
From: on behalf of ocaseupdates
Subject: FW: Open Letter

January 25, 2006

From:
Jim Phelps

To:
Advisory Board on Radiation and Worker Health For NIOSH / DHHS / CDC (Please place this Open Letter on the Board's Distribution) Department of Health and Human Services Centers for Disease Control and Prevention

Dear CDC / DHHS / NIOSH Advisory Board,

This open letter to the "Advisory Board on Radiation and Worker Health" is to express concern and doubt that this Board is using the "best available science" to arrive at sensible decisions for workers in Oak Ridge. My father worked at the Y-12 plant and had to take early medical retirement because the multiple exposures made him too sick to continue working.

I learned first hand from my father that workers were exposed to uranium

aerosols and chemicals. My father told me many stories of wearing yellow shoe covers in the uranium production areas and walking over uranium chips with sparks flying from under each footstep. I also learned these uranium production areas used PCB as coolant for the machine cutting operations to attempt to avoid setting parts and machines on fire. PCB has been identified as being damaging to a critical enzyme in the body called glutathione.

Early on I learned that Y-12 also had more serious problems with hydrogen fluoride releases around what the workers called the "Salt Shop" or "Green Salt" operation. Here workers were exposed to dangerous and cumulative fluoride gas vapors that have long term health effects. One worker named _____ sat on a wet keg of this green salt and died a few days later of sudden heart attack. This has become a well-established risk from HF exposures and involved in problems like the Donora, Pa. air inversion problems killing many due to heart attacks. The low levels of fluoride in the heart's system upset the calcium channels needed for proper heart function.

There were many laxities in the protection of workers at the Y-12 plant and at the K-25 gas diffusion plant. In many cases the chemical effects added directly to the harm due to both internalized and external radiation.

I also came to work for the Oak Ridge system as Development Staff person at the Oak Ridge National Laboratory and discovered the same problems that my father had told to me in years past. In working at ORNL in the mid-80s I came to help work on remediation problems in Oak Ridge and found many serious problems.

In working on this project to find the problems in Oak Ridge we found what has been the best available science some 20 years ago that exposed a greater extent of health harm than just looking at radiation damage effects singularly.

We looked at the cell mechanisms and found that toxic metals and certain

chemicals resulted in free oxygen radiation damage to cells that causes the same problems as excess radiation exposures.

We modeled the radiation effects as just simple inducement of free oxygen radicals in a body composed principally of water. The stress on the cells came in the form of the need for more production of a cellular repair enzyme called "superoxide dimutase, [SOD]." As the free radical damage from ROS increased this increased the cell's mitochondria production of the SOD enzyme and caused problems with the availability of trace metal minerals [manganese] needed to produce other cellular enzymes.

The radiation free radical repair processes for the cells employed all the available manganese within cells and upset the production of another cell enzyme process called "2-5A RNase L," which is the critical enzyme that controls pathogen infections internal to cells. 2-5A RNase L and the "Interferon" cytokine process work hand in hand to control cancer-associated virus and other pathogen linked illnesses. The mutation of this enzyme from its normal 83 kDa weight to a 37 kDa weight causes this principle protection enzyme within cells to become ineffective at cell apoptosis as well as killing virus and mycoplasma infections.

This was the principle cell mechanism that lead to cancer causation via allowing various cell pathogens to take control over cellular cytokine signaling and set the stage for the immune system to loose control over cancer cell regulation. This was found some 20 years ago and was well known to the national security system of ORNL, and was declared a highly sensitive issue because it explained a principal illness mechanism in Oak Ridge with large liability toward continuance of nuclear weapons production.

Our investigations were also able to link the chemical vector damage process to this same stress on the cellular protective enzyme system. One chemical stood out strongly in Oak Ridge as being linked to long term health problems and this was HF from the Y-12 Green Salt operation and the hydrolysis of UF-6 from K-25 process releases leading to HF releases.

What we found was that HF and aluminum in the body would spontaneously form the AlF₃ compound that would mimic the TSH thyroid hormone control and this effect would alter the normal night and day variation of the thyroid hormone control over cells. Normally the Pineal Gland's night and day sensing regulates the HPA axis hormones to power down the cells of the body as one sleeps to build up an enzyme called glutathione, [GSH].

Glutathione is the principle protective enzyme within cells that removes

toxic metals, like mercury, and toxic chemicals from the body via the liver and bile excretion route. As certain chemicals impact the thyroid regulation of cells the mitochondria become affected and the production of GSH is impaired resulting in the build up of toxic metals within the cells of the body.

As these metals became involved with the mitochondria mtDNA this causes the increased production of free radicals generated by the mitochondria's ATP production process. These excess free radicals placed the same stress on the cell repair processes and protection processes as radiation induced free oxygen radicals.

Thus, the bottom line is that this mechanism that we identified in the mid-80s at ORNL showed how chemicals and radiation combined to act on the very same cellular enzyme pathway that involves radiation inducement of cancer.

Today, the current research points to the same causality with the research being done on the Fallon, NV excess child cancer problems [Leukemia] from air fuel dumping. The Fallon Naval Air training station's dumping of jet fuel has affected the glutathione levels in children in this area, as identified by researcher Dr. Jill James of University of Arkansas.

Oak Ridge has lots of past HF release problems that have been compounded by more releases of toxic metals and HF from the TVA coal plants on each end of town. Just the coal emissions air quality placed this region at health risk long before the scrubbers were put in the TVA's plants in years past. When a USAEC worker came to work for Oak Ridge, his occupation exposures to HF and toxic metals made the long-term health risks much greater.

