AGENT ORANGE
A Veteran Compendium
The articles gathered together in this compendium focus on the use of herbicides during the Vietnam War and its effects on those involved in that war and on their offspring. Together, they shed light on the terrible toll paid for a misguided faith in the use of environmental toxins on the battlefield.

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Michael Keating
Editor
The VVA Veteran
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The Pleasures of Showering in Long Binh

BY DAVID WILLSON

A MACV memo arrived on my desk in the USARV Inspector General Office where I was working in the fall of 1967. It warned of a serious danger: Soldiers were shaving in the shower units and then discarding their used razor blades. Several soldiers had incurred serious injuries—in one case a life-threatening injury—getting tangled up with the blades. Some blades had been stuck between the 2x4’s used in the construction of these tiny frame buildings. The memo even suggested that careless soldiers were unknowingly doing the work of Viet Cong infiltrators.

The memo went on to warn that it was especially dangerous to shower in the dark in these units: Unfriendly creatures might lie in wait to nibble on the tender parts of soldiers. The memo ended with the threat of an automatic Article 15 for anyone caught shaving in a shower unit. There would be security inspections after dark of random shower units. What a friendly reception those folks will get, I thought.

I don’t recall that Alfred Hitchcock’s Psycho was mentioned, but the image of Janet Leigh, an incongruous and darkly comic image, but scary, too.

It so happened that I was one of those soldiers who often showered after dark. I worked long hours, so often it was dark before I had the opportunity to visit a shower unit. In the evening there was no crush or line for showering. I’d strip down to my olive drab boxers; carry my ditty bag containing a bar of Ivory soap, some shampoo, and a razor; and head out in my flip-flops across the boardwalk over a sea of red laterite mud that was between me and the shower unit of my choice. Oh, I also threw a stiff, none-too-well-laundered olive drab towel over one shoulder and carried with me a fresh, clean pair of OD boxers.

Another reason I preferred to shower in the late evening was that the water was more likely to be warmish. I didn’t demand a hot shower. I would have been out of luck if I had. I had heard that in a far corner of the compound there was a 55-gallon drum filled with water. A platform was erected of boards near the drum, and the barrels were brightly colored, often in a festive orange. Not the expected OD.

The U.S. Army outdid the BSA. We got to shower in real buildings, brand new ones. There were several part of living in Vietnam. I did not think much about the ever-present smell of mildew, which was a major part of living in Vietnam. I never thought about it at the time, but the water left the building through slats in the floor and went out into the red laterite soil that surrounded that building and all the other buildings in the compound. I also tuned out the ever-present smell of mildew, which was a major danger: Soldiers were shaving in the shower units of the building, alone with my thoughts, and alone with the tropical denizens, but I never was barefoot. The flip-flops gave me the illusion of safety. I do not remember ever having to share the shower with anyone else. I only remember being alone in the building, alone with my thoughts, and alone with the water. I remember my eyes stinging from the water, but at the time I figured that was due to the shampoo being washed out of my hair and onto my face. That was enough of an explanation at the time.

I didn’t spend long in the shower—five minutes was my limit. I turned off the toggle switch, grabbed my crusty towel, and dried myself. I climbed into my clean boxers, rolled up my old ones in the towel, and put my stuff back in the ditty bag. I then returned to my barracks via the boardwalk.

After my shower and shave, I’d sometimes get a late-night dinner of ham, escalloped potatoes, and green beans cooked with bacon. This was a meal I loved—lucky for me, as it was the same late-night dinner served every night. I loved the big slab of hot ham, slathered with my favorite sauce, and the peas and beans, all washed down with a hot cup of coffee.
in red gravy. The potatoes were cheesy and crisp on top, and the green beans had been cooked for hours with bacon. There was plenty of Kool-Aid to wash the dinner down. Actually the mess hall drink was Jell-O mixed with Long Binh water pumped from the water table and lots of ice. I drank gallons of the stuff.

Soon time in the '90s, I read a different memo warning of the dangers of showering at Long Binh. This memo failed to mention razor blades or nocturnal interlopers. This memo was all about the dangers of the warmish water that had coursed down my young body. Now that I thought about it, the water did often have an odd smell. Sort of medicinal or chemical, and sometimes oily.

This memo mentioned the orange barrels and talked about an herbicide nicknamed Agent Orange by the military folks who had dumped it out of the sky onto the green landscape of South Vietnam. The barrels containing the herbicides had been reused by the ever-frugal Army to contain and dispense water to us at Long Binh. They took no great care to clean the barrels as it was well-known that the stuff only harmed trees and not people. Above the little shower units were placed hundreds of these barrels into which was pumped the defoliant-soaked water of Long Binh. The water sat in the barrels much of the long day, cooking in the hot Vietnam sun, awaiting the eager victims who queued up to take turns being exposed to a premier cancer risk.

Test results about dioxins causing cancer had long been known to scientists and to the company that marketed the stuff to the Army. In fact, they had told the Army. But the Army was busy thinking about stopping the spread of communism. The showers got our exteriors. The Kool-Aid got us from the inside.

This second memo made me think of my grandfather, who served in the Army in the Philippines in 1910. If the SOBs don’t get you coming, they will get you going,” he often said.

So what does a guy do when he gets a memo that the rest of his life is unlikely to be endless vacations to Kauai, wind surfing, hiking, or even veranda sitting, watching frolicking sea turtles? You do what you can. You try to make the most of the time you have left, whatever that may be, with the people you love. You savour the moment. You try to avoid being consumed by bitterness about all the lies you’ve been fed. You put one foot in front of the other, as long as you have the mobility to do so. You soldier on.

David Willson’s “REMF Diary of Dying and Bureaucratic Complexity,” which details his struggles to cope with life-threatening, AO-related multiple myeloma, appeared in the November/December 2009 issue of The VVA Veteran.

**Agent Orange: The Past Is Prologue**

**BY ALAN OATES, AGENT ORANGE/DIOXIN COMMITTEE CHAIR**

Herbicides have ravaged many veterans and their families. So, where and how did the Agent Orange nightmare begin for Vietnam veterans and their offspring?

First, one needs to know what we mean by “Agent Orange.” That term has become a catch phrase that refers to several mixtures of herbicides that were used in Vietnam. To identify the different agents, manufacturers painted a color band on their storage drums. The herbicide agents were Orange, White, Blue, Purple, Green, and Pink. These same herbicides in their military formulations were stored, tested, and used in many locations outside of Vietnam. Agent Orange, the most-used herbicide agent, consisted of two herbicides, 2,4-dichlorophenoxyacetic acid (2,4-D) and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T). These two chemicals were also used in the formulation of some of the other agents.

In the 1930s agricultural research identified plant hormones that regulate the growth of plants. By 1939, fifty-four substances were identified. By far the most powerful was the chemical 2,4-dichlorophenoxyacetic acid—better known by the abbreviated name 2,4-D. It later became an equal partner with 2,4,5-T in the formulation of the Agent Orange herbicide used in Vietnam. While Agent Orange would not be the first herbicide formulation sprayed in Vietnam, it was the most used.

Scientists found that an overdose of the plant hormones injured and even killed plants. In the early 1940s E.J. Kraus first suggested that these plant hormones could be used as weed killers. Kraus believed his research into these plant hormones would interest the War Bureau of Consultants. The WBC was formed under the National Academy of Sciences as a result of an October 1941 directive from President Franklin Roosevelt to Secretary of War Henry L. Stimson. The committee’s job was to assess the state of the art of biological warfare.

Kraus suggested using 2,4-D in chemical warfare. There is some conflicting information on when Kraus made his recommendation. Robert Allen and C.D. Stelzer, in their article, “Dioxin and the Courts,” wrote: “By 1943, Kraus was confident enough about the properties of 2,4-D and 2,4,5-T to recommend them to a U.S. National Academy of Sciences committee on biological warfare.” But the WBC disbanded before 1943.

The WBC reported its findings in a February 1942 report, recommending the formation of a civilian agency to research defensive and offensive biological warfare. As a result, the War Research Service was formed in 1942 with George F. Merck as director. The WBC then disbanded.

Merck sent a report, dated January 3, 1945, to the Secretary of War. The report noted: “The major achievement of the War Research Service, however, was the organization of a program of research and development to extend the boundaries of knowledge concerning the use of pathogenic agents as a weapon of war.”

It also points out that “In November 1942 War Research Service requested the Chemical Warfare Service of the Army to prepare to assume responsibility for a larger scale research and development program involving the construction and operation of specially designed laboratories and pilot plants. The site chosen for these facilities was at Camp Detrick, Frederick, Maryland, where construction was begun in April 1943.” This was established under the Army’s Special Projects Division of the Chemical Warfare Service. E.J. Kraus became the head of the herbicide program at Camp Detrick.

Soon after the establishment of the facilities at Camp Detrick in 1943, the Army set up field-testing facilities in Mississippi, a plant for larger scale production in Indiana, and a field-testing site in Utah. Merck’s report boasted “information on the effects of more than one thousand different chemicals on plants.” It was one of the more important accomplishments of the programs.

For those interested in more research, a good place to start is the website, www7.nationalacademies.org/archives/cbhw.html.

More than herbicides were researched at Camp Detrick. There also was research and development of biological and chemical agents that affect humans and animals. Not everything that came out of these programs was bad. The programs provided vital information on how to protect the military and civilian populations from poisonous agents and made advancements in the treatment of diseases.

While synthetic forms of herbicides, including 2,4-D, were developed during World War II and there were plans for their use, the war ended without the military using them against the enemy. After the war, these herbicides were used heavily in agriculture to control weeds and thereby increase crop yield.

Eric Croddy, in his book, Weapons of Mass Destruction, reports that the U.S. military also planned to use a combination of 2,4-D and 2,4,5-T in the Korean War (1950-53). Again, the war ended without the use of the herbicides.

Croddy wrote that the herbicides were reported as destroyed in 1955. Alvin Young’s December 2006 DOD report, The History of the U.S. Department of Defense Programs for the Testing, Evaluation, and Storage of Tactical Herbicides, also documents the plans for the deployment of herbicides during the Korean War. “Although not used in World War II, the concept of vegetation control was not forgotten,” he writes. “In 1952, the Department of Army’s Chemical Corps Biological Laboratories at Camp Detrick, Maryland, initiated a major program to develop both aerial spray equipment and herbicide formulations for potential deployment in the Korean Conflict.”

Again, although not used in Korea, the equipment and the formulated chemicals were stored on Guam until 1954, after which the equipment was sent to Utah and the drums of herbicide were sent to Camp Detrick. Camp Detrick (now Fort Detrick) continued working on developing deployment systems and herbicidal materials through the 1950s.
What Can Science Offer the Children of Agent Orange?

BY CLAUDIA GARY

About two generations after the last American troops left Vietnam, scientific research has finally confirmed things that many veterans have strongly suspected for decades. Although the Department of Veterans Affairs has acknowledged a connection between dioxins such as TCDD (2,3,7,8-tetrachlorodibenzo-p-dioxin) and various illnesses in veterans who were exposed to them in Vietnam, the VA so far has recognized only a very limited array of birth defects found in the offspring of such veterans. Scientists believe that further research may reveal much more in the way of dioxin-related birth defects.

Structural defects—those that are visible—seem to represent only a small portion of the damage. As Betty Mekdeci wrote in these pages in 2007: “When compared to non-veterans’ children, the children of Vietnam veterans have shown consistent increases in learning, attention, and behavioral disorders; all types of skin disorders; problems with tooth development; allergic conditions and asthma; immune system disorders including chronic infections; some childhood cancers; and endocrine problems including thyroid disorders and childhood diabetes. More and more studies of prenatal exposures to dioxins and similar chemicals are adding support for these associations.” Some of these problems are not detected until later in life.

Mekdeci is the executive director of Birth Defects Research for Children, Inc. Her article was reprinted in this month’s San Francisco Medical Journal. The National Birth Defect Registry, which Mekdeci founded in the early 1990s, has recorded thousands of such cases and helped launch research studies. The Vietnam veterans questionnaire used in her registry was developed in conjunction with the New Jersey Agent Orange Commission. More information about the registry and BDRC can be found at www.birthdefects.org. For Mekdeci’s article, go to www.vva.org/veteran/1207/veteran1207.html

HOW DIOXINS CAUSE DAMAGE

What makes TCDD particularly dangerous is the shape of the molecule. “Because it just happens to have a shape that fits into a receptor that causes many different kinds of toxicity, dioxin is clearly one of the most toxic chemicals known to man,” said Dr. R. Thomas Zoeller, Professor of Biology at the University of Massachusetts. Zoeller specializes in thyroid hormone action on brain development and environmental disruption of thyroid hormone action.

How does this toxic effect work? “There is good evidence that dioxin increases thyroid hormone clearance from the blood,” Zoeller said. “The liver plays a role in managing how much thyroid hormone is in the blood at any one time, and dioxin activates enzymes in the liver that clear thyroid hormone. But dioxin also goes into the nucleus of cells and causes changes that I don’t think we fully understand. It probably has a direct action on the ability of thyroid hormone to function in cells, [and] in the brain. These mechanisms are probably the most important. Thyroid hormone plays a role during the development of brain structure.”

Asked about recent important developments in dioxin research, Zoeller said: “The Environmental Protection Agency recently reviewed dioxin toxicity for their standard-setting process, and they used thyroid function as the most sensitive index of toxicity. So I think it’s clear that dioxin is well known to influence the thyroid system, and that [the relationship between dioxin exposure and the thyroid] is an important public health concern.”

One thing that complicates the research, however, is the difficulty in measurement. “I don’t think we have a good handle on ways of visualizing or of measuring toxic effects on the thyroid system,” Zoeller said, “because we are learning more and more that chemicals in the environment can interfere with thyroid hormone action in ways that are not represented in serum levels of hormones” as measured in the blood.

IS DIOXIN EXPOSURE LINKED TO AUTISM AND ADHD?

“When a syndrome or disorder like autism reaches an incidence level of one child in eighty-eight,” Zoeller said, citing the most recent rates, “I think we should all be very concerned.” Does the thyroid interact with the functioning and development of ADHD as well? “Absolutely,” he said. “Thyroid hormone plays an important role. But I think in most cases, thyroid hormone interacts with many factors. That makes it a very complicated system to study.”

Dr. Erin Bell, Associate Professor of Environmental Health Sciences, Epidemiology, and Biostatistics at the University of Albany (SUNY) School of Public Health, specializes in examining the association of adverse reproductive outcomes with occupational and environmental exposures. “We are very interested in looking at autism and ADHD [attention deficit hyperactivity disorder],” Bell said. These are “of clear interest to the research community; the interest is not limited to Vietnam veterans, but their exposures are of continued interest for those of us evaluating the health effects of pesticides and other chemicals like dioxin. In general, we are looking at those chemicals that may interfere with the hormonal system. These are referred to as endocrine disruptors. Scientists are looking at those chemicals that would disrupt the endocrine system and whether they are related to autism and ADHD. This is a younger field; we are just beginning to have large epidemiological studies to look at these things. The literature is reviewed every two years [for the Veterans and Agent Orange report, published by the Institute of Medicine], so I would anticipate that for the next VAO report they would have more literature to be able to look at these kinds of outcomes.”

THE LINK BETWEEN PATERNAL EXPOSURE AND BIRTH DEFECTS

Most studies focus on maternal exposures during pregnancy, with regard to reproductive outcomes,” Bell said. “However, in the pesticide literature there are other studies that look at paternal, as well as maternal, occupational exposures to pesticides. And so they have been able to explore paternally mediated reproductive outcomes.”

There are two possible routes for this, she said. “One is that there is some chromosomal damage at the time of exposure that would then be delivered via sperm. Or, you have exposure that is delivered to the mother through the semen, so that the mother is exposed while pregnant.”

Since the life cycle of sperm is 90 days, “once [servicemen were] removed from exposure in a 90-day period, most of the time any damage from the chemical should be remediated at that point past 90 days. But again we still look at it, and there are some exposures where that would not be the case.”

For current studies, she said, “the question of whether paternal exposures can lead to adverse birth outcomes is a consistent research question, independent of Vietnam veterans. And pesticide studies now ask about paternal exposures in the three months prior to conception, because if there’s going to be an effect from the male, that’s when it would most likely happen.”

Although the potential for exposure is there, Bell added, “the literature has not provided consistent evidence that these exposures are associated with birth defects. Spina bifida is one exception, and that is discussed in the VAO report.”

The toughest challenge, Bell said, “is trying to understand the paternal exposure. Most of the literature does focus on maternal exposures. And much of the literature looks at all pesticides combined, rather than dioxins specifically or herbicides that are of interest to the committee. And so those are ongoing challenges.”

But Bell said that “one of the things we’re trying to do is to look at individual birth defects. A lot of the previous literature, due to the challenges of studying birth defects, combined all the defects together into one group. And that would be similar to combining all cancers together. We think that different defects will have different risk factors, just as different cancers have different risk factors. With funding and with better support, we would be able to better look at dioxin with regard to specific defects. That would help us in terms of understanding this issue.”

Bell noted that “there is very little funding to look at birth defects,” even though “there is a great deal of interest in the research community to examine risk factors of birth defects.” This is the case, she said, “independent of the Vietnam veterans; it is just not something that is on the radar screen of a lot of people.”

BRIDGING INFORMATION GAPS

Dr. Mary K. Walker, Regent’s Professor in Pharmacology and Toxicology at the University of New Mexico, chaired the VAO committee and wrote the preface to the 2010 update of its report. The latest major studies on paternal exposure to Agent Orange, she said, were “identified back in 1996, in the update where spina bifida was connected with exposure to chemicals in Agent Orange. Since that time, the VAO committee, through the Institute of Medicine, has continued to review any information in the literature related to exposure to the chemicals [dioxins] that were components of AO, and potential birth defects.”

When asked why there have been so few known studies related to paternal exposure during that time, Walker said: “Possibly one explanation would be that until more recently, the biological plausibility of birth defects related to paternal exposure was not well understood. And I think in the last five to seven years, we are starting to understand the biology better.” Such
research, then, was not a focus “until the biology caught up in understanding how paternal exposure could contribute to birth defects.” Since these things have been understood more recently, she said, “I think now we are starting to see more interest in looking at, and designing, those types of epidemiology studies.”

Asked whether it might be possible now to reexamine information from previous studies, Walker said: “I would say that the information should be present in the databases that exist from the VA, as well as the individuals in whom we have some assessment of what their exposures were—particularly the Ranch Hand cohort as well as the Army Chemical Corps cohort. That information is already present and could be looked at again.”

Additional studies could be done in some cases based on existing data, now that the biological plausibility is understood regarding a connection between paternal exposure and birth defects. This was already among the VAO committee’s suggestions for future research. Some of the areas of concern, Walker said, are “neurological deficits,” since there is “evidence from the animal literature that those are endpoints that would be of interest.” Others would include “thyroid hormone deficits, as well as possibly cardiovascular disease that develops in the offspring later in life.”

The study, updated every two years since 1994, is produced by an Institute of Medicine committee, “a group of individuals who have reviewed the literature in greatest detail and summarized it in a comprehensive way,” Walker said. “So I think that the recommendations that have come out by the committee are probably the ones that are the most relevant. The recommendation is that new studies should evaluate offspring of Vietnam veterans for what would be considered defined clinical health conditions that develop later in life. ADHD would be an excellent example. But more broadly, the recommendations of the committee identified three particular areas: neurological disease, immune dysfunction, and diseases that may be caused by disruption of the endocrine system.”

Who would carry out the proposed studies? Walker suggested that they would probably be “academics who have epidemiology experience,” since these are the groups that have conducted such studies in the past. Although universities most likely would perform the studies, she said, “the VA would certainly need to be an advocate.” Although VA funding would “be great,” she said, whether or not they can directly provide funding, it would be extremely helpful for the VA to be “an advocate to say that these are the sorts of things that are information gaps” that we need to fill.

Summing up the two major information gaps that the committee identified, Walker said the “studies on offspring need to be conducted following paternal exposure without maternal exposure,” along with studies “assessing clinically defined disease, focusing on neurological, immunological, and endocrine-related diseases.”

Notable among the published recommendations are that “work needs to be undertaken without delay to address questions regarding the potential for paternally mediated, clinically defined health outcomes in offspring, and the effective utilization of the VA’s medical database.” The report goes on to recommend “improved linkage and sharing between DOD and VA [including improved] collection of exposure data during current deployments, so that the impossible associated with missing exposure information will not impede investigations of health consequences in future veterans, as has been the case for Vietnam veterans.”

Another prominent recommendation is: “Available information should be gleaned from existing cohort studies.” This would include data on the Army Chemical Corps, the largest cohort of Vietnam veterans exposed directly to herbicides and TCDD.

**WHAT CAN BE DONE NOW?**

Avoiding risk and making the environment safer is a major and necessary focus. But since it is impossible to undo exposure to dioxins, what can be done for veterans and their children who are already affected by dioxin exposure?

Betty Mekdecie suggested that specially staffed centers could be created to provide evaluation and services for children with suspected—if not proven—dioxin-related birth defects and diseases. “We would have scientists with expertise in the types of disciplines related to chemical exposures and adverse reproductive outcomes,” she said. “They would study the children; they would make recommendations for treatments that the families wouldn’t have access to in another place—maybe including non-embryonic stem cell work or monoclonal antibodies—and send a treatment plan back to their regular doctor. I believe that through this process we could not only help for the most children, but we also would be learning things that we could extrapolate to the civilian environment.”

Mekdecie compared this concept to the children’s environmental centers run by the National Institute for Environmental Health Sciences.

Meanwhile, although a healthy diet and lifestyle are important for everyone, Zoeller pointed out that “Vietnam veterans and their children, and maybe even their grandchildren, should be especially vigilant and should have annual physicals and make sure their health care providers are particularly vigilant. Often, for example, diabetes isn’t really picked up until it’s acutely symptomatic. That really shouldn’t happen. People who are at risk of diabetes should have frequent checkups. The same goes for heart disease.”

It is also essential to keep an eye on what the scientific community is doing. In some cases there are opportunities to suggest or participate in ongoing studies. In all cases, staying informed can be helpful in facing the future and taking effective action.

“I don’t think we have a really good understanding of all of thyroid hormone’s effects and how to measure those effects,” Zoeller said. “So there can be a lot of debate about whether thyroid hormone or thyroid disruption plays a role in the symptoms of Vietnam veterans, and it’s the same with autism. I think we need very targeted research on how to evaluate thyroid hormone action.”

**FURTHER READING**

The Institute of Medicine’s VAO report is online. The PDF version is free, and the format makes it easy to search for sections of particular interest. Walker’s Preface, for example, starts on page 1; a diagram of the TCDD molecule can be found on page 88; the chapter on Reproductive Effects and Impacts on Future Generations starts on page 540; and the Committee’s conclusions and recommendations begin on page 759. The most recent update of the VAO report (released in September 2011) may be downloaded from www.iom.edu/Reports/2011/Veterans-and-Agent-Orange-Update-2010.aspx.

George Claxton, the former chair of VVA’s Agent Orange/Dioxin Committee, made valuable contributions to this article.

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**THE VVA VETERAN | MAY/JUNE 2012**
THE LEGACY OF AGENT ORANGE

Three Generations of Shattered Health

BY JIM BELSHAW

Jim and Sukie Wachtendonk’s forty-year struggle with Agent Orange stretches across three generations. It touches not only the Vietnam veteran and his wife, but their children and grandchildren. Each generation has faced birth defects and debilitating disease.

It began in Vietnam, where Jim was exposed to the defoliant. In 1976 his daughter, Ree Anne, was born with health issues so severe, she was not expected to live. Two years later, when their son, Zachary, was born, doctors said he would be little more than a vegetable. But Zak Wachtendonk would earn more than one college degree, and become a successful computer expert who worked in information technology for the state of Wisconsin. He died at the age of thirty in 2009.

Both children were diagnosed with eye and muscle disorders, epilepsy, autism, brain deformities, bone deformities, and other serious health problems. The children suffered so many seizures that the Wachtendonks stopped calling for ambulances.

“We just stayed with them until the seizures ended.” Jim said.

Ree Anne was born with aqueductal stenosis resulting in hydrocephalus. She underwent experimental brain surgery as an infant. She had learning disabilities and sensitivities to many chemicals. Sukie Wachtendonk said her daughter “has not known a day of her thirty-five years without pain and suffering from her disabilities.” Ree Anne’s own son and daughter were born with autism and chromosomal defects. Her son underwent many surgeries to repair a cleft palate; her daughter required long hours of care. She was unable to roll over or lift her head. Sukie worked with her for four hours a day. Doctors warned Sukie and Jim that Ree Anne could suffer brain damage and even death after necessary brain surgery. Nonetheless, she is thirty-five now, the mother of two children.

Two years after Ree Anne’s birth, Sukie found herself working just as hard with Zachary.

“I had to teach him how to raise his head, walk, and crawl,” she said. “They told me he would be a vegetable, but he wasn’t a vegetable. He was a successful human being. He was sweet, and he was my hero.”

She is frustrated that Jim is not on the VA Agent Orange registry.

“We were one of the first people to register, and he’s not there,” she said. “They don’t see him for Agent Orange stuff. They won’t admit it. My husband is just a ‘crazy PTSD vet’ married to a nutty wife, and they have sick kids, and it doesn’t have anything to do with the VA. The rank-and-file people at the VA have been terrific. It’s the upper-umpers who don’t want to be responsible for anything. And it’s all about money. Nobody wants to touch us with a ten-foot pole.”

For most of his life, Jim Wachtendonk had found strength and solace in music. He had played the guitar since he was a boy of six or seven. All through his struggle with the effects of Agent Orange he continued writing and playing his music, performing at hotels and concerts, including the 1984 HBO veterans concert.

But when illness made the guitar difficult for Jim, Sukie made a suggestion that started him down a different artistic road. Seeing a small set of watercolors one day, she suggested that he try painting.

He has been painting ever since, eventually branching out to three-dimensional art. “I never would have happened if Sukie hadn’t put that thought in my head. It was so important. She’s in many of my paintings. She’s the keeper of the light.”

He wanted to create public art with a purpose. One piece struck a chord with the community. He spray-painted a 30-gallon drum white, then added a 10-inch orange ring around it. He displayed it in the Richland County Bank for a week. A sign attracted the attention of bank customers: “Do You Know Someone Touched by Agent Orange? If you know someone touched by Agent Orange, please write down their name on my art barrel as we remember. Perhaps so shall others.”

“They’re a couple of pens there, and folks have been going in and writing down the names of loved ones,” Jim said. “My goal as an artist is to have folks fill that thing full of names, and then I’ll paint another. That’s action, right?”

Other Faces of Agent Orange, including a separate profile of Ree Anne Wachtendonk, are located on the Agent Orange page of the VVA website, www.vva.org. Jim Wachtendonk’s songs, poetry, and prose can be viewed at www.booneytunes.net
Vietnam veterans struggle with a wide array of physical ailments resulting from exposure to Agent Orange. That they were exposed to this toxic herbicide by their own government adds pain, confusion, and anger to the range of emotions. As Americans mull the suffering caused by Agent Orange, many are unaware that they and their loved ones are exposed to potentially dangerous herbicides on a daily basis. Indeed, government-approved herbicides—many of which contain ingredients that were used in Agent Orange and are manufactured by the same companies that produced them for use in Vietnam—are widely and frequently used on farms and yards across the United States today.

This widespread use of herbicides has made it particularly difficult for medical professionals to dedact with certainty the side-effects of Agent Orange. Because so many Americans have been exposed to a wide array of chemicals, forming control groups that have not been exposed to toxins is a major challenge for researchers. Lacking “clean” control groups, the medical community will only with great difficulty come to a clear, truthful, and scientifically sound understanding of Agent Orange’s side-effects.

A 2008 congressionally mandated study, Veterans and Agent Orange, pointed to this dilemma. The authors noted that studies of individuals exposed to herbicides in chemical plants “provide stronger evidence about health outcomes than do studies of veterans because the industrial exposures [are] measured sooner after occurrence and [are] more thoroughly characterized.”

In order to understand the rise in the use of herbicides in the U.S., one must examine the exponential growth in the popularity of genetically modified (GM) crops. Beginning in the 1990s, GM crops, which have altered DNA that makes them resistant to specific herbicides, began to dominate U.S. agriculture. Recent estimates suggest that between 86 to 93 percent of the soybean, cotton, and corn crops in the U.S. are genetically modified.

While experts had believed that the proliferation of GM crops would decrease the need for herbicides, evidence suggests that the opposite is true. According to a 2009 study released by the Organic Center, the amount of herbicides used on GM corn, cotton, and soybeans increased by 7 to 8 percent between 1996 and 2008.

Scientists attribute this spike in herbicide use to the fact that more than 130 weed species have developed a resistance to herbicides such as Roundup. The world’s top-selling herbicide since 1980, Roundup, manufactured by Monsanto (the producers of Agent Orange), is the trade name for glyphosate, the most widely used herbicide in the U.S. According to the USDA, the use of glyphosate doubled between 2005 and 2010. It is estimated that 94 percent of soybean crops and 70 percent of cotton crops are treated with Roundup.

In order to contain and limit the growth of herbicide-resistant weeds, many farmers have increased the amount of Roundup they apply to their crops and also have turned to herbicides with higher toxicity levels than Roundup. 2,4-Dichlorophenoxyacetic acid (2,4-D), an herbicide that was a key ingredient in Agent Orange, is the most notorious toxin farmers have turned to in the wake of Roundup’s increasing ineffectiveness. Because 2,4-D has proven to be so reliable at killing weeds, some in the agriculture industry see it as a critical part of the industry’s future. Indeed, Dow Chemical Company, the world’s second largest chemical manufacturer, has applied to USDA to gain approval for a new variety of GM corn that is resistant to 2,4-D. The chemical is also commonly found in weed-and-feed products that are applied to areas such as lawns, playgrounds, and school yards.

Citing studies that link exposure to 2,4-D with birth defects, cancer, nerve damage, non-Hodgkin’s lymphoma, circulatory and respiratory anomalies, hormone disruption, and Parkinson’s disease, many scientists and health advocates have reacted to the increased popularity of 2,4-D with great apprehension. George Claxton, former chair of VVA’s Agent Orange/Dioxin Committee, said that 2,4-D is “a very dangerous chemical” that “should be off the market.” Natural Resources Defense Council senior scientist Gina Solomon said that individuals “can be inadvertently exposed to chemical residues” from toxins such as 2,4-D every day. “There’s no reason to continue allowing a toxic Agent Orange ingredient in the places our children play, our families live, and our farmers work,” she said.

While less toxic than 2,4-D, Roundup and other glyphosate-based herbicides also draw a wide array of criticism from health advocates. Birth defects, liver dysfunction, and cancer are some of the diseases that studies have linked to exposure to Roundup. A recent study published in the Journal of Toxicology in Vitro found that Roundup also harms male fertility by destroying testosterone.

In 2009 researchers in France found that one of Roundup’s inert, or “inactive,” ingredients—polyethoxylated tallowamine (POEA)—is capable of killing embryonic, placental, and umbilical cord cells in humans. According to the authors of the study, POEA can have a harmful effect on human cells at concentrations far lower than those used on farms and lawns. Due to the fact that it is classified as an inert ingredient by the EPA, the USDA permits the use of POEA, which is used to help herbicides penetrate the surfaces of plants, in products the agency certifies as organic. Due to increased concerns regarding the safety of POEA, the EPA announced in 2011 that it will reevaluate the safety of glyphosate in 2015. In the meantime, some cities such as Boulder, Colorado, have banned the use of Roundup on public property.

Despite the fact that use of atrazine, an herbicide used heavily on corn crops, has remained relatively flat over the past ten years, it remains widely popular and the target of much criticism. Studies have linked the chemical to birth defects and disruption of the reproductive system. A 2011 Environmental Research study found evidence that atrazine could be causing menstrual irregularities and low estrogen levels in women. The study also found that the herbicide can be dangerous at levels far below the EPA’s limit. A 2011 independent EPA panel concluded that there is “suggestive evidence” that atrazine can cause ovarian cancer, non-Hodgkin’s lymphoma, and hairy-cell leukemia. The panel also found “strong” evidence linking the herbicide to thyroid cancer. Available data “failed to provide compelling evidence that atrazine is not carcinogenic,” according to the panel. The EPA is expected to officially review atrazine in 2013.

The fact that atrazine—which washes into surface water and groundwater because it does not cling to the soil—is the most commonly detected herbicide in America’s rivers and wells, fuels many of the herbicide’s opponents. In 2009 The New York Times reported that 33 million Americans have been exposed to atrazine through tap water. Nevertheless, the EPA maintains that it fully protects the public from excessive levels of the herbicide. “The exposure that the agency allows under its atrazine drinking water regulations is at least 300 to 1,000 times lower than the level where the agency saw health effects in the most sensitive animal species tested,” the EPA said in a statement.

Herbicide-producing companies such as Dow Chemical and Monsanto also adamantly maintain that their products pose no severe threat to the public’s health. Monsanto spokeswoman Janice Pearson, in response to a claim that Roundup causes infertility, said: “Regulatory authorities and independent experts around the world agree that glyphosate does not cause adverse reproductive effects in adult animals or birth defects in offspring…even at doses far higher than relevant environmental or occupational exposures.”

Such assurances do little to quell the concerns of Monsanto and Dow’s critics. “Because of the tremendous liability [associated with conceding the carcinogenic nature of their product], they’re never going to admit to it,” George Claxton said, dismissing the chemical manufacturers’ claims that their products are safe.

The fact remains that it is difficult to measure the extent to which human health is affected by exposure to herbicides. Because it is unethical to test herbicides on humans, scientific conclusions can only be based on circumstantial evidence and studies conducted on animals. Nevertheless, countless scientific studies—particularly those focused on people who work in the agricultural and chemical industries—provide strong evidence that herbicides can have an adverse effect on human health.

In 2010 University of California-Berkeley Professor Tyrone Hayes claimed that atrazine can chemically castrate frogs and cause male frogs to undergo a sex change. A spokesman for Syngenta, the Swiss company that produces the chemical tested in the study, dismissed the findings, saying the research was poorly designed and based on “bad data.” A 2012 study conducted by University of Pittsburgh ecologist Rick Relyea found evidence suggesting that exposure to Roundup causes tadpoles to experience abnormal hormonal shifts that result in the animals undergoing changes in their shape. Purdue University professor Don M. Huber, an outspoken critic of GM crops, also believes that herbicides pose a major threat to the safety of livestock. According to Huber, farm animals that are fed Roundup-selected GM crops have high rates of miscarriages and spontaneous abortions. Huber alleges that 20 percent of American dairy heifers are infertile and that as many as 45 percent of cattle experience spontaneous abortions.

Studies also have shown that pets can be left vulnerable to an array of physical conditions as a result of being exposed to herbicides. For instance, a Purdue University study...
Agent Orange Without Protection

BY WILLIAM TRIPLETT

Given the voluminous research, study, examination, and debate that has proliferated over the last forty years about Agent Orange, one might feel safe in assuming that most every aspect of the highly toxic herbicide and its effects on human health has been hashed over in some way, if not fully resolved.

For many Vietnam veterans, the controversy was resolved in great part by the Agent Orange Act of 1991, which established a presumed connection between exposure to Agent Orange and a list of diseases and illnesses, including certain cancers. While the landmark legislation couldn’t give veterans their good health back, it did force open a door that had, until then, been closed to them—a door to much-needed compensation and other related benefits.

Veterans understandably rejoiced. But what about civilians exposed to Agent Orange?

According to the federal government, between 72,000 and 171,000 American civilians may have worked in Vietnam between 1964 and 1974. The number can’t be narrowed any further because surviving records are scant. In 2005 the U.S. Government Accountability Office counted a mere handful of civilian claims—thirty-two—requesting compensation for diseases that the VA recognizes as service-connected to Agent Orange exposure. But GAO acknowledged there could be many more looking for help.

There has been comparatively little, if any, official action taken on civilians who were in-country and later developed ailments that are on the VA’s Agent Orange service-connected list.

Lesli Dahlke discovered this about three years ago. Part of a USO tour to Vietnam in 1970 and later diagnosed with soft tissue sarcoma (which is on the VA’s list), she called the agency for help. “I was told they couldn’t help me because I was not a veteran,” Dahlke said. “I had gone over as a guest of the Army, but I wasn’t employed by the Army. End of call.”

Dahlke had visited all four Corps while in Vietnam, often traveling to remote areas that official records show were sprayed—sometimes heavily—with Agent Orange before and during her time in-country.

She lived an otherwise normal life until 1990, when she was diagnosed with a type of sarcoma rare for a woman of thirty-eight with no family history of cancer. But it wasn’t until 2009, years after a ten-hour surgery removing five internal organs along with an eight-pound tumor, that she even learned that her type of cancer was presumed to be connected to Agent Orange exposure in Vietnam. By then, Dahlke and her husband already had been forced to sell their home and file for bankruptcy because of medical bills.

True, she had only been in-country less than three weeks. But the VA’s website clearly states that service-connection is presumed for anyone who “set foot in Vietnam,” including “brief visits.” Only the VA, however, has presumed such a connection. Meaning, as Dahlke learned when she first called the VA, “the burden of proof is different if you’re not a veteran. It’s on you.”

With no scientific studies proving a conclusive link—though some research strongly suggests it—that’s a burden of proof almost impossible to meet. As the GAO noted in its review of thirty-two civilian claims, “most have been denied. Denials...stemmed, in part, from the fact that under the laws governing these claims, claimants must demonstrate a causal link between their exposure to Agent Orange and their medical conditions, which is difficult to prove so many years later.”

The denying agency: The Department of Labor (DoL), which oversees the only system open to civilian claims of injury resulting from governmental service. That system was created with the Federal Employees’ Compensation Act of 1916, but it did not have a designation for Agent Orange-related claims until 2005, more than three decades after the Vietnam War officially ended.

Dahlke filed a claim with DoL. Denying it, the department said, “The evidence did not establish the claimed exposure.” She provided additional material. “I have a box of forty-year-old maps of where I had been. I have a diary with entries of all the places,” DoL, again denied. Dahlke has filed a formal appeal and is awaiting a decision.

She hopes to hear soon. In May 2010 she was diagnosed with a rare form of leukemia. In August 2011 she discovered she has lymphoma. Dahlke’s oncologist at the Mayo Clinic told her that both fall within the classification of cancers on the VA’s list of diseases presumed to be linked to Agent Orange exposure.

“Since July 1990 we’ve paid out of pocket almost $1 million in medical bills,” said Dahlke, who hasn’t been able to work since that year. “I would like to be reimbursed for those costs and for costs going forward. I would like to know I have money coming in to survive. I’m just looking for what is fair and is already on the books.”

For additional information, see Lesli Dahlke’s website, www.kalessinmocence.com

Searching for Legislative Remedies

BY RICK WEIDMAN

A friend, a Vietnam veteran like me, perhaps said it best: “The government brought us back from Vietnam to CONUS, but only we can help each other finally get all of us home.” He was referring to the battles that so many of us have been engaged in ever since we came home. None of those struggles has been greater or more frustrating that the battle to uncover the truth about the toxic exposures endured by so many in Southeast Asia, in the waters of the South China Sea, on the Korean peninsula, Okinawa, Guam, and many other locations in the world where American armed forces served. Many of us are sick, others have died, and there are many children and grandchildren who will never be healthy because of the toxic exposures of their parents.

One can argue that a constitutional democracy should, as a matter of course, do complete epidemiological studies of all of its armed forces if there is any reason to suspect that they have been harmed by that service. The Australians have done three complete studies of their naval, air, and ground service personnel who served in or near Vietnam.

That is how we in America discovered how the Blue Water Navy veterans were exposed, which was independently verified by the special review of the Institute of Medicine of the National Academies of Sciences last year. The desalinization units on Australian and American ships had the perverse effect of concentrating the dioxin that was contained in the herbicide mixed with kerosene or JP-4 fuel, thus keeping it on or near the surface many miles out to sea, where it was taken in by our warships to produce potable water.

American Vietnam veterans finally have an analogous study under way, thanks to friends in Congress and Secretary Eric Shinseki, who has forced the VA to contract the decade-delayed National Vietnam Veterans Longitudinal Study. When completed, this study may be the closest thing we will have to a large-scale, statistically valid, epidemiological study of Vietnam-era military service members.

It has been forty years since the initial exposures, and yet the suffering of many is still neither recognized nor is medical care provided. What can we do about this? Fortunately, there is a great deal each of us can do.

On April 27, VVA commented on proposed regulations by the Environmental Protection Agency that would permit use of genetically modified seed that is resistant to 2,4-D (a component of Agent Orange). As representative of American veterans who “were lied to about their exposure to toxic chemicals which have claimed many lives long after our troops left Vietnam and Southeast Asia,” VVA urged the EPA not to deregulate the GM seed “until such a time as an adequate environmental impact statement is prepared.”

VVA’s statement concluded: “Dow’s herbicide-resistant crop poses significant impact to many other food crops, biodiversity, and human health.”

Deregulation would not just be bad news for Vietnam veterans and our progeny because this additional exposure will add to the total body burden and impact of the previous exposures. It will also have an impact on the general population. We do not think it is just coincidence that the rate and numbers of children born with autism is at an all-time high in our nation.

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VVA, Agent Orange, and the Fight for Justice for Vietnam Veterans

BY MARY STOUT

Since its beginning, Vietnam Veterans of America has been at the forefront of seeking answers about the effects of Agent Orange on veterans and their families and getting justice through treatment and compensation for illnesses caused by the military’s use of this defoliant. The very first witness at the first congressional hearing on Agent Orange in 1979 was then VVA Vice President John Terzano.

One year earlier, the Veterans Administration had established an Agent Orange Registry offering veterans a physical examination, but it would not acknowledge that any of the illnesses they found had any link to Agent Orange exposure. A top VA clinician published an article, “Agent Orange and Witchcraft,” that concluded that Vietnam veterans were just using the issue to get compensation from the VA with no scientific evidence that Agent Orange had caused any illnesses.

Also in 1979, veterans brought a class-action lawsuit against the chemical companies that had produced Agent Orange. The lawsuit was settled by the companies in 1984 for $180 million. The disabled, the seriously ill, and the survivors of Vietnam veterans were paid an average of $3,000 from this lawsuit. But the suit did not find significant evidence of harm to veterans from Agent Orange: The companies settled simply to stop the controversy.

I first heard about Agent Orange when I joined Columbus, Ohio, Chapter 16 in 1981. We had lots of questions about the effects of Agent Orange on Vietnam veterans but few answers. At town fairs where we set up information booths, we explained that Agent Orange had been used as a defoliant to clear the jungle. The herbicides in Agent Orange were not the problem. It was dioxin, a byproduct of the manufacturing process, that was believed to cause illnesses in veterans.

To make Agent Orange, chemicals were heated together. The higher the temperature, the faster the process. But that also results in a higher concentration of dioxin. The military needed lots of Agent Orange, and fast, so manufacturers used the highest possible temperatures in the production. At the time, I realized that we were going to need a lot of scientific studies to get the answers veterans wanted and needed. Information booths were a good way to let veterans know that VVA was working in their interest.

The real impact of Agent Orange—and maybe my fervor to find the answers—came to me when I was working as Executive Director of the VVA Ohio State Council in 1982. A young woman called the office inquiring about the possibility of education benefits for veterans’ widows. Her husband had died of soft tissue sarcoma. The doctors who cared for him asked over and over what toxic chemicals he had been exposed to. They suggested that his illness may have been a result of exposure to chemicals in Vietnam.

She had two young children and was looking for a way to get an education so she could support them. Sadly, there was nothing we could do, but I talked to her about making a claim for an Agent Orange-related illness. She understood that her claim would be rejected but also that it would be in the system if we ever were able to get recognition of illnesses related to Agent Orange exposure. She drove the thirty miles to Columbus, and I accompanied her to the VA office to put in her claim. The claims worker took the information but was very pessimistic about any chance of compensation.

The second incident was a call from a woman whose husband had recently died from a severe heart attack just six weeks after participating in the Air Force’s Ranch Hand Study, which looked at the health status of the crews who flew Agent Orange spraying missions. She had been told by doctors that the blockage that had caused his heart attack could have been detected with a thorough physical examination. She questioned the validity of the Ranch Hand Study. As the years went on, many other people questioned this study, too.

1983: LOTS OF OBSTACLES

At one point, several of the Ohio State Council officers and I met with Dr. Barkley Shepherd, who was the head of VA’s Environmental Hazards Services. He briefed us on what VA was doing about Agent Orange concerns but related that the only illnesses he thought would ever be compensated were chloracne and porphyria cutanea tarda. And so, at VVA’s first National Convention in 1983, Rep. G.V. (Sonny) Montgomery (D-Miss.), the Chair of the House Veterans’ Affairs Committee, announced that those conditions would be determined to be service-connected. It seemed like we were making some progress, but it felt more like a bone to shut us up. For the next two years, little happened.

There were lots of obstacles to this quest for justice for veterans. The VA was dragging its feet on a study mandated by H.R. 1961, which had become law in 1983. There was little support from other veterans service organizations. Members of Congress wanted definitive proof that dioxin was the causative agent in any illnesses. And, perhaps most importantly, House Veterans’ continued on next page
Affairs Committee Chair Montgomery was steadfastly opposed. Montgomery was a World War II and Korean War veteran and a retired Major General in the Mississippi National Guard. As I got to know him, I determined that, while he was known as “Mr. Veteran,” his highest concern was always for the military. One of his greatest accomplishments was the Montgomery GI Bill, which gave education benefits to peacetime military personnel, including National Guard and Reserve members. It was a very successful recruiting tool for the all-volunteer force.

The idea that the U.S. military had used chemicals that injured its own forces was not something he could support. As Chairman, he was very powerful. The understanding in Congress at the time was that if a bill got through the House Veterans’ Affairs Committee, it became law because Sonny Montgomery approved it. Going against Montgomery would be our biggest challenge.

He also believed that “all politics is local,” reminding us of this at a hearing right after we had gotten the New York Times to run an article about his opposition to several Vietnam veterans’ issues. “The people in Meridian, Mississippi, don’t read the New York Times,” he told us.

But VVA members were asking us how to get rid of him. At the time, we had no chapters in Mississippi, so we decided to send a reporter to Meridian to talk to people about their views of Montgomery. They loved him, and he loved the article, even though it was meant to explain to VVA members the difficulty we faced in replacing him.

We did have support from members of the Vietnam Veterans in Congress caucus. Sen. John Kerry (D-Mass.) would add an important piece to the final legislation. In the House, Reps. David Bonior (D-Mich.), Tom Daschle (D-S.D.), and Lane Evans (D-III.) and their staffs worked with us throughout the whole process. Their support never faltered. Another indispensable group in our work on Agent Orange was the National Veterans Legal Services Project (NVLSP), which was by then working with VVA on many projects.

ANGIE’S PLEA

After I was elected VVA National Secretary in 1985, I got more involved in legislative issues than I had as the Membership Director, and the Agent Orange issue continued to bother me. We would talk about it but always felt stymied by the lack of progress.

One evening in the summer of 1986, I gave Jim Beard, a member of the D.C. chapter, a ride home after a VVA function. He invited me in for a beer and to say hello to his wife, Angie Auletta. During our conversation, Angie asked me what VVA was doing about Agent Orange. I told her, “Basically, nothing.”

“Why don’t you give up on this” she retorted. “The EPA just bought out a whole town because of dioxin. There’s something very wrong with that stuff.” Angie was an epidemiologist with the Environmental Protection Agency. We knew about Times Beach, Missouri, but could not find a way to correlate that incident to veterans’ experiences.

But Angie’s plea stuck with me. What could we do, I wondered. I asked VVA President Bobby Muller to let me put together a small group of interested people to discuss possibilities. He agreed but was not convinced we’d find any answers. Working with Bart Stichman of NVLSP and Ginny Richards, the VVA staff member who kept track of all things Agent Orange-related, we invited Wayne Wilson, the Executive Director of the New Jersey Agent Orange Commission, and Joe Bangert, the Executive Director of the Massachusetts Agent Orange Commission, to help.

Both commissions were working on ways to detect the presence of dioxin in veterans. Other state commissions also were looking into this issue. We also invited the lawyer who represented a group of Monsanto workers in West Virginia who claimed to have developed illnesses related to a dioxin spill at their facility. The judge in the case ruled that their Workers’ Compensation covered such incidences, not that dioxin didn’t cause the illnesses. And I invited Angie Auletta. I told her she had started this inquiry, and we needed her expertise as an epidemiologist.

We met over a weekend and spent all day Saturday and much of Sunday reviewing what had been done, what the stumbling blocks were to getting meaningful legislation to help veterans, and where we needed to go next. Auletta explained how difficult it is to find that “silver bullet” correlation between chemicals and illnesses that Congress was demanding because you can’t test chemicals on people. What scientists look for is an increased risk of illnesses in exposed communities. There were already scientists looking at dioxin exposure, but VA discredited every study by questioning the methodology, the sample size, or anything else they could find to throw doubt on the scientific work. At the same time, however, they couldn’t work out a protocol for the legislatively mandated study. Eventually, the VA transferred the study to the Centers for Disease Control, which also never did the study.

By the end of the weekend, we had the beginning of a new plan: We would propose legislation to have an independent scientific body review all dioxin-related studies and inform VA of their findings on a regular basis. Along with this, we needed to have VA rescind its regulation that only chloracne was related to Agent Orange exposure. NVLSP accomplished that by bringing the National Academy of Sciences. He argued that it was the only group Congress would recognize as fully credible. We reluctantly agreed.

It took four years of work with the VVA Agent Orange Committee, the VVA Board, members of Congress, VVA Legislative Coordinators, State Councils, and Chapters to finally have a chance to get the legislation before the House Veterans’ Affairs Committee. During that time, there were numerous hearings in both the House and Senate Veterans’ Affairs Committees. We tried to get the committees to allow testimony from scientists working in the field, but those requests were most often denied.

We also brought new attention to the issue and new supporters to join us. In 1986, a TV movie, Unnatural Causes, starring John Ritter and Alfie Woodward, presented the plight of a Vietnam veteran dying of cancer and his VA advocate fighting to get compensation for his illness. We worked with Adm. Elmo Zumwalt, who had been the Commander of Naval Forces in Vietnam from 1968 to 1970, when he was appointed Chief of Naval Operations by President Richard Nixon.

His eldest son, Elmo Zumwalt III, a Vietnam veteran, was diagnosed with lymphoma in 1983 and Hodgkin’s disease in 1985. In a 1986 article in the New York Times, Zumwalt III wrote: “I am a lawyer and I don’t think I could prove in court, by the weight of the existing scientific evidence, that Agent Orange is the cause of all the medical problems—nervous disorders, cancer, and skin problems—reported by Vietnam veterans, or of their children’s severe birth defects. But I am convinced that it is.” He died two years later.

After I was elected VVA National President in 1987, I did many interviews for radio, TV, and print media. The press was interested in the first woman elected to head a veterans service organization, so I had lots of
opportunities to talk about Agent Orange and the issues facing Vietnam veterans. It is important to note that throughout these years there was little support for Agent Orange legislation from the other VSOs. They followed the VA and Congress’ line that there was no connection between Agent Orange and Vietnam veterans’ illnesses.

The Veterans Administration had taken a very hard stand even against being asked questions by veterans about Agent Orange. We heard from many members that their VA doctors would not even discuss the possibility that some of the illnesses they had could be associated with this exposure. Years later, some VA doctors told me they had been specifically ordered not to discuss it.

As we got closer to the possibility of getting meaningful Agent Orange legislation, the VA took harder lines. At one Senate hearing, VA Deputy Administrator Tom Harvey, a Vietnam veteran, displayed the Ranch Hand flight maps and pointed out where he had served and probably been exposed. But, he noted, neither he nor any other Vietnam veterans working at the VA had any health problems. He then went on to introduce his wife and two-year-old son and said he understood Vietnam veterans were concerned about possible effects on their children. He, like them, worried about his son. He failed to point out that his son was adopted.

1988: THINGS BEGIN TO CHANGE

When President George H.W. Bush was elected, things changed at the VA. President Bush nominated Ed Derwinski to be the first Secretary of Veterans Affairs. My first meeting with the Secretary was a roundtable discussion with a large group of veteran advocates. Derwinski was interested in our concerns. Adm. Zumwalt was at that meeting and raised the Agent Orange issue. While the other major veterans’ organizations were silent, I was able to add to the Admiral’s concern.

Shortly after he was confirmed, Derwinski invited me and Paul Egan, VVA’s Legislative Director, to a private meeting. He wanted to discuss our top issues. While they differed from his, we came to an agreement to try not to surprise each other. For our part, we went to Derwinski several times about concerns with regulations with which we disagreed. We could have gone to the press and looked like heroes at VA’s expense, but our concern was for veterans. Derwinski listened to us and, on one occasion, called in the head of the Veterans Benefits Administration and had a regulation immediately rescinded.

Then one day in the summer of 1990, he called me to tell me he was having a press conference to announce that soft tissue sarcoma and Hodgkin’s lymphoma would be compensable illnesses in Vietnam veterans. These two diseases were included in the bill that was before Congress. Earlier that day, I had been interviewed on the Today Show about the Agent Orange bill, so this was great news. I went to that press conference and did several media interviews expressing our gratitude for the Secretary’s actions.

I knew that the person behind that VA change was Anthony “Tony” Principi, the VA Deputy Secretary. Principi was a Vietnam veteran who had been Counsel to the Senate Veterans’ Affairs Committee. We had worked with him on a regular basis. Several days later, Principi called and asked if VVA would back off its advocacy for the Agent Orange legislation, considering VA’s recent action. I explained that while we had faith that he would be an advocate for continuing to look at the effects of Agent Orange and communicating that to the Secretary, we could not count on the next administration carrying through with that concern.

I always felt the most important part of the legislation was the ongoing study of Agent Orange effects that was mandated in the bill. Besides that, I told him, our members have been working on this for more than ten years. We needed legislation to ensure this issue did not die. Principi understood our position and, in future hearings, VA tended to talk about what it had done, including the registry, but did not try to debunk our positions.

In 1990, H.R.565 was going to get a hearing in the House Veterans’ Affairs Committee Healthcare Subcommittee, chaired by Rep. Douglas Applegate (D-Ohio). For the first time we knew we had enough votes in that subcommittee to get it approved and sent to the full committee. Paul Egan and I met with Rep. Applegate and other members of the subcommittee before the hearing to make sure they understood the scope of the legislation.

But at the subcommittee hearing, a most unusual thing happened: Chairman Montgomery and Committee Minority Leader Bob Stumpf (R-Ariz.) attended the hearing and, as the ranking members who had voting rights on all subcommittees, voted against the bill. We lost the vote. Rep. Applegate was angry at this unprecedented interference with his subcommittee. We met with him again to determine if there was anything that could be done.

Applegate decided to threaten to withhold his support of some legislation Montgomery favored if the Chairman refused to bring the Agent Orange legislation to the full committee. Reps. Lane Evans and Jim Jontz had the legislation attached to a fiscal bill coming before the committee. Montgomery relented, knowing we did not have enough votes to pass in the full committee, and scheduled the mark-up (a hearing in which pending legislation is voted on) for, surprisingly, October 12, the opening day of VVA’s 1990 National Leadership Conference, held in Reston, Virginia.

We only had a few days’ notice but were able to identify the VVA members coming to the Conference from the districts of the House Veterans’ Affairs Committee members. We gathered those members and bused them to Capitol Hill the morning of the hearing. They went unannounced to their Representatives’ offices and said they were there to walk the members to the Veterans Affairs’ Committee hearing and expected them to vote in favor of the Agent Orange legislation.

I was not able to go to the hearing because I had to open the Leadership Conference, but those who went explained how many committee members looked apologetically at Montgomery as they voted for the amendment, which passed by a vote of 16-14. Montgomery’s admonition that “all politics is local” played out as representatives would not vote against the bill with their constituents sitting in the hearing room.

Sen. Daschle and Rep. Evans came to that Leadership Conference to speak at lunch that very day. They were ecstatic with the win for which they—along with VVA—had worked so hard.

On January 17, 1991, Rep. Montgomery introduced the bill in the full House, saying he did not think the NAS would find any increased risk from dioxin exposure but that he needed to get this controversial issue resolved so the committee could move on to other pressing issues. The bill passed unanimously on January 29. The next day, the Senate also passed the bill unanimously. On February 6 President Bush, in an unexpected White House ceremony, signed the Agent Orange Act and, ironically, handed the first signing pen to Sonny Montgomery, praising him for his advocacy for veterans.

The VA followed through with its responsibility to work with NAS to set up the processes for the review of scientific studies and the VA’s determination of compensable illnesses. While the VA did not keep track of the number of veterans compensated for Agent Orange-related illnesses under the Agent Orange Act until 2002, between 2002 and 2013 more than 650,000 veterans and their survivors received compensation under the provisions of the Act.

It took many years and many people to gain this justice for our generation of veterans, but the work goes on as VVA stands, always, in the forefront of the continuing fight for understanding this devastating issue.

Mary Stout served two terms as National President of Vietnam Veterans of America, from 1987-91, and as a U.S. Army nurse with the Second Surgical Hospital in An Khe and Chu Lai, 1966-67.
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Also on the administrative side, VVA will testify before the new panel that is being convened by the Institute of Medicine, pursuant to the Agent Orange Act of 1991. VVA staff will testify during the first public comment period in Washington, D.C., and Alan Oates, chair of the VVA Agent Orange and Other Toxic Exposures Committee, will be testifying at a hearing in Chicago later this summer.

The Agent Orange Act of 1991 stipulates that the VA must contract with the IOM every two years to do a complete review of all research that might document health care problems that stem from exposure of veterans to herbicides during the Vietnam War. The IOM gathers a new panel of scientists every two years who come together and review all recent research studies in peer-reviewed medical and scientific journals that may inform their recommendations to the VA Secretary regarding illnesses or conditions that may or should be declared service-connected presumptive.

VVA knows that many people who did not set foot on the ground in Vietnam also were exposed, most notably those sailors in the Blue Water Navy who served off the coast of Vietnam. There is good cause to believe that those who served as crew members of C-123 transport planes used in Vietnam for spraying missions in the Air Force Operation Ranch Hand also were exposed, because the planes never were decontaminated before they were converted for other uses back in the United States.

VVA also has good reason to believe that veterans who served in Korea after 1969 were exposed, as were those who served in Guam, Okinawa, Thailand, other U.S. military bases located in the Pacific during that time period, the Panama Canal Zone, and at many other military bases in the continental United States. The trick is to be able to document those exposures.

Much progress has been made in getting more conditions and illnesses added to the presumptive list in the twenty years since the Agent Orange Act of 1991 was enacted. Therefore, many have been helped with due Compensation & Pension payments and access to health care. However, much still remains to be done. There is cause for as much hope as there is cause for wringing of the hands. The more we work together, the more progress we will make toward getting access and health care for all who have been injured by these toxic exposures, particularly our children and grandchildren.

What can you do to help?

The first thing is to start educating your community and your members of Congress about the human toll that these exposures continue to wreak on Vietnam veterans and their families. Organize a town hall meeting to hear from veterans and their families in your area, and make sure your federal representatives or their staff members are there, as well as the local press. VVA’s Faces of Agent Orange campaign has been very successful in helping people understand the continuing costs of war. Go to: www.facebook.com/pages/Faces-of-Agent-Orange/187669911280144 and sign up yourself, and then sign up as many of your family, friends, and neighbors as possible.

Second, read all you can in the VVA Veteran about Agent Orange so you can be conversant with your members of Congress and their staff members. You do not have to be a scientist or an expert to advocate for your brothers and sisters and their families. You also can go to: www.vva.org/Commitees/AgentOrange/index.html to learn more about Agent Orange, the Faces of Agent Orange campaign, and the impact on you, your family, and the families of other Vietnam veterans.

Third, there are several bills pending in Congress. The first is the Agent Orange Equity Act, HR 812, introduced by Rep. Bob Filner (D-Calif.), which has sixty-five co-sponsors, and S1629, introduced by Sen. Kirsten Gillibrand (D-N.Y.), which has twelve co-sponsors. We hope to have additional legislation introduced this summer that we call the Agent Orange Veterans Family Preservation Act. It would authorize research into epigenetic damage due to herbicides and other toxic exposures. Currently, the only study that we know of that will affect our overall knowledge about the effects of these exposures is the National Vietnam Veterans Longitudinal Study.

While there is much to be done, there is greater resolve than ever on the part of VVA, our members, other Vietnam veterans, and our families to finally secure Agent Orange health care benefits.

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Toxic Risk at Home

found that exposure to herbicide-treated grass increases the risk of bladder cancer in Scottish terriers by four to seven times.

According to researchers, herbicides pose an especially high risk to children. A study released by the Research Triangle Institute noted that “children’s rapidly developing neurobiological, immunological, and other biological systems” make them highly susceptible to the adverse effects of herbicides. “Children’s behavior patterns—playing outside in the dirt and putting their hands in their mouths—put them in greater contact with environmental chemicals,” the study explained.

Herbicides also are frequently dragged into homes by shoes and pets, where studies show they can remain on carpets and household surfaces for years, posing an added risk to children who play on the floor. Experts also express concern that even low levels of herbicide exposure can pose risks to unborn children.

“There are short, critical times—like when a baby is in the womb—that chemicals can have disastrous impacts, even in very small concentrations,” explained Deborah A. Cory-Slechta, a professor at the University of Rochester.

While the extent to which herbicides pose an active risk to the human body remains the subject of much debate and scientific inquiry, one fact—that herbicide use has greatly expanded over the past two decades—is undeniable. As America struggles to care for those who suffer from the adverse effects of the use of Agent Orange in the Vietnam War, Americans once again may be exposed to toxic levels of carcinogenic herbicides with their government’s approval.

Scientific Fake News: Who to Believe

BY MAUREEN ELIAS

With today’s vast quantities of information and news outlets, it is becoming increasingly difficult to recognize truthful reporting and sound scientific research, because research and data are being altered to sell products and manipulate perceptions.

One tack discredits scientists personally and professionally. These efforts make scientists less likely to publish work that may embarrass or challenge industry, which is why some scientists have had to disguise their names to publish papers, articles, and policy briefs that tout the safety of products, even when the research is funded to push industry propaganda. These groups have been formed by large corporations with the goal of creating doubt, producing biased results, and discrediting scientists. At first glance, they may appear to be legitimate. But upon closer inspection, they are not what they seem.

There’s fake news in science. The burden falls upon us to determine whether what we’re reading is empirically evidenced, transparent science or just a misleading sham.

Veterans Health Council staff member Maureen Elias is the recipient of many awards, including the High Ground Veterans Advocacy Award and the 2017 Bowie State University Presidential Student Leadership Award. Most recently, she was selected for the Class of 2017 #Hillvets100, which honors veteran-advocates who effectively lobby Congress.
Much of South Vietnam is covered with dense jungle vegetation, used as cover during the Vietnam War by the enemy opposing the United States and its allies. One means the U.S. military used to counteract this advantage was the indiscriminate use of herbicides to destroy enemy cover and food crops and to clear U.S. base perimeters. These chemicals were extensively sprayed by airplanes (Operation Ranch Hand), helicopters, trucks, riverboats, and individual backpacks. More than three and one-half million acres of South Vietnam were repeatedly sprayed with more than 50,000 tons of Agent Orange and about eighteen other herbicides containing more than 500 pounds of dioxin. The military used twenty-seven times more herbicide per acre than recommended for domestic applications.

Long-term, low-level dioxin exposure is the focus of veterans' health concerns because of its extreme toxicity. However, many potentially life-threatening chemicals also were used throughout Vietnam.

There were a variety of means by which veterans were exposed to herbicides in Vietnam. Some veterans took part in the actual spraying. Others were exposed by consuming contaminated food or water. Veterans were in areas while spraying occurred, in areas that were recently sprayed, and in areas that were sprayed and then burned (Operation Arc Light). Burning increases the dioxin toxicity of the herbicides by 25 percent.

Agent Orange had its genesis as a defoliant in an obscure laboratory at the University of Chicago during World War II. Working on experimental plant growth at the time, researchers discovered that they could regulate the growth of plants through the infusion of various hormones. Certain broadleaf vegetation, they discovered, could be killed by causing the plants to experience sudden, uncontrolled growth. They gave the plants a fatal, chemically induced life-cycle boost. In some instances, deterioration of the vegetation was noticed within 24-48 hours of the application.

The Army experimented with 2,4-D during the 1950s. Late in that decade, researchers found a potent combination of chemicals that quickly found its way into the chemical arsenal. Army scientists found that by mixing 2,4-D and 2,4,5-trichlorophenoxyacetic acid (2,4,5-T) and spraying it on plants, there was a nearly immediate negative effect on the foliage. What they didn’t realize—or chose to ignore—was that 2,4,5-T contained dioxin, a useless byproduct. It would be twenty more years until concern was raised about dioxin, a chemical the Environmental Protection Agency would later label “one of the most perplexing and potentially dangerous” known.

After minimal experimentation in 1961, a variety of chemical agents was shipped to Vietnam via Guam to aid in antiguerilla efforts. The chemicals were to be used to destroy food crops and eliminate foliage that concealed enemy troop movements.

RANCH HAND BEGINS

On January 13, 1962, three U.S. Air Force C-123s left Tan Son Nhut airfield to begin Operation Hades (later renamed Operation Ranch Hand), the defoliation of portions of South Vietnam’s heavily forested countryside in which Viet Cong guerrillas could easily hide. By September 1962 the spraying program had intensified, despite an early lack of success, as U.S. officials targeted the Ca Mau Peninsula, a scene of heavy communist activity. Ranch Hand aircraft sprayed more than 9,000 acres of mangrove forests there, defoliating about 95 percent of the targeted area. That mission was deemed a success and full approval was given to continue Ranch Hand as the U.S. stepped up its involvement in the war.

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Over the next nine years, an estimated 20 million gallons of Agent Orange were sprayed throughout South Vietnam. The U.S. military command insisted publicly that the program was militarily successful and had little adverse impact on the economy of the villagers who came into contact with it.

Although the herbicides were widely used in the United States, they usually were heavily diluted with water or oil. In Vietnam, military applications were sprayed at the rate of three gallons per acre and contained approximately twelve pounds of 2,4-D and fourteen pounds of 2,4,5-T. The military sprayed herbicides in Vietnam six to twenty-five times the rate suggested by the manufacturer. In 1962, 15,000 gallons of herbicide were sprayed in Vietnam. The following year that amount nearly quadrupled, as 59,000 gallons of chemicals were poured onto forests and streams. The amounts increased significantly after that: 175,000 gallons in 1964; 621,000 gallons in 1965; and 2.28 million gallons in 1966.

A TROUBLING PICTURE

Scientists involved in Operation Ranch Hand and documents uncovered in the late 1980s in the National Archives present a troubling picture. There are strong indications that military officials were aware as early as 1967 of the limited effectiveness of chemical defoliation and that they also knew of potential long-term health risks to humans from frequent spraying. Dr. James Clary, an Air Force scientist in Vietnam, helped write the history of Operation Ranch Hand. Clary says the Air Force knew Agent Orange was far more hazardous to the health of humans than anyone admitted at the time.

“When we [military scientists] initiated the herbicide program in the 1960s,” Clary wrote in a 1988 letter to a member of Congress investigating Agent Orange, “we were aware of the potential for damage due to extreme dioxin contamination in the herbicide. We were even aware that the military formulation had a higher dioxin concentration than the civilian version, due to the lower cost and higher speed of manufacture. However, because the material was to be used on the enemy, none of us were overly concerned. We never considered a scenario in which our own personnel would become contaminated with the herbicide. And, if we had, we would have expected our own government to give assistance to veterans so contaminated.”

One of the first Operation Ranch Hand defoliation efforts occurred near a rubber plantation in January 1962. According to an unsigned U.S. Army memorandum dated January 24, 1966, titled “Use of Herbicides in Vietnam,” studies showed that within a week of spraying, the trees in the plantation “showed considerable leaf fall. The injury to the young rubber trees occurred even though the plantation was located some 500 yards away and upwind of the target at the time of the spray delivery.” The memo went on to say that “vapors of the chemical were strong enough in concentration to cause this injury to the rubber.” These vapors “appear to come from ‘mist drift’ or from vaporization either in the atmosphere or after the spray has settled on the vegetation.”

The issue of “mist drift” continued to plague the defoliation program. How far would it drift? How fast? Wind speed and direction were major concerns in answering these questions. Yet there remained other questions, many of which could not be answered, such as what happened in humid weather.

In addition to the planned dumps of herbicides, accidental and intentional dumps of defoliants over populated areas and into the water supplies were not unusual, according to government documents. A memorandum for the record dated October 31, 1967, and signed by Col. W.T. Moseley, chief of MACV’s Chemical Operations Division, reported an emergency dump far from the intended target. On October 29, 1967, an aircraft made an emergency dump of herbicide in Long Khanh Province due to failure of one engine and loss of power in the other. Approximately 1,000 gallons of the herbicide Agent White were dumped from an altitude of 2,500 feet. No mention was made of wind speed or direction, but chemicals dropped from that height had the potential to drift a very long way.

The American Association for the Advancement of Science in the summer of 1968 sent a letter to the Secretary of State and Defense urging a study to determine the ecological effects of herbicide spraying in Vietnam. Secretary of State Dean Rusk suggested releasing “certain non-sensitive” portions of a study on the ecological effects of herbicide spraying in Vietnam done earlier that year by Dr. Fred H. Tschirley. Earlier that year, Tschirley had gone to Vietnam under the auspices of the State Department and returned with exactly the report the U.S. government and the chemical com-
panies wanted. He foresaw no long-term ecological impact on Vietnam as a result of the herbicide spraying, thereby exonerating the chemical companies.

“NO EVIDENCE”

There is no evidence,” Tschirley wrote, “to suggest that the herbicides used in Vietnam will cause toxicity problems for man or animals.” Rusk urged that Tschirley’s report be made public. What Rusk did not mention was that Tschirley’s report had been heavily edited, in essence changing its findings.

Some of the troops in Vietnam used empty Agent Orange drums for barbecue pits. Others stored watermelons and potatoes in them. Still others rigged the residue-laden drums for showers. The spraying continued unabated in 1968, even though, according to military records, it apparently was having minimal effects on the enemy. A series of memoranda uncovered in the National Archives (now declassified) indicate that defoliation killed a lot of plants but had little real effect on military operations.

As those of us who served in Vietnam attempted to settle back into civilian life following our tours, some of us began to develop unusual health problems. There were skin and liver diseases and what seemed to be an abnormal number of cancers to soft tissue organs such as the lungs and stomach. There also seemed to be an unusually high number of birth defects among our children. Other veterans experienced wild mood swings, while others developed a painful skin rash known as chloracne. Many of these veterans were found to have high levels of dioxin in their blood, but scientists and the U.S. government insisted there was no link between their illnesses and exposure to Agent Orange.

By 1983 the results of studies of Agent Orange and dioxin exposure began to trickle in. They were, for the most part, contradictory and confusing. A series of studies conducted between 1974 and 1983 by Dr. Lennart Hardell—the so-called Swedish studies—showed a link between exposure to Agent Orange and soft tissue sarcomas and non-Hodgkin’s lymphoma. In July 1983 the U.S. Department of Health and Human Services released a report citing “an association” between dioxin exposure and incidence of soft tissue sarcoma.

Results of uncorrelated Agent Orange tests continued with widely varying results, depending on who was doing the testing. In December 1985 the Air Force released the third of its Operation Ranch Hand studies. It confirmed the other two: There was no evidence that Agent Orange had any adverse effects on those who handled it during the war. “At this time, there is no evidence of increased mortality as a result of herbicide exposure among individuals who performed the Ranch Hand spray operation in Southeast Asia,” the Air Force concluded.

After seven years of study, the CDC had made no progress on one of the most important and highly publicized issues of the war in Vietnam. In charge of the CDC study was Dr. Vernon Houk, director of the agency’s Center for Environmental Health and Injury Control. The White House’s Agent Orange Working Group was supposed to supervise the CDC study while the Pentagon’s Environmental Support Group was charged with providing the CDC with records of Agent Orange spraying and troop deployment. Houk’s CDC team complained throughout the study that those records were too spotty to make a scientific study of the effects of Agent Orange on troops.

Not so, said the Pentagon. Richard Christian, the head of the Pentagon’s Environmental Support Group, testified before Congress in mid-1986 that the records of troop movements and spraying were more than adequate for a scientific study. Christian’s testimony was bolstered by two other sources. Retired Army Maj. Gen. John Murray had been asked by Defense Secretary Casper Weinberger in early 1986 to undertake a study to determine if Pentagon records were adequate for purposes of the study. After four months, Murray determined that the records for a comprehensive study of herbicides were more than adequate.

But again there was more information available that was never presented. The Institute of Medicine in the weeks before the CDC released its results of blood tests wrote a stinging rebuke of the CDC’s tests methods. It said that none of the CDC’s conclusions was supported by scientific data. The CDC refused to turn this report over to the White House.

“Either it was a politically rigged operation or it was a monumentally bungled operation,” said Rep. Ted Weiss (D-N.Y.), chair of the Government Operations Human Resources and Intergovernmental Relations Subcommittee. Other information began turning up that there were concerted efforts by various government agencies to conceal information about the effects of herbicide exposure.

Air Force scientists involved in the study said they were pressured by non-scientists within the Air Force and the White House to change the results and delete critical information for the final report. Sen. Tom Daschle (D-S.D.) says he even obtained two versions of the minutes of the meeting in which that pressure was applied. One confirms what the scientists told him. Another deletes that information.

“What happened there was a fraud perpetrated by people whose names we still do not know,” Daschle said.

In a study released March 29, 1990, the CDC admitted that Vietnam veterans face a higher risk of non-Hodgkin’s lymphoma but denied that it was a result of exposure to Agent Orange. It said the studies showed that Vietnam veterans do not have higher rates of soft tissue sarcomas, Hodgkin’s disease, nasal cancer, nasopharyngeal cancer, or liver cancer.

One of the current, pressing issues—among many having to do with our exposure to herbicides—that has received insufficient attention is the matter of the exposure by personnel referred to as the Blue Water Navy: Navy, Coast Guard, and Marine Corps veterans who served off the coast of South Vietnam but within range and often within sight of the coast. Their exposure to herbicides is unique, and veterans’ advocates have engaged in a battle with the federal government for the past ten years, with H. R. 299 and S. 422 currently in committee with many co-sponsors.

But congressional leaders refused to move these two important bills to a vote. Nearly fifty years later, Vietnam veterans are still being stonewalled by our own government.