

National Institute for Occupational Safety and Health (NIOSH) SEC Worker Outreach Meeting for Pantex Plant

Meeting Date: Tuesday, January 29, 2008, 7:00 p.m.

Meeting with: Workers and former workers from the Pantex Plant and other interested parties, Ashmore Inn & Suites, Amarillo, Texas

NIOSH Worker Outreach Team:

Laurie Breyer, JD, National Institute for Occupational Safety and Health (NIOSH) Office of Compensation Analysis and Support (OCAS), Special Exposure Cohort (SEC) Petition Counselor

Mark Rolfes, NIOSH OCAS, Health Physicist

Melton "Mel" Chew, Oak Ridge Associated Universities (ORAU) Team, Health Physicist

Mark Lewis, Advanced Technologies and Laboratories (ATL) International, Inc., Senior Outreach Specialist

Mary Elliott, ATL, Technical Writer/Editor

Proceedings:

Laurie Breyer convened the meeting at 7:00 p.m. by welcoming the attendees and thanking them for coming. She introduced herself and Mark Rolfes from the National Institute for Occupational Safety and Health (NIOSH) as well as Mel Chew, Mark Lewis, and Mary Elliott from the NIOSH team of contractors.

Ms. Breyer briefly explained the Energy Employees Occupational Illness Compensation Program Act (EEOICPA or the Act) is administered by the U.S. Department of Labor (DOL). Part E of the Act provides compensation to workers from the U.S. Department of Energy (DOE) nuclear weapons program for illnesses that can be attributed to occupational exposure to toxic chemicals, while Part B provides compensation for cancers resulting from occupational exposure to radiation as well as those related to beryllium and asbestos exposures. DOL sends the Part B cancer claims that require radiation dose reconstructions to NIOSH after verifying the worker's employment and medical information. Dose reconstruction is a scientific estimate of a worker's occupational radiation exposure. When the dose reconstruction is complete, NIOSH sends the case back to DOL and the information is entered into IREP (Interactive RadioEpidemiological Program) to determine the probability that the worker's cancer was caused by his or her occupational exposure to radiation.

Ms. Breyer informed the attendees that specific claims would not be discussed during the public

portion of the meeting. She stated that anyone with questions about specific claims could speak with her or Mr. Rolfes after the meeting.

Ms. Breyer explained that the purpose of the meeting was for NIOSH to hear from former and current Pantex workers about their daily work practices at the plant, particularly about historical monitoring practices (dosimetry, whole body counting, and bioassay), safety equipment, and incidents or accidents that may have caused exposure to radioactive materials. The information will be used in the preparation of the evaluation report for a petition that has been filed and qualified for a class of Pantex workers to be added to the Special Exposure Cohort (SEC).

Ms. Breyer explained that an SEC petition can be filed when there is reason to believe that it is not possible to reconstruct accurate radiation doses for a specific class of workers at a covered facility during a prescribed time period. If the petition is qualified, NIOSH conducts an evaluation of the issues raised by the petition and any supporting data to determine whether dose reconstruction can or cannot be done for the proposed class of workers. Based on the outcome of the evaluation, NIOSH prepares a petition evaluation report that includes a recommendation on whether the class should or should not be added to the SEC. When the evaluation report has been completed, the report is reviewed by the Advisory Board on Radiation and Worker Health (ABRWH or the Board), an independent panel appointed by the President of the United States. At the Board's request, the process can include a review of the NIOSH petition evaluation report by Sanford Cohen & Associates (SC&A), the Board's contractor. The Board makes its recommendation to the Secretary of the U.S. Department of Health and Human Services (HHS), who has 30 days to present his own recommendation to the U.S. Congress. The Congress has 30 days to act on the recommendation. If Congress does not act in the prescribed time, the Secretary of HHS makes the final recommendation to add a class of workers to the SEC.

Ms. Breyer discussed the major differences between Part B and SEC cancer cases. Under Part B, all primary cancers except chronic lymphocytic leukemia (CLL) are eligible to be evaluated for compensation and individual dose reconstructions are done for each case. To be eligible for compensation as a member of an SEC class, a worker must have one of twenty-two specific types of cancer and have worked at the facility for 250 days during the specific timeframe. If the employee qualifies as a member of multiple SEC classes, the 250 days can be accumulated among multiple facilities.

Ms. Breyer encouraged the workers to share anything about their work experiences that may help NIOSH with its evaluation. She then turned the meeting over to Mark Rolfes, the health physicist who leads the dose reconstruction efforts for Pantex cases.

Mr. Rolfes stated that NIOSH is currently evaluating the SEC petition for all Pantex employees from 1951 to 1991. He noted that the topics of interest were on the handout, including first-hand knowledge of internal and external monitoring practices, work procedures, and historical information on radiation exposures. NIOSH needs additional information about which workers were monitored and what types of radiation they were monitored for, and what categories of workers participated in the dosimetry and bioassay programs.

Comments/Questions from Worker #1 [Name redacted]:

I have been at Pantex since 1969. I started working in Production in 1970. The protection that we had was not adequate. I have cancer now and am going through chemotherapy. All of us who worked in the bay where we did the insertion have prostate cancer. I think that we got cancer because they did not provide us with the protection that we should have had. We used to wear dosimeters, but we wore them on our collars. We had to get up on a little stand and our

vital organs would be touching the center item, the beryllium case. We did that for ten years. I can't remember any other tests, just the dosimeter.

I filed the first claim and it was turned down. Then I talked to [name redacted] and filed another claim, and I sure that it is going to be turned down, too. Why is so much money being spent to try to keep from paying us instead of helping us? I know that my family is going to need help. I am going through a crisis right now. I am still working. It is hard for me to go to work. I am weak and tired, but I still have to work to meet my financial responsibilities.

Ms. Breyer:

When EEOICPA was passed, it was not set up to be a reparations program for which workers would be paid automatically if they worked at a site and got cancer. When they wrote the law, Congress assigned specific roles to DOL, DOE, and NIOSH. Congress set the criteria that NIOSH must meet in completing the dose reconstructions.

We have traveled all over the country for these meetings and we hear this frustration often. We understand the difficulty you have in that it does take some time for a claim to go through the process. Not everyone believes that it is a claimant favorable process because some claims will still be denied. Operating under the constraints of the law, we have to do our best to be certain that the process is as favorable as possible to the claimants. The law is complicated and requires NIOSH to meet certain requirements when completing these dose reconstructions.

Mr. Rolfes:

We received worker input on the Pantex site profile regarding the placement of the badge on the lapel rather than the area of the body that could have been exposed to the highest dose rate. In those cases, we have a geometrical correction factor that is applied to the recorded dose from the badge worn on the lapel. This favorable assumption addresses the geometric uncertainties and corrects the dose as if the badge was being worn properly on the lower abdomen where the exposure would have been the highest. Even so, some claims still will be denied.

NIOSH applies all uncertainties in the worker's favor to assign the highest reasonable radiation dose that a worker could have received from such an incident. We take this approach so we can be confident that we are getting the correct answer and using the correct scientific methodology to support that answer. We acknowledge that there are still going to be people who disagree with our assumptions and the final decision. But if there are additional details that would affect your radiation exposure, we certainly welcome those comments on our technical documents or our dose reconstruction process. NIOSH makes every effort to get input that gives everyone the benefit of the doubt in a dose reconstruction.

Question from an unidentified attendee:

Has NIOSH been involved in every Part B claim?

Mr. Rolfes:

NIOSH has received more than 25,000 Part B cancer cases from DOL for dose reconstruction. Those cases are from more than 300 facilities across the United States.

Ms. Breyer:

NIOSH is not involved in any Part B claims for berylliosis or silicosis, or any claims that do not qualify for eligibility because DOL cannot verify the employment or a qualifying cancer. NIOSH only sees Part B cancer claims that require dose reconstruction.

Comment from Former Worker #2 [unidentified]:

I worked at Pantex beginning in 1979. I worked in Production Stores. I worked in the vaults. We wore dosimeters on our collars. We had lead aprons when we worked in the vaults, but there

is still exposure to the part of the body that the apron does not cover. We crawled all over the containers in there.

I also loaded and unloaded trucks. I worked down there for five or ten years before Safety started coming in to check the trucks. We went into the trucks, crawled all over the containers, took them off the trucks, put them on pallets, and took them to the areas where they were supposed to go. All we had was the dosimeters. I don't know how often they checked the dosimeters, but the reading was always the same. In between the times that they checked my dosimeter, I had worked in the vaults. It started out every six months or a year. As time went on, they started putting us in there for less time. We asked why we were going in there for less time when we were doing the same job, but never did get any answers. The readings were still coming up the same. Nothing would change. I developed MS in 1991 or 1992. I left Pantex in 1997. I always wondered if my work could have caused that, or if it might cause other problems.

Ms. Breyer:

Part E claims can be filed for any illness from chemical exposure. We can talk afterwards.

Comment from Former Worker #3 [Name redacted]:

I worked at Pantex from 1961 until 1986. For the first 22 years, I was an electrician. I went everywhere in the plant without a dosimeter. After 22 years, I was promoted to electrical inspector. I had to go without a dosimeter to everywhere the electricity went in the plant. I had an operation in July 2007 for lung cancer. The doctor told me that he wants to see me every three months for the first five years. After that, he wants to see me every six months for the next five years. That is all I have to say. I've got it and I don't know what to do with it.

Comment from Former Worker #4 [Name redacted]:

I worked in the Payroll Department for almost 24 years. We did weekly and semi-monthly payrolls for about 12 years. You wouldn't think that working in an administrative position would subject you to the radiation. But we always went all over the plant to deliver the checks, sat down with the people, and marked the checks off the list. Once a week and sometimes twice a week, we would spend an hour or two delivering the checks. People didn't take their coveralls off or wash their hands before they came to the Payroll Department to discuss their pay or their vacations. When it comes to their pay or their vacations, people can talk quite a bit.

I was diagnosed with thyroid cancer in 2000. I turned in my claim when I was supposed to. I had a hearing. They determined that there was a 46% chance that I got the thyroid cancer from my work. They said that if I could prove it was two primary cancers, they would redo my dose reconstruction. I proved that and the second dose reconstruction came back at 38%. How does the probability go down when there are two primary cancers? I was denied again because my husband's prostate cancer didn't qualify me. I denied their denial because it was stupid; my husband's cancer wasn't even in question. Then I was denied because "my prostate cancer" was not qualified. If NIOSH is so accurate in what they are doing, how in the world can they come up with any of that? If I have prostate cancer, then we've got really big problems!

Ms. Breyer:

I have heard that DOL has made that mistake before.

Mr. Rolfes:

I would like to answer your question about how the probability of causation (POC) can drop from 46% down to 38% when there is a second primary cancer. NIOSH tries to respond with a scientifically defensible answer for every case in a timely manner. When NIOSH began receiving claims from DOL, there was a backlog of approximately 6,000 claims. At that time,

there were approximately ten people in our office working on those claims. It was another year before we had a contractor to assist with the dose reconstructions. Since we were faced with a large backlog of claims, we developed an efficiency process in which we used a worst case scenario for the individual's radiation exposure. If the POC still remained below 50% using the worst case exposure scenario, nothing more had to be done. However, NIOSH received additional information from DOL for some cases, such as additional employment or additional cancers. When that happens, DOL sends the case back to NIOSH for a new dose reconstruction because each primary cancer has to be evaluated. If an overestimate of dose is assigned for both cancers, the POC could go over 50%. NIOSH cannot assign an overestimate or a maximizing radiation dose estimate to compensate someone. It has to be either a best estimate or an underestimate. A best estimate has to be as close as possible to the actual radiation dose that a worker received. An underestimate would be less radiation dose than was actually received.

It is likely that NIOSH had to re-estimate the dose for your initial single primary cancer to something more reasonable, but still favorable. That is probably why the probability of causation dropped a bit, even for two primary cancers.

This methodology was developed to provide a timely answer that was still scientifically defensible for some of the claims that had been at NIOSH for more than a year. We apologize for any confusion that it has caused, but we had to balance a timely decision with a more accurate assessment. Does that answer your question?

Response from Former Worker #4 [Name redacted]:

Partly, but how did they deny me because of my husband's prostate cancer and then because of my prostate cancer?

Mr. Rolfes:

I certainly apologize for any mistake that was in the dose reconstruction. It certainly should not have said "prostate cancer" in the your dose reconstruction. I cannot discuss any Privacy Act information in this meeting, but I would certainly be happy to speak with you afterwards if you would like to discuss this privately.

Response from Former Worker #4:

Thank you. I do have another question. How can the small group here represent Pantex? I have heard that 200 letters were supposed to have been sent out, but they weren't. How can we change anybody's mind or give any accurate information besides from the few people who are going to speak? How is this representative of Pantex?

Mr. Rolfes:

It certainly is representative of Pantex. We generated the letters and are looking into why they were not sent out. I apologize on behalf of NIOSH for not getting the letters out in time. I think Ms. Breyer has something to add.

Ms. Breyer:

NIOSH has a multi-tiered approach to outreach. We send out letters to target certain individuals. We send out press releases. We contact workers who we know in the area, and I think that was done in this case. It is not just the letters.

We did do a press release for these meetings. We contacted the petitioners. We contacted Congressional staff. We contacted the unions. We have multiple approaches. We had a meeting early that had a bigger turnout. It is still not 200 people, by any means. We may have a follow-up letter when we get back. There is a contact number on those letters, so there is a way for people to provide information. There is contact information on the Fact Sheets that we brought.

If you go to the Web site, there is a way to submit information to NIOSH in writing, either by mail or e-mail if you would like to do that. We always encourage that. NIOSH has also conducted worker outreach meetings in the past.

Question from the daughter of Former Worker #3:

How can NIOSH get an accurate dose reconstruction on my father's exposure if he never wore a dosimeter in the 25 years that he worked at Pantex? He went into areas where other workers wore them. He was sent into areas where there were explosions to rewire and re-lamp. He was wearing leather gloves when he went to work in this stuff, but those didn't protect him in any way. I don't know how they are going to be able to do a dose reconstruction when there is no dosimetry record for him.

Mr. Rolfes:

NIOSH can complete dose reconstructions for unmonitored workers based on co-workers' recorded dose information. We analyze all of the radiation doses received by the entire population of the plant, put that information into a distribution, and can use the 95th percentile of that distribution. That is equivalent to assigning the highest radiation doses recorded on site. Approximately 95% of the workers at the plant would have received less exposure than what NIOSH might assign to an unmonitored radiation worker. NIOSH determines the dose on a case-by-case basis. We look at the areas of the plant where the individual worked, the information provided to us by the claimant in the telephone interview, and other documentation that we receive from DOE.

There are other methodologies that can be used as well. Administrative control limits can also be used to bound the individual's dose. There are uncertainties about the radiation dose, but NIOSH treats those uncertainties to the benefit of the claimant. If a claim must be denied, the worst case radiation dose assumptions are typically used.

Comment from Former Worker #3 [Name redacted]:

I must have had enough radiation. I got the cancer and had the operation. I will be under a doctor's care for ten years.

Comment from the daughter of Former Worker #3:

We are mostly interested in information about in-home healthcare. My father is 86 years old. After his surgeries, he had to go into rehabilitation. We were not sure if we were going to bring him home at first or if he was going to have to go into a nursing home. They talked to former Pantex workers at the Senior Citizens' Center about in-home healthcare being available for people who become ill.

Ms. Breyer:

The program provides a one-time payment if the claim is compensable. The amount for Part B is \$150,000. On top of that, DOL covers all healthcare costs associated with that claim from the day the claim is filed. If you filed the claim in 2005 and it becomes compensable in 2007, you will get the payment and healthcare from 2005 forward. You should contact DOL with your question about in-home care. There is a sheet in the back with their contact information.

Comment from Former Worker #5 [Name redacted]:

Mr. Rolfes mentioned limits. To my knowledge, in the early years, there were no personnel, HE, or kg limits. That is something that probably came about after the Tiger Team reports. They are out there now, but they were not out there in the past. People today spoke about having eight or ten units around the room.

Mr. Rolfes:

I was talking about the DOE radiation protection standards that were in place. In the 1940s and 1950s, the annual limit for radiation exposures for a person working in a DOE facility was 5 rem.

Response from Former Worker #5:

You might make a note that they did not work with limits like they have now at the plant. That was not something that was part of the normal operations.

Mr. Rolfes:

Do you mean the load limits that you mentioned?

Response from Former Worker #5:

Yes, the HE/kg load limits.

Question from Worker #6 [Name redacted]:

Mr. Rolfes, I want to ask a question of the other workers who are here tonight. Do any of you remember working around another worker who did not wear a dosimeter? It could have been a clerk. They didn't wear them. [Name redacted] was a clerk who inventoried the items. She's gone. She never wore a dosimeter because she was a clerk. Those are the things that NIOSH needs to hear about. Lead aprons? We didn't always wear the lead aprons, but we folded them to get them out of our way. Sometimes we wore them, sometimes we didn't, but we didn't have written instructions to wear lead aprons. If you can remember some of the equipment that we did or didn't wear and how we wore it. They need to hear about the dosimeters and any other information that you can remember from the 1960s and 1970s.

Comment from Worker #1 [Name redacted]:

The clerks came into the bays with no protection and no dosimeters. They brought the parts carts and stayed in there. They brought in the schedules. They never wore anything that I can remember.

Comment from Former Worker #3:

I went into every bay out there.

Comment from Worker #6:

There could be multiple weapons or items in a bay.

Question from Worker #6 to Former Worker #7:

Do you remember [name redacted] or other workers who could have been working in those areas without dosimeters?

Response from Former Worker #7 [Name redacted]:

A lot of the clerks didn't wear them. Sometimes a clerk would be sent out to take the place of a materials handler who was absent. That clerk might not know that a material handler needed a dosimeter. The clerk would work all that day and maybe the next without a dosimeter. We assumed that everyone was told, so we really didn't look to see who was wearing one. Nobody was ever told.

When I went to work in Production Stores in 1983, I was inside a truck for almost two days before another materials handler asked the supervisor why I didn't have a dosimeter. I didn't know because I was never told. Situations like that happened a lot when people bid into production jobs. I didn't have a dosimeter for months, but I worked in all the areas. When my dosimeter was checked, it came back with about the same dose.

I always had a problem with my back being exposed. You all have noticed that right? If I had a

lead apron in the front, it was there because there was something that needed to be protected. What about my organs that were being exposed when my back was unprotected? They always told me not to worry about it. All I could do was ask the questions. I never did get any real answers.

Comment from Worker #1:

We used a lot of chemicals to clean the beryllium and the cases. I talked to [Name redacted] about the different chemicals that we used. We didn't wear respirators. We just used chem wipes. I worked down in the lab for 17 years. I developed cancer in 1999 and had surgery. I have been fighting it since 1999. I just started chemotherapy. We need help.

Question from Former Worker #8 [unidentified]:

Why is prostate cancer eliminated from this list? Did you say that there were 25,000 claims? That would be \$3.75 billion if everybody had been paid \$150,000.

Mr. Rolfes:

Under the Special Exposure Cohort, there are only 22 types of cancer that are covered. NIOSH had no say in the 22 types of cancer. Congress wrote that into the law. Prostate and skin cancers are not on the list.

Question from Former Worker #8:

How much has been spent on this program from the beginning?

Mr. Rolfes:

We had a similar question earlier today regarding the cost of administering EEOICPA as opposed to the amount of compensation that has been paid. In comparison, the amount of compensation is much higher than the cost of administering the program. If you send me an e-mail or give me a call, I can get more accurate information. The compensation amounts are on the DOL Web site and are available to the public by state and facility.

Ms. Breyer:

The total compensation for Parts B and E combined is approximately \$3 to 4 billion. The cost of administering the program is in the millions of dollars, but it is nothing compared to the billions of dollars that have been paid out.

NIOSH made a presentation to the Advisory Board at one of the public meetings regarding the cost of its part in the program. I can't give you the figures for the operating costs for DOL for EEOICPA.

You can find the compensation figures on their Web site for Part B, Part E, as well as compensation figures by state and facility. You can also go to the NIOSH Web site and get the information about how many claims from each site have been sent to NIOSH for dose reconstruction.

Ms. Breyer:

The \$3 billion total is for all compensated claims for both Parts B and E of the program. If you go to the DOL Web site, it is broken down by NIOSH Part B claims, Part B claims for berylliosis and silicosis, and for Part E claims.

Response from Former Worker #8:

My point is that this sounds like a government make-work project. If they had just said when they first started that everyone who files a claim by a certain date gets \$150,000, we would all be better off. That is all I have to say. It is just another government spending program.

Question from Former Worker #5 [Name redacted]:

What portion of the compensation has been paid to members of the SEC? Do you have those figures available? Wouldn't that be a higher number?

Ms. Breyer:

That number is available. If you e-mail me, I can get it for you.

Mr. Rolfes:

It actually is not higher. Typically, about one of every four claims is compensated through the dose reconstruction process (on average, across the complex).

Response from Former Worker #5:

Every claim is processed through NIOSH, whether or not it is a cancer claim. That has been my observation.

Mr. Rolfes:

Only Part B cancer claims that require dose reconstruction are sent to NIOSH. Other claims for chemical exposures or any other medical condition would be handled solely by DOL. You can receive compensation for both Parts B and E.

Comment from Former Worker #4 [Name redacted]:

I was never required to wear a dosimeter. I was told that I didn't need to. Twenty-four years ago, that was the way the company thought. We are not saying that they exposed us to radiation. They did what they thought was best at the time. Things have changed so much since then.

Mr. Rolfes:

That is something that we look at as part of the SEC evaluation process. We are here tonight to receive your input regarding historical radiation monitoring practices, who was monitored or not, and why.

Comment from Former Worker #9 [Name redacted]:

I worked out at Pantex from 1958 to 1970. I was exposed to a lot of beryllium. I worked at a dump site. I wanted to see what information you have. I was diagnosed with Stage IV bladder cancer in 2006. What is the deal on the beryllium?

Mr. Rolfes:

Claims for beryllium are filed through DOL under Part B, but those claims do not come to NIOSH. If you file a Part B claim for bladder cancer from radiation exposure that requires dose reconstruction, it will be sent to NIOSH. If you file a claim because you have other illnesses not related to radiation, then DOL evaluates those claims under Parts B and/or E. NIOSH will not be involved in evaluating any other health detriment.

Response from Former Worker #9:

We had the dosimeters out there, but I don't think they were capable of reading them. If you put the badge on the rack when you left, it was still there the next day. They didn't change the film on it. I don't think that they were very efficient. A worker could have been exposed several times and never have known it.

Comment from Former Worker #10 [unidentified]:

I worked with [name redacted] in the warehouse. I came to the plant in 1976. I started out in the yard and went into Production Stores in 1977 up until 1997 when I retired. I worked in every department out there. I worked in all the vaults in 26, in Stores, in the trucks, in the North and South Vaults, in 56 – all the vaults in all the areas. We were exposed to everything there. I worked several times in the Container Pen where they sent parts from the line. The parts would

come in so “hot” from the line that I sometimes had to call the supervisor to come with the Geiger counter to check them. It would literally make me so sick that I couldn’t work around it. I went into all the vaults out there to do my job. Before I developed breast cancer, we had to do a lot of inventory. We had to lean over the cans after we opened them to check the item.

I developed breast cancer in 1991 and I had a mastectomy. When I went back to work, they did not put me back in any of the areas where I had worked before – no vaults, no trucks. That was for a reason. I know that there was something there in that department. I worked until I retired in 1997.

I filed a claim. First, they want you to get all of your records from your doctor. That is a lot of paperwork to get together. Then they sent me a letter and asked me to get more information for them. It was just a lot to have to accumulate.

When they first talked to us about filing claims, they told us that we would get a certain amount. I can see how not everyone would come up with the same amount of radiation exposure, but there should be some way to compensate all of the people who have developed these cancers.

Question from Former Worker #5 to Former Worker #10:

How many people who you worked with directly had cancer? Were you a production control clerk?

Response from Former Worker #10:

There were 10 to 15 people who developed cancer that worked in that area. I was a production operator.

Mr. Rolfes:

Were you monitored? Did you wear a dosimeter or a film badge during the time period that you worked?

Response from Former Worker #10:

I didn’t when I first started working in Stores, but later I had a dosimeter that I wore on my lapel.

Question from Former Worker #7:

Are the dosimeters still the same size that they used to be? It has been 10 years since I’ve worked out there. Are they still small (indicating size with fingers)?

Response from Worker #1:

No, they have different ones now.

Question from Former Worker #5 to Former Worker #7:

Did you receive training on how to wear the dosimeter? Did you know about the window and which direction it should face? Did you ever take your dosimeter home accidentally?

Response from several workers:

No. The dosimeters were hung on a rack.

Response from Former Worker #7:

I’m not trying to be funny, but we didn’t want to take anything extra home. We always wore our coveralls because we never knew what we were working around. I saw parts in the warehouse in boxes that had the word “beryllium” on them, but they didn’t tell us to wear gloves. We were expected to go in there and pull the order for the line. We went in there and didn’t think anything of it.

Response from Former Worker #3:

We were exposed and we didn’t know it.

Question from Former Worker #5 to Former Worker #7:

Was it common practice for someone to swipe the materials before you went on the truck?

Response from Former Worker #7:

They didn't do that until Battelle came in the 1990s. They didn't let us go into the trucks until someone from Safety did a swipe.

Question from Former Worker #4 to Former Worker #7:

You said that you wore coveralls. You took them off before you left the plant. Were you required to take them off anywhere in the plant? The workers would come into Administration in their coveralls and sit right beside us.

Response from Former Worker #7:

Yes. We wore them all over the plant. We crawled across the containers to do inventory to get the serial numbers from the parts that we pulled for the line. I kept my coveralls on all the time – in the trucks and in the vaults. She started naming the vaults and I started thinking. We were in the North and South Vaults and all of the vaults in the 26 and the 56.

Question from Former Worker #5 to Mr. Rolfes:

Do you know what they mean? Do you know what was stored there?

Mr. Rolfes:

Yes. When they refer to the vaults, I am certainly aware that tritium was stored in one vault and the pits were stored in another.

Question from Former Worker #7 to Mr. Rolfes:

Has anyone from NIOSH ever gone to the plant to see what was in the vaults, what the workers did in the vaults, what type of work they were doing, if they had their dosimeters? We could tell you all day long what we did. But if you don't go and see for yourselves, how would you know what the workers are doing?

Question from Former Worker #5 to Former Worker #7:

Did you go to the igloos?

Response from Former Worker #7:

Yes, we did.

Mr. Rolfes:

I have not personally been in the vaults or the igloos. I have been to the training facility to observe some of the work done there. Maybe that is something that we can look into.

Response from Former Worker #5:

The igloos are the old buildings with the earth overburdens that are left over from World War II. I understand that there is quite a bit of contamination out there.

Comment from Former Worker #5:

[Name redacted] mentioned [name redacted]. She had her DOL hearing right before I did. She was in a wheelchair and was on oxygen. She had non-Hodgkins lymphoma and breast cancer. She told the people at the hearing that she had to crawl all over the parts to tag them. She was right-handed so that is how she reached over the parts. The cancer was in her right breast. She was a production control clerk and did not have a dosimeter. That was brought out in the hearing. She died waiting for an answer. How many more have to die waiting for a decision?

Comment from Former Worker #7:

I have been to a lot of meetings. I have never received much of anything after I have been to these meetings. No one has called me or sent me anything asking about what kind of work I did

or what I worked around. The only reason I knew about this meeting tonight is because she told me.

Comment from Former Worker #5:

The article in the newspaper was very small. I asked to be notified and was told that something would be sent out two weeks prior to the meeting. You keep talking about the Web site, too. I doubt that everyone in here uses a computer and can easily find that information.

Ms. Breyer:

I definitely agree with that. We will see what happened to the letters when we get back. We did not intend to rely on the press release alone. We will also try to contact other individuals. Mark contacted some people before we arrived. Some meetings may not be for everyone. We have had a couple of meetings here with former workers. I understand people don't always have access to the internet at home, although public libraries often have free access. If you call us, we can print out the information and send it to you even if it is a 100-page site profile.

Comment from Former Worker #1:

There were quite a few of us who worked in the same bay. All of us have prostate cancer. Why isn't it in the SEC cancers?

Mr. Rolfes:

NIOSH had no say regarding the covered cancers for the Special Exposure Cohort. Those were determined by Congress when the law was written. The decision was independent of NIOSH's opinion. We have to operate under the law as it stands. At this point, NIOSH can make recommendations about having additional cancers added to the SEC. We have been looking into that. I am not sure of the status of that or if prostate cancer will ever be one of the covered cancers.

Response from Former Worker #1:

Most of the men that I worked with have died from prostate cancer.

Ms. Breyer:

It will take an act of Congress to get the law changed.

Comment from Former Worker #5:

No one has been at these meetings that worked with the older records. At one time, Pantex was the repository for all of the records from all of the closed sites. Many of the records were contaminated. I believe it was the Mound documents that were buried when they arrived at Los Alamos because they refused to handle them. Those records were buried. Those were handled by clerical employees at the Pantex plant. They came directly from all of these facilities – the documents that were handled on the line by the people who built or disassembled the weapons. Those went to clerical employees who had no dosimeters and had no knowledge of any type of contamination. Contamination at the plant means “radiation in the wrong place.” How do you monitor for something like that? I don't mean to be rude, but I prefer not to have another answer. It seems to be just the same answer over and over again. The point that I am trying to make is that it is difficult to reconstruct some of these things.

Question from Worker #6:

How much radiation does it take to induce prostate cancer?

Mr. Rolfes:

It depends on the specifics of the individual case. The most important thing in the dose reconstruction would be the amount of radiation dose that the individual received. The higher the radiation dose, the more likely it is that the cancer is related to that radiation dose. The

latency period between the radiation exposure and the diagnosis of the cancer is another important factor, but many other things are considered during the calculation of the probability of causation.

One of every two men and one of every three women will be diagnosed with cancer in their lifetimes, just from natural causes. NIOSH has to do dose reconstructions to determine what excess relative risk the individual received from a given radiation dose. There is case specific information that is important to determine whether a given cancer is related to that radiation exposure. The bottom line is that there is not one simple answer. If there is a very short latency period, the probability that the radiation exposure caused the cancer is very low. There has to be a sufficient amount of time between the radiation exposure and the cancer diagnosis – at least five years for solid tumors. The probability of causation for a given dose would continue to increase over time, up until about ten years. It also depends on the type of cancer in addition to the radiation dose that the worker received. For one individual's case, it could take 40 rem to cause a prostate cancer with a probability of causation equal to 50% or greater. For another individual, it could take 80 rem to get the same probability.

The IREP computer program that is used to determine the probability of causation is on the NIOSH Web site. You can actually input dose values for a given scenario into the program and come up with the probability of causation. We will work with you to see if you can get the answer you are looking for. Unfortunately, I do not have a more direct answer for you. As I said, it all depends on the specifics of an individual case. For example, if the latency time is correct, it may take as little as 2 rem to generate a probability of causation of 50% for certain cancers. Other cancers may take in excess of 100 rem, depending on several factors that go into the dose reconstruction.

Question from Former Worker #4:

What about thyroid cancer?

Mr. Rolfes:

For solid tumors, there is a minimum latency of about five years. Thyroid cancers take less dose. An individual would need to receive at least 10 rem penetrating dose to get a compensable probability of causation for thyroid cancer. However, it depends on the specifics of the case as well.

Response from Former Worker #4:

I'll give you a scenario. For those who don't know, the thyroid is a butterfly-like gland that has two lobes. What are the chances that a person would get a primary cancer in both lobes of about the same size that were not metastasized? Is it 50% or greater?

Mr. Rolfes:

I really don't know the chances of getting two primary tumors in the same organ. It is typically very unlikely, but that is a different probability altogether. What we are comparing is the amount of radiation dose received by that organ and the probability that the given dose could have caused your cancer. That is not the same as the probability of two separate tumors occurring in the same organ.

Comment from Former Worker #5:

What is the primary cause of thyroid cancer, the most usual cause?

Response from Former Worker #4:

Eighty-five percent of papillary or follicular cancer, whichever it is, is caused by radiation exposure.

Mr. Rolfes:

I was not aware of that.

Response from Former Worker #8:

That is the whole point. I don't think this whole program knows what it is doing in that respect.

Mr. Rolfes:

I don't know the cause of the naturally-occurring thyroid cancers or thyroid cancers that are observed in a population. I am not an epidemiologist. In a dose reconstruction, NIOSH looks at the excess risk from a given radiation dose and compares that to the observed background incidence of cancer of a given type. That is accounted for in the models that are used in the calculation of the probability of causation. We make the determination based upon the excess relative risk of your exposure as compared to the occurrence of the cancer in the general population.

Response from Former Worker #8:

If 85% is caused by radiation, then how much radiation do you need? There is no number for that. So it should be an 85% chance that my wife got thyroid cancer from radiation at the plant. She could have had one rem or 100 rem. Eighty-five percent of thyroid cancers are caused by radiation, period. How are you going to answer that?

Mr. Rolfes:

I am not an epidemiologist or a medical doctor. My job is to look for a connection between radiation exposures and potentially occupationally-related cancers.

Response from Former Worker #8:

I don't know if that has anything to do with this particular situation.

Mr. Rolfes:

I am not in a position to answer the particular question you are asking. I cannot give you a better answer.

Question from Former Worker #6:

Does NIOSH feel comfortable that the records being used in the dose reconstructions for cancer are sufficient?

Mr. Rolfes:

The dosimetry records that we receive from DOE are the most important information for an individual's dose reconstruction. They are the starting point for the dose reconstruction. We have to look at the specifics of an individual's case to determine whether the records are adequate for a dose reconstruction. There are certainly some workers who were not monitored in the earlier years. In that case, we can look at the dose that they received when they were monitored in the later years doing the same job. We can also look at the radiation exposures of their co-workers who were monitored and doing the same job. The Act prescribes that each case be determined on an individual basis. We have to operate the way the law is written.

If we realize that there is not adequate information in an individual's records, we have information in our site profile that allows us to interpret why they might be missing data, or how to assign a claimant-favorable dose based on the specifics of the case.

Question from the daughter of Former Worker #3:

In the case of the electricians, none of them were wearing dosimeters. They went into every vault and every building. They went into the igloos and the potato sheds. They went everywhere without the dosimeters. How are you able to get a comparison for co-workers if

none of the craftsman who went into all of these places wore a dosimeter?

Mr. Rolfes:

The individuals who worked directly with the radioactive components would have been the workers who would have received the highest radiation doses. It is the data from these individuals who were monitored that are the basis for the co-worker model by which we would assign dose to unmonitored workers.

Comment from Former Worker #5:

I understand that at the Burlington plant, the guards had the highest readings and their change house was one of the “dirtiest” facilities. That was not Line 1. That was the guards.

Do you consider the geometry of the individual? Obviously, you consider the geometry of the items that they are working with. But you are talking about people who come in many body types. I doubt if that was built into it, nor was the epidemiological aspect, because it would affect the dose reconstructions.

Mr. Rolfes:

We use a range of correction factors to apply to an individual’s recorded external dose. If an individual had 100 millirem recorded on the dosimeter, there is some uncertainty surrounding that reading. It could be 10% higher or 10% lower. All of those uncertainties go to the benefit of the claimant during dose reconstruction. NIOSH would consider the higher of the values. If the individual’s recorded dose was 100 millirem, we would assign a dose of 110 millirem to consider the uncertainty.

Response from Former Worker #5:

So you are applying these correction factors to average out the difference in the size of the worker? It occurs to me that different body types may receive different exposures. I think that there are a lot of things that are not considered in this that probably should be.

Mr. Rolfes:

NIOSH acknowledges that there are uncertainties associated with doing a dose reconstruction. Under the law, NIOSH is required to use those uncertainties in a claimant-favorable way.

Question from Former Worker #5:

Is there any possibility that you might come back for another meeting with people being notified? It certainly would be appropriate.

Mr. Rolfes:

We will see what we can do.

Question from Former Worker #11 [unidentified]:

I worked for 28 years down on the line. For years we used trichloroethylene (TCE) to clean the weapons and the parts. We just about bathed in it. All of a sudden, they wouldn’t let us use it any more. That is a chemical exposure and you don’t measure chemical exposure.

Question from Worker #6 to Former Worker #11:

You said that you used TCE to clean the parts. Did you put them on a table or your lap?

Question from Former Worker #5 to Former Worker #11:

What type of personal protection equipment did you wear? Did you have a lead apron?

Response from Former Worker #11:

I didn’t wear a lead apron. I just poured the TCE on the part and wiped it down with my hands. We used all of these chemicals for years and all of a sudden they didn’t let us use them any more.

Mr. Rolfes:

NIOSH only receives Part B cancer claims for which radiation dose reconstruction is necessary. The Part E claims for medical conditions associated with chemical exposures are handled by DOL. They might also look at any synergistic effects between chemical and radiation exposures under Part E.

Question from Former Worker #12 [unidentified]:

What about the engineers that went to Tonopah and Livermore for development projects? I didn't wear a film badge doing all of that. What you have is a dent or a void in your readings.

Comment from Former Worker #4:

It is a void of knowledge of any exposures that you might have had at another facility.

Mr. Rolfes:

If you worked at another facility, you would have been technically employed by that facility. We would have to request dosimetry records from that facility as well.

Question from Former Worker #3:

What if you didn't wear a dosimeter?

Response from Former Worker #12:

I didn't work for another company. I was sent there to work on projects. I never wore a dosimeter.

Mr. Rolfes:

Were you working with radioactive materials in those situations?

Response from Former Worker #12:

I worked with them every day.

Mr. Rolfes:

That is certainly something that we would look at in the DOE dosimetry records that are specific to the case.

Response from Former Worker #12:

I came out here tonight because I saw the article in the newspaper. I got all of my records from the doctors. I want to leave it with you to evaluate. Then I want you to send me the forms I am supposed to fill out, instead of telling me what to do about it. I have my records. Can I leave them with you?

Mr. Rolfes:

The initial claim must be filed with DOL in order for NIOSH to conduct a dose reconstruction.

Response from Former Worker #12:

Why can't I leave these with you and you send me the forms that I am supposed to file? You are saying that I will have to fill out all the claim forms and then they go to you.

Mr. Lewis:

If you call the DOL Resource Center, they can help you fill out the forms. We can give you their contact information. Ask for Karen Martinez. She will take care of you.

Comment from Former Worker #5:

The Resource Center sends people here every other month. They will help you then. Keep copies of everything for your records.

Response from Former Worker #12:

I got what I wanted. Thank you.

Comment from Former Worker #13 [Name redacted]:

I worked out at Pantex from 1957 through 1975. I went up to Alaska in 2000 and stayed for more than five years. When I came back, my ex-wife suggested that I go to see a doctor because I was spitting up blood. They told me that I had lung cancer. I told them that I must have gotten it when I worked at Pantex because I never worked any place else where there was radiation.

My point is that as soon as I found out about it, I put in a claim. Someone at the plant dug up my records and she told me that I had been exposed to 10 or 12 different things – plutonium, uranium, and a lot of other stuff. I filed the claim in 2005 and I have never seen so much red tape. This is 2008. I got a letter from Los Alamos, New Mexico. The only reason I am here is because I was curious if they are going to come up with a better plan for compensation than the one they have. All you guys look like you are organizers or you are retired. Is there anything that you can do to hurry this up?

Mr. Rolfes:

NIOSH is doing the best that it can. I realize that it is not going to be good enough for everyone, but I know that we are working very hard to be certain that we incorporate public input to look at essentially any potential radiation exposures that an individual could have received. We are doing everything that we can to make sure that we get timely answers for the cases based on the best available science. We also are committed to revisiting previously denied cases when new information is made available or new cancer diagnoses are provided for additional primary cancers.

Since the site profile is a “living document,” NIOSH also looks at previously denied claims that could be affected when new information is incorporated into it. We are committed to considering every case with the best available science in a way that is favorable to the claimant.

Response from Former Worker #13:

You’ll have to excuse me. I have more things wrong with me than a dog has fleas. I can’t hear well out of this ear. I’m a really patient man, but it looks to me like the Department of Labor is waiting for me to pass on, but I am a fighter. I am going to live for awhile in spite of all of it. I only know of one man who has ever gotten any compensation from them.

Mr. Rolfes:

If anyone has questions after the meeting, I will be around. If you think of any other information that we should have, please send us an e-mail or a letter or give us a call. The address and phone number are on the back of the Fact Sheets.

Comment from Worker #6:

Mr. Rolfes and Ms. Breyer, thank you for coming to meet with us. Can you please look into what happened with the letters?

Mr. Rolfes:

Yes, I can. There have been some administrative changes with how we send out the letters to inform people of our meetings. I don’t know what happened. I haven’t followed up on it yet because we just heard about it today. I apologize for not getting the letters out in time. We will do our best to make arrangements for a future meeting so that we can receive more input. In the meantime, if there is any information that individuals have to send to us, or if someone who was not able to attend tonight has input that they would like to send, please feel free to pass on our contact information to them or to refer them to us.

If there are additional details that cannot be discussed in public, we have the means to do secure interviews on site as well. I have a sign-up sheet if anyone is interested in doing so.

Mr. Rolfes thanked the attendees for their participation and adjourned the meeting at approximately 8:40 p.m.