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Ranch Hand File:

Fatal flaws; How the military misled Vietnam veterans and their families about the health risks of Agent Orange

By Clark Brooks, staff writer

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The U.S. military's \$200 million study of the health effects of Agent Orange on Vietnam War veterans is so flawed that it might be useless, a six-month investigation by The San Diego Union-Tribune has found.

The study has been a key factor in denying compensation to Vietnam veterans suffering from illnesses they blame on Agent Orange, a powerful herbicide used to destroy enemy crops and jungle hiding places.

Interviews with military scientists, transcripts of meetings, and government reports and internal memos reveal that these are among the flaws in the Air Force study, which began in 1979 and concludes in 2006:

** Two study reports that revealed serious birth defects among children of veterans exposed to Agent Orange were withheld for years, leaving a generation of men and women who served in Vietnam to start families without knowing the potential risks.

** A report expressing concerns about cancer and birth defects was altered, with the result that the risks appeared less serious.

** The government ignored a National Academy of Sciences recommendation that the study be done by scientists outside the military.

** High-ranking Air Force officers interfered with the study's data analysis, undermining its scientific integrity.

** The Air Force stonewalled a U.S. senator who wanted full disclosure of the data.

Richard Albanese, one of four scientists who designed the study and later was taken off the project, says it was manipulated to downplay the health problems of Vietnam veterans.

"This is a medical crime, basically," Albanese said. "Certainly, this is against all medical ethics."

Albanese, a civilian doctor, still works at Brooks Air Force Base in San Antonio, where the study's scientists are headquartered.

When the Union-Tribune contacted him, Albanese weighed the consequences for several days and then agreed to a series of interviews in the hope that veterans will be treated better in the future.

He said the study is tainted because a government agency, in this case the Air Force, was allowed to investigate itself.

Joel Michalek, the study's head scientist, acknowledged that the Air Force and the government tried to interfere, but he said this had no impact on the study. He said he received two memos through the chain of command that tried to influence the study, but threw them away.

The study is named for Operation Ranch Hand, a series of Air Force missions that sprayed 18 million gallons of defoliants over 3.6 million acres of South Vietnam. The Ranch Hand study tracks the health of about 1,000 veterans who participated in the spraying missions, in comparison with an Air Force group that was not involved in the spraying. Both groups come to San Diego every few years for medical exams.

Agent Orange contained dioxin, now known to cause some cancers. The defoliant destroyed forests and darkened the waters of the Mekong Delta, where Patti Robinson's husband, Geoff, was a gunner's mate on a Navy patrol boat in 1968-69.

Robinson, who lives in Clairemont, said her husband described how the herbicide congealed and licked at river banks. But he told her the men bathed and swam in the water anyway; their superiors said it was safe.

When her husband died of cancer in 1981, Robinson turned to the Veterans Administration for help. Her claim citing Agent Orange as a factor in her husband's death also listed her son, Matthew, who was born in 1976 with a developmental disability.

But the government told Robinson that Agent Orange did not cause her husband's malignant melanoma, nor her son's communication disorder. Or any other health problem for that matter.

All claims were being denied. Agent Orange was innocent until proved guilty.

The government had made that clear in 1978, after the first 500 claims came in. Garth Dettinger, an Air Force deputy surgeon general, told Congress there was no evidence that Agent Orange had harmed anyone.

But concerns about the herbicide's health effects had been raised since the early '70s, and the public wanted proof. So Congress funded the Ranch Hand study. Dettinger helped make sure it was done by Air Force scientists.

Conflict of interest

Although Dettinger wanted the Air Force to evaluate its use of Agent Orange, some of its scientists thought that might present a conflict of interest. Col. George Lathrop, head scientist for the Ranch Hand study in its early years, told a military science board in 1979 that an Air Force study wouldn't be credible to people outside the government.

"We advised a certain general that, 'No, we should not do this.' And we were told to shut up and do it anyway," Lathrop said, according to a transcript of the meeting. "So we are saluting the flag pole and mushing on. We are doing the damn thing."

That general, Lathrop said in a recent interview, was Dettinger.

"Dettinger had the notion that if we didn't do this study that he would devise his own questionnaire and his own study and go out and get it done himself," Lathrop said. "It would have been scientifically disastrous."

Dettinger denied ordering Lathrop to do the Ranch Hand study and said he never threatened to conduct his own version.

"He's not being honest about that," Dettinger said. "I promised Congress we would do the study. My word is my bond, and so we went ahead and did it."

Albanese also worried that conflict of interest might affect the findings. But, at the time, he believed the danger could be offset by a rule written into the study design: Air Force management was not to interfere with the scientific analysis.

The scientists weren't the only ones with conflict-of-interest concerns. The National Academy of Sciences reviewed the study design in 1980 and recommended it be done by independent researchers. But a White House panel made up of representatives from the Pentagon and VA, among other federal agencies, said the Air Force would do it. The panel, called the Agent Orange Working Group, appointed an advisory committee to review Ranch Hand reports.

But the committee did more directing than advising during the first decade of the study, Albanese.

Ranch Hand reports went from the Air Force to the advisory committee, then to the Agent Orange Working Group and back to the Air Force. Sources and documents indicate the reports were changed during that process, sometimes dramatically.

Altered report

The Air Force scientists drafted two major Ranch Hand reports in 1984.

One of them was withheld. The other was published, but its findings were altered.

The report that was withheld dealt specifically with reproductive health issues, and stressed birth defects and infant deaths. It showed high rates of both among children of Ranch Hand veterans.

The report that was published examined the general health of Ranch Hand veterans. It presented data on birth defects, cancer and many other medical conditions. The Air Force announced that it showed little difference between the health of Ranch Hand and comparison veterans.

But that wasn't what the Ranch Hand scientists wrote. Their original version of the report contained a table showing that the Ranch Hand veterans were, by a ratio of 5-1, "less well" than the comparison group. That version also noted that Ranch Hand veterans reported significantly more birth defects among their children than did the other veterans.

After the White House panel's advisory committee reviewed the report, those details were downplayed or eliminated.

Lathrop complied with the committee's recommendations to omit the table, soften the birth defects language and drop a sentence that said Ranch Hand veterans might have been harmed by Agent Orange. Lathrop also deleted a sentence that said some of the findings were "of concern." He added a line that said the overall findings were "reassuring."

Lathrop didn't object to the changes, which he said were minor.

"Fundamentally, the advisory group felt that we were too liberal on the interpretation," he said.

Albanese, on the other hand, thought the changes distorted the report. He wrote a letter requesting that his views be published as a minority opinion, and kept a copy in his files. Lathrop, who didn't respond to Albanese's letter, said he doesn't recall receiving it.

Albanese and Lathrop also disagreed about how the cancer data were prepared and presented in the 1984 health report.

Because the Ranch Hand group is too small for the scientists to draw conclusions about rare cancers, Albanese said, they decided to study the incidence of cancer as a whole. They found that the Ranch Hand veterans had twice as many cancers as the comparison group.

But that didn't make it into the report.

Instead, skin and internal cancers were separated. Presented that way, the Ranch Hand group had 135 percent more skin cancers than the comparison group, but only 20 percent more internal cancers.

The scientists reported the high skin cancer rate, but suggested it was caused by overexposure to the sun. They found "no significant group differences" in internal cancers. Within the small Ranch Hand group, Albanese said, the increase in internal cancers became a meaningless statistic.

Albanese was outraged.

"It happened that most cancers were in the skin, and the report said they were just in the skin," he said. "That's not a correct inference."

At the press conference that unveiled the 1984 health findings, Murphy Chesney, a deputy Air Force surgeon general at the time, announced that the health of the Ranch Hand and comparison veterans was about the same.

In response to a question during that press conference, Albanese voiced a mild disagreement. Noting the higher incidence of some diseases, he said, "I cannot account for such differences by chance; on the other hand, I cannot explain their cause."

He repeated to reporters a phrase that had been deleted from the report:

"A degree of concern is warranted."

Albanese was removed from the Ranch Hand study eight months later. The Air Force said he was needed on a different project.

Sensitive information

Albanese considered going public with his misgivings about the Ranch Hand study years ago, but decided against it. He didn't want to jeopardize his career as a government scientist.

Because of the study's flaws, Albanese said, Vietnam veterans have not received the compensation they deserve.

Lathrop said it was better not to release sensitive data from the Ranch Hand study prematurely, and nothing was more sensitive than information about birth defects.

"There was a great deal riding on the issue of birth defects," he said. "The VA had not decided on the issue of compensation and so forth."

After her husband died, Patti Robinson struggled to meet her son's special needs. She needed the government compensation, but more than that, she needed the truth.

"The uncertainty has left big question marks," she said. "If it wasn't for that, you could put it behind you."

Robinson never remarried. She devoted her life to her son, Matthew, who is 21 now, the age his father was in Vietnam.

Matthew has the reading skills of a second-grader, and he has a hard time getting words out. But he can look at a photograph, identify a place he has been and offer directions to get there.

He calls his mother by her first name and often refers to himself in the third person. He will say, "Patti, Matthew is stupid," and his mother will fire back, "No, you're not."

Matthew keeps a picture of his father in his bedroom. Sometimes he shows it to visitors.

But pain registered on his face when he was asked what he remembers about the man who died so long ago.

He turned away.

"Matthew doesn't want to talk about that," he said.

In the private sector

To reduce the workload of its scientists, the Air Force hired a private company to conduct Ranch Hand general health studies published since 1984.

But the government has remained in charge.

And the firm that won the first contract featured a familiar face.

George Lathrop had retired from the Air Force and was working at the San Antonio office of Science Applications International Corp., a San Diego-based company that was founded on defense contracts.

Lathrop said he wanted to continue working on the Ranch Hand study. He figured that with him on its team, SAIC would get the contract.

It did.

Lathrop left SAIC in 1987. The company went on to win the contracts for 1987, 1992, 1997 and 2002. It uses Scripps Clinic in La Jolla to perform the medical tests.

Results are analyzed by SAIC, then sent to scientists at Brooks Air Force Base for approval. The SAIC contracts do not include compiling birth defects reports. The Air Force does that itself.

By 1987, Ranch Hand had emerged as the government's definitive Agent Orange study.

"It was the pivotal study," said Michalek, Ranch Hand's head scientist since 1991. "It still is."

The U.S. Centers for Disease Control and Prevention in Atlanta tried to do its own study by matching records of troop movements with Agent Orange spraying. But after five years and nearly \$50 million, the CDC decided its review method wasn't reliable.

After the CDC gave up in 1987, the government dismissed other studies that used similar

exposure estimates. They were deemed unscientific.

That left the Ranch Hand study as the government's principal yardstick for Agent Orange damage.

Pattern of manipulation

South Dakota Sen. Tom Daschle, a Democrat, has kept an eye on the Ranch Hand study since the early 1980s. He was confident it would support his belief that Agent Orange harmed Vietnam veterans.

When that hadn't happened by 1984, when Daschle was a member of the House of Representatives, he decided to investigate. He assigned an aide, Laura Petrou, to help. They collected Air Force and other government correspondence and saw what they believed was a pattern of manipulation to minimize findings of health problems among Ranch Hand veterans.

When Daschle learned about the unpublished 1984 birth defects report, he asked for a copy. The Air Force refused to give him one.

Finally, in a letter to Daschle dated Aug. 25, 1987, the Air Force conceded that the cancer and birth defects information in the 1984 Ranch Hand health report -- the one Albanese said was distorted by advisory committee changes -- might be incorrect.

Daschle then met with Albanese, Michalek and a third Ranch Hand scientist, Col. William H. Wolfe. They told Daschle about another unpublished report, which included some of the cancer and birth defects information that was left out of the 1984 general health report.

Daschle fought to make the report public. The advisory committee argued that it was a rehash of old data.

The report was released in February 1988, but it didn't gain the attention Daschle had hoped.

The Air Force deemed the report "technically correct" but did not publicize it or list it among Ranch Hand publications.

One month after the report was released, Scripps Clinic issued a study update, a press release that said the Ranch Hand veterans were doing fine. It quoted Wolfe:

"This is the definitive study on Agent Orange in Vietnam veterans, and so far it shows that disease is not related to apparent exposure, that there is no increased incidence of major long-term health effects.

"These results are reassuring."

'Forbidden interpretation'

Patti Robinson was not reassured.

She had been attending meetings of San Diego veterans' groups and had read everything she could find on Agent Orange.

Robinson also corresponded with retired Navy Adm. Elmo Zumwalt, who had ordered the spraying of Agent Orange along the Mekong Delta to kill vegetation where enemy snipers hid. His son, Navy Lt. j.g. Elmo Zumwalt III, had commanded a patrol boat in the Mekong Delta, the same waters Geoff Robinson had navigated.

Former Lt. j.g. Zumwalt died of cancer in 1988. His son, Russell, was diagnosed with sensory integration dysfunction, the same communication disorder that plagues Patti Robinson's son, Matthew.

Robinson thought the Ranch Hand veterans and her husband were exposed to roughly equal amounts of Agent Orange. She believed the Ranch Hand study would be the one that would "prove how dangerous Agent Orange was."

"I placed a high priority on that study," Robinson said. "I was disappointed in the results."

The Air Force now regrets having described Ranch Hand findings as "reassuring," Michalek said.

"That's a forbidden interpretation," he said. "You can't reassure anyone of anything in (statistical studies). You can only establish hazard, not safety."

Daschle grew tired of fighting the Air Force on the Ranch Hand study. He tried to find other ways to help Vietnam veterans and their families.

"Our whole point was if the government was controlling all the science and analyses, veterans would never get compensated," Petrou said.

Daschle, along with then-Sen. Alan Cranston, D-Calif., and Rep. Lane Evans, D-Ill., pushed legislation to compensate Vietnam veterans suffering from soft-tissue sarcoma and non-Hodgkin's lymphoma. The bill also authorized the National Academy of Sciences to evaluate scientific and medical information about the health effects of Agent Orange.

Earlier attempts to pass similar legislation had failed. But toward the end of 1990, with U.S. troops in the Persian Gulf, Congress was eager to help veterans.

The Senate passed the bill Jan. 30, 1991, the day Camp Pendleton Marines led the first major ground battle of the Persian Gulf War.

During a ceremony to announce the legislation, President Bush proclaimed: "We are here today

to ensure that our nation will ever remember those who defended her, the men and women who stood where duty required them to stand."

Undue influence?

Murphy Chesney, a retired lieutenant general, was an important player in both the Ranch Hand study and the Ranch Hand spraying missions.

In Vietnam, as the officer in charge of the health and safety of Air Force personnel, he could have recommended against spraying herbicides if he thought they might be dangerous. But he shared the then-prevailing opinion that Agent Orange, named for the color of the stripe around its 55-gallon storage containers, wouldn't hurt the troops.

After the war, he oversaw the Ranch Hand study from 1979 until he was promoted to Air Force surgeon general in 1985.

Chesney couldn't say whether his role in Operation Ranch Hand influenced his decisions in the Ranch Hand study.

"I hope it didn't," he said in an interview.

But Albanese, who worked on the study during the years Chesney was involved, believes it did. He recalled a dispute with a colleague, Wolfe, over data analysis. Chesney sided with Wolfe.

"Then," Albanese said, "Gen. Chesney pulled me aside and said, 'If I had to accept your analysis, I'm not sure I could live with myself.'"

"I could see the water in his eyes.

"He said he had approved some of those spraying activities."

Chesney said no such conversation took place.

But Chesney did remember ordering the scientists to comply with advisory committee recommendations, although such influence by the Air Force is prohibited by the rules of the study design.

Looking back, Albanese said, it should have been obvious that the conflict of interest was too strong for the study to be objective.

"There's a faction that doesn't want to pay the price of treating the veterans," he said, "and a faction that doesn't want to have made them sick."

Birth defects acknowledged

In August 1992, the Air Force finally published a Ranch Hand birth defects report.

Michalek said the Air Force had withheld the 1984 birth defects report because the advisory committee said it was incomplete. Ranch Hand scientists had verified records of babies with birth defects, but had not yet checked the healthy ones.

In the draft of the report, the scientists wrote that it would take about a year to verify records of the healthy babies. But eight years passed before a report came out.

The 1992 report confirmed the high rate of birth defects and infant deaths among children fathered by Ranch Hand veterans. But the scientists wrote that because the birth defects did not increase consistently with dioxin exposure, Agent Orange wasn't to blame.

But that might be inaccurate, the National Academy of Sciences concluded in 1994. The academy criticized the Ranch Hand study and singled out the 1992 birth defects report as an example of its many flaws.

"It was confusing how the analysis of the birth defects was presented," said Kathleen Rodgers, one of 16 contributors to the National Academy of Sciences study, "Veterans and Agent Orange."

"I remember being incensed at the time that we couldn't get anything out of it," said Rodgers, an associate professor at the University of Southern California School of Medicine.

The Air Force scientists, examining a study group that was small to begin with, had omitted hundreds of subjects from the analysis, the academy said. That made it harder to connect birth defects to Agent Orange.

Or easier not to.

"Some aspect of the Ranch Hand experience seems to have increased the risk of fathering children with birth defects," the academy report said, "but the implications of this finding are unclear."

The Air Force, of course, knew that 10 years earlier but sat on the information.

"It's the worst thing I have ever seen from the point of view of medical reporting," Albanese said.

Releasing the data

In recent years, as the Agent Orange controversy has faded from the public's consciousness, the Ranch Hand advisory committee's role has diminished.

During its meeting last week in San Antonio -- the first such gathering since 1995 -- Michalek

briefed the committee on the Union-Tribune's investigation of the study.

Michalek asked Albanese to detail his concerns about unpublished data and government interference. Afterward, Albanese suggested that the raw Ranch Hand data be made public, repeating an idea he has advocated for years. That way, he said, researchers outside the military might come up with new and useful analyses.

Advisory committee Chairman Robert W. Harrison recommended that everything should be released, except for information that would violate the confidentiality of the subjects. Michalek said he would comply.

Harrison, a professor of medicine at the University of Rochester, said that he and his colleagues on the panel should start looking more closely at how the study was conducted and its findings.

Expanded compensation

Last year, the Air Force announced its first link between Agent Orange and a serious illness.

The Ranch Hand veterans have a higher rate of diabetes.

Air Force scientists saw the diabetes increase in 1992 but waited five years to make it public. Michalek said they wanted to be sure.

The delay came as no surprise to Daschle and his aide, Petrou, who are still upset with the Air Force for withholding information about cancer and birth defects.

"Delay is clearly their major tactic," Petrou said. "The delay is justice denied. It's extremely disturbing.

"From a public health perspective and from a moral perspective in terms of how we treat veterans, there's no excuse good enough for this."

Daschle has given up on the Ranch Hand study. But he has worked around it with some success.

The National Academy of Sciences has continued its investigation, examining studies of Vietnam veterans and those of civilians exposed to dioxin in industrial accidents.

As the academy links additional diseases to dioxin, more Vietnam veterans get help.

The VA -- now the Department of Veterans Affairs -- has expanded its Agent Orange compensation list to 10 diseases, mostly cancers. Spina bifida, a serious spinal deformity, is the only birth defect on the list so far.

As of April, the VA had received 92,276 Agent Orange claims from veterans and their survivors. Claims approved for diseases on the compensation list totaled 5,908.

Patti Robinson remains a part of the larger group. The academy hasn't found enough evidence that Agent Orange caused malignant melanoma, the cancer that took her husband.

Which leaves Robinson where she was 15 years ago.

She still believes Agent Orange killed her husband and disabled her son.

But she can't be sure.

And that's what really hurts, she said.

"Look at all the years that have gone by, and there's still no clear-cut answer."

Agent Orange and Operation Ranch Hand

The herbicide...

Agent Orange was one of six defoliants sprayed in South Vietnam from 1962 to 1971 to damage enemy crops and to eliminate dense vegetation where enemy troops could hide.

The herbicides were stored in color-coded drums.

Agent Blue worked fastest and was the herbicide of choice for taking out rice crops.

Agent Purple, the first general defoliant, was replaced by Agent Orange in 1965.

Agent Orange was a 50-50 mixture of two herbicides the military first used together during the 1940s in experiments to defoliate tropical battlegrounds. It accounted for more than 11 million of the 18 million gallons of herbicide sprayed in Vietnam. It contained dioxin, now known to cause some cancers. Some of the other herbicides also were laced with dioxin.

... And the mission Operation Ranch Hand missions began in 1962 and ended in 1971.

Air Force pilots, in airplanes and helicopters, swooped down to 150 feet above the ground and sprayed 1,000 gallons for every three to four acres of vegetation. Eighty percent of the defoliant settled in the tops of trees. The rest hit a lower layer of jungle or reached the ground.

Operation Ranch Hand's aerial missions accounted for 86 percent of all herbicides sprayed in South Vietnam. The rest was distributed from other helicopters, trucks, boats and even backpacks.

In 1969, the National Institutes of Health reported that Agent Orange caused birth defects in mice.

Who is in the Ranch Hand study?

Ordered by Congress in 1979, the Ranch Hand study will conclude in 2006.

The 1,264 members of the Air Force who participated in Agent Orange spraying missions between 1962 and 1971 were deemed an ideal group to study. The Air Force is tracking the health of about 1,000 of these men.

The number of study participants is considered too small for drawing some scientific conclusions, but it was the largest specific group known to have been exposed to the herbicide in Vietnam.

They are being compared to a group of veterans selected from among 23,978 Air Force personnel who served in Southeast Asia but were not occupationally exposed to herbicides. The comparison group has been matched with Ranch Hand veterans by such variables as age, occupation and race.

VA eligibility

Veterans who have service-connected medical conditions are eligible for medical care at Department of Veterans Affairs hospitals. They also may receive government compensation ranging from \$95 to \$1,964 per month, depending on the level of disability. This can increase if the veteran has dependents.

Wounds suffered during combat and injuries from accidents while on active duty are examples of service-connected conditions.

Indigent veterans are eligible for medical care and compensation for injuries and medical conditions that are not service-connected. Such veterans may receive payments to bring their income up to \$8,665 per year.

Prior to 1990, the only ailment the U.S. government connected to Agent Orange exposure was a skin disorder called chloracne. Additional illnesses have been added to the Agent Orange list by Congress and as a result of research by the National Academy of Sciences.

Chronology of Agent Orange

** 1960: Two of nearly 900 U.S. military advisers in Vietnam are killed in a raid at the Bien Hoa military base, the first American casualties of the Vietnam conflict.

** 1961: President Kennedy authorizes use of herbicides to destroy enemy crops and thin jungle battlegrounds.

** 1962: Operation Ranch Hand begins.

** 1965: First U.S. combat troops arrive in Vietnam.

** 1969: The Pentagon restricts Agent Orange use to unpopulated areas after the National Institutes of Health reports it could cause malformations and stillbirths in mice.

** 1970: Spraying of Agent Orange ends.

** 1971: Operation Ranch Hand ends, terminating spraying of all herbicides.

** 1973: Paris peace accords end U.S. military involvement in Vietnam.

** 1975: Vietnam War ends after Saigon falls to North Vietnamese troops.

President Ford signs an executive order promising that the United States will never again resort to the wholesale poisoning of terrain as in Operation Ranch Hand.

** 1977: U.S. Air Force incinerates 2.2 million gallons of Agent Orange at sea.

** 1978: About 500 Vietnam War veterans file claims for illnesses they attribute to Agent Orange exposure.

Garth Dettinger, deputy surgeon general of the Air Force, tells Congress there is no evidence Agent Orange has harmed

GRAPHIC: 1. Aerial assault: U.S. Air Force planes spray the defoliant Agent Orange over dense vegetation in South Vietnam in this 1966 file photo. 2. Remembrance: Matthew Robinson, whose father died of cancer in 1981, held flowers for his dad's grave as his mother, Patti, wrote a Father's Day greeting on a card. 3. Agent Orange and Operation Ranch Hand (A-22) 4. Who is in the Ranch Hand study? (A-22) 5. VA eligibility (A-22) 6. Chronology of Agent Orange (A-22) 7. Researcher had doubts: Dr. Richard Albanese was removed from the study after questioning findings. (A-22) 8. U.S. involvement in Vietnam, 1960-1975 (A-22) 9. South Dakota Sen. Tom Daschle (A-23) 10. Sad legacy: Matthew Robinson paused with his mother, Patti, before placing flowers on his father's grave. Patti Robinson believes her husband's death in 1981 was linked to wartime exposure to Agent Orange. (A-23) 11. Researcher defends results: Joel Michalek, Ranch Hand's head scientist, does not believe veterans were harmed by changes in the study. (A-23) 12. The list grows (A-23) 1. ASSOCIATED PRESS 2,10. NELVIN CEPEDA

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