Centers for Disease Control and Prevention

National Institute for Occupational Safety and Health

Tenth Meeting of the Advisory Board on Radiation and Worker Health

January 7-8, 2003

Meeting Held at the Westin Hotel
Cincinnati, Ohio

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Executive Summary

The tenth meeting of the Advisory Board on Radiation Worker Health (ABRWH, or the Board) was held at the Westin Hotel in Cincinnati, Ohio on January 7-8, 2003. All but one member attended the meeting. And, since another member had to attend by a non-secure telephone link, she was unable to attend the closed session on day two. Others in attendance included staff of the Department of Defense (DOD), the headquarters of the Department of Health and Human Services (DHHS) and its agency, the National Institute for Occupations Safety and Health (NIOSH), and the Department of Labor (DOL). Members of the public also attended over the course of the meeting. The minutes of the ABRWH's October meeting and December teleconference of 2002 were approved with minor edits.

OCAS Program Report

Mr. David Sundin provided a report on NIOSH's Office of Compensation Analysis and Support (OCAS) Program to the end of the calendar year (CY) 2002. The federal fiscal year began in October 2002. Since the first quarter of 2002, 10,158 cases have been transferred (~150-200 cases/week) from the DOL's four district offices. The claims process was outlined again. The efficiency of the data base management system has been improved in order to operate with the dose reconstruction contractor, the Oak Ridge Associated Universities (ORAU). The vast majority of claims to date (86%) have come from employees who did not work for Atomic Worker Employers (AWE); only 14% worked for them.

NIOSH receives nearly 80 calls/day (11,325 to date and 949 e-mails). To date, 58% of NIOSH's 8471 requests to the Department of Energy (DOE) for personal exposure records have been provided; another 4884 claims required follow-up requests for more information. Of those requests, 14% are >150 days old, 4% >120 days; and 7% each at 90 and 60 days. Many of those delays involve older sites. DOE has set new procedures to speed those records' provision, and in general, the Centers for Disease Control (CDC) is encouraged by most sites' response. Claimant interviews have doubled since the dose reconstruction contract with ORAU was awarded, and active dose reconstructions have quadrupled. Fourteen draft reconstruction reports were signed off on by the claimants and transferred back to DOL for adjudication. All of ORAU's initial contract deliverables have been received on schedule. NIOSH's Residual Contamination Progress Report was transmitted to Congress in December 2002 and will be posted on the Website soon. Additional appointees to the project's physician panels will be recruited to staff about 25 three-member panels. Claimants will be able to check the status of their claim on the OCAS Website once the updated data base is available.

Dose Reconstruction and Contract Support Studies

Dr. James Neton presented a report on the dose reconstruction and contract support status. The government has agreed to double the OCAS staff, from 22 FTEs to 43. Active recruitment of experts in multiple disciplines is underway and the staff hopes to hire all FTEs by March 1. This would provide the staff necessary to support the contractors processing of 200+ dose reconstructions per week. Many of the dose reconstructions begun by NIOSH have been completed. NIOSH staff will continue to complete some small percentage of the dose reconstructions through the course of the program. The ORAU's team documents, procedures,

and dose reconstruction research have been overviewed (the latter is ongoing). Field reconstructors receive technical bulletins and document change notices.

The ORAU project's organization was related according to the contract's six tasks, all of which have an assigned NIOSH staffer for oversight: 1) data base management, 2) data collection, 3) dose reconstruction research, 4) claimant interviews, 5) dose estimation and dose reporting, and 6) technical/program management support. Details in each area were provided. Of particular interest was that ORAU's conflict of interest documentation will be on the Website in the next 2-3 weeks. That documentation will grow as support staff are engaged to do more dose reconstructions.

The claims interviewers will have a 40-hour training program on the program's legal basis, administrative roles, basic radiation worker training, on the computer aided telephone interview (CATI) data base, etc. As much as possible, site-specific knowledgeable interviewers will work the cases. Quality control includes some task manager sit-ins on interviews, the reports' review by a health physicist, and follow-up interviews.

AWE Site Profiles

The development of the AWE site profiles that serve ORAU's technical basis for dose reconstruction was presented by ORAU's dose reconstruction project director, Dr. R.E. Toohey. He outlined the procedures of a rolling mill in which 1.5" uranium rods used for plutonium production were processed. Data were used on test rollings in a salt bath in 1951, production runs in 1952, and a possible 6-8 runs in 1955 (assumed to parallel the 1952 runs), to develop the technical basis of the dose reconstruction. Monitoring data were used to develop the dose reconstruction approach, and the resulting data set was used to bracket the conditions for airborne (internal) and external exposures.

The ***development of the methodology*** was outlined. All the assumptions were claimant friendly. The resulting technical basis document will guide the dose reconstructions for >300 claimants from Bethlehem Steel. Since the AWE facilities usually did only one type of work with one type of radioactive material, monitoring data from the facility, or from another doing the same type of work, can be used to characterize exposure conditions, although extensive record searches might be required. Once an AWE is characterized, all claims from that facility can be processed relatively quickly.

The development was outlined of the airborne exposure matrix and the dose estimate based on the mode of the distribution. The airborne maximum allowable air concentrations (MAC) for 1949-50 at Bethlehem Steel were estimated at 5.0, and at 2.0 for 1952 and the possible rollings of 1955. Development of the uncertainty distribution was also described as it was carried through to the doses and then entered into the IREP program to determine the probability of causation (POC). The assumptions regarding exposure times were outlined, and were based on the records and using the 1994 ICRP -66 breathing rate for heavy labor. Estimated modes of inhalation intakes for the five years of exposure ranged from 8.7 to 32.5 nanocuries (nCi), with a maximum of 0.3 to 6.5 microcuries (μCi). Finally, external exposure to uranium dust and from the uranium billets was estimated to be a maximum beta skin dose ranging from 10 to 16.5 rem.

The use of the salt baths seemed to have avoided widespread uranium contamination. It is likely that some doses will be high enough to result in compensable cases.

In discussion with the Board, the absence of any bioassay data was reported. Interviews with site experts about the runs are planned. The triangular distribution that was used and described will be assessed for its consistency between sites, but simultaneously (not before) as the other sites are addressed, to avoid delaying the dose reconstructions. If further information prompts, past dose reconstructions will be re-done. There was some discussion of whether or how much the Office of Management and Budget (OMB)-approved forms could be changed in order to evaluate the validity of the posited 1955 exposures, and to explore any more information. NIOSH reassured the Board that the approved follow-up questions will allow more detailed questions to be posed than those from the original questionnaire. Follow-up cannot be done with all those interviewed. But NIOSH has OMB approval of a questionnaire with which to interview other site staff about information uncovered and newly discovered process information can be incorporated into the interview process.

The DOE site profiles are likely to differ from those of the AWEs in that they will have personal monitoring data as well as processing data. This will help to flesh out the site profiles. ORAU is also creating look-up tables for site processes and x-ray exposures, as well as the minimum detectable limits for sites.

Dose Reconstruction Workgroup
Mark Griffon provided the Dose Reconstruction Workgroup's review and discussion of three documents critical to the OCAS process, the request for contract, Attachment C (Statement of Work), and Attachment A (Technical Evaluation Criteria). The Workgroup's January 2003 draft reflected changes made in the conference call. The changes included that the review panel will present their justification for the evaluation contractor(s) selection prior to the contract award. NIOSH agreed to investigate whether the affiliation of panel members other than the Board member could be identified.

Attachment C, Statement of Work. There was much discussion of how to conduct an independent evaluation of the interview process, whether this constituted an audit, and how OMB approval affects progress of the evaluation. Retaining NIOSH's reputation as an agency independent of DOE was a high priority.

Ultimately, there was general agreement to delete the text calling for a comparison of the NIOSH OCAS work history with the interview report, and to leave the task as evaluating "the effectiveness of the phone interview in ascertaining relevant work history information." To the text on Task Orders will be added the critical staff needs expected (e.g., for evaluation of survey instruments or a program evaluation expert).

Changes to ***Attachment A, Technical Evaluation Criteria***, spurred much discussion. It was agreed that the "Personnel" section would be similarly edited as done in Attachment C, and that ORAU's "teaming partners" would be named (e.g., by corporate name or the contract numbers). However, debate continued on the length of time that an expert could work for DOE without

being eliminated from participating in this project. Eventually, it was agreed that the emphasis must be on disclosure, which, accompanied by a proper justification, could not overly shrink an already too-limited field of candidates.

Review of methods; "audit." Attachment C's Task 1 had originally been to review the methods and OCAS process procedures. But this was rolled into the individual dose reconstruction review component as the most pertinent related area, particularly in the initial absence of real data/cases. While it remains there, there was much discussion about reinserting it, perhaps as a separate task order, to also address the overall path taken by NIOSH/ORAU. The benefit of that would be added value by establishing a baseline for the NIOSH/contractor dose reconstruction process, aside from the individual case reviews; it would allow resolution of any basic disagreements before many cases are adjudicated; and it would enable a cost effective initial review. The tasks of a review of dose reconstruction methods/procedures were listed in an 8-item document distributed at this meeting and appended to the full minutes.

The Board agreed to place the focus on issues that need address, not those handled in other ways. For example, if the contractor's review of the procedures raises an issue (e.g., no procedure to deal with some specific in a consistent manner) that has not risen in the first 2000 cases, that would not be a deficiency in the audit, but only a point to note. Overly prescriptive text should be avoided, as it could establish criteria for a project that has never been done before.

Rather than a complete list, the following text was agreed upon for the *Statement of Work*: *"The contractor shall review all relevant dose reconstruction methodologies and/or procedures employed by NIOSH and NIOSH contractors in conducting individual dose reconstructions in SEC petitions. The contractor shall evaluate whether the methodologies and procedures are consistent with the requirements under 42 CFR 82, and whether there are sufficient procedures to achieve consistent application of the requirements in 42 CFR 82."*

Working Session

In a working session, the Board completely reviewed these documents and commented on each section. Aside from grammatical edits, the following were discussed:

- A motion was made and unanimously approved to accept the language in the paragraph above.
- A proposal was made to drop the basic, advanced, and blind reviews, in favor of having the contractor conduct a complete audit to determine the adequacy and correct use of the data and performance of the dose reconstruction.
- The specifics of Attachment C, Item 2.B (review of work history interview and claimant-supplied documentation) were hoped to be addressed after the work on this document was complete.
- Addition of a paragraph to cite the number of worker and site profile reviews was suggested, but this was not done in Item C (Review of SEC Petitions). This text serves only as a place marker; since no SEC rule is yet in place.

A motion to approve Attachment C with the discussed edits was seconded and unanimously passed.

Attachment D* (Basic Individual Dose Reconstruction Review)** was discussed as having too little information for a bidder's response. *But a **motion to adopt Attachment D with no changes passed unanimously, since what is evaluated is their approach, more than the cost estimate. However, a bidders conference call could be held to address any such questions, and they also can state their assumptions in their bid.

Attachment E (Advanced Individual Dose Reconstruction Review) was unanimously approved with one minor edit.

Discussion on ***Attachment A*** (Technical Evaluation Criteria) included:

- Consensus to add to Item 7 "program evaluation expertise related to health surveys."
- Lingering concern was expressed rhetorically, since this had been previously discussed and accepted by this Board, that the restrictive text for key personnel about DOE Q clearance could make it difficult for the reviewers to find a qualified person. It was agreed to leave this text as is.
- The provisions on Conflict of Interest spurred good discussion. By general agreement, the five-year term restriction related to work with DOE was changed to two years, to match the stringency of than the individual dose reconstruction contract. The following text was also added to paragraph 3:
  - "Additionally, the offeror, teaming partners, and key personnel shall have no prior work history, while performing under contract with NIOSH or ORAU ..." then add "... **or the two ORAU "primary teaming partners (related to contract #200-2002-00593) in the past five years. Beyond this limitation, the offeror, teaming partners, and key personnel shall be evaluated for prior work history with NIOSH and ORAU for any appearance or actual conflict of interest, or other factors which could otherwise prejudice the independence of the offeror, teaming partners and key personnel. If the offeror, teaming partners, or key personnel have current or past work history with NIOSH or ORAU, the offeror should include a needs justification for the key personnel's participation in the project."**
- The restriction in paragraph 4 on key personnel and staff members was well discussed. One opinion was that, while that they might not be involved in the review itself, it would be counterproductive to not allow them even to participate as a resource. ORAU uses such persons as a dose reconstruction expert resource, but not in the dose reconstruction itself. ORAU could work with OCAS further on identifying such persons' potential conflict of interest. The Board agreed to insert text that such persons "will not perform reviews" rather than "be involved" in them.

  A motion was made to change the previous paragraph's reference to "any litigation defending worker compensation" to "any litigation concerning worker compensation," while retaining "or other radiation related claims," and dropping the rest of the sentence referencing DOE, its contractors, AWEs or their contractor. Opinions cited: a) the resulting difficulty of finding an expert witness in legal actions if they know that this will exclude them from further employment; b) that this could include testimony on other radiation related exposures (e.g., hospitals) not associated with DOE, and would go far beyond those whom it is meant to rule out; and c) strong contrary opinions expressed that labor would not believe anyone who would testify for DOE.

Since the original text was consistent with the ORAU's contract, and there are also provisions to site-specifically limit participation of individuals involved in litigation from involvement in the review of that site, **the motion failed** in a close (5-6) vote.

Attachment A was unanimously accepted with the previously agreed-upon edits.

Public Comment

Public comment was solicited at several points in the meeting and is detailed in the minutes. The input provided included:

- Reported concerns of claimants with the interview process, particularly with draft reports that are overly condensed and not completely accurate, and with interviewers not familiar with the site's processes. NIOSH was urged to tape interviews with the claimants' permission in order to ensure maximum accuracy, and the ABRWH was urged to audit for QC and mid-course corrections as needed. The claimants should be allowed to the itemize records needed.
- The problems were cited of survivors of workers, whose spouses were not allowed to discuss the site processes with their families.
- DOE's own testimony that their monitoring results were "junk" was raised. Specifically noted was that the Oak Ridge Y-12 facility's air monitoring, historically done 8-12' above the floor, rocketed up when the breathing zone was lowered. Also noted was the common occurrence, in the 1940s and 1950s, of workers routinely told to leave their dosimeters outside when working on a "hot" job. Such history ensures a continued perception of DOE as "the fox still guarding the hen house." One opinion was that DOE should be the one required to prove they did no harm, not the claimant that they did.
- A DOD/Defense Threat Reduction Agency (DTRA) staffer suggested that the ABRWH closely attend to an NAS review of their similar process, to be reported later this year, and that NIOSH create an interagency agreement with another government agency (e.g., a state government also represented on the panel) to create their own independent review panel. The states may not have the required expertise, but they have the contracting vehicle in place to allow this to be done with this expert Board's oversight.
- The Board was informed that Mr. Jerry Tudor, an Oak Ridge Y-12 employee who had attended a previous Board meeting, had died of cancer on January 2 of this year.
- Questions were asked about whether the current Section C provides the option for the Board to contract for the source evaluation with multiple contractors; if that was desired; and if so, what the criteria to do so would be. Direction is needed on this area of one- versus two evaluations.

  A pre-bid meeting of potential bidders was supported, since matters discussed on this day indicate many pro's and con's related to the Request for Proposal (RFP) require clarification before bidding.

  A claimant's (Mr. Sam Ray) experience and perspective was provided for the Board and is detailed in the full minutes. He asked about the site-specific knowledge of the interviewers. NIOSH's goal is for the interviewers be as knowledgeable as possible, but that may not be possible except for the larger of the DOE complex's 314 sites. However, the interviewer will have the site profile in hand during the interview, as well as the full case file and all available site- and worker profiles.

The importance of considering the different DOE culture of 30-40 years ago was stressed, but the belief was stated that this process can work if that is desired. NIOSH was urged to not be put in a position where it appears to be like DOE, or the program will fail.
A Board member offered to refer NIOSH to Navajo translators if the need occurs; tribal councils are also sources of help.
Whether a public briefing on NIOSH's Residual Contamination Study report would be held was asked. The Board was briefed on this at the last meeting in Santa Fe. Once NIOSH can reconfigure this complex document in a format compatible with placement on the Web, it will be posted there.
A question about selection of a Board member for the audit panel was answered, in that the Chair will appoint that person.
The selection of Charleston for the next meeting, rather than Augusta, to accommodate the Savannah River Site (SRS) workers was answered. Charleston was selected for its proximity to SRS, and Aiken and Augusta were also discussed.

IREP Workgroup
The IREP Workgroup provided a document for the committee's review which will be on the next meeting's agenda for discussion. The document lists eight scientific topics in random order that might be discussed by the Board as potential additions to IREP. The unprioritized list, which was drawn from meeting minutes, comments from the public, etc., involves issues of science, of how other radiation compensation programs dealt with similar issues; and claimant issues raised that may trigger something for review. A suggested procedure for addressing these was for NIOSH to conduct the topics' background work and present it to the Board for its decision as to whether to pursue the topic, and perhaps prioritize some of them. No comments or grouping of the initial topics were offered on the IREP workgroup document at this meeting. The list will be discussed further at the February meeting.

Board Housekeeping
Board housekeeping included an added agenda item (update on implementation of the conflict of interest policies) at the February meeting in Charleston, SC; a likely need for a conference call on February 19 or 20, for 2-3 hours to discuss the expected SEC rulemaking if it is issued on the week of January 20 for a 30-day comment period that ends February 21. The subsequent meeting date will be on April 28-29 (May 1-2 and 19-20 were also acceptable) at Oak Ridge or nearby Knoxville, TN.

A table of current and completed action and agenda items were in this meeting's book. Comments or questions were directed to Ms. Homer or Mr. Elliott. The members were asked to provide, by January 10, their time spent in meeting preparation and their preferred travel dates for the next meeting.

SOW Attachments
Further informal discussions after the previous day's meeting were reported, about the modifications to the scope of work attachments agreed upon . However, while more flexibility was desired, no one could generate any language that was workable. It was finally agreed that the agreed upon 2 years was a compromise itself and remained acceptable.