-1 form. However, the enforcement of that provision in the face of a statement that the claimant does not understand the dose reconstruction report or in the context of concerns not having been fully researched raises equity concerns. SC&A is making this statement in the context of the lack of any provision in the procedure to ensure that the claimant manifestly understands the basics that are at issue:

- How the work done by the employee and the information in the CATI are related to the dose reconstruction
- How the concerns raised were substantively researched and addressed
- What the dose estimate and the POC have to do with compensation
- Whether the case will be compensated or not if the dose reconstruction is accepted by DOL

SC&A understands that the procedure does go through these points to some extent, except the last one, but the claimant statements of a lack of understanding were made in the context of NIOSH/ORAUT explanations. This occurred in two of the three cases that SC&A observed. Neither of the telephone log summaries noted that the claimant stated that they did not understand the dose reconstruction letter or the "lingo;" **hence, the statements of a lack of understanding were not only unaddressed, they were not even noted.**

The fact that the appeals process at the DOL level is limited to challenging factual information used in dose reconstruction makes the gap in the procedure all the more burdensome. The DOL Final Adjudication Branch (FAB) review process includes a statement that it is NIOSH that has "full authority" to do dose reconstruction, and that the NIOSH methodology could not be discussed by DOL. This appears to limit the extent to which a claimant can challenge the NIOSH dose reconstruction (DOL 2005), as evidenced by the following statement made by the DOL to claimants who appeal:

> *You have objected specifically that the NIOSH dose reconstruction failed to show enough exposure so the DOL could find that your cancer was at least as likely as not related to your employment. At this time I would like to say something about the NIOSH dose reconstruction. NIOSH is given full authority under the regulations that govern the Act to conduct the dose reconstruction used by the Department of Labor to determine the probability that a cancer is related to employment. I am not permitted to discuss the way in which NIOSH goes about preparing the dose reconstruction report. However, I can discuss issues of a factual nature regarding the information you provided to NIOSH, and challenges to the application of NIOSH's methodology. I am here to take your objections and enter them into the evidence of record but I am not permitted to consider objections to NIOSH methodology at this time.*

The statement of the OCAS-1 form that a claimant can "seek review of this NIOSH dose reconstruction after DOL makes a recommended decision on my claim" does not adequately convey the limited nature of the review opportunity provided by the Final Adjudication Board, as represented

by the above quote. There is, therefore, an especially heavy burden to get the close-out interview procedure right in all aspects to ensure fairness and accurate communication. There is also a need to ensure that the claimant understands the dose reconstruction report prior to signing the OCAS-1 form, and to document that process carefully.

SC&A notes that NIOSH/ORAUT does emphasize during the close-out interview that the claimant should not sign the OCAS-1 form until all their questions are answered. It is the lack of substantive provisions in the procedure to deal with situations in which claimants do not understand the dose reconstruction that raises questions about the signature to the OCAS-1 form in that context. The problem is compounded by the potential lack of technical thoroughness (documented in the process of this review) with which claimant technical concerns are handled at the close-out interview stage.

SC&A understands that the information is inherently complex and a full understanding requires a great deal of technical knowledge that the vast majority of claimants do not possess; but the essential content must be understood by the claimant, and NIOSH must ensure that it is understood. It would take a qualified person with experience in both health physics and in successfully explaining things in non-technical language to communicate the essential content of the draft dose reconstruction to the claimant. Highly complex information can be conveyed clearly to non-technical audiences—it has been done. It is essential that it be done in the close-out interview process.

Experience has shown that the simple explanations that are at the same time full and accurate usually take the most expertise in both science and communication. Yet, the close-out interview procedure makes no provision for a health physicist who knows how to communicate with non-professionals in the field to ensure that the pressure to sign the OCAS-1 form does not override the resolution of the concerns. On an even more elementary level, there is no provision in the procedure for a full and frank discussion between the dose reconstructor and the claimant on the dose reconstruction report. The HP Reviewers, while responsible for the research and evaluation of claimant technical questions or concerns upon referral, do not possess adequate technical qualifications, as was clear from SC&A's discussion with the ORAUT:

> *SC&A: Does a health physicist ever call [the claimant] back?*
>
> *ORAUT:* ***They do not receive a review by a health physicist or a call back from an HP****. If a substantive judgment on details in dose reconstruction is necessary, the HP Reviewer would call the DRist. As long as I recall, HPs have not been involved in calling claimants.*
> …
>
> *SC&A: What are the qualifications of the HP reviewers? Do they have health physics degrees?*
>
> *Ray:* ***Reviewers are not health physicists by qualification, by degree, or trade.*** *They review health physics information and call the claimant back and let them*

know the result. If necessary, they will call the original DRist to give them the review information.

SC&A: Do any of the four HP reviewers have a background in health physics or are any of them a CHP?

ORAUT: None of them are health physicists or CHPs. They all have 4-year degrees.

SC&A: This is surprising. It may be a misunderstanding on our part, but I have always understood that a health physicist calls back if there are questions the close-out interviewer cannot answer. The only discussion we have had with NIOSH about this is whether there should be a health physicist on tap while the close-out interview is going on, or whether they should call back later. So this is new information to us. How about the supervisors?

ORAUT: Per an established NIOSH agreement and direction, the dose reconstructors are not made available for closing interviews or follow-up calls, but rather supplemented with Task 4 HP Reviewer staff. Direction has been provided that the dose reconstructor priority is reconstructing dose for claimants. Also, the dose reconstructors have not been trained in claimant communications. Rather, claimant communications is facilitated by Task 4 Health Physics Reviewers working closely with the assigned dose reconstructor as necessary. [Emphasis added.]

Furthermore,

SC&A: In what fields do the four HP reviewers have degrees?

ORAUT: The reviewers are not qualified to do a dose reconstruction. All have 4-year degrees and training, including on-the-job training. One has a degree in chemistry. I can't recall the others.

SC&A could not confirm the qualifications of current HP Reviewers, as employee information was not available. Furthermore, it was noted that interviewers and HP Reviewers involved in the close-out interview process do not have to provide a conflict or bias web disclosure form.

5.3.1 Suggestions for Improvement related to Finding 3

(1) Qualified health physics personnel who are trained to communicate non-technical information to the general public or have a track record of doing so successfully should answer the claimant's questions during all follow-up calls and in cases where the claimant states that they do not understand the information in the draft dose reconstruction.

(2) A health physics professional should be available in real-time during the initial close-out interview (though not necessarily be on the line) in case there are concerns or questions that the interviewer cannot address, but that could be resolved relatively expeditiously by a health physicist familiar with the claimant's file.

5.4 REVIEW OF FINDING 4

Finding 4: The procedure does not ensure that the claimant has all the information that was essential to the dose reconstruction prior to the close-out interview. This can hamper the claimant in deciding whether or not to submit additional data or information at the close-out interview stage.

The draft dose reconstruction report, the OCAS-1 form, and a cover letter explaining the next steps in the process are provided to the claimant prior to the close-out interview. Documents available for review by NIOSH in the dose reconstruction process (e.g., the site medical and dosimetry files, work history information, and incident reports) are not available to the claimant unless a specific request for these records is made. In some cases, claimants have made a request to DOE to obtain this data; however, this can be a slow process. If a Freedom of Information Act request is needed for ancillary material, it could also be a costly process. There is no requirement at present that all personal dose information and the details of the dose reconstruction be provided as a matter of course to the claimant.

The dose reconstruction report contains a list of references to the standard documentation, such as the site profile volumes and OCAS dose reconstruction procedures. These can be downloaded from the OCAS web site and, at least in principle, should be accessible; however, the web addresses of the references are not provided. There are no references to essential documents, such as the workbooks, that were used in the dose reconstruction. The procedure, therefore, contains a significant gap in not providing for a contingency that a claimant may want or need more detailed information about how their dose reconstruction was done before NIOSH sends the case to DOL. One of the most important gaps is the lack of detailed explanations about what was done with claimant-provided information, data, and documents.

Lack of access to claimant-specific records retrieved from the DOE prevents the energy-employee claimant from identifying issues related to completeness and accuracy of the DOE records. During the course of site visits, SC&A identified instances where access to the DOE file would have assisted the claimant in identifying gaps in the record. For example, during interviews for one of the site profile reviews, an individual indicated she started as a radiation worker and was monitored much earlier than her dosimetry records indicated. Monitoring records were available for only 2 of the 20-plus years she worked at the facility. Medical records showed that she had received physicals as an employee of the plant for the time period she indicated. The availability of her medical records to her allowed her to question the completeness of her records. Furthermore, a number of individuals who are in possession of their DOE files have indicated that the information was incomplete, particularly regarding incidents. SC&A has raised the issue of the potential incompleteness of DOE personnel files in regard to incidents since its review of the Savannah River Site Profile in 2005 (SC&A 2005b, Section 5.10).

Due to the secrecy under which much of the early DOE (and predecessor agencies) work was conducted, the survivor is at a further disadvantage. Energy employees often did not speak about their work or maintain records at home or explain them to their family members. The importance of such records was illustrated by Case #3 in the SC&A close-out interview observation discussed above. In this case, the energy employee had made a request for his dosimetry records prior to his death, so the spouse had a critical piece of information that allowed her to raise some important questions. In most cases examined by SC&A (for instance, by examining CATIs), spouses are not in possession of such records.

5.4.1 Suggestions for Improvement related to Finding 4

The technical complexity of dose reconstructions and the lack of specific explanations about non-use of claimant-provided information in the draft dose reconstruction report make it critical that either the dose reconstructor or another experienced HP explain the document to the claimant when the latter states they do not understand the dose reconstruction report or elements of it:

(1) Claimants should be given access to the records, documents, and procedures pertaining to their dose reconstructions without having to request them. The specific Workbook version used for the dose reconstruction should be noted in the draft dose reconstruction report sent to the claimant. The draft dose reconstruction report should offer to make that Workbook and other materials available to the claimant, should they wish to have them.

(2) All Workbooks used in dose reconstructions should be archived.

6.0 REFERENCES

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ATTACHMENT A: OCAS-1 FORM

Statement by the Claimant Closing the Record on a NIOSH Dose Reconstruction under the Energy Employees Occupational Illness Compensation Program Act

I, [Name] (NIOSH Tracking Number XXXXX), a claimant under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA), certify that in signing this form, I have read, understand, and affirm that the following statements are true:

1) I am not in possession of any additional information that has not already been provided to NIOSH for completing a dose reconstruction" to estimate the radiation doses incurred by the employee; and,

2) I understand that NIOSH will forward a final dose reconstruction report to the Department of Labor (DOL), so that DOL can continue adjudication of my claim and produce a recommended decision and then a final decision to accept or reject my claim; and,

3) I understand that NIOSH can not forward the dose reconstruction report to DOL for adjudication without receipt of a properly signed OCAS-1 form within 60 days of my receipt of this form and NIOSH may administratively close the dose reconstruction and notify DOL of this action if I do not provide a properly signed OCAS-l form within this 60-day period; and,

4) I understand that my opportunity to seek a review of the NIOSH dose reconstruction occurs when my claim is with DOL and occurs only after DOL produces a recommended decision to deny my claim; and,

5) By signing this form, I do NOT certify or imply that I agree with NIOSH decisions indicated in the draft NIOSH dose reconstruction report concerning how NIOSH has used or not used information I have provided for the dose reconstruction; and,

6) By signing this form, I do NOT certify or imply that I agree with the findings of the NIOSH dose reconstruction and I understand that I may seek review of this NIOSH dose reconstruction after DOL makes a recommended decision on my claim.

Notice: I affirm that the information provided on this form is accurate and true. Any person who knowingly makes any false statement, misrepresentation, concealment of fact or any other act of fraud to obtain compensation as provided under EEOICPA or who knowingly accepts compensation to which that person is not entitled is subject to civil or administrative remedies as well as felony criminal prosecution and may, under appropriate criminal provisions, be punished by a fine or imprisonment or both.

Signature_____ Date _____

Public Burden Statement

Public reporting burden for this collection of information is estimated to average 5 minutes per response, including time for reviewing instructions, gathering the information needed, and completing the form. If you have any comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, send them to CDC Reports Clearance Officer, 1600 Clifton Road, MS-D-74, Atlanta, GA 30333; ATTN:PRA 0920-0530. Do not send the completed interview form to this address. Please complete and return this form using the enclosed pre-addressed, postage-paid envelope. Persons are not required to complete this form unless a currently valid 0MB number is displayed.

NIOSH ID: XXXXX

NOTICE: This document has been reviewed for Privacy Act information and has been edited accordingly.

NOTICE: This report is pre-decisional and has not been reviewed by the Advisory Board for factual accuracy or applicability within the requirements of 42 CFR 82.

ATTACHMENT B: CLOSE-OUT INTERVIEW OBSERVATION NOTES

The following notes of the close-out interview process relating to three claimants conducted by ORAUT on October 11 and October 13, 2006 were prepared by SC&A. By prior arrangement with NIOSH/ORAUT, the close-out interviews were observed by Kathryn Robertson-DeMers and Arjun Makhijani of SC&A. The draft notes were reviewed by CDC for Privacy Act considerations and by the ORAUT participants in the call.

Participants:

ORAUT: Pat Kraps, Ray Weaver, David Shatto, Rachel Hume, Gwen Knox, and Brian Kaske

SC&A: Kathryn Robertson-DeMers and Arjun Makhijani

Notes are not verbatim, except where phrases are in quotation marks. SC&A personnel agreed in advance not to say anything at all during the call, because the claims in question had not yet been adjudicated. They were allowed to interview the ORAUT interviewers after the completion of each call. This procedure was strictly followed. Claimants were informed that SC&A personnel were on the call. That script was provided to SC&A (Addendum A). Privacy information has been removed.

Case #1: This was the first of three close-out interviews observed by SC&A. It was with a survivor. The interviewer was Gwen Knox of ORAUT.

Interviewer went over the employment and cancer type at the beginning of the interview.

Gwen: Do you have your dose reconstruction report?

Claimant: Yes

Gwen: Turn to page 4 of the dose reconstruction report. It says that your father was employed at [site name] from [date] to [date] and that he was diagnosed with [cancer type] and [cancer type]. Is this information correct?

Claimant: Yes

Gwen: Radiation exposure is measured in rem – that is a unit of radiation. We use it in calculating Probability of Causation (POC). We only looked at dose to [the organ of concern]. The estimated dose of [redacted] rem produced more than 50%; once this threshold is crossed, we do not consider the case any farther. This case used a partial estimation of dose. Do you have any questions at this point?

Claimant: A lot of it I don't really understand.

Gwen: The report is technical and I will try to put it in terms that you can understand. Now we will go over the information used in the dose reconstruction. Your father wore a dosimeter badge and was monitored for internal exposure with urinalysis. This means a urine sample was collected to determine if he had inhaled or ingested radioactive material. [SENTENCE REDACTED]. Please go to page 5 of the dose reconstruction report. The dose reconstructor only had to use the internal dose to reach a POC of 50%. His external dose was not calculated, since the probability of compensation was greater than 50% without it. This approach is allowed under 42 CFR 82, the Code of Federal Regulations that governs us in this program, and the procedures that we follow.

As for his internal dose, he could have received it in any of two ways: (1) acute dose, which he could have received very quickly, and (2) chronic dose, which he could have received over a long period of time. He was exposed to plutonium, uranium, and neptunium. We use the most claimant-favorable approach. They looked at solubility type. Type S goes through your "digestive system" at a slow rate. He went through a [redacted] count, which gave how much radioactivity he had in his [redacted]. MDA is "Minimum Detection Radioactivity." The internal monitoring tells what he received and when he received it. These measurements have units of pCi, which is a form of radiation measurement.

Gwen: Are there any questions at this point?

Claimant: No.

Gwen: Alpha radiation was the most important in this case. They list reasons why the dose calculated is "a smaller dose." It shows the different types of radiation energy, "because they can affect everyone differently." One may be able to penetrate the body. The distance also matters—one may travel inches and the other may travel hundreds of feet. We are not going to say the dose is a high or low amount, because radiation affects everyone differently. We just use it in calculating the probability of causation.

Then there are the references that were used in the dose reconstruction. The table in the back of the dose reconstruction shows the calculations about what he was exposed to. Do you have any questions at this point?

Claimant: So he was exposed to radiation?

Gwen: Yes.

Claimant: I thought when he wore the badge, it would tell you the dose.

Gwen: His badge measured external radiation. He did wear a badge.

Claimant: I don't really know, because my guy never spoke about it. I am kind of left in the dark. He never really talked to us about anything. I was pretty young at the time.

Gwen: This is common, due to security at this time. That's why we don't just rely on interviews, but we rely on several sources of information, including site records and technical basis documents.

Claimant: As far as I understand, which is not a lot of it. My guy was exposed to at least 50%.

Gwen: That is the probability of causation. It was greater than 50%, so his cancer was more likely than not caused by radiation. However, NIOSH does not make the formal determination. The DOL is responsible for determining the Probability of Causation.

The form on the back of the dose reconstruction report has to be signed and returned. The system indicates NIOSH has already received a signed form from you.

Claimant: I thought this was done and over with some time ago. I did not know it was going on.

Gwen: This program has four different parts.

Claimant: I was not told that.

Gwen: There is one for radiation, one for beryllium, one for chemicals, and one for asbestos.

Claimant: Now you have explained to me what I did not know before. There are a lot of words in this letter that I don't understand. What is this [redacted]?

Gwen: That is the ICD code. When you go to the doctor, they assign a code for the type of cancer.

Claimant: When I got the paper, I thought, "this is still going on?" I thought it was done then.

Gwen: I am sorry that you were not better prepared. This is not an accurate statement.

Claimant: No one said anything about four different parts.

Gwen: I am glad I was able to help you with that.

Claimant: I knew he wore a badge. He said he had to change there and take a shower there. All of the other stuff—I was too young and do not remember.

Gwen: I can give you the Department of Labor phone number and they can answer any questions you have about the program. Cleveland 1-888-859-7211. They can give you the status.

Claimant: Will they tell us the radiation?

Gwen: No, they will tell you the probability of causation and the status of the claim. We will send you the final dose reconstruction, since you have already sent in your signed OCAS-1 form.

The probability of causation will be sent to you by the Department of Labor. They will let you know about your claim. I understand that it takes between 2 months and 8 or 9 months for them to get back to you, depending on their case load. Do have any more questions?

Claimant: No.

Gwen: If you do, call me with any questions at1-800-790-6728 and ask for Gwen.

End of first interview.

Case #2: This was the second interview observed by SC&A. It was with an energy employee. The interviewer was Rachel Hume of ORAUT. The employee was from a site that is part of the Special Exposure Cohort. The length of the Close-out interview was ~20 minutes. The initial part of the interview followed the same format as that in Case #1 and is abbreviated here.

Rachel: Do you have the draft dose reconstruction report? It is dated September 29, 2006.

Claimant: Just a second. I have to go get it.

Rachel: Do you see the Dose Reconstruction Overview section on page 4.

Claimant: What was that now?

Rachel: The Dose Reconstruction Overview on the top of the page.

Claimant: Okay, I'm there now.

Rachel: Go to DR Review, page 4. Is employment and cancer information correct?

Claimant: Yes

Rachel: NIOSH is focusing on the organ affected by cancer. In your case, NIOSH is reconstructing dose to the [redacted]. The [redacted] rem was the dose to the organ affected by the cancer. Rem stands for roentgen equivalent man, a unit of dose in this report. It is not a percentage. The probability of causation is less than 50%. Further analysis will not produce a probability of causation greater than 50%. We don't look at that number; the Department of Labor will be looking at the probability of causation. They are looking to answer the question, "was the cancer at least as not caused by occupational exposure?" Was there at least a 50% chance that the cancer was caused by radiation? Do you have any questions?

Claimant: No. I am taking it in.

Rachel: At the bottom of page 4 in the last paragraph it states:

Rachel read:

> *NIOSH has determined, and the Secretary of Health and Human Services has concurred, that radiation doses at* [redacted] *cannot be reconstructed unless there are actual radiation monitoring data for the energy employee. Therefore, since no radiation monitoring data exist for [Name], and no estimation techniques can be employed to derive a radiation dose for his* [redacted] *cancer, the only dose that has been assigned in this assessment was that received from occupationally required medical X-rays.*

Rachel: On page 5, there is a section call Occupational Medical Dose:

Rachel read:

> *The dose received from diagnostic X-ray procedures that were required as a condition of employment was included in the dose reconstructed for the prostate. Based on information in the Technical Basis Document for Atomic Energy Operations at* [redacted]*, using the* [redacted] [redacted]*, and with an assumed annual X-ray procedure for each year of employment, an X-ray dose of* [redacted] *rem was assigned.*

Rachel: Then let's go on. In your case, no radiation dose data exist. The Secretary of Health and Human Services has determined that doses cannot be calculated at this site. So, in your case, only medical x-ray dose was assigned. It was [redacted] rem, due to chest x-rays; it was [redacted] rem from a lumbar spine x-ray. The total is [redacted] rem. This was the total dose assigned in your case, and it was medical dose. Your dose reconstruction states on page 6 that occupational dose cannot be determined without records. Do you have any questions?

Claimant: You were supposed to have monitoring badges, but I never did have one, because I was never in the line of work.

Rachel: Any further questions?

Claimant: I have sent in my [OCAS-1] form.

Rachel: Did you have questions about the form?

Claimant: No.

Rachel: The form asks whether you have more information to give NIOSH about your dose reconstruction; you did not. If you have more information, we are happy to take it into account. The next and last thing you will get from NIOSH is final DR report. You don't have to reply to that. The dose reconstruction will also go to the Department of Labor. If they deny your claim, you can seek a review. There is an appeal process that is part of the law. When you sign the OCAS-1 form, we are not asking you to certify that you agree with NIOSH. The Department of Labor can take from 2 to 8 months to get back to you once they get the dose reconstruction

report from us. They will send you a letter. I will give you my phone number -1-800-790-6728. Ask for Rachel. Did you have any other questions?

Claimant: No.

Rachel: Is there anything else I can help you with?

Claimant: No

End of interview

Case # 3: This was the third close-out interview observed by SC&A. It was with a survivor claimant. The interviewer was Rachel Hume of ORAUT. The introductory remarks were along the same lines as in Case #1 and were not repeated in the notes below.

Rachel: Did you receive your report?

Claimant: Yes

Rachel: Do you have it with you?

Claimant: Yes

Rachel: Please turn to the Dose Reconstruction Overview on page 4. I show [name] employed at [redacted] from [redacted] to [redacted] as a [redacted]. Is this correct?

Claimant: Yes.

Rachel: Your husband was diagnosed with [redacted] and [redacted]. Is this correct?

Claimant: I guess. When he was diagnosed with the second cancer, I tried to contact Dr. [redacted] in [redacted]. I could not get in touch with him. I could not get in touch with him due to lapse of a long time to get exact date. He had his [redacted] removed and a biopsy done.

Rachel: Let's go over the dose reconstruction report. External dose is received from radiation outside the body and is measured with a dosimeter. Internal dose is caused by radioactive material taken into the body. NIOSH is concerned with the dose to each of the affected organs. Rem is the unit of measurement for dose.

POC is a phrase you will be seeing more often. This is a calculation performed by DOL to determine the claim outcome.

Claimant: What does that mean?

Rachel: DOL is looking to see if the POC indicates that cancer was as likely as not to be caused from radiation. It was a claimant-favorable dose reconstruction. The probability of causation did not reach 50%. NIOSH does not decide on the compensation. That is the Department of Labor, which will get back to you.

Claimant: There had to have been because of his records? Does this have to do with the inaccurate readings? His cancer could not have been caused by anything else. Does this have to do with the readings that they had there at [redacted] that were inaccurate? They sent him to several different labs. I sent a letter from them [Another Site] that said that the calculations at [the site where he worked] were wrong, and that there was a different kind of mobile unit that would be better.

Rachel: Part of the record that was used in dose reconstruction was what the DOE provided [to NIOSH]. But I did see where you talked about the mobile unit. Are you referring to whole-body count?

Claimant: The whole thing. A couple of them [workers] went to [a national lab]. When they were hot, they were taken out of that building where they worked and put in another building. I did not see anything in the records that showed he worked in the hot areas. I did not see anything that stated that he was sent outside of that [hot] area into other areas.

Rachel: When we get new information, we will send it to a Health Physics reviewer. Did he work at [the national lab]?

Claimant: No, they sent him to [the national lab] because he was constantly hot. That's where that letter comes in, because they said it was completely hot. So I don't know how you could state that, unless the doctors said something.

Rachel: Did he go to the [redacted]?

Claimant: They were going to send him to [redacted] and even to New York. I asked for his records. The others, I don't have anything on that. First, there were three men, and then there were two men.

Rachel: Did he work there at [the national lab] or was he just tested there?

Claimant: He was just being tested there. The letter showed that readings at [the site where he worked] were way off.

Rachel: I am making handwritten notes. I want to send this over, so reviewers can look at it. So they said records of [the site where he worked] were off?

Claimant: Yes, Low. Very low. [Sentence deleted regarding matter not concerning dose reconstruction.] He visited [the national lab] once. They said his readings were all wrong. I know he went to another place, too, and I don't have anything on that. I don't have any information on the other facility.

Rachel: Is there something else you want to go over or specific questions?

Claimant: No, a lot of this I don't understand. I just don't understand how you came to this conclusion [about probability of causation] based on false information.

Rachel: This needs to be looked into, but for now, let's go on to the bottom of page 4. The information used for the dose reconstruction included dosimetry results from the Department of Energy, technical basis documents, and procedures.

Claimant: What is this based on?

Rachel: The back of the report shows the references used. Let me have you turn to page 11. You will see list of references, which is referred to in the body of the report.

Claimant: What is that based on? The findings from [the site where he worked] or what?

Rachel: Some of them are findings from [the site where he worked].

Claimant: Is that from the surgeons and the doctors?

Rachel: No, these are not from medical doctors. Some of the references provide methods for dose reconstructions. NIOSH reviewed all the information that was gathered during the claim. The list of references provides information on external dosimetry. These reference documents are used as guidelines.

Claimant: What did you say his job description was?

Rachel: [redacted].

Claimant: They showed him on TV [doing his job]. This doesn't sound like [the job description he was given]. [Two sentences regarding job discussion deleted.]

Rachel: You saw him on TV when he was [job description]?

Claimant: Yes. I saw him [job description]. They showed a lot of that on TV. My husband was suspicious of [the DOE contractor]. There was one guy who disappeared. They had to change and shower. They found this fellow's glasses and street clothes. They found him in a tank and they said he must have tripped and fallen in there. My husband distrusted the whole atmosphere of the place.

Rachel: Let's go on to page 5 under Dose Estimate. This explains how the dose was assigned. It tells you what dose was received outside the body and what was received inside the body.

Read by Rachel

> *[Name] was monitored for external photon and electron radiation exposure from [dates]. [Name] was assumed to have no potential for external exposure during the short time frames at the beginning and ending of his employment, when he was not monitored. Electron radiation was considered in this evaluation, because it would not have added dose to the cancer sites.*

Claimant: What were the dates for monitoring?

Rachel: Let's go over the information. From [redacted] when started to [redacted], he would not have been monitored. Then, at the tail end of his employment, [redacted] to [redacted], he was not monitored.

Claimant: That's strange. Why was he not monitored? Even though it was wrong.

Rachel: At the beginning of employment, he may have had to wait for his security clearance to come through.

Rachel read

> *Individual dosimeter results were used to reconstruct [Name's] dose. Corrections to the reported doses were applied as described above. Missed dose was not assigned, because reported dose was recorded for each cycle that [Name] was monitored.*

Claimant: That's what it was. I did not understand missed dose. Why did he have missed dose?

Rachel: Let me further explain. When they refer to missed dose, it means that for some reason, a dose was not reported or it was below detection limits. They wore the badges or TLDs for some time, like a month at a time. When the TLDs were being read, they would receive a new badge.

Claimant: At the end, they let them wear their watches.

Rachel: Personal watch?

Claimant: Yes. Personal watch.

Rachel: Were they testing the watch?

Claimant: Yes. But he wasn't allowed to talk about that. A lot of things he wasn't able to talk about.

Rachel: Let's talk about ambient dose. Though he was monitored, onsite ambient dose, that's a dose that he might have received while outside, was assigned to him.

Claimant: I don't understand that.

Rachel: Is this something you want me to go over?

Claimant: I don't understand it. I don't understand the lingo. This is not in the medical records.

Rachel: This is dose that is added that may not have been recorded. Onsite ambient dose would not be in his medical records.

Claimant: So, that is separate from the mobile unit that was completely off?

Rachel: Yes. Let's go to internal dose. The assumption was made in the calculation that he had chronic exposure.

Rachel read:

> *Internal dose monitoring records for radionuclides were reviewed. Some measurement results for non-naturally occurring radionuclides showed an activity less than the level of detection for the given radionuclides and bioassay method. A comparison was made of [Name's] urine sample results and [redacted] count measurement results. [Name's] urine sample results were used in the dose reconstruction as a claimant-favorable assumption. To account for any potential undetected dose for [Name], who participated in internal dose monitoring programs, internal dose was assigned based on a chronic intake assumed to have occurred through [Name's] employment period ([redacted] through [redacted]).*

Claimant: That says a lot -- chronic exposure.

Rachel: Turn to page 8 at the bottom of the second paragraph.

Rachel reads:

> *Recycled uranium was first introduced at the site in 1961. Therefore, all uranium intakes after 1961 are assumed to have an associated plutonium-239, neptunium-237, and technetium-99 intake. The resultant intake dates were chosen based on a fit between the projected excretion rates and [Name's] bioassay data. The ICRP 66 [redacted] mode with default aerosol characteristics was assumed.*

Rachel: At the beginning of the paragraph, it talks about other assumptions.

Rachel reads:

> *Internal dose monitoring records for radionuclides were reviewed. Some measurement results for uranium showed activity greater than the level of detection. To account for potential uranium intakes for [Name], multiple acute*

intakes of absorption type S (for the [redacted]) dose and absorption type F for the [redacted] dose were assumed to have occurred on [various dates]. The assumed activity used in the assessment was enriched uranium (specific activity = 1.616 pCi/µg). In addition, the uranium intake was assessed at 100% U-234; this is a claimant-favorable assumption.

Rachel: Did you have any questions?

Claimant: It says they used 100% U-234. All I wanted to know was that it was claimant favorable.

Rachel: Let's go on to the Environmental Dose.

Rachel read:

[Name] worked in various locations during his employment at the [name of site]. It was assumed that he might have been occupationally exposed to environmental levels of radioactive material while working at the [name of site]. These radionuclides were determined to account for more than 95% of the potential missed dose from inhalation pathways (for years and radionuclides that have not already been assessed for dose based on positive bioassay results or missed dose.)

Turn to page 10 of the report.

Rachel read:

[Name] was exposed to various sources of radiation during his employment at the [name of site]. [Name's] whole body deep dose of record as provided by the Department of Energy is [redacted] rem. The reconstructed estimated dose to [Name] was calculated to be [redacted] rem to the [redacted] and [redacted] rem to the [redacted].

Claimant: [Name] had mentioned units he had been in. This was like working in the chemicals. He'd say they moved me again. I don't know what was in the other departments. What's the difference between DOE and NIOSH info?

Rachel: Go to page 4 of the dose reconstruction report to the last paragraph.

Rachel reads:

During this dose reconstruction, the primary data source was the dosimetry records obtained from the Department of Energy (DOE). In addition, specific parameters were applied to dosimetry records in order to assign organ dose based on information in the External Dose Reconstruction Implementation Guideline and the Internal Dose Reconstruction Implementation Guideline.

ORAUT Technical Information Bulletins and Technical Basis Documents were also used in this dose reconstruction (see References).

NIOSH requests monitoring data from the plant where an individual worked. The primary data source was dosimetry from DOE. NIOSH requests monitoring data from DOE.

Claimant: But they are in error. That is what is bugging me.

Rachel: If it is OK with you, I would like to present this to the Health Physics Reviewer and let them know that you think the results were in error. We will get back to you. In the meantime, don't sign your OCAS-1 form.

Claimant: I hope you get back to me within 60 days. If it is more, I will have to send it in.

Rachel: I want you to hold on to that.

Claimant: We found out all this information was in error. I can't see where there would be any differentiation with him since they did cut and paste from [DOE records].

Rachel: Any more questions? Let me give you my phone number. It is 1-800-790-6728. I am often on the phone, and if so, please leave a message and I will call you back. Anything else that I should tell the Health Physics Reviewer?

Claimant: Well, no. I am concerned about the differentiation between the records.

Rachel: If there is anything else, we are more than happy to take information about that.

Claimant: They told us that it would be helpful and we sent it in. I'll ask the kids and see if they have anything. If my son comes up with a question that I had not thought of, I will let you know.

End of interview

After the close-out interview observation, SC&A had the opportunity to discuss the process with the interviewers, Rachel Hume, Gwen Knox, and their managers, David Shatto and Raymond Weaver.

Kathy: There are activities that occurred prior to our joining the interview. Could you tell us what they were?

Ray: The claimant was read a special script regarding the interview. The script indicated a statement that the call was being monitored by Sanford Cohen and Associates.

[Ray read the portion of the script addressing SC&A participation in the call. This portion of the script was provided by ORAUT and is available in Attachment A].

Kathy: Was that call logged?

ORAUT: A log was also created of this introductory conversation. During the course of this introduction, the interviewer mentioned that the phone conversation may be monitored for Quality Assurance purposes also.

Kathy: What does the review of the claimant file consist of?

ORAUT: We read the dose reconstruction report, the phone logs, the CATI, and the claimant file. We basically try to go through all the documents in the NOCTS database.

Kathy: Was there a release signed to allow us [SC&A] to participate?

Ray: No.

Kathy: Was the permission just verbal?

Ray: Yes. If they had objected, we would have found another claimant.

Kathy: Is there a part of the script that says the call may be monitored?

Ray: Every time, we tell them the call may be monitored for quality assurance. In this case, the script I sent you replaced that standard language.

Kathy: Who will review the information from the last case?

Ray: She was referring to an HP Reviewer, who will make a detailed review and will get back to the original "DRist" [dose reconstructionist].

HP Reviewer: A detailed review of the entire file is completed. If it is perceived that the additional information will affect the claim, the claim is referred back to the DR.

SC&A: Do you always get back to the dose reconstructor?

Ray: More often than not. If we can't make the determination without it, we do not. If there are technical details about the dose reconstruction about which there are questions, then we get back to NIOSH.

SC&A: I did not understand the role of NIOSH, since the dose reconstruction is done by ORAUT.

Ray: There are occasions we believe where information is not material to dose reconstruction. So we contact the NIOSH reviewer who reviewed the claim, and ask them if they can make the determination for us. In addition, there are claims assigned to Battelle. Those go through NIOSH. We don't contact Battelle directly.

SC&A: How often does HP referral happen? Just an idea would be fine, if you don't have a percentage in mind.

Rachel: That percentage is low.

Gwen: I agree.

SC&A: You will get a chance to review this interview before it is finalized. Who does the call back with the HP review?

ORAUT: That would be a Task 4 HP Reviewer. We have four of them on our staff and they coordinate the scheduling of the follow-up.

On October 13, 2006, SC&A had a discussion about the follow-up call with managers Ray Weaver and David Shatto, prior to the Case #3 follow-up call by the HP Reviewer, Brian Kaske.

SC&A: What are the qualifications of the HP reviewers? Do they have health physics degrees?

Ray Weaver (ORAUT): Reviewers are not health physicists by qualification, by degree, or trade. They review health physics information, and call the claimant back and let them know the result. If necessary, they will call the original DRist to give them the review information.

SC&A: Do any of the four HP reviewers have a background in health physics or are any of them CHPs?

ORAUT: None of them are health physicists or a CHPs. They all have 4-year degrees.

SC&A: This is surprising. It may be a misunderstanding on our part, but I have always understood that a health physicist calls back if there are questions the close-out interviewer cannot answer. The only discussion we have had with NIOSH about this is whether there should be a health physicist on tap while the close-out interview is going on, or whether they should call back later. So this is new information to us. How about the supervisors?

ORAUT: Per an established NIOSH agreement and direction, the dose reconstructors are not made available for closing interviews or follow-up calls but rather supplemented with Task 4 HP Reviewer staff. Direction has been provided that the dose reconstructor priority is reconstructing dose for claimants. Also, the dose reconstructors have not been trained in claimant communications. Rather, claimant communications are facilitated by Task 4 Health Physics Reviewers working closely with the assigned dose reconstructor as necessary.

David Shatto (ORAUT): I am not a health physicist, but have 20 years of experience in the field.

Ray: I am an environmental scientist and have 20 years of experience in health physics. I don't do dose reconstructions, but am familiar with them and know them. But neither of us has gone through training for dose reconstruction.

SC&A: In what fields do the four HP reviewers have degrees?

ORAUT: The reviewers are not qualified to do a dose reconstruction. All have 4-year degrees and training, including on-the-job training. One has a degree in chemistry. I can't recall the others.

SC&A: Who reviews the records of the claimants when questions arise?

ORAUT: We would have an HP Reviewer look into their concerns. The reviewer makes a judgment about the concerns brought up by the claimant. A call is scheduled to address those concerns.

SC&A: It was my understanding that an HP would review new information. Does a health physicist ever call back?

ORAUT: They do not receive a review by a health physicist or a call back from an HP. If a substantive judgment on details in dose reconstruction is necessary, the HP Reviewer would call the DRist. As long as I recall, HPs have not been involved in calling claimants.

SC&A: So what preparation has been done to call back the claimant from Rachel's interview of October 11?

ORAUT: In this case, the information was reviewed by an HP Reviewer. We are going to determine what information is available and if it was reviewed in the DR.

SC&A: What has been done till now in preparation for the call?

ORAUT: We have reviewed available data before the completion of the dose reconstruction report. We did a more thorough review of the DR report and the IREP input sheet. We go into detail in the review. If new information is available, we review that.

SC&A: Is that information in the DR file?

ORAUT: It appears that there is information in the file.

SC&A: Is there a [report from the national lab referred to by the claimant] in the file?

ORAUT: Claimants sometimes get confused.

SC&A: Who did the review?

Ray: Brian Kaske (ORAUT) is going to be doing the call. I also did a quick review of the file.

SC&A: Can I ask you a few questions pretending I was the claimant to get an idea of how you would answer them?

ORAUT: OK.

SC&A: Did you conduct a co-worker interview for this claim?

ORAUT: No.

SC&A: Why wasn't there any monitoring data before [redacted], though he started work in [redacted]?

ORAUT: We don't know if that could be answered definitively. Rachel told her we may not know, but maybe it was during the waiting period for the security clearance. The start date for employment was [date]. The DOE response shows monitoring began on [date].

SC&A: Would the HP Reviewer handle that question?

ORAUT: The review would explain that data for these years was not provided. The reviewer would explain that an onsite ambient dose was assigned, because he was an unmonitored employee.

SC&A: What is a dose conversion factor?

David Shatto: We don't get that question. It is to convert whole-body dose to the organ in question.

SC&A: How do you explain anterior/posterior exposure and dose conversion factors?

ORAUT: This issue could be fielded by a reviewer if it is simply factual about what was done, or it could be referred to an HP for a response. Usually, the interviewers are capable of answering that question, and if not, HP Reviewers are capable of answering.

SC&A: Did you find any incident reports that caused him to be shipped off to [the national lab]? Who would answer a question like that?

ORAUT: That's a question that HP Reviewers would try to address. There is an incident report in the file, but we don't know if it is the same one.

SC&A: We have heard that the Department of Labor says that they cannot deal with DR, even when the individual may disagree with the dose reconstruction. So if they can't raise the disagreement with you and can't raise it with DOL, then it seems it falls through the cracks.

ORAUT: If an individual has objection to the DR report we will pass on their objection to the HP Reviewers. If after they sign the OCAS-1 form, the DR report is finalized and they are not happy, we cannot change the DR. If it is technically correct, then there is nothing we can do. We are not involved in the appeal process. Before the dose reconstruction is sent to DOL, they are asked for additional information. If they have new information, we look at it.

SC&A: At the end of the day, who is responsible for settling a difference of opinion about a dose reconstruction between claimant and NIOSH?

ORAUT: It isn't clear that the DOL doesn't listen to the claimant. If a claimant disputes where information was not used or improperly used, they can send the DR back to NIOSH.

SC&A: Health physicists at DOE sites are concerned that their credibility is being affected by the DR process, because the maximum dose calculations do not correspond to the dose of record. Do you feel like you are communicating the fact that dose reconstructions are for compensation and not for regulatory purposes, like at the DOE site?

ORAUT: We go over the point about how the dose reconstruction is done, when it is maximizing, with the claimants.

SC&A: How does the scheduling work?

ORAUT: We like to schedule interviews in advance, because that way, we can get a lot done. But sometimes we get calls from claimants who want their close-out interview on the spot. So we have "floaters" who answer these on-the-spot requests. Interviewers are assigned to be "floaters" on a weekly rotation.

SC&A: When there are multiple claimants, do you do close-out interviews one-on-one or separately?

ORAUT: It depends on the claimant. But we do normally separate them, unless the claimants request that it be done at the same time. There are privacy issues involved, so we cannot ask that the close-out interviews be done together with several claimants for the same claim.

SC&A: How do you document the close-out interview?

ORAUT: Every call is documented in the telephone log of NOCTS. It goes into detail as to what was spoken about.

SC&A: There is not a CATI-type report?

ORAUT: No. There are details in the phone log about what was said. And there is the OCAS-1 form that is returned, generally following the close-out interview.

End of conversation with interviewers and supervisors

SC&A observed the HP Reviewer's follow-up call to Case #3 regarding the issues the claimant raised during the close-out interview on October 11, 2006. The HP Reviewer was Brian Kaske of ORAUT.

Brian Kaske (ORAUT): As we have discussed, this call is being monitored by SC&A, the Advisory Board's contractor. This call may also be monitored for quality assurance.

Claimant: This is the problem. The Department of Labor, where you got your data, is wrong. The mobile unit at [site name] was way off. My husband and a couple of others got hot so many times that they sent them to [the national lab]. And [the national lab] said the unit was wrong from the get-go. I sent in the letter from [the national lab]. My whole case depends on this. Everything that he was led to believe at [site name] was not the case. The biopsies from the doctors should have been looked at. I could not get in through with Dr. [redacted] because he is too old and too much time has gone by. I sent in a log that he [her husband] had been keeping. Did you not look at the oncologist report and the other material in your information?

Brian: Can I have you turn to Page 4 of 15 under the Dose Reconstruction Overview section. Are the Diagnosis date and type of cancer correct?

Claimant: I don't know. You should know. I sent in the materials.

Brian: I can tell your cancer was verified on the claim by the Department of Labor. Questions about diagnoses should be addressed to them.

Claimant: I can't do that. I gave you all the information possible. I have just about had it. It is very difficult for me to do this. I would recommend that all of you get together and get those things that I have sent in and look at them with the understanding that what you got [from DOE] was wrong.

Brian: We appreciate your patience.

Claimant: What you got from [site name] is completely wrong.

Brian: I do see a letter that was sent from [DOE contractor]. Can we clarify which letter you are referring to when you say there is a letter from [the national lab] to [the DOE contractor]?

Claimant: No, that is not right.

Brian: The letter indicates that [the national lab] stated that the results of the body counts – including your husband's – the results of the in vivo counting at [the national lab] are not in accord with the results are at [site name]. [Brian read a statement from the letter relating to the mobile in vivo counter results.]

Claimant: That's right. But they never said once what their counts were.

Brian: The letter says the men should go to [another lab] for further testing.

Claimant: They sent him a couple of places. I don't recall if he actually went to the [redacted].

Brian: I don't think they went to [redacted]. I can tell you how the dose reconstruction was done in the dose reconstruction report. If you look at page 7 of 15, you will see missed dose.

Claimant: That's right, he had missed dose. They had to send him to another department.

Brian (read):

> *A comparison was made of [Name's] urine sample results and [redacted] count measurement results. [Name's] urine sample results were used in dose reconstruction as a claimant favorable assumption.*

Although there was a record of [redacted] count measurements, the [redacted] count results were not used in the DR. Do you disagree with the use of urine sample results?

If this goes to the Department of Labor, you are not required to agree with the results beforehand. Points 5 and 6 of the OCAS-1 form say that by signing the form, I don't certify that I agree with the decisions. That includes in this case your husband's [redacted] count data. If you disagree with that decision, you can appeal.

Claimant: Okay. If I do not agree with the dose reconstruction, where do I go from here?

Brian: Paragraph 5 of the form reads:

> *By signing this form, I do NOT certify or imply that I agree with NIOSH decisions indicated in the draft NIOSH dose reconstruction report concerning how NIOSH has used or not used information I have provided for the dose reconstruction…*

This would include any concerns with the [redacted] count information.

Claimant: I think the urine would provide the best results. They were surprised at [the national lab] about his [redacted].

Brian: We have all the urinalyses on your husband. He has urine samples above the minimum detectable limit.

Claimant: Yes, we knew that at the hospital – they mentioned that. I am not in disagreement with that.

Brian: Can we turn to 7 of 15 where it talks about missed dose?

Brian read:

> *To account for any potential undetected dose for [Name], who participated in internal dose monitoring programs, internal dose was assigned based on a*

chronic intake assumed to have occurred throughout [Name] employment period ([date] through [date]).

Claimant: That's right he had missed dose. They had to send him to another department.

Brian: On the same page, the second to last sentence says:

In addition, the uranium intake was assessed as 100% uranium-234; this is a claimant-favorable assumption."

Since he worked at [site name] after 1961 when recycled uranium was processed, a dose from plutonium, technetium, and neptunium was assigned.

Claimant: That's what was in the department.

Brian: On page 8, it says that recycled uranium was processed at [site name] and that was assumed also. It has plutonium, neptunium, and technetium in it. These were included also. He had confirmed positive dose, since his urinalysis did show that his measurements were greater than the minimum detection limit. A claimant-favorable assumption of Type S was used for the [Cancer type], and Type F was used for the [cancer type]. He has multiple acute intakes, which were assigned for the [organ name] system and a concurrent dose for [organ name]. The dates are there for assumed acute intake dates. They also used an assumption that the uranium was enriched. This is also claimant favorable. The dose was assigned beyond that in the records.

Claimant: That's good. That's what was bugging me. I sent the records in, including his appointment log.

Brian: Yes we have his appointment logs. Any other questions?

Claimant: I think that is what was bugging me. Also the notes I sent by Dr. [redacted]. His appointment log is in the claimant file. I sent it in, because we could not get in touch with Dr. [redacted].

Brian: All those materials will be sent to the Department of Labor when the dose reconstruction report is forwarded. Anything else?

Claimant: If you need anything else? I guess that was it. It was just bugging me that all this was wrong. I wouldn't trust anything from [site name].

Brian: OK

Acute intakes were assigned based on [Name's] positive urinalysis results. In addition to this, a chronic exposure was assigned to account for missed dose. All of these assumptions made this DR claimant-favorable.

Claimant: Yes

Brian: The next step is to send in the form if you feel all your questions have been answered.

Claimant: In other words, all this is favorable. Where do we go from here?

Brian: We need the OCAS-1 signed and returned, as long as we have covered all your questions.

Claimant: If you think all this is favorable, I will go ahead and sign it. I don't know where we go from here. [My daughter] did not think it was very favorable. She said they really worked him over. I was very skeptical.

Brian: I do want to confirm a couple of things. On page 4 under the dose reconstruction overview, it says that even under these [claimant-favorable] assumptions, NIOSH has determined that with further research and analysis, the probability of causation won't be 50% or greater.

Claimant: How much does it have to be?

Brian: That's a good question. This is individual-specific and is based on the person's date of birth, hire date, termination date, cancer type, and unique monitoring history. The dose reconstruction report does not provide a percentage, but it provides a dose. [redacted] rem was received by the [redacted] and [redacted] rem was received by the [redacted]. This is not a POC.

Claimant: So what does it mean?

Brian: It's the amount of radiation energy that NIOSH assumed he could have received. They are amounts of energy. This is not a decision.

Claimant: I don't see how the Department of Labor could be any different. There is enough evidence here to prove the claim.

Brian: The Department of Labor determines claim outcome. NIOSH does not adjudicate claims. If they deny you, you can appeal.

Claimant: I don't know how they could come up with another decision. [Sentences not related to dose reconstruction deleted.]

Brian: It's OK to be skeptical.

Claimant: I am an old lady and I have seen a lot of dishonesty.

Brian: Let me give you my number, so you can contact me if you have any questions.

Claimant: Is this the same as Rachel's?

Brian: As you continue through the process, feel free to call me or the DOL. It will take about 2–8 months for a decision. Claimants have said it is closer to 2 months.

Claimant: Very good.

Brian: You can call the DOL Cleveland office to find out the status of the claim. You can call to ask them anything.

Claimant: They are good at providing me with a note.

Brian: The contact information for DOL is on any correspondence. Are there any other questions?

Claimant: No

Brian: Two things will be different on the final DRR. First, the DRAFT will be changed to final. Second, there will be nothing included to sign. Once you receive this report, this indicates the DR has been sent to DOL.

Claimant: That will be good.

Brian: Labor will provide a decision.

Claimant: With all this information, I don't see how they can deny it. It was enough to kill him.

Brian: If you are denied, there is a process to appeal the claim. Best of luck! Give me a call if you need further assistance.

End of interview

After the follow-up call, SC&A had a discussion with the interviewers Rachel Hume and Gwen Knox, the HP Reviewer Brian Kaske, and manager Ray Weaver.

ORAUT: That is a pretty common follow-up call.

SC&A: Did you look at the [national lab] data she was talking about before making the call?

Brian: No. That was the DR's decision as to whether to look at it or not. I did not look it.

SC&A: Brian represented that the DR was claimant favorable. She had mentioned that the [national lab] lung count was higher than the [site name] count. But you did not look at [national lab] data or verify with DRist?

Brian: No I did not. We assume that all data was used.

SC&A: But Rachel told her that she would refer the specific issue of the [national lab] measurement to the HP Reviewer. The claimant mentioned it at least a dozen times, that the [national lab] measurement being higher was the critical problem in how she viewed the dose reconstruction. She said that the higher measurement from [national lab] was the issue for her. Do you agree that she mentioned it at least a dozen times between the close-out interview and the reviewer call?

Ray: Yes, she did mention it at least a dozen times.

SC&A: I just want to make sure. Did you look at all at the [national lab] data before assuring her that the dose reconstruction was claimant favorable, given that that was her main problem?

Brian: I looked at a letter in the claim file.

SC&A: Did you look at any data from [the national lab]? Any measurement to check if the actual value of lung burden or intake used from the urine data in the dose reconstruction was claimant favorable compared to the measurement from [national lab] she was putting before you?

Brian: I did not look at any numbers. I looked at the letter from [the DOE contractor] stating that [national lab's] measurements were different than [those of the site].

SC&A: Yes, I heard you read that to the claimant. Thanks. I just wanted to verify whether you looked at the [national lab] data, because that is what the claimant put forward.

End of interview.

SC&A Requests:

During the course of the discussions with the ORAUT staff, the following items were requested from NIOSH.

- The special script prepared for this interview to indicate to the claimant that Arjun and Kathy. (Action Completed)
- Interviewer training manual compiled by ORAU (pending). It is ORAUT's understanding that all requests must go through NIOSH for these types of documents.
- NIOSH Dose Reconstruction Packet (pending completion)

The following procedures are currently being used for conducting close-out interviews and subsequent reviews.

- ORAUT-PROC-0090, effective date 6/21/2005
- ORAUT-PROC-0092, effective date 8/17/2005.

Addendum A to the close-out interview notes
Script for call provided by ORAUT to SC&A

The following script was read to each claimant prior to the start of the close-out interviews that were observed by SC&A.

> *This call is being monitored by Sanford Cohen and Associates, the technical support group for the President's Advisory Board. They are listening in to ensure we're covering and answering all necessary information within the dose reconstruction report.*