

**Testimony of Laurence Fuortes, MD
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**Before the House Committee on the Judiciary
Subcommittee on Immigration, Border Security, and Claims
Oversight Hearing:**

**“The Energy Employees Occupational Illness Compensation Program Act:
Are We Fulfilling the Promise We Made to Cold War Veterans When We Created the
Program? (Part IV)”**

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Honorable Members of the Subcommittee on Immigration, Border Security and Claims, thank you for the opportunity to share with you my perspectives on the Energy Employees Occupational Illness Compensation Program Act (EEOICPA) and the Special Exposure Cohort process. My name is Laurence Fuortes, I am a physician and Professor of Occupational and Environmental Health and of Internal Medicine at the University of Iowa (UI). For approximately five years, my staff and I have been working with former Atomic Bomb assembly workers and more recently Uranium and Thorium processing workers in Iowa and surrounding states. Through a Department of Energy program, UI provides medical screening examinations and medical care to former workers, and we have gotten to know many of these workers quite well.

On behalf of these former Atomic Energy Commission and Energy Department workers and the families of those no longer alive I thank you for addressing questions of appropriate policy in response to recognized health risks and disease experienced by this workforce. These workers labored under a great weight of secrecy, as well as significant uncertainty, in regards to health risks associated with employment in the nuclear weapons industry. We owe these workers a tremendous debt of gratitude for their patriotism, placing themselves in harms way in defense of our country during both World War 2 and subsequently during the Cold War.

One of the primary things I hope to convey at these hearings is a sense of the effect of these programs on individuals as well as the community. I have spent hours with grown women and men in tears as they helped me identify those of their coworkers who are deceased. Without the benefit of a funded scientific study, I would have to say that anecdotally we are seeing a higher than expected rate of cancers and lung disease in this population, (as compared to what I have experienced in other medical screenings). These workers and their families said at first that the government was only waiting for them to die. Sadly the facts and history appeared to bear this out. The impression among many workers and their families is that the workers had been put at risk, made ill, and died as a result of their work, yet the government was merely going to stall and deny. Throughout our and other Former Worker Programs scores of former workers lives have fortunately been saved as a result of early detection of cancers and other conditions.

The approval of the SEC for the atomic weapons workers at the Iowa Army Ammunition Plant has rekindled the faith and participation in government.

To adequately understand the significance of these programs, it is first necessary to understand that safe working conditions in the earliest years of nuclear weapons production were severely lacking. Worker protection in terms of radiation shielding and monitoring – although state of the art for the time – was not adequate. Production was the primary focus for the operating contractors. The Health and Safety staff at these facilities used the best available knowledge and directives from the AEC to address and minimize workers' health risks. This was prior to the epidemiologic data that resulted from follow up studies of Hiroshima and Nagasaki victims and the radium dial painters. This was prior to decades of biological study which enlightened the field significantly as regards risks of ionizing radiation. There have also been dramatic technologic improvements in radiation monitoring. The measures taken to minimize exposures to these early workforces would clearly be deemed inadequate

and inappropriate today. This was decades previous to the Occupational Health and Safety Act and the protections it brought to the nations workforces. Under an oath of secrecy, there was little opportunity or incentive for complaints despite a real sense of uncertainty regarding their risks.

I am concerned that in addition to having been placed at historical risk in defense of our country, these workers are now at bureaucratic risk of being frustrated and disadvantaged by the processes for implementing EEOICPA. Both in the SEC process and in the dose reconstruction process there is a lack of transparency and access to expertise, which places petitioners and claimants at a tremendous disadvantage.

SEC. In the SEC case petitioners are tasked with proving the negative--that something cannot by definition, be proved. As a logical or philosophic process this is quite difficult and workers and petitioners need assurances that this process is workable and transparent. Workers and their representatives often have to rely on a cumbersome FOIA process and are unable to obtain the same data which is used by NIOSH and it's contractors in the creation of Site Profiles and Dose Reconstructions.

Dose Reconstructions. There is at least a perceived problem of this being a litigious process and one can understand why workers feel wronged by the unfair burdens of proof placed upon them. The Dose Reconstructions developed by NIOSH provide the appearance of precision, but this process is not exact nor at times defensible. As an example, a worker at the Iowa Army Ammunition Plant was determined to have a 48% probability of causation of a radiogenic cancer attributable to exposures at the plant. Imagine this worker's disbelief, when amending their filing based on a second and newly diagnosed radiogenic cancer, on being told that the newly calculated probability of causation dropped to 32%.

As background, allow me to describe the industrial processes, exposures, historical health and safety procedures and reflections on the SEC petition experiences at the two facilities I know best.

In the case of the Iowa Army Ammunition Plant, in Burlington, Iowa, workers were exposed to ionizing radiation from enriched and depleted uranium, plutonium, and tritium in the course of assembly and disassembly of nuclear weapons from 1949 until 1975. Workers routinely handled the radioactive components directly in their hands with only cotton gloves and without lead aprons. They had little or no radiation monitoring and little or no shielding from the radiation.

There are no reports documenting the internal doses of radionuclides in this workforce at any time. Only limited external dosimetry was provided to record the doses of external penetrating radiation to which such workers were exposed.

A Special Exposure Cohort petition was submitted on behalf of these workers on the basis of a near total lack of relevant exposure or estimated dose data. The SEC petition process was long and frustrating to the community. It took 3 ½ years just for the rules for evaluating SEC petitions to be developed. The argument was made by contracted Health Physicists that despite the lack of individual exposure data, doses could be reconstructed based upon classified information. All the subsequent cancer claims, even those considered radiogenic, resulted in denials initially. Statements were made by NIOSH contractors that this was a low exposure workplace despite a lack of records and without the benefit of worker interviews. This perceived a priori position seemed to permeate the actions and statements made early on by NIOSH and their contractors and may have resulted in resistance to take in to account information from workers which contradicted the a priori assumptions noted. NIOSH had stated that they could reconstruct the doses of workers at IAAAP despite a near total lack of exposure data by dint of theoretical models and data from workers at another worksite, Pantex, handling different warheads, in a different era. Petitioners are further disadvantaged by the technical nature and jargon of health physics and typically must take at face value the more technical calculations made by NIOSH. The Radiation Advisory Board is beset with complicated decisions and would benefit from the addition of persons recognized for strong environmental epidemiology skills. The functions of the Radiation Advisory Board and of their technical contractor, SC&A, must be guaranteed to be

independent of any real or perceived bias of involved federal agencies. SEC and claims decisions should not be based on financial implications but fair and balanced on scientific judgment.

There were significant weaknesses in NIOSH's assumptions that they could reconstruct dose without worker exposure data. Examples include NIOSH's use of ambient outdoor levels of radon gas for calculating respired doses experienced by underground workers in Iowa despite the fact that Iowa has among the highest geologic sources and reported indoor air concentrations of radon. NIOSH assumed that those badged had the highest exposures. Production workers reported a less than systematic radiation monitoring program and a pattern of inspectors and engineers with less hands on responsibility for assembling weapons were more likely than others to be monitored. It turns out that those workers exposed to the greatest numbers of warheads at any time and for whom the area monitoring reflected the highest exposure, (guards), were never monitored.

In April 2005 the President's Advisory Board on Radiation and Worker Health went on record agreeing with the workers' petition that asserted that accurate, defensible and timely dose reconstructions could not be performed.

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At the Ames Laboratory, former workers processed African pitchblende ores and radioactive thorium for use in the nuclear weapons program from 1942-1955. The scientific, technical, and administrative workers at the Ames Lab were involved in a heavy industry processing tons of uranium and thorium. This process generated large quantities of radioactive dust, and workers performed their duties without personal protection, engineering controls or radiation monitoring to protect them from radionuclide exposures and risks. Exposure data are available for small subsets of the workforce from very limited points in time, and without supporting documentation regarding both work and dosimetry protocols and methods. Review of Ames Lab medical records from individual workers involved in these processes has revealed no personal dosimetry records. Workers were exposed to extremely high levels of airborne uranium and thorium dusts, radon and thorium, even relative to the standards in effect during the time. In fact, some workers were excreting hundreds of micrograms of uranium per day in their urine.

My impression from the tone of the OMB memo that led to these hearings is that there is a sense among some that the risk to these workers has been overstated or that their employment resulted in minimal risk. Unfortunately, because of a severe lack of exposure records and the deaths of many potential claimants, it is not feasible to conduct valid dose reconstructions for the Iowa Army Ammunition Plant, IAAAP, facility or Ames Laboratory workers. At IAAP workers were in intimate contact with strong sources of radiation, handling the fissile central components of these weapons inches from their bodies without lead aprons. Work histories of Ames workers include reports of "blow-outs" with dissemination of both uranium and thorium from uncontrolled exothermic reactions occurring on a routine basis. These exposures would not be tolerated by any means under today's expectations of acceptable risk. Throughout our and other Former Worker Programs scores of former workers lives have fortunately been saved as a result of early detection of cancers and other conditions.

The SEC process has not fully addressed the risk of residual radiation among the workers performing maintenance and repair of these facilities. Recently an Ames Lab worker described to me his tasks including tearing out all the equipment, ceilings and exhaust ventilation in the building in which tons of thorium had been smelted and refined. The Ames Laboratory health and safety staff assisted in submitting an update to the Ames SEC petition to address this issue and to ask NIOSH to extend the period of coverage of the Ames SEC and add this subset of workers. The question of residual radiation risk is relevant to many of the AEC/DOE sites involved in manufacture and refining of radionuclides.

As regards the DOL claims process, despite the best of intentions for claimant friendliness, it operates at times disturbingly like a conventional property or health insurance claims process and functionally places obstacles in the paths of claimants. The claims process should also be as transparent as

possible given any confidentiality constraints.

I know of at least ten people whose claims were denied and whom upon review of their cases and a letter of clarification to the Director of the DOL Division of EEOICP resulted in these denials being promptly rescinded. These denials resulted from such things as:

- Proof of employment coming for a DOE site worker coming from the parent company headquarters in New Jersey instead of the plant site in Kansas City.
- Evidence of disease coming from a 'CT' scan and being denied because the term used was not 'CAT' scan.
- Statements that specific diseases – Polycythemia Vera, MAST cell lymphoma, myelodysplasia – are not covered under the SEC list of presumptive cancers when in fact they are.

These workers are typically elderly and not well versed in medical or legal terms and are unfortunately easily frustrated and dissuaded from pursuing valid claims. Cases such as those above suggest that there would be a benefit to a systematic review of denied cases and a change in policy from placing the burden of proof entirely on the claimants to a system in which claimants are assisted in identifying and locating missing information.

All the workers who were exposed to radiation, Beryllium and related toxins as part of our Atomic weapons industry deserve no less than a fair and open approach to the evaluation of causality and compensation for work related disease.

Sincerely,

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