



Dose Reconstruction Project for NIOSH Meeting on Hanford Site Profile

Date:

April 22, 2004

Meeting with:

Paper, Allied-Industrial, Chemical and Energy Workers (PACE) Local #8-0369
Fluor Hanford-Hanford Guards Union Local #21

Attendees:

Cynthia Faith	Paper, Allied-Industrial, Chemical and Energy Workers (PACE) Local #8-0369
Bob Alvarez	Sanford Cohen and Associates (SC&A)
Connie Reedy	PACE #8-0369
Grant McCalmant	PACE #8-0369
Kelly O. Schmidt	PACE #8-0369
Pete Turcic	Department of Labor (DOL)
Jeff Nesvet	DOL
Diane Case	DOL
Larry Loss	DOL Resource Center
Mick Thompson	Fluor Hanford-Hanford Guards Union Local #21
Joe Fitzgerald	SC&A
Arjun Makhijani	SC&A
Randy Knowles	PACE #8-0369

NIOSH and ORAU Team Representatives:

Dr. James Neton – National Institute for Occupational Safety and Health (NIOSH), OCAS

William Murray – ORAU

Edward Scalsky – Site Profile Team Leader

Mark Lewis – ATL International, Inc.

Marilyn Hodgson – ATL International, Inc.

Proceedings

Mark Lewis started the meeting by introducing himself and members of the team and turning the floor over to Mr. Murray who thanked everyone for coming. Mr. Murray expressed hope that participants would find the meeting to be beneficial, and invited questions at any time during his presentation. He explained the purpose of the meeting is to provide information about the work that Oak Ridge Associated Universities (ORAU) Team is doing for the National Institute for Occupational Safety and Health (NIOSH), and to talk about the Hanford Site Profile. Mr. Murray then introduced Ed Scalsky as the Team Leader for the Site Profile and said that Ed’s team would also be developing the Pacific Northwest National Laboratory (PNNL) Site Profile.

Mr. Murray next described how Site Profiles are used and reinforced his earlier comment that NIOSH and ORAU want to be sure all pertinent information is included in the Profile. One of the goals of the outreach program is to document the concerns and issues of the workers. Mr.



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Murray provided addresses for submitting issues and concerns, assuring participants that ORAU and NIOSH would respond to all formal submittals. Again Mr. Murray stated that comments and suggestions would be used to supplement and improve the Site Profiles, and that NIOSH and ORAU consider the Site Profiles to be ‘living documents,’ subject to change as new information is received. He then described the Energy Employees Occupational Illness Compensation Program Act (EEOICPA), explaining how the Department of Labor (DOL) receives claims, verifies employment at the site, and determines whether the cancer is related to the radiation dose. He further explained NIOSH and the ORAU Team roles in dose reconstruction and that NIOSH issues regulations for conducting the dose reconstructions.

Mr. Murray then discussed the importance of protecting the individual claimant’s privacy and that everyone working on the program is required to complete training on the Privacy Act. The primary goal of the program is to process every claim accurately, fairly and appropriately, and Site Profiles provide a consistent baseline for the health physicists to perform the dose reconstructions. He also mentioned that Mark Lewis will be doing outreach to unions at all the sites where site profiles are being developed.

Mr. Murray said there is an electronic database for compiling issues and concerns. NIOSH and ORAU are careful to avoid actual conflict of interest as well as perceived conflicts of interest. For this reason, no one who has worked in a management or supervisory position at a given site can be the primary author of a TBD for that Site Profile. In addition, the health physicists doing the dose reconstructions can not work on any claim from a site where he/she worked. He also explained that for legal purposes, technical definitions are very important– “facility” is used to mean an area, or group of buildings. Site Profiles support dose reconstruction – it is a useable reference book. All dose reconstructors work from the same data. NIOSH wants to get any information on the site for the profile and encourages your input into the profile. All documents are on the website. Site Profiles are written by subject matter experts and are reviewed and approved by NIOSH. There is a formal review process with comment resolution. Sometimes additional questions come up. We are conducting this Outreach Program to bring in more information. The site profile has 6 sections – Introduction that includes the purpose and scope, Site Description, Occupational Medical Dose, Occupational Environmental dose, Occupational Internal Dosimetry, and Occupational External Dose. This information is used by the health physicist to reconstruct dose. Any assumptions that are used are favorable to the claimant.

We are getting all the information we can, but some assumptions must be made. Decisions are always claimant-favorable when there is a gray area. We include the occupational medical radiation dose, the occupational environmental dose, and the occupational internal and external dose for monitored workers. Site profiles focus on radiation protection practices. This provides potential sources or radiation exposure. There are 6 technical basis documents (TBDs) – and they are ‘living’ documents. These assist NIOSH in completing work for dose reconstruction.

We are looking at things like chest X-rays required by employer, including the type of equipment and techniques used. The Section discusses how information is to be used. The Hanford Site did annual chest X-rays through 1959.



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Discussion

Concern:

Jack Fix is an external dosimetry expert at the Hanford site and was used as the subject matter expert in developing the External Dose Document. This is clearly a conflict of interest and takes away from the credibility of the document and the entire dose reconstruction process. Another conflict of interest is using Don Bihl, who was Internal Dose Manager at the site, as the subject matter expert for the Internal Dose Document.

James Neton:

We did that before the conflict of interest rule was specified and would not have otherwise, but NIOSH did approve those TBDs since the work was already done. We are checking into such conflicts carefully and are here to get your input. We are working on Revision 1 with new authors who have no conflict of interest. Also, independent reviewers are looking at this.

Concern:

How much QA is done on the completeness of records such as dosimetry back to the field records? NIOSH should reference all sources of data used for calculations.

William Murray:

Site Profiles include references in case people want to see where the information came from. There are also implementation guides and other supplemental information available for review. All documents used in the development of the Site Profile are on posted on the NIOSH web site.

Mr. Scalsky:

Site Profiles always contain references; my guess is that it must be scanning problem if you do not have them in your copy of the document. We will look into it and be sure they show up on the website.

Concern:

How will the questions and information shared at the NIOSH meetings be utilized? Are these meetings considered public? Did you capture who these people were?

James Neton:

Minutes will be posted to the NIOSH website once approved by NIOSH. You will have a chance to review them as well and are encouraged to provide any information that may have been missed.

Concern:

Will you use that information in the development of the Site Profile?

William Murray:

Yes, many of the same comments are made and will be tracked. NIOSH may make the comments part of Site Profile, or at least will post them on their website.

James Neton:

Questions, answers, and comments will be incorporated into the document or posted on the website but we do make sure nothing personal is included.



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Concern:

How is the information contained in the Site Description section validated? I was at B and know it went on into the spring of 1984.

Edward Scalsky:

When there have been conflicting sources, we have to go back, and check this out. This is where we need your help to figure out what is correct information from conflicting documents.

Comment:

Accurate log books are available but the site description appears to have been cut and pasted, rather than using information from the logs.

James Neton:

We will make corrections as new information is collected.

Comment:

This is the type of thing that can come up at adjudication. A claimant can ask that their case be reconstructed over again using new information. The new information would go back to NIOSH for review; this would also open other cases that could be affected.

James Neton:

We can go back anytime we feel cases are affected by new information.

Concern:

Are you monitoring records too?

James Neton:

NIOSH and ORAU would have to go back and look at those claims that were affected and denied. We have the site images database at Hanford site.

Concern:

There appear to be wrong statements in the documents. Are they really subjective? Do they belong?

James Neton:

It's very important to know the chemical form in order to determine the relationship to dose records. In the event there is still doubt, NIOSH gives the benefit of the doubt to the claimant by assuming the worst case scenario. We realize it's difficult to know how we use the Site Profiles, so a workshop has been started to show how a Health Physicist uses the information.

William Murray:

This is the very reason we are having these meetings.

Concern:

Section 5.7 suggests that doses were probably not monitored outdoors. How do you address this? Many times background badges were used that may not have been accurate, so the worker would have to figure out additional dose. How are doses calculated for construction workers who were not badged or monitored?



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James Neton:

It is helpful when people identify sites where they worked; the location provides valuable information.

William Murray:

Some people have trouble proving they worked at a site. NIOSH and ORAU are going to try to add another chapter for construction workers at each site.

Comment:

I was a pipe fitter and got a dose at 100N. Birds brought contamination and we got it in our shop.

Concern:

Is bioassay used in the dose reconstruction?

James Neton:

No. We'll use air data instead.

Comment:

Many workers transferred to this site from the Army. There were stacker leaks that could not be considered routine as far as exposure. They actually lived close to this. The Site Profiles don't talk about pouring hot asphalt over contamination.

Comment:

I feel that the documentation de-humanizes plant workers. It does not take specific activities, such as construction, into consideration.

James Neton:

We use all information from claimants and interview claimants who are still alive. The primary source is the person's information – the Site Profile is a supplement. Gathering reliable information is harder with a survivor trying to fill us in when they can't know all the circumstances.

William Murray:

We can hold classified interviews for people who need that.

James Neton:

The claimant sees the file in order to agree with the information.

Question:

Are dose records all kept in one place?

James Neton:

If you request it, you can get a standard dose summary document. We get every piece of dosimetry information and make as much as possible available.

Comment:

Y-12 gave me different records.



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James Neton:

NIOSH and ORAU have several good sources of information. In general, medical records are not needed as long as the diagnosis is on record. We will take anything that could help.

Concern:

Do you have incident records?

James Neton:

NIOSH and ORAU ask for all of the information at the same time, although there is no guarantee we get everything. We will assume incidents happened.

Question:

Where are the dose records kept when moving from one site to another?

Dr. Neton:

I'm not a Hanford expert, but we've made a determination from badge readings to bracket exposures.

Comment:

We wore lead vests with badges on the inside, and our arms legs were not covered. Doses to exposed parts of the body were never measured because of the vest.

James Neton:

The implementation guide is used as a standard model where the dose to one organ is adjusted to another organ. It is known that exposure is from all directions, so adjustments can be made.

Comment:

There were unshielded glove boxes at the site and the exposure was to the hips, not to the chest where the badge was worn. Exposure depends on which side is facing the source; when wearing the vests, there is no protection below the lead. The thermoluminescent dosimeters (TLDs) were shielded.

James Neton:

Health physicists use professional judgment in determining doses, and are always claimant-favorable to maximize dose in attempting to account for differences in the records.

Concern:

Maintenance workers were at different sites and different jobs. How are different badges accounted for in the dose reconstruction?

James Neton:

Each badge has a threshold for detection. NIOSH assumes a high dose when there is no record or an insufficient record in order to be as claimant-favorable as possible.

William Murray:

The health physicist can also use doses for unmonitored workers.

Concern:

In the table on page 29, the footnote states information is based on shipped samples. This does not seem to include information on doses workers would have received. I personally



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knew someone who told me he had received a very high dose but the report does not reflect such instances.

James Neton:

The health physicist can add in another percentage to use the upper range to calculate dose and apply it to the sample. A urine sample can show some, but not all contamination. NIOSH would multiply based on contamination.

Comment:

Some isotopes are difficult to identify, such as neptunium. The Site Profile doesn't talk about exposure when processing.

James Neton:

If a person was monitored for plutonium, NIOSH and ORAU would assume that a certain dose was received. Unmonitored workers have not filed many claims yet, but NIOSH and ORAU will make these assumptions as they give us more data.

Comment:

Some of these statements just don't belong in a document like this. The Tiger Team report even said methods had problems in their 1990 report.

James Neton:

It would be very helpful if you will provide specific information regarding your concerns to us. NIOSH can then determine if it's relevant and amend the document as necessary.

Concern:

Sec 5.2.10 states bioassay was considered to be sufficient. Will you assign neptunium dose?

James Neton:

The plutonium bioassay would assume all activity was related and would add in neptunium dose. This would result in claimant favorable results, so yes; this is something we would consider.

William Murray:

This is a very important task. This assures that we have living documents that change as you provide information. The comments go to NIOSH. There is an address on the handout. You have to indicate the number of Site Profile.

Question:

A co-worker has two forms of cancer, and received a lifetime dose in one shot. Why has it taken two years for him to get any feedback from the project?

James Neton:

The determination of cancer developing in the correct time frame to support would be a factor. This would not necessarily be covered; NIOSH must check what the likelihood would be that this particular cancer was caused by this exposure.

DOL:

40% of the cancer claims from gaseous diffusion plants go to NIOSH.



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James Neton:

The special exposure cohort (SEC) regulation is being developed by NIOSH to allow one to file for SEC status for a group of workers. But if a cancer is not on the list, we can't accept it as an SEC claim and have to do a dose reconstruction..

Concern:

How will our issues be looked at?

James Neton:

NIOSH and ORAU will enter your questions and concerns into the electronic database for the record.

Question:

Why are there so few participants?

Comment:

It seems like too much trouble to file a claim; people feel as if they are up against a brick wall and have a fear of invasion of their privacy. What is needed is news that X paid for cancer, or some success on a claim. If people knew the number of successful claims, they would believe it could happen.

James Neton:

Those numbers are available on the website, which is listed in your handout.

Comment:

Beryllium cases get decision in less than 90 days and are paid within 15 days.

Attachments:

- Sign-in Sheet
- Presentation by William Murray *Development of the Hanford Site Profile*
- Technical Basis Document for Hanford – Site Description