



NIOSH Dose Reconstruction Project Meeting On Fernald Profile

Date:

June 28, 2004

Meeting with:

Fernald Atomic Trades and Labor Council

Attendees:

Everett 'Ray' Beatty Sr.	Fernald Atomic Trades and Labor Council
Ralph Hennard	International Guards Union of America
Gene Branham	President, Fernald Atomic Trades and Labor Council
Robert C Tabor	Fernald Atomic Trades and Labor Council
Kristin Gulling	U.S. Department of Labor
Devin Clousing	Energy Employees Compensation Resource Center Portsmouth, OH
Allen Callaway	Vice-President, Fernald Atomic Trades and Labor Council
Richard Tinsley Sr.	Safety Director, Fernald Atomic Trades and Labor Council
Tina M. Mefford-Craig	Fernald Atomic Trades and Labor Council

NIOSH and ORAU Team Representatives:

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

William Murray – Oak Ridge Associated Universities (ORAU)

Melton Chew – Fernald Site Profile Team Leader

Mark Lewis – ATL International Inc.

Dawn Catalano – ATL International, Inc.

Proceedings

Mr. Murray opened the meeting at approximately 12:15 p.m. by welcoming the union representatives and thanking them for attending. He informed everyone present that copies of his presentation and the Introduction section of the Fernald Site Profile were available to follow along and take notes. Mr. Murray began his presentation by explaining that the outreach team had already been to about eight sites to discuss Site Profiles after they had been written. He explained the relationship between the National Institute for Occupational Safety and Health (NIOSH) and Oak Ridge Associated Universities (ORAU), and how the outreach program was designed to open a free exchange of information between workers and NIOSH. Mr. Murray then introduced Mark Lewis as the Senior Outreach Specialist on this task. Mr. Lewis said he has a background in labor himself, including 30 years experience working with the Paper, Allied-Industrial, Chemical and Energy Workers International Union (PACE). He said that the Site Profiles had been initially developed without input from the labor unions, and that his job is to help ensure that unions get input now. Mr. Murray then introduced LaVon Rutherford as the NIOSH Office of Compensation and Analysis Support (OCAS) representative, explaining that



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OCAS is part of NIOSH and that everyone was there with the same goal. Mr. Rutherford in turn said he was anxious to get the workers' valuable input. Mr. Murray further introduced Melton Chew, the Site Profile Team Leader, and Dawn Catalano, who was present to record the issues and comments that were raised at the meeting.

Mr. Murray said he is one of the few health physicists who has not worked for the Department of Energy (DOE), and, as a former NIOSH employee, he is happy to be working on the new program. He explained that the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) is related to radiation-induced cancers. The compensation to workers includes \$150,000 and coverage of medical expenses for the disease. He discussed the structure of the program, explaining the roles of the Department of Labor (DOL) and NIOSH. He pointed out that other issues covered by EEOICPA were outside NIOSH's purview. Mr. Murray described the process, stating that DOL receives claims, verifies that the claimant worked on the site, and then forwards the information to NIOSH to determine probability of causation by means of radiation dose reconstruction. He added that NIOSH is also involved in regulatory matters and issues pertaining to Special Exposure Cohort.

Mr. Murray further described ORAU's role as a contractor to NIOSH. In addition to receiving all the information necessary to perform dose reconstructions, ORAU was also charged with the implementation of the Outreach Program. He explained that it is a very big job with more than 16,000 claims to process since the program started in 2000. Several sub-contractors were required to take on this project since each of the claims needed a dose reconstruction done. The only exception to having a dose reconstruction done on a claim would be within a Special Exposure Cohort (SEC), and there are only four sites included in the SEC category.

Mr. Murray explained that the reason for the meeting was to document concerns and questions the workers have regarding the program. He stated that the team or representatives would be willing to return if further discussion was required in order to fully address concerns or personal issues, and that NIOSH wants to talk with anyone who wants to contribute. He explained that while the team's goals include collecting information for the record, all personal information is protected. Confidentiality is honored in accordance with the Privacy Act. All personnel working on the program receive specialized training in the Privacy Act, and all information regarding claims is stored on a secure computer system to protect the privacy of the claimant.

Mr. Murray said the Fernald Site Profile was developed by subject matter experts then reviewed by NIOSH. There is a formal resolution process in place for comments and questions to ensure consistency in the document. He explained that multiple reviews are required before NIOSH approves the Site Profile and posts it on their website, which can take a fair amount of time. ORAU has a review process as well; NIOSH sees all the input and comments, then each issue has to be resolved before the document goes for final approval. The 2003 team assembled for the Fernald Site Profile went through several personnel changes during the development of the document. Sections were written by different authors, but they all went through the same review process.

Mr. Murray explained the steps necessary to process claims. He stressed that all efforts are made to be accurate, fair, efficient, and consistent in doing so. He stated that NIOSH and ORAU are improving in efficiency, saying that the first 1,000 claims took fourteen months to process and the next 1,000 took only fourteen weeks. More than 4,000 claims have been processed to date.



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Another important aspect of the process that Mr. Murray described was avoiding conflict of interest. Health physicists who worked at a site are not permitted to perform dose reconstructions for that site.

Mr. Murray discussed how occupational radiation dose is calculated, including medical, environmental, internal, and external dose factors. He said that the focus of the Site Profile is on the production activities and radiation protection practices on site, and that NIOSH and ORAU have to rely on information from DOE. He explained that the occupational x-rays included in the dose reconstruction are only those required as a condition of employment. He pointed out that none of these doses are in DOE records, that adding medical x-ray dose is a claimant-favorable assumption. He stated that environmental dose is also added to the DOE file. He also discussed considerations regarding internal and external dosimetry.

In conclusion, Mr. Murray related the methods of submitting comments to NIOSH, and reiterated that NIOSH is responsible for tracking them. He asked attendees to use the Fernald document number to ensure their input could be properly assigned, and gave the website address where all information and documents could be found. He then asked if there were any questions or comments.

Discussion Session

Question:

How is dose reconstruction done?

Answer:

NIOSH begins with DOE dose records. The next step is to identify information gaps, then fill them in. When assumptions are necessary because of a lack of information, conservative assumptions are used that favor the claimant.

Concern:

The guards have a special problem regarding exposure records. Since no records of movement exist, there is nothing to base a dose reconstruction on. One woman is dying of multiple cancers now, but no records exist on which to base a claim.

LaVon Rutherford:

NIOSH needs to do more homework, to go back to get information from co-workers if records don't exist. This can be a very long process, so NIOSH tries to make all the claimant-favorable assumptions necessary to get the claim approved. The telephone interview is critical; NIOSH tries to get all the information on issues that don't appear in the Site Profile. That additional information will later be added to the Site Profile as well.

William Murray:

One problem that comes out of the interview process is that survivors don't have certain information because it is classified.

Concern:

The woman mentioned only has about a year left to live but we will get as much information as possible to support her claim.



Comment:

Regarding the conflict of interest issue, there are some workers who may have more confidence in a health physicist who has experience at the plant. It would seem be better since they know what has gone on at that site.

LaVon Rutherford:

NIOSH had that same idea in the beginning, but the Advisory Board on Radiation and Worker Health felt it was better to do it this way. Since health physicists implement radiation protection programs at the site, they might not give a fair assessment for fear of divulging information regarding deficiencies in their own program. Your concern is legitimate and has been expressed elsewhere, but in the long run NIOSH weighed it out and thought this was better.

Comment:

I was in Buffalo when they had conflict of interest training and can see that side of the question – it could work both ways. A neutral person has no negative feelings towards the site either; no sour grapes would come into the equation.

William Murray:

The same practice is in place for the authors of the Technical Basis Documents (TBDs); at first NIOSH and ORAU thought someone from the site would be the most knowledgeable person and therefore the best choice as an expert author. However, there could also be motives to cover up past mistakes or problems from the person's tenure at the plant.

Concern/Question:

Workers are convinced that DOE records have been laundered. How much faith does NIOSH put in documentation it receives from DOE?

William Murray:

DOE records are all that NIOSH has to base the Site Profiles on. The question of their accuracy is secondary to having no information at all. It is expected that the dose reconstructors will bring up questions when data seem to be either inadequate or inaccurate. NIOSH is acutely aware that there are problems, limitations, and inaccuracies, and is trying to balance them out with claimant-favorable assumptions. That being said, there is still more information available on radiation doses than there is on chemical doses, even with these limitations.

LaVon Rutherford:

NIOSH and ORAU do not take dose monitoring records at face value. The limitations of monitoring programs are also acknowledged and considered. Another way NIOSH and ORAU attempt to correct this is by looking at DOE sister sites to find correlations in monitoring programs and make corrections. As a rule, the dose is adjusted in the claimant's favor if at all – the maximum potential dose is given when in question. Other routes are available; Special Exposure Cohort status can be granted if a dose reconstruction cannot be completed.



Concern/Comment:

DOE alters and falsifies records and failed to disclose information in an attempt to ensure that public opinion is not negative. Plant workers have no trust in DOE – *known facts* have been altered or not disclosed as required.

Melton Chew:

The Site Profile Team did its best to see how badging was used in early days and what might have been missed. They attempted to address these issues in the best way they could in a technical, scientific manner.

Concern/Comment:

We appreciate that and believe the team will come as close as can be done. One problem in accuracy is that the testing was not structured to produce a factual sample; for example, urinalysis would be put off for days to avoid an accurate reading. Our feelings are based on fifty years of being lied to and seeing records falsified – we still believe we will be lied to.

The Advisory Board says that DOE documents do not supply Mr. Chew with the right information to write an accurate Site Profile. DOE has testified against one claimant who was rejected even though he never worked anywhere else. At one time DOE said there was no beryllium on the site, but now they admit it after the facts have come to light. We have old NIOSH documents that say dose reconstructions can't be done here – which am I supposed to believe?

William Murray:

Information on specific incidents is needed to update the Site Profile.

Concern/Comment:

That's my point – incidents at the plant have never been documented or disclosed.

Question:

Why are the unions only being contacted now instead of at the beginning?

William Murray:

That was an early mistake that we are trying to correct now. When the program started, there was a large staffing-up effort and lots of pressure to get the dose reconstructions underway. The Site Profiles were needed for general, technical information to use as a guideline to do the dose reconstruction. The effort was focused on getting that moving. The Advisory Board saw the importance of talking to the workers to get the whole story last November and gave NIOSH and ORAU the task of catching up. We have Mr. Vernon McDougall on our team, who has an extensive labor background. NIOSH and ORAU believe we have an effective team and are in a very good position to get the job done. The original plan was to get the Site Profiles done so the health physicists could do the reconstructions. Now, plans are being made to visit the sites before the Site Profile ever gets started.

Question:

How did some people already get their dose reconstructions done?



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LaVon Rutherford:

Efficiency processes can be used. For example, DOE maximum values can be used for likely non-compensable cases or if internal dose alone would result in 51% probability of causation, there would not have to be any further calculations done. Those are the first to go out since the other parts of the dose reconstruction don't have to be done.

Concern:

Security personnel wore thermoluminescent dosimeters (TLDs) but they would hand off the monitor, whatever instrument it is, and the workers would never really know how much dose they got.

Melton Chew:

Pocket chambers were not official individual records. They were only used to track how long people could be in an area.

William Murray:

Your comments are very helpful to understanding what the situation has been here. But the best thing to do is to submit them officially.

Melton Chew:

This is the kind of information NIOSH and ORAU are looking for; it helps with general information on the Site Profile. DOL would verify when you worked on site and for how long to determine if a specific dose should be applied.

Concern/Comment:

DOE did testing that could not be interpreted – workers questioned it in court but there was never any resolution. This is not being mentioned to be critical of you, but DOE was deceptive and did not educate workers that materials they had to handle were deadly.

Question:

Dose reconstruction results for ten people who worked together show them only at 35% probability of causation. This certainly is not enough. Doesn't the fact that they all got cancer raise a flag to get into the SEC?

LaVon Rutherford:

NIOSH and ORAU are only responsible to do the dose reconstructions. In a case like that involving several workers, they would have to have the same cancer and it still is not necessarily radiation-induced. NIOSH and ORAU would pass that information on to the National Cancer Institute. For the dose reconstruction, dose information is entered into the model and the result is the probability of causation. NIOSH and ORAU are legally bound to use this method.

William Murray:

As information such as the situation you describe becomes available, NIOSH and ORAU can add it into the claim. Doses and claims can be revisited and recalculated as Site Profiles are revised.



Question:

What specifically is in the Fernald Site Profile and how can it help with dose reconstructions?

William Murray:

The Site Profile is used as a technical guide – a handbook of sorts – for dose reconstruction. This minimizes the need for interpretation of data. The dose reconstructions are done independently using consistent data.

Concern/Comment:

Fernald was designated as a thorium repository for the country and the material was gathered from all other sites. They were going to put it all in Buildings 67 and 68. They brought robots into buildings 64 and 65 to repackage 5,600 drums over eighteen months. They were supposed to be shipped to Texas, probably Pantex. The scope was huge; this information should be in the records.

Melton Chew:

This is mentioned on page 50 of the Site Profile.

Comment:

A man named ___ (name withheld), a former Fernald worker, died of cancer. His son had the organs preserved and proved that there was thorium exposure.

Comment:

There always seems to be legal controversy involved in the claims. Bickering has political undertones and holds up information that is needed to process the claims.

Concern/Comment:

On-site documents were developed for all major projects. Data from these documents can be used but it seems hard to get that information in the Site Profiles. DOE paid for studies but finds reasons not to use them.

Question:

If a worker was at Fernald for twenty years, would the time be factored as accumulated?

LaVon Rutherford:

Yes, NIOSH and ORAU add all the years in. All information on the site is considered in dose reconstructions, even if it comes later. For example, the original Site Profile for the Savannah River Site did not address photofluorography. NIOSH and ORAU went back and added in the higher dose when it was discovered that the photofluorography x-rays were used. Claims can be re-opened when there is new information in the Site Profile.

Melton Chew:

Fernald medical workers have been very helpful when NIOSH and ORAU asked for assistance. They wanted to be sure about injuries because those x-rays wouldn't be counted if it was an accident. They also checked that the beam was collimated to be sure exposure to other organs was limited.



Comment:

The union has a process handbook for every plant. We will turn those records over if they would be useful.

William Murray:

That would be a good resource for NIOSH and ORAU team members still working on the Site Profile. The references would also be particularly useful.

Melton Chew:

That kind of document would provide the next level of detail – NIOSH reports show the process and yours would show the effect.

Concern/Comment:

A NIOSH study showed a 10% higher incidence of stomach cancer in administrative workers in the offices from air conditioning intake.

Concern/Comment:

There are silos full of radon from a project but we know it can't be monitored. There were plant announcements in the past for elevated levels of radon. These are undocumented incidences that could be considered claimant-favorable if NIOSH and ORAU include them in the dose reconstructions.

LaVon Rutherford:

Radon is known to affect the lungs – NIOSH and ORAU would have to look into those incidents.

Concern/Comment:

'Essential personnel,' which is to say the guards, still had to be on patrol when the warnings to stay inside were announced. The emergency workers were in the same boat. These doses were never calculated.

William Murray:

Environmental dose is added to DOE records for dose reconstruction. For Fernald, sources of exposure and reporting levels are included as well as information regarding bioassay and air monitoring that was started in 1951.

LaVon Rutherford:

If a worker's whole body count is zero, NIOSH and ORAU apply a missed dose in the reconstruction.

Concern/Question:

Workers had *in vivo* counting for many years then the plant took it away. What was the advantage of its removal?

LaVon Rutherford:

It seems the argument would be that the best detection for uranium is urinalysis. However, we are not here to identify problems or issues with the radiological control program.



Question:

Were pencil dosimeters used in dose reconstruction?

LaVon Rutherford:

No, they are not used because they are not a reliable source by which to determine dose. The worker said they were passed between workers.

Comment:

There were 150 drums of thorium by-products in the storage area. Workers had to clean that up and were told to get out if the reading went over 50. The pencils were not handed off. Production workers got readings from them as 'real time' doses for the permanent record. It was the guards who handed off the pencils.

Concern/Comment:

Fernald is not a plutonium processing plant, but in May of 1961 Senator Glenn was there to witness them moving material from Plant 4 to Plant 5 that was over permissible limits. The workers had to re-assimilate; we knew it was plutonium but they didn't care.

William Murray:

These are the kinds of comments NIOSH and ORAU need on record in addition to what is known about badge exchanges and such practices. External dosimetry is used to give missed doses. In looking for radiation sources, NIOSH and ORAU are aware of problems in protection, but we also need to know about your experiences. Please send your comments directly to NIOSH – they are responsible for tracking the input and making appropriate responses. Information regarding the documents and how to submit questions and/or comments is on the NIOSH website and included in the handout from today's presentation.

Concern/Comment:

The presentation explained a lot about the Site Profile, but what about individual incidents? Do they get incorporated into the Site Profile from dose reconstruction if they could affect other people? Things such as releases without any alarms or operations and incidents that are not documented may come up in individual interviews but not for the whole site.

William Murray:

Individual information is only used in claims due to privacy issues.

LaVon Rutherford:

The Site Profiles took into account dosimetry data from early years to apply to unmonitored workers. If NIOSH and ORAU know about routine releases, air monitoring information can be used.

Melton Chew:

Specific incidents are not included in the Site Profile at this time. NIOSH and ORAU are trying to go back to reconstruct for claims and the incidents have to be documented.

Mr. Murray asked if there were any further questions or comments. It was noted that copies of the on-site documentation were being made for NIOSH to take for the record. He thanked



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everyone for their participation, and reminded attendees to forward future comments directly to NIOSH. The meeting adjourned at approximately 3:00 p.m.

Attachments:

- Sign-in sheet