



NIOSH Dose Reconstruction Project Meeting On Oak Ridge National Laboratories Profile

Date:

November 9, 2004

Meeting with:

Knoxville Building and Construction Trades Council, AFL-CIO

Attendees:

Arnold Pesterfield	Bricklayers Local 5
Danny Hatfield	Insulators/Asbestos workers
J.W. Nelson	Sprinkler Fitters Local 669, UA
John Holliday	International Union of Operating Engineers Local 917
Ray Wilkerson	International Brotherhood of Electrical Workers Local 917
W. Ray Whitehead	KBCTC/IUPAT
Charles Cate	LU 102
Tony Dagley	Laborers 818
Ken McCormick	United Brotherhood of Carpenters and Joiners
Robbie Helton	United Brotherhood of Carpenters and Joiners
David Garcia	International Brotherhood of Electrical Workers Local 270

NIOSH and ORAU Team Representatives:

Brant Ulsh – National Institute for Occupational Safety and Health (NIOSH) Office of Compensation Analysis Support (OCAS)

William Murray – Oak Ridge Associated Universities (ORAU)

Vernon McDougall – ATL International, Inc.

Robert Burns – Shonka Research Associates

Mark Lewis – ATL International, Inc.

Dawn Catalano – ATL International, Inc.

Melissa Fish – ORAU

Proceedings

Mark Lewis opened the meeting at 10:15 a.m. by thanking all attendees for allowing the National Institute for Occupational Safety and Health (NIOSH) and Oak Ridge Associated Universities (ORAU) to be part of their regular monthly meeting. Mr. Lewis explained that he is part of the Outreach Team as an employee of ATL International, Inc (ATL) working with Mr. McDougall on the Energy Employees Occupational Illness Compensation Act Program (EEOICPA). He said that the Team had asked for this meeting in order to explain Site Profiles and dose reconstruction under the Act, and how it applies to claims. He said that his job was to get input from organized labor that would be incorporated into the Site Profiles. He introduced the



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members of the Team in attendance, and stated that the meeting would be recorded only to ensure the accuracy of the minutes. He added that a draft would be sent for their review. Mr. Lewis then asked Mr. Ulsh for opening comments regarding the role NIOSH plays.

Mr. Ulsh thanked the participants for being there and acknowledged that the program was highly complicated. He explained that the Department of Labor (DOL) administers the EEIOCPA. Claims are sent to NIOSH for dose reconstruction, which starts with individual records. Then information is added based on the Site Profile. Mr. Ulsh said the primary purpose of the meeting was to discuss the Site Profiles and dose reconstruction process, but also to serve as a forum for people to ask questions and express concerns about the program. He then introduced Mr. Murray of ORAU.

Mr. Murray said that he has been working on the ORAU Worker Outreach Program for several months to let unions know how the EEOICPA works. He said that worker input is valuable and is needed in developing an accurate Site Profile document. The Team appreciates the worker's point of view and comments that are submitted which help make the document more accurate. The Site Profiles are highly technical documents written as handbooks for the health physicists who are reconstructing doses for claimants. Mr. Murray said he was the Team Leader for the development of the Y-12 Site Profile, and Mr. Burns was the Team Leader for the Oak Ridge National Laboratory (ORNL) Site profile. They would try to answer as many questions as possible. He assured attendees that, while the meeting was being recorded, it was only to be sure all concerns were captured; and that no one would be named or quoted directly.

The administration of one part of the EEOICPA is in transition from the Department of Energy (DOE) DOE to DOL in accordance with a recent amendment to the Act. Mr. Murray stated that NIOSH and ORAU came to talk about Subtitle B, dose reconstruction, and radiation-related claims. He explained that Subtitle E includes exposure to toxic chemicals and that a worker could make two separate claims to apply for both Subtitle B and E. The change does not affect NIOSH and ORAU's participation in the dose reconstructions since that falls under Subtitle B. The office within NIOSH responsible for performing the dose reconstructions is the Office of Compensation and Analysis Support (OCAS). Approximately 17,000 claims have been received to date. Due to the size of the project, it was necessary to contract out a considerable amount of the work, and ORAU was selected to do the dose reconstructions as well as the Worker Outreach Program.

Mr. Murray explained that the ORNL and Y-12 Site Profiles have already been completed and are being used as technical handbooks by the health physicists responsible for performing dose reconstruction. He said that it was critical to use site-specific technical information in order to minimize the need to interpret data and to ensure consistent calculations among dose reconstructions for claims at the same site. Site Profiles can be revised if additional information comes to light. Revisions have been made to the Site Profiles for the Hanford and Savannah River Sites after worker input was considered. Revisions also are applied to dose reconstructions, so it can work to the advantage of the claimant. Mr. Ulsh added that new information could always be used to add to dose, but would never reduce dose that had already been established in the reconstruction process.

Mr. Murray described the six different sections of the Site Profile: the Site Description, External Dose, Internal Dosimetry, Occupational Environmental Dose, and Occupational Medical Dose.



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Mr. Murray said that the Site Profile Teams for ORNL and Y-12 were established in May, 2003, and that he and Mr. Burns were (respectively) the Team leaders. The Site Profiles have both been completed and approved. Mr. Murray explained the ORAU and NIOSH review and approval processes in which each section is carefully and repeatedly reviewed prior to release for use in dose reconstructions.

The Site Description provides an overview of the facilities, activities, and radioactive materials at the site since 1943. Because of the differences in function between Y-12 as a weapons plant primarily dealing with uranium and nuclear weapons components and ORNL as a laboratory environment, the two sites had very different Site Descriptions. Several major incidents are discussed in the Site Profile, including a criticality accident at Y-12 in 1958.

Occupational external dosimetry discusses the sources of exposure, dosimetry methods and practices, and adjustments to recorded dose. The dose reconstruction also takes into account the sensitivity of the monitoring equipment used. If workers are exposed at a level less than the minimum that a badge could detect (minimum detectable level [MDL]), a missed dose is added to the dose reconstruction and then multiplied by a factor to account for the badge exchange frequency. This is a claimant-favorable dose that NIOSH and ORAU add to the official DOE recorded doses that are used in dose reconstruction. Placement of the badge is another consideration in calculating external dose. Mr. Murray discussed the types of dosimeters used to measure radiation at ORNL and Y-12. He indicated that relatively few people were monitored prior to 1961 at Y-12 and that NIOSH and ORAU are contemplating the best way to assign a reasonable dose for that timeframe.

The bioassay program was started in 1947 at ORNL and in 1948 at Y-12 for occupational internal dose. At Y-12, there is an information gap between 1943 and 1947. Both urine and feces were analyzed for various radionuclides at the sites. Monitoring was also done for gamma-emitting radionuclides, which could be measured by a whole-body or chest counter, starting in 1959 at ORNL and in 1961 at Y-12. The program at Y-12 was primarily focused on uranium, since that is the substance that was present in the greatest quantity and greatest number of locations site-wide. Minimum detectable activity is also considered if workers received zeroes on their bioassay measurements to account for missed dose.

Environmental dose is generally for the benefit of unmonitored workers who could receive a dose from sources in the plant. External doses are possible when a worker is in the vicinity of an x-ray machine or radioactive waste storage. Mr. Murray said that site-wide monitoring data on Y-12 was limited and the Site Profile team is looking for more. Internal doses are calculated based on how much dose is delivered through ingestion, such as breathing in airborne substances. At Y-12, uranium isotopes were present.

Medical dose is added for employer-required X-rays, most often chest X-rays. These added doses are particularly beneficial to outside contractors, but they are considered in all dose reconstructions.

Mr. Murray concluded by saying that worker input is important for a usable Site Profile, and any comments or concerns could be sent directly to NIOSH. Much of the information used in the Site Profile is taken from government sources, and NIOSH and ORAU realize it may be biased. He gave the contact information for submitting questions or comments directly to NIOSH.



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Discussion Session

Question:

Will the change from DOE to DOL expedite the approval process? How many claims have been processed? Also, will the transition time hold up claims that have been filed?

William Murray:

ORAU has completed 5,000 dose reconstructions for NIOSH. NIOSH provides information on whether the cancer is likely related to radiation exposure, but DOL makes the determination if the claim will be awarded or denied.

Vernon McDougall:

There will be a period of time that the records are in transition; DOL needs to prepare to administer Subtitle E. There will be major changes in how that side of the program is administered and that will need to be addressed.

Brant Ulsh:

The change to Subtitle E will not affect the Subtitle B claims; NIOSH does not work on that part of the program. A worker can file claims under both Subtitles independently.

Question:

I worked in the plant for 26 years in some nasty (contaminated) places, but my annual dose readout has always been zero. How will I argue that I got more dose when that's what my official record shows?

Brant Ulsh:

Your dose records are a starting place for the process. But there are other sources of radiation dose that NIOSH considers that could assign you additional dose.

Question:

When co-worker data is used for a dose reconstruction, for example when you know someone with cancer that you worked next to, how accurate are the records from the plant? Will it help with a claim?

Brant Ulsh:

Co-worker data is only used when individual dose data is missing. If the co-worker data is not reliable, NIOSH and ORAU will go to source data from the plant. Any individual worker or worker group can file for special exposure cohort (SEC) status by showing NIOSH and ORAU that there is no possible way to do an accurate dose reconstruction.

Question:

At what point do NIOSH and ORAU decide that there is not sufficient information available for dose reconstructions?

Brant Ulsh:

That depends on the individual situation. For example, a petition from the Iowa Army Ammunition Plant is currently under consideration because data from the early years have not been located. If it is found that the data can not be reasonably recovered to perform a credible dose reconstruction, NIOSH could recommend SEC status. The employment



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requirement and type of cancer need to be verified for claims to be approved for SEC facilities.

Mark Lewis:

Information on SEC and how to file an application for SEC status is on the NIOSH website.

Question:

Surviving spouses filing claims don't have sufficient information – badge number, or what facilities the employee worked at – only what they needed to know. There was an employee who filed and unfortunately died without being awarded. He didn't even know what he was exposed to. He just kept working year in and year out not knowing so he could keep his job. How can the widow continue the claim?

William Murray:

NIOSH has access to many reports and records that would be a source of additional information to process such claims. Affidavits from co-workers could also help supplement the record.

Comment:

Back in the early 40's and 50s, in the days of Tennessee Eastman and Union Carbide times, workers tracked contamination home with them. The families weren't even aware they got exposures, but anything the worker came in contact with was brought home in smaller amounts.

Mark Lewis:

The best way to address this kind of concern is to write to your state representatives. The laws can be amended and expanded to include other situations. The NIOSH webpage has a lot of information about the EEOICPA that would help.

Mr. Lewis thanked everyone for their participation and urged attendees to follow up by submitting formal comments. The meeting was adjourned at approximately 11:45 a.m.