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.

The public portion of the meeting was adjourned at 9:25 a.m. After a short break, the Board then met in Executive Session to discuss and review the development of the proposed independent government cost estimate for the contract discussed at this meeting.

National Institute for Occupational Safety
Minutes of the Tenth Meeting of the
Advisory Board on Radiation and Worker Health
January 7-8, 2003

JANUARY 7, 2003

The tenth meeting of the Advisory Board on Radiation and Worker Health (ABRWH, or the Board) was held at the Westin Hotel in Cincinnati, Ohio, on January 7-8, 2003. These meeting minutes of the Board's deliberations and a complete transcript certified by a court reporter is available on the Internet on the NIOSH/OCAS Website (www.cdc.gov/niosh/ocas). The meeting was called by the Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Safety and Health (NIOSH), the agency charged with administering the Board.

Attendance

Members present were:
Paul L. Ziemer, Ph.D., Chair
Larry J. Elliott, M.S.P.H., C.I.H., Executive Secretary
Henry A. Anderson M.D.
Antonio Andrade, Ph.D.
Roy L. DeHart M.D., M.P.H.
Richard L. Espinosa
Michael H. Gibson
Mark A. Griffon
James M. Melius, M.D.
Wanda I. Munn (see below)
Robert W. Presley
Genevieve S. Roessler, Ph.D.

Member Leon Owens was absent; member Wanda Munn was present by telephone link for the public portion of the meeting.

Federal employees present were:

Department of Defense (DOD):
D. Michael Schaeffer, Defense Threat Reduction Agency (DTRA)

Department of Health and Human Services (DHHS):
Larry Elliott, Russ Henshaw, Cori Homer, Liz Homoki-Titus, Ted Katz, David Naimon, Jim Neton

Department of Labor (DOL):
Jeffrey L. Kotsch and Rose Toufexis

Members of the public who attended over the course of the meeting were:
Everett "Ray" Beatty, Fernald Atomic Trade and Labor Council (FAT & LC), Lawrenceburg, IN
William L. Beck, Oak Ridge Associated Universities (ORAU)
Eula Bingham, University of Cincinnati, Cincinnati, OH
Jeanne Cisco, Paper and Allied Chemical Employee (PACE) Union, Piketon, OH

Richard Findlay, Fluor Fernald, Fernald Atomic Trades and Labor Council, Fernald, OH
Kenny Fleming, Science Applications International Corporation (SAIC), Knoxville, TN
Steven R. Fowee, IAM&AW/ICWUC, Maineville, OH
Ray Green, court reporter, Atlanta, GA
Jim Griffin, MJW Corporation, Olean, NY
Stu Hinnefeld, Cincinnati, OH
Mark Lewis, PACE Worker Health Protection, Waverly, OH
Bill McGowan, University of Cincinnati
Greg Malone, ICWUC, Cincinnati, OH
Richard Miller, Government Accountability Project (GAP)
John S. Morametz, ICWU, Cincinnati, OH
Marie Murray, meeting recorder, Atlanta, GA
Paul Mullens, PACE Union, Piketon, OH
Louise S. Presley, Clinton, TN
Sam Ray, PACE, Lucasville, OH
Leland Russell, Fluor Fernald, Fernald, OH
David Stuenkel, Trinity Engineering, Cincinnati, OH
Robert Tabor, FAT & LC, Harrison, OH
Bill Tankersley, ORAU
Elyse Thomas, ORAU
R. E. Toohey, ORAU

Opening Comments
Dr. Ziemer convened the meeting, calling it to order at 8:35 a.m.

Review/approval of the Draft Minutes Dr. Ziemer asked for any changes to the minutes of the October 15-16, 2002, meeting and teleconference of December 12, 2002. The following were provided:

October 2002: *Executive Summary* (pp 3-10)

- David Naimon: 1) Page 7, sentence two, of the report on his presentation, change to: "... agency or the department, and may not speak for the ABRWH unless a majority of the members approve the position" and 2) in sentence 3, delete "regardless of" and add to the end of the sentence".. or otherwise, with anyone."

*Dr. Anderson **moved to accept the executive summary as edited** and the motion was seconded. Upon a vote, the minutes were **unanimously approved** as edited.*

Main Minutes: Dr. Ziemer noted that the formal actions of the meeting were italicized in order to stand out in the report. Edits requested were:

- Mr. Naimon: 1) Page 34, Scenario 1: After "I cannot speak for," delete ABRWH and insert: "... or the department. They also cannot speak on behalf of the ABRWH"; and 2) Page 35, Scenario 2: delete "regardless of" and change as done in executive summary edit 2.

*Dr. Andrade **moved to accept the formal minutes** as edited and the motion was seconded by Mr. Presley. The motion received **unanimous approval.***

***December 2002** Conference Call*

- Dr. DeHart: On the page 1 listing of participants, insert that he left the conference call at 3:00 p.m.
- Mr. Griffon asked that the names of those speaking be inserted to the bottom of page 4, at "Comments included:".

*Dr. Melius **moved to accept the minutes and Mr. Gibson seconded the motion. They were unanimously approved.***

OCAS Program Report

Mr. David Sundin, Deputy Director of NIOSH/OCAS, reported on the OCAS program's progress to the end of calendar year (CY) 2002. The last quarter of CY 2002 was the first quarter of the federal fiscal year.

Cases transferred from the Department of Labor (DOL) since the first quarter of 2002 totaled 10,158. About 150-200 cases/week are received from the four DOL district offices. NIOSH sends a letter to the claimant to confirm receipt of the claim, which is logged in to the data base, and a paper file is created. Changes were made to the data base management system to more efficiently operate with the dose reconstruction contractor, the Oak Ridge Associated Universities (ORAU). Of the claims to date, 14% have come from atomic weapons employer (AWE) employees and 86% from non-AWE employees.

NIOSH is receiving nearly 80 calls/day (11,325 to date and 949 e-mails). OCAS has forwarded 8471 requests for personal exposure records to the Department of Energy (DOE), which has responded to 58%. Follow-up requests for more information were sent on 4884 claims (14% are at >150 days from request; 4% >120 days; and 7% each at 90 and 60 days). Many of the outstanding requests were sent to older sites. DOE has set new procedures to expedite those records' provision.

Since the ORAU contract was awarded, the number of interviews conducted has doubled; 320 were done by phone with claimants and 242 interview reports were sent to claimants. Currently, 144 dose reconstructions are underway, quadruple the amount reported in October 2002. Fourteen draft dose reconstructions were sent to claimants. The close-out interview was completed for these and the OCAS-1 form, signifying the claimant's approval, was signed. They were then transferred back to DOL for adjudication.

All initial contract deliverables have been received on schedule from ORAU. NIOSH's Residual Contamination Progress Report, of interest to the OCAS process, was transmitted to Congress on December 9, 2002. Additional appointees to the physician panels have been identified, and more will be recruited to staff about 25 three-member panels. These will be sorely needed with the rising numbers of completed dose reconstructions.

Discussion with Mr. Sundin included:

- Ziemer: *Are any substantive changes expected on the Memorandum of Understanding's (MOU) contents as its discussions go higher in the agency?* That is hard to predict, but sufficient communication to date on the basics of the agreement should prevent any major changes. The content is not currently available since the document is still in pre-decisional form.
- Melius: *Are the delayed information requests more applicable to particular sites, or to types of records that are not available?* The reasons for untimely response are individual to the sites. For example, some did not anticipate the volume of the requests and staffed up later than others and one site had not completed the necessary indexing system for the records' locations. As a result, some sites will always lag behind, but by and large, CDC is encouraged by most sites' response. Communication with claimants relate the date the information request was sent. The sites are reminded at >60 days overdue on individual cases. If requested, the claimant is told the individual work done on their behalf. Since many have already contacted the site, this notice is usually not a surprise. Response to claimant inquiries is done, but there is no periodic update process in place. Claimant information will be placed on the OCAS Website once the updated data base is available. Upon entry of the claimant number, they will be able to check their claim status.
- Melius: *Will the ABRWH get a list of the sites lagging in response to records requests, and breakdown of the reasons why?* This can be provided.
- Anderson: *How many phone calls relate to delayed claims, that might be avoided with a regular notification system; or are they general information calls?* This has not been analyzed, but the sense is that most are asking about the status of their claim.

Dose Reconstruction and Contract Support Status

Dr. James Neton, OCAS' dose reconstruction project officer, reported government approval to double the size of the OCAS staff, from 22 to 43 full-time employees (FTE). NIOSH is actively recruiting new staff who are health communication specialists, a dose reconstruction team leader who is a health physicist and nine other health physicists; seven public health advisors, a paralegal, a research epidemiologist, an epidemiologist/statistician, and an office automation specialist.

Other activity: 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 (a key staff members is assigned to each aspect). Technical bulletins and document change notices have been distributed to the field reconstructors. Review of ORAU dose reconstructions is ongoing.

A flow chart of the ORAU project organization showed six areas: 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 (with a NIOSH staffer assigned to each, as above).

Task 1: Data base management: The Cincinnati Operations Center was installed and is operational. A sequel server environment will be rolled out January 13 and will allow better communication between NIOSH, ORAU and the field. The computer aided telephone interview (CATI) system is being redesigned and upgraded, and collection and input of site profile data is continuing.

Tasks 2 and 3: Data collection and dose reconstruction research: A sampling plan for initial cases was established (external, high- and low internal exposure environments, and the AWE facilities). Key health physicist staff members were hired to review the cases. Environmental dose reconstruction tables are being developed for the large Hanford and Oak Ridge sites, as well as diagnostic x-ray tables for Hanford and the Nevada Test Site (NTS). Site visits to Environmental Measurement Laboratories in (EML) in New York City and the Atlanta Federal Records Center identified many data files dating back to the 1950s. These are now being transferred to the Germantown DOE offices, to be researched by ORAU. The ORAU vault was also inventoried for relevant records.

Task 4: Claimant interviews: Four of the six points of the interview plan were implemented. The transition to the ORAU team is well underway and the interview staff was hired and trained. The claims received early are given priority, as much as possible, and >370 interviews have been done to date. All interview reports are reviewed by an health physicist prior to issuance and ~20% of the interviews provided additional comments to the draft interview report sent to them (e.g., spelling error edits, names of facilities, etc.).

Task 5: Dose estimation and reporting: More than 60 draft dose reconstructions were completed and forwarded to NIOSH for review, most involving compensable claims. The technical basis for conducting a dose reconstruction at an AWE facility was completed and is close to official approval. Control procedures to ensure the consistent conduct of dose reconstructions nationwide were written and forwarded to NIOSH for review. Additional health physicist support staff was added. The ORAU goal is to produce 100 dose reconstructions per week by March 1, 2003, and then 200/week by June 1.

Task 6: Administrative/technical support: The build-out of the Cincinnati Operations Center was completed. The project quality assurance plan (QAP) was completed by ORAU and approved by NIOSH. The information systems QAP is in development, and key training documents were developed to train interviewers about DOE facilities, the program's legislative underpinning, etc. The conflict of interest documentation is underway and will be on the Website in the near future (2-3 weeks).

Discussion with Dr. Neton included:

- Roessler: *Where are you on the organizational chart?* Dr. Neton is the technical program manager, to whom the dose reconstruction team leader, contract oversight team leader, and technical support team leader report. The claim information and communication team leader reports directly to Director Elliott. All are based in Cincinnati.
- Roessler: *Can the names of the ~90 people involved in the interviews and dose reconstruction work be provided to the ABRWH?* Yes, and more and more will be on the

Website with the posting of the conflict of interest forms. However, in addition to the NIOSH and ORAU FTEs (20-30), an additional ~90 may work on the project. They are not FTEs, but equal ~50 FTEs in time devoted to the project. That number will grow with the number of dose reconstructions done.
Melius: *If the 100/week dose reconstructions are done by March 1 by ORAU, will NIOSH be adequately staffed to review the completed dose reconstructions to be sent to DOL?* NIOSH hopes to have all FTEs hired by March 1, which would allow 200 reconstructions per week to be reviewed. The level of effort for review also is expected to decline with experience (~1 month to become familiar with all aspects of a compensation dose reconstruction) and with parallels between cases.
Melius: *It is hoped that NIOSH will expedite the conflict of interest postings to ensure the transparency of the process. What QC is planned for the interviewers' training?* Their training will take a week. Dr. R.E. Toohey, ORAU's dose reconstruction director, elaborated that this 40-hour training program covers the Energy Employee Occupational Illness Compensation Program Act (EEOICPA), the roles of OCAS and ORAU, the conflict of interest policy, Privacy Act disclosures, basic radiation worker training ("Health Physics 101"), details on the CATI data base and how to use the computer system, etc. There will also be a half-day trip to Fernald to see its DOE site. Two of the interviewers were DOE records employees, others are familiar with the claims process, and one speaks Spanish. ORAU hopes to have about 12 interviewers in all. The average length of interviews is about 100 minutes, but should be an hour. A person with a Masters in Social Work is being hired to help interviewers keep the process timely. As much as possible, site-specific interviewers are involved. For quality control, the task manager listens in on some interviews and reports, and the reports are reviewed by a health physicist. Follow-up interviews are done. While re-checks with claimants have not been implemented, ORAU would be willing to do so.
Melius: *Is a formal record kept of the interviewers QC reviews?* Dr. Toohey did not know, but agreed to advise the Board about that.
DeHart: *Will the thousands of records processed simultaneously be logged to be re-findable?* Dr. Neton responded that all DOL hard copy records are kept in one location and all DOE records are now at ORAU. NIOSH has all the electronic records.

AWE Site Profiles; Technical Basis for Dose Reconstruction at Bethlehem Steel
Dr. Toohey, ORAU's director of the NIOSH dose reconstruction project, described the approach to be used. He began by outlining for the Board the processes of a rolling mill in Lackawanna, NY. There, 5.5" uranium billets were rolled into 1.5" rods to be used for reactor loading in Hanford's plutonium production. Test rollings in a salt bath were done 4-5 times in 1951, followed by production runs on 7 dates in 1952. A labor representative's letter found in the files claims that an additional 6-8 runs occurred in 1955. Although this is not supported by records, ORAU is assuming this to be true and is profiling them parallel to the 1952 runs.

Monitoring data sources were used to develop the dose reconstruction approach, and the resulting data set was used to bracket the exposure conditions.

1. The Atomic Energy Commission (AEC) used 70 disintegrations per min (DPM) per cubic meter of air as the maximum allowable air concentration (MAC).

2. A 1981 report by the New York state assembly's Task Force on Toxic Substances, which investigated the Love Canal event, reported that rolling without lead baths produced readings as high as 1,000 times the MAC, while those done in a salt bath produced readings of 3-5 times the MAC. This was one reason the salt baths were used in the production runs.
3 Monitoring data from Simons Saw and Steel rolling runs in 1951 indicated 0.8 to 2.5 MACs on one occasion and 0.9 to 4.2 MAC on another.
4. A claimant submitted documents of Bethlehem Steel readings that indicated a range of 0 to 1.9 MAC in 1951 to 0 to 70.0 in 1952.

An exposure matrix was developed for airborne exposures, based on available monitoring data from Bethlehem Steel and Simons. Due to the uncertainties involved (e.g., unknown positioning of the air monitors used), a triangular distribution was used to develop the line from the minimum to maximum probable levels. For the time period of 1949-1950, they assumed a 5.0 MAC (in a range of 0.9 to 5000), based on the New York Task Force report. For 1951, they assumed a minimum of zero; and for 1952 and the possible additional rollings in 1955, they assumed 2.0 MAC (in a range of zero to 70 MAC).

The *dose estimate* was done on the mode of the distribution, while still carrying the uncertainty distribution through to the doses. That uncertainty distribution was then entered into the IREP program and promulgated through with the uncertainty of the risk coefficients to estimate the overall uncertainty of the probability of causation (POC). A compensable claim must achieve 50% POC at the 99% confidence level. So, 20% ±10% would be compensable using these three standard deviations.

Exposure times were estimated with several assumptions, again based on the records: 10-hour workdays and 12 workdays per year for 1949 and 1950; then 13, 11, and 8 days for 1951, 1952, and 1955, respectively. The 1994 ICRP -66 breathing rate for heavy labor was used (in part due to the higher temperature environment). The modes of estimated inhalation intakes per year ranged from 8.7 to 32.5 nanocuries (nCi), with a maximum of 0.3 to 6.5 microcuries (μCi) over those five years of exposure.

Estimates of *external exposure* were developed for uranium dust using the standard assumptions of submersion in a semi-infinite cloud of uranium dust from the uranium billets used. Then, for the external exposure from the billets themselves, they used the beta dose rate, which was figured from an average of one to three feet from the semi-infinite plane source of uranium. The maximum calculated skin dose from the beta exposure ranged from 10 to 16.5 rem; the deep photon dose on bone surfaces was half that. That number included occupational chest x-rays. The CATI interviews will particularly inform the latter. In summary, all available data were used to characterize the exposure conditions at the Bethlehem Steel facility. Claimant-friendly assumptions were made for exposure times and the amounts of material handled, and a triangular uncertainty distribution was used to estimate the uncertainty in the exposure estimates. The resulting technical basis document will guide the dose reconstructions for the >300 claimants from Bethlehem Steel.

The conclusions reached were that: 1) AWE facilities usually did only one type of work with one type of radioactive material, 2) 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, and 3) Once an AWE is characterized, all claims from that facility can be processed relatively quickly.

Discussion with Dr. Toohey included:

- Ziemer: *Where there any bioassay data?* None were found. The guess, from EML records and one 1951 document from the New York Operations Office, tracing the material flow through various AWE sites, indicate that bioassay testing (such as urinalysis for uranium) was spotty. The reliance was on air monitoring, which was always reported at less than the MAC.
- Roessler: *There are no estimates on internal dose, although they were probably significant, and x-rays should be a contributing factor in external dose.* The draft document has some estimates for photon exposure to skin. Dr. Toohey was not yet satisfied with them, but expected them to be a few mrem.
- Griffon: *Were any interviews done with site experts about the runs?* They were done with interested claimants, but not yet with site experts, although that is planned. For example, Tony LaMastra will be asked to do a reality-check review of the draft document.
- Griffon: *Will you wait, in developing the technical basis document, to do other similar facilities, to see if the triangular distribution will be consistent between sites?* That will be done, since this is an iterative process. The technical document will be done simultaneously with the other sites; the dose reconstructions cannot be delayed to ensure maximum accuracy. ORAU will proceed with the dose reconstructions, and the claimant review of the interview and the dose reconstruction itself are also checks. If further information so prompts, past dose reconstructions will be re-done.
- Melius: *Could you modify the claimant interview process to evaluate the validity of the posited 1955 exposures, and to explore any more information?* The interview form has been approved by OMB and cannot be changed, but the interview includes worker input on when they worked and on what processes. Melius: *Then, would the Office of Management and Budget (OMB) not allow data gathering from the present 300 claimants before their interview to try to determine any further information on these runs?* Mr. Elliott did not expect that the OMB would allow that, but follow-up questions will allow more detailed questions to be posed than those from the original questionnaire. This is part of the normal claimant interview process, but NIOSH cannot go back to all those interviewed to do so. However, NIOSH has OMB approval of a questionnaire to go to other site staff to interview them about information uncovered.

  Presley: *If a person is identified with an outstanding dose (e.g., a mill operator versus a material handler), can ORAU go back and review such employee classifications at other sites?* Yes, but it is not clear that this kind of detail can be done at this particular site. But such process employee detail can be incorporated into the interview process.

  Dehart: *Were particles flaking off into the air a cause of radiation contamination?* We are using a claimant-friendly 5 micron default particle size in the respiratory tract. Most particle sizes would probably be higher than that, which produces a lower dose per unit intake. But a survey done in the 1970s at a Formerly Utilized Sites Remedial Action

Program (FUSRAP) site did not find widespread contamination, probably due to the use of the salt bath. For conditions related to dose, those likely compensable are lung cancers in nonsmokers, and skin cancers are compensable. Kidney cancer may be compensable.
Ziemer: *Will the methodology account for the greater chemical than radiological toxicity of natural uranium?* Yes, but that pertains to a Sub-part D claim, not this task.
Melius: *So ORAU went through a number of the AWE sites to develop the site profiles?* Yes, and four more sites are still in development. Mr. Elliott added that these were chosen according to the number of claims to date, in order to have the maximum impact of addressing the "low hanging fruit" (e.g., this site had 300 claims) while building and testing the models.
Griffon: *How are the DOE site profiles likely to differ from those of the AWEs?* Dr. Neton said that most DOE sites will have personal monitoring data as well as processing data. That can flesh out these profiles, which are now mostly based on whole-year data. Dr. Toohey added that ORAU is creating look-up tables for processes and x-ray exposures, as well as the minimum detectable limits for sites. For example, Hanford, Rocky Flats, the NTS, etc., were major plutonium facilities. Those lookup tables are necessary to do dose reconstructions for people who had biomonitoring done.

Public Comment
Ms. Jeannie Cisco (phone 740-289-2045) was employed at the Portsmouth Gaseous Diffusion Plant (GDP), and is a compensation representative for the PACE Union Local 5-689. She works in the PACE Medical Protection Program and assists the members' EEIOCPA claims. She reported the concerns of claimants with the interview process. PACE advised the claimants to prepare written answers before the phone interview to ensure that the most information could be provided as accurately as possible. One person did so and spoke to the interviewer for about 3 hours in the first interview. He was pleased with the interviewer's patience and attention, but the draft report was overly condensed and held inaccuracies. The interviewer was clearly not familiar with the processes. When the person called to complain, he was told by the interviewer that the computer only had so much space for answers per question asked. He then contacted Ms. Cisco's office and they tried to condense his written answers. The second interview was 45 minutes long. Comments provided were included, but there were still incomplete sentences and inaccuracies (e.g., coal recovery versus cold recovery).

Ms. Cisco urged that NIOSH tape interviews with the claimants' permission in order to ensure maximum accuracy. Clearly, she thought an audit to be needed by the ABRWH to ensure QC and mid-course corrections as needed. She advised that the claimants be allowed to itemize the records needed, and felt that the claim form is problematic for widows/widowers, whose spouses were not allowed to discuss processes with their families.

Mr. Greg Malone, of Local 252 of the National Chemical Workers Union, represents the Center for Worker Safety Information. This is funded by a DOE grant and conducts health and safety training; he is a coordinator. He stated that asking an 80-year-old woman what her husband did is contrary to the reality of the culture. In the 40s and 50s, anyone who said they worked at Oak Ridge was not asked any other questions.

He had heard Dr. Tara O'Toole, a DOE Assistant Secretary, testify to Congress that DOE monitoring results were "junk." He agreed, noting that Y-12's air monitoring was done 8-12' above the floor, and only in the mid-1980s was lowered to the breathing zone. After that, "the counts went sky high." He also asked how the fact could be addressed that in the 1940s and 1950s, workers were routinely told to leave their dosimeters outside when working on a "hot" job. He asked how the perception can be avoided that the "fox is still guarding the hen house?" DOE is still providing the data and funding the process. In fact, in Mr. Malone's opinion, DOE should be the one required to prove they did no harm, not the claimant that they did.

Dr. Ziemer recalled that one member of the public said at a previous meeting that claimants had to provide the data, although it was clarified that they do not. He appreciated the good points raised, which have had been discussed by the Board before. The dose reconstruction processes are trying to gather supplementary data to address those issues.

Dose Reconstruction Workgroup Report/Changes Made

Mr. Mark Griffon, Chair of the Dose Reconstruction Workgroup, reviewed the three documents discussed by the workgroup and by the Board during the December conference call. The latest draft (January 2003) reflected the changes made in the Workgroup and the conference call. He outlined those that were major.

Attachment A, Request for Contract

- Page 3: A reference value will have to be added to Project Planning.

  To Section H, "The review panel will present their justification for contractor(s) selection to the Board prior to the contract award" was added.

  Section P, page 4: Definition of the technical panel members was left open except for one advisory Board member. Also discussed was whether among the other members should be a representative from other federal agencies as well as NIOSH. Mr. Elliott clarified that one OCAS staff member will be on the review panel as well as others from other federal agencies (not DOE) who are trained in contract procedures. Panel members other than the Board member will not be identified, but their affiliation may be identifiable. Mr. Elliott agreed to check on whether the latter is possible.

Attachment C

- Page 3, Section A: Text included the projected breakouts of expected cases to review years one through five.

  Page 5, Section 2b: Mr. Elliott asked that the phrases added on re-interview be removed, because that would require at least the Department of Health and Human Services (DHHS) and possibly OMB clearance before the program could proceed. Even adding *"pending OMB approval"* would still require OMB and/or DHHS approval.
  - Griffon: The ABRWH should commit to proceed with this, at least in principal, because if not included here, it may not be done. The current plan is only to review the summary form of the interview rather than whether the interview itself captures everything

accurately and sufficiently. Ziemer: Perhaps a third, non-specific, point could be included, requiring the contractor to assist with other work in the future to evaluate the process.

- Mr. Elliott appreciated Ms. Cisco's comments related to this question, and wished they had been brought directly to NIOSH. The survey instrument and interview approach were fully vetted in DHHS and were designed to capture all information, even acknowledging the site secrecy that was cited in public comment. There are three interview forms, and the one for survivors also asks about co-workers who could add information. Among the process tools are a follow-up report, a final review by the claimant, and their signing of the OCAS-1 form. NIOSH welcomes an audit of all these procedures, and can implement such new procedures after the OMB clearance is in place.
- Andrade: *Taping the interviews seems advantageous. Would a comparison by an auditing body of the tape to a transcript/report require OMB clearance?* Elliott: Whether OMB clearance is required depends on whether there are changes in the questions, going back to the interviewee, etc. These considerations led to NIOSH's decision to not tape.
- Andrade: *Then, perhaps it would be more practical for both the interviewer and the auditor to summarize what they thought they heard and compare those for accuracy. Any discrepancies would prompt a follow-up phone call to the interviewee to straighten that out.* Mr. Elliott found this suggestion to have merit. This would be part of the follow up to ensure that the information needed is in hand to pursue the claim, and not require OMB clearance. Such methods are more practical than requiring a follow-up audit to all interviews.
- Melius: *However, the issue is that NIOSH chooses the contractor to review NIOSH. If the RFP does not specify follow-up interviews, but that task is added later, would that require OMB approval?* Any task requiring an additional burden or time commitment from the public will require OMB approval.
- Ziemer: What constitutes an audit requires clarification; it is not a re-interview with different questions. It must be ensured that the ABRWH does not end up doing the work of the auditor or the agency itself. Mr. Griffon supported the generation of a transcript.
- Melius: The current QC plans, of having a supervisor listen in occasionally and informally, are not adequate. It is independent of the ABRWH's process, but that process still should be examined in more detail and improved. He was uncomfortable with substituting that for this Board's review. He asked the *Board to agree whether 1) the interview process should be reviewed by the ABRWH, and 2) how and when that should be done (e.g., transcript, with or without follow up interview; and after the record is developed or at the time of the initial interview?); and 3) how to implement that, while allowing NIOSH to proceed with the RFP.* For example, consideration is needed of whether the contractor has the necessary expertise to oversee the interview process.
- Dr. Andrade strongly suggested, if supervisors will be listening in randomly, that the supervisor and interviewer independently transcribe their summary of the interview (while redacting Privacy Act material). This should allow the OMB process to be completed quickly.
- Dr. Anderson thought that this would not require altering the Task Order. He suggested extending Task #1 with "or other evaluation mechanisms which would not increase the

time needed," or whatever the exclusionary phraseology would be. An independent auditor sitting in on the interview would not affect the claimant's time, nor would tape recording it. Those suggestions, or some other language (along with these meeting minutes), should indicate to the contractor the basis on which to estimate. He thought Item #1 to be overly restrictive and not even include auditing the independent record. If the only way to properly audit is a re-interview, that can be approached at another time.

- Dr. Ziemer expected that an independent listening-in by a Board member, separate from the audit and before the dose reconstruction itself is done, could focus on the process rather than the particular case, to identify shortcomings in the process.
- Melius: *Include a task for the contractor to develop a process, for submission to the Board, to evaluate the interview process.* Mr. Elliott responded that this is not the Task Order itself, but just a description for the bidders. The proposal would not have to bid on it, but would need to factor in the required expertise of technical personnel to respond to that. Once the Board has a technical consultation contractor in place, then the Task Orders will be developed and negotiated with the contractor.

  Resolution of the question. Dr. Ziemer suggested, to general agreement, deleting the last half of the sentence and inserting a period after "history of information" in Page5, 2.B1. This was to be done by Mr. Griffon after this document review.

Page 6, Section B; page 7, Section C: The numbers of cases projected were deleted. The estimated dose reconstruction reviews for individuals, but not site profiles, were inserted. Dr. Neton noted the need, for the procurement, to provide numbers for all years if numbers are provided for year one. Those could be reinserted before this meeting's end, as Mr. Griffon had already estimated them.

Mr. Elliott advised also **for Page 7, C-4, Task Orders, after sentence one, inserting the critical staff needs expected (e.g., for evaluation of survey instruments or for an expert on program evaluation), or "See attachment A, Personnel Requirements."**

Attachment A: Technical Evaluation Criteria

- Section A, Personnel, should be edited as just discussed.

Section E was modified in terms of the time allowable since DOE work was done, and key personnel are defined at the bottom of page 4.

Roessler: The work history (page 4, paragraph 2), "while performing with NIOSH, ORAU or "teaming partners" is too vague and should be more specific. Make this the "two primary teaming partners;" the procurement officer can name the corporations or insert the contract numbers. For example, ORAU has contracts for similar work not pertaining to this project at all.

- Mr. Griffon stated that the original intent was to be more restrictive about work with NIOSH or ORAU, as with DOE, to ensure the project's credibility to the public.
- Dr. DeHart objected that such excluded work could be one lecture delivered at ORAU four years earlier, or someone doing work with funding channeled through ORAU, but not actually done directly for or by them (e.g., training done oversees).

- It was agreed that the emphasis should be on disclosure. For example, insert "If work was done and those doing the work are included on staff, provide justification of why they are included."
- Mr. Elliott cautioned that this could exclude people who otherwise could develop a great proposal. Mr. Griffon thought that the justification should resolve that, but the minimum requirement could block out such people.
- Dr. DeHart asked if experts testifying for employees of AWEs would also be excluded, being concerned about excluding experts on only one side. His experience with compensation claims indicated that experts can disagree based on the same data, so excluding an entire viewpoint would skew objectivity. While the problem pertaining to individual claim cases had been resolved by the Board (experts just could not review any case in which they had testified), the problem facing class action suits still required resolution.

Review of Methods and Procedures

After a short lunch break, the discussion continued. Mr. Griffon noted that Task #1 in Attachment C had originally been to review methods and procedures, but this was rolled into the individual dose reconstruction review component. That was done because this review mostly pertained to the individual case audit process rather than that overall, particularly in the initial absence of real data/cases. It remains in the individual case approach. But he had reconsidered, since this also pertains to the path taken by NIOSH/ORAU. It would add value by independently reviewing the methods and procedures to establish an early baseline. The only intent is to establish a baseline and set an early understanding of how NIOSH/ORAU are approaching things. The EEOICPA statute itself also calls for review of the methods and a sampling of the cases, but this should be carefully bound to avoid great expense.

He suggested that this overall review be reinserted into Task #1, to enable a cost effective initial review. Aside from the individual case reviews, this could serve as the baseline of the NIOSH and contractor dose reconstruction process and allow resolution of any basic disagreements before many cases are adjudicated. It was currently a component of Item A, or it could be on page 4 under C-3. A handout distributed at this meeting proposed an 8-item methodology to review NIOSH and the contractor's methods/procedures (see Attachment #2 to this report).

Discussion with Mr. Griffon included:

- Andrade: The tasks as stated are quite general. The Board could appear to be second guessing what the experts themselves had developed, and the IREP and methods to address individual cases had been shown to be as claimant-friendly as possible. Finally, many if not most of the methods in the current processes had been presented to the ABRWH, many members of which also are experts, who agreed that these were the best methods for the analyses. This may go beyond the realm of auditing and approach second guessing. On the other hand, Mr. Griffon pointed out that reinserting it could also eliminate any second guessing since is done up front. He also clarified that this was not intended to second guess IREP or any other underlying level of the current approach.
- Ziemer: The procedures and questionnaires for the work history phone interviews have not yet been reviewed either. His sense was that the workgroup was not questioning the

approaches used, but whether those already described were being used. Mr. Griffon responded that the internal/external implementation guidelines address how, for example, a missed dose would be handled. This does not preclude individual case approaches that might have to differ, but would be only a generic review of the protocols (e.g., one question may be whether it is always sensible to assign an Minimum Detectable Activity (MDA) model).

Melius: Any review process involves some second guessing, but the Board should not revisit issues already addressed. This should be a carefully specified review of the application of the developed guidelines and procedures. Any identified vagueness or areas of potential uncertainty or disagreement could then be brought by the contractor back to the Board for resolution. This could be helpful to the overall review process, ensuring consistent application of these procedures, and would be more efficiently done up front.

Roessler: Clarity on the intent is necessary, to avoid interpretation by potential bidders that this could invite assessment of whether the proper ICRP guidelines are being used. But Mr. Griffon responded that, while the use of the proper ICRP model could be assessed, whether or not to use an ICRP model would not be. But these tasks also were deliberately broadly defined, as they only serve as place holders, since this work is not something that would be bid on in Attachments D and E. Nonetheless, it will need to be carefully bound in any actual Task Order.

DeHart: Agreed, the bidding contractor will have to understand the methodologies and procedures to bid. But should this be called an audit or report? Dr. Ziemer noted that a review for familiarity differs from an audit review.

Anderson: Add these issues to the first paragraph; especially the last part: "to achieve consistent application of the requirements of 42 CFR 82." Then, just drop the listed tasks.

Elliott: This was addressed in the early Board deliberations and in the workgroup, and the scope of work's items for the three reviews (basic, advanced, and blind reviews), call for address of any deficiencies. Additionally, a single review will not be sufficient. As the AWE technical guideline is developed, the review contractor will have to do several "snapshots in time" based on accumulated experience.

Dr. Neton agreed. The program is essentially keeping one step ahead of the dose reconstruction process; every possible scenario cannot be predicted. This is not a mature program that can be reviewed for a full fleshing-out of tables, etc. No contractor has ever done this kind of work, which is very different from regulatory-based or research dose reconstructions, although those can give the bidders some idea of the procedure. The first pass-through will look at a small set of the ultimate overall number of procedures, and the Board can pick the cases for review (low- versus high dose, etc.) and "road test" those.

Melius: *Take paragraph 1 and move it into the individual dose reconstructions, making it a second or third paragraph under the existing item A.* The Task Orders then could direct the contractor to avoid unnecessary or too-early reviews and time/target the reviews most appropriately.

Elliott: Change *"determine" to "evaluate;" and later in the sentence, insert "whether" before "there are sufficient procedures..."*

Andrade: *Or, insert a piece of last sentence into the provisions, addressing "whether the procedures in place are sufficient to achieve consistent application of the provisions of 42 CFR."* But this also is a secondary function, part of the audit. An audit is done by an

independent body to see how well the program is being done. The question is whether the Board will hire someone to do an audit (which he favored) or some other function. If an audit is done, he advised doing one comprehensive one, reviewing all the books rather than just one dose reconstruction or procurement. Audits are based on data arriving after the fact – e.g., reviewing two sets of transcripts of interviews in random fashion, choosing cases that are reflective of the number of cases coming from different sites. This is not to be confused with the QA function of the OCAS and ORAU supervisors. Finally, the OCAS dose reconstruction team leader is responsible for consistency of approach. That should be taken advantage of, ensuring that the Board is kept up to date. The focus should be on issues that need address, not those handled in other ways.
Anderson: This seems to be only spot where cross-program consistency is addressed, such that the procedures in place are documented and maintained in a continuing program that will inform the address and resolution of any future ambiguity found. Drs. Andrade and Neton agreed; these will be dynamic procedures that will develop over time. Being fundamental and consistent with the legislation, they will probably not change wildly, but some change is probable as specifics arise, not all of which can be documented.
Melius: If the contractor, in reviewing the procedures, raises an issue (e.g., the absence of a procedure to deal with a specific in a consistent manner) that has not risen in the first 2000 cases, that should be just a point to note, not a deficiency in the audit.
Munn: In the absence of precise language, Ms. Munn agreed with Dr. Andrade that overly prescriptive text should be avoided, which could establish criteria for a project that has never been done before. It would be hard to identify how many actions the auditor might be asked to undertake without defining what a full scale audit would involve.

Board Discussion/Working Session to Review All Documents

In a complete review of the documents, the Board commented on each section, as follows:

Request for Contract: No further changes were suggested to the document. The following Executive Session of the Board will insert the dollar amounts, and the Board member will be appointed to panel along with the OCAS project officer (Dr. Neton).

Attachment C: Statement of Work

C.1: Purpose of Contract : no changes

C.2: Background and Need: no changes

C.3: Contract Tasks
Component #1: Individual dose reconstructions

Section A: Dr. DeHart ***moved to insert after paragraph one, as a separate paragraph, text then read by Mr. Elliott: "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."

The motion was seconded by Dr. Melius. There was no further discussion other than Mr. Griffon's remaining feeling that it may be confusing to place this under individual dose reconstruction review. He still preferred this as a separate task. *In a vote, **the motion was unanimously approved, including by Ms. Munn on the telephone link.***

Other considerations were:

- DeHart: *From where did the estimated case review numbers in C.3.A the current paragraph 2, now paragraph 3, come?* Griffon: These came from discussions with Dr. Neton and NIOSH staff, after which he adjusted the first year's expectations down considerably. Dr. Neton added that, if this process parallels the ORAU ramp-up, the realistic number of cases is expected to be less than the 8000 for year one.
- Dr. Andrade proposed again dropping the basic, advanced, and blind reviews, and instead having the contractor conduct a complete audit to determine the adequacy and correct use of the date and performance of the dose reconstruction. The points of the discussion included:
  - Anderson: A comprehensive audit might break the budget; doing a statistical sample could accomplish the intent.
  - Ziemer: The whole data base is available for audit and the ABRWH is the auditor, helped by a contractors to determine whether sampling 2% or 50% is an adequate sampling size. All the cases cannot be done.
  - Andrade: Agreed; base it on the number of claims from each site. But do a comprehensive study of each element of whatever cases are chosen.
  - Melius: After the first year, the Board can review whether the number audited is satisfactory. This would start the process, and later on it can be determined how the sampling will be done. This could be discussed during the selection process, but in the meantime, this the personnel that might be needed could be indicated.
  - Ziemer: Add: *These percentages are subject to change by the advisory Board based on its experience with the review process.*

Item C, 5d: Change the text to data *"are"* here and consistently throughout the document

Advanced Review.

- B.1: End the sentence after the work "information" and drop the comparison of NIOSH OCAS work history with the interview report. **No objections.** Griffon: Less specificity is acceptable here but he hoped, after this document was done, to discuss those specifics. He will edit attachments D&E to reflect this change.

Component #2, NIOSH OCAS site and worker profile reviews.

- Add an additional paragraph to cite the number of worker and site profile reviews (five and 5, respectively, in year one; 4 and 4 in years 2 and 3; and 3 and in year 5). This will total ~10% (32) of all covered facilities (~300). **No objections**
- Again, correct the grammar to "are ... data appropriate"

Component #3, Review of SEC Petitions (place marker, as no SEC rule is yet in place).

- Inserting the number of petition reviews per year of the contract was discussed, or text about the number "to be determined by the Board." However, this is not necessary in this document; and since the process/procedure remains unknown, it was agreed by **consensus to drop the numbers in the absence of the Rule.**

Component #4, Task Orders

- Insert ***"See Attachment A"*** after "the required work" in paragraph one.
- Item f: ***delete "of is projection".***

Component #5: Preparation of Reports: No changes

Dr. Melius **moved to approve Attachment C** and Mr. Espinosa seconded the motion. In a **vote, all Board members were in favor of the motion and none were opposed or abstained.**

Attachment D: **Example of Basic Individual Dose Reconstruction Review**
Mr. Griffon expressed concern that this attachment provides insufficient information for the bidders to respond. Dr. Neton clarified that what is being evaluated is their approach, more than the cost estimate (i.e., NIOSH assigned points to expertise of staff, approach, etc.). A bidders conference call could be held to address any such questions, and they also can state their assumptions (e.g., a 5-page versus a 100-page report). The most qualified bidders will understand the types of sites, and CDC's Procurement Office advises against including too much information in order to be able to assess what the bidder intuitively or by experience knows.

Dr. Anderson **moved to adopt Attachment D with no changes,** and Dr. DeHart seconded the motion, which **passed unanimously with no abstentions.**

Attachment E, Example of Advanced Individual Dose Reconstruction Review.
Dr. DeHart **moved to accept Attachment E** with the following edit: insert a period after 'information' in B.1 and dropping the rest of the sentence (as done for C3, Advanced Review). Dr. Andrade seconded the motion, which was **unanimously approved with no abstentions.**

Attachment A: **Technical Evaluation Criteria**

A. **Personnel** changes discussed were:

- Add an Item 7 after "6) evaluating contradictory records", to state: "7) program evaluation expertise related to health surveys" and then continue with "evidence of this..." **Agreed to by consensus.**

  Roessler: *Does text at the end of paragraph 2 on DOE Q clearance conflict with Section E's minimum of 2 years of non-DOE work by key personnel.* Mr. Gibson responded that this pertains to U.S. government clearance after a background check. Dr. Andrade noted that there are many different types of Q clearances: DOE and their contractors are cleared

on need-to-know basis, and DOD has an almost parallel policy for nuclear design processes. A DOE Q clearance is specific to DOE. Mr. Griffon stated that this was not meant to conflict; but only to distinguish for key personnel, not all staff. Dr. Roessler reiterated her concern that this will make it difficult for the proposal reviewers to find a qualified person with this restriction, but this had been discussed before.

Mr. Elliott suggested, instead of a requirement, saying it would be 'advantageous' to have such a person who is also not conflicted. However, Mr. Presley noted that this will have to be a requirement, since such persons will certainly be needed for dose reconstructions done at site facilities. Although some non-Q cleared people can be escorted, at some sites the isotope/operation itself could be classified. It was agreed to leave this text as is.

B. **Management Approach/Understanding of the Requirement.** No comment/changes.

C **Technical Approach:** No comment/changes.

D **Past Performance:** No comment/changes

E. **Conflict of Interest.**

- To paragraph 3, after "Additionally, the offeror, teaming partners, and key personnel shall have no prior work history, while performing under contract with NIOSH or ORAU ..." then add the following text: **"... 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."**
  - By **general agreement, the five year term was changed to two years,** since there was no need seen for this to be more stringent than the individual dose reconstruction contract.

In the Paragraph 4 text regarding key personnel and staff members, Ms. Munn took exception to the exclusion of anyone who ever worked at a site being involved in any reviews related to that site. This was particularly relevant in light of the public comment at this meeting on the lack of understanding of the site's processes. While she understood that such persons might not be involved in the review itself, it would be counterproductive to not allow them to participate as a resource.

- Griffon: *What is ORAU's process?* Toohey: Such persons can serve as a dose reconstruction expert information resource, although they cannot participate in the dose reconstruction itself. They review the phone interview records to correct nomenclatures, for example.

- Melius: *What provisions ensure that the task does not overly rely on their information?* Toohey: The input is part of the administrative record, along with everything else, so it would be evident if too much weight was placed on any particular source. They are listed as site experts, but ORAU could work with OCAS on identifying their potential conflict of interest.
- DeHart: In Paragraph 5: To the last sentence, ***insert "will not perform reviews" rather than "be involved."*** The Board **agreed.**

DeHart: In paragraph 4, he **moved to change the previous paragraph's "any litigation defending worker compensation" to "any litigation concerning worker compensation," retaining "or other radiation related claims", and dropping the rest of the sentence.** Dr. Roessler seconded the motion. Discussion included:

- Munn: That is unfair. While some degree of restriction is necessary, it is difficult to imagine anyone would be able to find an expert witness in legal actions if it is known that this will exclude them from further employment.
- Ziemer: *Does this also apply to friends of the court brought in to testify to matters of fact?* DeHart: The parenthetical "(including non testifying witness)" would include that.
- Melius: If that includes testimony on other radiation-related exposures (e.g., hospitals) not associated with DOE, that would go far beyond those whom it is meant to rule out.
- Griffon: At the Santa Fe meeting, the Board heard that, if expanded in such a manner, Dr. Toohey would lose his two teaming partners and a large percentage of their pool of contractors.
- Gibson: In law suits, experts have testified in support of contractors for not monitoring employees, and later DOE acknowledged that that was true; it was not done. He personally would not believe anyone who would testify for DOE, and opposed the motion. Mr. Espinosa agreed, citing the Los Alamos workers' many claims against and distrust of DOE.
- Dr. Melius also spoke against the motion. The original language was directed to DOE to assure a fair process to the claimant; it is consistent with the ORAU's contract; and there are also provisions to site-specifically limit participation of individuals involved in litigation in the review of that site. At this general level, the idea is to limit the participation of people who were employed by the major "source" of exposure in this program. This is necessary to ensure the perception of equity and fairness in this process.

- Dr. Ziemer asked for a vote, reclarifying that a yes vote favored the change of the motion; a no vote would retain the current language.

Vote:

In Favor: Five.
Opposed: Five. The Chair then voted against the motion, totaling six opposed
Abstentions: Two, Drs. Roessler and Andrade.

The motion failed, and the original wording was retained.

Dr. DeHart **moved to accept Attachment A with the edits previously accepted,** and was seconded by Mr. Presley. All were in favor; and with no abstentions, the **motion passed.**

Public Comment

Dr. Mike Schaeffer, of DOD, Defense Threat Reduction Agency, applauded the Board's work to advance the dose reconstructions. He retained one concern, however, that this was still a NIOSH process, a NIOSH contract, and a NIOSH follow-up and evaluation, which could pose grave consequences to public confidence in this interview process. He had described his office's similar experience in a previous ABRWH meeting. The NAS has reviewed their process and would report on that later this year; he urged the Board to attend to those results. He suggested, to overcome that impediment, that NIOSH have an interagency agreement with another government agency (e.g., a state government also represented on the panel) to issue their own independent review panel.

Dr. Melius noted that some state radiation programs (e.g., his in New York) do not have the required level of expertise to do that and asked if Dr. Schaeffer knew of one. He replied that the state may not have that, but the states have the contracting vehicle in place to allow this to be done with this expert Board's oversight.

Mr. Richard Miller, of the Government Accountability Project (GAP) informed the Board 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.

He asked if: 1) the current Section C provides the option for the Board to contract for the source evaluation with multiple contractors; 2) if that was desired; and if so, 3) what the criteria would be to do so. A double blind review was originally discussed; or, with a large contract, smaller bidders could address half of it. Before discussion of this RFP ended, he asked that some direction be provided on this area of one versus two evaluations.

Mr. Griffon responded that the Board had discussed a double blind process early. In the selection process, the same case could be given to two contractors to do a double blind review. While this was not specified, it also is not prohibited. Dr. Ziemer added that double blinds can also be done with one contractor, using multiple teams.

Introduction of the members of the public attending, and who wished to introduce themselves, included:

Mr. Kenny Fleming, of Science Applications International Corporation (SAIC) Oak Ridge, which will bid on the evaluation project. He commented that, as now described, the project is small ($7 million, 2.5%) of the overall contract. He supported a pre-bid meeting, since matters discussed on this day indicate many pro's and con's related to the RFP that require clarification before bidding. He also noted that, as described, 2.5% of Dr. Toohey's 12 Q-cleared staff calculates out to less than one FTE, which could cause some problems with Q clearance.

Mr. Dave Stuenkel, of Trinity Engineering Associates of Cincinnati, related their interested in bidding as well.

Closing Comments.
The IREP workgroup (Dr. Anderson, Mr. Elliott, Drs. Ziemer and Melius) had prepared a document for the committee's review which will be on the next meeting's agenda. They hoped to identify scientific topics that might be discussed by the Board for addition to IREP. Eight topics were identified from meeting minutes, comments from public, etc., and listed in random order for future consideration, perhaps with speakers to present them. Dr. Melius reported that one aspect discussed was how to prioritize these. The list involves issues of science, of how other radiation compensation programs dealt with similar issues; and claimant issues raised that may trigger something for review. As a procedure for addressing these, he suggested that NIOSH conduct the topics' background work and present it to Board for its decision as to whether to pursue the topic, and perhaps prioritize some of them.

With no further comment, the meeting adjourned at 4:50 p.m.

JANUARY 8, 2003

Board Housekeeping
Future meetings. Committee Board management specialist Ms. Cori Homer confirmed that the next meeting will be held on **February 5-6 in Charleston, SC.** Dr. Melius asked that the next meeting agenda include an update on implementation of the conflict of interest policies.

Dr. Ziemer noted that the SEC rulemaking may be issued on the week of January 20, and the 30-day comment period ends February 21. A conference call may be needed on February 19 or 20, for 2-3 hours (e.g., 1:00-4:00 EST). Mr. Espinosa and Dr. Anderson had some conflicts on the 19th but the 20th was clear.

Future meeting dates to be held open by the members were: April 28-29; May 1-2 and 19-20 were also acceptable. Oak Ridge was thought to be the best site, but nearby Knoxville, TN, is most likely to have adequate and available meeting facilities.

Current and completed action/agenda items were in this meeting's book. Any comments or questions should be e-mailed to Ms. Homer or Mr. Elliott. Ms. Homer also asked the members to provide her by January 10 with a list of their time spent in meeting preparation and their preferred travel dates for the next meeting.

SOW Attachments. Mr. Griffon reported that, subsequent to informal discussions after the previous day's meeting, he had reconsidered his position. He had more concern about the modifications agreed upon than the original language on the 2-year limit for conflict of interest. While more flexibility was thought to be desirable, no one could generate any language that was workable. It was finally agreed that the 2 years was a compromise itself and remained acceptable.

IREP Workgroup Document. Dr. Ziemer asked for any comments or grouping of the initial topics described the previous day, but none were offered. The list will be discussed further at the February meeting.

Public Comment

Mr. Sam Ray asked for clarification of whether the interviewers will be site specific. Mr. Elliott said that the goal is for the interviewers be as knowledgeable as possible, but with 314 sites, accomplishing that except for the larger sites may not be possible. He also confirmed for Mr. Ray that 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.

To give the Board the claimant's perspective, Mr. Ray outlined his claim process from its filing in July 2000 to its finalization 11 months and 2 weeks later. The claims examiner was nice, but he was unsure he knew much about the mill. He received NIOSH's notification that the claim was entering dose reconstruction and the recommended decision. But then the final adjudication Board had a different interpretation of the facts regarding his specified cancer. When his argument "hit a stone wall," he contacted his congressmen, the National Cancer Institute (NCI), and Mr. Miller of GAP. The case was resolved, but his experience could serve as a cautionary tale of the dose reconstruction process. He was now hearing comments from people that NIOSH is "a tool of the DOE".

He emphasized that the different culture of DOE 30-40 years ago must be worked into the equation. The 1981 document by NIOSH identified a hazard evaluation report done at the Portsmouth GDP that was "so bad as to make a reconstruction almost impossible." Nonetheless, he believed that this process can work if that is desired. He urged NIOSH to not be put in a position where it appears to be like DOE, or the program will fail. He would like to see it succeed and thought that it could.

Mr. Espinosa asked if NIOSH has bilingual staff engaged, and Mr. Elliott confirmed that, by both NIOSH and ORAU do so. Mr. Espinosa offered to refer NIOSH to Navajo translators if the need occurs, and Dr. Melius also suggested tribal councils as sources of help.

Mr. Miller asked if there is any plan for a public briefing on NIOSH's Residual Contamination Study report. Mr. Elliott noted that the Board was briefed on this at the last meeting in Santa Fe. It is a complex document with a format NIOSH has had difficulty in reconfiguring to place it on the Web, but it will be there. Mr. Miller then asked if any selection had been made of a Board member for the audit panel, and Mr. Elliott responded that the Chair will appoint that person.

Mr. Robert Tabor, of the Fernald Atomic Labor Council asked why Charleston was chosen for the next meeting, as opposed to Augusta, to accommodate the Savannah River Site (SRS) workers. Dr. Ziemer responded that Charleston was chosen in order to be close to the SRS. Mr. Elliott explained further that Aiken and Augusta were discussed as well, and added that the SRS Health Effects Subcommittee, supported by CDC, has held meetings all around the area that have been well attended.

The public portion of the meeting was adjourned at 9:25 a.m. After a short break, the Board met in Executive Session to discuss and review the development of the proposed independent government cost estimate for the contract discussed at this meeting. Since the line on which Ms. Munn was calling was not secure, she was unable to attend that portion of the meeting.

I hereby confirm that these Minutes are accurate to the best of my knowledge.

Paul L. Ziemer, Ph.D., Chair

2/17/23
Date

ATTACHMENTS

Draft Proposed Dose Reconstruction Methods/Procedures Review
January 7, 2003

The contractor shall review all relevant dose reconstruction methodologies and/or procedures employed by NIOSH / NIOSH contractors in conducting individual dose reconstructions and SEC petitions. The contractor shall determine whether methodologies and procedures are consistent with requirements under 42 CFR 82 and shall determine that there are sufficient procedures to achieve consistent application of the requirements in 42 CFR 82.

The contractor shall review all methods/procedures being used by NIOSH and the NIOSH contractor for the determination of a dose estimate (individual or SEC-related dose estimates). This includes but is not limited to:

1. Review the internal and external radiation dose reconstruction technical basis documents,
2. Review of methods for estimating "missed dose" and "un-monitored dose" (for cases related to monitoring technology and for cases where monitoring was not performed, monitoring data is not available or incomplete or otherwise inadequate),
3. Review of the statistical approaches developed for multiple dose reconstructions,
4. Review procedures used for determining whether data is sufficient to make a reasonable dose estimate,
5. Review methods or procedures used for substituting exposure information for unavailable or incomplete information
6. Review methods for estimating uncertainty in dose and uncertainty distributions surrounding internal and external dose reconstructions on a facility and time specific basis and determine whether, how, and to what extent the benefit of the doubt was resolved in favor of the claimant where there where uncertainties,
7. Review procedures and questionnaire used for work history phone interview,
8. Review the NIOSH methods, procedures and performance in evaluating, analyzing and validating all contractor work products.

Action Items of the Tenth ABRWH Meeting

NIOSH will provide the ABRWH with a list of the sites lagging in responding to records requests and a breakdown of the reasons why. Sundin will provide.

Mr. Elliott will check on whether the affiliation may be identifiable of the review panel members, other than the Board member, referenced in Attachment A.

An update on implementation of the conflict of interest policies was requested in the next meeting agenda.

The members favored selecting April 28-29 as the dates for the next meeting; May 1-2 and 19-20 were also acceptable. Oak Ridge, TN, is the best site, but Knoxville, TN, is most likely logistically.