



# NIOSH Dose Reconstruction Project Rollout Meeting for Energy Technology Engineering Center (ETEC) Site Profile

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## Meeting Date:

April 19, 2006, 10:00 a.m.

## Meeting with:

Los Angeles/Orange Counties Building and Construction Trades Council (LA/OC BCTC), AFL-CIO, Los Angeles, California

## Attendees:

Name	Organization
Richard Slawson	Secretary-Treasurer, LA/OC BCTC
Freddie Montoya	Heat & Frost Insulators and Asbestos Workers Local 5
Joe Scavo	United Association Local 250
Tom Moxley	Ironworkers Local 433
Patrick J. Owens	International Brotherhood of Electrical Workers Local 11

## NIOSH/ORAU Team:

Mark Rolfes, National Institute for Occupational Safety and Health (NIOSH), Office of Compensation Analysis and Support (OCAS)

Melton "Mel" Chew, M. H. Chew and Associates, Site Profile Team Leader

Steve Meiners, Tricord, Inc.

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

Mary Elliott, ATL

## Proceedings:

Mr. Lewis began the discussion at 10:00 a.m. by thanking the Council members for the opportunity to meet with them. He introduced himself and explained how his union background and work experience in the nuclear weapons complex led to his involvement in working alongside fellow union members for the passage of the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). Mr. Lewis stated that his career experience paved the way to his current position as the Oak Ridge Associated Universities (ORAU) Team's Union Outreach Specialist on the Dose Reconstruction Project for the National Institute for Occupational and Health (NIOSH).

Mr. Richard Slawson, Executive-Secretary of the Los Angeles/Orange Counties Building and Construction Trades Council, welcomed the NIOSH/ORAU team and introduced the Council members. He stated that he would disseminate information from the meeting to other unions that were unable to send representatives through the Council's Executive Board process and delegates meetings. He expressed that some of the local unions affiliated with the Council may be interested in holding their own meetings with the Worker Outreach Team since many of them had sent large numbers of workers to construction projects at the Energy Technology Engineering Center (ETEC) in Santa Susana throughout the years.

Mr. Lewis introduced the other NIOSH/ORAU team members and explained that the meeting



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was being recorded to aid in preparing meeting minutes that will accurately capture the comments and issues raised during the meeting. He requested that everyone sign in on the sheet provided and stated that their names would be included in the minutes. The minutes will be posted on the NIOSH Web site after the Council has had a chance to review and approve them. Mr. Slawson responded that the Council members were amenable to recording the meeting and were eager to learn more about the program.

Mr. Lewis explained that the ETEC Site Profile is a tool that serves as a technical handbook for dose reconstructors to use in determining the radiation exposures for claimants from that site under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). Since the primary sources of information for the Site Profile are records kept by the Department of Energy (DOE) and its contractors, the Worker Outreach Team meets with labor organizations to get the workers' perspective from employees who worked at the sites under the DOE nuclear weapons contracts. Getting worker input is an important part of developing the Site Profiles because the "official" records may not always accurately reflect the actual work practices and radiation safety issues at a given site.

Mr. Lewis stated that the ETEC Site Profile can be viewed on the NIOSH Web site: <http://www.cdc.gov/niosh/ocas/etec.html>. Paper copies and compact discs of the Site Profile are also available to anyone who requests them. Mr. Slawson stated that the business managers from all of the Council affiliate unions would appreciate receiving a copy of the Site Profile on compact disc.

Mr. Lewis introduced Mr. Mark Rolfes, a health physicist in the NIOSH Office of Compensation Analysis and Support (OCAS). Mr. Rolfes gave a summary of the claims process:

- An employee or former employee from an eligible DOE nuclear weapons site files a claim with the U.S. Department of Labor (DOL). If the employee is deceased, the claim may be filed by eligible survivors.
- DOL verifies the employee's work history at a covered facility and medical diagnosis for a covered illness (cancer). The claim is forwarded to NIOSH for a radiation dose reconstruction if both criteria are met.
- NIOSH requests the employee's radiation dose records, occupational medical records, and other pertinent records from the facility through the DOE.
- Claimants are interviewed by telephone to gather exposure history information on the employee.
- ORAU begins the dose reconstruction process using the site profile and other technical documents, as well as the personal information for the employee. A draft dose reconstruction report is prepared and forwarded to OCAS for review and approval. The approved dose reconstruction is then sent to the claimant(s) for review.
- The claimant is contacted again to review the draft dose reconstruction report and to make sure that all information has been provided.
- After the claimant agrees that there is no additional information, they are asked to sign a form. The case is then forwarded to the DOL for a final decision on whether or not the claim will be awarded. If the case is denied, DOL adjudicates any appeal(s).



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**Question:**

How long does uranium remain in the body?

**Mark Rolfes:**

That depends on the chemical solubility of the uranium and the production processes. This type of information is included in the Site Profile. For example, if you inhale uranium hexafluoride (UF<sub>6</sub>), which is highly soluble, it is typically excreted from the body fairly rapidly, usually within a matter of days. An insoluble form, such as a ceramic oxide, will typically stay in the lungs for a longer period of time, sometimes for a period of years.

**Question:**

If you're doing a dose reconstruction on someone now who worked there 30 years ago, would you still be able to detect something like uranium in the body?

**Mark Rolfes:**

Whether it is possible to detect uranium 30 years after an intake depends on the route of exposure, the amount of radioactive material taken into the body, the solubility of the material. Information from the Site Profile -- for example, the production processes and types and quantities of radioactive materials in the worker's area -- and bioassay data from the worker or any coworkers from the same area are used to make a claimant-favorable assessment of the worker's radiation dose.

**Question:**

So urine or blood samples would not necessarily show radiation exposure. Is that correct? NIOSH would have to go back to the employment records.

**Mark Rolfes:**

NIOSH uses the data for the individual worker as the basis of the dose reconstruction. If there is bioassay data -- specific to uranium, for example -- and the production processes are known for the area where the individual worked, the bioassay data can be used to reconstruct an intake and calculate a radiation dose for that individual. If the bioassay data that was provided for the worker do not show detectable quantities of a given radioactive material, then NIOSH can use information in the Site Profile to estimate a claimant-favorable missed intake and the resulting internal dose. For example, if the analytical method used to quantify the radioactive material did not detect an exposure and a "zero" is recorded, dose reconstructors use information in the Site Profile to estimate the "missed" dose for the exposure.

**Question:**

So if you took a urine sample after a period of time from an individual filing a claim, the uranium would not show up?

**Mark Rolfes:**

That would be very unlikely, unless there had been an extraordinarily large exposure. For uranium, it is very unlikely to show up in a current sample from an exposure occurring years ago.



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**Question:**

But you still do it for the slim chance that it may show some sample?

**Mark Rolfes:**

NIOSH does not request blood or urine samples as part of the dose reconstruction process. Bioassay data from the individual's employment files from the time that he or she worked at the site are used, if this information is available.

**Question:**

Were they doing urinalyses years ago?

**Mark Rolfes:**

In many cases, they were testing people who were routinely working under special work permits or in the radiological areas.

**Mark Lewis:**

That is one of the things we need to know from construction workers who worked at the site. Did construction workers participate in the bioassay programs?

**Response:**

Some of the people I know who worked at the site have told me that they didn't have any inkling that they were working around radioactive materials. I would take from that comment that they were not participating in any routine post-employment bioassay screening.

**Mel Chew:**

The ETEC site is quite large, and there were a number of different operations going on at the same time. There were NASA (National Aeronautics and Space Administration) programs as well as the DOE programs. These projects were kept fairly separate, so it is possible that a person could have worked at the site and not have been exposed to radioactive materials.

Mr. Lewis turned the floor over to Mr. Steve Meiners for the presentation. Mr. Meiners thanked the Council members for the opportunity to meet with them. He gave an overview of EEOICPA, which was passed in 2000 to compensate workers from the nuclear weapons program who have become ill as the result of exposure to radiation or toxic substances during their employment. Site Profiles are site-specific documents that serve as technical guidance in reconstructing a worker's radiation dose to determine the probability that the cancer is related to the worker's occupational exposure.

All EEOICPA claims are filed through the Department of Labor (DOL). Two types of claims may be filed under this program. Subtitle E claims may be filed for diseases related to toxic chemical exposure. Subtitle B claims may be filed for radiation-induced cancers, berylliosis and some silicosis claims. Employees or former employees who worked at facilities or for companies under contract with DOE or its predecessors can file claims for \$150,000 for Subtitle B. If the worker is deceased, a surviving spouse or children may file on the worker's behalf. NIOSH receives only Subtitle B cancer claims from DOL for radiation dose reconstruction. The NIOSH Office of Compensation Analysis and Support (OCAS) provides oversight for the dose reconstruction efforts. Due to the large volume of claims, NIOSH hired the ORAU team to assist with the dose reconstructions and other associated tasks.

The Site Profile is a collection of site-specific technical documents that are used by the health physicists who reconstruct workers' EEOICPA radiation doses. The information in the Site Profile provides a consistent framework for reconstructing radiation doses for all claims from



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that site. A worker's radiation dose is reconstructed from his or her own dose records from the site and the information from the telephone interview by entering the data into a computer program (Interactive RadioEpidemiologic Program, or IREP) to determine "probability of causation" (POC) – that is, the probability that the worker's cancer is related to his or her occupational radiation exposure. The claim is awarded if the computer program finds a greater than 50% probability that the cancer resulted from the worker's occupational radiation dose. When there is no dosimetry or bioassay data for an individual, NIOSH makes claimant-favorable assumptions in order to allow the maximum radiation dose that the worker may have received.

Because the Site Profile Team relies primarily on the records from DOE and its contractors for most of the information in the document, input from people who actually worked at the site is essential. Because the workers are the "site experts," the knowledge they can provide – such as daily operations, safety practices, dosimetry and bioassay programs, as well as incidents or accidents that may have affected a large number of workers – improves the quality of the Site Profile, making it a more accurate and comprehensive tool for radiation dose reconstruction. The Site Profile is a "living document," which means that it can be revised if additional information comes to light that can positively affect the dose reconstruction process.

### **Question:**

If a claim has been rejected, does the claimant have to reapply each time the Site Profile is revised, or will the claim be reevaluated automatically as the Site Profile is updated?

### **Mark Rolfes:**

At the beginning of the claims process, NIOSH used an efficiency process before the Site Profiles were completed to expedite the dose reconstruction process for claims that had a clear compensation decision. In certain circumstances, a person's recorded external dosimetry data from the site may be sufficient to produce a probability of causation greater than fifty percent, which would be high enough to recommend compensation. However, if a cancer is less likely to be attributable to radiation exposure, there is an efficiency process to assign a maximum radiation exposure. The Site Profiles are used in cases that require a more detailed assessment so that there is a consistent dose approach for all cases from a particular site.

When there is a Site Profile revision, it is possible that a claim that was previously rejected may be re-evaluated, depending on the magnitude of the changes. NIOSH prepares a program evaluation report to look at the direct effect of the new information on the POC without reassessing the dose reconstruction. Cases with a POC very close to fifty percent will be automatically reevaluated. If the revised POC is greater than fifty percent, the case will be recommended for compensation. The claimant must submit a formal request if the POC is too low to be automatically recalculated.

### **Question:**

How would an individual know if there has been a revision to the Site Profile?

### **Steve Meiners:**

That information is available and updated often on the NIOSH Web site. There is information in your packets about where you can find this information, as well as how to contact NIOSH. The quality of the Site Profile will continue to improve as additional important information is submitted. To answer your question more specifically, there is a link on the NIOSH Web site: [List of Work Sites](#), which lists all EEOICPA sites that have completed Site Profiles.



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### **Comment:**

Our local union has had a number of members working at the ETEC site over the years, both on the Atomics International and Rocketdyne sites. One individual developed cancer, which is now in remission, after working on the crew that dismantled one of the reactors. What are his options?

### **Steve Meiners:**

He should file a Subtitle B claim with DOL, which will verify his employment and his medical diagnosis. DOL will validate the information and determine the need for a dose reconstruction. If the claim is validated, the case is forwarded to NIOSH for dose reconstruction.

### **Mark Lewis:**

Has he filed a claim?

### **Response (from commenter):**

He has been in remission for a long time. If he hasn't filed a claim, I'm going to make sure he knows about the Program.

Mr. Meiners continued the presentation, stating that a Worker Outreach meeting serves several purposes: (1) to discuss EEOICPA and the Site Profile; (2) to gather information from workers from the site; and (3) to answer questions and to document comments and questions raised by the workers. The Worker Outreach meeting is not the end of the dialogue, but part of the continuing process of improving the Site Profile by maintaining an on-going dialogue.

The ETEC Site Profile has five sections that include historic, site-specific, technical information about the Energy Technology Engineering Center: the Site Description, the Medical Dose, the Environmental Dose, the Internal Dose, and the External Dose. It is important for workers to review these sections to fill in the gaps where information may be missing or incorrect.

The Site Description is an important starting point for workers to become involved in the revision process. This section describes the facilities that were used in nuclear weapons and energy research contracts between DOE and Rockwell's Atomics International and its successors from 1948 to the present, including Area IV (the Santa Susana Field Laboratory) and the facilities at DeSoto Avenue, the Vanowen Building and the Downey Site. It describes the radiation-related programs that took place in each area, as well as the radiation sources that were present. Table 2-6 lists incidents or accidents that occurred in these areas. DOE contracts for Area IV nuclear operations for the development and testing of experimental nuclear reactors spanned the period from the 1950s to the 1980s. The last experimental reactor was shut down in 1980.

### **Question:**

What happened to the materials and equipment when the last reactor was shut down? At least one individual who I know was involved in the clean up was not aware that he was working around radioactive materials at the time.

### **Steve Meiners:**

Clean up continued through 1988 and materials were removed to other sites.



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Mr. Meiners continued: The Site Description includes radiation doses received at four areas for the years specified:

- De Soto Avenue from 1959 – 1998.
- Area IV from 1954 – 1999.
- Vanowen Building from 1954 – 1960.
- Downey Site from 1948 – 1955.

**Question:**

The Downey Site... Was that in Downey, California, or is that in Santa Susana?

*Response (from another Council member):*

The Downey facility was where they are building the new Kaiser-Permanente hospital.

*Response:*

That is in the middle of our area.

*Mel Chew:*

I will be talking about that. There will be some minor changes in the Site Profile regarding these different facilities.

The Medical Dose section describes the medical X-ray programs that were in place during the contract periods. This section discusses which workers may have received radiation exposure from medical X-rays required as a condition of their employment, as well as the frequency and types of X-rays that were regularly required, and how the medical program changed over time. If site-specific information on the frequency of X-ray examinations is not available, NIOSH assumes one chest X-ray per employee per year for dose reconstruction purposes.

**Question:**

Would X-rays that are part of physical examination not required by an employer be considered?

*Steve Meiners:*

No, only X-rays that are required as a condition of employment are included.

The Environmental Dose section is included to consider the sources of radiation in the workplace for workers who were not monitored in the dosimetry and/or bioassay programs. Internal environmental doses are based on air monitoring data from the four facilities for specific radionuclides during specific periods of time. The internal environmental dose also considers inadvertent soil ingestion for strontium-90 and plutonium-239 for the DeSoto Avenue facility from 1959-1999 and for Area IV from 1954-1999; and accounts for inadvertent soil ingestion of strontium-90 only for the Vanowen Building from 1954-1960 and the Downey Site from 1952-1956. External environmental doses are based on annual external doses for the four different facilities for specific periods of time. The external environmental doses are calculated from measured data from 1975-1999, and are estimated from 1952-1974.

**Comment:**

You would be surprised how many construction workers wind up sitting on the ground while they are eating their lunch.

The Internal Dose section describes the bioassay program from August 1958 to present day, as well as which workers were included in the program. It discusses the radioactive materials that



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were present in the workplace and how radioactive contamination was controlled, as well as the air monitoring programs. The urinalysis program measured various radionuclides over time. Whole body and lung counts have been performed from 1967 through the present. Analyses have been done for gross alpha and gross beta radiation, mixed fission products and specific radionuclides analyses have been done for tritium, carbon-14, sulfur-32, phosphorus-32, cobalt-60, strontium-90, cesium-137, promethium-147, polonium, plutonium, americium, cerium and thorium.

The section on External Dose describes the external dosimetry programs from 1954 to the present. It provides information such as which workers wore dosimetry badges, what types of dosimeters were issued, the badge exchange frequency, the badging practices in the programs, and the types of radiation that were measured. In an effort to be claimant-favorable, NIOSH applies a “missed dose” component in cases where dosimeter readings were reported as “zero.” The median “missed dose” is calculated as one-half of the minimum detectable level (MDL) for each badging period.

Mr. Meiners stressed that getting worker input is crucial in producing a quality Site Profile. Information that could contribute to revisions to the Site Profile can be sent directly to NIOSH at the addresses in the presentation, as well as by fax at the number provided. The ETEC Site Profile is complete and is posted on the NIOSH Web site, which is a very good resource for information on the EEOICPA program.

***Mark Lewis:***

The presentation folder includes information about how to contact the DOL Resource Center to file a claim. After you file a claim, your case is assigned a tracking number and the Resource Center serves as your point of contact for the duration of your claim. The regional Resource Center for California is located in Livermore.

Mr. Meiners concluded the presentation by recapping the EEOICPA criteria. Compensation and continuing health care costs may be paid to workers who have become sick as a result of their employment in DOE nuclear programs. Subtitle B compensates for cancer caused by radiation, as well as for beryllium disease and some silicosis cases. Subtitle E compensates for illnesses resulting from toxic chemical exposure. Survivors may be eligible to file for compensation on behalf of a deceased worker, but cannot be compensated for medical expenses.

**Question:**

Does DOL make the determination for eligibility?

***Steve Meiners:***

That is correct. I want to make one last point. The information that we discussed today is for radiation-induced occupational illness. EEOICPA also has Subtitle E, which compensates for diseases related to chemical exposure in the workplace. Subtitle E claims are filed separately from Subtitle B claims, but a worker or survivor may file for both.

***Mark Lewis:***

The same Resource Center handles the Subtitle E claims.

**Question:**

Who pays the compensation?





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**Steve Meiners:**

Compensation is paid by the federal government.

**Mark Lewis:**

Additional cancers will increase your probability of causation. If your claim is initially rejected – for example, a skin cancer claim – and you are diagnosed with another skin cancer, the claim can be reopened and the dose reconstruction will be re-evaluated based on two cancers.

**Question:**

Is there some kind of graph or scale that determines whose claim is automatically reopened? You mentioned forty-five percent (45%) POC for the program evaluation report, and the case where the individual could appeal if the POC was low – is there an actual percentage that would determine which cases would be reevaluated when the Site Profile is revised?

**Mark Rolfes:**

The cases that would be automatically reviewed are those that are done using the “best estimate” calculations and have a forty-five percent (45%) or higher POC.

**Question:**

When was the Act passed?

**Mark Lewis:**

EEOICPA was passed in 2000.

**Question:**

How many people been compensated under the Act?

**Mark Rolfes:**

To date, DOL has forwarded 22,000 Subtitle B claims to NIOSH for dose reconstruction. NIOSH has completed about 13,000 of these to date. Approximately 25% of these claims have been compensated following dose reconstruction.

**Question:**

How was the original contact made with all the individuals? Was it directly with employees of Rocketdyne, or companies that worked there and now it is getting into the construction companies list?

**Steve Meiners:**

The 22,000 claims are the nationwide statistic.

**Question:**

Is every nuclear employment site across the country covered by this Act?

**Steve Meiners:**

Every site that had work associated with DOE nuclear weapons and energy research programs.

**Mel Chew:**

Commercial nuclear energy companies are not included in the Act.

**Mark Lewis:**

The first claim was compensated in 2002. The ORAU Worker Outreach Program began in 2003 when the Advisory Board on Radiation and Worker Health (ABRWH) recommended that workers should have input to the Site Profiles. I was asked to join the team as the Union Outreach Specialist because of my involvement with the union movement to bring about the Act



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that began in the early 1990s. The Center to Protect Workers' Rights (CPWR) serves as a point of contact for the Building and Construction Trades.

**Question:**

So because you were originally involved with the Oil, Chemical and Atomic Workers (OCAW), they asked you to be the liaison?

**Mark Lewis:**

Yes. The Act is not perfect, but it is better than what we had before. Workers need to speak up, especially the construction workers. I came from a site that enriched uranium-238 to uranium-235. I started working there in 1975 and we had to stand up to management for safer work practices. The Building and Construction Trades exposure pattern is different from that of workers in the nuclear plants. My job is to make sure you get input to the Site Profile, not to sort out the scientific part.

**Question:**

I worked all over the Atomics International and Rocketdyne sites in almost every building in every area over a 20-year career. Where do I go?

**Mark Lewis:**

If you don't have a cancer, then you don't have a Subtitle B claim. If you have other diseases that may have resulted from toxic chemical exposure, you can file a Subtitle E claim.

**Comment:**

I suppose that there is nothing that can be done for our members who worked out there that had cancer and have now passed away. My father worked up there for years and developed throat cancer. My mother is still alive.

**Mark Lewis:**

Your mother can file a claim on his behalf through the DOL Resource Center in Livermore. She can call them and they will assist her in filing the claim.

**Question:**

How about you as an individual working at the site? Do you have any illnesses related to your work there? Is there a residual period for compensation?

**Mark Lewis:**

I have filed a Subtitle E claim, but I have had trouble finding a doctor who will state that my illnesses were occupationally related.

**Comment:**

You told how, as an employee, you fought against performing work for safety reasons and the Building Trades came in and did the work. I was just curious...

**Mark Lewis:**

I was on the Fire Department, and also the Davis-Bacon Committee. That is how I know that the work was contracted to the Building Trades.

**Question:**

What triggered the Act being passed? Was it that a large number of individuals who had worked on DOE sites that were developing cancers? Was there a class action lawsuit filed against the government?

**Mark Lewis:**



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The OCAW local unions from the gaseous diffusion plants in Paducah, Kentucky, Portsmouth, Ohio, and Oak Ridge, Tennessee, orchestrated a grassroots movement and held public hearings. We contacted our Congressional representatives with our concerns and our representatives took the concerns to DOE. DOE sent investigators to the sites to talk to people. Current employees couldn't speak out against the contractors, so we asked retirees to come in and speak to DOE. DOE eventually held public hearings in the late 1990s in these communities. The Act is the end result of this movement.

**Response:**

Well, good job for all of your hard work. Getting the government to admit anything to begin with is a major task. Who carried the Bill?

**Mark Lewis:**

The Bill was introduced by Representative Ted Strickland of Ohio, Representative Ed Whitfield of Kentucky, and former Senator Fred Thompson of Tennessee. Originally, we did not ask for a monetary compensation. We were only asking to have medical expenses paid for employees and their immediate families. Many different versions of the Bill were introduced before the Act was passed. Many people were involved.

Four sites – Amchitka Island, Alaska and the three gaseous diffusion plants in Paducah, Portsmouth and Oak Ridge – were designated as a Special Exposure Cohort (SEC). Workers and former workers from these sites are automatically compensated for any of 22 radiological cancers if they meet the employment criteria.

**Question:**

Does EEOICPA have any time limitations?

**Mark Lewis:**

There are no limitations to the timeframe for compensation at present, but there are always groups that are looking to amend the Act.

**Comment:**

This is similar to the asbestosis compensation that has been ongoing for about 30 years now. There is still legislation pending to try to resolve the issues. It seems like it is always on the agenda at our legislative conferences in Washington, D.C. I'm surprised that it was not this year because they still haven't settled it.

**Response (to commenter):**

They just tabled it. It was just voted down, remember?

**Comment:**

I am surprised that we didn't see more about this (EEOICPA) in the newspapers.

**Mark Lewis:**

The DOL Resource Center is responsible for getting information to the public. The Resource Centers are also the points of contact for claims.

Mr. Meiners introduced Mr. Melton "Mel" Chew, who is the Site Profile Team Leader and the author of the ETEC Site Profile. Mr. Chew thanked the Council members for extending the invitation to the Team to meet.

Mr. Chew explained that the ETEC Site Profile addresses the radioactive materials and the machines and reactors that produced radiation at all the facilities involved in the Atomics



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International (AI)/Rocketdyne contracts. The Site Profile team originally thought that they would be looking at one site, but soon realized that the ETEC site is really a combination of four facilities:

- Operations began at the Downey Site in 1948 with a Van de Graaff generator. In 1952, the first reactor was started up at the Downey Site.
- The Canoga Avenue facility (Vanowen Building) was located in downtown Canoga Park, where Pratt-Whitney is now located. From 1954 to 1960, this facility fabricated fuel for some of the reactors.
- The DeSoto facility operated from 1959 to 1998.
- Area IV, Santa Susana Field Laboratory operated from 1954 to 1999.

Mr. Chew stated that the Site Description is already under revision to expand the information on these facilities. Several tables in this section detail important information such as project operations, radionuclides present in different areas, and major incidents. He requested that the attendees review the Site Description for accuracy and content, and share any additional information that they may have about these sites.

The Site Profile is not the only information used in reconstructing the worker's radiation dose. Many other documents are used in addition to the Site Profile, as well as personal information from the claimant interview. The dates in the Site Profile are very important to define the programs that were in place during a claimant's employment.

During their first site visit to ETEC, the Site Profile Team went to a records storage building in Area IV that housed 148 four-drawer file cabinets of original records, including many from the late 1940s and the 1950s and on up through the present. These documents described the reactor programs from the 1950s and 1960s, the fuel fabrication programs, and the dosimetry and bioassay programs. These records were the primary source of information for the Site Profile. The Team spent considerable time sifting through the information and putting it together into the different Site Profile sections to be the most useful for the dose reconstructors.

The Site Description for the ETEC site contains 46 pages of information that is written so everyone can understand it. The other sections of the Site Profile go into more technical detail because the dose reconstructors use the information in these sections to reconstruct the claimant's radiation dose. When the dose reconstructors get a new case, they look first at the Site Description to confirm the claimant's work background. Then they look at the other sections and any available dosimetry records for the claimant to compile the accumulated radiation exposure so they can complete the assessment for the probability of causation.

### **Question:**

How can you do a dose reconstruction for a worker from the construction trades where the individual goes from place to place in the facility? I could show you where I worked if you give me a map, and I can probably use my tax records to tell you what years I worked out there, but our assignments sometimes changed daily. How can I verify that I worked in that environment? Some of the companies are no longer in business, especially some of the ones my father worked for, so there are no records for what projects they worked on.

**Mel Chew:**



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That is probably one of the key questions, and that is why it is necessary to spend time with the workers. It is easy if a person was employed at the site by Boeing or AI because the company kept records. But for a construction worker who moved around between the sites, assessing the radiation exposure can be more difficult. It is important to see if the worker was monitored, to see if there was a radiation exposure card. If a construction worker was going to be in a radiation area for a prolonged period, he probably would have been given a dosimeter badge. If he was involved in an incident or an accident, he probably would have been asked to submit a bioassay sample. If this information is available, the dose reconstructors can attempt to calculate your exposure. If you worked in a hazardous area, chances are good that you were monitored in a radiation safety program.

**Question:**

If a worker had a daily log book that documented that he went up to Santa Susana Field Laboratory and worked in a certain building or area, would that be helpful?

**Mel Chew:**

That is a very good question and I would like to come back to it. We have a visualization of the locations of the radiation sources at the site. We also have a good idea of the maximum potential external radiation. Air samplers were placed in the different areas. If you can tell us the timeframe in which you worked, we can look at the sampling information and reasonably estimate your potential exposure – all that is part of the dose reconstruction.

**Comment:**

My father worked for a rigging company and went into the Downey plant all the time to move things from place to place. He was diagnosed with throat cancer in 1995, and they took out his throat. The doctor who diagnosed the cancer attributed it to his mother having an X-ray while she was pregnant. My father was also diabetic and died from a massive heart attack in 1995. I can tell you right now, that 11 years after my father's death, my mother doesn't have any of his work records.

**Question** (to commenter from another attendee):

How long does your local union keep dispatch records? Local 250, the Fitters, have records back to the early or maybe mid-1950s.

**Response:**

Those records are kept for three years. He worked for a number of rigging companies that went in and moved things in the 1950s and 1960s.

**Mark Rolfes:**

In addition to the Site Profile, NIOSH conducts a telephone interview with every claimant before the dose reconstruction is done. If there are concerns about which facility your dad worked at, when he worked there, what he did, you can identify any concerns you would have during the telephone interview. When NIOSH doesn't have data specific to a person, co-worker data can be used to estimate the radiation exposure. If there is monitoring data for workers doing the same job, NIOSH will use that data. NIOSH can also use other efficiency processes. For example, if your father worked in Buildings A, B and C, and the radiation exposure in Building C would have resulted in the highest radiation dose then NIOSH would assume that his employment took place only in Building C. These types of claimant-favorable assumptions can be used to reconstruct a worker's radiation dose.

**Response:**

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His co-workers have all passed on, too. The company he worked for was Pacific Crane and Rigging and they've been out of business since the mid-1980s. The building isn't even there anymore. They had an exclusive contract with North American Rockwell. They would go in for a day to move something, and go back in the next time they were called for a job.

**Comment:**

It is going to be very difficult for people to provide verification that they even worked there except for their verbal testimony. But that is a start. In some cases, there could be a company still in business that has records that go back that far. Their trust funds for their Health and Welfare contributions may indicate contractors' names. In fact, Social Security records would also indicate that. If they said that a particular contractor employed them at the site, they would have that record of employment and could perhaps link that with records kept by the facilities.

**Response (from another attendee):**

It may be a stretch, but maybe insurance records could verify that the company did work at the site. Since your dad's company worked for the site, maybe they had to hold insurance policies required by the facility.

**Mel Chew:**

This has been a very difficult task for the NIOSH/ORAU team to address. What do you do with an unmonitored construction worker – in other words, one who didn't have a badge, and perhaps didn't need one? The question is whether, at some point, he should have been monitored. There is a whole team working on that particular problem right now. The team is looking at construction worker monitoring data from across the entire DOE nuclear weapons complex – from the Savannah River Site, Rocky Flats, Oak Ridge, Hanford, and Idaho National Laboratory. The Savannah River Site in Augusta, Georgia, has had many thousands of construction workers.

Between 1952 and 1970, there are 29,000 records that were kept for construction workers at that site. There were millwrights, carpenters, electricians, all kept by trade. That is probably one of the better sites, primarily because the site was operated by DuPont, which keeps very detailed records. Hanford, during the same time period, had similar operations, but had many different contractors that operated the site during that time period. The ORAU Team is developing a distribution for the construction trades based on this data. The ORAU Team must show that the information is defensible to the DOL and NIOSH.

**Response:**

Obviously, as this proceeds, the trades and their members have to understand that it is an "iffy" process for them. The construction workers who develop cancer after being employed at the sites are the only ones who should be filing claims – or their families. Added to that is that the claim may or may not result in some kind of compensation and that the cancer must be related to the employment. There are lots of "ifs" involved.

**Mel Chew:**

NIOSH hopes that the study will define the upper bounds for the maximum exposure for construction workers because there is a large amount of data from other sites for similar occupations and situations.

**Comment:**

I went up to Santa Susana many times, beginning in 1972. Every time I have ever worked at AI or Rocketdyne, I had to sign in at the guard gate and show my driver's license. Do they retain those records? Downey was no different.



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***Mel Chew:***

The Santa Susana site (Area IV) is quite large. I talked to some of the employees who said that they might work at one of the reactors one day and on the Space Shuttle the next. That obviously complicates the situation.

***Response (from commenter):***

When you sign in, you also have to tell them what building you're going to and the guards have the information to verify that.

***Mel Chew:***

When a dose reconstruction is complete, the claimant receives a report stating the assumptions that are made in estimating the radiation dose and the bases for those assumptions. NIOSH makes every attempt to make a claimant-favorable decision if there is any data missing.

**Question:**

How has the legal profession been involved in this process? Have individuals hired their own attorneys in these cases?

***Mark Rolfes:***

Although the process was designed so that people do not need their own lawyers to file a claim, there have been some who have chosen to get their own lawyers.

***Mark Lewis:***

The Act places a cap on legal fees that an attorney can charge to assist in filing a claim.

**Question:**

Did the law set parameters for claims? Did it discount any group filing a legal action over this independent of the Act? Has anyone done that?

***Mark Lewis:***

The compensation is for workers, former workers and survivors.

**Question:**

Have any employees filed a class action lawsuit – not withstanding the law that has been passed to provide the compensation?

***Mark Lewis:***

We have seen people filing for Special Exposure Cohorts.

***Response:***

Have there been any employees who have filed lawsuits against the government because their expenses have been more than the \$150,000 compensation?

***Mark Rolfes:***

I am not aware of any such lawsuits.

**Comment:**

A group of Simi Valley residents filed a lawsuit against Boeing for environmental and health problems caused by some of the waste from the site.

***Mel Chew:***

The Santa Susana Field Laboratory has also been called the Nuclear Development Field Laboratory (NDFL), the Liquid Metal Engineering Center (LMEC), and later on became ETEC. NIOSH is only concerned with Area IV, where the DOE nuclear operations took place.

***Response:***



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When I worked up there, and I went to the gate to sign in, they always wanted to know if I was going to AI or Rocketdyne. Our parking passes only had "AI" printed on them. I can remember going up there in the early 1970s, and asking "What is in that old rusty building over there?" The guy told me that there was a breeder reactor in that building.

***Mel Chew:***

The Site Profile Team tried to capture every fuel fabrication and all the reactors have been mentioned. If everything was documented, the document would be considerably longer. But the Site Profile is a summary document and many other documents are used as reference in the dose reconstruction process.

**Question:**

Does the Act cover those of us who worked in the nuclear power houses here in Southern California?

***Mel Chew:***

EEOICPA does not cover private nuclear facilities.

**Comment:**

The Sodium Reactor was Building 26 when we worked up there.

***Mel Chew:***

That is correct. That is documented in the Site Profile, as well as an incident that happened there.

**Question:**

Do they have records about the incident that happened up there? I think it was in 1952. I saw a documentary about it on the History Channel.

***Mel Chew:***

That incident actually happened in 1959. There was a loss of cladding and some material was released. People refer to it as a meltdown, but it really was not. The incident was very well documented.

Mr. Chew thanked the Council members for their time and the meeting adjourned at approximately 11:30 a.m.