

## Nuclear Testing and the Downwinders - Janet Burton Seegmiller

Between 1951 and 1963, 100 above ground nuclear tests were conducted in the Nevada desert as the United States built its nuclear weapons arsenal. The following excerpts are from an article by Janet Burton Seegmiller and published by the State of Utah. They describe some of the impacts that these tests had.

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Atomic Energy Commission press releases promised that atomic tests would be conducted "with adequate assurances of safety." Residents of southern Nevada and southern Utah who lived downwind of the tests initially believed what they were told; as one historian wrote, "Their faith and trust in their government would not allow them to even consider the possibility that the government would ever endanger their health." However, their experiences during and since the 1950s have convinced them of just the opposite--there was no safety for either people or livestock from atmospheric nuclear testing and the AEC knew it. Declassified transcripts released from 1978 to 1980 show that scientists knew as early as 1947 that fission products released by atomic bomb tests could be deadly to humans and animals exposed during and after the tests. The AEC chose to ignore warnings from its own scientists and outside medical researchers and continued with a "nothing-must-stop-the-tests" rationale.

Atomic testing during its first two years actually received very little attention in Iron County, if the pages of the *Iron County Record* are an accurate measure. Residents could read about detonations in statewide daily newspapers, but the local paper was more likely to describe civil defense preparedness. Residents were more concerned about the threat of nuclear attack from Russia. As elsewhere, children practiced bomb drills at school and residents began building bomb shelters and storing food so it would not become contaminated.

The sheep and their owners were Iron County's first victims of radioactivity. While being trailed across Nevada from winter range to the lambing yards at Cedar City, some 18,000-20,000 sheep were exposed to large quantities of radioactive fallout from tests in March and April 1953. 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 lost as much as a third of their herds.

Ranchers and preliminary veterinary investigators suspected radiation poisoning. The AEC had given Iron County agricultural agent Steven Brower a Geiger counter, a small radiation meter, to carry with him. At the sheep pens, he reported the "needle on my meter went clear off scale. We picked up 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." In early June the AEC sent teams of radiation experts to Cedar City to examine ailing animals. The 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 a quarter of a 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."

Within three to five years after atmospheric testing, leukemia and other radiation-caused cancers appeared in residents of Utah, Arizona, and Nevada living in areas where nuclear fallout had occurred. Communities in which childhood leukemia was rare or unknown had clusters of cases in the late 1950s and early 1960s. In the 1990s, people in Iron County believed that those who lived there in the 1950s were guinea pigs and victims, like the sheep. They have adopted the appellation "downwinders," signifying they lived "downwind" of atomic tests. Tests were usually 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. Iron County is centered in the fallout arc. 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 Iron County 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.

(accessed on 4.26.16 at [http://www.historyto.go.utah.gov/utah\\_chapters/utah\\_today/nucleartestingandthedownwinders.html](http://www.historyto.go.utah.gov/utah_chapters/utah_today/nucleartestingandthedownwinders.html))

1. Highlight unknown words that you feel are critical to the meaning of the article
2. Briefly outline the article by summarizing the main idea of each paragraph in 1-2 sentences (for each paragraph).
3. Highlight sections that contain evidence that the tests caused negative effects for residents living down wind. List, in bullet form, the negative effects described in the article.
4. What was the government's response to concerns regarding the safety of nuclear tests? Highlight the relevant sections and list the responses, in bullet form,
5. Should those responsible for the Nevada tests have faced criminal prosecution?
6. Based on what we have discussed in class, the video and this article describe the "cold war mindset" that the government and many Americans developed in the early Cold War. How did this mindset shape how Americans looked at the world during the 1950s?

The outline and questions should be completed on the back of this page. The completed assignment is due at the end of the period. It is worth 1 quiz.