



NIOSH Dose Reconstruction Project Introductory Meeting on Development of Site Profile for Energy Technology Engineering Center (ETEC)

Meeting Date:

April 20, 2006, 10:00 a.m.

Meeting with:

United Auto Workers (UAW) Local 1519 Retirees' Association, Santa Susana, California

Attendees:

Name	Organization
George Bounds, President	United Auto Workers Local 1519
Al Onori	UAW Local 1519, Retired, Santa Susana Field Laboratory (SSFL)
Harold (Rocky) Rasmussen	UAW Local 1519, Retired, SSFL
Nick Lombardo	UAW Local 1519, Retired, SSFL
Lynn E. McKie	UAW Local 1519, Retired, SSFL
Earl Rinehart	UAW Local 1519, Retired, SSFL
Arlo Malwitz	UAW Local 1519, Retired, Rocketdyne
Don DiRubio	UAW Local 1519, Retired, SSFL
R. C. Dealva	UAW Local 1519, Retired, Rocketdyne
Stephen Rudolf	UAW Local 1519, Retired, Rocketdyne
Duncan Thompson	UAW Local 1519, Retired, Rocketdyne
Ted Fleser	UAW Local 1519, Retired, SSFL
Ed Schaper	UAW Local 1519, Retired, SSFL
Leo V. Rodriguez	UAW Local 1519, Retired, SSFL
Norm Pollock	UAW Local 1519, Retired
Charles Armstrong	UAW Local 1519, Retired
John O'Toole	UAW Local 1519, Retired
Edgar R. Lavallee	UAW Local 1519, Retired

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



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Proceedings:

Mr. Al Onori, Recording Secretary of the United Auto Workers (UAW) Local 1519 Retirees Association, opened the meeting at approximately 10:00 a.m. with the Pledge of Allegiance. He welcomed the Worker Outreach Team from the National Institute for Occupational Safety and Health (NIOSH) Dose Reconstruction Project to the meeting. Mr. Onori introduced Mr. Mark Lewis, the Union Outreach Specialist for the Team.

Mr. Lewis thanked the attendees for taking the time to come to the meeting. He explained that the Team was present to request worker input for the Site Profile for the Energy Technology Engineering Center (ETEC). The Site Profile is a tool used to reconstruct radiation doses for workers and former workers from the site who file claims under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA).

Mr. Lewis described his 30-year background as a union worker within the nuclear weapons complex. He was involved in the union effort for the passage of the Act. These experiences led to his current position as the Team's Union Outreach Specialist.

Mr. Lewis introduced the other NIOSH/Oak Ridge Associated Universities (ORAU) team members. He requested permission to record the meeting, explaining that the recording helps in preparing minutes that accurately capture the comments and questions from the meeting. He requested that everyone sign in on the sheet provided so that the names of the attendees could be included in the minutes. NIOSH publishes the minutes on its Web site after the union has a chance to review them.

Mr. Lewis explained that in order to give labor a voice in the Site Profile, it is important to get "the rest of the story" from people who worked at the ETEC site – the "site experts." The NIOSH/ORAU team met with United Auto Workers Local 1519 in January 2006 to familiarize union membership with the types of information that can improve the quality of the Site Profile. The union scheduled a subsequent meeting after the ETEC Site Profile was complete and representatives of UAW Local 1519 had the opportunity to review the document.

The Site Profile is a "living document," which means that it can be revised as new information becomes available. By including the workers' perspective on actual daily work procedures, safety programs, and incidents or accidents affecting a large worker population, the Site Profile becomes a more claimant-favorable tool for EEOICPA dose reconstruction. Mr. Lewis encouraged the attendees to speak up at any time during the presentation with comments or questions about the Site Profile or the compensation process.

Mr. Mark Rolfes of the NIOSH Office of Compensation Analysis and Support (OCAS) stated that he would answer questions about the program or dose reconstruction at any time and those concerning individual claims after the meeting.

Mr. Lewis turned the meeting over to Mr. Steve Meiners for the presentation. Mr. Meiners thanked the attendees for the opportunity to meet with them to discuss the Site Profile. He emphasized the importance of including first-hand information from workers to supplement the "official" information from the records of the Department of Energy (DOE) and its contractors.

Mr. Meiners gave a brief overview of EEOICPA, which is a federal law that provides for compensation to workers who have become ill as the result of exposure to radiation or toxic



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substances during their employment in facilities that were part of the DOE nuclear weapons and energy research programs.

Filing a claim with the Department of Labor (DOL) is the first step in the compensation process. The DOL verifies the energy worker's employment and medical information. Employees or former employees who worked for facilities or companies under contract with DOE or its predecessors can file Subtitle B claims for \$150,000 and reimbursement of eligible medical expenses for cancers, beryllium disease, and some silicosis cases. Subtitle E provides compensation for illnesses resulting from toxic chemical exposure in the workplace. Surviving spouses or children may also file a claim on the worker's behalf if the worker is deceased.

The DOL forwards only Subtitle B cancer claims requiring radiation dose reconstruction to the NIOSH Office of Compensation Analysis and Support (OCAS). Due to the large number of claims, NIOSH has contracted with ORAU and its subcontractors to assist with the dose reconstructions and other associated tasks, including Site Profile development. The purpose of the Worker Outreach meeting is to give workers and former workers from the DOE nuclear sites an opportunity to review the content of the Site Profiles and to suggest corrections or improvements. The meetings also serve as an outlet for the Outreach Team to provide information about EEOICPA and the dose reconstruction process.

The Site Profile is a site-specific technical "handbook" used by the health physicists who reconstruct workers' EEOICPA radiation doses. The information in the Site Profile provides the dose reconstructors with a consistent set of data to use for all claims from that site. To determine the "probability of causation" (POC) that a worker's cancer is related to his or her occupational radiation dose, the worker's dose is reconstructed from dose records and other information. The dose reconstructor enters the worker's exposure information into a computer program to calculate the POC for that type of cancer. If the program determines that the worker's occupational radiation dose is "as likely as not" (greater than 50% POC) to have caused the cancer, the claim will be recommended for compensation. If the POC is less than 50%, the claim will be recommended to be denied. However, it may be re-evaluated if the Site Profile is revised to include new information that could affect dose reconstruction. A claim that was initially denied may also be re-evaluated if a claimant reports additional cancers, which may increase the POC.

The ETEC Site Profile is a collection of technical documents based on historic information from ETEC contractor and DOE records. These documents include the Site Description, the Medical Dose, the Environmental Dose, the Internal Dose, and the External Dose. NIOSH needs input from people who actually worked at the site to ensure that the document is an accurate and comprehensive tool for radiation dose reconstruction. Because the Site Profile is a "living document," it can be revised as new information becomes available that may affect dose reconstruction.

The Site Description summarizes the ETEC facilities used in contracts between DOE and Rockwell's Atomics International and its successors from 1948 to the present in the nuclear energy and weapons programs. This section includes documentation of the DOE areas and the radiation-related programs that occurred in these areas over time, including the radiation sources that were present. Table 2-6 enumerates the incidents that occurred in the radiation areas.

Comment:



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Do you know about Systems Test Laboratory (STL)? It used to be Systems Engineering Test Facility (SETF) years ago. It was about a quarter of a mile outside the boundary of the nuclear site.

Steve Meiners:

What work did they perform there?

Response:

They did rocket engine testing there. It also included the Hydrogen Lab, ACL (ECL?) and (sounds like) QUILL within about half a mile from Building 55.

Steve Meiners:

The Site Profile Team had access to 148 file cabinets full of records that documented the programs through the years.

Comment:

I am sure those company records say this was the safest place in the world, too.

Steve Meiners:

That is why we are here today – to hear from you about what happened at the site.

Question:

Do you have a map of the Santa Susana Field Laboratory (SSFL)?

Response (from another attendee):

There is a map in the Site Description. If you look on the map, you will see all these adjoining places.

Steve Meiners:

We would like you to see if the areas and buildings on the map are identified properly. There are several copies of the Site Profile here. You can also see the Site Profile on the NIOSH Web site: <http://www.cdc.gov/niosh/ocas/etec.html>. NIOSH wants to hear what you have to say about this Site Profile. Please look at Table 2-6 and tell us if the list of major incidents is complete or if it needs to be refined.

The Medical Dose section describes the radiation dose received from medical X-rays that were required as a condition of employment, as well as the frequency and types of X-rays that were regularly required, and how the equipment and 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.

Comment:

The Medical Department did two X-rays per year, one with the employee facing the machine and the other was a side view.

Mr. Meiners continued the presentation: The Environmental Dose section is included for workers who were not monitored in dosimetry programs. It discusses the internal and external environmental radiation doses from sources in the workplace. Annual external environmental doses for the DeSoto, Vanowen, Downey, and Area IV sites during specific periods are included.



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The external doses were measured from 1975 to 1999, and were estimated from 1952 to 1974. Internal environmental doses from specific radionuclides that may have been inhaled or ingested are also given for these facilities during specific periods.

The Internal Dose section describes the bioassay programs at the ETEC facilities from August 1958 through the present. Urinalysis bioassay programs measured for various radionuclides during this time. Whole body and lung counts began in 1967 and continue through the present. Bioassay analyses have been done for gross alpha, gross beta, mixed fission products, and specific radionuclides over the years, including tritium, carbon-14, sulfur-32, phosphorus-32, cobalt-60, strontium-90, cesium-137, promethium-147, polonium, plutonium, americium, cerium and thorium. Minimum detectable levels (MDLs) are included.

Comment:

I worked in Instrumentation and we worked in all the facilities. I do not recall having any health checks. One of my coworkers wore a badge and gave samples. I went without one for months, but he had one regularly. He died last month.

Comment:

Most of the bioassay and the body counts were given to the people who actually suited up and went in to perform the work. The support personnel did not give urinalysis or get the whole body counts.

Steve Meiners:

Do you think you could identify the work groups that were in the bioassay and monitoring programs?

Response:

Some of the employees that will be in your afternoon meeting will be able to do that. Several of them have worked in Building 55 in the Hot Lab. They also worked during the decommissioning and decontamination (D & D) at the AI Powder Room at the DeSoto facility.

Steve Meiners:

That is very helpful information. The workers often tell us that some personnel are not suited up or monitored, but are working right beside others who are. NIOSH needs to know about this type of information to make the Site Profile a more accurate instrument.

Comment:

One group of workers used to go off base to work on D & D programs.

Comment:

The company used to send people off to do off-site assignments. Some of them have gone off to work at other companies. Those assignments usually lasted from two to six months.

Steve Meiners:

Did the company keep good records of where and when these workers went? That would be useful information, too.

Response:

Most of them are dead.



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Mr. Meiners continued: The External Dose section describes the dosimetry programs that monitored for beta, gamma and neutron radiation that came from radiation sources outside the body. Data are available for the period from 1954 to the present. Dosimeter technology during a worker's period of employment and badge exchange frequency are also considered. MDLs are given. In an effort to be claimant-favorable in the dose reconstructions, NIOSH applies a "missed dose" component to compensate for dosimeter readings that were reported as "zero." The "missed dose" is calculated using one-half of the MDL for each "zero" reading.

Mr. Meiners concluded the presentation by reiterating that workers can provide information that can make the Site Profiles more comprehensive and accurate documents for calculating dose reconstructions for EEOICPA claimants. Information that might contribute to Site Profile revisions should be sent directly to NIOSH by mail or e-mail at the addresses in the presentation, or by fax at the number provided.

Mr. Meiners introduced Mr. Mel Chew, who is the Site Profile Team Leader for the ETEC Site Profile. Mr. Chew stated that when the ETEC Site Profile Team first began to work on the documents, they intended to address the ETEC facility in very general terms. Boeing permitted access to a large cache of records documenting the many diverse technical operations from the late 1940s through the present, including the experimental reactor and fuel fabrication programs of the 1950s and 1960s and the energy research and development programs of the 1970s and 1980s. As their research progressed, the Team realized that there were actually four different facilities involved in the radiation work during different periods: Area IV of the Santa Susana Field Laboratory (SSFL), the Downey Site, the Canoga Park facility (Vanowen Building), and the DeSoto Avenue facility. The Site Profile Team also recognized that workers frequently went between Atomics International (AI) where they worked around radioactive materials and the Rocketdyne Site where they performed work for the aerospace development programs of the National Aeronautics and Space Administration (NASA).

When the NIOSH team performs dose reconstructions, it uses the Site Profile and other technical documents. In an effort to provide the EEOICPA claimant with the best possible dose reconstruction, NIOSH asks for additional input from workers as part of the Site Profile development process. The information that the workers contribute can supplement the technical information in the documents to make them more accurate and comprehensive.

The Site Profile Team reviewed a large amount of data for incidents that occurred at the ETEC facilities. Table 2-6 in the Site Description describes incidents in which exposures were large enough to require bioassay. Claimants may document other smaller incidents during their claim interviews.

Mr. Chew opened the floor for discussion.

Question:

What about the radiation exposure that one would receive from working with high-voltage distortion lasers?

Mel Chew:

Lasers do not emit ionizing radiation. Exposure to the non-ionizing radiation from a laser would most likely result in tissue damage that is very different from the effects of exposure to ionizing radiation from radioactive materials. The part of the compensation program that we are talking about only deals with ionizing radiation.



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Mel Chew – Question to Attendees:

Do you remember any events at the ETEC that you think we should know about?

Response:

A leach line was contaminated with strontium-90 for about 15 years. (*Name withheld*) was the boss then and he said that he did not know what damage that would cause to the food chain or the water table. Does the Site Profile mention that incident? I know they removed the contaminated soil and hauled it off somewhere.

Mel Chew:

The Environmental section addresses the strontium-90 and the contamination level in the soil and the water. It does not discuss the effects on the food chain, but the Team recognized the strontium-90 as a contaminant.

Comment:

Many of us did not work on the AI side, so we did not receive direct exposure to the radiation.

Steve Meiners (to Mel Chew):

Someone indicated earlier that many of the employees on the Rocketdyne side worked right outside the perimeter of Area IV.

Comment:

We could have been exposed to radiation in the air.

Mel Chew:

Some years ago, they did an aerial survey of the entire facility. They had environmental monitoring data as well. If you did not actually work inside Area IV, there is probably enough information to determine what your environmental radiation dose might be.

Comment:

That area is a natural canyon and the air would move down through there from the AI side. It goes right to Bell Canyon. The water run-off goes that way, too. If they had monitors there, we probably were okay.

Mel Chew:

As you know, in addition to the AI site, the Rocketdyne site was there, too. Many of the chemicals used in non-DOE programs at the Rocketdyne site were handled at the AI site (e.g., the propellants used in the aerospace development). The Team looked at several groundwater studies that documented the effects of those chemicals.

Response:

That was mostly down at the Burn Pit.

Mel Chew:

Yes, that is right. NIOSH has the ability to reconstruct those potential exposures. If you worked in those areas, there are records that document not only those chemicals, but other things like tritium and strontium-90 as well.

Question:

Did they analyze any of the sediment in the water for radioactivity?



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Mel Chew:

Yes, Ames & Moore measured the chemical content in the water samples and, in addition, accounted for the radioactivity in the samples.

Question:

Have they done any drilling to determine the depth of the penetration of the chemicals from AI into the groundwater in Simi Valley? The residents there claim that it gradually flows down into their groundwater.

Mel Chew:

I do not know that answer, but I am familiar with the issue. I know that some of those residents have sued for compensation based on some environmental issues. I cannot quote the studies, but I know that there have been significant groundwater studies. I do not know if they have drilled for samples.

Comment:

I started working for the company in 1952. At that time, they were just starting to put up (sounds like def stands) in the different areas. We were involved in developing experimental propellants. It was common then to transfer these chemicals without any protection whatsoever. Nobody knew what the materials were, except that we handled the stuff. I left the hill in 1958. I do not remember any blood tests or urine tests (bioassay) – or any tests for that matter during that period. What we were handling must have been dangerous, because the engineer in charge opened a 55-gallon drum of it and ran when he got a whiff of it.

I worked in the building above the dump in Area IV. Every time we got in a new propellant or chemical, the engineer did not know what it was and neither did we. We did not have any protection. I went back to work on the hill in 1971 and we were required then to suit up to handle the same propellants.

After your last meeting here, I sent in my name and received a call from the DOL Resource Center in Livermore. They asked me questions for two hours and I told them everything I could remember. I received a questionnaire (claims form?) in the mail. It seemed to me that it pertains to AI more than to Rocketdyne.

Comment:

That was back before the days of MSDS sheets. We had to count on our supervisors to keep us from getting hurt.

Mel Chew:

The early propellants were experimental.

Response (from first commenter):

That is right. As I said before, the engineers did not know what we were handling and neither did we. We did as they told us.

Mel Chew:

This site had many different customers. The Atomic Energy Commission (AEC), the Energy Research and Development Administration (ERDA), and later DOE had contracts with the company, as did NASA. I think I can say with certainty that the propellants were part of the NASA contracts.



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Comment:

Before NASA, the contracts were with the Air Force.

Mel Chew:

EEOICPA pertains only to the work that was under the auspices of AEC, ERDA, and DOE. The Act does not extend to work done under contract with any other agency or company. With the exception of the radiographers, who went back and forth between the AI site and the Rocketdyne site, there is a clear demarcation between the two sites. The questions the Resource Center asked you during your long telephone conversation probably were to determine whether you handled radioactive material.

Response:

They wanted me to get medical records to verify things that happened back in the 1950s and 1960s. I cannot supply the records. Most of those doctors are dead. What can you do in that case? What kind of answer can I give to justify a claim?

Mark Rolfes:

It sounds like your questionnaire may be for a Subtitle E claim for chemical exposure through the DOL. Did you file a Subtitle E claim? They probably need you to provide medical records so they can verify that you were employed at the site during the contract period and so they can verify the medical diagnosis for the disease you are claiming. We are here today to discuss radiation exposures. If you file one claim, you are considered automatically under both Subtitles of the Act for radiation and chemical exposures. Does that answer your question?

Mark Lewis:

Make sure you get the information to them within 30 days, so they can begin to process your claim. If you have any questions, you should call the Resource Center.

Mr. Chew thanked the attendees for their time and the meeting adjourned at approximately 11:00 a.m.