

Environmental Defense Institute

News on Environmental Health and Safety Issues

December 2014

Volume 25 Number 12

Difficult to Convince NIOSH of Department of Energy Worker Overexposures

by Tami Thatcher.

Egan Lamprecht knew personally that unrealistically low radiation doses were recorded for workers involved with the 1961 SL-1 accident. I had talked to Egan a few years ago, and while I am not an expert in radiation protection, I had been radiation worker qualified. I found everything he said to be credible. Responders to the SL-1 accident at the Idaho National Laboratory were certainly overexposed. And workers learning of their low recorded doses knew their doses had been knowingly under-recorded.

The nurse that gave artificial respiration to one of the dying SL-1 workers in an ambulance — a worker that had to be buried in a lead-lined cask — was obviously overexposed. She died a few years later of cancer. She had not been monitored for radiation during her exposure.¹

But, it was not only accident responders to SL-1. Premature deaths of workers who performed SL-1 cleanup are evidence of inadequate radiation protection despite denials by the contractors who conducted the cleanup.²

In 2000, a law was passed by congress providing monetary compensation to former Department of Energy workers who get illnesses, such as cancer and qualify for compensation due to their exposure at DOE facilities. The Energy worker compensation act (EEOICPA) law includes this statement: “studies indicate than 98 percent of radiation-induced cancers within the nuclear weapons complex have occurred at dose levels below existing maximum safe thresholds.”³ Even with a large percentage of claims denied, the law has paid out over 10 billion dollars paid in compensation to date.

¹ William KcKeown, “Idaho Falls – The Untold Story of American’s First Nuclear Accident,” ECW Press, 2003.

² See Environmental Defense Institute’s “Citizens Guide to the Idaho National Laboratory.”

³ See 42 USC 7384, [The Act--Energy Employees Occupational Illness Compensation Program Act of 2000 \(EEOICPA\), as Amended.](#)

Some worker exposure situations involved chronic long-term exposure to elevated and inadequately monitored conditions. Once characterized, workers may become part of a recognized cohort of workers that qualifies for compensation.⁴

But workers exposed to unique and changing work conditions may be unable to prove the conditions they were exposed to, especially years after exposure. INL workers historically and currently face an exceedingly wide variety of radiation and chemical hazards. When workers are harmed, the recorded exposures carry weight—and from what I see, the worker's testimony is often discounted. Convincing characterization of the radiation (or chemical) exposures they encountered can be next to impossible.

Inadequate monitoring of chemical vapor hazards has been in the news at Hanford recently, and chemical hazards contribute to health risks for INL workers as well.⁵

A NIOSH dose reconstruction document for the EEOICPA law states that even in 1961, radiation was “carefully monitored and well-documented.”⁶

And this captures a mindset that may explain why I heard the comment at a NIOSH gathering last week that: “Egan had convinced himself over the years of radiation overexposure that had not occurred.” You see, NIOSH gives the DOE contractor the benefit of the doubt. The over-exposed radiation worker? No so much.

Sins of the past are one thing. But even more saddening, workers for DOE contractors today still face preventable overexposures and are routinely denied access to information about their radiation and chemical exposures—when such documentation exists. This game favors cost-saving contractors—leaving workers to suffer the fallout.

Another Responder to SL-1 Tells Story

Luke Ramseth reports 11/26/14 in the Post Register:⁷ “Melvin Hess is proud of his role in two monumental, chaotic moments of American history. But that’s not to say he’d like to experience them again.

As a 20-year-old sergeant in the U.S. Army, Hess was among the second wave of Allied soldiers who stormed Omaha Beach in France during D-Day, June 6, 1944.

⁴ See the website for the Center for Disease Control, National Institute of Occupational Safety and Health, Division of Compensation Analysis and Support at <http://www.cdc.gov/niosh/ocas/>

⁵ Hanford Tank Vapor Assessment Report, Oct 30, 2014, SRNL-RP-2014-00791
http://srnl.doe.gov/news/releases/nr14_srn1-advisory-hanford-vapors-report.pdf

⁶ Idaho National Laboratory – Occupations Environmental Dose, ORAUT-TKBS-0007-4, August 17, 2007. <http://www.cdc.gov/niosh/OCAS/pdfs/arch/ineel4-r1.pdf>

⁷ lramseth@postregister.com

Hess also was among six firefighters who responded Jan. 3, 1961, to the world's first fatal nuclear accident at Stationary Low-Power Reactor Number One, or SL-1, located in the Arco desert west of Idaho Falls.

"I wouldn't take a million dollars for the experiences I had," Hess said. "But I wouldn't give a dime to do it again, either."

The Post Register reported Wednesday that Egon Lamprecht, who died Saturday at his Idaho Falls home after a battle with brain cancer, was believed to be the last survivor of the six firefighters who went to SL-1 that frigid January evening, exposing themselves to untold amounts of radiation.

But it turns out that the 91-year-old Hess — alive and well and residing in Mesa, Ariz. — is the last surviving firefighter. He spoke to the Post Register by telephone Wednesday, after the story about Lamprecht was published.

Lamprecht was a close friend, Hess said, though he had not yet heard of his death. The firefighters met up several times over the years to talk about their experiences working at what today is the site of Idaho National Laboratory. Hess lived in Ammon until 2002, when he moved to Arizona.

"I think about it all the time," said Hess, who worked at the site for 23 years. "When an alarm would come in, you'd have no idea what you'd find when you got there. It was like opening up a package at Christmastime."

That certainly was the case with their response to the SL-1 meltdown, Hess said.

"Everything was uncertain," he recalled of the evening when firefighters heard the alarm. "There were only three people on duty (at SL-1), and they were all military."

Hess, a lieutenant, was the one who entered an empty SL-1 guardhouse. He called inside to get someone to open up the gate so firefighters could get inside the complex.

Despite not having any clue what had happened, the six men entered the reactor building anyway.

What had occurred, an investigation later found, was a runaway nuclear reaction of sorts. Improper removal of a control rod led to hundreds of gallons of water turning instantly into super-heated steam. A massive explosion occurred, killing three nuclear operators and pinning one to the ceiling.

Just like Lamprecht later wrote in an 89-page report on the accident, Hess also recalled growing concern due to the firefighters' radiation dose meter pegging to its limit.

"When (the meter) pegged, we didn't have time to stand around there and wonder what was wrong," Hess said. "We had to get the hell out of there."

Still, the firefighters stuck around long enough to report two bodies lying in SL-1's reactor room, riddled with radioactive shrapnel. They didn't notice the third, pinned to the ceiling with a reactor shield plug.

After other emergency personnel took over, Hess also recalled reporting to another facility about a mile away from SL-1. In temperatures well below zero, the firefighters were told to strip off their radioactive clothes and gear at the gate and run inside to shower. "It wasn't much fun, I'll tell you," Hess said.

James Dennis SL-1 Army Demolition Crew

The author⁸ interviewed Jean Dennis at her home in Virginia, the widow of James Dennis, who was a member of the INEEL SL-1 involuntary Army demolition crew brought in by General Electric under contract with Atomic Energy Commission (AEC) to dismantle the reactor after it blew up in January 1991. The 38 eight by ten inch photographs taken by the AEC and submitted as evidence in Dennis' litigation against General Electric, shows Dennis right beside the damaged reactor core placing the explosive charges on the support beams that held up the 80 ton concrete and lead operating room floor above the reactor vessel. The photos also show the two huge clouds of debris that went into the air when the two separate charges went off, covering Dennis, his partner Arthur Limeruk, and spreading the residual contaminates over a large area. Dennis died of a rare blood cancer called Waldenstrom micro-globulin anemia (blood and bone marrow cancer), which his medical documents confirm was caused by exposure to 50 rem/hr for nine hours and ten minutes at the SL-1 site. [\(11\)](#)

SL-1 Recovery Operations report notes radiation levels on the reactor floor ranged from 500 to 1,000 rad/hr. immediately above where Dennis and Limeruk later were working. This report also notes that the dosimetry badges worn by the workers only went up to 1,000 mrad.⁹ Dennis' documents further challenge the government's acknowledged exposure of whole body at 2135 mrem, and skin at 3845 mrem¹⁰ as grossly understated. Dennis claimed he received internal exposure because of the contamination in his nose. GE's health physics technicians however made no attempt to swab out his nose to remove the contamination or provide chelates to flush out the contaminates.

Dr. Charles Miller M.D., hematologist and oncologist, chief of Medical Services at Letterman Army Medical Center and Dennis' internal physician, supports the allegation that Dennis' cancer was caused by exposure to radiation.¹¹ Dennis was also forced by the Army to conduct exercises in the ground zero area of two Nevada Test Site nuclear blasts, March 22 and 23, 1955. Dennis unsuccessfully tried to convince the Army, the AEC, and GE personnel that he had already received more than a life burden from his exposure to nuclear bomb tests. Dennis' supervisor at Fort Belvoir, VA (Renehart) told him "he would be fired for violation of orders" and "he would have no grievance rights." [Dennis @ 11] As a twenty-one-year combat veteran of three wars, his retirement was put in jeopardy by refusing to follow his orders. According the Dennis' deposition, GE health physics personnel would not disclose the radiation levels at the SL-1 nor provide the backup work necessary to minimize the time required to place the

⁸ Chuck Broscious, author of Victims Stories, www.environmental-defense-institute.org

⁹ IDO-19301, SL-1 Recovery Operations, Combustion Engineering, June 30, 1961, p.32, 38.

¹⁰ James Dennis citing AEC/SL-1,CAB.

¹¹ James Dennis Affidavit, March 27, 1962, p.17.

explosive charges. Dennis cites no less than 19 worker exposure violations committed by GE on Dennis and Limerick.

The government refused to grant Dennis any compensation for his radiation exposure injuries that caused his early death. The US Justice Department defended General Electric's and John Horan, an INEEL health physics technician, who was an expert witness brought in by the Atomic Energy Commission to refute Dennis' claims to radiation induced injuries. Horan was also in charge of the Health Physics Department at the site and in charge of worker monitoring of the SL-1 cleanup workers. Ironically, John Horan later died of a brain tumor in the late 1990's.

Hanford Report States: Worker Exposures & Health Effects from Toxic Vapor Exposures are Real & Hanford Not Protective of Workers

Another expert panel has released a report on the issue of toxic vapor exposure at the Hanford nuclear site in southeastern Washington State, finding that "the weight of testimony and evidence strongly suggests that a causal link exists between chemical vapor releases from Hanford waste tanks and subsequent adverse health effects, particularly upper respiratory irritation, experienced by Hanford tank farm workers and that those adverse health effects are likely caused by acute, transitory exposures to relatively high concentrations of chemicals."

Hanford Challenge raises the question: "In light of these very serious findings, what is the contractor doing to protect its workforce *today* and into the future?"

The report, led by [Savannah River National Laboratory](#), was commissioned in May 2014 by contractor [Washington River Protection Solutions](#) (WRPS), to determine the adequacy of their program to protect workers. This report was compiled after numerous workers received medical evaluation and treatment following toxic vapor exposures at Hanford - over 56 workers since March 2014. There have been [30 reports](#) on this issue in the past 25 years.

There are some 1,800 toxic chemicals detected in the headspace of Hanford's tanks, though the report stated that methods used to arrive at this number were flawed. Over the years, there have been serious injuries and illnesses among workers that have resulted from toxic vapor exposures, including brain damage, lung disease, nervous disorders, and more.

Hanford Challenge has [called upon](#) the Washington State Attorney General's office to enforce existing provisions in hazardous waste laws to require them to protect workers. Hanford Challenge was pleased with the Savannah River report, yet also cited several areas that were missed, and should be included in the final report. We outline these areas in our "[Get Well Plan](#)." Some areas of improvement include independent third-party regulation, immediate institution of protective measures, changes to the Industrial Hygiene program and changes in administration for worker compensation claims.

Union and Public Interest Advocates Serve Notice of Intent to Sue, Plan to Seek Order to Protect Workers

Richland, WA: [Hanford Challenge](#), [United Association Local 598](#), and [Washington Physicians for Social Responsibility](#) announce service of [notice of intent to sue](#) the U.S. Department of Energy (DOE) and Hanford contractor Washington River Protection Solutions (WRPS). Groups seek to ensure that workers at the Hanford nuclear site are protected from exposures to toxic vapors from Hanford's high-level nuclear waste tanks.

Pete Nicacio, Business Manager for United Association of Steamfitters and Plumbers, Local 598, which represents numerous Hanford workers, said,

"We have had enough. Hanford management continuously denies ever exposing workers to toxic vapors, yet our members have been exposed and sickened for decades. They don't have the monitoring equipment in place, they don't have enough people to do the monitoring, and worst of all, Hanford officials have made it clear that they think there is no problem. It is hard to see how another report is going to make any real difference without more accountability. That is why we are taking action today by serving this Notice."

On November 19, 2014, the Washington State Office of the Attorney General [announced](#) the State's [notice of intent to sue](#) DOE and WRPS on the same subject of vapor exposures. Washington State Attorney General Bob Ferguson said, "Hanford workers face a very real and immediate health risk. The federal government has a responsibility to keep these Washington workers safe and I intend to hold them accountable."

Both actions were served pursuant to provisions of a federal law governing hazardous waste called the Resource Conservation and Recovery Act (RCRA), which applies to the mixed radioactive and chemical waste stored and treated at Hanford. RCRA requires that a 90-day notice of intent to sue be sent to the offending party before a lawsuit may be filed.

The notice of intent to sue follows the publication of an expert report funded by DOE after numerous workers received medical evaluation and treatment after experiencing toxic vapor exposures at Hanford. The panel of experts who wrote the report found that WRPS's program to protect workers was inadequate. Findings and recommendations from this report and numerous past reports on Hanford worker exposure to toxic vapors have yet to be implemented.

Despite the extensive history at Hanford of toxic vapor exposures and multiple studies on the subject, workers' health and safety continues to be jeopardized.

"The current number of workers sent for medical evaluation since March 2014 has risen to over 56," said Tom Carpenter, Executive Director of Hanford Challenge. "There have been some 30 reports over the past 25 years on the

Hanford toxic vapor issue,” according to Carpenter. “It is time to break this cycle and bring accountability to Hanford so that workers are protected.”

Serious injuries and illnesses among workers have resulted from toxic vapor exposures, including brain damage, decreased lung capacity, and nervous system disorders. Laura Skelton, Executive Director, Washington Physicians for Social Responsibility, said,

“Members of our healthcare community operate under the precautionary principle. If we suspect that workers will be sickened by hazardous chemicals, we take precautions against any possible exposure to those chemicals. It is imperative that DOE and its contractor WRPS employ the best available precautions to keep workers safe.”

The citizen groups’ action announced today seeks specific behaviors from Hanford officials designed to protect workers, including (1) immediately institute protective measures to prevent toxic vapor exposures, (2) implement systemic changes to Hanford’s chemical protection program, (3) conduct comprehensive medical monitoring for past and present Hanford tank farm workers, and (4) fix the compensation programs to assist workers in getting medical treatment for injuries and illnesses resulting from toxic exposures.

The citizen groups are represented by the law firms of Smith & Lowney, PLLC (Seattle, WA) and Public Justice, PC (Washington, D.C.). Richard Webster, Staff Attorney for the Environmental Enforcement Project at Public Justice, said, “Toxic vapors from the waste in tanks are endangering the health of Hanford workers. This violates the federal Resource Conservation and Recovery Act, which specifically and explicitly prohibits even potential endangerment of health. We are therefore pleased to help to enforce federal law in this case.”

“Hanford has endangered its workers for far too long. Today, citizens are taking action to force the Department of Energy and its contractors to implement long overdue protections for workers on the front line,” said Meredith Crafton, an attorney with Smith and Lowney.