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

Meeting Date: Tuesday, January 29, 2008, 2:00 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 opened the meeting at 2:00 p.m., greeting the attendees and thanking them for coming. She explained that several people had not received notification of the meeting and asked how many had received an announcement in the mail. Most attendees replied that they had read about the meeting in the newspaper that morning.

Ms. Breyer stated that she is the NIOSH Special Exposure Cohort (SEC) Petition Counselor. She introduced the other members of the NIOSH team and explained their roles in the meeting.

Ms. Breyer explained that the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) is administered by the U.S. Department of Labor (DOL). Part B provides compensation for workers from covered sites for cancers that may be related to their occupational radiation exposure. Part E provides compensation for workers with illnesses that may be related to toxic chemical exposure on the job. When a worker files a Part B claim, DOL verifies the medical and employment information and forwards the case to NIOSH for radiation dose reconstruction. The dose reconstruction process determines whether the employee's radiation exposure was likely to have caused the cancer. The dose reconstruction is used by DOL to make the compensation decision. NIOSH only handles the Part B claims for cancer. Ms. Breyer added that literature with EEOICPA and dose reconstruction information was available at the back of the room.

Ms. Breyer stated that the SEC process is another way for EEOICPA claimants to be compensated when there is not enough information for NIOSH to perform individual dose reconstructions. She gave a brief explanation of how a petition can be filed to add a class of workers to the SEC. A worker is eligible to be part of an SEC class if he or she has at least one of 22 specific types of cancer and worked for at least 250 days during the time period specific to the class.

Ms. Breyer said that the purpose of the meeting was to get information from workers to support an evaluation report that is being written on the SEC Petition that was filed for a class of Pantex workers from 1950 to 1991. The primary reason for the report is to investigate whether dose

reconstructions can be performed for that class of workers. The report will be presented to the Advisory Board on Radiation and Worker Health (ABRWH or the Board) at a future public meeting. The Board will review the report and make a recommendation to the Secretary of the U.S. Department of Health and Human Services (HHS) on whether or not to add the class to the SEC. The Secretary of HHS will then make a recommendation to Congress, which has 30 days to act on that recommendation.

Ms. Breyer concluded her opening comments by stating that attendees were welcome to direct questions to her regarding individual claims, dose reconstructions, or the SEC after the meeting. She turned the meeting over to Mark Rolfes, the NIOSH health physicist who is preparing the SEC evaluation report.

Mr. Rolfes reiterated that the purpose of the meeting was to listen to former and current Pantex workers to gather information about exposures and radiation protection practices from 1951 to 1991, particularly the historical external monitoring procedures, internal monitoring for the various radionuclides, shielding in the work areas, use of engineering controls that may have limited employees' exposures, protective equipment such as lead aprons, and incidents or accidents that occurred at the site. He encouraged the attendees to share any information that they might have that may affect how NIOSH evaluates the petition.

Comments/Questions from Former Worker #1 [Name redacted]**:**
I have several questions that I have presented to DOL and to NIOSH that have never been answered:

1) In the late 1960s or the early 1970s, there was an event in Cell 8. There is a list of workers, primarily sheet metal workers, who were not wearing dosimetry unless it was a special case. (As a Utilities Operator, I did not wear a dosimeter for the first 20 years of my employment at Pantex.) Most of these individuals were sheet metal workers and have died of some form of cancer – [names redacted]. [Name redacted] worked as an illustrator who made drawings of the various weapons programs and visited the area quite a bit. He passed on not long ago. [Name redacted] was another worker from the Training Department who may have been involved in production. [Name redacted], who was a shift supervisor in Utilities, died of brain cancer years ago. I talked to [name redacted.] prior to his passing. He said that he was asked to go into Cell 1 (or Cell 8) to replace the ductwork after an event. The sheet metal workers that I mentioned before would probably have all been involved in the event. I have heard little or nothing about that particular event.
2) When I first started applying for compensations for thymus cancer – initially it was stated as lung cancer and then they decided that it was thymus cancer – the doctor asked, "Were you exposed to radiation?" I told him that I worked at Pantex and things got very quiet. He never again mentioned anything about my work at the plant. When you file a claim, they (DOL) want you to have a doctor's support. It is my understanding that all of the attorneys in Amarillo are on retainer to Pantex and most of the doctors are. I talked to one individual who commented that the doctors have quite a clientele at Pantex under normal health services, so they are not going to go out on a limb for any one person.
3) I remember an event that happened in 1224 South between 1982 and 1984. It was on the swing shift. I was working days at the time. I asked some of the workers in Utilities in the production area and they told me who to talk to. I asked him if he was working in 1224 South when the event happened and he said, "That happened in 1226." I asked another individual what happened in 1226 and he said, "No, you're talking about 1224."

I found one person who was willing to talk to individuals about the events. He was a maintenance supervisor on swing shift. His name is [name redacted] and I have his phone number if you are willing to talk. The other people I talked to told me that there were actually two events, one in 1224 and one in 1226. People who worked outside of the building were not aware of the other event. These events happened within the timeframe of a year or so, when a lot of weapons were being built.

4) The other event happened in 1226 in either Bay 17 or 19. This event also happened on the swing shift in 1982. One worker [name redacted] who was involved in this event was standing right over the weapon when something broke and there was a release. He has since died from bladder cancer. That should not be too hard to track.

   Everyone that I talked to about these two events, with the exception of [name redacted] wants to remain anonymous because they are still employed at Pantex. They don't want to be labeled as whistleblowers for fear that they might lose their jobs.

   It is my understanding that all "tube-related work" was relegated to Cell 8 due to all of the problems that they had. I talked to one worker who told me that he ran from the building and got into his car. Management took him from his car to the Medical Department for urinalysis. They gave him beer so they could get the sample to see if he had any exposure.

   An interesting comment about the event in 1224 South: The only workers who tested positive were on the opposite side of the building. Workers who were in the bay where the incident happened were told that they were "clean."

5) Moving on to another event – and this is a rumor that I heard when I was talking to people to get information for my own claim. Building 1226 was a production area, but inside that building there was a calibration facility – Metrology. I was told that there was a man who worked in Metrology whose job it was to pick up radiation monitoring equipment and take it to the calibration lab to be recalibrated before returning the equipment to the production areas. Rumor has it that the instruments were brought into the calibration lab, the old sticker was removed and a new sticker was put on, then the instruments were taken back out to the facility. During this time, this particular individual had a black book that he used to take notes. After doing so for about a year, he went on vacation to Washington, D.C., where he met with a Congressman. After this vacation, this man retired because he traded his little black book for a healthy sum and a promise not to talk about it any more.

6) Recently, I was at a refrigeration meeting. They passed out an indoor air quality report from the Environment Protection Agency (EPA), primarily from the State of Texas. The report talks about radon being predominant in the Panhandle. I was told by people at Pantex that it was probably more of a problem more toward the north end of the plant than the south end – north end of the plant being the radiation areas. It is my understanding that radon collects in basements and that type of place. At one point in time – probably from 1953 up through the time that they produced HE in 1217 and 1219 – utility operators sat in the equipment rooms, which were underground concrete structures, for 8 hours per shift (24 hours per day) watching temperatures on melting pots. If radon was a problem in the panhandle of Texas, and more specifically in Carson County, I am sure that those people probably had some exposure to radon, which I have never seen addressed in the NIOSH dose reconstruction efforts.

7) Tritium has an affinity for water. My first responsibility at Pantex was supervising air filter changes. It is my contention that any contamination, be it biological, chemical, and/or radiological, is probably going to concentrate in the filters. I was told by a person at NIOSH that it would pass right through the air filters. My question is this: "Why, then, do we even have radiation-grade absolute filters?" My second question is: "If radiation other than tritium has an affinity for water, what about the condensate that forms on air conditioning coils in that air stream? Would that have an affinity for any radiations other than tritium?"

8) For several years, I was in charge of the potable water systems at Pantex. Initially, water was pumped from 1512 through the firing site to the plant. It is my understanding that the firing sites are contaminated. Any time we had a water leak out there, they would not let anyone go dig the water leak unless it was dry. How do you dry out a water leak when it is on the main line from the water plant going into the plant? They told me they would make an exception, but not to track any mud out of the area. They made provisions so we could not track any "earth contaminated with water" from the area. What about the water in the pipe? Is there any potential for contamination as that water passes through the pipe – from the radiation going through the steel pipe and into the water? I'm not good with times – and I should know – the water plant was replaced so water no longer goes through the firing site on its first pass to the pump station, but it does circulate through the plant and the firing site was the end of the lines. If water has an affinity for radiation, and if radiation can penetrate that cast iron pipe into the water, do we have a problem? We were having trouble keeping the chlorine content up for the potability of the water, so we started recirculating the water from the firing site back into the well collection lines so it could be redistributed to the plant to go through the chlorination process again. I am not sure that we didn't shoot ourselves in the foot when it comes to spreading contamination.

I want to raise two more questions about this type of activity:

1) When they demolished 12-4 (the old boilerhouse), they knew that it was contaminated with asbestos. They were very cautious with the decontamination. If you go back and look at the project, you will probably find that they ran out of money. The reason that they ran out of money for that demolition was that they supposedly found some radiation in the boiler tubes. My initial thought was that there is some natural radioactivity in natural gas and it was built up on the outside of the tubes where the fire strikes. They capped the tubes that they were getting rid of, which I thought was odd. I talked to several people about that. They told me that it was not from natural gas, but that the concentration of radiation in water would plate out in the tubes in the form of scale. One of the engineers suggested that we call [name redacted], formerly a Project Engineer at Pantex, who might be able to explain why they capped those boiler tubes when they demolished that facility. Radiation could have found its way into the scale by either the raw water from the water plant or the steam that went out into the production facilities, which was condensed and returned to the boilerhouse. If radiation could pass into the water lines in the firing site area, why couldn't it pass into the steam lines in the production area?

2) I don't have the report here with me, and it is probably after the timeframe, but we had a positive hit for plutonium and radium in the third quarter water draft report. I'm not sure what you will find in the final report, but we had positive hits in the draft data. I was on the e-mail distribution that asked, "What can we do now? We have some dirty water." I

was not concerned with that, I only worked with the biological contamination. I didn't work with the other kind of contamination. I was only an interested spectator. I saw an e-mail that said not to report anything until it was proven. On the biological side of the house, we reported any water contamination that was suspected until proven otherwise. So, in my opinion, the water consumption for long-time Pantex employees may be another source of radiation that NIOSH has not considered, along with the radon and the events that I described earlier.

Comments from Former Worker #2 [unidentified]:
It has been ten years since I worked at the plant. I worked in Utilities. I covered that whole plant. I am quite aware of that water area and what they have out there. The water is chlorinated to purify it. It goes back through the lines all the way back to the plant and into the storage tank. The #2 storage tank was right outside of 15-4, the water facility. It goes back into the plant in the other direction into another storage tank. It does not go through Zone 4. It goes from the wells into 15-4 (the water plant) and on into plant.

Another incident: There was an explosion in 1976 in Zone 11. I knew the three workers who were killed [names redacted]. [Name redacted] went in through the bay. He had been working in there quite a while. He was doing some lathe work on his break. That is what caused the explosion. It was a mess over there. It ruined all of the equipment. I had two supervisors that were up on top of the water storage tank over there. They were nearly blown off the tank. I was on duty that night. They pieced the lathe together and found out what went wrong.

I heard something about the incident on 1224-South. I was on duty then, too.

Question from an unidentified attendee:
How can all skin cancers be denied? Melanoma is what my husband had. Melanoma is highly metastasized. It metastasized to his lungs. He had lung cancer, but he had the melanoma first, which was skin cancer. That metastasized to both lungs, which a needle biopsy proved. I had all of that turned in to authorities. The doctor's reports state that. I don't know how they can ignore all skin cancers.

Mr. Rolfes:
I cannot speak about your specific claim. Skin cancers are included in the cancers that are evaluated under the dose reconstruction process. However, they are not included in the SEC. If an SEC class is designated here at Pantex, skin cancers will not be included.

Response from the attendee:
He could very easily have gotten the melanoma from processing cards from all over the plant in the Data Center. He breathed the fumes that came through when they processed the cards. He handled the cards. They couldn't get up to wash their hands every time they needed to scratch an itch.

Mr. Rolfes:
We can certainly set up an appointment to discuss the specifics of your claim. We are here to receive input for historical radiation monitoring practices. We are here to look at historical procedures. For example: Were the people who had the highest exposures to radiation monitored? Were they monitored for external dose? Was the monitoring only for beta and gamma exposures? Were they monitored for neutron exposures? We are looking for information pertinent to bioassay programs (fecal and urine samples), whole body counts or lung counts to determine if there was radioactive material deposited in the body. We are looking at the big picture for historical procedures and policies at the plant.

Ms. Breyer:
If you have any specific questions about your claim, after the meeting we can set up an appointment for someone back at the office in Cincinnati to talk to you about your claim. To answer your question about melanoma: It is a covered cancer under dose reconstruction under Part B. If it is an issue with DOL saying that you are not an eligible claimant, we will talk to you afterwards about your claim. Under the SEC, skin cancers are not covered.

Question from Former Worker #3 [Name redacted]**:**
Do you count film badges as dosimetry? That is all we had.

Mr. Rolfes:
Yes, that is correct. When we refer to dosimetry, we acknowledge that film badges were used in the earlier times. It is a matter of terminology.

Response from Former Worker #3:
The utilities people and the guards did not have badges. The clerks that went in and out picking up data constantly did not have anything. We had no rad programs whatsoever. All we had was a couple of safety people. Quality did the swiping of the pits and such. No lead aprons – where did people get that idea? We didn't have them in the early days. The utility guys were in there as much as the guys who were red-barred. They were in there all the time.

And dose reconstructions – where do the dose reconstructions come from if you don't have data? Even when we got dosimeters, it was just that little TLD that went on your collar. When I worked at Rocky Flats and LANL, we had dosimetry – not anything like what they had at Pantex. We had rad workers (at Rocky Flats and LANL), which they never had at Pantex until after the 1990s. If you want to know things, those are exactly the kinds of things that I want to tell you.

Mr. Rolfes:
That is exactly the kind of information that we are looking for. I can answer some of your questions about dose reconstruction. If there was an individual that had potential exposure to the radioactive materials who did not have monitoring data specific to his file, we do have information from people who were monitored. We would use co-worker information for a claimant-favorable estimate of the worker's dose.

Response from Former Worker #1:
Every day was different.

Response from Former Worker #4 [Name redacted]***:***
The co-workers were not monitored. Workers did different things. One week, you might be on the computer and your co-worker might be doing the hands-on work. So if you are monitoring the person on the computer, you aren't going to get much – it's that person standing over that device for eight hours or more a day.

Response from Former Worker #3:
The clerks went in and out. The utility workers lived in there. The sheet metal workers were everywhere.

Response from Former Worker #4:
They had to have custody of devices, particularly the clerical people. I was not there, so this is hearsay. [Name redacted] worked in the X-ray facility. I have heard stories that she sat at a desk surrounded by pits.

Comment from Former Worker #5 [Name redacted]**:**
We all did in those days. In 1971, when I went down to the warehouse, there were no monitors. We were told when we worked down there that we had no radiation (exposure). We were not monitored. We used to sit down there with the pit cans. At break time, we would put a cardboard box across the top and sit with our legs around it playing cards. We ate our dinners that way. We were told nothing.

The men that worked in the North and South Vaults in the warehouse in 1214 were mostly Hispanics. I was a Catholic convert. I asked one of the men why he always wanted to work in the vaults and he said, "You're Catholic, you know about the rhythm method. We don't know what it is, but we know that when we work there our wives don't get pregnant."

I had a friend who worked at Northwest Texas Hospital who once asked me, "What do you do out there? I can tell you when a woman comes in with a first trimester miscarriage, her husband works at Pantex."

They didn't monitor any of those things. Even when [name redacted] had a baby with no hands and feet, they would not monitor. They would not talk to her about it. I went to the union and they said, "We can't discuss it. We don't want to look into it."

After the explosion in 1977, I went down on the line and was given some information about radiation. I was given a dosimeter, a film badge, and they sent me as a quality inspector back down to the warehouse where I had been a clerk for years. My supervisor called and wanted my dosimeter back. I said that I wanted to wear it in the warehouse. He told me that I wasn't exposed to anything in the warehouse. I said, "According to OSHA regulations, I am a woman in childbearing years and I have a right to request to be monitored." He said, "Gotcha. We're not regulated by OSHA. We are our own entity and we have no reason to be monitored." We argued heatedly about it and finally he let me wear a dosimeter just to keep me quiet. After about four months, they moved me out of the warehouse without telling my why. They went back down there after I left and put dosimeters on all of the women that came out of the office that did work on the floor and went back into the office. Those women had "hot" readings. I found out later that I got some of my hottest readings as an inspector in that warehouse. They didn't tell me. They just moved me out. They put dosimeters on the women. When they saw how hot they were getting just coming out of the office and into the warehouse just to get data – where I had been sitting for years as a clerk – they went down and put dosimeters on the men in the North and South Vaults (the pit rooms) and were horrified when they saw how "hot" they were getting. They started rotating them out every six weeks. Those guys had worked for years like that. We didn't know about lead aprons.

When I worked down there as a clerk, I might spend the whole day in the vault room receiving the pits. The guys would take the pits out of the cans so we could write down the serial numbers and then put them back in the cans. We spent whole days in there. We were never monitored. We were never told. None of those people ever were until I found out quite by accident because

I demanded to be monitored and they found out how "hot" the people were getting. That went on for years and years.

When I worked in the cells years later, they did have some lead aprons. Nobody wore the lead aprons because it took too much time out of the process to stop and put on the apron, start the inspection process, and take the apron off. Nobody wanted to slow down to do it. Our supervisors encouraged us not to do it because they wanted the product. People would laugh at me for wanting to put on a lead apron. There wasn't time to slow down and put on the lead apron when we were in the cells when we were doing certain processes. We used to do the same processes down there as clerks before we had film badges.

I was working on swing shift one night with [name redacted] in 1226. I don't remember the year. The monitor went off in the bay next to us. Our supervisor, [name redacted], came by on a bicycle and said that it was a false alarm and told us to go back to work. We went back to work in the bay with big, noisy hoists so we didn't know what else was going on in the building. Unbeknownst to us, they had evacuated the building for a real tritium release right next door to us. (She was urged by another attendee to describe the building.) It was an open facility (no doors) that had been condemned for years. Air was circulating throughout the whole building. We were working and some guards came in and asked us what we were doing. We shut down the operation and stepped out in the hall to talk to the guards. They told us that the building had been evacuated two hours before because of the tritium release. We had been locked in the building and left there. It had been aired to the outside the whole time. We shut down operations and went to Medical for urine tests. The Safety people had to come out from town about 11:00 p.m. and were not happy. They took the stickers from the vials with the urine samples, put them on a piece of paper, and wrote a number down. Then they passed the bottles around the room, so they didn't know whose samples they had. There was no true monitoring that night. The man I was working in the bay with that night was [name redacted]. The first place that tritium goes to in the body is where there is water, the bladder. The first place that he got cancer was the bladder. He died from bladder cancer after a long ordeal with it. It went to his bones and his brain. It was a horrible thing. But that was the tritium accident at night. Years later when the Tiger Team investigated because it was a closed facility, there was no government regulation. It was a very unusual situation. When they came out and talked to people, I went out to discuss the tritium incident with them on the last day. They called me back from Washington, D.C., and told me that they investigated the incident and that it had been reported by other workers. They told me that when they went to Medical, my record and [name redacted]'s records didn't indicate that we were there that night. They said that our records had been pulled and there was no indication anywhere in the plant that we were even on the site that night. They said that because of "gross negligence" for clearing records to make the plant look clean, they had fired the plant doctor [name redacted]. At Pantex, everyone had just been told that he retired. The people in Washington said that he had been fired because they could prove that time and again, when people were injured in radioactive incidents, he had pulled documents from those files and completely cleared the information as though it never happened. They said that all of us had been maligned by not having the truth told in our medical records.

Comment from Former Worker #6 [Name redacted]**:**
I went to work at Pantex in 1958. I was recruited to come here with the promise of being made a supervisor. I was promoted in 1961. I worked every program that came down the pike until I went into the Developmental Program (68). The 57 Program is the one that concerned me a great deal with the tritium. We received the tritium bottles from the Savannah River Site, three bottles to a can. We opened the cans and about one-third of them were "hot." We opened the

cans and started to purge them. We purged them and when the reading was good enough, we sent them on to the line so they could be installed on the weapons, two to a weapon. I supervised the assembly of every one of them. We built approximately 1,050 of them in one year. I supervised the assembly on the bottles of every single one and kept records. A great percentage of them leaked.

When the 57s started coming back in for disassembly, they couldn't tear them down fast enough to suit the company, so they put it on swing shift. I supervised the disassembly on the swing shift. That was in 1988 or 1989. We had to swipe the back and send it to Mass Spectroscopy. We had to pull a gas sample and send it to the lab. If it came back with anything in it, we had to empty the bay and put one operator and one safety person in there in full SCBA gear to disassemble the unit. The bottles would be piled up in the bay, two to box. Sometimes there would be as many as 50 bottles in there. These bottles had already been proven to be "leakers." If you put three of them in there – I came in one night and before I could get any more boxes, to keep the operation running, I had to call the warehouse to bring a special cart down to haul them off. Before they would haul them off, I had to open all of the boxes to inventory them. The first box had three bottles that were so hot that I couldn't touch them. The rubber had melted in them. I reported it to my boss, but there was never any report written about it. I could go on like this all day long, but I would get into classified information. I'm getting into that when I state that I had as many as 20 to 50 bottles in the work bay all the time.

Mr. Rolfes:
If there are additional details that we should not discuss here, we can arrange to set up secure interviews onsite on Wednesday or Thursday. We can pass around a sign up sheet for individuals who feel that they have sensitive or protected information that may affect the investigation and evaluation that NIOSH is conducting. We can make arrangements to return if we cannot speak with everyone in the next couple days.

Response from Former Worker #6:
I will need to make special arrangements. I worked in Special Programs. My people assembled special jobs for special tests that I cannot even discuss. We ran one operation for Lockheed to determine how many weapons could be mounted on the submarine missiles.

I have already been turned down. I am not worried about my claim because I wouldn't live long enough to collect it if you started trying to pay me today. I am worried about the people who worked for me from 1961 until well into the 1970s. We didn't wear film badges until well into the late 1960s when the 58 Program started. I have told all of this to several people, including you. There has never been anything done.

I wrote a letter after I talked to Shelby Hallmark after the first meeting. They had me on the news talking to him. I told him that I would have to write 50 pages to tell all that I could tell. I don't have the time to fool with that and you people probably are not going to do anything anyway. When he closed his meeting, he told us that anyone who wasn't happy could write to Mr. Glassman.

At that time, I had prostate cancer and was having a terrible time. I had been on sick leave. They called me to come back when they were planning to disassemble the 56s, for which I had supervised production. I supervised the modifications for changes when they shielded the 56s. They put me on sick leave because I was unable to go back to work. I went to talk to the plant psychologist, who determined that I was suicidal at the time, so they pulled my clearance. I didn't want to go back to work, so I stayed on sick leave for three years.

[Name redacted] was talking about the South Vault. That is where we brought the tritium bottles in for storage. I talked to someone in your group who told me there was no such thing as neutron radiation from the tritium bottles. Anybody here who has ever worked with them can tell you that if you put two of them side-by-side, they will get hot.

If you want to know about the incidents that happened that I know of or if you want to know how much protection was given, I can go down this list for you.

- External monitoring for beta and gamma did not happen until well into the 1980s. Sometime in the 1970s or 1980s, they put beta monitors in the cells.
- We didn't have film badges to monitor for neutron exposure until the 58 Program began. It was a very "hot" program, the highest that we had outside of 48. That was when I saw the first lead apron here. We had to rotate people out of there every three weeks. One of the men who worked for me got a year's radiation in three weeks. I was supervising the cell. I never had experienced people. I didn't rotate out. I had to stay in there. We had a great deal of trouble with that program. We built nearly 100 of them and had to tear them down because the potting process was improper and the silicone turned to oil. We had to rebuild all of them. I worked under the supervision of [name redacted], who at that time was an engineer. He was later a nuclear safety engineer. I worked with him on the 28, 57, 58, 62, and 68 Programs. I worked with him for nearly five years developing the 58 program. I worked on the units with the other workers.

When they did my dose reconstruction, they said that I was a supervisor, so I couldn't have been subjected to any radiation. At one time, they were going to have a supervisor that stayed in the cell all day. I worked in Building 26 for 15 to 20 years, supervising all of these programs. I supervised the disassembly of units after they came back from the firing site. We didn't have anything to protect us from beryllium. We didn't get beryllium vacuums until well up into the 1970s. Prior to that, if the beryllium sloughed off the unit, we just clomped around through it and went on about our business. Most of the people who worked for me that are now deceased worked on the 45 Program, which used a material called (inaudible). The first of those who died was [name redacted], a supervisor, who died from kidney failure. Another died from colon cancer. [Name redacted] worked for me for years and was promoted when I went on to the 58 Program. He died from cancer. He worked almost until the very day that he died. I was told that there was no danger in tritium because it is out of the body in no time. I was told that there is no danger in depleted uranium because it is heavy and goes down to the floor. They said that there was no hazard from it because it would lie on the floor all day long and could be swept up and taken to Safety. They stated that I wore wristband dosimeters. I never had on a wristband the whole time I worked. I didn't wear a film badge or a dosimeter until 1974. (Other workers stated that it wasn't until the 1980s.)

Comment from Former Worker #4:
There was no training so workers didn't know how or where to wear them.

Comment from Former Worker #6 (continued)**:**
In the South Vault, I supervised assembly of the (sounds like) squib valves to the tritium bottles. Two men installed them under a vent hood that was vented to the air. When they moved the operation to Bay 25 in 1226, it was a closed-in building. There were sometimes 100 people working in there. An inspector who worked in there for a long time died of prostate cancer.

I could go on like this all night, but what would it accomplish? You're telling me that I didn't receive any radiation in the 35 years that I was out there. The people who did my dose

reconstruction said that I only had 1.5 rem from the amounts and types of material that we were handling. In the early days, we were allowed to get 5 rem per year. Mason-Hangar reduced it to 2.5 rem in the 1970s. Later they cut it down to less than that. They didn't start shielding anything until well into the 1980s. (Other workers said that they did not remember shielding. Another suggested 1979 as a possible start date for shielding.)

I would like to talk to you sometime about classified information after 5 p.m. so I can get someone to stay with my wife.

Mr. Rolfes:
I will have to speak with someone at the site to see what we can do.

Comment from Former Worker #6 (continued)**:**
I can tell you about some of these incidents that these people have talked about. I was not involved in the Cell 1 incident, but they locked the bay down for something like five or six years. They barricaded it for two years while I was out there. We had to go clear around it. They finally tore down the barricade because we couldn't make the schedule if we couldn't get the materials through there. They still may not be using Cell 1. I don't know because the day I left was the day that my information stopped. We were sworn to secrecy and believe in it. We live by it.

Comment from Former Worker #5 [Name redacted]**:**
I wanted to add that [name redacted]'s baby was born without feet and hands. [Name redacted] died 20 years later from lung cancer.

Question from Former Worker #7:
Is this going to be the same as last time when we applied for the beryllium compensation? They said that we were not even sensitive for it, so we don't have any reason to send in a claim. There were many of us who worked around beryllium before we even knew what it was. We also worked around depleted U-238 (DU) quite a bit. We used to have clouds in the bay when we had DU in there. We didn't have anything in there to contain it.

Mr. Rolfes:
I can answer your question. I have no experience on the beryllium compensation because that is handled solely by DOL. NIOSH only receives the claims for radiation-related cancers for which dose reconstructions are needed. We don't see any claims for chronic beryllium disease or beryllium sensitivity, so I cannot comment on that. NIOSH does acknowledge that there were DU exposures at Pantex. We have information in the site profile and in an individual's exposure information. People who worked with DU and had a potential for exposure to it provided bioassay samples. NIOSH has urinalysis results and whole body counts from individuals for events such as the B-28 contamination events from the 28 Series. There were about 200 people who were counted onsite by a Helgeson in vivo monitor.

Question from Worker #8 [unidentified]**:**
What about the 55? It looked like it turned black in the bay until it settled down on the floor.

Question from Former Worker #3:
Are you talking about in vivo monitoring, where you get in and they do the lung count? I had that at Rocky Flats, but Pantex didn't have that. He was a supervisor in 28. They didn't do that. Where did you get that?

Mr. Rolfes:
NIOSH has monitoring data for approximately 200 individuals that had worked on the 28 Series in 1989.

Comment from Former Worker #6:
They did have whole body counts on the 28. I had one and got 1.5. There were people who worked upstairs in the front office that had higher body counts than I had. They told us that we couldn't ingest the DU because it was so heavy that it fell to the floor.

After I had my interview on the phone during my dose reconstruction, they sent me a report. They cut off the last seven pages of the interview in the report and coerced me into signing the OCAS-1 form. When they turned me down, I sent it back to Mr. Benedict at DOL and he sent it back to you for another dose reconstruction. You don't have any dose reconstruction data on me. I have records that Battelle submitted to you that say that I didn't receive any radiation after 1981. I got 1.5 rem up until 1981. I know that there were numbers on the computer printouts that I got from Battelle because if the annual report came back well under the 2.5 rem that were allowed per year, I threw it in the trash. I didn't know that I was going to go through this. I didn't know that I was going to go through this when I left. I didn't file a lawsuit, but Battelle laid down the groundwork so I couldn't. I don't even have a personnel record. When I asked for a personnel record for the programs that I worked on, the days and years that I worked on them, I got nothing. All they had was two or three tests where they told me how they monitored the radiation, an accounting of my salary, the application that I filled out before I went to work, and the one security infraction that I had in 38 years. I handled thousands of secret documents.

Comment from Former Worker #8 [unidentified]**:**
They have mentioned [name redacted] a couple of times. That was my father. He died at age 48 from pancreatic cancer. He was involved in a highly significant inhalation event with two other men who have also died. They died before he did. It is my understanding that the majority of the information is in a classified report which we cannot get. Did you get that report?

Mr. Rolfes:
We have looked at the report.

Response from Former Worker #8:
There is not a doubt in our minds that is what killed my father. He was 48 years old. This incident happened around 1962 when I was about four years old. These three men were told at the time that they were going to have serious health problems within about 20 years. They all did and they all died from cancer. I believe that they all had pancreatic cancer.

I would like to reiterate a few of the things that I have heard here. I worked at Pantex from 1981 to 1990. I went to Rocky Flats after that. I had never even heard of such a thing as a radiation program until I got to Rocky Flats. That was all new to me. If they had a radiation program at Pantex, it was all secret. Nobody knew about it. I went into every bay and every cell on a daily basis for inventory. I handled highly contaminated parts bare-handed. We were never even told to wash our hands. We bagged those parts. I don't know how many times I helped them do that. We handled those parts bare-handed with no respirator. We didn't even know anything about a respirator or a dosimeter or anything else. There was no real radiation program when I was at Pantex from 1981 to 1990, no true monitoring.

Comment from Former Worker #4 [Name redacted]**:**

They trained people starting in approximately 1994. They brought in (sounds like) [name redacted] from Texas A & M. They enlisted a group of people who were interested in getting the training, some of whom went as far as getting NRRPT certification. All of those records are out there. I worked in Training. I have seen them. I worked with a lot of the schools. That was when the Rad Safety Department was created. That was after the Tiger Team Report. They had

the big push when they brought in Battelle. I was there in the 1970s and I went back out there in 1994. I was gone for about 18 years. I was one of the big group that was brought in while they were creating that department. Other people would go in and do the swipes and such. It is my understanding that there were no more than six or eight people who worked in the Safety Department. [Names redacted] and maybe one other person served one at a time as the Nuclear Safety Officer for the entire plant. If they were not onsite, they were called to come back out to the plant.

I have a real problem with the site profile. As an SEC filer, I have never been invited to the meetings. I would have said, "It is a snapshot in time today." It does not include any of the older buildings. I have looked at it. I have seen the wonderful drawings. It was produced as an historical document, but it is a snapshot in time today. It shows the bays. It shows the cells. It does not show 1226. It dose not represent past practices. I don't know if this is important or not, but I did critical safety system training when I was at the plant. I had to be familiar with all of the safety systems. The as-built drawings were never maintained. This would have included information on the SARs, etc., that would have also included contaminants or the various radioactive materials that were in the facilities. There was a big push sometime after 2000 to finally bring those up to date. The building documents were not up to par. They did not tell what was in those buildings. All of that information was out of date.

[Name redacted] talked about the 1226 incident. I talked about the Cell 1 incident with a man whom I know that you have interviewed before [name redacted]. He told me that he and [name redacted] were the two people that were asked to respond to the Cell 1 incident. They went in there suited up to the best of their ability and asked whoever was in Rad Safety at the time what kind of personal protective equipment they needed. Rad Safety called the Savannah River Site because they had no idea what to do. They went in and wore one pair of gloves for three or four hours. When they came back out, they determined what they needed to do to seal the item. They were told when they went back in that they had to change gloves every five minutes.

[Name redacted] brought up [name redacted] earlier. In 2000 or 2001, the Fire Department asked for a survey looking into birth defects and stillbirths among their children. This was pushed under the rug, as was the breast cancer survey that NIOSH did. None of the females in the weapons complex were told about it, including me. I know people have looked at it and found that there were quite a few breast cancers among people who worked in Stores. I don't know if you have ever seen a weapon, but they don't install one widget. They stand for hours around the weapon. If there is no lead apron, breasts and reproductive organs are exposed. They have to hug those devices at times. The women ended up in the weight chambers, some of them from Burlington. The women had to put the pits on their laps and scoot across the floor to get the items into the weight chamber. They had no lead aprons and it was on the ground.

Comment from Former Worker #3:
It was like a tube. You had to get under there.

Comment from Former Worker #4:
I hope I am not violating a confidence, but I was told by [name redacted] that he stood and watched, under the direction of a Safety Division manager, while all of the accident reports were destroyed. He has gone to the plant numerous times to talk with NIOSH. I have also talked with people who actually copied the documents that everyone is depending on. This would be the dose records, all of the personnel records and medical records, particularly from the earlier years. They just put all of the documents on the face of the scanner. Not every document had a person's name or badge number on it. Now when you ask to retrieve these documents, it is their

best guess as to which records belong to whom. I have seen [name redacted]'s records from the early years. They were handwritten on cards, and then typed later on a manual typewriter. To me, that is an incidence where there is a potential for error, a transposition. They might not be sure what they are copying, or they might misread it. I have also seen at least one rad record on which the person's name would be on the record. Other times there was no name or badge number on any document, and yet these records were given to the surviving widow as her husband's records. I question how you can know whose record it is if there is no name or badge number.

Mr. Rolfes:
In response to attending site profile meetings, we have had previous site profile meetings here at the site and received quite a bit of input. NIOSH has incorporated much of this information into site profile. The site profile is a "living document," which we use to estimate workers' radiation exposures. But it is not sole source of information for dose reconstruction. In addition to the site profile, which allows NIOSH to interpret dosimetry information (or the lack thereof) for a given person, NIOSH uses the individual's dosimetry records for the first source of information for his or her dose reconstruction. Information in the site profile allows the dose reconstructor to assign missed dose or unmonitored dose on top of what was already received and documented in a worker's dosimetry files. The site profile continues to change as NIOSH receives public input on it. If you have input, the site profile is publicly available on the NIOSH website. If you have additional input after today, NIOSH encourages you to submit it by e-mail or telephone, but we prefer to have the information submitted in writing.

Question from Former Worker #9 [Name redacted]**:**
I was a production technician on the line at Pantex. I have a few questions to start with. When did they start taking claims for Part B?

Ms. Breyer:
The Act was passed in 2000. NIOSH opened OCAS in 2001. DOL started accepting applications in 2001.

Response from Former Worker #9:
I remember that DOL said this was all supposed to be said and done within six months from the time that they started taking claims. Here we are seven years later in the same place as we started. How many of those claims were put in by Pantex workers for Part B?

Mr. Rolfes:
The statistics are available on our Web site. I think that NIOSH has received roughly 400 Part B claims for Pantex workers. I have worked on EEOICPA Part B claims since 2002. At that time, the program had just been put into effect. NIOSH has developed site profiles/exposure matrices for more than 300 sites, allowing us to interpret dosimetry information and assign claimant-favorable dose estimates for DOL to adjudicate claims.

Response from Former Worker #9:
Can you tell me how many millions of dollars have been spent to administer the program?

Mr. Rolfes:
In comparison to the amount of compensation, the amount is very low. I don't have the figures in front of me.

Response from Former Worker #9:
I just can't agree with that. Can you supply me with that information?

Ms. Breyer:
You can go to the DOL Web site. They are the ones who make the compensation decisions and the payments, so they keep the figures. For Parts B and E combined, the total is in the billions of dollars. The cost of administrating the program may be in the millions, but it is nowhere in comparison to the billions of dollars that have been paid out.

Response from Former Worker #9:
Who is getting all of these billions of dollars?

Ms. Breyer:
The figures are broken down on the DOL Web site: Part B claims, Part E claims, as well as statistics by State and site. I am not sure what the specific numbers are for Pantex or Texas. I believe the administrative costs are documented there as well. NIOSH has received more than 25,000 Part B cases for cancer, which doesn't account for how many claimants are on each claim. Approximately 70 to 80% of those dose reconstructions have been completed and returned to DOL for compensation decisions.

NIOSH has done a lot of work over the past seven years, gathering information for site profiles for more than 300 sites and handling well over 25,000 claims. Since the site profiles are "living documents," DOL sometimes returns claims that have been previously denied to NIOSH to be re-evaluated. NIOSH has done a great deal of work with regards to the SEC part of this program as well.

Response from Former Worker #9:
Some of the people here have attended several meetings to talk about the exposures at Pantex. It is redundant to keep having these meetings. It seems that everyone wants to keep drawing this out a little farther. I don't know if you are not getting what we are saying or if it even matters. We keep telling you that there was no administration at Pantex that handled radiation properly. It shouldn't be hard to put on paper that we were exposed to things that we thought were safe at the time. They were safe in the 1960s and 1970s, but all of a sudden in the 1980s, they were no longer safe. You should already know that these things happened. We have already told you several times. Someone ought to get it down on paper and start processing these claims.

Ms. Breyer:
As I stated, this is all public information. It can be found on the DOL and NIOSH Web sites. You can call us in Cincinnati and we can look it up for you if you prefer.

Question from Former Worker #6:
I have a question about asbestosis. It is due to asbestos exposure. The plant was loaded with it from 1976 on. Are you related in any way to the Pantex Workers Survey Corporation located in Denver, Colorado? I am curious about asbestosis. I have been diagnosed with it. What about heart attacks and breathing problems?

Mr. Rolfes:
I don't believe that NIOSH is affiliated in any way with the Jewish Hospital that is conducting the survey. You can file a claim for asbestosis and other illnesses due to chemical exposures with DOL under Part E. NIOSH is tasked only with dose reconstructions for Part B cancer cases due to radiation exposure. All other claims are administered by DOL.

Comment from Former Worker #10 [unidentified]**:**
We had a tornado on site in the1960s (another attendee interjected that the tornado occurred in 1969). Material from the south end of the plant was blown to the north end and all over the plant. The material gathered up by Pantex employees was destroyed and buried around the plant.

There was probably as much contamination outside the plant as there was in the plant. You didn't have to be in a building to be exposed to it. Many workers from the cleanup crew are now dead. I have survived four bouts with cancer. We have some good doctors in Amarillo. Others are not so lucky.

Another source of contamination has been the consolidation of materials from other plants that operated under the atomic weapons programs. A lot of the material that came in was not tagged "radioactive." It came into the plant by the truckloads and was handled here by employees with no protection.

I worked with [name redacted]. He was on one side of the building in the production area. I worked on the other end in the tooling and non-production area. He died during that operation. I was quite aware of the things that his daughter was telling. I'm running into this all the time – people that I knew, that I worked with there, and the things that happened that give us a memory, but that has been a long time ago. It was a good place to work and there were a lot of good people out there. It is a shame that we were not protected the way they said we were. We were told that there was no danger at all, that we worked in a perfectly safe place. Of course, they were looking at the physical danger from accidents. If we had one, it was covered up very nicely so they could get their accident-free hours. Everybody got a nice present and that was it. They don't look at it the same now. Now it is laboratory clean and a lot safer than it was back then.

A lot of people came to work after World War II. I know of a couple who came in from Burlington after the war. He died of cancer and she's suffering with it now. A lot of the people that came in from the rural areas to work in that era have gone the same way. It wasn't radiation; it was the chemicals that killed them. There are a lot of people here today that have had relatives that were killed the same way. Radiation had no part of it, but chemicals did.

The sad part is that DOL won't deal with that until NIOSH gets off their can on Part B with everything that has gone on. I have filed and been denied by NIOSH twice. I asked DOL to just forget about that and go to Part E. They said they couldn't do that until they got Part B completed. Every time I talk to the Denver DOL office, I have a different case worker. One never knows what the other has said. It's just a merry-go-round that we're on. It is getting to the point where it's not very fun.

Question from Former Worker #3:
I wanted to ask a question about the Super S plutonium notice that came in the mail. My husband's previous wife died from cancer. She went to work at Pantex in 1969 and had no dosimetry. She was in and out of every bay and cell. You gave her a very strange dose reconstruction – less than 50%. Then he got a notice in the mail that it was vacated because they found out about the Super S plutonium. And we haven't heard a single thing since, although we have been told that they all have been adjudicated. Yet you have released no information on them.

Mr. Rolfes:
The Super S plutonium finding was part of the NIOSH internal process to look at claims that have previously been turned down. We had a policy change that resulted in new methodology to estimate internal doses based on the data that we had for a specific claim. Based on the types of bioassay data that we had for an individual that was potentially exposed to Super S plutonium, we were asked to re-evaluate all of the claims that could have been affected by this. That is why the letter was sent out.

If the claim was completed and the previous decision was vacated by DOL, there may be something else within the claim that is holding up a new dose reconstruction. I would have to

take a look at it to give you a better answer.

Response from Former Worker #3:
She was a worker who was in and out of every bay. She lived on that line. She had no dosimetry of any kind. She was classified as a clerk. NIOSH seems to think that clerks stay in offices and that is not what she did. I think that is a very big misconception or Pantex told you that. I don't know how you can reconstruct a dose for someone that you have no records for.

Response from Former Worker #4:
There are no records that show where people worked, so it is impossible for you to say, "I'm going to take [name redacted]'s records because he and [name redacted] did the same thing." There is no document like that. That is part of our SEC petition: The information is there. My present husband was a production technician. He was asked, along with other workers, to re-create where he worked and what programs he worked on. That is almost impossible. When he came to work in the
1980s, he worked multiple programs in one day. They worked a lot of overtime. It is impossible to do this.

You've changed your process. That is wonderful, but I have to wonder. Where is your system of checks and balances? Who is responsible for oversight of the system of dose reconstruction that I know came out of the Hiroshima study? It was never designed to be used for legal purposes. If you read about it, about the historical information on it, you will see this.

The plant had the ability to change the algorithms in 1990 for the dose records. All of this is out of the workers' hands. Every dose was re-estimated in 1990. How can workers possibly trust what has gone on? You have no oversight. I know that. I believe in a system of checks and balances. That is what this country is about.

Comment from Former Worker #5:
In 2000, we had to sign a document or be terminated. They took every one of us back to "0", no matter where we worked or what we did. We were not allowed union representation and if we didn't sign that document we were terminated right then. You don't know where we were. They didn't even know where we were.

Comment from Former Worker #4:
When the plant can tell you where these people worked, when they can tell you what programs they worked on, how long they worked on them, and in what facilities, then we will stop the SEC. Until you can show us that, how can you possibly do this?

Mr. Rolfes:
The SEC will not be stopped. We have come for this meeting to receive workers' input for the evaluation. I cannot answer some of the specifics of the dosimetry records. I would have to look at some of the specifics of the case. NIOSH acknowledges that there are uncertainties during dose reconstruction. Those uncertainties can be compounded into additional uncertainties. When the uncertainties are considered, the number could be higher or lower. But when NIOSH completes the dose reconstruction, only the positive side of an uncertainty is considered to benefit the worker. For example, if a worker had a dose of 100 millirem (mrem), there could be an uncertainty about that number. NIOSH would assume that it was higher, rather than lower.

Question from Former Worker #4:
What detail goes into that? A worker never sees that. They don't know that you found someone who worked on the 68, and this was his reading because he worked in 1226. Is that the type of information that you are using? I don't think it is. The worker is asked to tell you everything

and prove it over and over again and to provide multiple records. They never get anything back from you. They get a number. This is about people. It isn't about numbers. Why can't NIOSH tell them what was used?

Mr. Rolfes:
NIOSH looks at the individual's dosimetry records first. It doesn't matter what program you worked on. If you had a dosimeter, it doesn't matter where the radiation came from. If it was recorded by your dosimeter, NIOSH assigns that dose to you.

Response from Former Worker #5:
We worked as clerks in the warehouse all those years without dosimeters – without knowing that it was so "hot."

Mr. Rolfes:
NIOSH looks at the individual's records and conducts an interview with every claimant. We hear those concerns often and we take a look at each of those concerns. If an individual worked from 1960 through 1980, but only had dosimetry records from 1970 through 1980, he had ten years when he was not monitored. If that individual was not working in a radiological area, then it is probably unlikely that he received a significant amount of dose. If he was doing the same job for the first ten years and he was only monitored for the last ten, NIOSH might use different approaches based on the historical information about the components that the individual worked with, as well as information from the doses of co-workers who were monitored. NIOSH might use a claimant-favorable dose from the later years and assign that to the earlier years or use co-worker information based on the 95th percentile of a distribution of the highest recorded doses on site.

Comment from Former Worker #5:
You are saying "dosimeter," but we had film badges. They are not even similar.

Mr. Rolfes:
The terms are interchangeable. They both measure radiation, but in different manner. The film badges have to be developed, rather than measuring the light that is emitted when the TLD (thermoluminescent dosimeter) is heated.

Question from Former Worker #8:
Are they highly accurate?

Mr. Rolfes:
There are uncertainties with anything. Film badges and dosimeters are no different. When NIOSH looks at the case, the uncertainties are used to the favor of the claimant.

Ms. Breyer:
I would like to respond to the comment that NIOSH has no oversight on this program and that there are no checks and balances. There is quite a lot of oversight in this program. First of all, DOL gets all of the claims. That agency is tasked with verifying medical and employment information and forwards the cases requiring dose reconstruction to NIOSH. NIOSH talks to the claimant in a telephone interview. People have a chance to clarify any information that may be wrong. If anything is wrong, the case goes back to DOL. There are checks and balances between NIOSH and DOL on that information. When the dose reconstruction is complete, NIOSH sends a draft report to the claimant and conducts a close-out interview. If the claimant agrees with the information in the report, he or she is asked to sign the OCAS-1 and the case is sent back to DOL for the compensation decision. If the claimant has reason to appeal the decision, the case will go before the adjudication board, which is independent of NIOSH. Aside

from these two agencies, the Advisory Board on Radiation and Worker Health (ABRWH or the Board) is an independent panel that is composed of members who are appointed by the President to oversee NIOSH role in EEOICPA. Part of that oversight is for the dose reconstructions. The Board established a work group to look at those methods. The work group, as well as the full Board, has reviewed a sampling of dose reconstructions for flaws. The Board also has its own contractor, Sanford Cohen & Associates (SC&A), which reviews site profiles and the dose reconstruction process. There is a great deal of oversight NIOSH's responsibilities. All of that information is public. SC&A's documents are on our Web site. All of the Board's transcripts are on our Web site, including subcommittees in which they talk about dose reconstruction. You can find all of this on our Web site. There are also Congressional hearings, which the Director of NIOSH has been involved in as another level of oversight. The Department of Labor has an Ombudsman's Office that oversees complaints by individuals under Part E of the program. NIOSH also has an Ombudsman to oversee complaints about the dose reconstruction process or the SEC. There are two chances to appeal under the SEC process as well: one at the NIOSH level that is independent of OCAS, all the way up to HHS. The one thing that this program does not lack is oversight. There is also a lot of public oversight. Earlier, there was a comment about all of the meetings that have been held. The reason that NIOSH holds these meetings is because we know that there can be new information. That is why we have these handouts. These are the areas where we could use additional information. So there is public oversight as well. Every Board meeting is transcribed and posted on the internet. There are minutes being created for this meeting that will be posted on the internet. Every site profile is posted on the internet. You have a right as a member of the public to submit comments. Many union groups have submitted comments on the site profiles to the NIOSH Docket Office. These comments are also posted on the NIOSH Web site. There is a lot of oversight by the public, by Congress, by the Advisory Board, and even between NIOSH and DOL, as well as the Ombudsman Offices of these two agencies. NIOSH is not making decisions willy-nilly because we think it would be fun. There are many people involved in this project. We try to get the public involved as well as union and retiree groups. Congressional offices and the media are involved. Many articles are written on this program. NIOSH tries to be as transparent as possible. If you have any questions on the dose reconstruction methods and the oversight, look at the Board's meeting transcripts to see all of the work that NIOSH has done in the last six years. The SC&A reports are on the NIOSH Web site because their job is to review the dose reconstruction process and to determine ways to improve it.

Question from Former Worker #4:
Is their report on Pantex from last year on the Web site?

Ms. Breyer:
If you go to the Web site, the easiest way to find out about what has been done for Pantex is to select the List of Worksites link, which will take you to the page where Pantex is listed. When you select the Pantex link, you can view the site profile, the worker outreach activities, the Board work group activity, and the status of the SEC petition. If you feel that anything is missing, please contact us.

Comment from Former Worker #4:
The SC&A meetings were almost a year ago. Last time I looked at the Web site, there was nothing out there.

Mr. Rolfes:
They are still in the process of finalizing their reports.

Comment from Former Worker # 6 [Name redacted]**:**
Each bay in each building is a unit in itself. I worked with a man who worked 18 years in one cell. He is dead now. In that same 18 years, I worked in every building in the whole plant – 10 programs to his one. How can you compare his dose reconstruction to mine? We were both supervisors. I was doing the special projects. You can't tell what one person gets from his dosimeter. In the first place, we didn't wear dosimeters. We've told you that 50 times and nobody hears it. You cannot estimate what I got with what someone else got. He might be working in 26, where there wasn't any radiation at all. It could be the same program. We could be working with 68 JTAs and there would be no radiation. We could be working with live 68's in a cell with six or eight pits. When there are six to eight units under construction, there is going to be a considerable amount of radiation.

I want to get back to the Type Super S plutonium. When DOL adjudicated my appeal, I was given 30 minutes to tell them anything I wanted. He got very uncomfortable because he thought I was going to raise cane. That is not what I want. I want justice for the people who worked for me. I feel that I am entitled to have my claim either settled or denied. I don't know why they would have remanded mine because of S plutonium. I never heard of S plutonium.

When they had the plutonium spill, I was working on second shift. I didn't go in there. But when the workers came out of there, they were stripped and showered right there in the restroom in my office. We ran the pipes under [name redacted]'s desk that took the water to a hole in the ground that was about four or five feet deep. In the late 1980s they dug a hole that was big enough to put the whole building in and hauled the dirt off. They didn't tell one person why. [Name redacted] sat at a desk within five feet of that hole for several years. I sat within six feet of it for six or seven years. I don't know how much radiation was there, but I do know that they dug it up and hauled it off. The only thing I can think of is that someone thought that the plutonium had not been disposed of properly.

Comments/Questions from Former Worker #1:
I don't envy NIOSH's job for these dose reconstructions. I am not going to presume that you do not have any oversight, but I do judge that you don't have any insight to the workings of the Pantex plant.

For example, Building 1226 has come up several times today. The building is a series of open cubicles that are open to the perimeter of the building. The return air fans that take the air out of the building are located on the outside wall. A production worker that is grinding on beryllium or chipping on a pit may or may not be in the airstream of the contaminants. I will guarantee you that any casual worker going into that building is going to be in that airstream because as the air exits that bay it is going through the return air fans at the outside of the building. Any casual that goes through that building is subjected to that.

In 1226, there were three types of filters: foam pre-filters, 30% pleated filters, and absolute filters. There were times when you would see "Wash me" written in the dust on the pre-filters. People talked about the black clouds of beryllium dust that would go across – maybe that is why they used black pre-filters.

That is the type of insight that it may be impossible to get your arms around. All of us are dying, but some of us believe that we are dying faster than the rest of you because of our exposures at work. We appreciate that the government has come up with a program to try to help those of us that helped the government win the Cold War. The fact of the matter is that we have to settle for whatever you say because we have no advocates on our side. The medical industry doesn't want to say, "Yes, your cancer came from your exposure to radiation at Pantex." We have to prove

that we were in Building XYZ at the time when an event happened. We are not talking about numbers here, we are talking about people. The number of people here is a lot smaller than previous crowds for two reasons. The first reason is that they are tired and the other is that they are dying. Some of them are no longer with us.

[Name redacted], who was mentioned earlier, was a supervisor in the Safety Department. He was a radiation safety expert. He responded to the last Cell 1 event. At the last DOL meeting that I went to, he told them, "I guarantee that the official report for the Cell 1 event is not what happened." Whose word are you going to take?

One of my big gripes at Pantex has been the infestation of vermin (rodents) and pigeons. I have not seen the Cell 1 report, but it is my understanding that the exhaust fan for that facility was rendered useless because of a pigeon nest in that exhaust fan. I know for a fact that in the water area that I supervised, pigeons would build nests in the fans. Motors in the fans would burn up because the nests kept the fans from turning. In the Cell 1 even, they ran exhaust ducts across the ramp to exhaust the building. I am not sure if the general public is aware that we dumped all of that tritium outside, or whatever it was that was dumped in Cell 1.

I have asked this question several times and no one has answered me. Can radiation actually go through a steel pipe and into water?

I do have a date on the report that I mentioned earlier. The title is "Production Well and Drinking Water Report for Third Quarter 1996." It was when they had a plutonium hit in the 12-6 cafeteria of 1.3 picocuries per liter (pCi/l). It said, "We are in exceedance of the DCG." I have no idea what that is, unless it is a DOE Order 5400.5. No one will answer that question.

I have been inside those boilers during inspections. If there was a concentration of radiation in there, I sure would have liked to know that. The thing that bothered me the most when I was trying to find out about the 1226 and 1224 events was that maybe DOE didn't even know about them. It was pretty hush-hush in the Pantex worker community. One of the men who I talked to about these events told me about a worker who was taking the monitors to 1226 for calibration. He also told me that he was working on a relatively "hot" program in the production area. He said that one day they came to him and told him that he could no longer work in the building because he had all the radiation he could have. They came to him weeks later and said that he could go back to work. They said that because they had made a mistake with everyone's dosimeters, they had cut the doses in half. Have you found any documentation where doses were cut in half due to errors?

Mr. Rolfes:
I haven't seen any such reports. What time period are you talking about?

Response from Former Worker #1:
It would be between 1982 and 1984.

Mr. Rolfes:
We will certainly look into it. It may have been during the period when a new dosimeter was brought on site or an over-response. There could be a number of reasons.

Response from Former Worker #1:
I don't think that you will find it documented. That is the kind of thing that ticks us off and makes us discouraged.

Mr. Rolfes:
Please allow me to respond to that. If dosimetry readings were cut in half and it was not documented, the original value (the higher dose value) would still be in the individual's record.

After NIOSH receives a case from DOL that requires a dose reconstruction, the first information that we request is the individual's dosimetry records from DOE. Typically, we receive a response to every request, even if the individual was not monitored. If the individual was monitored, but not every year, we receive data for the years that the individual was monitored. Dose reconstructions are done on a case-by-case basis. If the individual was not monitored, we have to look at whether the individual had a potential for radiation exposure when he was not monitored. If we believe that there was potential exposure, we assign an unmonitored dose to the time periods when he was not being monitored.

Question from Former Worker #1:
What type of number do you come up with? Do you get this number from the background radiation?

Mr. Rolfes:
It depends on the facts of the case. We can take a look at the doses that were received by monitored workers across the site. Then we make a co-worker distribution for all of the recorded doses. Normally, the 95th percentile of the distribution could be assigned for the unmonitored time period if he was in a high-exposure job category.

Response from Former Worker #1:
Again, I appreciate that. I would not want your job because I would not know how to approach it. I never wore a dosimeter. I was the casual worker who walked through those clouds going from the bay to the perimeter of the building. Buildings 1226, 1224, and 1221 are all built the same, so we are not talking about a specific building. Did I hear that you cannot find any records on 1226 now?

Comment from Former Worker #4:
Building 1226 is not in the site profile. It has always been condemned, even when I was there in the 1980s. They had to use it because production had to come first.

Response from Former Worker #1:
It was scheduled to be torn down in 2000, but it is being rehabilitated as we speak.

Comment from Former Worker #4:
It is well known out there that the roofing is in bad shape. My deceased husband told me to always be careful in 64 because of the contaminated water. Wherever the tritium from Cell 1 went, it stayed there. It was carried into every facility. You have to walk by 1226 to get anywhere. You have to come out the gate by 1264 and the 44 cells. There are certain routes that you have to take. There is no way to skirt around them.

Mr. Rolfes:
I didn't get to answer your question about radiation penetrating the pipes. There are a couple of differences. If you have a steel pipe, it is very unlikely that the contamination from the surrounding soil would penetrate into that pipe to actually contaminate the water in the pipes. Contamination is radioactive material in an unwanted area. Radiation is an energy passing through a medium. Radiation can pass through metal but it is very unlikely that low level contamination would pass through the metal. Very high amounts of tritium can pass through welds. But in an environmental situation, it is very unlikely that depleted uranium would pass through a metal pipe and contaminate the water inside of the pipe. There is naturally occurring uranium in the background, and also radium, so it is possible that it could have been in the well water in trace amounts and may have formed a scale inside the pipes. That would not necessarily be linked to plant operations, but you could find trace amounts of uranium and radium in the

water if you were to check out a well at your home.

Question from Former Worker #1:
I don't understand what the Super S plutonium is and I did not read the entire letter. Is there a deadline date when we will find out how that affects our claim?

Mr. Rolfes:
DOL has sent any affected cases that previously have been denied compensation back to NIOSH for another dose reconstruction that takes the Super S plutonium into consideration. At that time, NIOSH would have sent letters to all of the claimants in these cases stating that the case will be re-evaluated. NIOSH is looking at approximately 5,000 claims again to assess the Super S plutonium exposures. I don't have a definitive date when the new dose reconstructions will be issued. We are working as fast as we can to get timely answers out to everyone. If you would like to give us a call, we can give you an update on the status of your specific claim and see if there are any other issues holding up the dose reconstruction.

Question from Former Worker #1:
Do you have any target dates for the SEC evaluation report?

Mr. Rolfes:
The SEC petition has been qualified for evaluation. We are currently in the evaluation phase. When we complete the evaluation, we will put out an evaluation report that will include a recommendation to the Board whether the class should be granted based on NIOSH's ability to do dose reconstructions for the Pantex site, specific to the years 1951 through 1991. The Board will review the report and make a recommendation of its own. We hope the report will be completed in time for the Board meeting in June. The Board does not have the same time constraints as NIOSH, so it may take them longer to conduct their own evaluation.

Response from Former Worker #1:
That is not the answer that I wanted to hear. Several people commented on the frustration. I didn't see very many hands go up when we were talking about this meeting.

Pantex had several X-ray facilities. (I am not talking about chest X-rays, but I did get chest X-rays very often out there.) The X-ray facilities were not protected upstairs above the building where the air conditioning equipment was located. Finally, they put chain across the ladders going up on top of these buildings so nobody could go up there. That probably had to do with the Tiger Team findings. There was a lot of X-ray exposure at that time.

There was a refrigeration worker that put in a claim for thyroid cancer. He went to the plant doctor, who put him off initially. After a short time, she called him in to apologize and told him that it was a textbook case, that the textbooks say that you can expect to see thyroid cancer 10-15 years after exposure to high beams of X-rays. His cancer occurred 13 years later, right in the middle of the window. I don't know the status of his claim now.

That is the type of frustration that we live with. I probably have a two-foot stack of documentation. It is not specific time-wise. It is not medically edited. I will probably use it in the fireplace. I do appreciate your coming here.

Comment from Former Worker #11 [Name redacted]**:**
I worked in Buildings 24 and 26 from 1980 up until 1987 when I went to Transportation. I got my dosimeter about 1986 for the first time. When I left the line, they took it away from me. I worked in Transportation for five years before they gave it back to me. The whole body count that I had before I left line had been cut in half from that time until I got my dosimeter back again. I have the documentation to prove that. I've got my last dosimeter reading in 1986 and I

have the first one when got my dosimeter back in 1993. It is stamped on it that it is estimated because there were no bottles for urine samples. I never submitted a bioassay sample. They didn't have them back then. When I came back into the program later, I was considered light duty. Bioassay started in 1997 or 1998.

This reminds me of when I came back from Viet Nam. People did not understand why I had cancer at 30 years old. I have had cancer twice since then. The letter that I got after I filed said that my claim was closed out – that you weren't going to do anything. It took me 30 years to get the Veterans Administration to admit that I was exposed to Agent Orange.

Mr. Rolfes:
I would like to take a look at that later, if you don't mind.

Comment from Former Worker #3:
When I went to Rocky flats in 1990, I asked why they were carrying little boxes around with them. I didn't know that there was such a thing as bioassay and I had worked at Pantex for 15 years on the line. We didn't have bioassay.

Comment from Former Worker #3:
They had shielding and bioassay at Rocky Flats. There was shielding around the pits there.

The pits at Pantex came in ALR8 cans that were like tin cans. We picked them up to swipe them. We didn't have respirators or lead aprons. We just didn't have a lot of things that they had at Rocky Flats. It really surprised me when I got to Rocky. They had rad workers and that was the highest paid position in the whole place. They controlled the line – whether you went in or out. We didn't have that at Pantex because it was about production here.

Mr. Rolfes:
There are certainly differences between Rocky Flats and Pantex. There was a much higher potential for intake at the Rocky Flats plant than in the typical operations at the Pantex plant.

Comment from Worker #12 [Name redacted]**:**
I teach radiation safety at Pantex now. I worked at Pantex for 30 years, as a PT and a rad tech. When people come to my class, they get the feeling that you think things are now the way they were then. It is so different that it is bizarre. If it is any consolation to you, we don't do things the same way now. When I was a PT, if you had a dosimeter, nobody made you wear it. They should have made us and we were probably told to wear them. That is not true today. You have to wear them. We had lead aprons hanging in the cells, too. Nobody told us to wear them.

We were talking about how long it is taking for the claims to be processed. If you filed an insurance claim for the roof on your house, and it took seven years to find anything out, you would be furious. When you have cancer as I do, time is not your friend. We have a limit on our time that has not been placed on you. We just want you to understand that this is about people. We want you to believe what we are telling you. We didn't have respirators. We didn't have bioassay. We turned off the SAM alarms because they kept going off. That is what we are trying to convey to you. We are just people. You are just people and you are doing the best that you can. All the information that you can get doesn't have a number to it. What is the "go, no go" number for you for colon cancer or pancreatic cancer that gives you the 50% likely to have cancer? Is that also posted on the internet?

Mr. Rolfes:
It depends on the specifics of the case. There is a good chance that one of every two men will get prostate cancer in his lifetime even if he is not exposed to radiation. The statistics for women are that one of every three women will get cancer. This is the exact reason that dose

reconstructions must be done. Very specific information goes into a dose reconstruction. One of the most important pieces of information is the dose that the individual received, along with the type of cancer, the organ where the primary cancer originated, the time between the exposure and the date of diagnosis (latency). For certain types of cancer there are other factors – for lung cancer we look at smoking history, for skin cancer we look at ethnicity. We look at factors specific to each individual case to make a determination of the probability that a given dose caused the cancer. The program that is used is called the Interactive Radio Epidemiological Program (IREP). There is a link on the NIOSH Web site. If you put in a given amount for internal and external radiation exposures, it will give you a probability of causation for a given type of cancer given the parameters specific to your own case. If you need help running that program, you can give us a call or send us an e-mail and we will be happy to help you through it.

Comment from Former Worker #4:
When the program was initially announced by DOE, they said that smoking was okay, that it would not be held against you. Now I have seen that people have to sign an affidavit swearing that they did or did not smoke. I don't know if you are aware, but smoking was allowed everywhere at the plant. Everyone smoked in all the break rooms, in the offices, in the warehouse. There is virtually no one who was not exposed to smoke out there. My understanding is that smoking exacerbates the effects of radiation exposure. You may not have been told the same things that these workers were told from the start. When you come in eight years later and say that you are changing it, that doesn't sound like a problem to you. But it sounds like a problem to a worker who has waited for eight years to be heard.

Mr. Rolfes:
Every person who has submitted a claim has at least one interview, so we have heard at least one time from that individual. We encourage public input.

Response from Former Worker #4:
It took over four years for my claim for my deceased husband to even be opened. This was not the initial call from NIOSH. It came from DOL. I know where these people are coming from. You have got to remember that you are dealing with people. It is fine for it to take several years, but most of these people will be gone by then.

Mr. Rolfes:
I understand that things may not move as fast as we all would like them to. When we receive a claim from DOL we do our best to get that claimant an answer as soon as we can. In addition to doing dose reconstructions, we are doing many other things. We are doing SEC evaluations. We are holding worker outreach meetings.

Response from Former Worker #4:
And we appreciate it, but by the next time you come, some of these people who are here now will no longer be alive. I know that you have to wait for the SC&A report, but I hope that you will do anything you can to expedite it. I know it will be appreciated by the workers.

Question from an unidentified attendee:
I don't think that I can add anything to what these people have said because I never worked at Pantex. My husband did. He is deceased and I am a claimant. What I know about my husband's job came from the people he worked with. I have a question about the timeline for the report. You said that you plan to have the report done by June. You mentioned that it could take the Advisory Board a long time to review the report. Why is that?

Mr. Rolfes:
The Board does not have the same time constraints as NIOSH. I share your frustration. We are currently working with the Advisory Board to be certain that everything is evaluated to the depth that is warranted. We sometimes share the same frustration as the claimants because we would like a timely decision to be made so that we can continue to do our work on other sites. The Act does not place them under the same time constraints as NIOSH.

Response from the attendee:
What is the make up of the Advisory Board?

Ms. Breyer:
I would like to add to Mr. Rolfes' comment. If the NIOSH report says that we cannot do dose reconstructions for the Pantex class, historically the Board has always voted to add the class. But if NIOSH would say that they can do dose reconstructions for the class, then it would depend on what the Board can do. Then they can vote or not. Mr. Rolfes mentioned in his first response about the Board that they can vote that day, or they could request for SC&A to review the NIOSH evaluation report. If that is the case, they can set up their own interviews with workers. They can set up a work group with members of the Board and NIOSH and others to look at the technical issues. That is why it can take so long. I think that the Board has been trying to be more efficient. There were some issues with the Rocky Flats evaluation report that took three years to finish. They heard a lot of public comment at their public meetings. There was a lot of frustration. They are trying to make it a more efficient process. Once the Board makes a recommended decision, it goes to the Secretary of HHS, who then has 30 days to evaluate the report. The Secretary of HHS sends his recommendation to Congress, which has 30 days to act. If Congress does not act within that time, the Secretary's recommendation stands. This is all written into the law.

The Advisory Board is made up of workers, medical doctors, health physicists, and union representatives from various sites around the country, so there are a variety of perspectives represented by the Board. The Board's members are appointed by the President of the United States. NIOSH has no role in choosing who sits on the Board.

Question from Former Worker #1:
Is there a list of cancers? I have never heard anything mentioned about pre-cancer. I have had several pathologies of pre-cancer.

Mr. Rolfes:
NIOSH has no say in that. DOL is the entity that makes the determination of what conditions are covered. A doctor's statement or a biopsy report is necessary to confirm the cancer. Pre-cancers are not considered under Part B for dose reconstruction.

Comment from Former Worker #11:
If they knew that they were wrong and that radiation was harmful in the beginning, but they told us that it would not harm us, we could hold them liable.

Mr. Rolfes:
Over the past 50 years, there has been so much new information from research and studies regarding both radiological and chemical exposures. The historical radiation exposure limits in the early days under the Atomic Energy Commission (AEC) were much higher than they are today. I cannot make a statement regarding liability one way or another.

Question from Former Worker #4:
Did you say that exposures were higher at AEC facilities? Pantex was an AEC facility.

Mr. Rolfes:
Historical radiation exposure limits across the U.S. were much higher in the 1940s and 1950s. New standards and regulations lowered permissible radiation exposure to workers. I am not implying that workers actually received higher radiation exposures in the early days.

Response from Former Worker #4:
Even though the earlier weapons that they were disassembling were the "hotter" weapons, the ones that were deteriorating more quickly were the 28s, the 31s, and many others. All of that is documented very well in Daily Change Reports at the plant. I haven't looked at the SEC because I just recently found out that there was another version and I don't spend every day looking at your Web site. One of the earlier SECs said that all of the older weapons were disassembled in the 1960s and they were not. That is incorrect. Unless they have been destroyed, there are documents all over the plant that show that they were coming in all the time to be disassembled in the 1970s and 1980s. Disassembly of some of the "hotter" ones has just recently been completed.

Mr. Rolfes:
Disassembly is still continuing today. NIOSH has information on which weapons systems have been retired and those that are being disassembled currently.

Response from Former Worker #4:
Has that statement been removed from the site profile?

Mr. Rolfes:
If you can provide a specific page, I will be happy to make sure that it is corrected if it is inaccurate. If not, I will do my best to explain it or investigate it.

Ms. Breyer thanked the attendees for coming and adjourned the meeting at approximately 5:10 p.m.