

John Howard: Hello. My name is John Howard and I am the director of the National Institute for Occupational Safety and Health, or "NIOSH." NIOSH is the federal agency responsible for generating new knowledge in the field of Occupational Safety and Health and transferring that knowledge into practice. NIOSH was established in 1970 to ensure safe and healthful working conditions for every worker in the United States. We at NIOSH are proud to serve all American workers, and especially those of you who have filed claims under the Energy Employees Occupational Illness Compensation Program Act.

Brant Ulsh: I'm Brant, a scientist at NIOSH. Welcome to the Taft Center, the home of NIOSH's Office of Compensation Analysis and Support.

Brant Ulsh: Inside this building, a team of scientists and health professionals handle claims for thousands of workers who performed a variety of important tasks at over 350 Department of Energy or atomic weapons employer facilities. Some of these employees have developed cancer, possibly as a result of exposure to radiation in the workplace.

Brant Ulsh: To determine whether a worker's cancer is related to radiation, NIOSH must first estimate the amount of radiation the worker was exposed to. The methods we use to do this are called dose reconstruction.

Brant Ulsh: In October of 2000, Congress passed the Energy Employees Occupational Illness Compensation Program Act. This act established a new federal program intended to compensate energy workers, or their survivors, who develop illnesses from workplace exposures to hazardous substances.

Brant Ulsh: There are three federal agencies involved in this compensation program. The Department of Labor administers, or oversees the Energy Employees Occupational Illness Compensation Program. There are two parts to this program: Part B and Part E. Part B covers illnesses related to Beryllium, silica, and radiation exposure. Part E covers illnesses related to exposure to other toxic substances.

Brant Ulsh: All claims begin and end with the Department of Labor. And it is the Department of Labor which makes all compensation decisions.

Brant Ulsh: The Department of Energy provides worker information to the Department of Labor and radiation exposure information to the Department of Health and Human Services.

Brant Ulsh: HHS was assigned its specific duties based on scientific expertise within its National Institute for Occupational Safety and Health. NIOSH only conducts dose reconstructions for claims filed under Part B that involve cancer and radiation exposure. The Department of Labor handles all other claims filed under Parts B and E of this federal compensation program.

Brant Ulsh: In this brief introductory video, we will describe dose reconstruction. And we'll describe how NIOSH processes claims under Part B of the Energy Employees Occupational Illness Compensation Program Act.

Brant Ulsh: In July of 2001, NIOSH established its Office of Compensation Analysis and Support to handle dose reconstructions. NIOSH began by hiring expert staff, initiating extensive research, and developing the formal guidelines and scientific methods needed to conduct dose reconstructions.

Larry Elliott: Our primary responsibility is to determine the amount of radiation exposure that a worker might have experienced at a Department of Energy facility, or an Atomic Weapons Employer facility.

Larry Elliott: Cancer is a relatively common disease in the United States. Therefore, for the Department of Labor to determine whether a worker's cancer is related to workplace exposure to radiation, NIOSH conducts dose reconstructions.

Brant Ulsh: There are two concepts that are critical to understanding the methods NIOSH uses when conducting dose reconstructions and how the Department of Labor uses dose reconstructions to make compensation decisions.

Brant Ulsh: One concept is that the dose reconstruction methods consistently give the benefit of the doubt to the claimant whenever there is a question or uncertainty about the amount of radiation exposure the worker may have received.

Brant Ulsh: The second concept is that the statistical value used by the Department of Labor to make compensation decisions overestimates the likelihood that a worker's cancer was related to radiation exposure in the workplace. This overestimate increases the likelihood that the claimant will receive compensation.

Brant Ulsh: Claimants receive compensation when the Department of Labor determines that the worker's cancer was "at least as likely as not" related to workplace exposure to radiation. This means there only needs to be a 50% probability of causation, or likelihood, that the worker's cancer was related to employment at a covered facility.

Brant Ulsh: Before a dose reconstruction begins, NIOSH gathers information that might help a worker's claim. At the forefront of this effort are the Public Health Advisors.

April: The role of the Public Health Advisor is to assist and provide support to the claimants as long as their claims are here at NIOSH.

Mike: It's our goal to assist them with an understanding, and answer any questions that may pop up during the whole claims process.

Katie: Since the Public Health Advisor is really the person that the claimant talks to all the time – the one that they call, the one that they e-mail. We need to work with them and help them get their claim through the system.

Brant Ulsh: Once NIOSH receives a claim from the Department of Labor, we mail a letter to each claimant that briefly explains the dose reconstruction process. This process includes a voluntary telephone interview. While optional, the interview is an opportunity for claimants to provide NIOSH any additional information about their claim. Energy workers, their survivors, or an authorized representative may contact NIOSH at any time during this entire dose reconstruction process.

Brant Ulsh: Dose reconstruction emerged as a scientific discipline in the late 1970s. Scientific standards and practices are recommended by the International Commission on Radiological Protection."

Brant Ulsh: NIOSH scientists, called Health Physicists, use these standards and practices in dose reconstruction. Once NIOSH has collected the necessary information, and a claim has been assigned to a Health Physicist, we can begin the claimant's dose reconstruction.

Chris: Dose reconstruction is an accepted scientific method used to estimate the amount of radiation a person was exposed to.

Grady: When we do a dose reconstruction, we're calculating the dose to the organ that was affected.

Chris: In dose reconstruction we use many sciences: physics, we use for the study of radiation itself; chemistry, for the elements that are radioactive, and how they disperse in the environment, and how they interact with the body tissues; biology, obviously, the development of cancer and how radiation affects tissues in the body; and statistics, because we're dealing with probability.

Grady: There's a lot of information that's used in the course of completing the dose reconstruction. The information specific to the individual like age, sex, length of employment is very important to us.

Grady: We also look at the DOE records for their radiation dose that they received while they were on that site. The type of cancer.

Grady: We also look at the medical records that we received from the Department of Energy that will tell us what kind of x-rays that the individuals received.

Grady: The Department of Energy dose of record is the dose that was assigned to the individual while they were employed at that Department of Energy facility.

Grady: The way NIOSH uses these in dose reconstruction is we review those – we use them as a starting point basically in our dose reconstruction. We know how the individual was monitored for radiation.

Grady: And, we know the limitations of the radiation dosimetry that was used at that time.

LaVon: You will find that the NIOSH dose reconstruction – the exposure – is typically much higher than what you would see as the dose of record.

Chris: There are reasons that workers are not monitored. In some cases, they don't work with radiation. For instance a person who was a receptionist in an administrative building might not be monitored on some sites. On the other hand, in the early days, some workers were not monitored who should have been monitored. In that case, we try to estimate the probable dose that the worker received by looking at what his co-workers received - those who were monitored.

LaVon: We look at the site profile documents,

LaVon: which are developed specific to these sites, to determine any exposures that may not be documented.

Grady: This is one of the reasons that the program was established because there are a lot of people out there with incomplete monitoring records, or none at all.

Chris: With over 20,000 claims to process – so far – we've had to adopt certain strategies in dose reconstruction in order to make sure that people get their claims processed as quickly as possible. We do this in three ways. In some cases, we make an overestimate of the dose in order to move the claim along quickly.

Chris: We do this whenever there was very little exposure or because the cancer in question is particularly resistant to radiation. Or, for other factors that we've identified.

Chris: Conversely, we may take another approach. We may take an underestimating approach...

Chris: ...where we don't need all the dose we have because the cancer is such that it's highly probable the case is compensable.

Chris: The third method of course is to do a very detailed dose reconstruction using best estimate techniques. That takes a lot of time.

Chris: So, we don't automatically use that method with every claimant. It really depends on the nature of the claim, and the claimant's cancer.

Chris: We're very concerned that each claimant gets his or her case processed efficiently and quickly.

Brant Ulsh: When a dose reconstruction is completed, NIOSH mails a copy of the draft report to the claimant for their review. The claimant will then have the opportunity to ask questions...

Brant Ulsh: ...and discuss this report with a NIOSH representative during a closeout interview.

Brant Ulsh: This draft report describes how the dose reconstruction was conducted, the information used to complete the dose reconstruction, and how the dose reconstruction is used to determine final compensation.

Brant Ulsh: The report also includes an OCAS-1 form, which must be signed and returned to NIOSH by the claimant. Signing this form does not indicate that the claimant agrees or disagrees with the dose reconstruction results.

Brant Ulsh: It only indicates that the claimant does not have any additional information to share at this time that might be relevant to the dose reconstruction.

Brant Ulsh: Once NIOSH receives the signed OCAS-1 form, a final dose reconstruction report is mailed to the Department of Labor, and a copy of the report is mailed to the claimant.

Brant Ulsh: The Department of Labor uses the information in the final report to assist in determining if the claimant qualifies for compensation.

LaVon: It's important to me as a Health Physicist, as a professional, that has been given the responsibility to ensure that dose reconstructions are done for these former energy employees, and they're done correctly.

Sam: Each of these cases is a personal tragedy. We recognize that every person we talk to has a significant loss. They've lost a loved one. They've lost a father. They've lost a brother. They've lost a sister. Or, they have cancer or a loved one has cancer. But, still, we have to then take from that what scientific information we can use to best evaluate their case; in a scientific manner that supports the dose reconstruction process, which is bound by law.

Chris: I'm confident that NIOSH's dose reconstructions are accurate, providing the Department of Labor with the information they need to make a recommendation for the compensability of the claim. To ensure that our dose reconstructions are accurate for compensation purposes, the President of the United States created an advisory board composed of workers, scientists, and union representatives. This advisory board is responsible for reviewing a portion of our dose reconstructions to make sure they were done with scientific validity and quality for the purposes of this program, and that we were consistent in the methods we used to complete them. We are very concerned about the humane purposes of the Act, and ensuring that we provide accurate information to the Department of Labor so that they do not underestimate the probability of causation in any worker's case.

Brant Ulsh: We hope that this brief introductory video gives you some insights into the NIOSH dose reconstruction process. If you have any questions, or would like to speak to one of our Public Health Advisors, please call us. Or, if you would like additional information about dose reconstruction please access our website.

Brant Ulsh: We are here to serve each of you. On behalf of the NIOSH staff, thank you for watching this video. And, thank you for your patience.