



NIOSH Dose Reconstruction Project Meeting On Paducah Gaseous Diffusion Site Profile

Meeting Date:

February 11, 2005

Meeting with:

Western Kentucky Building and Construction Trades Council

Attendees:

The meeting with the Western Kentucky Building and Construction Trades Council on the Paducah Site Profile was scheduled to take place during their regular monthly meeting. Unfortunately, there was some misunderstanding about whether this meeting was a public extension of the meeting with the PACE local union on the same Site Profile on the day before (February 10). The Council leadership welcomed other union members who were interested in the presentation. Of the approximately 40 people in attendance, the following chose to sign-in:

Name	Affiliation	Name	Affiliation
Mike Stone	Millwrights Local 1080	John Kuzvoka	Sheet Metal Local 110
Larry Sanderson	UA Local 184	Michael L. Vaughn	Laborers Local 1214
Ray Parrott	Boilermakers Local 40	Alton Cunningham	Painters District Council 91/Local 500
Mike Vinson	IUOE Local 181	John T. Horn	Laborers Local 1214
Don Mitchell	Carpenters Local 357	Bud Dillow	Teamsters Local 236
Jim Bradley	Teamsters Local 236	Gary Sealy	IBEW Local 816
Margaret Allbratton	F.H. McGraw	Colleen Billham	Paducah retiree
Joe Ben Pipu	Operating Engineers 181		

NIOSH and ORAU Team Representatives:

Peter A. Darnell – National Institute for Occupational Safety and Health (NIOSH), Office of Compensation Analysis and Support (OCAS)

Jay Maisler – Integrated Environmental Management, Inc. (Team Leader for the development of the Site Profile)

William Murray – Oak Ridge Associated Universities (ORAU)

Mark Lewis – Advanced Technologies and Laboratories International Inc. (ATL)

Dawn Catalano – ATL

Proceedings

Mr. Lewis began the discussion at approximately 10:15 a.m. by thanking the Council for allowing the team to be part of their regular meeting. He described his own background as a union activist who had worked for passage of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). He spoke about the importance of the Site Profile in dose reconstruction for claims filed under EEOICPA, and the importance of getting workers' input into the Site Profile. Mr. Lewis explained that the Site Profile can be revised based on



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information that may not be in the “official” records of a site. He asked the attendees to consider any accidents or incidents they know of, to see if those appear in the Site Profile, and to consider if they believe their inclusion would make a difference in claimants’ dose reconstructions.

Mr. Lewis then introduced the Team. He explained that notes were being taken and a recording was being made in order to produce minutes of this meeting. The minutes will be available for the union participants’ review to be sure that their comments and concerns are captured correctly. He introduced Mr. Darnell for some opening comments.

Mr. Darnell thanked the Council again for inviting the Team to their meeting, and explained that he is a Certified Health Physicist with NIOSH. He explained that NIOSH provides oversight to the ORAU process of developing Site Profiles and working on dose reconstructions. Mr. Darnell said the Site Profile needs to be as technically accurate as possible, and NIOSH needs the workers’ collective wisdom to achieve that goal. He turned the meeting back to Mr. Lewis.

Mr. Lewis stated that the issue of conflict of interest had been raised in the PACE meeting the day before, and he wanted to clarify this up front. He explained that health physicists are not permitted to work on the Site Profile or to perform a dose reconstruction related to a site where he or she had worked previously. He said that Mr. Murray would be able to provide more details in his presentation, and turned the meeting over to him.

Mr. Murray added his thanks for the Council’s hospitality. He said the Team looks forward to learning about worker experiences and hearing any information or comments that anyone would like to contribute. He asked all attendees to sign in. Mr. Murray mentioned that the meeting was being recorded but only for the accuracy of the minutes. No one would be quoted, and the minutes would be available for participants’ review.

Mr. Murray said that the Team was attending the meeting to discuss the development of the Site Profile for Paducah. He explained that the administration of the chemical part (Subtitle E) of the program had been transferred from the Department of Energy (DOE) to the Department of Labor (DOL) in recent legislative changes. Mr. Murray explained that NIOSH is the agency responsible for dose reconstructions for claims filed under Subpart B for radiation-induced cancers. NIOSH created a separate office, the Office of Compensation Analysis and Support (OCAS), to handle the dose reconstruction and Site Profile work. The scope of the effort was so large that there was a need for an extensive team to include contractors and subcontractors. There have been 18,000 claims submitted, and many dose reconstructors are needed to calculate them.

Mr. Murray explained that the Site Profile helps dose reconstructors by providing site-specific technical data relating to radiation exposures and how they were measured. The Site Profile is used as a handbook for each site so that the dose reconstructors use the same information for all claims. This minimizes the need for interpretation of data and provides consistency in how claims are handled. Mr. Murray stressed that Site Profile can be revised as new information becomes available. The Site Profile provides an overview, or historical summary, of how exposures and monitoring methods and technologies changed over time. There are two ways to receive dose: external dose from an x-ray that can penetrate the body, and internal dose such as from a radioactive material that can be breathed in and delivers a dose from inside one’s body.

Unmonitored workers, such as some construction and trades workers, are also potentially exposed to radiation but may not have been monitored in the same way as plant production



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workers. An “environmental” dose is added to the official dose record to take this into account. Workers who were required to have x rays taken regularly as a condition of employment are also assigned a “medical” dose by the dose reconstructors.

Mr. Darnell interjected that he has never seen a dose reconstruction without a medical dose. This is included as part of the process and works in favor of the claimant.

Mr. Murray said that the Paducah Site Profile Team started work in September 2003. The first draft has been completed, reviewed, and approved by NIOSH. The current document can be viewed on the NIOSH website. The Site Description section gives a historical overview of plant operations since it opened in 1952. It tells what kinds of radioactive materials were used. There were not many changes since Paducah had a single mission. NIOSH knows that the primary mission was to enrich uranium, but there were other aspects to be considered in dose reconstruction, such as workers handling the waste. Other radioactive materials that have been present include neptunium and plutonium.

The dosimetry program was set up by the DOE contractor to track exposures and comply with regulations. Although workers question the validity and accuracy of these records, they are the only records NIOSH has to work with. The external dose is based on the worker’s dosimeter readings. The internal dose is based on data obtained from analyzing samples of the worker’s urine and measurements of radioactive materials in the worker’s body using a whole body counter. When the worker’s dose records show zeros, a missed dose is assigned, based on the minimum detectable levels for measuring external and internal dose. Half of the minimum detectable level is assigned, multiplied by the number of zeros in the record. This is used to calculate missed dose for both internal and external doses.

The Environmental Dose is primarily used for workers who were not in the dosimetry program because they were not radiation workers. It identifies sources of radiation that the workers could have been exposed to, such as uranium in cylinders, radioactive materials in storage areas and radioactive materials that were in the air the worker breathes.

The Medical Dose is calculated for employer-required x rays. The total dose takes into account the frequency of the x-ray exams and the type of equipment used. The environmental and medical doses are additional doses that NIOSH adds to the worker’s official dose record from DOE and are considered to be claimant-favorable because they make the reconstructed dose larger.

Mr. Murray concluded by reinforcing how important the Site Profile is for accurate dose reconstructions. He encouraged attendees to send any information for updates or revisions directly to NIOSH. He gave information on the methods that could be used to submit information.

Discussion Session

Question:

Would the Site Profile tell about work outside the fence or in a particular building?



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William Murray:

The Site Profile tells about work done inside the fence. It would not necessarily specify a location within the plant where releases of radioactive materials occurred. Because the Site Profile is used by health physicists to reconstruct doses, any input the trades workers can provide would be helpful if there is inaccurate or missing information. NIOSH will follow up to revise the document.

Jay Maisler:

NIOSH knows about releases within regulatory limits. Information provided for a dose reconstruction includes how much exposure a worker may have received in a particular timeframe. The maximum external dose rate is added to the internal dose using information in the Environmental Dose section. The Team is looking for information on additional incidents to build a more credible document.

Comment:

When construction was going on in the mid-1970s, workers who were trying to get Q-clearances were told flat out not to ask questions. Under those circumstances, the average worker didn't even ask about exposures in order to keep their job. People were moving barrels with dust blowing around, but they didn't question anything as long as they were working.

William Murray:

The phone interview would be the time to discuss specific issues about a claim. This is easier for claimants than survivors who don't know all the details, but NIOSH and ORAU do the best job possible in putting the pieces together.

Question:

What is the timeframe for a dose reconstruction to be completed?

William Murray:

The process can be very long in order to search all available records. There are some claims from July 2001 that still have not been resolved

Peter Darnell:

The first dose reconstruction cases were received by NIOSH in December, 2001. ORAU was contracted in September 2002 to help with such a large effort after NIOSH had attempted to complete it in-house. It took 14 months for the first 1,000 claims to be completed, but only 14 weeks for the next 1,000. To date, between 6,000 and 7,000 claims have been processed. It is not an easy job, and the process takes time to reconstruct the dose.

Question:

Can anyone explain why some claims require a dose reconstruction while others are approved without it?

William Murray:

There are four DOE sites that have a Special Exposure Cohort (SEC) status established by Congress in the Act. Three are gaseous diffusion plants, including Paducah, and one is a weapons test site in Alaska. If a claimant from a SEC facility has one of the 22 cancers included, they are automatically approved and no dose reconstruction is needed. If there is a



claim for a cancer that is not included on the list, NIOSH has to do a dose reconstruction to see what the probability of causation is for that particular cancer.

Question:

Does the claim have to be filed prior to any medical procedures starting?

Peter Darnell:

It is unlikely that the dose reconstruction would be completed in a timeframe that a patient would want to wait for treatment. It is best to file as soon as you get a diagnosis.

Compensation for medical expenses begins when DOL gives an adjudication of the claim.

The payment will be retroactive to the time you filed.

Question:

How long does a contractor have to work on the site to be eligible for compensation?

William Murray:

The total number of days worked has to be 250, although they do not have to be consecutive or within any particular timeframe.

Comment:

The old claim form specifically said the person had to work at the plant in 1951 and/or 1952. I worked in the switch yard in 1958 for the railroad, but got the same type of cancer as earlier workers.

Peter Darnell:

If you think you may qualify for compensation, you should make the claim as a general rule. Regardless if it's for radiation under Subtitle B or toxic exposure under Subtitle E, it all goes to the DOL. Ask for help at the DOL resource center as well.

Comment:

Where does a family member go for help when filing a claim as a survivor? They don't always have all the information about the worker's job.

William Murray:

The person who calls the claimant or the survivor for dose reconstruction information would ask for names of co-workers to cross-reference information on working conditions.

Comment:

The problem with that is most of the co-workers have also died. The system is flawed and changes need to be made in the legislation. The best thing any of the workers can do is to contact their representatives to ask for support.

Mark Lewis:

One of the approaches to this problem is to gather retirees to do risk mapping. When people who are experts on the site get together to discuss the site, they jog each other's memories. If you have several meetings over a few months, a lot of information comes out, and many new resources are discovered. The Resource Center can help you,



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Mr. Murray asked if anyone else had any questions or comments. He thanked the Council for hosting the meeting and being gracious about letting other union members sit in. The Team left at approximately 11:45 a.m. and the Council resumed its regular business meeting.