National Institute for Occupational Safety and Health (NIOSH)

Worker Outreach Meeting for West Valley Demonstration Project

Meeting Date: Thursday, August 23, 2007, 5:30 p.m.

Meeting With: International Association of Machinists and Aerospace Workers (IAMAW) Local 2401, Springville, New York

NIOSH Worker Outreach Team:

Grady Calhoun, National Institute for Occupational Safety and Health (NIOSH) Office of Compensation Analysis and Support (OCAS), Health Physicist

Laurie Breyer, NIOSH OCAS, Special Exposure Cohort Petition (SEC) Counselor

Jackson Ellis, Oak Ridge Associated Universities (ORAU) Team, Health Physicist and West Valley Demonstration Project Site Profile Document Owner

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

Mary Elliott, ATL, Technical Writer/Editor

Proceedings:

Mark Lewis opened the meeting at 5:30 p.m. He thanked the union representatives for hosting the NIOSH Worker Outreach Team. He explained that the meeting was being recorded to assist NIOSH in accurately documenting their questions and concerns.

Mr. Lewis is the Senior Outreach Specialist for the NIOSH team and coordinates worker outreach for the NIOSH Office of Compensation Analysis and Support under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). Mr. Lewis described his background as a 30-year union member and safety officer of a United Steelworkers of America (USW) local union and a 30-year employee at a gaseous diffusion plant in southern Ohio.

Mr. Lewis asked the union members and representatives to introduce themselves. The IAMAW District Representative and the other 10 union members briefly described their work histories at the West Valley Demonstration Project (WVDP). Many of them had careers spanning more than 20 years. The union president stated that they had organized a committee to assist West Valley employees with EEOICPA. He thanked the NIOSH team for coming to meet with them.

Mr. Lewis introduced Laurie Breyer, who is the NIOSH Special Exposure Cohort (SEC) Petition Counselor. Ms. Breyer stated that she assists people in filing petitions to add new classes to the SEC, as well as helping them understand the SEC process and keeping them informed of the petition status once it has been filed. She also communicates regularly with EEOICPA claimants who may be affected by a petition in process. Ms. Breyer distributed printed information on the SEC.

Mr. Lewis introduced Grady Calhoun, a Health Physics Team Leader in the NIOSH Office of Compensation Analysis and Support. Mr. Calhoun stated that he reviews most of the dose

reconstructions that come to NIOSH. He is also involved in the approval process for the technical basis documents that are used in the dose reconstruction process. He has been working on the NIOSH project for six years. Prior to that, he worked for 11 years as a health physicist at a DOE nuclear weapons facility in Ohio.

Mr. Lewis then introduced Jackson Ellis, who is the document owner of the West Valley Demonstration Project (WVDP) Site Profile and a dose reconstructor for claims from West Valley. The Worker Outreach Team met with IAMAW Local 2401 in August 2006 prior to the preparation of the site profile to get information from workers regarding their daily work and safety practices. The information was reviewed and integrated into the document along with information from the U.S. Department of Energy (DOE) and contractor records from the site.

Mr. Ellis began the presentation on the development of the West Valley Site Profile, a technical document that contains site-specific technical information that is used in the dose reconstruction process. The site profile contains sections that describe the site, work activities and processes, sources of radiation, potential radiation exposure scenarios, and other important details that could affect a worker's radiation dose. NIOSH includes worker input in the site profile because the "official" records may not always be an accurate representation of the actual working conditions and safety practices at a site. Site profiles are "living documents" that may be revised as new information becomes available.

In addition to the site profile, dose reconstructors use the energy employee's individual records to estimate his or her lifetime occupational radiation exposure. This information may include film badge readings, occupational medical X-rays, bioassay results, incident reports, environmental exposure records and coworker data. Each case also includes telephone interview(s) with the energy employee or his or her survivors. It is important to include specific work locations, incidents, and special circumstances in the interview.

Mr. Ellis stated that the purpose of the meeting was to discuss the West Valley Site Profile and the impact of worker input on the development of the document, and to answer any questions from the attendees. The WVDP Site Profile can be found on the NIOSH Web site at https://www.cdc.gov/niosh/ocas/pdfs/tbd/wvdp-r0-p1.pdf. He noted that the presentation called out the areas where worker input from the August 2006 meeting had impacted the development of the site profile, including:

- Inadequate monitoring and surveys were considered throughout.
- An effort was made to emphasize the radiological working conditions in general and to itemize incidents and common routes of high exposure.
- Incidents are included along with the discussions of plant facilities and processes responsible for chronic exposure problems.

The West Valley Site Profile includes six sections: Introduction, Site Description, Medical Dose, Environmental Dose, Internal Dosimetry, and External Dosimetry. It also has two attachments.

The Site Description contains historical information on the site, including activities, facilities, and major incidents or accidents, as well as sources of potential radiation exposure. He described the following time frame:

- 1962: The State of New York Space Development Authority and Nuclear Fuel Services (NFS) partnered to build a privately owned nuclear fuel reprocessing facility.

Construction began in 1963, and the first fuel was received in June 1965. Reprocessing began in April 1966.

- March 1972: Reprocessing halted to complete improvements. Fuel shipments continued, but in 1977 NFS abandoned and released management of the facility to the State of New York.
- 1980: U.S. Congress passed the West Valley Demonstration Act. DOE took over the facility in 1982. DOE began shipping fuel back to owners, performed demolition and decontamination activities, and prepared for the construction of a vitrification facility.
- 1996 to 2001: Vitrification activities were performed. Low level waste was cemented and stored onsite. Other waste from WVDP and other commercial sites was also stored onsite.

The Medical Dose section provides information for the dose reconstructor about the amount of radiation dose to assign for occupationally required X-rays. Records of these X-rays are provided in the energy employee's DOE records. This section discusses the frequency of X-rays during various time periods in the history of WVDP and gives default frequencies when the employee's record is not considered adequate.

The Environmental Dose section discusses ambient environmental levels of external and internal radiation doses. Sources of environmental exposure at WVDP include stack emissions, ground level facility releases (FRS vents, Low Level Waste Treatment Facility, etc.), and waste storage areas. This section also discusses the handling of "control badge" data.

The Internal Dosimetry section provides information for calculating internal radiation doses based on bioassay results: in vitro bioassay (urine and fecal analysis); and in vivo bioassay (chest counts and whole body counts). Typical radionuclides of concern at WVDP include tritium, uranium, mixed fission products, plutonium, thorium, europium and americium.

The External Dosimetry section of the site profile describes workplace radiation fields, dosimeter technology, dosimetry practices (whole body monitoring and extremity monitoring), and badge exchange frequencies throughout the history of the West Valley site. The "missed dose" component is also described in this section. "Missed dose" is a method of assigning a potential dose for radiation exposure under the minimum detectable limit (MDL) of the dosimetry badge.

A brief discussion ensued on the topic of missed dose. An attendee stated that the badge readings often would come back "0." NIOSH adds a measure of dose equal to half the minimum detectable limit for each "0" reading in the badging cycle in an effort to be "claimant favorable." Mr. Calhoun added that the method for estimating the claimant's radiation dose includes a distribution that brings that missed dose even closer to the MDL.

The WVDP Site Profile also includes Attachment A, which was provided by workers from the site, and Attachment B. Attachment A was included in the site profile to help dose reconstructors understand the radiological conditions and hazards of 52 WVDP work areas.

Attachment B contains dosimeter codes and information.

As of August 21, 2007, 48 EEOICPA claims had been filed for the West Valley site. Nine of those claims were compensated and 18 were determined to be noncompensable. Twenty claims were awaiting dose reconstruction, including 9 unreconstructed claims and 11 that were being

reworked after the completion of the site profile. One claim was in inactive status at the time of the meeting.

Mr. Ellis explained that there are many reasons why a claim might be reworked, including the claimant having been diagnosed with an additional cancer or a revision to the site profile that brings about an increase in radiation dose.

Mr. Calhoun added that the EEOICPA program involves several government agencies as well as the Advisory Board on Radiation and Worker Health (ABRWH or the Board) that give oversight to the NIOSH Dose Reconstruction Project. When the determination is made that there may be good reason to add more dose in a certain area (for example, there may have been higher internal doses in a certain work area), any previously completed claim that may be affected by that new information will be evaluated by NIOSH to determine if a rework is necessary.

Mr. Ellis concluded his presentation on the WVDP Site Profile by reiterating that worker input is important in developing a usable site profile. Because the site profile is a "living document," it will change when important information comes to light that may affect dose reconstructions for the site. He gave the attendees contact information and the Web address for the NIOSH OCAS Web site: http://www.cdc.gov/niosh.ocas.

Mr. Lewis added that the NIOSH Dose Reconstruction Project only sees the Part B claims for radiation-induced cancers. Another EEOICPA subtitle, Part E, compensates for other illnesses resulting from exposure to radiation or toxic chemicals.

Mr. Calhoun stated that it is important for workers or survivors who are eligible to file Part B claims to also file for Part E. Even if the dose reconstruction does not show enough exposure for compensation under Part B, the Department of Labor (DOL) could determine that the worker had enough chemical exposure to cause the cancer.

Question:
Does that explain the difference between the DOL statistics and those that you have here?

Ms. Breyer:
Claims go through a verification process when DOL receives them. Both employment and medical diagnosis must be verified. It is possible that DOL has received a number of Part B claims that are still going through this process and have not yet been sent to NIOSH. NIOSH only sees Part B claims for cancer. The DOL statistics you have may also include the Part E claims. Part E only covers DOE facilities. West Valley is considered a DOE facility for the period from 1982 to present.

Mr. Ellis asked if there were any questions on the WVDP Site Profile. A brief interchange followed between attendees and the NIOSH Team regarding the importance of reviewing the document for any omissions or erroneous information. NIOSH encourages worker input to make the site profiles more accurate and complete for dose reconstructors. Ms. Breyer added that the "living document" policy ensured that claims that have been previously denied may be re-examined if information is added to the site profile that could increase a worker's radiation dose. If WVDP workers review the site profile and find anything lacking, it could be beneficial to someone whose claim had been previously denied. Denied claims may also be reopened and reworked if an employee is diagnosed with additional cancer(s) and submits that information to DOL. Mr. Calhoun added that additional cancers increase the probability of causation (POC) that the cancer may have been caused by radiation.

Mr. Lewis asked whether the attendees had any questions about the SEC. The International Union Business Representative stated that he and Ms. Breyer had discussed the subject briefly before the meeting.

Comment:
Last November, I was having some problems and they told me that I had a bone infection and had something in my adrenal gland. The doctor said that the infection didn't come from the adrenal gland – that it had to have come from a cancer at least Stage 4. So they looked and looked for it – did every test in the world – and they all came back negative. I still have a mass in my adrenal gland, but they couldn't find any other cancers.

Mr. Calhoun:
Is it a cancer or is it just a mass?

Response:
They won't biopsy an adrenal gland. I didn't pursue why. It's hard to be admitted to the hospital and told a few days later that you're in Stage 4. That's a hard thing to deal with. At the same time, my brother looked into the EEOICPA program and I started a claim. He did the paperwork for me and signed as my designated representative. Then all the test results came back negative for cancer. I spoke to the DOL representative again and asked her to put a halt on it.

Mr. Calhoun:
NIOSH has seen claims for secondary cancers with unknown causes. For example, if the secondary cancer is adrenal cancer, there may be 5 different organs where the primary cancer can be found. It doesn't matter if they haven't found the primary cancer anywhere else. NIOSH will do individual dose reconstructions for all five of those cancers and pick the one that gives the claimant the highest probability of causation. I cannot speak for your case, though.

Mr. Ellis:
You said earlier that you have multiple skin cancers.

Response:
But I just have never really gotten a specific diagnosis on the other. Yes, this is my second skin cancer. My doctor just biopsied this second one and said that it is basal cell again. I will have both pathology reports for the skin cancers. I am ready to go forward with my claim now.

Question from the IAMAW International Union Business Representative:
Would you mind going over the information about the SEC again?

Ms. Breyer:

Is everyone here familiar with what the SEC is? An SEC petition is a way for a class of employees to be added to the Special Exposure Cohort. The reason the SEC is different is that, if the petition qualifies and the class of workers is added, the workers in that class will be automatically compensated without dose reconstruction if they have one of 22 specific types of cancer and have 250 days of employment in the DOE nuclear weapons complex. Four SEC classes were established when the Act was written and several have been added since.

Normally, a case is verified and DOL sends the case to NIOSH for the individual's dose reconstruction. So as individuals, you may have filed and NIOSH is doing your dose reconstructions. But you might think that there is a reason that NIOSH cannot do dose

reconstructions for a certain class of employees; if so you could file a petition to add the class to the SEC so they can be compensated without having to have a dose reconstruction.
There are four reasons that you can argue that the way NIOSH does dose reconstructions is not sufficiently accurate. One of those reasons is that there is no monitoring (F1). Another reason (F2) is that the monitoring records have been destroyed, lost, or falsified. (For example, "We all wore badges but management threw away the file cabinet that had all the dosimeter readings," or "They took my badge and threw it away and I saw them take it out to a trash can and burn it.") The other two reasons to argue the NIOSH process are that you have a technical report in your possession (F3) or one that is written on the subject (F4) that shows reasons why it is not possible to do a dose reconstruction. Affidavits from workers with first-hand knowledge can be submitted with the petition as proof.

My role as the NIOSH Special Exposure Cohort Petition Counselor was created because many people felt that filing a petition was a very difficult, bureaucratic process. That is really not the intent. We have seen petitions that come in with nothing more than the form that you see here and a one page, one sentence letter. They have gone through the qualification stage and at least one of them has been added to the SEC. We also get some that may have 300-400 pages of supporting documents. The process can be as simple or as difficult as you want to make it, but my role here is to help you understand what it is.

Let's say that there was no monitoring between 1966 and 1970 when they first started processing fuel. So your definition for the petition class would be "all employees between 1966 and 1970 because there was no monitoring," or another example of the class definition could be "all employees from 1966 through the present because there was monitoring but those records were destroyed or falsified." So you submit the petition with your affidavits. The first thing you will get is a letter that verifies the receipt of the petition. The next step is a telephone consultation with the petitioner(s) and the NIOSH contractor team that reviews the petitions. During the phone call they will verify the information that the petitioner(s) submitted. If there are any deficiencies in the petition or the affidavit(s), the petitioner(s) are given a chance to correct anything that may be wrong with the petition. The petitioner then has 30 days to correct the problem, or may ask for an extension if that time is not sufficient. The petition is then reviewed to see if the class qualifies to be evaluated. During the qualification stage, the site profile and other archive documents are reviewed to verify or disprove the qualification. For instance, if there are hundreds of monitoring records for the site, you would get a letter stating that NIOSH has conducted a review and does have monitoring records in possession for that time and that the petition does not qualify.

Question:
Could your affidavit state that you knew they were monitoring, but they were not monitoring for the right thing?

Ms. Breyer:
Yes. You could say, for example, that they weren't monitoring for neutron dose.

Comment:
For four years, we did riser work where we were looking down a hole into a tank with the radioactive material in it. We used to wear finger dosimeters and dosimeters on our body, but we were always leaning over the hole and they would tell you to keep your hands back. So you were always taking a dose to your head, because there were beams coming up out of there that

would fry an airplane if it flew overhead. They would allow you to look in the hole, but they didn't want you to get your hands over it. We used to do that routinely in the tank farm operations, too. We would be looking in this hole with all of the radioactive waste when we were installing the equipment. They were smart enough to keep our hands and our body dosimetry back, so they were using monitoring. It just wasn't effective because it took three years for some of the radiation safety people to tell us to start wearing the dosimetry on our heads, so it was years that we were exposed in that way. They can say they had monitoring, but it wasn't effective for the job.

Ms. Breyer:
That would probably come under F2, because they told you not to put your fingers near it but you weren't monitored from the neck up. If that is already taken into account in the site profile, then it still may not qualify, but it may. They will let you know if it does not qualify, and if it does not, you can appeal that decision to a three person panel outside of OCAS. If it does qualify, it will go into evaluation at which point NIOSH will do a more detailed petition evaluation report (PER) stating the technical reasons why NIOSH can or cannot do dose reconstructions based on your petition. Once the evaluation report is completed, it will go to the petitioners and ABRWH and put on the NIOSH Web site for public viewing. The report will be presented to the petitioners at a public meeting of the Board so that they can attend or listen by phone. If NIOSH has found that dose reconstructions can be done, ABRWH will send the report to their contractor, Sanford Cohen & Associates (SC&A), to review. After that, the Board will make a recommendation to the Secretary of Health and Human Services (HHS). The Secretary looks at the recommended decision of ABRWH and a report from the Director of NIOSH. The Secretary will make a final decision at that time regarding whether to add the class. He then submits his final recommendation to the U.S. Congress and they have 30 days to either reverse or accept the Secretary's decision. If Congress does not act, the Secretary's decision becomes final. When a class is added to the SEC, NIOSH returns all affected claims to DOL. DOL makes all decisions on the claims eligibility. If the class does not get added, the petitioner has the right to appeal at that time as well.

Mr. Calhoun:
There are some important things to consider, though. Skin and prostate cancers are not eligible under the SEC; those two combined make up 30-40% of the cases that NIOSH gets for dose reconstruction. NIOSH still performs dose reconstructions for cases that are not covered by the SEC class. If there is an argument that the data cannot be used to do dose reconstruction, NIOSH cannot use the data to do the dose reconstructions for those cancers. You need to remember that when a class gets added to the SEC there can still be a large number of claims that are not covered.

Ms. Breyer:
Workers without 250 days employment are not included either. Another point is that a labor organization can be a petitioner, as well as an energy employee or survivor, or an authorized representative. An energy employee or a survivor must fill out a form to designate an authorized representative.

Comment:
I would like to say something else about working on the risers on the tank farm. There were corrosion coupons in the bottom of the tank that were the same material as the tank itself. We

had to pull them up periodically. I was in with a rad tech and had brought it up close within a foot. Then you had to reach in and take the corroded coupon off the thing. The rad tech said to me – and I am left-handed so my dosimeter was on my left hand – use your right hand to get it out.

Comment:
There is also a practice of turning off the electronic dosimeter alarms when you're out. There is also the practice of turning your back. You're still getting the dose, but it is just not being read.

Ms. Breyer:
After you read the technical basis document, if you don't think that it addresses some of those concerns, you could consider some of those as the basis for an SEC petition. It seems that the sites where the workers are more organized sometimes have an easier time getting the information to get their petitions together and get them rolling. At some of the sites, there are a lot of people interested in filing but nobody knows what to do so they don't work together to come up with the information.

Comment:
Another thing with working on the risers, the TLDs (thermoluminescent dosimeters) are on our hands, but we're standing on the floor where some places are really "hot." If you have any reading on your ring dosimeter, it is "ghost" from your feet. I have been told to sit on a ladder to avoid the dose so that I'm up away from it.

Ms. Breyer to Mr. Calhoun:
Wouldn't that be a point to be brought up in the claimant's telephone interview during the original dose reconstruction? You could tell them then that you were exposed to a source on the floor and it would be considered in your individual dose reconstruction.

Mr. Calhoun:
That would be taken into account most of the time, if that is known, and we know that the source term was not just periodically, but mostly farther away from you than the TLD. If I have cancer on my knee, and the TLD is on my lapel, but the source is coming from the floor, the dose reconstructor would apply a geometric correction factor. NIOSH frequently considers a geometric correction for hands. For example, if someone routinely performed "hands-on" work with radioactive material and has hand or forearm skin cancers, and did not wear extremity dosimetry, the dose that is received at the forearm is higher than the dose received at the dosimeter, so a correction factor is applied.

Comment:
I guess without reading this site profile and belaboring that point, we brought up the issue that we raised to management in 2004 about non-uniform radiation fields. The rules were more stringent after they changed the definition of whole body in 1991 or 1992. We had none of that here at West Valley and they were not relocating the dosimetry on the basis of where the whole body was as of that point, between your knees and your head. That is not how they worked it here. The whole rad program here is flawed because of that.

Mr. Calhoun:
Where did they have you wear your dosimetry?

Response:
Mostly here (pointing to lapel). Every once in a while, you would wear extremity dosimeters,

but then you had the other things going on. They didn't understand and it is documented. We went through several meetings with them – trying to hold their feet to the fire. They were going to train all the rad techs after the incident happened in December. But that didn't happen and things didn't change until the next September. They went another nine months. They didn't even take us seriously after the issue was brought to their attention.

Mr. Calhoun:
When were the changes made?

Response:
Mostly, it was about when they were training the rad techs to do their pre-work surveys.

Mr. Calhoun:
So if you had something extreme, you would try to put the badge where the worker was getting the dose?

Response:
Yes. After that happened with that particular job, we raised such a fuss that they finally relocated the TLD to the knee every day. Prior to that, every other time we worked in the cell the dosimetry was at lapel level. There were two other cells that we cleaned completely before that, back in the 1980s.

Response:
Both of the surveys were done with the dosimetry here (indicating lapel). Basically, we worked for 15 years or more, with our whole body reading here on the chest where we wore our dosimeters. Aside from particular radiation sources, the floor was where it was "hot." That is where everything spilled. Everything typically went to the floor.

Comment:
We were pretty upset when we were going through those meetings with plant management. We felt that when this incident happened, the supervisor slipped and let the whole body thing out of the bag. My mouth just dropped because I was thinking, "When did that happen?" Evidently, it had been 13 years before. During those meetings, when we were trying to get them to do the right thing, they even admitted that.

Response from another worker:
If they pull those surveys up, the surveys are not going to show that they did surveys that show the radiation for non-uniform radiation from the floor. There might be some, but not all of them. When we had those meetings, we listed several cells and rooms from that place where that type of survey should have been done. They can't say they shouldn't have been done. We crawled around vacuuming.

Comment:
There are probably a lot of people still there who don't have this information about the non-uniform radiation and how the dosimetry should be monitored.

Response from another worker:
It might depend on who your rad tech is, too. Now we have contract techs that aren't confident enough to do adequate readings in a lot of the areas. I don't feel that they are.

Comment:
We did a reconstruction of the incident back in 2004 after they removed the box. We had to tell

the Dosimetry Department to check this and check that. We asked them why they didn't do some of the monitoring before they removed the box. We said that it gave a dose to the eye and they looked at us like we were nuts. It gets back to the tank farm problem, like when they are telling us not to look down into the hole. After the union raised the question, they finally went to a different area to reconstruct the incident and the dose went up two full (inaudible). It gave a dose to the eye and the whole body from 300 to 650 millirem (mrem). The whole incident brought up a lot of questions that needed to be brought up.

Mr. Lewis concluded the NIOSH program at approximately 6:30 p.m. by thanking the attendees for hosting the NIOSH Team.