



## NIOSH Dose Reconstruction Project Meeting On Nevada Test Site Profile

---

### Date:

August 9, 2004

### Meeting with:

Southern Nevada Building and Construction Trades Council, AFL-CIO

### Attendees:

Randy Smith	Sheet Metal Workers International Association Local 88
Raymond Keen	International Union of Bricklayers and Allied Craft Workers Local 13
Thomas White	Laborers International Union of North America Local 872
John Haslam	International Union of Operating Engineers Local 21
Rick Knight	International Brotherhood of Teamsters Local 631
Jeffery L. Westover	International Brotherhood of Electrical Workers Local 357
Raymond Battiste	International Brotherhood of Electrical Workers Local 357
Teo B. Castro	Ironworkers Local 416
Sandie Medina	NTS Medical Surveillance Project Office
Scotty Logan	Sheet Metal Workers International Association Local 88
Patrick Donnan	Laborers International Union of North America Local 872
Robert Nard	Southern Nevada Building and Construction Trades Council
Carl Hosmer	International Brotherhood of Teamsters Local 631
Ernie Raeh	Operating Plasters and Cement Masons International Association Local 797
Dewy Darr	International Brotherhood of Teamsters 631
Chuck Lenhart	Ironworkers Local 433
Dave Garbarino	International Union of Operating Engineers Local 12
Milt Menchey	United Association Local 525
Brett McCoy	United Association Local 525
Rick Johnson	H.F.I.A.W. Local 135
Bill Middleton	I.U.E.C. Local 18
Dianne L. Case	US Department of Labor

### NIOSH and ORAU Team Representatives:

Stuart Hinnefeld – National Institute for Occupational Safety and Health (NIOSH), Office of Compensation Analysis and Support (OCAS)

William Murray – Oak Ridge Associated Universities (ORAU)

Eugene M. Rollins – Dade Moeller & Associates, Nevada Test Site (NTS) Site Profile Team Leader

Mark Lewis – ATL International Inc.

Dawn Catalano – ATL International, Inc.

---

### Proceedings

Mark Lewis opened the meeting at approximately 10:45 a.m. when the Team was invited to join the Council meeting in progress. He thanked the attendees for inviting the Team to their regular meeting for the presentation. He introduced himself as the Union Outreach Specialist with a long history working with unions. Mr. Lewis then explained the goal of the meeting, stating that



## NIOSH Dose Reconstruction Project Meeting On Nevada Test Site Profile

NIOSH and ORAU were looking for worker input and comments on the Nevada Test Site (NTS) Site Profile. We know that the people who do the work are the best resource for information. He introduced the Team and explained that the meeting would be recorded only for purposes of accuracy in the minutes, and that no names would be used.

Mr. Lewis turned the meeting over to Mr. Murray, who thanked everyone for taking the time for the presentation. He asked the participants to introduce themselves and to sign in for the formal record. He reinforced Mr. Lewis's comments about the recording of the meeting. He explained that NIOSH maintains a formal record of all Site Profile meetings and that the record of this meeting would be available for review once approved.

Mr. Murray described ORAU's role in the outreach program. He explained that, under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA), there are two types of claims covered. He said that NIOSH is responsible to provide dose reconstruction for claims for radiation-induced cancer that have been forwarded from the Department of Labor (DOL). He explained that the Site Profile contains site specific technical information intended to be used by health physicists performing the dose reconstructions. This helps to ensure consistency and accuracy while minimizing the interpretation of data. He added that Special Exposure Cohorts (SECs) do not require dose reconstructions, but there are only four sites currently in the SEC category.

Mr. Murray said the Team has been out to several sites conducting the Outreach Program and gathering information regarding workers' on-the-job experiences for the Site Profile. He then explained that the NTS Site Profile is not completed yet. The objective of the meeting was to gather information to help with the accuracy of the finished product, and to document comments and issues and answer questions. He stated that NIOSH and ORAU are responsible for radiation exposure issues, and that the Department of Energy handles claims for other exposures, that is, exposures to toxic chemicals. He added that Site Profiles can be modified or revised as new information is received, regardless of whether they have already been approved by NIOSH. This is what makes the worker input critical; most of the Site Profiles were written based primarily on existing DOE documentation.

Mr. Murray said that four of the six sections of the Site Profile for the Nevada Test Site, known as Technical Basis Documents (TBDs), are completed – the Introduction, Site Description, the Occupational Environmental Dose, and the Occupational Medical Dose. The internal dosimetry and external dose sections are in the approval process. He said these can be viewed on the NIOSH website once they are approved. He explained that the NTS Site Profile Team was established in May of 2003 and comprised of several different authors led by Mr. Eugene Rollins. Mr. Murray stated that the TBDs contain information on NTS dating back to 1951. Mr. Murray gave examples of the types of activities covered, including weapons testing, monitoring, drilling, and re-entry. He also stated that exposure to radioactive waste material was taken into account.

Mr. Murray acknowledged that with 1,300 square miles to cover, NIOSH and ORAU realize hazardous work and accidental releases have occurred at the NTS. He listed known radioactive materials, such as tritium, cobalt, cesium, iodine, radon, uranium, plutonium, and americium, which are included in the Site Profile. In addition, he said that radon, both naturally occurring and that from uranium, was a concern.



## NIOSH Dose Reconstruction Project Meeting On Nevada Test Site Profile

---

Mr. Murray explained that the probability that a cancer was radiation-induced had to be 51% or greater to award a claim. NIOSH and ORAU use scientifically-based methods in calculating doses for claimants. Discussing occupational medical dose, Mr. Murray stated that NIOSH and ORAU attempt to be claimant-favorable and add in the dose received from X-rays. He clarified that only x-rays required as a condition of employment are added to the worker's dose. He pointed out that the X-ray doses are not kept in DOE records, and this is a clear example of NIOSH and ORAU being claimant-favorable in dose reconstruction. He further explained that NIOSH and ORAU calculate dose to a specific organ and that older equipment that gave higher doses is considered.

Mr. Murray moved to a discussion of occupational environmental dose, explaining that workers who were not badged or monitored also had possible exposure. For example, a worker could come into contact with contaminated air and receive a dose even if he or she was not a radiation worker. He explained that a worker walking past waste pits could also be exposed.

Mr. Murray also explained that methods and practices, sources of exposure, and the sensitivity of the methods are examined when determining internal dose. He said that the bioassay program was started in 1952, but the Building Trades workers were probably not monitored.

Regarding external dosimetry, NIOSH and ORAU examine methods and practices, sources of exposure, and sensitivity of the methods. For example, the badges used at NTS only measured gamma between 1951 and 1965. Beta and neutron exposure monitoring was added from 1966 to present. When the badge reading is zero, NIOSH and ORAU can account for missing dose by determining the practices of exchanging badges as well. Mr. Murray reiterated that the Site Profile is a living document that can be revised as new information is received.

---

### Discussion Session

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

How much information is taken from dosimeter readings? None of the workers' badges ever showed a dose despite the known exposures. Other facilities had acceptable levels of radiation that could not be exceeded; no precautions were taken at NTS.

#### ***William Murray:***

Part of NIOSH and ORAU's attempt to assign some dose is the missed dose component. This means that a zero reading really just means that the exposure was below the lowest detectable level, a certain amount of dose is added that is between zero and the minimum detectable limit and then is multiplied by either 52 weeks or 12 months, depending on how frequently the badges were exchanged.

#### ***Stuart Hinnefeld:***

It is important that NIOSH and ORAU find out about worker experiences such as zero doses. Those comments need to be reported and formally submitted.

#### ***Eugene Rollins:***

If dosimetry data were not required from workers such as Building Trades workers, it is critical that NIOSH and ORAU recreate the dose. This is the kind of information the Team is looking for in these meetings.



**Question:**

Will this information be used to re-evaluate a claim?

**William Murray:**

If information is received that pertains to a group of workers, it would be used to update the Site Profile. A claimant gives individual information during the telephone interview for his or her own case. NIOSH and ORAU can conduct a secure interview if the information is classified. If a claim is first denied and then more information is added to the Site Profile that would affect how that person's dose is calculated, NIOSH and ORAU will go back and re-calculate that dose.

**Concern/Comment:**

There were two to three year stretches of time when workers never got a reading on a film badge. Whole body counts were always zero, and Building Trades workers never had a urinalysis even though the radiation workers did.

**Stuart Hinnefeld:**

It is important for NIOSH and ORAU to know who was in the monitoring programs and who was not. Contamination on the skin that does not show up on the film badge is fairly common since the threshold is higher.

**Mark Lewis:**

Any information along those lines would be very important for NIOSH and ORAU to have in development of the Site Profile and dose reconstruction. This is exactly the kind of issue that needs to come to light. As Mr. Murray mentioned, we can address security concerns by conducting secure interviews. You can make a difference in this process; NIOSH and ORAU need your help. Anyone who has information to offer should call; if you have co-workers, friends, or relatives who can offer additional information please encourage them to speak up. This program can not work without your input.

**Question:**

Does NIOSH or ORAU have a toll-free number that workers can use?

**Stuart Hinnefeld:**

The number is 1-800-35 NIOSH (1-800-356-4674)

**William Murray:**

When you contact NIOSH, be sure to ask for someone in OCAS. Please review the Site Profile to make sure you think it is accurate, and make the call to NIOSH if you know of anything that is missing. Accidents and/or incidents may not have been reported, so if you know of a particular instance, it would be a great help to let NIOSH and ORAU know.

**Concern/Comment:**

The dump at the Test Site is a new problem. Will there be a program to look into that before people start to get sick or will it be another typical government program that does it after the fact – let all the people die then try to fix it?



## NIOSH Dose Reconstruction Project Meeting On Nevada Test Site Profile

---

***Stuart Hinnefeld:***

That type of exposure would be covered under EEOICPA, and there is no end date on this program.

**Question:**

What about people who live downwind of the Site? Are they eligible for compensation?

***Stuart Hinnefeld:***

There have been a number of studies conducted on the effects on community residents, but this program only covers workers.

***Mark Lewis:***

I understand your frustration, but I have been involved with DOE matters for thirty years and I have seen progress. Your input can keep things moving. Together we can make a difference.

Mr. Murray concluded by advising attendees that comments should be sent directly to NIOSH and asking if there were any questions. He thanked everyone for their participation. The meeting adjourned at 11:30 p.m.

---

**Attachments:**

- Sign-in sheet
- Presentation by William Murray: *Development of the Nevada Test Site Profile*