



# NIOSH Dose Reconstruction Project Meeting On Y-12 National Security Complex Profile

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**Date:**

November 9, 2004

**Meeting with:**

Y-12 Atomic Trades and Labor Council

**Attendees:**

Kevin L. Ringley	International Union of Operating Engineers Local 900
Jim Bass	Service Employees International Union Local 166
Joe Richards	International Guards Union of America Local 3
Carl R. Cunningham	Carpenters Local 50
Richard Lewis	Service Employees International Union Local 166
Bill Foster	United Association Local 718
Jeff Barnard	Painters Local 1805
W.E. Johnson	Y-12 (no union listed)
G.M. Waithey	Atomic Trades Labor Council /International Brotherhood of Electrical Workers
J.H. Lawson	Atomic Trades and Labor Council/ES&H
H.L. Wilson Jr.	Atomic Trades Labor Council / UA Local 718
Joe Richards	IGUA Local 3
Carl R. Cunningham	Carpenters Local 50
Bill Foster	United Association Local 718 Pipefitters

**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

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**Proceedings**

Mark Lewis opened the meeting at approximately 1:40 p.m. by thanking the participants for welcoming the NIOSH and ORAU Outreach Team to their Stewards' meeting. He explained that the meeting was requested to discuss the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). He said the Site Profile is used as a tool in dose reconstruction to process claims under EEOICPA. The objective is to ensure worker input for the most accurate document possible. He described his professional background in health and safety at the Portsmouth site, and introduced Mr. Murray.



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Mr. Murray also thanked the union members for allowing the Team to attend. He added that the meeting was being recorded only to ensure accuracy of the minutes, and that no one would be quoted by name. He cautioned participants to be careful not to discuss any classified information. Mr. Murray said that the Team Leaders for both the Oak Ridge National Laboratory (ORNL) and Y-12 Site Profiles were at the meeting and would answer questions to the best of their ability. He asked Mr. Ulsh to make some opening comments on behalf of NIOSH.

Mr. Ulsh thanked the participants as well and said that NIOSH and ORAU are very interested in getting worker input for the Site Profile. He said that although the Site Profiles have been completed and approved, they are always subject to revision when new information is obtained. He said that any classified information can be conveyed in a separate meeting if anyone felt it was necessary. He clarified that the Team is not from the Department of Energy (DOE) but a part of the NIOSH program geared towards helping claimants.

Mr. Murray described his background dealing with worker issues at ORAU and NIOSH. He said that the Site Profiles were technical documents written for health physicists performing dose reconstructions. Mr. Murray explained that the administration of one part of EEOICPA is in the process of being transferred from DOE to the Department of Labor (DoL) as a result of recent legislation. This change only affects Subtitle D, now Subtitle E, for toxic chemical exposures. NIOSH and ORAU process claims for radiation-induced cancers under Subtitle B. He said that because the legislation is so new, not all questions can be answered until DOE completes the transfer. DOE has 210 days to get the records to DoL.

Mr. Murray explained that NIOSH was the agency within the Department of Health and Human Services selected by Congress to be responsible for radiation dose reconstruction under EEOICPA. NIOSH found it necessary to hire a contractor because of the size of the project. More than 17,000 claims were filed since EEOICPA was passed in 2000. ORAU was selected to help with dose reconstructions and the Worker Outreach project, and that several subcontractors were included. Mr. Murray stated that the purpose of this meeting was to discuss the Site Profiles that have been done for Y-12 and ORNL. He said that they provide technical information for health physicists doing dose reconstructions, and can be very technical. Input from workers in previous Outreach Team meetings has been used to revise Site Profiles to more accurately reflect the working environment at a site. He encouraged the participants to ask questions during the presentation and said the Team would answer them to the best of their ability.

Mr. Murray said the most critical purpose of the Site Profile was to reduce the need for individual interpretation of data used to calculate dose reconstructions. Consistency is very important. NIOSH and ORAU find the Site Profiles an extremely useful tool in the timely processing of the dose reconstructions. Dose reconstructions for claims can be revised when new information is added to the Site Profile. (Mr. Ulsh added that changes are only made in cases where it is beneficial to the claimant. Dose will never be deducted from a claim in light of new information. He said that the law requires any estimated dose to be favorable to the claimant.)

Mr. Murray said the Teams were established approximately 18 months ago to write the Site Profiles for Y-12 and ORNL. He said both had been completed and had gone through a complete review process before being approved by NIOSH. The Site Profiles are comprised of six sections called Technical Basis Documents. They can be viewed on the NIOSH website, and comments



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can be submitted there as well. The Site Description is a general overview of the types of work done, radiation sources and radioactive materials present, and how they were used. It is also important to identify environmental and medical radiation sources. Differences between ORNL, as a national laboratory where a lot of research and development is done, and Y-12, as a major weapons assembly facility, are noted in the Site Descriptions. Mr. Murray said that NIOSH and ORAU are aware of several accidents that occurred in each of the plants. The Occupational External Dose focuses on the radiation dosimetry program, taking into account how radiation sources outside the body deliver a dose. The internal dose is calculated from doses received inside the body. The Y-12 dosimetry program was started in 1948 for beta, gamma, and x-rays, and neutron monitoring added in 1950. There is a gap, however, because a lot of people were not monitored until 1961. Between 10-20 percent were monitored prior to 1961; the data after 1961 is being used to decide how to assign dose prior to 1961. Worker location and how often badges were exchanged also are considered in the dose reconstruction. The bioassay program started at Y-12 in 1948 for uranium; gamma-emitting radionuclides were measured with whole body counting starting in 1961.

These dose data are part of the record NIOSH and ORAU receive from DOE. Mr. Murray explained that when records show zero doses because the equipment used is not able to detect low radiation levels, NIOSH and ORAU add a missed dose component. This is usually calculated by multiplying one-half of the minimum detectable dose by the number of times a worker's badge was read. Other doses added above and beyond the DOE record of record are environmental and medical doses.

As part of the dose reconstruction process, NIOSH and ORAU conduct extensive telephone interviews with claimants. Information from the interviews can be supplemented by co-worker information when spouses/survivors don't have much detail about the work that the employee did. In addition, NIOSH and ORAU can set up classified interviews when necessary.

Mr. Murray explained that environmental doses are used for workers who were not monitored. Workers may have been exposed to radiation sources inside buildings such as storage sites, waste pits, and other sources of radiation not related to the worker's particular duty. The environmental dose has an external component to include radiation sources such as x-ray machines, accelerators, or cyclotrons inside buildings. Radioactive waste and storage is also a source outside the buildings. Data from site-wide monitoring is being used to estimate these doses. Average annual air concentration on the site is used to calculate radioactive material breathed into the body and the resulting internal dose.

Mr. Murray said that occupational medical dose is also added to the reconstructed dose, although it generally only applied to workers who were required by the employer to receive periodic chest x rays. Chest x rays were required at both sites. At ORNL lumbar spine x rays were required for certain workers in the early 1950s. The type of machine used is also considered in calculating the dose.

In conclusion, Mr. Murray said that the worker input is valuable for revisions to Site Profiles and he gave several methods to submit formal comments. He said that NIOSH and ORAU are looking to the people at the sites to help make these more accurate documents. Mr. Murray opened the floor for comments and questions.



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## Discussion Session

### **Question:**

Will the change from DOE to DoL expedite claims in process?

### **Brant Ulsh:**

The change does not affect Subtitle B, which NIOSH administers. More than 5,000 dose reconstructions have already been done.

### **Vernon McDougall:**

DOE has until May 2005 to transition the records. There are many changes that have to be addressed, and DoL will need to issue rules regarding how they will handle the program.

### **Question:**

Some people did not work directly with radioactive materials, but were around them all the time. This exposure does not show up on the official records. Also, people didn't always know what kinds of material they were working with. How can that be counted in dose reconstruction?

### **Brant Ulsh:**

Individual monitoring data is generally the most useful. NIOSH and ORAU are using co-worker data when individual data is not available. The next method would be to look at source term data. If dose can not be determined, workers and organized labor can file for a Special Exposure Cohort (SEC).

Cases involving classified information require special consideration. NIOSH and ORAU can set up classified interviews. The Team at the Iowa Army Ammunition Plant (IAAP) ran into some trouble with classified information that came into play. A cleared employee was assigned to translate that information into usable data if possible.

The three gaseous diffusion plants are SECs. Groups or individuals can file a petition for SEC status. Information on how to do so can be found on the NIOSH website. The application has to establish that dose reconstructions are not possible.

### **Question:**

At what point does NIOSH agree that dose reconstructions can not be done accurately?

### **Brant Ulsh:**

The original data could not be found at IAAP, and there was no way to determine a credible dose estimate. This is an example of what is required to make a recommendation for SEC status. An applicant under an SEC generally needs 250 days on the job (it does not have to be consecutive) and can be compensated for any of the 22 types of cancer on the list.

### **Question:**

There is a case in which a claim was filed from Y-12. The individual had cancer of the thyroid, but the claim was not approved because there was "not enough dose," even though



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the person had to have the thyroid removed because it was cancerous. Can the person re-apply since they undoubtedly have the cancer?

**Brant Ulsh:**

NIOSH uses National Cancer Institute risk models to determine the probability of causation (POC). Some cancers are more related to radiation than others. So the dose reconstruction is geared toward figuring out if the cancer was likely to be from a radiation exposure or not. Thyroid cancer is one of the more radiogenic cancers because radioiodine collects there. At Y-12, iodine is not a big concern. Thus, it is not likely to have come from that source. If a person gets a different type of cancer, they should file again.

**Comment:**

The Z wing had criticality incidents in the 1940s and 1950s, but much of the machinery was still located in that area. If a person worked in the machine shop, they would have to be getting their coffee right in the middle of the machine shop that had been contaminated in the early days.

**Brant Ulsh:**

It seems likely that those workers were monitored; NIOSH and ORAU used all the monitoring records. Additionally, we do consider exposure to residual contamination.

**Comment:**

I knew people who lived on the campus when it was like a fortress who were denied their claims. Other people who spent very little time on the property had their claims awarded. It is baffling that someone with thyroid cancer would not be approved.

**Question:**

What percentage of claims filed that came from Y-12 were approved?

**Brant Ulsh:**

I do not have the numbers for Y-12 at hand, but about 25 % is the general figure.

**Comment:**

Workers at ORNL and Y-12 were led to believe that claims from K-25 got priority.

**Vernon McDougall:**

It's not so much an issue of priority, but most of those claims from K-25 did not have to go through dose reconstruction. When the law was being passed in 2000, people from Paducah, in particular, made a major issue about exposures that were not documented. They got an SEC provision written into the law. All they have to show is that they worked out there for 250 days. There are three gaseous diffusion plants that are under the SEC provision because of their situation.

**Comment:**

It is very frustrating because it's a matter of people's lives being put in jeopardy. People walked through buildings where radioactive materials were stored and were never told about it. They undoubtedly brought the contamination home to their families. Thousands of lives have been affected both directly and indirectly. Everything that people did on the site was kept a secret due to the nature of the work.



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**Comment:**

The construction side is not so cut and dried as the plant workers. The job requires workers to go from one site to another as needed, rather than to report to a specific post. There is no practical way to track where and when the construction assignments were made.

***Vernon McDougall:***

Construction is different from metal trades. There are problems documenting where they worked since timecards and pension contribution records just say what contractor they worked for. The claimant has to show that the contractor was at the Site – an affidavit from an individual who worked there should be sufficient.

***William Murray:***

If employment records don't show where the contractor was assigned, they could be supplemented with security records.

**Question:**

Why does the DOE make claimants prove that they worked out there when they have the employment records?

***Brant Ulsh:***

Actually, when a claim is filed, NIOSH, not the worker, requests all records available for an individual from the DOE. The law does require that some proof of employment must be provided when a claim is filed. This can include union records, social security statements, or even an affidavit from someone who knew the employee when he worked at a DOE facility.

**Question:**

The Y-12 Site Description includes deconstruction and demolition (D&D) for infrastructure reduction. This type of work is done using different methods and controls, depending on the specifics and the requirements of the job. How can NIOSH and ORAU be sure exposure assessments are valid considering the variations at each D&D job site? Similarly, since different sets of rules exist, how can it be verified that jobs are documented the same?

***William Murray:***

NIOSH and ORAU are considering adding a new section in the Site Profile to cover construction activities, including the D&D work, since it is so different from production work. NIOSH and ORAU met with the building and construction trades unions at the Savannah River Plant to discuss this issue. This will be looked at by site and discussed with the people there, since site-specific construction activities need to be considered.

**Comment:**

Two buildings literally next to each other can each have different levels of protection, and the suspend/stop work authority of either is not questioned. Workers wonder how to ascertain which decision is safest.

**Comment:**

Construction contractors wore their own clothing, but maintenance workers who worked for the plant received protective gear, when they were working alongside each other. The trades workers ended up bringing home the contamination on their clothes and exposing their families unwittingly.



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***Brant Ulsh:***

These concerns illustrate the reason that responsibility for dose reconstruction was given to NIOSH and ORAU. NIOSH has a reputation for fairness and being on the workers' side that goes back before the beginning of this program. We have already reviewed hundreds of dose reconstructions. In my experience, we have never reduced the calculated dose because the person was wearing a respirator. NIOSH and ORAU rely on individual dosimetry and urinalysis results, which is more favorable to the claimant in general.

***William Murray:***

NIOSH and ORAU keep those situations in mind. Health Physicists know that people were treated differently in different situations. The goal is not to evaluate the effectiveness of one program over another, but rather to determine what dose a claimant received based on the information available. That is why the exposures are added and it is not assumed there is a protection factor.

**Comment:**

A lot of workers took off their badges in order to be able to keep working after their readings got high. The workers were not educated about the level of risk.

***Brant Ulsh:***

We have heard this concern before from workers at other sites. We are currently working on a procedure to handle these situations. In the meantime, we are holding on to these claims until we get the procedure developed.

**Comment:**

It doesn't seem right that one person who filed a claim for colon cancer in 2001, is still waiting for an answer. But someone else filed a claim in 2002 and has already been awarded. DOE records were never intended to be accurate. The company was paid incentives for safety on the job. This is both the largest employer and the largest polluter in the state. Management cheated on people's records to make the overall safety record better, which was profitable for the company. Accuracy in documenting radiation was secondary to a good safety record.

The DOE did not want to fight with claimants; they asked if DoL could take over and it was agreed. DoL does not care about the workers; they just pass the buck. Many claimants are dead and gone, and their widows are still trying to settle the claims. The funds will never be available.

***Mark Lewis:***

Anyone who feels that it is impossible to do an accurate dose reconstruction can petition for SEC status. Information is available on the NIOSH website on how to proceed.

**Comment:**

The type of cancer people base their claims on makes a difference in the speed of processing. For example, since silicosis is a special qualifier for the Nevada Test Site, they will be compensated before workers at the Tank Farm. There are many more painters in Oak Ridge who develop silicosis from sandblasting than workers in Nevada. It is painful and difficult to



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try to help people who are dying and not be able to get their records to settle their claims. There is an undue burden on the claimant who is trying to prove their exposures.

**Comment:**

The workers are glad that there is an effort to help straighten things out with the complicated process. Many appreciate the attempt, even if it is still difficult.

**Question:**

Will there be a Site Profile for the D&D work at Y-12?

***William Murray:***

There will be one for the construction activities. The Team will also bring back concerns expressed here today to the highest levels of the program. The question is how to cover the topic already under consideration, but there is no way for NIOSH and ORAU to know what the issues of the workers are except for these meetings.

Mr. Lewis thanked the participants again and encouraged them to look at the Site Profile on the NIOSH website. The meeting adjourned at approximately 3:45 p.m.