

Rocky: U.S. nuke work afflicted 36,500 Americans
Radiation sickened 36,500 and killed at least 4,000 of those who
built bombs, mined uranium, breathed test fallout

By Ann Imse, Rocky Mountain News
August 31, 2007

The U.S. nuclear weapons program has sickened 36,500 Americans and killed more than 4,000, the Rocky Mountain News has determined from government figures.

Those numbers reflect only people who have been approved for government compensation. They include people who mined uranium, built bombs and breathed dust from bomb tests.

Many of the bomb-builders, such as those at the Rocky Flats plant near Denver, have never applied for compensation or were rejected because they could not prove their work caused their illnesses. Congressional hearings are in the works to review allegations of unfairness and delays in the program for weapons workers.

The Rocky calculation appears to be the first to compile the government's records on the human cost of manufacturing 70,000 atomic bombs since 1945. It is based on compensation figures from four federal programs run by the Departments of Labor, Justice and Veterans Affairs. Many people have been paid only recently.

More than 15,000 of the 36,500 are workers who made atomic weapons. They were exposed to radiation and toxic chemicals that typically took years to trigger cancer or lung disease.

Others were civilians living near the Nevada test site during above-ground nuclear tests; soldiers and workers at test sites; and uranium miners and millers who breathed in radioactive dust until 1972 when the government stopped buying uranium.

At least 4,000 of the 36,500 died. This number reflects cases where survivors could be paid only if their relative died of the covered illness.

Many more of the 36,500 likely also have died of the deadly diseases triggered by their work. But in most of the compensation programs, the government does not track deaths or cause of death,

so the true number who gave their lives to support the nuclear bomb program probably will never be known.

Some were contaminated through accident or ignorance. But government documents have revealed that officials at times risked the health of civilians, soldiers and workers because they believed national security demanded it.

One early Atomic Energy Commission director, Lewis Strauss, wrote to a civilian who had been downwind of atomic test fallout that the danger of fallout was "a small sacrifice compared to the infinite greater evil of the use of nuclear bombs in war."

Well into the 1960s, hundreds of thousands of American troops were placed within a few miles of nuclear tests to determine their ability to march and fight shortly after a blast. The Atomic Energy Commission barred them from being closer than 7 miles, but the military cut that by more than half.

"In those days, we were training military personnel to fight a nuclear war. The Department of Defense had to know the effect on soldiers, sailors and airmen who moved within hours into a hot zone," said R.J. Ritter, who now runs the National Atomic Veterans Association and lobbies for aid to those contaminated troops. "Nobody had a clue what would happen years later from inhaling those particles."

One of those servicemen was Howard "Howdy" Pierson.

He had no idea when he was trucked into the desert from California in 1957 that he was about to watch a nuclear blast from just three miles away.

The Marine gunner was dropped into a trench and told to turn around and cover his eyes, according to his widow, Deb Pierson, of Loveland.

It was the day after Independence Day, and "Shot Hood" filled the pre-dawn sky with a bright light seen in Los Angeles and a towering orange mushroom cloud.

It was a hydrogen bomb – the biggest nuclear weapon ever detonated inside the U.S., five times more powerful than the one at

Hiroshima. Three miles from ground zero at Hiroshima, nearly every building was damaged, according to the U.S. government.

Howdy Pierson's trench caved in. Dirt – already contaminated by previous tests – poured down on them, he told his wife years later.

An airman who was at the same test said in the book *American Ground Zero* that the blast wave threw him 40 feet. He said it felt like being cooked.

A Marine who was marched toward the mushroom cloud said he wondered why anyone would be assaulting Ground Zero minutes after a blast. "What's to assault?" he said in a posting on a Web site for nuclear veterans.

About 200,000 troops were brought in to witness and work on U.S. nuclear tests over the years, according to the Pentagon. For decades, they were barred by national security from telling anyone what they had seen.

Pierson died of lung cancer in 2000. Deb Pierson, who works for Larimer County helping veterans apply for benefits, didn't win a widow's compensation for her husband's lung cancer until Congress revised the law in 2002. The change granted compensation to any veteran who developed lung cancer after breathing radioactive dust at the nuclear tests.

The Veterans Administration, however, is fighting Pierson's attempt to get benefits back to the day he filed his claim.

Lawsuits by contamination victims uncovered evidence over the years that many officials knew the dangers, and ignored them or covered them up. Officials blocked safety standards for uranium dust and beryllium and promised residents above-ground tests posed no danger.

"A lot could have been prevented if they had given the least bit of warning" said J. Turner, of www.downwinders.org.

The U.S. did not begin to admit that Americans were sickened by the weapons effort until the 1980s. The first compensation programs had such tough standards that few people were paid.

Under the Clinton administration, with the Cold War over, previously secret information became public. Americans successfully lobbied for compensation.

But the programs remain complicated by the difficulty of finding exposure records.

Cliff Hemphill, 67

- Home: Adams County
- Exposure: On the deck of an aircraft carrier in the South Pacific during nine nuclear tests
- Compensation: Given a monthly 50 percent disability payment and veterans medical care for 140 skin cancers and post-traumatic stress disorder.

Cliff Hemphill, of Adams County, still carries the bulldog frame, fierce pride and "Semper Fidelis" tattoo on his arm from his days as a Marine.

But his memories are seared with images of himself curled up on the deck of a small carrier, his head buried in his arms, as heat and noise slammed into him. When he looked up, he saw the sky lit with brilliant streaks of pink and blue.

Nine times he witnessed nuclear tests from the deck of the USS Princeton in the South Pacific in the 1960s.

That caused so many health problems that his wife of 43 years was finally driven away, he believes.

It was the 140 skin cancers that caused the U.S. government to finally give him a disability payment, after it revised his estimated radiation dosage to 550 rem – 110 times the current annual federal maximum for nuclear workers.

He blames the nuclear tests for a long list of other health problems as well, from scarred lungs to unusual back-of-the-eye cataracts. He figures either the skin cancer or diabetes will do him in.

"I'm just waiting for the hammer to fall," he says.

He's certain officials knew they were risking the health and lives of servicemen who witnessed the tests. It was 17 years after the U.S. dropped a nuclear bomb on Hiroshima, after all.

"We were used as guinea pigs," he says. "Most of my shipmates have the same problems."

He says the film in the Marines' dosimeters for measuring their radiation exposure turned black after the blasts. The government said natural heat and humidity spoiled the readings.

"I don't believe they were false readings at all," says Hemphill.

Hemphill won additional disability payments for post-traumatic stress disorder after pointing to a study by Dr. Henry Vyner that diagnosed PTSD in servicemen who witnessed nuclear tests. The study said they harbored "anger at the government because it knowingly placed them in a dangerous situation and now is refusing to accept responsibility."

Thomas Atcitty, 78 Chester Atcitty, 73

Home: Shiprock, N.M.

Exposure: Both hauled radioactive uranium ore on 300-mile daily round trips from a mine in northwestern New Mexico to a mill in Utah; Chester also mined uranium.

Compensation: Thomas was denied compensation because he was paid in cash and doesn't have pay stubs. Chester has collected \$150,000 in compensation.

Thomas Atcitty was a 21-year-old Navajo with only three months of education and no hope of a job in 1949 when a friend told him about a rare opportunity for work.

For the next several years, Atcitty filled his 2-ton dump truck with ore for the trip from New Mexico to Utah.

"There's no work, so I just helped a friend. He gives me a little money – three, four dollars a day," Atcitty said.

"I would load it by hand when I first started.

His son-in-law, Jim Hamilton, of Denver, says Atcitty told him that when a cooling rain splashed onto the radioactive ore in the searing desert heat, it gave off a wonderful fragrance. The smell enticed Atcitty to crawl on top of his load and nap, to rest for his daily trip.

"I like the smell of uranium," Atcitty said, his face brightening at the memory.

Atcitty's younger brother, Chester, who had just a year of schooling, also hauled ore with the truck. Later, Chester was one of hundreds of Navajos who worked the uranium mines without masks, breathing radioactive dust.

Children on the Navajo Reservation played on tailings, and waste from local mines was dumped into riverbeds, contaminating the water supply. Ore fell off the trucks, and roadsides were littered with uranium.

Chester Atcitty worked 10 years for the Climax uranium mine in Grand Junction, so he was able to prove his work history and collect compensation. "It's gotten really hard to breathe," said Chester, leaning on the old truck. "My body is really weak."

But Thomas has not been able to collect, according to Hamilton, who teaches at Skyview High School. "He qualifies in every aspect, except now they need his pay records from 1950."

They don't exist.

Jim Turner, 63

- Home: Denver
- Exposure: Beryllium, plutonium at Rocky Flats nuclear weapons factory

- Compensation: Paid \$150,000 compensation and a monthly disability payment he did not disclose.

In the 1970s, Jim Turner crawled into the ventilation system at the sprawling Rocky Flats nuclear weapons plant outside Denver to change out contaminated air filters.

He'd listened to the safety lectures and knew he had to be careful not to be contaminated with plutonium.

Nobody mentioned beryllium.

Workers in the beryllium machine shops were so unconcerned that they ate snacks at their work stations, Turner recalls. "It was, 'Hey, this stuff won't kill you.' "

But decades earlier, in 1948, scientists had warned that beryllium was so dangerous that it should be handled only inside glove boxes so workers would never breathe even a microscopic bit.

No one told the workers at Rocky Flats. Protecting their lungs from scarring would have meant building an entirely new structure and production line, according to documents revealed in a trial in Golden several years ago. Rapid-fire production of nuclear bombs would have stopped at the height of the Cold War, and that was "unacceptable," according to a memo from the 1960s.

As a result, hundreds of former Flats workers suffer from beryllium disease, which can be fatal.

Turner struggles to breathe. "I've coughed till it feels like my head is going to explode."

The coughing started in the 1970s, but no one told Turner that it was caused by beryllium until 1988, he says.

"They knew, but they never did say anything about it, and I continued to work in these contaminated areas," says the 26-year veteran of Rocky Flats. For officials, he believes, it was "anything so they could win the Cold War."

Unlike most weapons workers, Turner did not need to find records to prove how much he was irradiated. Beryllium disease is caused only by exposure to beryllium.

Dennis Nelson, 64

- Home: Raised in St. George, Utah; now in Bethesda, Md.
- Exposure: Downwind from the Nevada nuclear tests
- Compensation: Family granted \$50,000 for each parent; nothing for sister because parents were deceased.

Dennis Nelson was a 7-year-old sleeping outdoors in the hot summers of St. George, Utah, when the U.S. set off the first "special weapon" at the Nevada test site in 1951.

Repeatedly through his childhood, the predawn sky would light up in the west. No one thought it was dangerous.

Nelson remembers only one doubt, the day he watched men wash radioactive fallout off cars on St. George's main street. He thought, "If they are washing poison off these cars, why are they letting it run into the water, where we water our gardens?"

In one of the first alarms, 4,500 sheep in a herd of 14,000 died in 1953. Government scientists at the time insisted there was no connection, but documents uncovered in 1980 said those scientists actually found lethal doses of radiation in the dead sheep.

Nelson's aunt, Irma Thomas, began marking a map of St. George with the names of everyone with cancer or other unexpected illnesses, including her sister and her husband.

"Back then, it was not wise to speak against the government," said Nelson's wife, Denise. "She was quickly called a Communist."

Then Nelson's mother died at 47 of a brain tumor. His father succumbed to bone and lung cancer. Next came his sister, an assistant U.S. attorney in Salt Lake City who died of colon cancer. Nelson's brother has fought lymphoma and bladder cancer. Nelson has survived skin cancer.

The Nelsons have read thousands of pages of evidence and concluded that the irradiation of St. George was deliberate.

"It was clearly an experiment," says Denise Nelson. Officials wanted to find out what clothing or buildings might offer protection from fallout, she says. "There was dosimeter data collected, listing people's names, jobs and wall thicknesses."

Officials delayed the tests until the wind was blowing toward St. George – and not toward Los Angeles or San Francisco, her husband says. "They said it was a virtually uninhabited portion of the country – except there were a lot of virtual uninhabitants."

Some people who lived downwind of nuclear tests eventually won damages in a lawsuit. But an appeals court in Denver overturned that decision in 1987, saying the federal government cannot be held liable for its deliberate actions – in this case, a decision to put national security over public safety.

Arguments that the number is too low

- More than 30,000 sick nuclear weapons workers have been denied compensation because they cannot prove the amount of contamination they suffered and whether it was enough to cause their illnesses. Workers say many in this group should have been approved. More than 10,000 additional workers are still awaiting a decision and thousands more may not have applied because they think the process is too difficult.
- The Veterans Benefits Administration admits it has not kept a good count of how many soldiers it has paid for radiation-related illness out of the 400,000 veterans exposed during weapons tests and in occupied Japan after World War II. The VA counted 483 as of 1998. The number is "woefully low" and out of date, said Tom Pamperin, deputy director for compensation and pensions. Recently, 1,200 atomic veterans with skin cancer won reconsideration, and 266 of them were approved, Pamperin said.
- The National Association of Atomic Veterans says up to 25,000 former soldiers have applied.

- Some members of Congress are trying to expand the program to compensate "downwinders" – people who lived downwind of the Nevada nuclear tests. They point to a National Cancer Institute study showing that the radioactive fallout was far greater and more widespread than previously believed. Radioactive iodine, which is linked to thyroid cancer, contaminated grass and then cows milk across the country for a period in the 1940s and 1950s.

Especially affected were large parts of Montana and Idaho, as well as six counties in Colorado: Gunnison, Conejos, Hinsdale, Archuleta, Mineral and Grand. Because rainstorms washed fallout onto the ground in concentrated pockets, these areas had more contamination than any of the 22 counties in Nevada, Utah and Arizona, where compensation is paid.

- A National Cancer Institute study in 2004 estimated that another 265 Marshall Islanders would come down with cancer due to the nuclear tests there, on top of the 265 that already had occurred.
- No one has studied the effect of fallout from the Pacific tests, which were far larger than the tests in Nevada.

Arguments that the number is too high

- The weapons workers program is required by law to lean in favor of compensating too many claimants rather than too few. Officials of the program say it does favor approval and pays too many, though workers scoff at that.
- President Reagan said when he signed the veterans compensation bill in 1988 that it was not a judgment that radiation caused their diseases. Instead, he said, it was recognition for their unusual service – being exposed to bomb radiation.
- Some downwinders were paid for cancers that would have occurred even without being exposed to radioactive fallout. The downwinders program requires no proof of radioactive dose and simply pays anyone with certain cancers in the 22 counties closest to the test site that are listed in the law.

A National Research Council committee recommended tightening the downwinders program, requiring proof of radiation dose and

connection to the particular cancer, said Thomas Borak, a radiation physics professor at Colorado State University who was a committee member. Congress has not made the recommended changes.

"We had very emotional testimony" from sick people just outside the compensation zone, Borak said. But he is opposed to giving aid without proof.

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