THE ADVISORY BOARD ON RADIATION AND WORKER HEALTH
NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH
CENTERS FOR DISEASE CONTROL AND PREVENTION

Summary Minutes of the Fifty-second Meeting
January 8-10, 2008

The Fifty-second Meeting of the Advisory Board on Radiation and Worker Health (ABRWH or the Board) was held January 8 through 10, 2008, at the Suncoast Hotel and Casino in Las Vegas, Nevada. The meeting was called by the Centers for Disease Control and Prevention's (CDC) National Institute for Occupational Safety and Health (NIOSH), the agency charted with administering the ABRWH. These summary minutes, as well as a verbatim transcript certified by a court reporter, are available on the internet on the NIOSH/Office of Compensation Analysis and Support (OCAS) web site located at www.cdc.gov/niosh/ocas.

Those present included the following:

Board Members:

Dr. Paul Ziemer, Chair; Ms. Josie Beach; Mr. Bradley Clawson; Mr. Michael Gibson; Mr. Mark Griffon; Dr. James Lockey; Dr. James Melius; Ms. Wanda Munn; Dr. John Poston; Mr. Robert Presley; Dr. Genevieve Roessler (telephonically); and Mr. Phillip Schofield.

Designated Federal Officials: Dr. Lewis Wade, Executive Secretary; Dr. Christine Branche.

Federal Agency Attendees:

Department of Health and Human Services:

Ms. Laurie Breyer, Ms. Denise Brock, Mr. Larry Elliott, Dr. Sam Glover, Mr. Stuart Hinnefeld, Dr. James Neton, Mr. Mark Rolfes, Mr. LaVon Rutherford, Dr. Brant Ulsh (NIOSH); Ms. Emily Howell, Ms. Liz Homoki-Titus (Office of General Counsel); Ms. Chia-Chia Chang (Office of the Director of NIOSH); Mr. Jason Broehm (CDC Washington); Mr. David Staudt, (CDC Procurement).

Department of Labor: Mr. Jeff Kotsch.

Department of Energy: Mr. Greg Lewis, Dr. Patricia Worthington.

Contractors:

Dr. Arjun Makhijani, Dr. John Mauro and Dr. Steve Ostrow, Sanford Cohen & Associates.

Congressional Staff Members:

Ms. Sara Bermingham (Senator Charles Schumer); Ms. Sharon Block (Senator Edward Kennedy); Mr. Steven Hill (Congressman Shavitz); Mr. Frank Rowe (Senator Joe Lieberman); Mr. Robert Stephan (Senator Barack Obama).

Other Participants:

See Registration.

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Tuesday, January 8, 2008

Dr. Paul Ziemer, Board Chairman, called the meeting to order. He called for members of the assembly to register their attendance in the book provided for that purpose, reminding those who wished to make public comment in the meeting of a sign-up sheet in the foyer for that purpose as well. **Dr. Ziemer** described materials available for those who wished to take advantage of them, including the agenda and documents associated with the deliberations for the three days of the meeting.

Dr. Lewis Wade, Designated Federal Official for the Board, was introduced and offered regards from Mr. Mike Leavitt, Secretary of Health and Human Services; Dr. Julie Gerberding, Director of the Centers for Disease Control and Prevention; and Dr. John Howard, Director of NIOSH. **Dr. Wade** thanked the Board members for their service.

It was announced that on the following morning **Senator Harry Reid** was expected to address the assembly, although that does not appear on the agenda. **Dr. Wade** added that during this meeting he will be sharing the Designated Federal Official's chair with **Dr. Christine Branche**, who will be assuming responsibilities of the DFO in the near future.

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MOUND PLANT SEC PETITION
NIOSH EVALUATION REPORT

Before the presentation began, **Dr. Wade** announced that Board member **Mr. Michael Gibson** had a conflict with this site and **Mr. Gibson** would be joining the audience for the presentation and discussion. He explained that under Board policy if a member is conflicted on a particular site,

they don't sit at the table and participate in deliberations, discussions, motion making and votes surrounding SEC petitions.

Dr. Ziemer added that a conflicted member basically becomes a member of the public and that **Mr. Gibson** would be able to comment as a site expert or member of the public.

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Dr. Brant Ulsh,
NIOSH

Dr. Ulsh explained that generally DOE facilities were either production-type facilities or focused more on research, such as the National Laboratories. He observed that the Mound facility is unique in that it had significant production operations as well as significant research activities, which presents unique challenges in moving forward with evaluation of the Mound petition.

Dr. Ulsh provided some background into the Mound mission. He explained that a major mission was in polonium-210 production and research. Polonium-210 was used in initiators in nuclear weapons. Research included research into the use of radium-226 and actinium-227 as alternatives to polonium-210, which had some undesirable characteristics. There was also research involved with the civilian nuclear power program, including various isotopes of uranium, protactinium-231 and plutonium-239. Also included was the Radioisotope Thermoelectric Generator (or RTG) program which first involved polonium-210 and later plutonium-238. Mound was also involved in some research activities with tritium. **Dr. Ulsh** cautioned that these were the major programs at Mound and this list is not intended to be all-inclusive. There were many smaller programs.

As a part of his presentation **Dr. Ulsh** also provided some history of the Mound site. The activities were transferred from the Dayton Project, also known as the Monsanto site, with the transfer completed in 1949. In February of 1949 the Mound site was occupied and began operations. Production continued through 1994. **Dr. Ulsh** commented that he wasn't going to make that a hard date because the RTG program continued beyond 1994, but the focus of the site was shifted from production to decommissioning and decontamination in '94 and continued up through 2006.

Two petitions were received from this site. Petition 00090 was received in early June of 2007, qualified for evaluation mid-August of 2007. Petition 00091 was received in mid-June of 2007 and qualified

for evaluation in late September. Those petitions were merged into one.

The initial class definition was "all employees who worked in all areas within the boundaries of the Mound plant from February 1949 to the present." The NIOSH proposed class is for "all employees who worked in all areas of the Mound plant from February 1949 through August 17, 2007." NIOSH preferred to put a definite end date and so used the qualification date of the earlier petition. **Dr. Ulsh** explained this was the class definition established at the beginning of the evaluation process in order to provide parameters for the NIOSH considerations.

Dr. Ulsh described some of the activities surrounding the site as far as communications between NIOSH, SC&A and claimants, which included preparation of the six Technical Basis Documents which make up the site profile. Those were issued between March and October of 2004. Sanford Cohen & Associates, the Board contractor, reviewed the TBDs and issued their draft review report in July of 2006. Worker outreach meetings were held with PACE and with Dayton Building and Construction Trades Council in January of 2005. During the petition evaluation process interviews were conducted with approximately 25 former Mound workers.

In addition to that information, other data resources for determining feasibility of dose reconstruction included dosimetry records, Mound environmental safety and health plutonium reconstruction and polonium reconstruction databases and hard copy records, ORAU site research database, and documentation provided by the petitioners and site experts.

According to the NIOSH/OCAS Tracking System as of December 6, 2007, DOL had submitted 491 Mound cases for dose reconstruction. NIOSH has completed 348 of those cases; 420 of the 491 cases submitted have internal monitoring records, and 430 cases have external monitoring records.

Dr. Ulsh listed the bases or concerns that formed the foundation of the petition. These included haphazard radiation monitoring of workers, radioactively-contaminated materials in non-controlled areas, employees in non-controlled areas prohibited from receiving monitoring, control of Mound lab documentation, record destruction, and integrity of radiation dose records. **Dr. Ulsh** addressed each of those concerns individually and discussed them in depth, explaining how NIOSH addressed each concern and the findings of their evaluation. He explained the petition is evaluated by NIOSH using the guidelines in 42 CFR 83.13, and a summary of those findings is submitted in a petition evaluation report to the Board and petitioners. That report was issued in December 2007.

Dr. Ulsh went on to discuss an issue that he explained wasn't raised explicitly in either of the petitions, but was raised in several of the interviews conducted with former workers. That issue involved an operation from October of '49 over the next ten years, the separation of radium-226, actinium-227 and thorium-228. He explained the source materials were from K-65 residues and irradiated radium.

Describing interviews with Mound employees, **Dr. Ulsh** reported he likes his last question to offer them an opportunity to discuss anything they feel would be important to NIOSH in dose reconstruction that had not yet been discussed. That is the context in which this issue came up over and over. NIOSH therefore spent time evaluating and looked at some health physics progress reports and found language to indicate that contamination was not confined to the SW 19 area, which was referred to as the "old cave" or "radium cave" where the separation operations took place. That contamination spread throughout the R and SW buildings.

Although **Dr. Ulsh** could not go into details about some of the information, other buildings were involved in research to support the separation project and he had seen air data that was sufficient to indicate there was a significant airborne potential for exposure. There are problems with interpreting the limited number of bioassay data available for this particular operation. It often isn't associated with a particular worker, et cetera, and NIOSH felt it would not allow them to put a sufficiently accurate upper bound on internal doses from this operation, and concluded that reconstruction of internal doses from those three radionuclides -- radium-226, actinium-227 and thorium-228 -- is not feasible.

The period that covers is from the time the material arrived on site until completion of the D&D of the "old cave". Giving it the broadest scope, they have designated that time as October 1st, 1949 through February 28, 1959.

Reconstruction of internal doses is feasible from 1959 forward through approximately 1990. **Dr. Ulsh** noted that caveat is as a result of concerns about the situation which led to the Price Anderson Act violations, and related specifically to the bioassay problem. NIOSH continues to investigate those bioassay problems in the D&D era, which is the 1990s. However, reconstruction of external doses is feasible for all years.

Dr. Ulsh then explained the standard two-pronged test for conducting the evaluation process to determine whether it is feasible to estimate the level of radiation doses to individual members of the class with

sufficient accuracy; and if not, is there a reasonable likelihood that such radiation dose may have endangered the health of members of the class. NIOSH recommends addition of an SEC class consisting of "all employees who worked in all areas of the Mound plant from October 1, 1949 through February 28, 1959."

The NIOSH summary is that the answer to the feasibility question for the specified period for internal exposures from radium, actinium and thorium is negative; and there is a likelihood of health endangerment. In the period 1949 through 1990 it is feasible to accurately reconstruct dose for internal exposures from all other radionuclides, and therefore the health endangerment question is not applicable.

In the period 1990 through 2006 internal exposures from all other radionuclides continues to be the subject of investigation through the decommissioning and decontamination era.

It is feasible to reconstruct external doses from 1949 through 2006, and the health endangerment question is not applicable.

Discussion Points:

- Does NIOSH have bioassay data for the time frame of 1964 when actinium was processed in the new cave;
- A question as to the differences in plutonium records summaries for 1965, 1966 and 1967 when they range widely;
- A question regarding the cutoff date of February 28, 1959;
- Why does NIOSH believe it can do internal dose reconstructions after 1959 and what changed in the process that makes that possible;
- When the "old cave" was deconned in the late 1950s their standards were a bit different than standards of D&D today;
- A discussion of the D&D period as it related to the Price Anderson Act violations regarding bioassays;
- A question about whether D&D workers were appropriately monitored for materials they may have been exposed to, even though they were not denied monitoring.

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PETITIONER RESPONSE

Mr. Larry Russell, husband of the SEC 00090 petitioner [name redacted], spoke about their concerns with the evaluation report relative to monitoring procedures of operating contractors, commenting that there were six different contractors during the time [identifying information] worked at the facility.

Ms. Judy Miller, petitioner under SEC 00091, spoke on behalf of her deceased mother, [name redacted], who worked at Mound from 1956 to 1983. She presented a slide show of photographs and described her mother's life and work history, her illness, and commented she was happy her mother had been awarded on her claim under the Part E portion of the program before her death. She also discussed the area where her family lived and the contamination of water in that area. She also described [identifying information] death from cancer, as well as the illnesses of her brother and herself.

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Mr. Jason Broehm from the Washington CDC office read into the record a letter from Senator Sherrod Brown from the State of Ohio expressing his support for the Mound SEC petition.

Also circulated was a letter from a former Mound employee, Mr. Fred Stanley Radwanski, a retired engineer with 57 years experience. It was distributed to Board members, but Mr. Radwanski had not asked that it be read into the record.

A full transcript of all statements is available on the NIOSH/OCAS web site at www.cdc.gov/niosh/ocas.

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Discussion Points:

- There is not a working group on Mound;
- There is a site profile review done by SC&A;
- It would be in order to form a group to follow up on the petition and deal with the site profile;
- Should the Board decide to approve the actions NIOSH has recommended, it does not preclude later actions on other parts of the petition;
- Taking action as recommended would put part of the workers into an SEC class;
- Confirmation that the 1949 to 1959 time period presented by NIOSH would involve all workers on the site, as well as the later time period would include all workers during that time period, presuming they meet the other requirements of the SEC, such as the 250-day requirement, et cetera;
- Discussion of the item on the summary indicating reconstruction of external exposure from all other radionuclides is feasible from 1949 through 1990 creating confusion relative to dose reconstructions for non-SEC cancers;

- An individual whose POC can be shown to be more than 50 percent -- without taking into account the radium, actinium and thorium -- would be compensable through dose reconstruction.

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Dr. Ziemer outlined the possible paths forward. This report was received very recently and is extensive, with a lot of backup material. Action could be delayed if the Board is not comfortable with acting on the subset recommended as an SEC class.

A motion was made and seconded that the NIOSH recommendation for an SEC class for the years 1949 through 1959 for the entire mound site be accepted.

The motion carried by a vote of 11 to zero, with one member of the Board having been recused due to conflict of interest.

The formal wording to be sent to the Secretary of Health and Human Services is attached hereto and made a part hereof.

A motion was made and seconded to establish a workgroup to oversee the review of the petition evaluation report, as well as make an effort to resolve issues related to the site profile review, and that SC&A be asked to work on issues related to the SEC petition evaluation report.

The motion carried by a vote of 11 to zero, with one Board member having been recused due to conflict of interest.

Dr. Ziemer observed that five Board members had expressed interest in participating in the working group, and he would make his decision for appointments and announce them later in the meeting.

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LAWRENCE LIVERMORE NATIONAL LABORATORY SEC PETITION
NIOSH EVALUATION REPORT

Dr. Sam Glover,
NIOSH

Dr. Glover presented the NIOSH evaluation report on the Lawrence Livermore National Laboratory SEC petition. He explained this is an 83.14 petition which was submitted by a claimant whose dose reconstruction could not be completed by NIOSH because of a lack of sufficient dosimetry-related information. This claimant had been

employed at the Laboratory during the DOE operational period as an experimental physicist.

Background on the site included the fact that from 1942 to 1950 the facility was a Navy base. The Atomic Energy Commission first occupied the site in 1950, still as part of the Navy base, and in 1951 the property was transferred to the AEC, now the Department of Energy. The site was previously known as University of California Radiation Laboratory at Livermore, and later as the Lawrence Radiation Laboratory at Livermore. Lawrence Livermore National Laboratory consists of two sites, the main laboratory site located in Livermore, California, and an explosives test site located near Tracey, California, previously known as Site 300.

Dr. Glover explained the radiological operations, which included the original mission of thermonuclear weapon development and that since 1957 there have been diversified activities, including nuclear propulsion, fusion research, et cetera. Off-site nuclear weapons testing took place at Pacific Proving Ground, Nevada Test Site and Amchitka, Alaska. He described other testing with non-fissile materials which occurred on-site and occurred during periods of moratorium and in support of research activities.

Dr. Glover explained weapons testing activities included weapons test materials, or shot samples, which were returned from test sites for analysis and were handled in many facilities at the site. These highly radioactive samples contained weapon-induced fission and activation products, plutonium, uranium and higher-order actinides. Other radiological activities included reactors and reactor research, linear accelerators and Cyclotrons, fuel testing, biomedical and waste disposal.

As a part of his presentation, **Dr. Glover** produced a chart showing current building numbers and the operations or activities conducted within those buildings. There were some 26 buildings related to chemistry, nuclear and radiochemical analyses and tests, et cetera; ten buildings associated with accelerator studies; and all buildings in areas of Site 300 which were associated with linear accelerators, radiography and the Plowshare programs; in addition to reactor, biomedical studies and waste operations buildings.

The documented radiological source terms indicate the predominant radionuclides were plutonium, radium and tritium. Fission and activation products were from shot samples, fuel fabrication, weapons research, et cetera.

In vitro monitoring data is available on the MAPPER database and contains 16,750 results for uranium from 1958 to 1996; 7,700 results for plutonium from '57 to '96; along with other transuranics, gross alpha and gross beta-gamma results.

Dr. Glover explained that *in vivo* data was not contained in LLNL's MAPPER database, but logbooks indicate approximately 50 to 200 *in vivo* counts were performed each year beginning in 1965. Whole body counters were primarily in a state of research and testing prior to 1974.

He discussed the workplace monitoring data which dated back to 1953 and was available for many buildings and Site 300. Those results, **Dr. Glover** indicated, were mostly total or net alpha or beta activity, with some results including the actual element that was analyzed.

In 1961 LLNL began using environmental air monitoring at two site perimeter stations and nine stations beyond the site boundary, and in 1971 established a network of permanent outdoor stations for evaluating airborne radiological levels, both within the site and at its perimeter.

As of July 23, 2007 NIOSH has access to individual results reported for 617 claimants; 88 percent of the claims have external data and 53 percent have internal data. **Dr. Glover** also noted that records for less than five percent of the claims contained bioassay results for mixed fission products.

He explained that coworker models have been developed using the MAPPER bioassay data -- uranium starting in '58, mixed fission products beginning in '74 -- and the models can be used to reconstruct dose for those radionuclides and time periods for all LLNL workers in all LLNL locations.

Addressing feasibility of reconstruction for internal doses, **Dr. Glover** observed that, based on the minimal bioassay data for the period prior to '73 for mixed fission and activation products, NIOSH concluded it is not feasible for workers who were monitored or should have been monitored for those exposures from 1950 through 1973. Therefore a health endangerment determination is required.

In that regard, the evidence reviewed indicates some workers in the class may have accumulated chronic radiation exposures through unmonitored exposure to fission products. The site generated or processed unknown quantities of mixed fission products during the proposed class period as part of the work conducted for DOE. As a result NIOSH is specifying that health may have been endangered for those workers covered in this evaluation.

Addressing feasibility of external dose reconstructions, **Dr. Glover** remarked that recorded external dosimetry photon data are extensive and sufficient.

The NIOSH recommendation is that for the period January 1, 1950 through December 31, 1973 they have found internal radiation dose estimates cannot be reconstructed for compensation purposes, so the feasibility finding is negative, and positive for health endangerment.

The proposed class is for "all employees of the Department of Energy, its predecessor agencies and DOE contractors or subcontractors who were monitored, or should have been monitored, for internal exposure to mixed fission and/or activation product radionuclides while working at the Lawrence Livermore National Laboratory for a number of work days aggregating at least 250 work days from January 1, 1950 through December 31, 1973, or in combination with work days within the parameters established for one or more other classes of employees in the Special Exposure Cohort.

Dr. Glover commented that although NIOSH does have access to documents describing some activities and radionuclides specific to certain buildings, they do not have sufficient data to document quantities and types of most fission products and activation products. They also do not have sufficient information to rule out the use of fission and/or activation products in other buildings where radioactive material was handled and stored. NIOSH has no indication that exposures to mixed fission and activation products would have been a concern in administrative areas outside the radiological areas, such as cafeterias, libraries and office areas.

Dr. Glover added that additional documentation and sample dose reconstruction scenarios are available for the Advisory Board's review.

Discussion Points:

- Is NIOSH assuming cafeteria workers or workers in the non-radiological areas did or did not have access to radiological areas;
- For people who worked in non-radiological areas, DOL has to make the determination;
- Can the Board assume that the list of buildings shown in the chart is essentially all the covered areas for which this class would be approved;
- The buildings shown were those that had radiological materials;
- Department of Labor would have to determine if a claimant had access to those buildings;

- The evaluation and recommendation for the class would not include people who worked in the cafeteria or library or were strictly clerical, but NIOSH is not confident that the list is the total list;
- Even though there's a lot of monitoring data for the site, it is a complicated site in terms of different exposures and NIOSH is not really able to determine what people were doing during various time periods when they were or were not being monitored;
- The rationale for the cutoff in '73 was the introduction of whole body counting, which provides more data with which coworker statistics can be used to develop a coworker model;
- A discussion regarding DOL determining whether people entered radiological areas, even though they might not have been assigned to work in them;
- In many cases the only thing separating a person working in a radiological area and a non-radiological area was a few two-by-four studs and some sheetrock;
- Did these workers actually go to off-site test sites such as Amchitka and NTS;
- Claimants' time spent at one of the off-site test locations would enable them to accumulate time in those SEC classes and add to their required 250 days;
- The definition language of monitored or should have been monitored has been consistently considered anyone who had the potential to receive more than 100 millirem exposure annual should have been monitored, and that's what would be considered by DOL;
- DOL also considers affidavits from petitioners or claimants to make that determination;
- A 100 millirem exposure limit is a small exposure to have to demonstrate;
- Further discussion of the 1973 cutoff and changes that occurred at that time, as well as development of the coworker model;
- Is the coworker model based on *in vitro* or *in vivo*;
- The coworker model would be released as a Technical Information Bulletin by NIOSH and would therefore be something available for Board review as a procedure;
- The way the definition has been characterized might be worth discussing more;
- An invitation for the representative from DOL to join the discussion about how to establish whether or not a claimant has been in a radiological area.

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PETITIONER RESPONSE

Ms. Raili Glenn spoke about her husband, David Glenn, a physicist with LLNL for 25 years. She discussed his illness, his work history, and his death in 2005. She commented that the lab had destroyed all of her husband's X-rays and badges do not show what he had inhaled, although X-rays taken in the hospital show his lungs had been contaminated by radiation.

Ms. Glenn commented that had he been working in a private company he would have made four times his wages, but he loved his job and that was why he worked there. She went on to say that the medical bills and expenses associated with his illness she calculated to have been 25 percent of his earnings.

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Discussion Points:

- A continuation of the discussion on the list of buildings and people working in them, and what limitations may be indicated;
- This is similar to Los Alamos where the words "radiological areas" were used, and then NIOSH will work with DOL to define what is considered to be a radiological area;
- The list of buildings is a starting point;
- If other areas are discovered later, NIOSH can recommend they be included and DOL can make that adjustment through their technical bulletin process;
- The table in the evaluation report is the basis for defining the Special Exposure Cohort class, with the understanding there may be other locations not listed.

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A motion was made and seconded to add to the Special Exposure Cohort the class described in the NIOSH evaluation report. The precise wording to be forwarded to the Secretary will be presented on the last day of the meeting.

The motion carried by a unanimous roll-call vote of 11 to zero, with one member away from the table due to conflict of interest.

Dr. Ziemer asked that the workgroup on Special Exposure Cohort issues, chaired by **Dr. James Melius**, take this issue as part of their task to

monitor and work with NIOSH, and SC&A if necessary, to look at open questions on this particular petition.

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NIOSH PROGRAM UPDATE

Mr. Larry Elliott, Director
NIOSH Office of Compensation Analysis and Support

Mr. Elliott presented the program status update and update of program issues, commencing with overall initial claim information. He reported that 26,108 cases had been referred to NIOSH for dose reconstruction; 74 percent of those have been returned to Department of Labor, either with a dose reconstruction report or having been pulled from dose reconstruction by DOL for miscellaneous reasons or having been pulled due to addition of an SEC class. Twenty-five percent of those cases remain at NIOSH for dose reconstruction, with one percent having currently been administratively closed. **Mr. Elliott** used various graphs to illustrate cases completed by NIOSH tracking number, submittals versus production, total administratively closed records, receipt and completion of cases returned by DOL for reworks.

Mr. Elliott noted that NIOSH is building another backlog due to a variety of reasons, one of which is the funding constraints that has affected NIOSH for the last three quarters of FY07. Another is an increase in recruiting of claims by DOL. Although NIOSH welcomes those claims so they can be worked, it has nevertheless increased the workload. Pending is the award for contract support which, when in place, will enable NIOSH to return to the 2006 capacity.

Mr. Elliott explained that in the past reworks typically represented demographic issues such as a new survivor, new cancer, additional employment, et cetera, which requires reworking the dose reconstruction, with very few representing a technical change in the dose reconstruction approach. With the advent of Program Evaluation Reviews there is an increase in reworks, primarily as a result of the PER on the super S or highly insoluble plutonium issue.

These PERs are done whenever there is a technical change in their dose reconstruction approach which could increase dose for a claim or set of claims. There are currently 32, which can be found on the web site. Noting his slide indicated 13,077 claims could be affected, **Mr. Elliott** commented this was somewhat inflated because many claims would be affected by multiple PERs. To date 157 claims have experienced an increase in their POC to a compensable level, 5,380 claims have had no change, and 7,540 claims are awaiting evaluation.

There are currently 553 outstanding requests to DOE for exposure records, 170 of which are more than 60 days old.

Turning to technical support and dose reconstruction activities on AWE sites, **Mr. Elliott** noted that TBD 6000, which serves as a site profile for AWEs which worked uranium and thorium metal, now has 15 site-specific appendices completed, with three in review and none currently in development. TBD 6001, which serves as a site profile for AWEs which refined uranium and thorium, has five completed site-specific appendices, with none in review and none currently in development.

Mr. Elliott announced that 25 Special Exposure Cohort classes have been added since 2005. Sixteen of those have come through the 83.13 process, with nine through the 83.14 process which identifies a claim NIOSH was unable to complete due to lack of information. The added SEC classes represent workers from 19 sites and 1,519 potential claims.

Mr. Elliott spoke about the Quality Assurance and Quality Control program instituted at NIOSH in processing claims. He discussed quality control processes embedded within the dose reconstruction approaches and technical documents used to complete those DRs. **Mr. Elliott** described the peer reviews, technical reviews and OCAS approval. The QA programs identify documents and correct program deficiencies. Public health advisors are at each meeting to assist claimants.

Also discussed were mechanisms in place to ensure corrective actions are implemented to correct problems or deficiencies. NIOSH tracks and trends performance, with feedback channels in place to let people know how they're doing with regard to the quality of work. He noted 11 self-assessments have been documented. An automated program has been created which runs every night to check 55 potential data discrepancies in every case that has been modified. Any discrepancies found are then given to the public health advisor assigned to that particular case for correction.

Updating the contract award process, **Mr. Elliott** explained that the Request for Proposal was published May of 2007 with proposals due by mid-June. Reviewers' questions prompted an amendment, with proposals to be submitted by mid-October. Those proposals are being processed in Procurement Review and, to avoid interruption of service, the ORAU contract has been extended until February 1, 2008, with further extensions if necessary until the award of a new contract.

Discussion Points:

- What kind of questions resulted in the extension of the time to submit proposals;
- Questions were from both reviewers and proposers, and the extension was in effort to make a level playing field for all proposers;
- Has the issue causing difficulties with DOE providing records at the Hanford site been resolved;
- Will the remaining 59 cases from the first 5,000 be converted into an 83.14 petition;
- An observation that it's "absurd" that someone cannot get their claim processed in over five years, with a call to re-examine the whole process;
- A detailed presentation on the QA/QC process at an upcoming meeting would be helpful;
- The workgroup on procedures might be in a position to look at that as a starting point since they haven't looked at any QA/QC procedures;
- What percentage of potential discrepancies does the automated program catch and is it procedure driven;
- What types of things are included in the 55 issues it checks;
- NIOSH can make a presentation on that program in the future;
- Is that automated system part of the QA.

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PUBLIC COMMENT

Public comment was solicited on the first two days of the meeting. The members of the public who spoke on this day are listed below. A full transcript of their remarks is available on the NIOSH/OCAS web site at www.cdc.gov/niosh/ocas.

Ms. Antoinette Bonsignore for Linde Ceramics workers; Mr. Sherman Jenkins, former LLNL worker; Dr. Dan McKeel, SINEW; Ms. Patricia Cook, NTS claimant; Ms. Teri Sepulvida, NTS survivor; Ms. Dorothy Clayton, NTS survivor; Ms. Brenda Sieck, NTS survivor; Ms. Denise Brock reading into the record statements of Ms. Linda Buckles, NTS survivor rep, and Ms. Sandy Jackson, NTS survivor rep; Mr. John Funk, NTS worker; Mr. Michael Brew, NTS worker; Ms. Kay Barker, ANWAG.

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With no further public comment offered, the Board officially recessed until 8:30 a.m.

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Wednesday, January 9, 2008

The second day of the meeting was called to order by **Dr. Ziemer**, who gave a brief summary of the agenda for the morning.

NEVADA TEST SITE SEC PETITION
NIOSH EVALUATION REPORT

Mr. Mark Rolfes,
NIOSH

Mr. Rolfes began his presentation by providing some history of the Nevada Test Site, the area chosen, the period of atmospheric testing, et cetera. He described site functions, which also included research into nuclear reactors and rockets, peaceful uses of nuclear energy and management.

Mr. Rolfes gave a chronology of when the two petitions were submitted for the site. SEC 00084 was qualified for evaluation April 4, 2007 and SEC 00070 was merged with SEC 00084 April 10, 2007. The evaluation report on the merged petition was issued September 27, 2007. The proposed class definition included "all employees of the Department of Energy or any DOE contractor or subcontractor who worked in any areas of the Nevada Test Site from January 1, 1963 through September 30, 1992."

Mr. Rolfes enumerated the variety of sources of available information, from the Department of Energy's Radiation History data through Technical Information Bulletins and Technical Basis Documents, rad safe reports, the NIOSH site research database documents, interviews with NTS and LLNL employees and experts, case files, and documentation and affidavits provided by petitioners.

Also discussed was the availability of dosimetry data, with **Mr. Rolfes** citing the numbers of claims submitted in total, as well as the numbers of dose reconstructions completed and numbers of cases pulled by DOL for the earlier petition covering the 1952 through 1962 time period. He also provided information relative to claims meeting the definition of this particular class under evaluation, the number of those claims which contained internal dosimetry and those containing external dosimetry.

Mr. Rolfes enumerated the petition bases and petitioner concerns, which included hot particle exposures, ambient dose reconstruction, radiological incidents, destroyed or lost records, and practices

defeating universal badging. He then addressed each concern individually, elaborating on the concern itself and describing the evaluation findings and how those findings are being addressed in the dose reconstruction process.

Two sample dose reconstruction scenarios were presented by **Mr. Rolfes** in great detail, describing a hypothetical employee's work history, sex, age, cancer information, date of diagnosis, lifestyle where applicable, internal and external exposure potential in all work areas, assigned exposures where applicable, and the reconstructed dose through to probability of causation. One case was a hypothetical claimant whose POC would have been compensable; the other hypothetical claimant was found to be non-compensable. The purpose of the examples was to demonstrate how dose reconstructions are produced.

Mr. Rolfes explained that NIOSH evaluates a petition using the guidelines provided in 42 CFR 83.13, and submits a summary of those findings in an evaluation report to the Board and the petitioners. That report was issued in September 2007. **Mr. Rolfes** reiterated the two-pronged test of feasibility and health endangerment, describing that NIOSH had found the available monitoring records, process descriptions and source data are adequate to complete dose reconstructions with sufficient accuracy for the proposed class of employees. With that finding, a determination of health endangerment is not required.

The chart of feasibility findings indicated that NIOSH found dose reconstruction was feasible for internal exposures to uranium, plutonium and fission products, and for external exposures to gamma, beta, neutron and occupational medical X-rays.

Mr. Rolfes added that additional documentation and sample dose reconstruction scenarios are available for the Advisory Board's review.

Concluding his presentation, **Mr. Rolfes** expressed his thanks to all former and current NTS workers for their contribution to the security and defense of the country.

Discussion Points:

- Were people specifically asked in interviews if they had been properly badged;
- The majority of the interviews cited were telephone interviews, which are scripted and no deviation from the script is permitted, and that question is not asked specifically;

- Fifteen to 20 interviews were conducted specifically asking about the badging issue and none of those individuals indicated the practice of removing a badge had been adopted by them;
- NIOSH has had six years to ask the Office of Management and Budget to change the questionnaire if they wanted to do so;
- Claimants don't want somebody else's data to be used for reconstruction of their dose;
- A surprisingly large amount of logbooks and specific exposure information has been discovered for this site;
- How does NIOSH handle a situation where, when a draft reconstruction report is sent to the claimant with a request for any additional information, it comes back with a comment that they were told to stop using their badge;
- There are supplemental records in logbooks and at least one compilation of data that can help, but each case has to be addressed individually;
- In many cases, information is there if the researchers dig hard enough to find it;
- A suggestion that the records NIOSH is using for coworker data be put in a reading room available to the public so people can verify what NIOSH and DOL are saying because claimants don't want to just take somebody's word;
- A suggestion that the same level of documentation be available to the claimants so they may corroborate their dose reconstructions from their personal files.

Dr. Ziemer observed that it appears that in many cases information is there, if there is the ability to dig for it sufficiently, to actually get more precise or accurate dose reconstructions than would be available otherwise by the estimating procedure. He cautioned, however, that in most cases they have found from experience that the probability of causation is higher where estimates are made because of the overestimating assumptions. Of course it's important to try to get the actual data, but in most cases that tends to lower values to the individual and affects the POC.

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ADDRESS BY SENATOR HARRY REID

Nevada Senator **Harry Reid** addressed the assembly, expressing his appreciation to the Board for the work they've done. He described growing up in Nevada within 100 miles of the Test Site, watching the glare in the sky from aboveground tests.

He remarked the petitioners in this current petition were just as valuable in winning the Cold War as were those involved in the underground test phase. He recalled explanations his father had given him about the dangers of tunnel reentry too soon, based on his experience as a hard rock miner, indicating that some of those situations were similar to those of the men at the Test Site.

Senator Reid observed the Cold War was won by different people in different ways, and that one prime reason this country was able to prevail is what went on at the Nevada Test Site. He commented that NTS is still conducting tests and explained computerization has allowed tests to stop short of an actual explosion.

Remarking that he had done the right thing in support of the passage of EEOICPA, **Senator Reid** expressed his dismay at how he feels the program is failing some people who worked at NTS. He contended NIOSH is being short-sighted and unfair, and urged the Board to acknowledge the shortcomings with the petition evaluation. He commented that NTS workers have faced injustice and urged the Board to understand that the badging issue was a widespread practice and the people are not lying when they say they did not always wear them. He observed that reality and protocol are two different things, and the Board needs to understand that. He cautioned that everyone should be careful of NIOSH judgment.

Senator Reid went on to comment that Congressional intent was to provide workers with timely and adequate compensation. He concluded by remarking that the topic of discussion is not a chapter in a book, but the lives of human beings who are being hurt as a result of work they did for this country. He expressed his belief that fairness dictates the petition be granted.

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PETITIONER RESPONSE

Ms. Laurie Hutton introduced herself as lead petitioner, the daughter of a former 8-year NTS worker who was diagnosed with cancer five years later, passing away just months after his diagnosis when she was 16 years old. She discussed the workers who are suffering, some too ill to be present, and many who have already passed away. Many feel the government is waiting for them to die so it won't have to pay their claims.

Ms. Hutton asked all NTS workers in the audience who took off their badges while working in radiation areas to please stand. She indicated that demonstrated it was not only common, but sanctified by

supervisors. She contended that NIOSH refuses to acknowledge this is a widespread practice.

Ms. Hutton suggested another issue very important to the SEC petition is the 250-day requirement, claiming that radiation doesn't take 250 days of exposure to cause harm.

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Mr. Paul Stednick spoke on behalf of the petition, describing his work history of 28 years at the Test Site in the drilling department. He talked about the need for wives to work to make ends meet and the various medical problems people are facing, how the work was done in the drilling department. He noted the workers had taken for granted that rad safe was taking care of their exposure issues.

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Mr. Peter White talked about how the program is not at all what workers had expected. They thought it was supposed to support and help the claimants, and he's worn out from trying to work through it. He commented that on his first day at NTS his badge was burned because of welding and that to this day welders can't be badged. He was told that if he ever came in to get a new badge because it had been burned, he would no longer work there. He also remarked that in that era there weren't many jobs, and what jobs you had, you hung onto. He indicated he simply wanted to be judged on his own exposure, not on somebody else's.

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Ms. Raili Glenn spoke by telephone on behalf of her husband, who worked at Lawrence Livermore National Lab but often traveled to NTS, describing his work and his life. She told about taking a tour offered to family members and scientists in the early '80s where they visited the Test Site, and the guide told them if they stayed at the Sedan crater more than ten minutes they would get too much radiation.

She described her husband's work and his education, his illnesses before his death.

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Dr. Ziemer explained there is a Nevada Test Site workgroup which is charged with reviewing the site profile and would give a status report, but they are not addressing the petition nor do they make a recommendation on it. He reminded the Board that at the last meeting

they had requested that SC&A begin reviewing the petition issues, but that report has not yet been received. He remarked that, in his judgment, the Board is not in a position to take action on the petition.

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REPORT FROM NTS SITE PROFILE WORKGROUP

Mr. Robert Presley, Chairman, described the composition of the workgroup and that they have been meeting for about two years now. He explained they had met in mid-December when they reviewed all 25 comments with SC&A. Most were determined to have been closed. Just before this meeting the group met to discuss the review of findings of those remaining comments. He explained one had to do with correction factors for external environmental dose and the other with internal exposures due to non-use of film badges. He observed the first issue is not just an NTS issue but is related to more than a few sites. Therefore it will be discussed by SC&A and NIOSH and will continue to be worked on for a while longer. The other comment was discussed at length. The finding was resolved to the satisfaction of NIOSH and SC&A and the issue has been closed.

Mr. Presley went through all 25 comments individually and how they had been resolved.

Discussion Points:

- Will this workgroup's purpose be expanded to address the SEC petition;
- Everyone involved should be using all avenues possible to get every bit of information available because of the film badge issue;
- It is a travesty that so much information is missing;
- It is impossible for widows of former workers, advanced in years, to be able to get information that couldn't even be discussed during the years of employment because of classification;
- A call to declassify certain reports that might assist claimants in finding more information on incidents that happened while they were not badged.

Ms. Wanda Munn commented that a debt of gratitude is owed to the workers on every site in this country. Many comments have expressed frustration with what has been referred to as "the government". She pointed out that the government is comprised of people, and often people are encountered whose bureaucratic mind which makes it difficult to communicate. She explained the work done by these petitioners and other workers at NTS provided scientists information which ultimately gave them the ability to calculate the worst possible exposures that

could have been received, even though individual exact doses are not available. **Ms. Munn** added she wanted to thank the workers personally, and expressed to them that when decisions are made by this Board, the members try to do it with the best science possible.

Dr. Ziemer announced that, by consensus, the NTS site profile workgroup would be expanded to address the SEC issues. The Board will not take action on the NIOSH recommendation that the SEC not be granted for this class because they can reconstruct dose. The vote on that issue will be delayed until the Board hears from the contractor and the workgroup has an opportunity to evaluate the SEC issues and present their recommendation.

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COMBUSTION ENGINEERING SEC PETITION
NIOSH EVALUATION REPORT

Mr. LaVon Rutherford,
NIOSH

Mr. Rutherford explained that the Combustion Engineering petition was submitted when NIOSH determined that dose reconstruction was not feasible for a particular claimant. The evaluation also considered a class of workers similar to the petitioner. **Mr. Rutherford** reminded the assembly of the evaluation process, which includes the two-pronged test of feasibility of dose reconstruction and likelihood of health endangerment.

Background was provided on the company, which is located in Connecticut, noting that the company was a contractor for the Atomic Energy Commission starting in the 1940s. Radiological activities covered under this Act did not begin until 1965 and ended at the end of 1972. **Mr. Rutherford** described the radiological processes that were relevant to the class covered by the petition, which included research and development of nuclear fuel, fabrication of fuel from high enriched uranium, et cetera. Radiological sources relevant to the class included uranium compounds from fuel fabrication, et cetera, and cobalt-60 from R&D activities, although the time period for this particular work is uncertain.

The information available for dose reconstruction was summarized and included data capture attempts from requests to the current operator, the Nuclear Regulatory commission, DOE Germantown, National Archives, et cetera.

Mr. Rutherford described the internal monitoring data available included two uranium bioassay samples for a single individual during the covered period. Those results were below detection limits. There were no workplace, breathing zone or general area monitoring data. Although a '64 report indicated some sampling was performed, NIOSH has not located any results. Ventilation effluents were also sampled by Combustion Engineering. Average and high values were found in the above-referenced 1964 report. No similar reports could be found, however, for the time period '65 through '72.

Source term data is available from uranium shipments from Combustion Engineering to Fernald during the covered period, but is not available for other activities, nor are detailed process descriptions available.

As to external monitoring data, NIOSH has whole body monitoring data for four claimants. Two had monthly results and the others had annual summaries. NIOSH has been unable to find any radiation surveys for the covered time period, and the only source term information discovered is for the uranium shipped to Fernald.

In describing how this petition came to be, **Mr. Rutherford** explained that NIOSH was unable to obtain sufficient information to complete a dose reconstruction for an existing claim. A claimant was notified of this fact, provided with a copy of Form A, which is a SEC petition short form. That petition was completed and submitted to NIOSH on October 9 of 2007. The conclusions of the evaluation are that, addressing feasibility, NIOSH lacks monitoring, process, or source term information sufficient to estimate external or internal radiation doses to Combustion Engineering employees for the period January 1, 1965 to December 31, 1972, which is the entire covered period.

NIOSH believes it does have sufficient information to estimate external dose from medical exposures for that period.

Since NIOSH has determined it is not feasible to complete with sufficient accuracy external or internal radiation doses, and that the health of the covered employees may have been endangered. Evidence indicates that workers in the class may have accumulated intakes of uranium and other radionuclides during the covered period.

On the summary chart for this petition dose reconstruction is feasible only for external doses from occupational medical X-rays, and is not feasible for internal exposures from uranium or other radionuclides or external exposures from beta-gamma or neutrons.

The NIOSH proposed class definition is for "all AWE employees working at the Combustion Engineering site in Windsor, Connecticut for a number

of work days aggregating at least 250 work days from January 1, 1965 through December 31, 1972, or in combination with work days within the parameters established for one or more other classes of employees in the SEC."

The recommendation is that NIOSH finds that radiation dose estimates cannot be reconstructed for compensation purposes for that period. The answer to the feasibility question is no, and to the health endangerment question the answer is yes.

Discussion Points:

- The cobalt-60 presence was determined from a FUSRAP survey;
- Since NIOSH was not able to characterize the site very well, but somewhere the FUSRAP program was able to uncover information about where things took place, did the FUSRAP report reference documents that were not available to NIOSH;
- The FUSRAP survey was done between '94 and '98, and there's very general information in that report because work had continued after 1972, and the report has no details but a lot of the information was on processes that occurred between '72 and '94;
- Is there information on the type of uranium product shipped to Fernald;
- It is NIOSH policy that if data integrity is established, that would be used for partial dose reconstruction for non-SEC cancers;
- For partial dose reconstructions, if individual data exists, it would be used to the best advantage of the claimant;
- A lot of the FUSRAP information came from interviews conducted at the time as opposed to reports, so that wouldn't necessarily provide exposure monitoring or air monitoring information.

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PETITIONER RESPONSE

Mr. Dan Greenberg commented that the Army Corps of Engineers is working on the site cleanup and contamination currently there. The building his father worked in still exists and has not been torn down because of the contamination. He expressed a concern that their claim had been submitted in 2001 and that he hasn't seen any movement regarding it since then.

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Mr. Frank Rowe from **Senator Joe Lieberman**'s office had been on the phone earlier and had been called away. He left a statement to be read

into the record by **Mr. Jason Broehm** from the CDC Washington office, which was to say that **Senator Lieberman** was hopeful the process would expedite relief to claimants who have been waiting so long for a positive outcome.

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A motion was made and seconded to accept the NIOSH recommendation.

A roll call vote carried the motion unanimously.

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Mr. Mark Griffon was not on the phone call at the time of the vote, but his vote will be solicited.

Dr. Ziemer noted that the Board is recommending Special Exposure Cohort status for the class and that, along with a similar recommendation from NIOSH, it will go to the Secretary of Health and Human Services who will make the final recommendation to Congress.

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SCIENCE ISSUES UPDATE

Dr. James Neton,
Associate Director for Science,
NIOSH/OCAS

Dr. Neton explained there are two classes of science issues, one related to risk models and one to dose reconstruction process. There are seven risk model issues and ten dose reconstruction issues previously identified by the Board. NIOSH has completed addressing three of those and has either issued TIBs or is in the process of finalizing TIBs for three of the ten. His report today is on their progress on the science issue related to workplace ingestion.

Dr. Neton provided an overview of the issue, describing the three major routes of entry into the body and that it must be specifically modeled when bioassay data is unavailable, and is most applicable at AWE facilities. TIB 009, the estimation of ingestion intakes, was developed to account for that pathway and was reviewed by SC&A during a procedures review. The basis of the TIB 009 model has been questioned. A diagram of the ingestion model was provided to illustrate the method of that intake.

Dr. Neton explained TIB 009 addresses ingestion from settling material on food or drink, and transfer of material from contaminated surfaces to the mouth. He described the calculation used and the relationship that was evaluated using data from Bethlehem Steel and Simonds Steel, with a graph to demonstrate those findings.

Further evaluation included a literature review of over 35 applicable references and model evaluation. They also reviewed the applicability of NUREG CR-5512. That document was developed by the Nuclear Regulatory Commission to evaluate doses from occupancy of contaminated buildings, and NIOSH was trying to see how TIB 009 compared to that model.

Dr. Neton presented a chart comparing ingestion rates between the two models. He noted that in all cases the NIOSH value is in range or higher than the comparison model, which led them to believe that they were very much in the right ball park and that the approach is appropriate. Also discussed by **Dr. Neton** was the significance of uranium ingestion since those doses are a small fraction of the dose from inhalation.

Dr. Neton then presented the NIOSH conclusions, noting that they were comforted by them.

Discussion Points:

- Is the model applicable for all isotopes of uranium;
- What was the reference for the box model;
- Resuspension is another issue that's being worked on;
- The comparison model is not based on uranium, but NIOSH intends to apply it to uranium at AWE facilities;
- This analysis will be written up into a Technical Information Bulletin and would be available for review by the Board upon completion.

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DEPARTMENT OF ENERGY UPDATE

Dr. Patricia Worthington,
Department of Energy

Dr. Worthington reported on DOE support to the EEOICP. She described DOE activities as their major responsibilities under EEOICPA, which included responding to exposure records requests. She reported the numbers associated with various portions of those responsibilities such as employment verifications, dose documentations and document

acquisition requests for employee work histories, with a bar graph illustrating the increases in completed requests as the program has progressed.

Dr. Worthington explained the funding issues that had presented challenges for their work in the past year. She described the effort with DOL to gather information to assist and support their activities on various sites, which at DOE is referred to as the site exposure matrix. She described places which DOE has researched, organizations they have worked with in the past year, records research efforts for NIOSH and ORAU, as well as records research support for the Board itself.

Dr. Worthington commented that a key responsibility for DOE is research and maintenance of a covered facilities database, the 343 covered DOE and AWE facilities, as well as beryllium vendors. She discussed some of the research currently underway and the cooperation with the Office of Legacy Management in completing the research efforts.

Dr. Worthington described some of the 2007 DOE initiatives and the progress made in having named a point of contact within her office, conference calls with members of NIOSH and SC&A, et cetera.

Dr. Worthington reported that DOE had conducted audits at three of the sites to evaluate records process and contractor efficiency. She wanted to continue to do that and visit additional sites, but feedback thus far indicates people are doing a good job. Nevertheless, they do recognize where there are opportunities for improvement and are able to move forward and address those concerns.

Discussion Points:

- Is there anything the Board or NIOSH can do to help the claimant retrieve information from DOE, and is there anything DOE is doing to assist the claimants with those requests;
- DOE is trying to be driven by the information rather than set a path of where to look for records;
- Some of the DOE slides may need to be updated;
- Has there been any freeing-up of funding necessary for records retrieval at Hanford;
- In Mr. Elliott's presentation earlier he had mentioned 75 percent of the outstanding requests to DOE were more than 60 days old and from one location, and that might be something for DOE to look into;
- Before Ms. Libby White moved into a different area of DOE she was working on clearances for some Board members and contractor team

members who are running into problems now with access because their clearances have expired. What is DOE doing to address these issues.

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DEPARTMENT OF LABOR UPDATE

Mr. Jeffrey L. Kotsch,
Department of Labor

Mr. Kotsch began his presentation by remarking that DOL has present at this meeting the Director of the Las Vegas Resource Center, as well as three members of the Seattle District Office, including their District Director, available to speak to claimants and attempt to answer questions or address issues. He noted they had begun that practice again at the Chicago meeting and it seems to be a useful thing, along with the NIOSH public health assistants.

Mr. Kotsch explained that the DOL portion of the program has two parts, Part B, the part the Board addresses, dealing with cancer, silicosis, beryllium sensitivity, et cetera. **Mr. Kotsch** provided background on that part and explained that all of his slides are giving statistics as of December 25, 2007.

The other part of the program is Part E, which deals with toxic exposures, asbestosis and other conditions other than cancers. That part was the old Part D program which was transferred from Department of Energy in June of 2005. **Mr. Kotsch** provided statistics on that portion of the program.

Mr. Kotsch noted that as of the end of 2007 the program has paid $3.2 billion in compensation, $2.2 billion in Part B with $1.7 billion for cancer and $272 million for the RECA claims adjudicated by Department of Justice; $938 million have been paid for Part E claims and $187 million in medical benefits. There have been a total of 36,653 payees under the program.

Mr. Kotsch explained that approximately 79 percent of the Part B cancer claims have final decisions, with slightly over 4,300 cases at NIOSH. There are slightly more than 2,000 cases in the initial development stages, being developed for survivor, medical and employment information. There have been 11,111 approvals for compensation and 19,024 decisions for denial. Also included were numbers on reasons for denial, which included non-covered employment, POCs less than 50 percent after dose reconstruction, insufficient medical records, non-covered conditions or ineligible survivors.

Over 26,000 cases have been referred to NIOSH for dose reconstruction, with 19,656 returned. A little more than 2,000 were withdrawn, not requiring dose reconstruction for various reasons. The percentage of referred cases having completed dose reconstructions is approximately 74 percent. There have been 1,495 cases pulled for review to determine their status under newly-added SEC classes; 1,326 of those cases have received final decisions, 59 have recommended but not final decisions, 43 are pending, and there have been 67 closures. There has been $917 million paid in compensation in NIOSH-related cases, $748 million on dose reconstructed cases and $169 million on added SEC classes.

Mr. Kotsch also provided information on the sites having SEC petitions to be discussed at this meeting. The information included cases in Parts B and E, dose reconstructions completed, final decisions, approvals for Parts B and E, and total compensation paid.

Discussion Points:

- In December the Linde site was redesignated from an AWE site to a DOE site; why was that done and is the decision final;
- Forty-four of the claims remaining at NIOSH were among the first 5,000 claims submitted and five or six years seems an unacceptable amount of time for a claim to be pending, so would DOL have any comment on that.

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FISCAL YEAR '08 TASKS FOR SANFORD COHEN & ASSOCIATES

Dr. Lewis Wade led the Board through a discussion of tasking the Board's contractor for this fiscal year. He remarked that this has been discussed at the last two Board meetings and that progress is being made. He indicated he wanted to discuss each task under the contract; in some cases there are decisions to be made by the Board and in others there are not.

One of the simpler issues is under Task IV, the review of individual dose reconstructions. The subcommittee met yesterday and offered the potential of 60 cases to be reviewed this year. **Dr. Wade** discussed the options available under the circumstances of those cases and the additional need for blind review cases and whether more proposed cases would need to be developed based upon Board consensus as to acceptance of all or part of those 60 cases recommended. The contractor is close to being fully tasked on that category.

There are two lists involved in the recommendations of those cases. One is a list of all cases and then a list of best estimate cases. Those are available to Board members and discussion of that is on the agenda for 10:45 a.m. the following day.

Next is Task III, the procedures review. There is an ongoing workgroup associated with that task. There is a possibility of up to five additional procedures to be reviewed, but assignment on that will be held to see how things unfold. There will be reports from all workgroups tomorrow and a status report on procedures reviews will be presented at that time.

Task V is the SEC task for review of the NIOSH evaluation reports. There may be six reviews to be done this year. The NTS petition is under review at this time. A Mound review was assigned yesterday. When this was last discussed the Board had decided to wait on additional assignments to see what is before them. Tomorrow **Mr. Rutherford** will present a report on the SEC petition status, so there may be some information gleaned from that report that the Board may use to decide how to task the contractor. **Dr. Wade** remarked that it's not necessary that they do that, it's just that it should be kept in mind during **Mr. Rutherford**'s presentation.

There was a discussion on the differences between the SEC review task and the site profile review task, Task I, and how those tasks work together. Suggestions were made for potential site profile reviews. Under Task I SC&A was told to expect four new site profiles to be reviewed this year, and they have been assigned Sandia and Argonne East. They are also reviewing TBD 6000, 6001 and Appendix BB under that task.

Dr. John Mauro from SC&A indicated that work will largely consume the resources for the year. He explained the money he holds in reserve to address the closeout portion of site profile reviews done by SC&A but not completed by the Board. There is currently about $800,000 being held. The question for the Board now is whether to give SC&A new site profiles to review and spend into the reserve or wait and see how things progress.

Another issue is with the end of SC&A's contract approaching, in the event a new contractor is put in place, how the old contract could be continued or overlap to allow the closeout process on items already delivered. The reason site profiles have been reviewed but not closed out is because there simply are not enough workgroups to work on everything. There is a backlog, and either through the Board's priorities or through priorities that have been thrust upon it politically, there are pressures to get certain sites done and that's

just the way things have developed. That is the reason the ability to track those reviews has become an issue, and that will be discussed during tomorrow's session.

There are currently 12 site profile reviews completed and delivered, but there has been no action on working through a workgroup and closing them out. This is also a reason some have suggested additional Board members may be necessary in the future to help share the load, because all the members are on multiple workgroups. Limited resources of NIOSH also play into the building of backlog with their contractor, staff and funding.

A major issue with site profile closeouts is that site profiles continue to change. A possibility of segmenting site profile reviews was discussed to potentially provide more flexibility in dealing with issues as they arise. Consideration of whether to maintain the two and a half percent of completed cases to be reviewed by the Board is still a reasonable number. With 20,000 completed dose reconstructions, that would be 500 reviews and the Board has just completed 200. The pace was slow to begin with and now things move somewhat faster.

Mr. Mark Griffon is in the process of preparing a review of the first 100 cases, which he's shared with the subcommittee, so that's another issue to be considered and discussed. The subcommittee is finding it difficult to come up with enough best estimate cases to warrant review, and there have already been enough over- and underestimates so the subcommittee doesn't feel it's productive to continue to do those.

The contractor might be asked to give alternative ways to conduct the site profile reviews. There is the capability under the project management task of the SC&A contract to have SC&A do some strategic thinking beyond site profile issues.

A discussion ensued relative to the types of issues that recur in site profile reviews, such as the 250 workday issue, radionuclides, badging, that come up at various sites and might be removed from the general site profile reviews because they can get lengthy and a lot of time and money can be spent on that.

Also floated as a topic for consideration is the likelihood of having more subcommittees and a reliance on them for taking action to reduce the amount of time the full Board has to deal with specific issues. There might be developed a better way for workgroups to report back to the Board on not only their recommendations, but how they arrived at those recommendations. The requirement of a *Federal Register* notice for a subcommittee meeting could add a bit of rigor and time to announcing those meetings, but it isn't a major issue. Workgroups

don't have that requirement, but subcommittees can also have workgroups, if needed. Subcommittees can have consultants, but subcommittee members have to also be members of the Board. A federal advisory board can have subcommittee members that do not sit on the main board; however, they have to go through the appointment process and be appointed by the President and confirmed by the Secretary. Workgroups can ask ad hoc people to support their efforts and would not be required to be members of the Board; they wouldn't be voting members.

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UPDATE ON SELECTION OF THE BOARD CONTRACTOR

Mr. David Staudt from the CDC Procurement Office explained that they're at the point now where the Board has had the opportunity to review the draft Statement of Work and evaluation criteria, and he's now ready to ask the Board to allow him to go ahead and proceed with the normal procurement process. He explained it is about a six-month process, and he anticipated there will be several Board members to sit on the technical evaluation panel. **Mr. Staudt** remarked that there will be no need for a pre-proposal conference since there is a huge amount of information available for any bidder to review. At this point nothing further is needed from the Board, and he could provide an update in a couple of months as they go through the process.

Dr. Wade commented that there is a draft Statement of Work and an evaluation plan. He has received one comment from a Board member which goes to the Q clearance requirement for the contractor. He added that if there are other things the Board members would like to suggest, this is an opportunity to do that.

Discussion Points:

- The Board should be sensitive to the situation that NIOSH is letting a contractor review their own work. That is mandated by Congress and the review is supposed to be independent of the Agency, so it's important for transparency to the process, recognizing the need for layers of review;
- If individual Board members are submitting comments or suggestions, those should be shared;
- It would be helpful if the Procurement Office could say the Board member input has been heard and describe its effect;
- It would also be important for the Subcommittee on Dose Reconstruction Review to have input into the Statement of Work;

- A suggested change that there be some method in the Statement of Work in terms of site profile review and SEC evaluation report review that would allow those to be done in an incremental fashion rather than a specific number each year;
- An observation that the more instructive this type document becomes, the more difficult it becomes for the individuals attempting to meet requirements;
- The idea is to inform the contractor what needs to be done rather than telling them how to do it;
- Call for an explanation of corporate experience in the evaluation criteria;
- The four Board members having expressed interest in being on the technical evaluation panel were Phillip Schofield, Bradley Clawson, Mark Griffon and Dr. Paul Ziemer.

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SEC PETITION STATUS UPDATE

Bethlehem Steel Company

The issue of the surrogate data had been assigned to a workgroup for review. **Dr. James Melius**, as workgroup chair, reported that SC&A had produced two reports for his workgroup. He indicated he was to produce a report for review by the workgroup, and eventually by the Board, discussing the criteria to be utilized in evaluating the use of such data, a set of guidelines. **Dr. Melius** commented it was not yet ready, but he hoped to have it circulated by the end of the month for discussion at the February conference call or the April Board meeting.

Dr. Ziemer observed that although **Dr. Melius**' report is intended to be somewhat generic, it has direct implications on Bethlehem Steel. Until it is in hand, there is no action to be taken regarding the petition.

A letter from **Senator Charles Schumer** was read into the record. It urged the Board to approve the petition.

Mr. Ed Walker, petitioner, commented by telephone that when he began his journey through the process, he understood the site profile was to be completed for use in dose reconstruction and site experts were to be consulted. That was never done. He discussed various shortcomings in the TBD for the site and the lack of cleanup, and that Simonds Saw was not a good surrogate for Bethlehem Steel.

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Blockson Chemical Company

Ms. Wanda Munn, chair of the Blockson workgroup, discussed the fact that two petitions from the site were merged into one and qualified in 2006, and gave a general history on the petition. The technical contractor reviewed the evaluation report and provided six technical items at issue. The workgroup quickly closed on four, with interaction between NIOSH and SC&A people. **Ms. Munn** described the two remaining issues as revolving around what happened to thorium in the site's process, and the lack of written data as to how the process was performed. Based on expert advice from chemists familiar with the process to reassure themselves that their information was accurate, they asked that NIOSH present white papers on their review of the documentation and a final report from SC&A with respect to any outstanding issues. This was provided in December 2007, leaving no unresolved issues.

Ms. Munn explained she had assumed at that time that the group would be recommending the Board accept the NIOSH recommendation on the petition. However, at this point she understands **Dr. Melius**, a member of the workgroup, has reservations with respect to the data, so she is unable to make that statement. She requested that **Dr. Neton** from NIOSH give a quick review of the NIOSH recommendation.

Dr. Neton commented that NIOSH was in agreement with SC&A on all issues related to Blockson Chemical evaluation report, and the only outcome resulting in a change to the site profile was modification to allow for existence of solubility class M and S for thorium in Building 55. That modification was reissued in late November and has been available to the Board and petitioners. Petitioners have also been provided with a copy of SC&A's final report.

In July of 2007 the NIOSH opinion was that monitoring records, process description and source term data available are sufficient to estimate radiation doses with sufficient accuracy for the proposed class of employees, and that is still the NIOSH opinion. NIOSH believes internal exposure calculations can be done for uranium and associated progeny, as well as radon, thorium and progeny, and dose reconstruction for external exposure to beta-gamma and occupational medical X-rays. The NIOSH position has not changed since last July.

Ms. Kathy Pinchetti, petitioner, inquired if there would be a vote today. She indicated she had submitted a petition on behalf of [identifying information] coworkers in Building 55. She related information on his work history, his illness, the lack of monitoring, et cetera. She contended that there are references to estimations,

probabilities and assumptions, and that the compensation program has morphed into something it wasn't intended to be.

Dr. Ziemer acknowledged the lack of unanimity in the workgroup in terms of path forward, and invited **Dr. Melius** to share his concerns. His unease was with the robustness of the available sampling data and the methods used for estimating radon exposures.

Dr. Genevieve Roessler, a workgroup member, commented that it was her understanding at their last meeting that all issues were cleared. **Dr. Melius**' expression at this point comes as a surprise to her.

Dr. Melius explained the radon issue was a concern raised by **Mr. Mark Griffon**. **Dr. Melius** had asked him to look at the issue again to see if he is satisfied, but **Mr. Griffon** was not on the call at the moment.

Ms. Munn announced that, as she sees the issue now, the workgroup has fulfilled its charter and the contractor has done as they have been asked. The resolution of issues raised, as presented by NIOSH, has been accepted and at this point she has no feel for how the workgroup can go further. Her instinct would be to recommend accepting the NIOSH position, and she's prepared to make a motion to that effect if the Board wishes to hear it and vote on it at this time. If not, she would request at least some concept of when a response might be expected from **Dr. Melius** and **Mr. Griffon.**

Discussion Points:

- Did SC&A address the two points raised and say the data is robust and the radon issue has been addressed;
- A call for an opportunity to review some of the work from the workgroup, with a comment that when there's an issue within the workgroup it's important to have the information upon which to make a decision;
- Agreement to provide the Board with full record of the documents, transcripts of workgroup meetings and all the information they have before it is discussed on the record, potentially leading to a vote;
- Discussion as to how the materials would be provided, described, how to indicate everybody had read the materials, et cetera, with the goal being a vote at the April meeting.

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Dr. James Lockey made a detailed, three-part proposal that would involve NIOSH and SC&A in an intensive statistical review of badge

samples, et cetera, relative to Nevada Test Site. A discussion ensued among **Dr. Ziemer**, **Dr. Mauro** and **Dr. Neton** as to the time and effort that would be involved in such a proposal.

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PUBLIC COMMENT

Public comment was solicited on the first two days of the meeting. The members of the public who spoke on the second day are listed below. A full transcript of their remarks is available on the NIOSH/OCAS web site at www.cdc.gov/niosh/ocas.

Ms. Doris Gyorody, NTS survivor; Ms. Andrea Matson-Morse, NTS survivor; Ms. Brenda Sieck, for Mr. Robert Lemons, former NTS worker (statement read) and her mother, an NTS survivor; Ms. Deb Jerison, for her mother, a Mound survivor; Dr. Dan McKeel, SINEW; Mr. John Taylor, NTS claimant; Ms. Carol Pittaro, NTS survivor (statement read); Mr. William Vasconi, former NTS worker; Mr. John Ramspott, for GSI workers; Ms. Rosemary Hoyt, Hanford petitioner.

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With no further public comment offered, the Board officially recessed until 8:30 a.m.

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Thursday, January 10, 2008

Dr. Ziemer called to order the final day of the meeting, commenting that **Dr. John Poston** had had to leave and that **Dr. Genevieve Roessler** and **Mr. Mark Griffon**, who were participating by telephone, were expected to join shortly.

Dr. Christine Branche announced that she would be serving as Designated Federal Official for this day.

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SEC PETITION UPDATE

Mr. LaVon B. Rutherford,
NIOSH Health Physics Team Leader

Mr. Rutherford presented an update on upcoming SEC petitions, reporting that as of mid-December NIOSH had received 104 petitions, with four in

the qualification process; 51 have been qualified to date, of which 39 evaluations have been completed, with 12 in progress; 49 of the submitted petitions were not qualified.

The evaluation reports currently with the Advisory Board for their recommendation were listed, with **Mr. Rutherford** explaining the background and history of each and providing their current status. Those petitions included Chapman Valve, with DOE to provide an update at this meeting. Blockson Chemical has a couple of issues being looked into by **Dr. Melius** for the workgroup. Feed Materials Production Center workgroup review is ongoing. Bethlehem Steel update was provided earlier in this meeting. Sandia National Laboratory Livermore, an update is scheduled for this meeting. Hanford Part 2 petition and evaluation report are with the Advisory Board and SC&A for review. Nevada Test Site ('63 through '92) evaluation report has been sent to the workgroup for review. Lawrence Livermore National Laboratory ('50 through '73) action was taken during this meeting to recommend addition of that class to the SEC. Mound Plant (1949 to present), Advisory Board agreed with the NIOSH recommendation to add a class for the earlier years during this meeting, and agreed that work should continue on the later years. Combustion Engineering (1965 to 1972), Board concurred with the NIOSH recommendation to add a class to the SEC during this meeting.

Mr. Rutherford announced the SEC petitions currently in the evaluation process and the dates those evaluation reports are expected to be completed. They are: Pantex, with expected completion in April, but not in time for presentation at the April meeting; Texas City Chemicals, on hold awaiting Board decision on Blockson Chemical; Santa Susana Field Laboratory, expected completion in January; Horizons, Inc., expected completion in February. The last three will be completed for presentation at the April meeting, along with Westinghouse Power Development.

There are three 83.14 petitions where NIOSH has identified through an existing claim that dose reconstruction is not feasible. Those include Kellex Pierpont, the Massachusetts Institute of Technology, and SAM Laboratory, all of which are anticipated to be presented in April.

Mr. Rutherford also explained there are seven additional sites in the early phases of the 83.14 process, with a bit more work to be done. However, one of them, the NUMEC Parks petition, is expected to be ready to present at the April meeting.

Discussion Points:

- If the Pantex report isn't going to be ready for the April meeting, the Board's schedule should be reconsidered relative to location;
- The SEC evaluation workgroup has been reviewing 83.14 petitions prior to their presentation, and it would be helpful to have those provided to the workgroup ahead of the April Board meeting.

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STATUS REPORT ON SPECIFIC SEC PETITIONS WITH ONGOING ISSUES

Chapman Valve

Dr. Patricia Worthington from DOE commented that DOE will come to the Board with updates and final decisions as soon as possible, and they do recognize the need to be timely. She cautioned that a quick response is not necessarily a complete one, so they make an effort to follow all leads.

Dr. Worthington explained the Chapman Valve facility is covered as an AWE for the period 1948 to 1949 for work with uranium for the Brookhaven National Lab. NIOSH asked DOE to research whether there were any additional sources of radioactive material which may have contained enriched uranium. DOE tasked research specialists to look into the relationship between Chapman Valve's Dean Street location and work done with AEC. **Dr. Worthington** described the research efforts, including document searches, public testimony, and employee interview.

Dr. Worthington commented she would give the results in two parts. One is that, based on research, DOE recognizes the Chapman Valve building on Dean Street was part of the parent Indian Orchard facility. DOE will update their facility list database to reflect that determination.

As to the search for additional radiation sources, DOE was unable to substantiate that work involving additional sources of radioactive material was conducted on behalf of the AEC. Those findings have been forwarded in a letter report to DOL and NIOSH.

Discussion Points:

- What are the next steps to occur;
- This report has just been provided to NIOSH, and the official change in designation by DOL has probably not occurred yet;
- If DOE research did not identify additional sources of radiation exposure, nothing will change in the NIOSH evaluation report;
- There may be a slight modification of the class definition;

- The fact that, of three uranium samples, one was enriched, can be a part of deliberations, but it was covered by the NIOSH evaluation report;
- If another source of material is found it can be covered under an additional petition;
- SC&A should follow up on this issue if the petition is going to be dealt with at the April meeting;
- Chapman Valve workgroup can follow up on what's needed.

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Dow Chemical, Madison

Dr. Patricia Worthington announced this is a final report from DOE. There have been a number of questions raised as to whether the facility sold magnesium/thorium alloys to AEC; and if so, whether that would be a sufficient basis to satisfy the statutory requirement for additional coverage as an AWE under EEOICPA.

Dr. Worthington explained that DOE has determined that sheets and plates made from magnesium/thorium alloys went directly into atomic weapons from 1956 to 1969, and that Dow Madison produced and sold such sheets and plates to the AEC during the late 1950s. The selling of magnesium/thorium alloy sheets and plates to the AEC required an AEC license and meets the definition of an AWE, as defined by EEOICPA. DOE will update the description of the covered facility to state that Dow Madison supplied magnesium/thorium sheets and plates to the AEC from 1957 to 1958.

Dr. Worthington thanked workers and interested parties for providing information that helped DOE come to their decision, noting that cooperation and shared information is very helpful. DOE feels there was enough information available to render a fair decision. She discussed requirements for designation as an AWE, and described investigations conducted in order to determine those requirements had been met.

Discussion Points:

- Formal action necessary by the Department of Labor;
- Action required by NIOSH in terms of class designation;
- The cleanup period may now come into play;
- NIOSH will have to determine if they can reconstruct doses for thorium exposure during the residual contamination period, which hasn't been attempted yet because up until now it was not required under the Act;

- NIOSH will give this issue a very high priority in research efforts to arrive at an answer as soon as possible;
- This issue will affect approximately 100 workers, so it would be good to have the meeting perhaps in St. Louis when this petition is ready for action;
- Discussion surrounding whether petitioners will have to prove the magnesium/thorium alloy went into nuclear weapons;
- A call from petitioner to ask SC&A to review information they submitted on this issue;
- The resolution should be handled as expeditiously as possible;
- NIOSH has not yet developed a methodology for, or even determined if they can, reconstruct the thorium dose, which would need to be done before SC&A could review their product;
- Perhaps by the phone meeting NIOSH will know where they are and the Board can determine at what point they can ask SC&A to assist;
- The SEC workgroup was asked to follow the Dow situation, and perhaps with this development perhaps the workgroup can get involved again and keep things moving, and have a mechanism to report back to the Board;
- NIOSH can keep the workgroup informed;
- Additional discussion regarding the length of time, accepting statements from workers, sharing information with petitioners;
- Has the SC&A report of August 2007 been provided to the Board;
- Clarification that the report has been provided, but it has not been formally addressed.

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Fernald

A letter from **Senator Sherrod Brown** was read into the record expressing his support for the Fernald petition. He discussed creation of the compensation program in 2000. Workers at Fernald were involved in important work and dangers were frequently unknown. Lack of available information prevents full and accurate dose reconstructions. The SEC was created so workers and survivors would not be denied benefits due to incomplete information. Granting SEC status would fulfill the intent of EEOICPA. **Senator Brown** urged the Board to make a prompt decision in favor of the petition.

Mr. Bradley Clawson, workgroup chair, added that SC&A had established a matrix of their findings which the workgroup has completed reviewing. They are dealing with several issues in order to work through the process, and hope to have another meeting in late January or mid-

February. They are awaiting some documentation that will have to be reviewed.

Discussion Points:

- Has there been progress in the preparation of site profile revisions;
- The SEC evaluation discussion and ultimate decision will probably result in several chapter revisions;
- When a dose reconstruction approach is changed, NIOSH has to re-evaluate completed cases, and they would like to have the impact of as many changes as possible evaluated before publication of revisions;
- The petitioner will be kept abreast of changes as they come about;
- Effect of changes on the timeliness issue was discussed;
- NIOSH would like to minimize any further delays.

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Sandia National Laboratory, Livermore

Mr. Rutherford indicated he didn't have any additional material, all documents have been provided to the Board. If anyone has a technical question concerning the evaluation and the NIOSH decision, **Dr. Sam Glover**, who is the lead on this petition, is available for those answers.

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SUBCOMMITTEE AND WORKGROUP REPORTS

Hanford site profile and SEC petition workgroup chairman **Dr. James Melius** indicated he didn't have anything additional to report. The main issue has been the holdup on access to records and there will be reports to circulate among the group shortly. **Dr. Melius** and **Dr. Arjun Makhijani** from SC&A had a conference call with NIOSH and he reported briefly on that discussion.

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Savannah River Site site profile workgroup report was given by **Mr. Bradley Clawson** in chairman **Mr. Mark Griffon**'s absence. The group had gone to the site and reviewed some data in the incident database and have been working through that. They plan to set up a meeting to process some of that information, but no time has been set yet.

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SEC Issues, including 250-day issue and preliminary review of 83.14 petitions workgroup chairman **Dr. James Melius** reported the workgroup met a couple of months ago. They have been discussing NTS and Ames Laboratory regarding the 250-day issue. They have decided the approach to dealing with the Ames issue is as a dose reconstruction issue rather than an SEC issue. **Dr. Neton** is looking into the feasibility of doing that. As to NTS, the workgroup has reached out to DTRA for some information. SC&A is working on that ongoing issue. There will probably be a workgroup meeting sometime in the next month.

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Procedures review workgroup chairman **Ms. Wanda Munn** reported that the workgroup had met this week. They have a number of items approaching closure. They've spent a considerable amount of effort working with SC&A to revise the format being used for review. The new method for reporting may become more widely used by the Board and other groups because it provides a method for archival retrieval. After they have finished what they're working on, they are able to follow through step-by-step what was done. Problems in setting up the database have been resolved. Population of data is the major issue and will take a considerable amount of input.

The group anticipates that before their next meeting NIOSH will have at least one white paper regarding OTIB-17. **Ms. Munn** described additional issues under consideration and review by the workgroup, and when they anticipate completion of those issues.

Discussion Points:

- It would be useful to have some sort of process where the Board could reach closure on procedures reviews, similar to that with dose reconstruction reviews;
- With all those procedures in the first set of reviews nearing completion, that would be an appropriate time to make a report to the Board highlighting issues that were of primary concern and the nature of the closeout;
- In the new format there will be a sheet that gives complete information and description of what transpired, what instructions were given, action taken and closure received;
- Perhaps a summary report could be presented at the April meeting on the first group of reviews;
- It might also be helpful to have an introduction to the new access database this workgroup is using, and how the Board can look at items there and track them;

- Do members of the Board have access to individual procedure reviews from SC&A through the web site;
- Three major reports have been delivered to Board members in large 3-ring binders, along with 3 or so smaller special deliverables such as the OTIB dealing with construction workers;
- Discussion surrounding how things are reported to the Board and whether they should be reported to the Secretary;
- The Board has no natural mechanism to bring procedures reviews to closure.

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Worker outreach workgroup chairman **Mr. Michael Gibson** reported there was nothing new since the last conference call. Workgroup members have gotten some common dates together and will try to have a meeting later in the month.

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Linde Ceramics site profile workgroup chairman **Dr. Genevieve Roessler** reported that the group met this week, with people from NIOSH and SC&A and others present. **Dr. Roessler** provided a written report for Board members, but commented on some pertinent things. This week was the second meeting of the workgroup. At the first meeting in March of 2007 22 issues were raised by SC&A. **Dr. Steve Ostrow** presented the SC&A matrix of those issues. There was agreement this week that 16 of those issues are now closed. The six remaining open issues were discussed among the workgroup, **Dr. Ostrow**, **Mr. Joe Guido** from NIOSH, and others. **Dr. Roessler** explained those issues were summarized in her report, but commented that resolution was reached five of the six. The one remaining open issue has to do with the burlap bags used to bring unprocessed uranium ore to the site. After being emptied they were stored behind Building 30. A site expert had stated workers would sit on the bags, resting or eating lunch, on into the 1950s. NIOSH has documentation to indicate bags had been removed by 1946. The petition covers the time period from October 1, 1942 through October 31, 1947. When the bags were there and when they were removed is important.

The workgroup determined there was not enough information to evaluate the validity of the site expert's statement and the documented information from NIOSH. NIOSH, in consultation with SC&A, was asked to summarize the facts as soon as possible and present it to the workgroup. At that time a technical call will be set up to discuss the issue, with workgroup members participating.

A letter from **Senator Charles Schumer** regarding the Linde Ceramics site profile and dose reconstructions was read into the record. **Senator Schumer** explained he understood there was no petition to have later periods added as classes of the SEC, due in part to ongoing difficulties former employees have had in obtaining documents from NIOSH. He asked the Board to direct NIOSH to cooperate fully with people representing the Linde workers so their cases could be decided on the merits. He encouraged the Board to expedite the privacy review of the ORAU document so it could be made public. He acknowledged that other difficulties were outside the scope of the Board's authority. He remarked on the heroic efforts of the men and women at Linde Ceramics and that the country owed its safety to their work and sacrifices. He contended a way to show a share of what is owed to them is by supporting their appeals for restitution.

Discussion Points:

- Discussion surrounding the document the Senator called to be made available.

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Rocky Flats workgroup chairman **Mr. Mark Griffon** was not available by telephone but had provided a written report which **Dr. Branche** read in part. He reported there had been a workgroup conference call in which the issue of DOL implementation of the SEC class was discussed, initiated by concerns raised in stories reported in the *Rocky Mountain News*. The data referenced in the articles was from the University of Colorado research, specifically **Ms. Margaret Ruttenber**. The workgroup asked NIOSH to discuss the issues with **Ms. Ruttenber**. The call took place just before the holidays and **Mr. Griffon** had indicated he took minutes from the call and will provide a draft of those for later review. As a result of the meeting NIOSH is to work with **Ms. Ruttenber** to obtain the database developed by the University. NIOSH and **Ms. Ruttenber** believe the data are the same and that the Board has access to it.

The second action is that the workgroup will have another conference call to discuss implementation of the class by DOL. The primary problem is workers with work history cards indicating they worked in a non-neutron building, yet the analysis in the newspaper articles indicates you can't be sure the worker didn't go into other areas. That makes it difficult to base the determination on buildings.

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Los Alamos National Laboratory workgroup is also chaired by **Mr. Griffon.** He had not provided a report, but **Dr. Ziemer** commented he didn't believe the group had met since the last Board meeting.

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Subcommittee on Dose Reconstruction Reviews is also chaired by **Mr. Griffon**. **Dr. Ziemer** explained the subcommittee had met earlier in the week and identified a list of suggested cases for the next 60 dose reconstruction reviews. He understood **Mr. Griffon** is not asking the Board to approve them, but is providing the list for information because there is a possibility some may drop off.

Dr. Branche noted that **Mr. Griffon** had written that the list is preliminary and that **Mr. Stu Hinnefeld** from NIOSH will provide more detailed information for these cases to allow the subcommittee to understand what procedures were used for dose reconstruction. **Mr. Griffon** had indicated he expected the Board should be able to take action on the list at the Board call in February.

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BOARD WORKING TIME

Review of SEC Petition Write-ups

The SEC petition write-ups on actions taken earlier in the week were circulated. These were hard copy drafts of Board recommendations to the Secretary for Mound and Lawrence Livermore. With some minor editing discussed and approved, **Dr. Ziemer** indicated he would follow his usual practice of sending each Board member of what he planned to send to **Dr. Howard** for transmittal to the Secretary so they would have a final look at the formal language within the next three weeks.

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Board Redaction Policy

With questions having been raised about unredacting some things that were already redacted, **Ms. Liz Homoki-Titus** from the Office of General Counsel explained that the documents will be redacted for third-party personal information. Unredacted documents will have to be re-reviewed and something may still be redacted. Names of presenters would appear, however.

Dr. Branche remarked that they appreciated the comments people made about the policy. It appears in *Federal Register* notice. The new policy will be applied to transcripts from a period of time when a more stringent policy was in place, but that will take some time getting those transcripts posted as it imposes additional work.

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Tracking of Transcripts

Dr. Wade reminded the assembly that there had been discussion on how quickly things could get posted on the web site. His analysis is that NIOSH can commit to having Board meeting transcripts on the web site in 45 days. They are required in 30 days from the court reporter. With the streamlined redaction policy, cleared transcripts should be on the web site within 45 days. In the confusion of changing policies, however, the July transcript was not handled within that time period but will be fixed immediately. **Dr. Wade** commented forty-five days is the proposal back to the Board and he is ready to hear concerns about that. It is a reasonable compromise and doable.

Discussion Points:

- Increased SEC petitions makes this more critical than it has been in the past;
- There are limitations, both for the court reporter and staff;
- This report will be provided before every meeting;
- Workgroup transcripts are a different issue;
- Workgroup chairs should not go directly to the court report to request expedited transcripts but should coordinate their requests through Dr. Branche and/or Dr. Wade;
- There are no new resources being put to this effort, so it should be understood that any special request for a workgroup transcript will delay other work in the stream.

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A question was raised as to whether someone will be responsible for assuring appropriate documents are distributed to Board members and petitioners for items on the agenda. **Dr. Branche** announced she would be responsible for the agenda, and discussed issues involving appropriate timing of topics, *Federal Register* announcements, notices, and getting agenda items identified as early as possible. She explained they were trying to use the web site or the O drive to get information to Board members. She observed that often workgroup meetings have a very short lead time and, what with staff and travel,

there are a lot of things that have to fall into place. She asked that workgroup chairs use their calendars with as much sensitivity as practical when scheduling their meetings.

There was an observation that it would be helpful to Board members if agenda items could indicate whether an issue is an action item or a report.

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Tracking of Board Actions

Dr. Ziemer observed this is the master document currently under development. **Dr. Wade** suggested it would be effective to make that presentation when **Ms. Munn** reports to the Board about the tool, because it will become the substance of the overall tracking activity.

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Appointment of Mound Workgroup

Board members **Ms. Josie Beach**, **Mr. Phillip Schofield**, **Mr. Robert Presley**, **Mr. Bradley Clawson**, **Mr. Mark Griffon** and **Dr. Paul Ziemer** had expressed interest in this group. **Dr. Ziemer** announced he would leave **Mr. Griffon** off this workgroup since he has an overload at the moment. He added that since only four were needed, he would take the alternate position. If **Ms. Beach** is willing to chair the group, he will appoint her to do so.

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FUTURE PLANS AND MEETINGS

Dr. Ziemer remarked there has already been an indication of a high likelihood the Pantex SEC evaluation report will not be ready for the April meeting tentatively scheduled for Amarillo, Texas. He called for suggestions for alternate locations for the April meeting.

Suggestions included Pinellas, at Tampa or Clearwater, Florida. Sandia Albuquerque was suggested, as well as Los Alamos. Lawrence Livermore, Fernald, northern California as opposed to southern California were also discussed. It was agreed that effort would be made to accommodate a meeting in either Clearwater or Tampa for the April 7 through 9 meeting; St. Louis for the June 24 through 26 meeting; and either Livermore or Los Angeles, California for the September meeting. If

there is difficulty scheduling the Florida venue for April, the venue will be switched with the one for September.

Dr. Branche enumerated the schedule of meetings and conference calls through February of 2009, and indicated that in the February 2008 conference call she planned to propose additional dates for the remainder of 2009 and into January of 2010.

Discussion evolved around meetings scheduled in the first week of September and the effect of Labor Day, start of school, et cetera.

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CONTINUATION OF DISCUSSION OF SC&A TASKS

Dr. Ziemer commented he was going to go through the list, which will not be in order. Beginning with Task IV, the Board is in the process of assigning 60 cases for review for next year, and there will also be a selection by the subcommittee of two cases for blind reviews.

Task V is the SEC task. The NTS SEC petition evaluation report review assignment is being done under the funding for this year. Mound has been assigned for review of the petition evaluation report.

Under Task I, SC&A has been authorized to proceed on site profile reviews for Argonne National Laboratory East and Sandia National Laboratory Albuquerque. It was agreed that Santa Susana and Weldon Spring could be added as a part of this year's assignment.

It was agreed that under Task III, procedures reviews, there was adequate work already scheduled.

Under the project management task it was discussed that SC&A might be asked to think about ways in the future of accomplishing reviews of site profiles in a way that would focus on a specific aspect or aspects of the site profile.

It was agreed **Dr. Wade** and **Mr. Staudt** would work together to very quickly develop language to assign such a task. It will be e-mailed to the Board as a matter for an action of approval by the Chairman. Since the Board has previously expressed their interest in the task, it would enable SC&A could begin work at that time.

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With no further business to come before the Board, the meeting was adjourned at 11:50 a.m.

End of Summary Minutes

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

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Paul L. Ziemer, Ph.D., Chair

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Date