Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

Summary Minutes

Eighteenth Meeting of the Advisory Board on Radiation and Worker Health

October 28-29, 2003

Meeting Held at the Adams Mark
St. Louis, Missouri

Executive Summary

The Eighteenth Meeting of the Advisory Board on Radiation and Worker Health (ABRWH or the Board) was held at the Adams Mark St. Louis Hotel in St. Louis, Missouri on October 28-29, 2003. All members but one were in attendance. Others in attendance included staff of various Federal agencies, as well as members of the public. The Summary Minutes of Meeting Seventeen were approved with no changes.

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Tuesday, October 28, 2003

Claimant Communication

Ms. Chris Ellison of the National Institute for Occupational Health and Safety/Office of Compensation, Analysis and Support (NIOSH/OCAS) presented an overview of the claimant communications, outlining the four primary methods. They consisted of phone calls, e-mails, the web site, and written communications. She announced two new pieces to be included in the written communications, which are a flow chart and an activity report.

Following her presentation, **Ms. Ellison** entertained questions from the Board.

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OCAS Program Status Report

Mr. David Sundin of NIOSH/OCAS announced the number of claims to date as '14,500-some.' He reminded the Board that there is not only an electronic file, but a paper file of documents on each claim. He gave a breakdown of percentages of claims involving Atomic Weapons Employers (AWEs) and Department of Engergy(DOE) site employees and survivors. A profile was presented of the types of cancers represented in the claimant population, warning against over-interpretation of the list.

Mr. Sundin noted a marked improvement in the responsiveness of the DOE points of contact for requests for information. The total percentage of the outstanding requests more than 60 days or older is now down to eight percent.

Mr. Sundin announced initiation of another recruitment effort for physicians for the Physicians Panel under Subtitle D.

Four completed site profile documents are now out on the web site. They are Bethlehem Steel, Savannah River Site, Blockson Chemical and the Mallinckrodt Technical Basis Document. The residual contamination final report is drafted and in final review.

Mr. Sundin answered questions from the Board following his presentation.

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DOL Program Status Report

Mr. Jeff Kotsch presented the Department Of Labor's (DOL) program status report. He gave an update on the number of claims, with a breakout of claim types. Approximately 53 percent of the total cases have received final decisions, resulting in compensation payments to 9,143 claims in the amount of roughly $673,991,000 in compensation. Medical benefits in the amount of $19,765,000 have been paid as of October 23rd.

Mr. Kotsch updated the Board on the improvement in the ability of the DOL to get claims through the process. He discussed a continuing outreach program. The number of cases being received at present was noted. Long-term projections of future claims were discussed.

Questions were taken from the Board following the presentation. Those which were outside **Mr. Kotsch**'s area of expertise he agreed to refer to **Mr. Pete Turcic** for clarification.

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DOE Program Status Report

Mr. Tom Rollow of the Office of Environment Safety and Health presented a status report from the DOE. **Mr. Rollow** is director of the office of worker advocacy.

Mr. Rollow presented an overview of the differences between the Subtitle B portion of the program managed by DOL and the Subtitle D portion managed by DOE.

Mr. Rollow described accomplishments of and continuing challenges to his office.

Following his presentation, **Mr. Rollow** entertained questions from the Board.

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Public Comment Period

Public comment was solicited on both days of the meeting. An extra opportunity was offered on the first day. Public input in the first session included the following:

- Issues regarding concern for missing records.
- Need for clarification to claimants between Subtitle B and Subtitle D claims.
- Continuing outreach efforts.

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Dose Reconstruction Workgroup Report

Mr. Mark Griffon led the Board in a discussion of three task orders which were to be presented for approval by the Board. Changes made to the draft tasks since the previous Board meeting were highlighted.

After discussion, all three tasks were voted on and approved.

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Board Discussion - Claims Review Process

Mr. Larry Elliott announced that the contract for technical support to the Board had been awarded to Sanford Cohen & Associates.

A suggestion was made by **Mr. Elliott** that the Board take some time to discuss the issue of a dose reconstruction subcommittee and the differences between a subcommittee as an ongoing working group and a working group, essentially an ad hoc group with a specific, defined task.

After discussion, the matter was tabled until the following day

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The second opportunity for public comment in the day was offered. Input from that session included the following:

The schedule for issuance of the Special Exposure Cohort rule.
Conflict of interest statements for those parties working on the site profiles.
Observations from review of the Mallinckrodt Technical Basis Document.
Interest in worker input to the site profiles.
Vignettes of incidents from the personal experience of a number of former Mallinckrodt workers and/or their children.
Perceptions of being passed from one agency to another.
Integrated Modules for Bioassay Analysis (IMBA) model availability.

Wednesday, October 29, 2003

Review and Approval of Draft Minutes

A motion to approve the Executive Summary and Minutes of the seventeenth meeting was seconded and unanimously passed.

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Administrative/Housekeeping

Mr. Larry Elliott addressed the issue of Board members receiving correspondence and/or phone calls from claimants and interested parties. He offered assistance from NIOSH in Board response.

Ms. Cori Homer reviewed several routine administrative and housekeeping items.

Mr. Robert Presley asked about member interest in visiting the Nevada Test Site following the December meeting.

Items of interest for the December agenda were solicited

The Board agreed to meet in Augusta, Georgia on February 5th and 6th. Washington, D.C. was agreed to as a back-up location.

The week of April 19th was decided on for the following meeting, to be held in Richland, Washington. No specific dates were decided on.

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Site Profile Updates

Dr. James Neton described the purpose of the document, and the status of other site profiles under development. He then presented a detailed overview of the Technical Basis Document (TBD) for the Mallinckrodt Chemical Works.

Dr. Neton's presentation included a history of the use of the Mallinckrodt site and its evolution over the years the site was in operation. He described the uranium refining process and how it led to the radiological characteristics and conditions. A summary was given of the types of available data and how determinations were made of radioactivity intakes, both internal and external doses.

Dr. Neton's presentation was followed by questions from the Board and discussion of the content of the Mallinckrodt TBD.

> **A motion that NIOSH develop a program for public and site expert participation in development of site profiles was seconded and passed.**

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Working Groups on Options for Evaluating Claimant Interviews

Dr. James Melius provided an update on the working group. No recommendations were available at this time, but are expected to be provided at the December meeting.

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Research Issues

Mr. Russ Henshaw, NIOSH/OCAS, presented considerations for adopting and implementing modifications to cancer risk models and an update on research topics. He described the differences between the NIOSH-Interactive Radio Epidemiological Program (IREP) and National Institues of Health (NIH)-IREP models.

Mr. Henshaw noted potential effects of risk model modifications, as well as practical considerations for doing so.

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Public Comment Period

Public Comment was solicited on both days of the meeting. Public input on the second day included the following:

- Desire for input from former employees in site profile development.
- Conflicting information given to workers during employment.
- Inclusion of Mallinckrodt workers in the Special Exposure Cohort.
- Emphasis by employers to employees on the secrecy of the work.
- Documents reflecting what workers had to say to keep their jobs, rather than the truth.
- A request for another visit from NIOSH or Oak Ridge Associated Universities (ORAU) specifically to discuss the Mallinckrodt TBD.
- An offer for use by NIOSH of the information gathered over the years from the site by the Missouri Department of Natural Resources.
- Questions related to the Blockson Chemical Site TBD not addressing radon exposures.

With all further business to come before the Board requiring action in Executive Session, the public portion of the meeting was adjourned.

End of Executive Summary

Tuesday, October 28, 2003

OPENING REMARKS

Dr. Paul Ziemer, Chairman of the ABRWH, called the meeting to order, welcoming the attendees. He announced **Dr. Henry Anderson** would be absent from the meeting.

Dr. Ziemer called for everyone to register their attendance in the book provided. He instructed members of the public to sign up if they wished to address the Board during the public comment period. **Dr. Ziemer** reminded the members of the public that the comment period was not a forum for a question and answer session, but comments on the program or a specific issue were invited.

Noting that perhaps all members of the Board had not had an opportunity to review the minutes, **Dr. Ziemer** inquired whether the Board's preference might be to defer approval until the following day The members agreed.

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CLAIMANT COMMUNICATION

Ms. Chris Ellison
NIOSH

In her overview of the claimant communications, **Ms. Ellison** outlined the four methods. They included phone calls, e-mails, visits to the web site, and written communication. Two new pieces to the written communication were announced. They are a flow chart graphically describing the steps of the claims process, and an activity report. The flow chart will be included in the acknowledgement packet sent to a new claimant. Pending claimants will be sent the flow chart in a separate mailing. The activity reports will be mailed quarterly and will include both a status report on the pending claim, as well as program information.

Discussion Points

- **Dr. Genevieve Roessler** asked if a determination had been made as to the effectiveness of the web site. **Ms. Ellison** reported that web site "hits" are tracked, but the majority of contact from claimants is through e-mail or phone calls.
- **Dr. Roy DeHart** inquired into the number of dead letters.

Ms. Ellison responded that when a letter is returned, DOL is contacted and those issues are being worked out.

Dr. Paul Ziemer wondered if claimants experienced confusion about who communications were coming from. **Ms. Ellison** replied that there did not seem to be. **Mr. Larry Elliott** added that, in anticipation of that problem, each letter sent throughout the process introduces the claimant to the next person they may expect communication from. **Mr. Elliott** noted that the issue of dead letters was becoming even more important as dose reconstructions were being finalized, and the matter was being addressed.

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OCAS PROGRAM STATUS REPORT

Mr. David Sundin
NIOSH/OCAS

Mr. Sundin reported on the number of claims to date. He reminded the Board that both an electronic and a paper file is maintained on claim documents. **Mr. Sundin** included a breakdown on percentage of cases involving AWE and DOE site employees and survivors.

A marked improvement was noted in the responsiveness of DOE points of contact for requests for information. The total percentage for outstanding requests more than 60 days or older is now down to eight percent.

Mr. Sundin presented a profile of the types of cancers represented in the claimant population, warning against over-interpretation of that list. Non-melanoma skin cancer predominates.

Announcements were made of the following activities and/or achievements:

Initiation of another recruitment effort for physicians to serve on the Physicians Panels under Subtitle D.
Four completed site profile documents are now out on the web site. They are Bethlehem Steel, Savannah River Site, Blockson Chemical and Mallinckrodt Technical Basis Document.
The residual contamination final report is drafted and in final review.

Discussion Points

- **Dr. Roy DeHart** asked who was doing the medical coding of the cancer types, noting that, as a physician on the Physicians Panel, mis-diagnosis is often seen. **Mr. Sundin** replied that it is DOL's responsibility to ensure the medical record supports the diagnosis, and they do provide the codes. It was pointed out that DOL is amenable to reviewing any apparent errors and making changes where necessary.
- **Mr. Robert Presley** inquired into availability of the residual contamination report. **Mr. Sundin** indicated it would not be available until it had been released to Congress.
- **Mr. Michael Gibson** asked for elaboration relative to staffing and development of the site profile teams. **Mr. Sundin** asked if he might defer to **Dr. Jim Neton**, who was presenting on site profile status the following day.
- **Dr. Paul Ziemer** wondered about the time commitment of a physician serving on the Physicians Panel. **Dr. DeHart** noted that he averaged four to six hours per case, though some required less time. **Mr. Sundin** added that DOE was interested in identifying physicians able to devote as many hours as possible and the latest recruitment announcement emphasized full-time participation was desirable. The time commitment is significant.
- **Dr. Ziemer** was curious whether there were any projected numbers for future claims. **Mr. Sundin** suggested DOL might have a better answer since they initially develop the cases and are involved with the traveling resource centers in outreach efforts.

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DEPARTMENT OF LABOR STATUS REPORT

Mr. Jeff Kotsch
Department of Labor

Mr. Jeff Kotsch updated the Board on the number of claims, with a breakout of claim types. Approximately 19,300 cases have gone to final decision, or 53 percent. This represents approximately 24,000 claimants, roughly 10,200 approvals, and 13,700 approvals. This has resulted in compensation payments to 9,143 claimants in the amount of some $673,991,000. Medical benefits in the amount of $19,765,000 have been paid as of October 23rd. **Mr. Kotsch** reiterated that the majority of denials were for non-covered medical conditions.

Mr. Kotsch commented to the Board on the ability of the DOL to get the claims through the process. He discussed a continuing outreach

program and the number of cases being received at present. **Mr. Kotsch** indicated he would relate the Board's interest in projected numbers to Mr. Pete Turcic for an answer.

Discussion Points

- **Dr. Paul Ziemer** inquired whether it was generally felt the major sites had heard about the program, relative to past workers. **Mr. Kotsch** replied that it was his understanding the information had been pretty thoroughly disseminated. There were some sites where greater numbers of claims had been expected based on the number of workers.
- **Mr. Mark Griffon** asked if the DOL had an outreach plan that might be made available to the Board. **Mr. Kotsch** indicated that he knew a plan existed, and would pass the request on to Mr. Turcic.
- **Mr. Leon Owens** commented that he and Mr. Turcic had been present at a recent meeting of the atomic council which is composed of a number of Protocol for Assessing Community Excellence (PACE) locals. A session on outreach efforts was included, with a variety of ideas passed back and forth. **Mr. Owens** anticipates DOL will use those ideas for an outreach program once they have been compiled, noting there had been participation by the active unions.
- **Dr. Genevieve Roessler** asked what was being done relative to outreach directed at retirees who had left the geographic region of their employment. **Mr. Kotsch** indicated he knew unions were aiding in getting information out through union newsletters.
- **Mr. Owens** observed that privatization had created a challenge relative to unions accessing employment records from former DOE sites.
- **Dr. Ziemer** asked if the Board might be provided a summary of Mr. Kotsch's presentation since he'd used no handouts and it included a lot of numbers. **Mr. Kotsch** agreed.

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DEPARTMENT OF ENERGY STATUS REPORT

Mr. Tom Rollow, Director
Office of Worker Advocacy
Department of Energy

Mr. Tom Rollow began his presentation with an overview of the differences between the Subtitle B portion of the program managed by DOL and the Subtitle D portion managed by DOE. In addition, the DOE

provides records from DOE sites to the DOL and to NIOSH in support of the Subtitle B portion.

The Secretary of the DOE last spring asked **Mr. Rollow**'s office to begin an initiative to process all cases within a 12-month period. This takes resources, and he announced their plan for efforts to accommodate this request. The plan included additional funding and efficiency measures. These will entail batch processing and possibly reworking the Physician Panel makeup.

Noting that the Subtitle D program is not federally funded, but works through state Worker's Compensation, the willing payer issue is a continuing challenge.

Discussion Points

- **Mr. Michael Gibson** inquired if Mr. Rollow could comment on the Department's opinion relative to rumblings that the Senate was looking at ways to move responsibility for the program to another agency. **Mr. Rollow** responded that the original law placed the responsibility for Subtitle D with the DOE and they would carry it out to the best of their ability and complete the job. Should the Congress or the President decide to make a change, the Department would support it 100 percent and work with whatever remedy they chose to put in place.
- **Mr. Mark Griffon** asked who made a determination that records were too difficult to retrieve if asked for them by NIOSH. **Mr. Rollow** noted that his office funded retrieval of records and generally went very far and deep in doing so. He indicated he would discuss the matter with NIOSH to see if something more could be done to support their efforts.
- **Dr. Roy DeHart** commented that he'd seen a recent article in his local newspaper which had completely confused the two parts of the program. He expressed a need for public clarification. **Mr. Rollow** replied that it is a complex program, but he has also noted the confusion. The DOE takes care to separate the two in every public gathering, noting that it is a continuing challenge for everyone.
- **Dr. Paul Ziemer** inquired whether the fees for the Physician Panels came from the NIOSH budget or Mr. Rollow's. **Mr. Rollow** responded that the fees were fixed by law to a certain Federal government pay scale and came from his budget. However, the pay scale is on the low end for what the physicians are accustomed to being paid.

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PUBLIC COMMENT PERIOD

Mr. Tom Horgan
Office of Senator Christopher Bond

Mr. Horgan welcomed the Board to Missouri on behalf of Senator Bond. He pointed out reasons why the program is of great interest to the State of Missouri. **Mr. Horgan** commented on the complexity of the program and the frustration of the Missouri constituency, and offered his opinion that the presence of the Board and NIOSH would be very helpful.

Ms. Denise Brock
United Nuclear Weapons Workers, St. Louis

Ms. Brock inquired if she might pose questions to Mr. Rollow regarding claimants under the Subtitle D portion of the program. **Dr. Ziemer** indicated she might pose her question, but the answer may have to be deferred.

Ms. Brock asked if claimants under Subtitle D were without remedy due to Mallinckrodt's previous private insurance, statute of limitation problems, and Tyco, the entity which purchased Mallinckrodt, had its own issues.

Dr. Ziemer noted that her questions were on the record and some response may be allowed, but reminded the public that the comment period was not intended as a question and answer session.

Ms. Brock asked if Freedom of Information Act (FOIA) requests for documents and memos related to exposure information were considered under Subpart D. She further inquired how latency periods factored into a Worker's Compensation claim.

Commenting on the need for outreach, **Ms. Brock** indicated only 400 of 3,300 direct Mallinckrodt employees have filed claims. She expressed a further concern that indirect employees were being missed.

Indicating that the Board was interested in the answers to her questions, **Dr. Ziemer** asked if **Mr. Rollow** could respond now or would need to provide them later to both the Board and **Ms. Brock**.

Mr. Rollow replied that the willing payer issue was very complex. The law states that the DOE can order its contractors not to contest a

claim in the Worker's Compensation system. The problem is there are now some facilities where DOE is no longer present and has no contractor there. A DOE contractor may have employed subcontractors, whose employees came to the site with their own Worker's Compensation arrangements. DOE has no legal way to order the subcontractor not to contest a claim. Worker's Compensation works differently in each state with its own set of rules.

Mr. Rollow indicated he hadn't understood the question related to FOIA and getting sick later and asked for clarification.

Ms. Brock confirmed she was not so familiar with the Subtitle D portion of the program, and wondered if a claimant who had been denied after review by the Physicians Panel was similar to a dose reconstruction with not enough exposure. She asked if a FOIA request that may provide further information factored into Subtitle D.

Mr. Rollow explained that every applicant under Subtitle D was permitted to submit items for the record. Any information obtained through a FOIA request can be added, and there are several opportunities to do so throughout the process. Applicants get a last look before the package is sent to the Physicians Panel.

Mr. Rollow added that the Physicians Panel denies nothing. They present a finding that it is more likely than not that illness was a result of the claimant's work at DOE, or they don't have that finding. It does not necessarily mean there will be a denial in the state system.

Ms. Clarissa Eaton, Board Member
United Nuclear Weapons Workers of St. Louis Region

Ms. Eaton addressed her concern regarding missing records. **Ms. Eaton** expressed her belief that an obligation was owed to the men and women who worked to protect the country.

Ms. Eaton further commented that everyone who had worked at a DOE facility should be included because of residual contamination. She observed that after the Cold War weapons workers, facilities were like a game of hot potato and properties were sold and resold and the cleanup problems were never addressed. She noted that Missouri has now become a state of pollution.

Mr. Bob Tabor
Fernald Atomic Trades and Labor Council

Mr. Tabor described recent outreach efforts at his site. He noted areas in need of improvement for future efforts, possibly through use of overheads. He cited confusion among claimants between Subtitle B and Subtitle D as a problem not eased by the meeting.

Mr. Tabor described some claimants having informed him that contractors showed up at Worker's Comp hearings with their attorneys to contest the claim. He expressed the union position as being that if a contractor takes over a site, he takes over the problems and it shouldn't matter who was the contractor at a given time. He asked **Mr. Rollow** for some clarification.

Mr. Rollow responded that the order from Congress to the DOE is to not contest claims coming through the Subtitle D program only. The Workers Compensation program tends to be adversarial, with both sides challenged to prove their points. That's just the way the process works. The Federal government has no say in it. The rules are made by the states. DOE is not asking its contractors to roll over on every claim.

Mr. Rollow further commented that if there are some overly-adversarial relations, those issues might be raised either with the Department or with local management at those sites.

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DOSE RECONSTRUCTION WORKGROUP

Mr. Mark Griffon,
Workgroup Chair

Mr. Mark Griffon led the Board in a discussion of the task orders which were presented for Board approval. **Mr. Griffon** detailed the working group's meeting in Cincinnati, noting changes in the draft tasks covered at the previous meeting. Those changes were a result of that meeting with NIOSH staff.

The change **Mr. Griffon** highlighted in the Procedure for Processing Individual Dose Reconstruction Reviews was that it now included a recommendation for establishment of a subcommittee.

Of particular interest in the Site Profile Review task was the number of reviews specified in the Period of Performance.

The Dose Reconstruction Review Tracking task gives responsibility to

the contractor for developing a database system to track cases and give reports back to the Board.

Discussion Points

Ms. Wanda Munn inquired as to the anticipated size of the subcommittee. **Dr. Ziemer** recommended it be a minimum of four, possibly five, and would serve as a steering committee.
Dr. Tony Andrade wondered if the site profile review task would be delayed. The task calls for 12 reviews and only four are complete. **Dr. Jim Neton** explained there were 15 profiles expected to be completed by the end of the year. **Dr. Andrade** asked if they were sites which dealt with only one isotope or had limited operations. **Dr. Neton** replied that was not the case. The site profiles had been scheduled according to the number of claims and covered the majority of sites having complex isotopic work, approaching 80 percent of the claimant population.
Mr. Griffon wondered what would happen if there were not that many completed site profiles of interest to the Board. **Dr. James Melius** opined that the site profiles were going to be more intertwined with dose reconstructions than originally anticipated and the Board would want to spend time reviewing them.
Dr. Ziemer pointed out that the review process had to be developed by the contractor, which would come back to the Board for approval.
Dr. Melius observed the matrix for selecting cases for review may need to change based upon site profiles reviewed.
Ms. Munn asked what percentage of the total site profiles was the ten to 12 specified in the task. **Dr. Neton** responded that since the number of profiles projected for completion this year was 15, that was the majority, noting they are major sites.
Mr. Griffon indicated the rationale for the high percentage selected was because of the impact on individual dose reconstructions.
Ms. Munn questioned if such a large number could be justified if early reviews show the process and results to be reasonable and acceptable. **Dr. Ziemer** noted the Board's job was to audit and find weaknesses, not to validate. The number really serves as a guidance number for the contractor.
Dr. Ziemer observed that the contractor would probably have to do the tracking for its own purposes, but the task formalizes the requirement to report to the Board.
Dr. Andrade asked if the same contractor would be doing all three levels of reviews on the individual cases. **Mr. Elliott** answered

that there was only one contractor, which would perform all tasks placed before them.

- **Mr. Griffon** indicated that a question had come up in the working group as to what point in the process individual cases would be available for review. **Mr. Elliott** responded that cases would be available upon final decision from DOL, so long as the case is not on appeal.

Dr. Ziemer advised the Board that the recommendation for approval of the Procedure for Processing Individual Dose Reconstruction Reviews came from the working group as a motion requiring no second. If approved, it would become the Board's working document and could be changed at any time upon action by the Board. With no further discussion requested by the Board, **Dr. Ziemer** called for a vote.

> **The motion to approve the Procedure for Processing Individual Dose Reconstruction Reviews was passed unanimously.**

- **Ms. Munn** indicated she was still concerned about the large number of site profiles being required. **Dr. Ziemer** asked if tasks couldn't be changed if needs changed. **Mr. Elliott** responded that tasks could be added to, but once a scope of work was placed before a contractor, it could not be reduced.
- **Dr. Genevieve Roessler** stated she didn't feel it was a large number. The phrasing of the task afforded some flexibility, and the contractor should have a variety of different types of sites to evaluate.
- **Dr. Andrade** suggested perhaps starting with five and increasing the scope, given **Mr. Elliott**'s information and **Ms. Munn**'s comments.
- **Mr. Leon Owens** commended the working group for its job and called for the question.

Dr. Ziemer acknowledged calling for the question as a formal motion to end debate, which required a two-thirds majority vote to pass.

> **The motion to end debate was seconded and passed by a vote of eight to two.**

Dr. Ziemer called for a vote on the motion to approve the Site Profile Review task.

> **The motion to approve the Site Profile Review task**

was passed, with one abstention.

The motion to approve the Dose Reconstruction Review Tracking task required no second. With no further discussion requested by the Board, **Dr. Ziemer** called for a vote.

The motion to approve the Dose Reconstruction Review Tracking task was passed unanimously.

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BOARD DISCUSSION, CLAIMS REVIEW PROCESS

Mr. Larry Elliott announced that the contract for technical support to the ABRWH had been awarded to Sanford Cohen & Associates. The announcement will be placed on the web site following determination of the portions appropriate for public dissemination by the Procurement Office.

Mr. Elliott suggested taking some time to discuss the subcommittee recommendation and the differences between that entity and a working group.

Ms. Cori Homer of the Atlanta NIOSH office presented the Board with a description of the differences between the two. Applicable requirements for establishment under FACA rules, as well as authority of a subcommittee, were discussed.

Since the subcommittee recommendation was made to effectuate efficiency, **Mr. Elliott** offered to walk the Board through the task order process. This was an effort to help the Board come to an understanding of specified time periods for each required step.

Following **Mr. Elliott**'s description of the process and extensive discussion, **Dr. Ziemer** pointed out to the Board that an agreement at this meeting was not necessary. The issue was tabled until the following day in order to stay with the agenda and proceed to public comment.

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PUBLIC COMMENT PERIOD

Mr. Richard Miller
Government Accountability Project

Mr. Miller inquired into the schedule for the Special Exposure Cohort (SEC) rule being available. **Mr. Elliott** responded that the rule has been revised and is under review. It will be published when released by the Department, and available for petitions to be generated against.

Mr. Miller raised the issue of conflict of interest statements for those working on the site profiles. **Mr. Elliott** noted they are now on the web site.

Mr. Miller queried policy that applies to dose reconstructors not applying to those doing site profiles. **Mr. Elliott** responded that they didn't want to see anyone working on their products serving on the opposite side of litigation. **Dr. Neton** commented on the issues **Mr. Miller** has raised about people who have worked at a site and are now doing site profiles, noting that the expertise to do the site profiles lies with those who have experience at a site.

Mr. Miller contended it was an incongruity to have different professional standards of conduct applied to those doing dose reconstruction than for those who do site profiles and wondered if that were "spelled out" anywhere. **Mr. Elliott** was concerned that **Mr. Miller**'s example had been accurately portrayed for the record. The situation is one individual from a particular company working on one site profile, with another individual from that company testifying against a Subtitle D claim in Alaska. **Mr. Elliott** clarified that **Mr. Miller** was inquiring into whether that was a perceived conflict, even with affiliations disclosed, and how it was handled. **Mr. Miller** confirmed that it was.

Dr. Dan McKeel
Washington University

Dr. McKeel commented on the TBD for the Mallinckrodt site. Specific areas of concern from his perspective as a pathologist were cited. He noted that the document's recent release had not allowed for an in-depth review. He cited two additional studies by Dr. Nancy Dupre-Ellis which were not included in the profile and wondered why.

An additional concern expressed by **Dr. McKeel** is disclosure of the number of workers for whom there is incomplete radiation exposure data.

Ms. Nancy Adams
United Nuclear Weapons Workers

Ms. Adams spoke on behalf of her father, a long-time Mallinckrodt employee. **Ms. Adams** described difficulties she had encountered relative to missing records for his employment period, noting that her father had been a part of the Dupre-Ellis study referred to by **Dr. McKeel**.

Mr. James Mitulski
United Nuclear Weapons Workers

Mr. Mitulski spoke on behalf of his father, a former Mallinckrodt worker. **Mr. Mitulski** was also familiar with the issue of missing records, noting some people had only been able to prove their employment through Social Security records. Some of those people are now claimants.

Mr. Mitulski described incidents his father had been involved in during his employment at Mallinckrodt. He expressed an opinion that granting of SEC status is dependent upon effectiveness of a state's legislators.

Ms. Barbara Smiddy
G. B. Windler Florist

Ms. Barbara Smiddy spoke to the Board about her father's employment at the Small Arms Factory at Weldon Spring during World War II. She believed his health problems were related to his employment. She described what she perceived as being bounced from one agency to another.

Ms. Denise Brock attempted to respond to some of **Ms. Smiddy**'s questions with information she had gathered through her efforts.

Mr. Richard Miller
Government Accountability Project

Mr. Miller asked to be allowed to raise a follow-up question on the availability of the IMBA model so that dose reconstructions can be independently evaluated. **Dr. Neton** responded that they had inquired of the contractor who provided the program and was advised that a web-based version was not available. It is a proprietary-type calculation engine customized for NIOSH application.

Dr. Neton added that, while not convenient, it is available for use in the NIOSH public reading room.

Mr. Miller asked if money was necessary to make it accessible to the public, and how the Board was going to do its work if it were not available to them. **Dr. Neton** answered that their licensing agreement allowed use by the Board and the contractor.

Mr. Miller asked if there were anywhere on the earth other than Cincinnati where it could be made available, or if there were some practical solution, like $10,000, to make the problem go away. **Mr. Elliott** replied that the only practical solution for those who cannot make use of the availability NIOSH can provide is to purchase the software and get a license themselves. It is a licensure issue only. **Mr. Miller** contended it was a real problem to use proprietary software not available to the public to make decisions about a public compensation program. **Mr. Miller** opined that he had been patient, but NIOSH needed to "grapple" a bit more on the licensure issue as it was beginning to pose a question. **Dr. Neton** reminded **Mr. Miller** that it was the software that is proprietary. The methodology is generally available to the public.

Mr. Mark Griffon suggested the DOL resource centers might be a place it could be made available. **Dr. Ziemer** noted the point had been made and the staff could explore whatever was out there. **Mr. Mitulski** suggested the public library or some government building. **Dr. Ziemer** observed that probably no one present was fully aware of the licensing issues. The point had been made and may be worth following up.

Dr. Melius asked if any progress had been made on providing public access or opportunity for input and comments on the site profiles. **Mr. Elliott** deferred elaborating due to **Dr. Neton**'s scheduled presentation on the subject the following day. He did explain that the site profiles have been placed on the web site. Hard copies are available for those with no internet access, if requested. They ask for written comments to be provided the Docket Office, which tracks written comments on a variety of publications. Comments would then go on the web site or be available upon request.

NIOSH will go to sites where the TBD or site profile has been approved and share it in a meeting with labor representatives from the site, explaining it to them. They will provide examples of dose reconstructions built from the document so they understand how the reconstructions work and where the profiles are critical in the process. They will ask for their comments.

Dr. Melius inquired if a meeting is scheduled in St. Louis for the Mallinckrodt profile. **Dr. Neton** answered that he would be discussing the Mallinckrodt document the following day, but they did not have a general meeting to discuss Mallinckrodt. Since the facility is no longer in operation, it's difficult to identify organized labor representatives to present it to.

Dr. Melius expressed his disbelief, given the comments heard from the public. He opined it wouldn't be difficult to pull together a group of people with knowledge of the facility and representational interest.

Mr. Michael Gibson asked if it wouldn't be more efficient to add workers to the site profile teams before the documents are finalized rather than getting comment afterwards. **Dr. Neton** asked if he might defer responding until after his presentation tomorrow. **Mr. Gibson** agreed.

Mr. Tom Horgan of Senator Bond's office asked if there was not going to be a discussion of the Mallinckrodt site profile the next day with feedback from the Board. He pointed out that, because he worked with the authorizing committee that has legislative oversight over NIOSH, DHHS and DOL, that was his primary purpose for being present. **Dr. Ziemer** indicated that was included in tomorrow's schedule.

Dr. Melius explained he had been referring to having workers from a site involved in the development of the site profile. A second portion had been to have a public session for NIOSH to present the site profile and receive comment or answer questions.

Ms. Denise Brock observed that while Mallinckrodt had once been independent, the union for the facility became the UAW. She noted that the biggest wealth of information is the former workers, who have amazing stories and memories. She asked if there would be time to let those workers speak tomorrow if she could get them to the meeting.

Mr. Elliott commented that at the August Board meeting in Cincinnati, individual comments were heard and considered. His reponse to Dr. Melius had addressed how NIOSH will handle the roll-out of the TBDs or site profiles. The documents will be taken into the field to solicit comment and input. This Board meeting in St. Louis is the first step to talk about the recently-developed TBD for Mallinckrodt. Tomorrow will provide an introduction, with Board and public comment welcome. As with all the TBDs, it will be brought back. It is not the final step.

The suggestion from **Mr. Gibson** to put workers on the site profile teams was heard and was not a viable solution. NIOSH has opted to go out and present the documents, present examples of dose reconstructions, help people understand how the documents are used and what a dose reconstruction looks like and take their comments. NIOSH needs comments to the written record. Due consideration was given to individual comments of the Board, and NIOSH is proceeding along the course outlined.

Mr. Melius expressed his confusion because **Dr. Neton** had said there was no meeting and **Mr. Elliott** was saying there would be meetings. **Mr. Elliott** noted that **Dr. Melius** had asked if a meeting had been scheduled. It has not. This Board meeting is the first step.

Mr. Gibson offered that the legislators and the President who signed the bill felt it necessary to balance the Board with doctors, scientists and workers. Those workers should be involved in every step possible in the process. And while workers may not fully understand the science, they know when they were sent into a room and an alarm went off; the professionals turned the alarm off and told them to go back in, it was just radon when it was something else. **Mr. Gibson** opined those may be the same people who wrote the site profile, and it seemed blatantly unfair.

Mr. Elliott responded that he agreed with **Mr. Gibson**, and that there are points in the process where that information is solicited. One step is the interview. With the site profiles has been added the opportunity for field visits, hearing comments and asking those people to make written comment. **Mr. Elliott** expressed his hope that **Mr. Gibson** understands effort has been made to bring worker perspective into the process in more ways than just sitting on the Advisory Board.

With no further comments, the Board officially recessed until the following morning.

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Wednesday, October 29, 2003

ADMINISTRATIVE/HOUSEKEEPING

Dr. Ziemer called the second day to order. The meeting commenced with administrative and housekeeping matters. The first issue before the Board was review and approval of the draft minutes of the seventeenth meeting.

REVIEW AND APPROVAL OF DRAFT MINUTES

A motion to approve the Executive Summary and Minutes of the seventeenth meeting was seconded and unanimously passed.

Mr. Larry Elliott offered the assistance of NIOSH in response to any correspondence and/or telephone calls Board members may be receiving from claimants or interested parties. He noted NIOSH would like to have a sense of the types of inquiries being received by Board members. The staff would be happy to assist in members preparing their own responses, or NIOSH could handle the response for them and provide a copy for their files.

Drs. Paul Ziemer, Roy DeHart, and **Genevieve Roessler** all indicated they had received such communications. **Ms. Wanda Munn** offered her manner of responding to verbal inquiries and telephone calls, noting that she had not received any written communications.

Mr. Elliott agreed **Ms. Munn**'s response was appropriate. He indicated NIOSH stood ready to help in any way the Board preferred.

Ms. Cori Homer reminded the Board of the importance of providing her with their e-mails of meeting time, prep time, and working group time She also requested that Board members not make their own flight arrangements, if at all possible, because reimbursement could not be guaranteed.

Ms. Homer announced that the annual report to GSA covering accomplishments and activities of the Board would be available around mid-December. She asked if anyone had interest in receiving a copy of the report.

Dr. Ziemer inquired into the length and format of the report. **Ms. Homer** responded it was approximately four to five pages, covering general financial information and activities of the Board for the

preceding year. She was uncertain as to the format in which it would be available. **Dr. Ziemer** suggested they be made available electronically, if possible, or by hard copy if necessary.

Mr. Robert Presley indicated he was speaking with personnel at the Nevada Test Site relative to a tour while the Board is in Las Vegas in December. The tour will take an entire day and is being scheduled for the day following the meeting. Names and Social Security numbers will be needed for those wishing to participate. **Ms. Homer** offered to assist in that effort.

Items of particular interest for the December agenda were solicited. **Mr. Elliott** indicated NIOSH would put a travel task before the Board's contractor to facilitate a face to face meeting in Las Vegas. **Mr. Griffon** inquired into the possibility of a presentation on the IMBA program, which **Mr. Elliott** agreed to look into. It was suggested that any items that come to mind prior to November 15 when *Federal Register* notice has to go out, be provided to **Dr. Ziemer** or **Mr. Elliott**.

Future meeting times and sites were discussed. The Board agreed to meet in Augusta, Georgia on February 5th and 6th to coincide with the Health Physics Society meeting the next week and because of its proximity to the Savannah River Site. The timing allowed for review and possible approval of early deliverables in the support contract. Washington, D.C. was agreed to as a back-up location.

The week of April 19th was decided on for the following meeting, to be held in Richland, Washington for its proximity to the Hanford site. No specific dates were decided on.

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SITE PROFILE UPDATES

Dr. James Neton
NIOSH

Dr. James Neton provided the Board with an update on progress on TBD and site profile development. He reiterated the purpose of the documents, supporting dose reconstructors by providing site-specific information, helps minimize interpretation of data. With approximately 130 health physicists slated on dose reconstructions, the document helps provide consistency and is used much like a handbook. They are dynamic documents, under review whenever new information becomes available.

All completed TBDs may be viewed at the web site. Comments are encouraged and can be made to the NIOSH Docket Office. The Docket Office address is located at the introduction to the individual site profile.

Briefings are being arranged with union representatives to solicit input as each document is completed. A meeting is scheduled at the Savannah River Site on November 11. Arrangements are currently being made to visit Hanford. The six TBDs making up the site profile for Hanford have just been completed.

Team members on individual site profiles are now listed on the ORAU web site, along with their associated conflict of interest statements.

Fifteen DOE facility TBDs are under development in parallel, with targeted completion by end of the calendar year. Completion of those 15 documents will provide the ability to address approximately 77 percent of the claims currently pending at NIOSH.

Mr. Michael Gibson interrupted to ask how many health physicists and parties involved in development of site profiles were Q-cleared and how classified relevant data was being included in the TBDs. **Dr. Neton** replied NIOSH had three and ORAU had 15 to 20 Q-cleared individuals. Q-cleared individuals have reviewed data to determine applicability to the site profiles. Thus far no classified information has been discovered that needed to be included in dose reconstruction.

Dr. Neton noted an additional issue with UCNI data, which is not classified but similar to Privacy Act information. **Mr. Presley** clarified UCNI as the acronym for Unclassified Controlled Nuclear Information. **Mr. Elliott** added NIOSH had successfully worked with classification officers to provide data or information couched in a way that it could be used but not jeopardize national security.

Returning to the Mallinckrodt document, **Dr. Neton** noted the scope of the document was limited to aid in reconstruction of radiation doses to workers at the St. Louis downtown site only, specifically plants 1, 2, 4, 6, 6E, 7, and 7E. The time period addressed is from April 1942 through July 1958. Currently reserved, residual contamination in the 1959-1995 time period will also be covered in the document.

The introduction covers the Manhattan Engineering District asking Mallinckrodt Chemical Works to begin research on uranium refining and processing operations. That was April of 1942. Three months later, they were in production. Between 1942 and 1957 more than 50,000 tons of natural uranium products were processed.

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A full-scale health program was not started until 1948. Film badging began in late 1945, with urinalysis some time later. Both Mallinckrodt and the AEC performed periodic air sampling, including radon breath analysis. External dose records are missing from 1942-1945. Internal dose records are missing for the 1942-1947 period.

This section also establishes the context for interpretation of existing records, along with the basis upon which to determine missing doses for periods in which records are non-existent.

Dr. Neton explained the history of site use provided a summary chronology, with descriptions of the work performed in major plants and the safety problems and solutions noted. The section covers decontamination and surveys performed. It moves through the recycling performed commencing in 1957 and waste residues taken to the St. Louis Airport Storage Site.

The section describing the uranium refining process explains the basic process, and defines three specific periods of time of significance. They are the wartime period (April '42 to April '45), the early postwar period (May '45 to December '49), and the later postwar period (1950 to 1958). The section discusses other processes, the ores and other feed forms used, as well as residues and effluents.

The next section covered radiological characteristics, conditions, considerations, and available date. It described units, limits and recommendations. Radioactivity content and handling of the ore, uranium produces, and residues was discussed.

Internal dose considerations included particle size, solubility, composition and sampling methods. Also reviewed were airborne dust levels, respirator use, radon and surface contamination. Information and available data included urinalysis, breath radon analyses, WBC and lung counts.

External dose considerations included film badges, extremity dosimeters and occupational X-rays. Other areas of interest were number of workers, number of hours worked per week, job types and work areas.

Determination of radioactivity intakes and internal doses included assumptions, estimating intake using surrogate worker data and time-weighted daily average exposure data, as well as calculation of internal doses for missing periods or for comparison.

Determination of external doses was covered by general considerations unmonitored workers. Application of dose data from available film badge dose monitoring, external exposure geometries and photon energy

ranges was discussed

Discussion Points

Mr. Mark Griffon queried whether there is any feeling for an inability to reconstruct dose for any subpopulation of worker at the Mallinckrodt site. **Mr. Neton** answered there was not.
Dr. James Melius asked what happened if a worker had been employed at the other facilities, too. **Dr. Neton** replied that if a dose reconstruction based on Mallinckrodt alone took the claimant into the compensable range, it was completed. If it did not, the claim would have to wait for the TBD on the other facility to make a determination.
Dr. Roy DeHart asked if any incidences of adverse events had been discovered through the document review. **Dr. Neton** answered that a few incidents were addressed in the document. Where documentation was available, they were characterized.
Dr. Genevieve Roessler inquired how long the development process had taken. **Dr. Neton** reckoned some six to eight months.
Dr. Roessler asked what part of total dose was assumed for the chest X-ray. **Dr. Richard Toohey** responded that since they were done at a hospital, it was presumed that both AP and lateral views were shot, and that they were given the typical exposures for the time.
Mr. Leon Owens wondered what the mechanism was for incorporating an undocumented significant event in the '45-'49 time period that was mentioned in several claimant interviews and necessary for a claim to be compensable. **Dr. Neton** replied that corroboration and plausibility would factor into the event being considered and put into the claimant's dose.
Mr. Mark Griffon asked how use of surrogate worker data was being validated. **Mr. Neton** indicated they would match as closely as possible. If you can't match, pick the next highest value to be found in the table.
Mr. Griffon wondered if any past experts had been interviewed in the process. **Dr. Neton** indicated they had not.
Mr. Griffon asked if the references would be posted on the web site. **Dr. Neton** replied that, to the extent that the Privacy Act would not be violated, that could be looked into.
Dr. James Melius commented that in the future it would helpful to have reports to be discussed in a meeting available beforehand. He added he found it disconcerting that in a process taking eight to ten months, no attempt was made to consult experts. He asked what plans were to do that in the future. **Mr. Elliott** answered

that consultation was sought where needed, as in the Bethlehem Steel document. The wealth of information available at Mallinckrodt allowed them to proceed without that need. The first goal is to get the documents out. Comment is welcome.

Dr. Melius said he still had a question about whether NIOSH planned to hold meetings. **Mr. Elliott** reiterated that it was the plan to do so.

Dr. Melius commented he was presuming NIOSH was rejecting involvement by labor or other interested parties prior to publication. **Mr. Elliott** replied it was not being rejected; it will be sought where it is felt necessary and appropriate to put out a quality document.

Mr. Melius inquired where that was being done on the 15 documents in development. **Mr. Elliott** responded that he could not comment with specificity on each individual document and where they were in their development.

Dr. Melius offered that he found **Mr. Elliott**'s answer unsatisfactory since nothing was scheduled and there was no commitment. Noting that the conflict of interest issue had been raised in public comment, he opined that the development of a policy in that regard was imperative.

Dr. Paul Ziemer observed that the document was probably never going to be complete and every resource will never be tapped. But it has to be put out sometime, and there appeared to be a wealth of information to support the Mallinckrodt document. Other information will be added as it becomes available. While further refinement may be helpful and useful, this document has already helped to process claims.

Mr. Elliott agreed, noting that NIOSH was concerned at the time involved if a participatory process were adopted. This was considered more expeditious.

Mr. Griffon asked if claimant interviews had been used in development of the TBD. **Dr. Neton** responded that they were checked to make sure there was nothing inconsistent with what the TBD is saying.

Dr. Melius opined that responding to a web site is not an open public process, noting that the documents were going to be used to reject claims. **Mr. Elliott** clarified for **Dr. Melius** that the TBDs or site profiles were not used to reject claims. They are to support dose reconstruction. The dose is either compensable or not.

Mr. Elliott offered that individual comments had been heard and reacted to, but if there was Board consensus, he needed to hear that.

Ms. Wanda Munn reminded the Board of Dr. Till's recent appearance

before the Board in which he spoke of the need for establishing a policy of when the science one has is what one will use, and recognize what is the reality in terms of imponderables that cannot be defined clearly. Failure to do so creates more confusion.

Mr. Gibson observed the science of health physics was not being questioned, but rather the adequacy of records of people for whom a Federal agency has already gone on record to say they were improperly monitored.

A motion was made by **Dr. Melius** and seconded by **Mr. Griffon** that the Board recommend NIOSH develop a process for public and site expert participation and involvement in the development of site profiles, that this participation include both prior to publication on the web site and comment after initial publication. **Dr. Ziemer** opened the motion for discussion.

Board Discussion

Mr. Owens agreed with **Mr. Gibson**'s comment, adding that measurements don't mean anything to a lot of people, they just feel lied to. The site profile development process needs to be as transparent as possible.

Dr. Tony Andrade agreed with transparency, but noted measurements have everything to do with the process. Assuming are all records are false and untrue and that folks who ran a radiation protection organization would falsify such things is unconscionable. He pointed out one must start somewhere dispassionate, which has everything to do with the records. The starting point is what is on paper. Agreeing that a larger outreach effort to let people know they can comment is needed, **Dr. Andrade** asserted his belief that the process currently in place is appropriate.

Dr. Roessler queried **Dr. Melius** about specifically what he would have done differently and how he would have gone about it.

Dr. Melius responded that his motion was to develop a process, and he felt the process should be flexible and would have to be different for different sites. Speaking from a greater familiarity with the Savannah River Site, **Dr. Melius** noted there were several opportunities to seek information from other resources which were not taken in the development of that TBD. He stated he was trying to defer to NIOSH as much as possible to let them develop a program that doesn't hamper their progress, but at the same time gives people a chance for input.

Dr. Ziemer opined that NIOSH, its staff, the Board and all its

representative facets were after the same thing: A good quality product. What needed to be recognized is that what appears to be issues of being lied to reflects ignorance. The changing dose limits themselves reflect changes in knowledge of the biological effects of radiation. Mistakes were made by even some of the best professionals simply as a result of ignorance or lack of information. **Dr. Ziemer** went on to say that while there may have been instances of falsification, he believed they were few and far between. If specifics were known, they should be taken into consideration. The issue of getting input from the worker side should be respected and he felt NIOSH wants to accomplish that. If it needs to be formalized, that may be useful. **Dr. DeHart** offered his support of the motion, but wanted to make clear his belief that NIOSH has made a good faith effort to do the best they could with what they have. His support is because the issue is divisive. The need for worker and expert participation has been expressed and this is an opportunity to continue that participation. **Dr. DeHart** cautioned that it is a mistake to assume this will resolve or remove any issues. It will, however, provide NIOSH with one more step of protection as it moves forward.

Mr. Gibson commented he was not questioning the credibility of any particular rad professional, but knew of some in the complex who put production over safety. He likened it to having to represent union employees caught sleeping on the job; there are some out there.

Dr. Roessler observed that from her evaluation of the Mallinckrodt document, it was very well done. She felt the motion would give the Board direction in prioritizing when its support contractor began their work.

Ms. Munn indicated that while all sources of valuable information should be incorporated into the final document, she has observed that what happens with public hearings and wide open input prior to having something to work from is cumbersome and time-consuming for everyone. It has been her experience that it is most effective to have a document based on the best evidence that can be supported by record and have input to that if there are shortcomings or errors to it. **Ms. Munn** offered her opinion that the motion was incorrect procedurally.

Dr. Ziemer pointed out that the motion does not mandate how the process is to be carried out other than to ask that there be input The process could in fact be exactly what has occurred.

Dr. Ziemer further noted that the Board must recognize it is not a management board for NIOSH. If the motion passes, it simply reflects

the sense of the Board. It is **Mr. Elliott**'s prerogative to use it or not use it, as he sees fit.

The motion that NIOSH develop a program for public and site expert participation in development of site profiles was passed.

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WORKING GROUP ON OPTIONS FOR EVALUATING CLAIMANT INTERVIEWS

Dr. James Melius
Workgroup Chair

Dr. James Melius reported that the working group had met with NIOSH staff by conference call and requested certain materials. Those items had been provided yesterday when the working group again met briefly. **Dr. Melius** described how the working group planned to approach their evaluation of the process. No recommendations were available at this time, but are expected to be provided at the December meeting.

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RESEARCH ISSUES

Mr. Russ Henshaw
NIOSH/OCAS

Mr. Russ Henshaw presented considerations for adopting and implementing modifications to cancer risk models and an update on research topics. He described some differences between the NIOSH-IREP and NIH-IREP models.

Mr. Henshaw explained that the interpretation of research findings is complex. When NIOSH last year observed that the thyroid cancer and leukemia models were the only ones to confer zero risk at short latency periods, they felt science did not support those exceptions. SENES-Oak Ridge, developer of NIOSH-IREP, was asked to create new models conferring some risk at short latency, with the caveat that doing so should not lower the PC for any potential claimant. NCI eventually agreed with the interpretation and modified NIH-IREP so that the two models now match NIOSH-IREP.

Scientific value and applicability of findings range from weak to

substantial. Prudence should be exercised in considering any findings. Scientific evidence may be sufficient for modification a risk model in some cases, not in others, depending on the potential impact on PC. Generally the greater the impact, the more stringent the standard should be for implementing any findings.

Uncertainty is a major contributor to compensability in many claims. As study results that would have an effect on the uncertainty built into the risk are incorporated, there's a domino effect. As uncertainty is reduced, compensation is also likely to be reduced.

Usefulness of research is another issue, including time frame for conducting and completing studies. It would not be in the best interest of the claimants or this program to commission a prospective cohort study slated to last ten years or more.

Updating research topics, **Mr. Henshaw** reported that NIOSH's Health-related Energy Research Branch is conducting a multi-site leukemia case-controlled study and intends to look at the CLL cases in that study. There are a number of issues related to smoking and the lung cancer model that are to be looked at on a high priority basis. Age at exposure is another controversial topic, with age at exposure workshops expected to commence before the end of the current fiscal year.

Comparing NCI-IREP and NIOSH-IREP, **Mr. Henshaw** noted the new NCI lung model is favorable to some claimant profiles, unfavorable to others. The changes made by NCI do not apply to radon exposures. It does take into account age at diagnosis and age at exposure. NIOSH-IREP does not. Other examples of differences were described, with **Mr. Henshaw** noting that NCI believes their change represents the best science available currently.

Mr. Henshaw summarized by stating that some modifications seem relatively non-controversial. Other potential changes are substantially more significant, and policy does play a role. NIOSH intends to use science to its fullest extent within the confines of current policy. Attention must be given to practical issues. Generally the more good quality data accumulated, the less the uncertainty and possibly the lower the probability of causation. Research projects are being planned that it is hoped will prove very relevant to the program.

Discussion Points

- **Dr. Melius** suggested consideration should be given to participation in the age at exposure workshop and that a workshop for the smoking issue might be a good way of handling that, too.

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PUBLIC COMMENT PERIOD

Public Comment was solicited on both days of the meeting. Public input on the second day included the following.

Dr. Ziemer again reminded the public that the session design allowed for comment for the record on the program, the policies or concerns. Questions on individual claims should be directed privately to the NIOSH staff.

He also noted that the format is not one of a question and answer period, but a period to make statements.

Ms. Dolores Stuckenschneider
Former Mallinckrodt Employee/Claimant

Ms. Stuckenschneider described her work history with the company and some of the frustrations she had experienced with the program.

Mr. Robert Leach
Former Mallinckrodt Employee

Mr. Leach described some of the working conditions at facilities within the complex. He noted things not taken care of were too numerous to go into, offering an opinion that there was no way an accurate exposure record could be developed because monitoring was done incorrectly.

Ms. Kay Drey
Nuclear Information and Resource Service

Ms. Drey explained that it was in 1974 that she began learning about the hazards of uranium mill tailings. In 1978 she learned St. Louis had uranium tailings from some of the most radioactive ore in the world.

Since that time she has met with many people who have told her about working for Mallinckrodt Chemical Works and the workplace hazards they faced. No one told the nuclear weapons workers, who were not allowed to use the words "uranium" or "radiation" that radiation is harmful. Decision-makers are only now reluctantly beginning to level with them.

Ms. Drey described situation that a worker had recounted to her

After spending an extended period of time just two years ago digging a trench at the downtown site as part of the cleanup, someone told him the gamma readings were not ten to 20 counts per minute, as in nature, but were 1,500,000 per minute.

As a request to the Board, **Ms. Drey** asked it consider including in its findings the observation that more than 60 years of radioactive waste has been accumulated in the world.

Mr. James Mitulski
United Nuclear Weapons Workers

Mr. Mitulski agreed with an earlier comment that there was no reason to assume company supervisors were not people of integrity. He noted there was also no reason to assume they were people of truth. He gave examples of conflicting information disseminated to workers. He commented that people sometimes say things to keep their jobs, so input from the people who were in the plants is needed. He described several incidents from his father's work experience, indicating that many people were told to drink beer on their way home and it would rinse everything out.

Mr. Mitulski suggested the only way to check out the validity of what the company says is to bounce it off what the laborers are saying, and then try to arrive at the truth.

Mr. Mark Bruening
United Nuclear Weapons Workers

Mr. Bruening spoke as a 17-year worker at both Mallinckrodt downtown and Weldon Spring who was diagnosed with colon cancer two years ago. He noted that Senator Bond had managed to appropriate $1.5 million for a city to build a street, but the workers wait months and years for compensation.

Mr. Don Camstrader
United Nuclear Weapons Workers

Mr. Camstrader recounted some of his experiences at the Weldon Spring site from '57 to '66, noting things were pretty primitive. As an example of how inaccurate monitoring records are, **Mr. Camstrader** described working with another employee on a particular job for several days. One day that employee told **Mr. Camstrader** he couldn't go back on the job because he'd come up "hot" the day before. Because they'd been together the whole time, **Mr. Camstrader** went to check his levels and was told he was fine.

Mr. Norbert Hier
United Nuclear Weapons Workers

Mr. Hier, who had worked with **Mr. Camstrader**, described scooping out uranium wearing a respirator he later found was barely approved for cutting grass. **Mr. Hier** expressed concerns that it wasn't just radiation exposures they had to deal with. He described using asbestos and was particularly distressed that people who surely knew better never warned the workers.

Mr. Tom Horgan
Office of Senator Christopher Bond

Mr. Horgan indicated he felt the scientific guidance and advice from the Board is very important as they try to work out some of the kinks in the legislation and implementation of the program. He asked for individual feedback from every Board member on the Mallinckrodt TBD, particularly those with scientific and medical knowledge.

Mr. Horgan expressed concern about the lack of records prior to 1948 and encouraged NIOSH to do what it could to finalize the SEC rule in the near future.

Ms. Donna Erlmann
United Nuclear Weapons Workers

Ms. Erlmann appeared on behalf of her father, who was too ill to attend. He had worked at both Destrehan Street and Weldon Spring a number of years. She read a statement her father had written.

In his statement, he described in great detail working conditions and specific events at a variety of locations within the complex. He commented that DOE has spent $900 million covering up mistakes at Weldon Spring and it's time to take care of the workers.

Ms. Denise Brock
United Nuclear Weapons Workers

Ms. Brock explained the United Nuclear Weapons Workers is an established worker advocacy group. She noted it seemed it would be efficient to utilize the group when NIOSH meets with the public to review the Mallinckrodt TBD. She offered to share any information they had, as well as her access to the UAW and retirees.

She questioned how it could be stated that Mallinckrodt wouldn't be

considered for Special Exposure Cohort in view of missing records prior to '48, particularly when the SEC rule isn't final. **Ms. Brock** expressed her belief that Mallinckrodt claimants deserve the same consideration and benefit of the doubt as the four Special Exposure Cohorts. She asked a variety of questions specific to the TBD, indicating a response by e-mail would be fine.

Mr. James Werner
Missouri Department of Natural Resources

Mr. Werner announced his main message was to offer the technical resources of his Department. Staff have been at various sites for decades reviewing technical documents and have built a lot of expertise over the years. With that background, **Mr. Werner** observed the Mallinckrodt TBD was probably the most comprehensive document he'd ever seen on the site.

No longer speaking on behalf of DNR, **Mr. Werner** asked that due consideration be given to establishing a Special Exposure Cohort for Mallinckrodt, given the uncertainties connected with the site.

Mr. Richard Miller
Government Accountability Project

Mr. Miller asked if anyone could explain why the Blockson Chemical site profile was posted on the web when it excluded any discussion of radon exposures. He wanted to know if it was available for use in dose reconstruction without addressing the radon issue. **Mr. Elliott** confirmed that it was available for use.

Mr. Miller indicated he lacked the imagination to understand how NIOSH could go forward with that significant exclusion. **Dr. Neton** advised **Mr. Miller** that the radon issue was not excluded, but rather reserved. It has not been addressed yet. The TBD is solid for all exposures at Blockson, excluding radon. To the extent claims not involving radon can be moved forward, they will do so.

Mr. Miller offered that the Board should be aware that incomplete documents were being posted as site profiles. He noted he'd not had answers to e-mails he'd sent and now the site profile is posted and he still didn't have an answer. He wished the incompleteness of the document had been advertised to the Board.

Mr. Miller read a number of lengthy memos into the record which he felt should have been included in the references. He elaborated

further on what he perceived as weaknesses in the TBD.

With all further business to come before the Board requiring action in Executive Session, the public portion of the meeting was adjourned.

End of Summary Minutes

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

Paul L. Ziemer, Ph.D., Chair

1/7/04
Date