# Mike Schaeffer: Ministry of Science

Based on a February 8 2023 interview with Nellie Ohr

For over fourteen years (1991-2005) Mike Schaeffer was in charge of the atomic veterans’ registry for the US Department of Defense (DoD). He took this job as a scientific person, a health physicist, dealing with radiation. He was aware that the job would entail more than just scientific work. But little did he know how much of his job would involve the “human element.” Mike found himself drafting legislation, parrying challenges from members of Congress, enduring daily negative publicity, and even facing a lawsuit.

Mike’s Nuclear Test Personnel Review (NTPR) program at the US DoD’s Defense Nuclear Agency (DNA)—currently called the Defense Threat Reduction Agency (DTRA)--dealt with American veterans who were exposed to radiation during the atmospheric nuclear tests the US conducted from 1946 to 1962. Their job was to help veterans with their claims to the Veterans’ Administration (VA) for compensation. This entailed verifying by records that the veterans were present at the tests or in the vicinity of the original Trinity nuclear test or the nuclear blasts at Hiroshima or Nagasaki, and also to estimate their likely radiation dose. They could make these estimates based either on records or on scientific measurements that were gathered by world-class scientists at the time of the explosions.

Mike’s office also communicated with veterans about other compensation programs available to them. A US Department of Justice (DOJ) program, for example, had a compassionate compensation program for veterans and other categories of people associated with the US nuclear weapons test program, regardless of their exposure. This required verifying the records but did not require reconstructing doses from scientific data. (One beneficiary of the DOJ program was PAX’s own Carl Siebentritt, who was involved in atomic testing. For Carl, getting VA compensation, another approach available to veterans, wasn’t the better deal. Under the DOJ program, Carl received the lump sum benefit). [ASK TRES IF OK TO SHARE THIS info?]

**Confronting Veterans’ Distrust of Government**

Mike soon came to realize how deeply the veterans distrusted the DoD. Every day, negative comments would come in on the agency’s hotline or would appear in the newspapers and veterans’ newsletters, showing the atomic veterans’ distrust, blaming the Defense Department if the veterans’ claims were not successfully getting through the VA for them to get their monthly payments.

In Mike’s first months at his job, he took steps to deal with that credibility issue head-on. He invited the key veterans’ advocates to a public face-to-face meeting. “It was a disaster!” Mike recalls. “All of their history of bad feelings about the government came out at this meeting. There was no common ground we could discern at that point.” Indeed, one veterans’ advocate nearly had a heart attack at the meeting. “This told me how passionate these people were in their distrust of the government.”

Responding to veterans’ advocates, members of Congress often called the DTRA director to testify in Congressional inquiries. The found the same “litany of distrust” and disbelief that the government was sincerely trying to help the veterans and giving them the best estimate of their dose. Many veterans, however near or far they had been from the nuclear tests or detonations, believed they had received high radiation doses and that these had caused whatever health problems they were experiencing.

The veterans’ testimony to Congress, casting doubt on the DNA/DTRA’s efforts, led the US General Accountability Office (GAO) to investigate the agency as well. The GAO would question whether the agency was using reliable historical data and scientific methods, and would also call on the National Academy of Sciences (NAS) to examine particular scientific questions.

**The Human Element**

Every day, the public relations person working for Mike’s program would field calls from veterans and their lawyers. If the callers would not accept her explanations, Mike recalls, “I told her to bring those calls to me. I had to deal with these people.”

Veterans perceived that all kinds of physical experiences resulted from radiation. One person said radiation had caused him to become a woman. Another blamed radiation for a callus on his foot—until Mike pointed out that he had a very similar callus too.

Mike attributes these disconnects to problems of perception rather than malice. “I had people I worked within the agency who would say the vet was lying,” Mike recalls. “I would say they’re not lying—if they are filing a claim for something that happened in the 1950s. Are they going to remember everything precisely?”

Rather, Mike says, the tendency to blame all kinds of health problems on radiation exposure results from skewed public perceptions of relative risks. “Health physicists need to educate people,” Mike explains. Ordinary activities sometimes yielddoses of radiation higher than those to which many veterans were exposed. Airline employees and others who fly for extended periods, for example, get doses that are six times background levels. This rate is on the high end for the general population but not in the danger range for radiation workers, Mike explains. In contrast, some medical procedures give much larger doses of radiation. For example, a chest X-ray can deliver ten times as much radiation as Mike himself received when inspected molten metal girders from a test in the Nevada desert. Whether air travel or an X-ray, the risk of an activity needs to be balanced against its potential benefits.

Another perception that veterans and the public often fail to understand, Mike explains, is that, “Whether you like it or not, 40-50% of the population are naturally going to get cancer in their lifetime,” regardless of exposure to radiation. As people become less likely to die of other causes, the likelihood of cancer increases. “I commissioned three mortality studies of different groups of atmospheric test vets. None of them concluded there is glaring evidence that people who got certain radiation doses got cancer at rates greater than the general public.”

In addition to explaining these concepts to concerned veterans, Mike also had to speak the language of legislators who advocated for the veterans. His agency’s Congressional Affairs office would receive requests to comment on proposed bills or even to draft legislation themselves. He recalls a one-on-one meeting with progressive Minnesota Democrat Paul Wellstone, away from the cameras. Mike said Wellstone’s proposed legislation was “full of hypocrisy”: it looked good for the public perception but would provide little benefit for atomic veterans except in Minnesota. Mike recalls encountering legislation that members of both US political parties would propose. In general, he observed, Republicans were good for putting on grand-scale legislation that did the most good in the bigger scheme of things, covering large groups of veterans. In contrast, Democrats’ legislative proposals were focused more toward individuals.

“I became an expert in a lot more things than health physics. I had to write testimony for generals who would appear before Congress. I had to write things for the General Counsel. And the

veterans’ radiation compensation laws of various government agencies—we knew them inside and out.”

**Lawsuit**

Criticisms of Mike’s program culminated in a 2002 class action suit against Mike and other government officials by a dozen atmospheric nuclear test veterans (https://ecf.dcd.uscourts.gov/cgi-bin/DktRpt.pl?70011546937459-L\_1\_0-1). The plaintiffs claimed that the DoD had been hiding exposure data from the veterans and hindering them from pursuing their claims for compensation. In actuality, Mike explains, in many cases the data simply did not show that the veterans’ radiation exposure had caused their disease. “The science is very clear and robust on the causation between levels of radiation and disease.”

Mike says these claims were “ironic” in light of his program’s sincere efforts to ensure that veterans got the best compensation available to them. Mike’s program worked constantly to find and declassify records showing exposure data and make those records available in a public repository, the Nuclear Testing Archive in Las Vegas in particular. (For more on this work, see the section “Treasure Troves of Data in the Garage,” below). If the veterans could not substantiate their claims for VA compensation using this data, Mike would advise veterans’ attorneys on how they could receive compensation through other programs, such as the DOJ program, even without proof of significant exposure-caused damage. “I would convince a vet’s lawyer not to fight the VA but to fill out forms on DOJ website.” Mike’s efforts ironically further alienated veterans’ advocates, because it undermined their portrayal of Mike’s agency as the bad guys.

The US Department of Justice acted as Mike’s attorney in the lawsuit.

**Changing the Agency Culture to Improve Credibility**

Mike recalls having a “steady diet” of criticism and scrutiny for the first ten years of the program. He vowed, “If I was going to stick with this job, I’d have to break this propensity to distrust the government.” He looked for ways to change the culture of the program, improve the veterans’ trust in the government, and reduce the frequent demands for Congressional testimony and GAO and NAS audits.

Mike sought to address complacency and non-transparency in the day-to-day workings of his program without alienating the people up and down the chain of command. Fortunately, he says, the generals who ran the agency “had my back.”

Mike said he realized how to solve the problem. Since the GAO and NAS were auditing the agency anyway, “Let’s appeal to that as a good vehicle for trying to address some of these confidence problems.” Mike resolved to provide the GAO and NAS with full cooperation and all records needed to conduct their investigations. He also hired “one of the best health physicists in my field,” who was expert not only in the science but also in dealing with the US Department of Energy bureaucracy and the public. “He had a good success record in reestablishing credibility.” With the help of this scientist and with his policy of transparency, Mike was able to benefit from the GAO’s and NAS’ recommendations and make some needed improvements to his program. He realized that the program needed independent technical oversight by the scientific community to improve the agency’s credibility. Otherwise, “It looked to the veterans as if we invented [the radiation dose assessment methods] on our own and we had nobody looking over our shoulders to see if we were doing it right.” As he also learned from the investigations, “We did have good science but didn’t know how to use it or keep it updated.”

**NAS Report Breaks the Logjam**

A final top-down investigation of the program--scientific aspects, quality control, and oversight--culminated in a report the NAS wrote in 2003, shortly before Mike’s retirement (<https://nap.nationalacademies.org/read/10697/chapter/1>). That report. The report advised establishing an independent government Federal Advisory Commissions Act (FACA) committee, with expert scientists, veterans, communicators, and advocates, to help structure and oversee the program. Also, the report advised holding public meetings, open to veterans and veterans’ advocates. Reforming the program required making its efforts more visible and making people aware that “the best scientists in the world were showing how best to approach the science,” Mike explained. In addition, the NAS recommended having the panel oversee the VA as well as the DTRA on their roles to serve the veterans. “Having the VA part of reporting to this independent government panel laid it out in the open where the problems were, what the vets were up against, which agency was not interested in doing a better job.” The NAS report also provided other suggestions for how to “make a good program better,” Mike said, such as applying modern data analysis and scientific techniques to old data.

**Making Change Happen**

Having received these NAS report and recommendations, Mike’s job was to present them to the DTRA director and flesh out what the agency needed to do and how much it would cost. The director welcomed Mike’s proposal and wanted to take it on. Unfortunately, that director soon retired, and the chain of command in Mike’s agency decided they were not going to put up the money. Mike’s program to improve the validity and credibility of their help to veterans “was going to go up in smoke.”

Mike took drastic measures. Bypassing the chain of command, he went straight to the general. “I told the replacement director that it was time for me to retire. We had gotten to the point of all these goals of culture change in the program to get implemented---and it was all going to go away.” The general said she would restore the money but it would take awhile. “I said you need to do it sooner rather than later.”

Mike knew he was taking a risk and would have to be very careful. However, he was uniquely placed, as a civilian scientist outside the chain of command. “A military person outside the agency told me, ‘You can do this. If we tried to do this, we could get fired. You’re a civilian; we can’t fire you.’ That’s why I took these risks to make sure the program will work for the veterans.”

When General Trudy Clark came in to head the DTRA in 2003, she came through with the money.

Once the funding was secured, Mike did retire. “My plan was that even if everyone embraced it and put up the money, I would still retire, so someone younger with fresh eyes could come and implement the NAS program.” Indeed, Mike says, “They found a good person to take over the job, who had the same attitude I had when I came in—wanting to serve the veterans and do it credibly in terms of public dealings and with scientific credibility. I was comfortable retiring, knowing the program would change over to a new culture. And it did. Even if all I did was to set it up so someone could take it over and pull it off.”

“We won the confidence of the veterans, through this independent advisory group that came in, where the vets had a place to go if they didn’t like what they were getting from the government. This independent body chartered by Congress would dig in and find the facts and records. From a public confidence standpoint, it solved that problem. It removed the idea that without government oversight, that we were making up this science and weren’t answering all vets honestly.”

Mike sums up, “The program came a long way after witnessing a veterans’ advocate suffering coronary problems in the first public meeting called as the new Program Director. It was a good news day for the veterans once it was all said and done. Lots of talented scientists, smart government administrators, and perceptive politicians were what made it happen.”   Mike notes that his successor in the program received fewer and fewer of the calls from veterans and inquiries from congressmen, questioning their findings. The “complaining and issues became different” when veterans realized they could appeal to the independent oversight panel, “people who wanted to look into their grievances—who seemed sympathetic and objective.”

It was only after he retired that Mike received closure in the lawsuit. “I had been retired over a year from this job before the court system came through and found in favor of the government.” The court found that the government was not hiding information; veterans had avenues to obtain the information they needed. The dissatisfied veterans were failing to use the established Freedom of Information Act (FOIA) process or to take advantage of information that the US Defense and Energy Departments had already made available in the Nuclear Testing Archive.

Mike waited six or seven years after retirement—to avoid the appearance of conflicts of interest—and later found himself working for the same program as a contractor for Leidos (formerly known as SAIC). Mike’s successor at DTRA—now his boss—continues to have to “read the political tea leaves,” focusing on groups of vets who are likely to “cause public furor.” One current program focuses on determining the radiation doses of the people who did cleanup work in 1977-1980 at the Enewetak Atoll in the Pacific, the site of nuclear test that obliterated some of the islands in the atoll.

## Treasure Troves of Data in the Garage

As mentioned above, Mike’s office spent a lot of time locating, declassifying, and making available data on veterans’ radiation exposure during nuclear tests and other incidents. “Some of our best finds for records were chief scientists—civilians--who ran these nuclear weapons tests and would cache boxes of records in their garage.” Mike’s office would scour the obituaries for the names of chief scientists and would quietly contact the widows and offer to take the boxes off their hands. Mike’s office first had to declassify the documents and redact any sensitive information. Referring to controversies in 2023 over the improper handling of classified documents, Mike chuckles that the scientists did not face repercussions for any infractions because they were no longer alive.

Sometimes the old data had an afterlife. For example, Mike remembers the case of a prominent physician, Dr. Payne Harris, who observed the after-effects of tests in places ranging from New Mexico to the Pacific atolls. He had the highest dose of any veteran in the database, Mike recalls, but lived to be 88 years old. Dr. Harris was an expert on the medical effects of nuclear testing-related radioactive atmospheric iodine. He had boxes full of unclassified data on iodine that he never found time to publish. One day Mike attended a conference with another radioactive iodine expert, Steve Simon of the National Cancer Institute (NCI), who said he wished he had access to such data. Mike told him that Dr. Harris had the records that had never been published. Thanks to Mike’s mediation, the two iodine scientists made contact and jointly authored three landmark scientific papers. The final paper appeared print after Dr. Harris had died. “You make connections--another part of my job,” Mike says of his contribution.

## Crossing Paths with Carl Siebentritt

Mike’s work intersected with that of Carl Siebientritt. In fact, Mike wrote a biography of Carl’s scientific work, which helped Carl win an award from the Health Physics Society a few years before Carl’s death.

They met while Mike worked at an earlier job for the Navy’s nuclear propulsion program. Carl worked for the Army Civil Defense Agency, which later became the Federal Emergency Management Agency (FEMA). Though Carl’s most famous invention is a pocket radiological dosimeter, Carl’s expertise also included building houses in the desert that the Civil Defense Agency used to see the effects of nuclear tests on physical infrastructure. As one example of an idea that resulted from these tests, many schools used to have window glass reinforced with chicken wire in case of a nuclear attack. The data that Carl’s agency had collected on the survivability of buildings from nuclear tests was stored in the Nuclear Testing Archive, along with the data Mike’s agency collected on human radiation exposure. For a recent project, Mike retrieved some of that building-related data so it could be analyzed with modern techniques to study survivability and optimization of building structure according to various sizes of nuclear detonations.