

My Drift

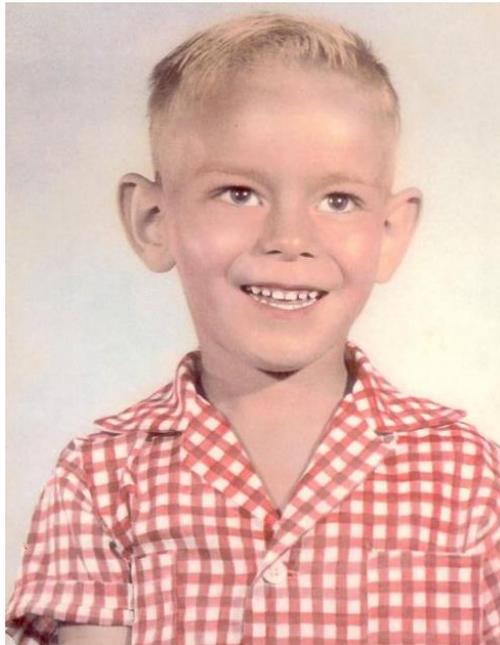
Title: DOWNWINDERS

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This article is dedicated to my brother, John Wesley Petersen, who died from Leukemia (blood cancer) on January 17, 1960 at the young age of six (6).



**John Wesley Petersen
(August 20, 1953 - January 17, 1960)**

Our family is 100% certain that John's illness was a direct result of the nuclear bomb tests that were conducted at the Nevada Test Site from 1951 to 1962.

In this article, we are going to learn a little bit about the United States and the Soviet Union Nuclear Bomb Testing Programs, selected testing sites, the meaning of "Downwinders", effects of radiation on humans and animals, the U.S. Government's cover up, and along the way I will try to make my case that these tests killed my brother.

NUCLEAR WEAPONS TESTING

Nuclear weapons tests are experiments carried out to determine the effectiveness, yield, and explosive capability of nuclear weapons. Throughout the twentieth century, most nations that developed nuclear weapons tested them. Testing nuclear weapons can yield information about how the weapons work, as well as how the weapons behave under various conditions and how personnel, structures, and equipment behave when subjected to nuclear explosions. Nuclear testing has often been used as an indicator of scientific and military strength, and many tests have been overtly political in their intention; most nuclear weapons countries publicly declared their nuclear status by means of a nuclear test.



Trinity – The First Nuclear Bomb

Trinity was the code name of the first detonation of a nuclear weapon. It was conducted by the United States Army at 5:29AM on July 16, 1945, as part of the Manhattan Project. The test was conducted in the Jornada del Muerto desert about

35 miles southeast of Socorro, New Mexico, on what was then the USAAF Alamogordo Bombing and Gunnery Range (now part of White Sands Missile Range). The only structures originally in the vicinity were the McDonald Ranch House and its ancillary buildings, which scientists used as a laboratory for testing bomb components. A base camp was constructed, and there were 425 people present on the weekend of the test.

The first thermonuclear weapon technology test of an engineer device, codenamed "Ivy Mike", was tested at the Enewetak atoll in the Marshall Islands on November 1, 1952, also by the United States. The largest nuclear weapon ever tested was the "Tsar Bomba" by the Soviet Union at Novaya Zemlya on October 30, 1961, with the largest yield ever seen, an estimated 50–58 megatons.

In 1963, three (United Kingdom, United States, and the Soviet Union) of the five nuclear states and many non-nuclear states signed the Limited Test Ban Treaty, pledging to refrain from testing nuclear weapons in the atmosphere, underwater, or in outer space. The treaty permitted underground nuclear testing. France continued atmospheric testing until 1974, and China continued until 1980. Neither has signed the treaty.

Underground tests in the United States continued until 1992 (its last nuclear test), the Soviet Union until 1990, the United Kingdom until 1991, and both China and France until 1996. In signing the Comprehensive Nuclear-Test-Ban Treaty in 1996, these states have pledged to discontinue all nuclear testing; the treaty has not yet entered into force because of failure to be ratified by eight countries. Non-signatories India and Pakistan last tested nuclear weapons in 1998. North Korea conducted nuclear tests in 2006, 2009, 2013, and 2016. The most recent confirmed nuclear test occurred in September 2016 in North Korea.

Just in case you were not keeping track, there are now eight (8) countries with nuclear weapons: United States, United Kingdom, Soviet Union (Russia), France, China, India, Pakistan, and North Korea.

The nuclear weapons tests of the United States were performed between 1945 and 1992 as part of the nuclear arms race with the Soviet Union. The United States conducted 1,054 nuclear tests (involving at least 1,149 devices) including 216 atmospheric, underwater, and space tests. Most of the tests took place at the Nevada Test Site and the Pacific Proving Grounds in the Marshall Islands and off Kiribati Island in the Pacific, plus three in the Atlantic Ocean. Ten other tests took place at

various locations in the United States, including Alaska, Nevada (other than the primary test site), Colorado, Mississippi, and New Mexico.

The nuclear weapons tests of the Soviet Union were performed between 1949 and 1990 as part of the nuclear arms race with the United States. The Soviet Union conducted 715 nuclear tests using 969 total devices including 219 atmospheric, underwater, and space tests and 124 peaceful use tests. Most of the tests took place at the Southern Test Site in Semipalatinsk, Kazakhstan and the Northern Test Site at Novaya Zemlya. Other tests took place at various locations within the Soviet Union, including now-independent Kazakhstan, Uzbekistan, Ukraine and Turkmenistan.

THE NEVADA TEST SITE

The Nevada Test Site (NTS), is a U.S. Department of Energy reservation located in southeastern Nye County, Nevada, about 65 miles (105 km) northwest of the city of Las Vegas. Formerly known as the Nevada Proving Grounds, the site was established on 11 January 1951 for the testing of nuclear devices, covering approximately 1,360 square miles of desert and mountainous terrain.

The Nevada Test Site was the primary site used for both surface and above-ground nuclear testing, with 86 tests at or above ground level, and 14 other tests underground, all of which involved releases of significant amounts of radioactive material into the atmosphere.

In the 1950s, people who lived in the vicinity of the test site were encouraged to sit outside or come watch the mushroom clouds that were created by nuclear bomb explosions. Many were given radiation badges to wear on their clothes, which were later collected by the Atomic Energy Commission to gather data about radiation levels.



HOW SCIENTISTS MEASURE RADIATION

In a report by the National Cancer Institute, released in 1997, it was determined that the nearly ninety atmospheric tests at the Nevada Test Site left high levels of radioactive iodine-131 (5.5 exabecquerels) across the United States. Radiation levels were the highest in Utah, Arizona, and Nevada, especially in the years 1952, 1953, 1955, and 1957. The National Cancer Institute report estimates that doses received in

these years are estimated to be large enough to produce 50,000 to 75,000 additional cases of thyroid cancer, 22,000 additional radiation-related cancers and more than 2,000 additional deaths from radiation-related leukemia.

Please let me explain what radioactive iodine-131 is and how they measure radiation levels. Radioactive iodine-131 is a dangerous and short-lived fission product (radioisotope) with a very short half-life of eight (8) days. The becquerel (symbol Bq) is the international derived unit of radioactivity. One becquerel is defined as the activity of a quantity of radioactive material in which one nucleus decays per second. The becquerel is therefore equivalent to an inverse second, s^{-1} . One (1) exabecquerel (Ebq) = 1,018 becquerels (Bq). So, the 5.5 exabecquerels generated from the Nevada nuclear tests equals about 5,600 becquerels which is an extremely high level of radiation. It is high enough to give humans and animals various forms of cancer that can lead to death.

THE FIRST KNOWN VICTIMS OF THE RADIATION WERE SHEEP

The sheep and their owners were Utah's first victims of radioactivity. While being trailed across Nevada from winter range to the lambing yards in Cedar City, Utah, some 20,000 sheep were exposed to large quantities of radioactive fallout from nuclear tests in March and April 1953. Ranchers Kern and McRae Bulloch first noticed burns on their animals' faces and lips where they had been eating radioactive grass. Then ewes began miscarrying in large numbers and at the lambing yards wool sloughed off in clumps revealing blisters on adult sheep. New lambs were stillborn with grotesque deformities or born so weak they were unable to nurse.

Ranchers and veterinary investigators suspected radiation poisoning. Iron County agricultural agent Steven Brower had a Geiger counter and a small radiation meter which he carried with him. At the sheep pens, he reported the "needle on my meter went clear off the scale. We picked up very high counts on the thyroid and on the top of the head, and there were lesions and scabs on the mouths and noses of the sheep."

The sheep started dying and the ranchers lost as much as a third of their herds.



Sheep were dropping dead and had to be carried away and disposed of

In early June 1954, the United States Atomic Energy Commission (AEC) sent a team of radiation experts to Cedar City to examine the ailing animals. However, this team come about 6 months too late because the thousands of dead carcasses had already been destroyed. The AEC reportedly forced its scientists to rewrite their field reports and eliminate any references to speculation about radiation damage or effects. The number of dead sheep represented a loss of about a half million dollars to the ranchers, but Brower was told "that AEC could under no circumstance allow the precedent to be set in court or otherwise that AEC was liable or responsible for payment for radiation damage to either animals or humans."

The cover up had started!

In 1955-56, five lawsuits were brought by Utah sheep ranchers against the U.S. government alleging that atmospheric testing of nuclear devices in the spring of 1953 had severely damaged their herds. The ranchers and their young lawyer, Dan Bushnell, firmly believed that truth would win out and fair play would prevail. The first case, Bulloch v. United States, was processed and tried as representative of the others. It came before the court of Judge Sherman Christensen in September 1956. To the plaintiffs' dismay, technical data from government studies and testimony from government veterinarians regarding radiation damage gathered by the AEC was not presented. Instead, government expert witnesses testified that radiation damage could not have been a cause or a contributing cause to the sheep deaths. Attorney Bushnell tried without success to convince the judge that the government was covering up unfavorable material to protect itself and its program; however, although Judge Christensen ruled the government was negligent in monitoring the tests, he ruled for the government on the crucial issue of whether damage occurred as a result of atomic nuclear testing.

The sheep ranchers lost their lawsuit and many of them went out of business.

The cover up continues.

DOWNWINDERS



About three years after atmospheric testing started, leukemia and other radiation-caused cancers started appearing in residents of Utah, Arizona, and Nevada. Communities in which childhood leukemia was rare or unknown had clusters of cases in the late 1950s and early 1960s. Many people living in the downwind states believed that those who lived there in the 1950s were guinea pigs and victims, like the sheep. They adopted the term "**DOWNWINDERS**," signifying they lived "downwind" of atomic tests. Tests were always conducted when the wind was blowing east or northeast in order to avoid fallout over more densely populated areas to the south and west, including Las Vegas and southern California (Los Angeles and San Diego).

Hey, give our government some credit, in their great wisdom, they determined that the collateral damage would be much more manageable if the radiation fallout killed a few hundred people in Utah rather than thousands in California.

Southern and central Utah Counties are centered in the fallout arc (See above map). Even though it is impossible to prove that any particular person died or was afflicted by cancer caused by radioactive fallout, the perception of people living in Utah is that atmospheric nuclear testing brought an epidemic of cancer to the area. The link between radioactive exposure and tumors can, however, be drawn statistically. There is also a local perception that infertility, miscarriages, and birth defects are part of the legacy of living downwind of nuclear tests. Long-time residents of these Utah counties are quite comfortable blaming a multitude of medical problems on the nuclear testing and wonder how many future generations will be affected.

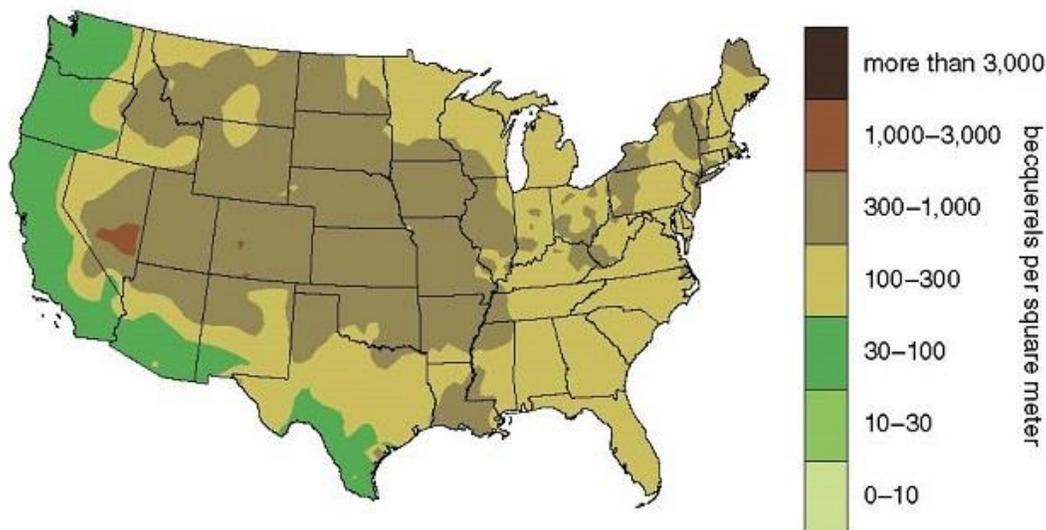
DAY OF REMEMBRANCE FOR DOWNWINDERS

January 27, 2017 marked the 66th anniversary of the inception of nuclear testing at the Nevada Test Site. The test, a 1 kiloton bomb code named Able, went off at Frenchman Flat at 5:45AM local time on 27 January 1951.



Frenchman's Flat, Nevada Test Site

Within eight days it was followed by four additional nuclear tests. In the forty years that followed, those first five tests, known as the Ranger series, were followed by another 923 nuclear detonations in Nevada. Massive amounts of toxic radiological pollution entered the downwind environment, contaminating the air, food, and water that local citizens relied on, and creating a legacy of health problems that will continue to ripple forward for generations. At 1 kiloton, Able was a comparatively small test, (if you consider 1000 tons of TNT small). Subsequent tests in Nevada were frequently upwards of 100 kilotons. Atomic Energy Commission policy dictated that tests go forward only when the wind blew east or northeast, over the communities of southern Nevada, southern and central Utah, northern Arizona, and often southern Idaho. Testing from 1951 to 1962 took place atmospherically, or in the open air, dumping massive amounts of radiological pollution into the winds to be carried across the country.



In memory of those who have been lost to radiation-related illness, downwinders hold an annual memorial gathering in Salt Lake City called, "Day of Remembrance for Downwinders".

URANIUM MINING AND PROCESSING

Testing in Nevada was only part of the problem. Massive amounts of uranium were being mined, milled, transported, and processed to fuel the bombs (225 million tons between 1950 and 1989, some of that destined for the nuclear power industry), a process that left its own legacy of catastrophic pollution and health problems across the American West.

LAWSUITS FROM DOWNWINDERS MOUNT

Even though House subcommittee hearings in 1979 found that the government was negligent, that fallout was a likely cause of both adverse health effects to downwind residents and the 1953 sheep losses, its report *Health Effects of Low-level Radiation* stated that a cause-and-effect link cannot be forged between low-level radiation exposure and cancer or other health effects. Since these might not appear for years or decades, the Federal Tort Claims Act is impossible to apply and compensation had to come through legislation.

Suits were nonetheless brought against the government by Navajo uranium miners, test-site workers, military servicemen forced to watch the tests, and downwind victims of radiation-caused cancers; all were unsuccessful. Twenty-four plaintiffs in one test case, *Irene Allen v. United States*, represented 1,200 individuals who were deceased or living victims of leukemia, cancer, or other radiation-caused illnesses. Eleven of the twenty-four lived in Iron County Utah during the period of atmospheric testing. Two were children who died of leukemia; eight others died of various other cancers; only one of the eleven was alive in 1984.

My mother jointed a Class Lawsuit against the United States Government to get an apology for causing her son's death and for enough money to cover the medical expenses. The Atomic Energy Commission and the U.S. Government refused to accept any blame for the death the children in the lawsuit. My mother didn't receive a cent for her efforts.

FINALLY, THE U.S. GOVERNMENT ADMITS THAT ATOMIC TESTS CAUSED RADIATION-RELATED ILLNESSES TO CITIZENS WHO LIVED DOWNWIND

Judge Bruce Jenkins issued a landmark decision that awarded damages to some victims. The government appealed, and, in 1986, the Tenth Circuit Court reversed Jenkins's judgment. In January 1988, the Supreme Court again refused to hear an appeal.

In 1990, however, Congress passed and President George Bush signed into law the Radiation Exposure Compensation Act (RECA), which created a \$100 million trust

fund to compensate citizens who lived downwind from aboveground atomic tests and later were stricken with radiation-related illnesses before warnings of potential danger were issued. The act was later amended to remove the \$100-million ceiling and to allow uranium miners and test-site workers to participate in the compensation.

The legislation states in part: "The United States should recognize and assume responsibility for the harm done to these individuals. And Congress recognizes that the lives and health of uranium miners and of innocent individuals who lived downwind from the Nevada tests were involuntarily subjected to increased risk of injury and disease to serve the national security interests of the United States. The Congress apologizes on behalf of the Nation to the individuals...and their families for the hardship they have endured."

The Radiation Exposure Compensation Act (RECA) established an administrative program for claims relating to atmospheric nuclear testing and claims relating to uranium industry employment. The Act delegated authority to the Attorney General to establish procedures and make determinations regarding whether claims satisfy statutory eligibility criteria.

RECA PROGRAM SUMMARY

The United States conducted nearly 200 atmospheric nuclear weapons development tests from 1945 to 1962. Essential to the nation's nuclear weapons development was uranium mining and processing, which was carried out by tens of thousands of workers. Following the tests' cessation in 1962 many of these workers filed class action lawsuits alleging exposure to known radiation hazards. These suits were dismissed by the appellate courts. Congress responded by devising a program allowing partial restitution to individuals who developed serious illnesses after exposure to radiation released during the atmospheric nuclear tests or after employment in the uranium industry: The Radiation Exposure Compensation Act was passed on October 5, 1990. The Act's scope of coverage was broadened in 2000.

The Act presents an apology and monetary compensation to individuals who contracted certain cancers and other serious diseases: following their exposure to radiation released during the atmospheric nuclear weapons tests, or following their occupational exposure to radiation while employed in the uranium industry during the Cold War arsenal buildup.

This unique statute was designed to serve as an expeditious, low-cost alternative to litigation. Significantly, RECA does not require claimants to establish causation. Rather, claimants qualify for compensation by establishing the diagnosis of a listed

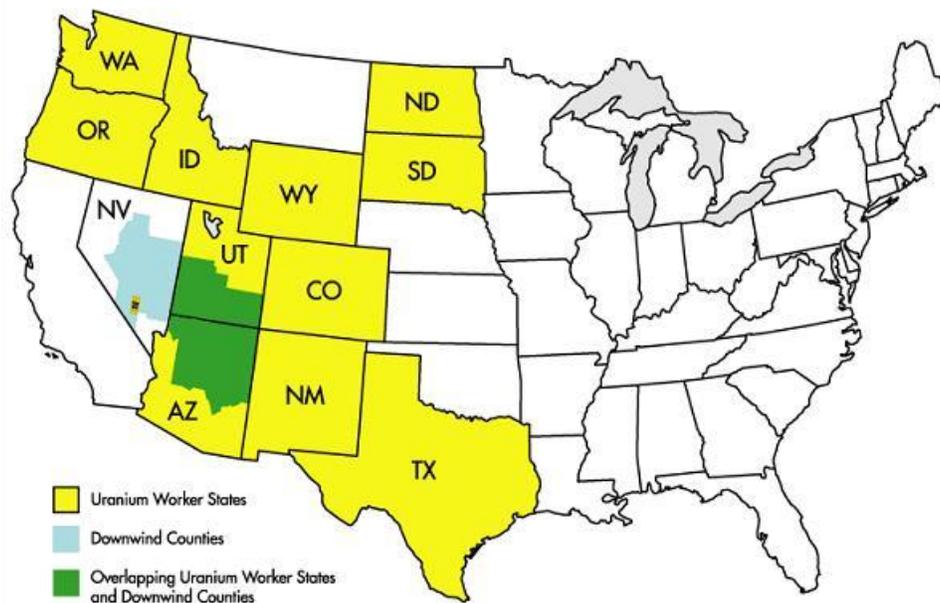
compensable disease after working or residing in a designated location for a specific period of time.

RECA COVERED AREAS

RECA establishes lump sum compensation awards for individuals who contracted specified diseases in three defined populations:

- Uranium miners, millers, and ore transporters – \$100,000;
- “Onsite participants” at atmospheric nuclear weapons tests – \$75,000; and
- individuals who lived downwind of the Nevada Test Site (“downwinders”) – \$50,000.

RECA COVERED AREAS



Take a look at the above map. The only “Downwinders” eligible for compensation are affected individuals living in the light blue and green areas. In Utah, these southern counties are very sparsely populated. The counties along the heavily populated Wasatch Front were NOT included. Utah County where my family lived was just outside the eligible (green) area. In fact, all of the counties in Nevada, Arizona, and Utah selected by the government as “Downwind Eligible” were sparsely populated. Yes, they excluded Las Vegas in Nevada, Phoenix in Arizona, and Salt Lake City in Utah.

My mother decided to try one more time to get a personal apology from our government that she had been trying to get since her son died in 1960. She updated

the justification documents and submitted another claim. About a year later, the government sent her a very short letter denying the claim simply stating that she didn't qualify for any compensation.

DOWNWIND CITIZENS ARE STILL CYNICAL

The end-result of this prolonged "cover-up" by the Atomic Energy Commission and the United States Government is a more cynical attitude toward government. In recent years, many people in central and southern Utah have been skeptical of government promises and government studies. This was evident when the government was considering building the huge MX missile track in the Escalante Valley in 1980 and 1981; it carries over to wilderness issues and endangered-species battles of the 1990s. It continues to this day with the nerve gas testing at Dugway Proving Grounds in Tooele County.

During his term as Utah governor, Scott Matheson brought to the forefront of public awareness the problems faced by Utahns as a result of the nuclear testing. At the 1979 hearings he presented some 1,100 pages of testimony concerning the AEC cover-up and other research. All this was done before Matheson himself developed terminal cancer. His personal conclusion in 1986 was: "I am still angry about the way this issue was handled by the federal government. It points to a continuing need for governors to be vigilant concerning both short-term and long-term impacts of federal decisions on their residents. If citizens in a state are to be sacrificed for the 'national interest,' then, at the very least, those citizens need to be fully informed and protected as much as possible."

Starting on the next page, I'm going to include an article titled "Toxic Utah: A land littered with poisons" that was published in the Salt Lake City Deseret News in 2001. Although this article is 16 years old as of this writing, nothing has changed and most everything in the article still applies today.

Toxic Utah: A land littered with poisons

Utah has paid high price for U.S. military might

By Lee Davidson and Joe Bauman

Deseret News staff writers

Published: Feb. 12, 2001

The Cold War was hot in Utah, though few realized it.

The government chose the remote, low-population state for secretive weapons tests that bombarded it with nerve gas, germ weaponry and radioactive fallout.

Oleta Nelson of Cedar City was among the thousands of unwitting civilian casualties in Utah. Fallout from atomic bomb tests in Nevada — conducted by design of federal officials only when the wind was blowing toward Utah — killed her after 12 years of agony from brain cancer. The fallout hit not only southern Utah, but also the heavily populated Wasatch Front — a fact few suspected.

Another casualty was Ray Peck's family in Skull Valley. They were likely hit with low doses of the nerve gas from a Dugway Proving Ground test that accidentally killed 6,000 sheep near their home in 1968. The Pecks lived but haven't been the same since.

On the other hand, Rolland Bivens was a voluntary human guinea pig intentionally infected by germ weaponry in Utah's desert with other Seventh-day Adventists who had avoided combat duty as conscientious objectors. The same germ clouds that sickened him floated toward major highways and some small cities.

Much of the waste — and suffering — from Cold War tests and military work remains in Utah. New secretive military testing raises even more concerns. And wastes from more conventional arms testing and training also litter vast areas of the state.

That's not a new story. It is one that has been closely watched and reported by the Deseret News for 25 years, with some cleanup and compensation for victims achieved. But an update now shows much remains undone.

'Downwinders'

Energy Department records show the Nevada Test Site conducted 141 tests of atomic bombs that likely spread radiation toward Utah — just a portion of the 930 tests (both above and below ground) conducted there through 1992. The bomb tests are the only class of Cold War weapons testing that the government has acknowledged likely killed or sickened civilians downwind. But it acknowledges that fact for only a small portion of people who think they are victims.

For example, studies show significant fallout from tests not only hit southern Utah, but also heavily populated Salt Lake County — and even every county in America. Congress never made these areas eligible for compensation, in part, because it simply would be too expensive.

As of Nov. 15, Justice Department figures show 7,138 "downwinders," uranium workers and Nevada Test Site workers with claims settled — but 3,574 (30 percent) were rejected. The case of Oleta Nelson demonstrates how many victims had to wait for the government to acknowledge fault and offer compensation — and why many may never receive it. Isaac Nelson, her husband, remembers that neighbors called them outside on May 19, 1953, to watch a fallout cloud. It was from an atomic bomb test later nicknamed "Dirty Harry" because of its heavy fallout. They didn't worry because the government falsely told residents it was safe.

Later that night, Oleta Nelson suffered a headache that would pound for six months. A few weeks later, she would scream when much of her hair simply slipped off her scalp. She would soon develop brain cancer and die 12 years later. Isaac Nelson joined early lawsuits seeking to make the government acknowledge that fallout caused such deaths and to pay for it. But judges ruled the government was immune from suits for actions it made for national defense.

In 1990, Sen. Orrin Hatch, R-Utah, and Rep. Wayne Owens, D-Utah, passed a law that apologized to downwind cancer victims and offered compensation. But Isaac Nelson didn't qualify. The brain cancer that killed his wife was not included among a list of cancers recognized as likely caused by the atomic tests.

With better research in recent years, Hatch passed another bill last year to expand the type of cancers covered — including the brain cancer Oleta Nelson suffered. Her survivors could finally now qualify for \$50,000 in compensation. Isaac Nelson was pleased when that bill passed but still bitter. "No amount of money will restore one hair to her head at this point. The government murdered my wife."

Obtaining money for people such as Isaac Nelson may be difficult the next few years. The Justice Department ran out of money for claims last spring — and has approved \$20 million worth of claims since then that it has been unable to pay. To make matters worse, the department only requested \$13.9 million worth of funding for claims this year — not enough to cover even those claims already approved. On top of that, changes that Hatch made to allow more people to qualify are expected to bring \$70 million worth of claims a year, beginning in 2001. That means the Justice Department will likely be \$76 million short of money to fund all claims this year.

Other Radiation

Utah wasn't hit by radiation only from atomic bomb fallout. The government also spread radioactive dust via artillery shells, bombs and airplane spraying — and even intentional nuclear reactor meltdowns at Dugway Proving Ground.



Spreading Radioactive Dust at Dugway Proving Grounds



Nerve Gas Storage at Tooele Army Depot

At least 74 tests of "radiological arms" were conducted at Dugway in the 1940s and 1950s. Radioactive materials would be burst and scattered in a way designed to contaminate enemy battlefields. Most the materials used had short half-lives and would have ceased to have been dangerous years ago. Also in 1959, the Air Force secretly conducted what amounted to eight intentional nuclear reactor meltdowns at Dugway. It melted reactor fuel in high-temperature furnaces and used forced air to ensure the resulting radiation would be spread to the wind. Researchers wanted to see how far radiation from then-planned nuclear-powered airplanes might spread if meltdowns occurred.

When radiation clouds left detector range, they were headed toward the old U.S. 40 (now I-80). The communities of Wendover and Knolls might also have been in the path of

those clouds, according to documents obtained and reported on by the Deseret News in 1994. Those tests release a total of 215.57 curies of radiation, or about 14 times more than that released at the infamous Three Mile Island near-meltdown. Also between 1959 and 1965, the Atomic Energy Commission experimented with atomic-powered rockets in Nevada, which may have spread radiation downwind to Utah.

Chemical Tests

Radiation wasn't the only problem. Utah was also host to 1,174 series of open-air tests or firing of munitions filled with chemical arms at Dugway Proving Ground. Army documents obtained by the Deseret News through the years show that at least 494,700 pounds of nerve agent were spread to the winds. A pinhead-sized drop of nerve agent VX can cause death.

The strongest case that some of it drifted off base came on March 13, 1968 — after a jet streaked around the Dugway base, dropping 2,730 pounds of VX on test grids. Documents said more than half of it may have traveled farther than the mile downwind that monitors tracked it. The next day, 6,000 sheep began dying 25 miles from the base in Skull Valley. The Army paid \$1 million in restitution to ranchers but never acknowledged the VX killed those sheep.

Ray Peck, who now lives in West Valley City, was living in Skull Valley the night the VX was spread and worked outside much of that evening. He went inside when he developed an earache. The next morning, he said new-fallen snow was so pretty that he ate a handful of it. Then he saw the dead birds nearby and a dying rabbit struggling in the distance. Soon the sheep began dying. An Army helicopter would soon land on his yard, disgorging officials who collected dead wildlife and performed blood tests on his frightened family.

Not long after the incident, Peck said he began experiencing violent headaches, numbness, a feeling of burning in his legs and "bouts of paranoia." He said others in his family also have suffered violent headaches ever since. Peck's family suffered another problem not reported in scientific studies — high numbers of miscarriages. "We come from large families and never had problems with that before. But the girls (who were children at the time of the incident) have a real struggle with miscarriages," Peck said. In recent years, Peck also suffered skin cancer and heart problems. "I wonder if the tests didn't have something to do with that," he said in December.

Germ Tests

Documents obtained by the Deseret News through the years show Dugway conducted at least 328 series of open-air tests of germ weapons during the Cold War. Some tests used

agents that cause such diseases as anthrax, botulism, the plague, tularemia and Q fever. Rolland Bivens, who now lives in Colorado, was intentionally attacked by germ weapons spreading Q fever in one 1955 Dugway test along with 29 other Seventh-day Adventists who had avoided combat as conscientious objectors.

"It was night. I remember hearing in the distance some motors running. We were told they were creating a cloud of Q fever germs. The cloud came toward us and passed by. It was invisible, though; all we saw was clear air," Bivens remembered in a 1991 Deseret News interview. Documents said the clouds headed toward the old U.S. 40 (now I-80), along which the Army had placed guinea pigs in cages in what the Army called "peripheral sampling stations."

The soldiers were flown to Ft. Detrick, Md., where some became sick with Q fever — which can be deadly, but usually is not. Bivens and others seemed not to have suffered long-term effects.

Dugway commander Col. Edward A. Fisher said earlier this year, "Presidential directives, originating in 1969, forbid open-air testing with any toxic chemical or biological agents. For this purpose, we have built state-of-the-art test chambers and laboratories" that he says safely contain deadly germs.

Other Threats

Not surprisingly, the military says a third of Dugway Proving Ground may be contaminated with old unexploded bombs, rockets and artillery shells and most of the vast Utah Test and Training Range is considered contaminated by similar ordnance from airplanes. However, it likely would surprise most Utahns that 1,421 square miles of public lands off of military bases — all on U.S. Bureau of Land Management areas — are also considered possibly contaminated with unexploded ordnance, according to a BLM study completed in 1994. The total square miles believed to be contaminated adds up to an area roughly the size of Rhode Island.

In 1986, several campers were injured on Hurricane Mesa, Washington County — once used as an impact area for grenades and mortars. One of them found an old M-79 40mm artillery shell and threw it into a campfire, where it exploded.

Not only conventional arms may be scattered on such lands, but also germ and chemical weapons. Dugway even tried to annex two possibly contaminated areas in the late '80s, but the BLM opposed the move and simply wanted them cleaned instead.

Other military wastes have "wandered" off military bases in Utah. For example, Department of Defense environmental studies found that nitrates from explosives at the old Tooele Army Depot had contaminated regional groundwater between the 1940s and 1980s, when problems were discovered. Nitrate poisoning is potentially fatal to infants, but Army representatives said the situation poses no immediate danger and contamination had not spread far. The Army also took steps to stop further contamination, which it said had come from some unlined ponds where wastewater was drained — often after washing off equipment contaminated with explosives.

Similarly, military environmental studies reported contamination in groundwater near Hill Air Force Base and the now-closed Defense Depot Ogden, including fuel, solvents and toxic metals. The military has taken steps to contain and clean such underground sources of pollution.

Navy tools and machine parts contaminated with explosives are also buried near western Salt Lake County suburbs. The Navy says the explosives present no risk as long as they remain buried and relatively dry so they do not contaminate groundwater beneath the Naval Industrial Reserve Ordnance Plant near Magna.

Chemical Arms

Deseret Chemical Depot — formerly known as Tooele Army Depot's South Area in Rush Valley — was the long-time home to 40 percent of the nation's chemical arms stockpile. Originally the government stored a massive 13,616 tons of it in 1.1 million separate containers, rockets, bombs and artillery shells. As of Oct. 15, the Army had destroyed 4,775 tons of chemical agent (in 584,231 containers) at a \$1 billion incinerator at the Tooele County base, said John Pettebone, public affairs specialist at Deseret Chemical Depot.

But critics say incinerating those arms presents great risks — accidents at the plant have released nerve agent — and other communities near similar stockpiles nationwide are fighting incinerators there. The incinerator's existence raises the possibility that more arms could be transported to Utah for destruction, although that is now banned by law. One accident at the depot in 1998 allowed unburned nerve agent to escape the smokestack as workers figured alarms must be in error. The incident shut down the plant for months and led to congressional hearings.

Deseret and Dugway are also home to some "non-stockpile" chemical arms — a fancy name for old weapons that were dug up at long-forgotten storage sites, or arms captured from foreign countries. Pettebone said Deseret has 297 such arms stored there — 296 rocket warheads plus one 1-ton container. Dugway spokeswoman Melanie Moore said

her base has 40 such arms in storage — all but one of which were recovered on Dugway grounds. The other was discovered at Denver's Rocky Mountain arsenal and sent to Utah. Congress has not yet decided how to dispose of such "non-stockpile" weapons.

Continuing Tests

Not all chemical testing ended with the Cold War. Some continues today. Dugway Proving Ground is continuing experiments with poisonous chemicals inside the Melvin Bushnell Materiel Test Facility, a \$30 million structure built in the 1990s. The research involves detection systems to warn when chemical attacks are launched and to improve protective clothing used by the military, police and emergency response teams. The building's test chamber measures 50 feet by 50 feet by 30 feet, so huge that technicians can place aircraft and tanks inside to check susceptibility to chemical warfare agents. The building standards used for the duct work that carries poison gas to and from the chamber allows no detectable leakage.

Sen. Orrin Hatch, R-Utah, has pushed — but has been unsuccessful so far — to construct a mock city at Dugway, complete with buildings, subway systems and homes where the military and police could practice responding to chemical and germ attacks.

Dugway commander Fisher said earlier this year that Dugway and Utah attract such testing now for many of the same reasons they did during the Cold War. "The installation's land mass, remoteness, test facilities and highly professional work force (make) our customers recognize that Dugway is the ideal location for testing," he said.

****End of Deseret News Article****

GRANTSVILLE, UTAH – A TRUE-LIFE STORY

When Chip Ward pondered whether to move his family to Grantsville in 1978, he considered factors like good schools, low property taxes and a small-town atmosphere. And, of course, he wanted to be near the desert that touched his soul and prompted him to leave behind the verdant valleys of Vermont. It never dawned on him that the desert's beauty also harbored dark, deadly secrets — lands contaminated with residue from chemical weapons and nuclear fallout, air sullied with countless tons of pollutants and water swirling a potent brew of toxins.

From his front porch on Cooley Street, the professional librarian can point to three houses where children had been confined to wheelchairs, another where a child had spina bifida, and yet another where a child was missing a kidney. He can also point to other homes where kids died of cancer. And there was a 32-year-old woman on his block who also died of cancer. All in a small town of only about 4,400 people at the time.

Ward, whose dogged determination to find out what was wrong with the land he loves resulted in the book "Canaries on the Rim," is hardly alone in his suspicions that Utah's environment is contaminated with toxins that are sickening and killing thousands of Utahns.

Note: This “Canaries on the Rim - Living Downwind in the West” book is a real eye-opener and a must-read for anybody who lives in Utah.

MORE HORROR STORIES

The late Irma Thomas once documented 49 cases of cancer in her St. George neighborhood, and now her daughter, Michelle, is stricken with a host of ills. Former state lawmaker Bev White points to 14 cases of multiple sclerosis within a two-block area of the Tooele home where she has lived the past 50 years.

Former Monticello High School principal Dale Maughan recalls the leukemia deaths of seven young people who lived within a five-block radius of his home in southeastern Utah. One was his son, Jon Alan Maughan, who died July 5, 1966, two months before his 17th birthday. The captain of his high school basketball team, Jon Alan used to swim with friends in the pond of water that collected at the uranium mill on the outskirts of this small town of less than a thousand people. There were no fences around the pond, no warning signs and nothing to keep the southerly winds from blowing the tailings dust into nearby homes.

From one end of Utah to another, victims of Utah's toxic legacy tell strikingly similar stories — stories of deceit and complicity by government and industry to bury the truth about the dangers of uranium mining and nuclear and chemical weapons testing, about public safety sacrificed in the name of corporate profits.

"You learn quickly that the first victim of nuclear weapons or nuclear power is the truth, and the first casualty is the government's ability to tell the truth," said home-grown nuclear activist J. Preston Truman.

Disconcerting to survivors of Utah's toxic past is that the legacy will inevitably continue into the future as industry, a co-conspirator with government in nuclear programs, supplants government as the cause of environmental degradation. One recent study by the Public Interest Research Group found that among all states, Utah ranks fourth nationally in the release of chemicals that affect child development and learning. Tooele County ranked first in the nation among counties.

The No. 1 air polluter in all of North America — Magnesium Corp. of America (MagCorp) — is located on the western shore of the Great Salt Lake, upwind from 1.5 million people living along the Wasatch Front. "You would think we would have learned from the past," Truman said. "Utah has been the ultimate sacrifice zone."



Magnesium Corp. of America (MagCorp)

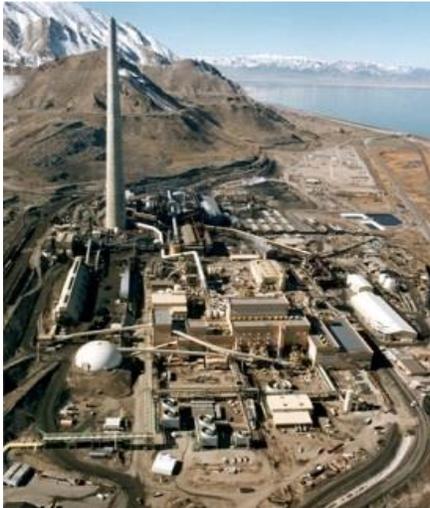
AMERICA'S DUMPING GROUND

Utah's toxic legacy is inextricably intertwined with global events of the past 65 years that transformed a state renowned for natural beauty into a toxic dumping ground.

A uranium frenzy in the 1950s and 1960s resulted in tens of thousands of tons of radioactive mill tailings left behind after the boom went bust, not to mention the thousands of abandoned and potentially deadly open mines throughout southern Utah.

Above-ground nuclear testing in the late 1950s and early 1960s sent radioactive pink clouds billowing over unsuspecting residents in Nevada, Utah and Arizona. Thousands died of cancers believed linked to the tests.

Along the populous Wasatch Front, steel mills and smelters built to bolster the war effort contaminated surrounding lands and underground water with lead and arsenic while spewing deadly chemicals into the air.



Kennecott Copper Mine

(Located 28 miles southwest of Salt Lake City near the Great Salt Lake)



Geneva Steel Plant

(Located 40 miles south of Salt Lake City in Orem Utah – This steel plant is now closed)

Mining companies like Kennecott also contributed to a dangerous concoction of toxic byproducts handed down to future generations. The company is now spending hundreds of millions of dollars cleaning up the messes it made in the past.

Today, Utah is home to 20 actual or proposed Superfund sites, most of them located in Salt Lake, Davis, Weber and Tooele counties. With Superfund running out of money, another 14 contaminated sites have been targeted for cleanup under a different program that entails voluntary cleanup by property owners.

Additionally, four uranium mill sites have already been cleaned up at a cost of almost \$1 billion, and cleanup at a fifth site, the Atlas mill outside Moab, is expected to cost as much as \$300 million. Almost all of it is taxpayers' money.

But while billions are being spent to clean up the wastes dumped on Utah in the past, environmentalists and citizen activists question the wisdom of some of Utah's political leaders in the late 1970s and early '80s whose attitude of "waste is welcome here" opened Utah to non-Utah waste.

Millions of tons of hazardous and radioactive waste generated in other states are now being dumped in Utah — specifically Tooele County, which is home to the nation's only commercial low-level radioactive waste dump, as well as one hazardous waste dump and two hazardous waste incinerators.

A commercial waste dump in Carbon County accepts wastes deemed hazardous in other states but not in Utah.

A uranium mill in San Juan County accepts radioactive wastes from around the nation that are "recycled" to recover small traces of uranium.

A military incinerator in Tooele County is being used to destroy massive stockpiles of chemical and biological weapons.

And it may not end there...

Sometime during the next two years, Utah could find itself a home to 40,000 tons of spent nuclear fuel rods — the most toxic of all nuclear wastes — as well as less-radioactive wastes resulting from the decommissioning of nuclear power plants around the nation.

"We are at a critical crossroads . . . when people need to make decisions about what they want for their children and grandchildren," said veteran activist Steve Erickson of Utah Downwinders. "For them, we have to reverse a legacy we have allowed to take place on this land for more than 65 years."

CONCLUSION

As I stated upfront, our family is 100% certain that my brother John Wesley Petersen's illness and death was a direct result of the nuclear bomb tests that were conducted at the Nevada Test Site from 1951 to 1962.

John started showing symptoms that something was seriously wrong in late 1957. His condition steadily got worse and doctors eventually discovered that he had Leukemia (Blood Cancer). He suffered greatly during his last two years before his death on January 17th, 1960.

We lived in Pleasant Grove, Utah, a small town of about 5,000 people (back then). During this period (late 1950s to early 1960s), several families lost children to leukemia and other cancers. My mother Dorothy Petersen who had lived in Pleasant Grove her whole life said that she had never heard of any children dying of cancer before. Several of the mothers of sick or dead children joined a class action lawsuit and submitted claims against the U.S. Government in an effort to get an apology and compensation for medical expenses. Nobody received an apology and nobody received any compensation. All they got was a complete denial of responsibility from our government.

Well, my mother died about a month ago on May 18, 2017. Among the things I inherited was a jumbo-sized envelope containing all of the paperwork concerning my brother's death and her efforts to get an apology from our government. The paperwork included John's death details, justification papers, class lawsuit documents, compensation claims, and of course, all of the government's denial documents. She didn't directly tell me this but I believe she wants me to take over the effort to get some kind of "justice" and "closure" from the government for causing John's death. She spent 57 years trying to do it and now it is my turn. I accept the challenge and writing this article is the first step.



Dorothy Ella Nelson Petersen
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