



# NIOSH Dose Reconstruction Project Meeting On the Kansas City Plant Site Profile

**Date:**

September 15, 2004

**Meeting with:**

International Association of Machinists and Aerospace Workers Local 778  
Security, Police, and Fire Professionals of America, Local 251, Kansas City, Missouri

**Attendees:**

Neal McGregor	Security, Police, and Fire Professionals of America Local 251
Leo Berroteran	International Association of Machinists and Aerospace Workers Local 778
Mike Roepke	International Association of Machinists and Aerospace Workers Local 778
Glenn E. Carpenter	International Association of Machinists and Aerospace Workers Local 778

**NIOSH and ORAU Team Representatives:**

William Murray – Oak Ridge Associated Universities (ORAU)

Jack Fix – Site Profile Team Leader

Vernon McDougall – ATL International Inc.

Dawn Catalano – ATL International Inc.

**Proceedings**

Mr. McDougall opened the meeting at approximately 10:15 a.m. by thanking the union representatives for taking the time to meet with the team. He explained that the team is comprised of contractors supporting the National Institute for Occupational Safety & Health (NIOSH) under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). He explained the two sides to the Act: Under Subpart B, administered by the Department of Labor (DOL), and Subpart D, administered by the Department of Energy. Mr. McDougall explained that the meeting pertains only to radiation-related claims under Subpart B. Those claims go to NIOSH, whose job is to reconstruct people’s radiation. NIOSH is supported in this by ORAU and subcontractors. Mr. McDougall introduced the members of the team and described their respective roles. Mr. McDougall said that a draft of the minutes of this meeting will be sent back for review in a few weeks. No one is quoted directly in the minutes.

Mr. McDougall explained that the purpose of the meeting is to discuss the Technical Basis Document that Mr. Fix’s team is working on to help with the dose reconstructions. He said that the team would welcome input from the workers pertaining to issues they feel are important to the accuracy and completeness of the TBD, and that the unions would have the opportunity to review and comment on the draft when it is approved by NIOSH. He then turned the meeting over to Mr. Murray to describe the structure of the TBD and to explain what kind of information the team is looking for.

Mr. Murray extended his personal thanks to the attendees for taking the time for the meeting. He said that the group within NIOSH that oversees the program is the Office of Compensation Analysis and Support (OCAS). They hired ORAU as a prime contractor, and ORAU took a team



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approach due to the size of the effort. He explained that EEOICPA was signed in December of 2000, and that DOL has been taking claims since July 2001. The ORAU team was assembled in September 2002 and has been working on the project since then. Mr. Murray described DOL's role in the claims process.

Mr. Murray said the team wanted worker input on the Technical Basis Document and that he would answer any questions he could in his description. He explained that the document supports the dose reconstruction process for claims submitted for radiation-induced cancer. He said that there are four facilities in the Special Exposure Cohort category that are largely exempt from dose reconstruction for claims, but that was included in the original Act as written by Congress. Most of the 18,000 claims that have been submitted require dose reconstruction.

Mr. Murray said the Technical Basis Document provides site-specific technical information for the Kansas City Plant to provide the health physicists the technical information they need to reconstruct radiation doses to workers who have submitted claims. He said these documents ensure that every claim is treated fairly and equitably. Further, they ensure that all dose reconstructions are conducted in a consistent manner using the same information, minimizing the need to interpret data. He added that the Technical Basis Document can change as additional information is received. He described the sections of the document, saying that most Site Profiles are made up of six different sections, but due to the smaller scale of the radiation related work at the Kansas City Plant, this would be a single document. It contains all of the same information, including a description of facilities and activities since Atomic Energy Commission (AEC) operations began in 1949, radiation sources and materials that were present, and potential internal and external exposures from occupational, environmental, and medical radiation sources.

Mr. Murray explained that the workers who were in monitoring programs at DOE or AEC sites were typically covered by external or internal dosimetry programs. These programs included testing of urine for radioactive materials, and workers were issued badges that measured the external doses they received. He said that there are other considerations NIOSH looks at, such as the occupational environmental and medical radiation doses that are not usually counted in a worker's DOE dose record. These are added to make sure NIOSH and ORAU account for all possible radiation doses received at the site. He said that the site description will focus on the different facilities at the Kansas City Plant, including the main manufacturing building as well as several support buildings.

Mr. Murray said that the Team led by Mr. Fix has begun working on the document, but much of the information they used came from DOE reports. This is the reason for the Outreach Program; NIOSH and ORAU want to make sure that the workers' perspective is represented and that any information they have is included in the document. Mr. Murray explained the review process and said that the document would be available on the NIOSH website after approval.

The external dosimetry section will include information on the methods and practices of the monitoring program and radiation sources that pose an external radiation hazard. NIOSH and ORAU also look at adjustments that have been made to doses and the minimum detectable levels or sensitivity of the badges. He explained that the sensitivity of the badge used is very important to determine if a missed dose should be assigned. Starting in 1950, the dosimeters used at the Kansas City Plant have been able to measure the dose from beta radiation (dose to the skin) and gamma and x rays, and then neutron radiation after 1961.



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Regarding the internal dosimetry program, potential sources of exposure are considered, as well as urine testing (bioassay) for depleted uranium at the Kansas City Plant.

Mr. Murray explained that unmonitored workers at many sites can also be exposed to doses from sources in the air or in the work environment. The dose for unmonitored workers is calculated using information from air monitoring records and area monitors. He said that occupational medical doses are also added. These are calculated based on frequency of chest x rays and the type of equipment used. Only x rays required as a condition of employment are counted in this dose. Both the occupational environmental and occupational medical doses are in addition to the official DOE record, which does not include either dose.

Mr. Murray said that NIOSH and ORAU are specifically trying to develop a usable document, which is an important task. It will be used by the people doing the dose reconstructions, so accuracy is crucial. He said they are considered 'living documents' that can change when additional information is received. Comments can be sent directly to NIOSH by several methods. Mr. Murray pointed out that the types of information NIOSH and ORAU are looking for are listed in the handout. Any specific information or documentation the union representatives may be aware of would be especially helpful in the development of the document.

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### Discussion

#### **Concern/Question:**

The medical department in the plant gradually changed over the years. Chest x rays were standard procedure in the past (18 years ago). But the medical department now only suggests that workers get x rays from their own doctors. X rays for beryllium monitoring were done outside the facility as well. Will that information be included in the Site Profile?

#### **Mr. Murray:**

The beryllium question has come up before, and NIOSH decided that the chest x rays for beryllium would not be counted in the total dose. The only x rays that will count are those that are required as a condition of employment.

#### **Mr. McDougall:**

This is a good example of something that workers can comment on.

#### **Mr. Fix:**

It is my understanding that the practice of getting x rays from their own doctor started with the beryllium program and that was subcontracted out later.

#### **Mr. Murray:**

I strongly suggest submitting a comment via the website or fax expressing this concern to NIOSH officially. It would be a good idea to let NIOSH know that you believe it's a DOE requirement and it should be counted. Also let them know that the plant did not give worker x rays but suggested that they be done by a personal physician because of the type of work you've done.

#### **Question:**

What difference does it make if the x rays were done under a sub-contract or by the plant?



**Mr. Fix:**

There is no difference in the dose. I would have to agree with what Mr. Murray and Mr. McDougall were saying; if workers were required to get x rays it should not matter who took the films.

**Mr. Murray:**

It would make it more difficult to document since NIOSH would not have a record that specifies the type of equipment used or other details considered when determining a dose.

**Mr. Fix:**

From a pragmatic standpoint it would not make much difference in the dose to a worker because modern x-ray techniques are standardized with relatively small doses. The parameters that go into the compensation award are important components of models used to calculate the likelihood that the cancer that you have is caused by the occupational radiation dose you received. It might be difficult to get records but NIOSH could make assumptions. For example, NIOSH assigns doses to unmonitored workers based on the results of monitored workers so there are already assumptions included in the process to ensure that the workers' doses are not underestimated.

**Concern/Question:**

One of the big problems for Guards is that they go everywhere in the plant but they are not told what is dangerous or not. For years they've been telling us we would be told but it never happens. We walk through chemicals and don't even know the radiation sources around here. One time there was promethium released and a lot of the folks in maintenance tracked it home. We got involved when the plant wanted to bring their cars inside to check them for radiation. The guards had to search the cars for security reasons before they brought them in, but they were not told that there possibly was radiation in the cars.

**Mr. Fix:**

This was a well documented incident that involved a promethium-147 source brought in from Oak Ridge. Many of the people affected by the promethium were not being monitored, since it was an unexpected event. They thought it was a sealed source but it was not. As Mr. Murray mentioned, these are the things NIOSH is very interested in. These unexpected and unusual occurrences pose the most difficulty when trying to document events.

**Mr. Murray:**

Were the guards included in the monitoring program?

**Response:**

No, the guards were not monitored. I would not have known about the promethium incident unless I was on duty at the time they asked the crew to bring the cars in. After we were told that the cars were being brought inside to be tested for radiation, we did not want to do the searches. We argued with management for two hours. Why would you expose people in the process of finding out if something is contaminated? It didn't make sense.

**Mr. Fix:**

NIOSH knows that this plant provided a pivotal role in the nuclear weapon capabilities. It's a highly scientific activity which is unfortunately classified.



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**Mr. Murray:**

If anyone wants to discuss information that you think may be classified, NIOSH can make arrangements to take you to a secure area in a federal building for a classified interview. This interview would only be with NIOSH. But DOE does arrange the location of the interview and has the authority to review and redact these conversations.

**Concern/Question:**

What the workers really need to know is what the sources of exposure were at the Kansas City Plant.

**Mr. Fix:**

That will be in the Site Profile. The information gathered so far suggests that radiation was used in an analytical fashion at the Kansas City Plant – as part of the process control or in industrial radiography systems. It was only used as a diagnostic tool or as a part of the quality control process. The notable exception was the depleted uranium used here from about 1959 to 1971. The reason for its use is still classified, but there are still monitoring records that are available to us to examine.

Mr. Murray said that in addition to today's discussions with the union leadership, NIOSH and ORAU would like to maintain contact and follow up with the unions as the Site Profile progresses.

Mr. McDougall thanked everyone for taking the time out of their busy schedules. The meeting was adjourned at approximately 11:00 a.m.

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**Attachments:**

- Sign-in sheets
- Handout