

= Dugway sheep incident =

The Dugway sheep incident , also known as the Skull Valley sheep kill , was a 1968 sheep kill that has been connected to United States Army chemical and biological warfare programs at Dugway Proving Ground in Utah . Six thousand sheep were killed on ranches near the base , and the popular explanation blamed Army testing of chemical weapons for the incident , though alternative explanations have been offered . A report , commissioned by Air Force Press Officer Jesse Stay and first made public in 1998 , was called the " first documented admission " from the Army that a nerve agent killed the sheep at Skull Valley .

= = Background = =

Since its founding in 1941 , much of the activity at Dugway Proving Ground has been a closely guarded secret . Activities at Dugway included aerial nerve agent testing . According to reports from New Scientist , Dugway was still producing small quantities of anthrax as late as 1998 , 30 years after the United States renounced biological weapons . There were at least 1 @, @ 100 other chemical tests at Dugway during the time period of the Dugway sheep incident . In total , almost 500 @, @ 000 lb (230 @, @ 000 kg) of nerve agent were dispersed during open @-@ air tests . There were also tests at Dugway with other weapons of mass destruction , including 332 open @-@ air tests of biological weapons , 74 dirty bomb tests , and eight furnace heatings of nuclear material under open air conditions to simulate the dispersal of fallout in the case of meltdown of aeronautic nuclear reactors .

= = Incident = =

In the days preceding the Dugway sheep incident the United States Army at Dugway Proving Ground conducted at least three separate operations involving nerve agents . All three operations occurred on March 13 , 1968 . One involved the test firing of a chemical artillery shell , another the burning of 160 U.S. gallons (600 L) of nerve agent in an open air pit and in the third a jet aircraft sprayed nerve agent in a target area about 27 mi (43 km) west of Skull Valley . It is the third event that is usually connected to the Skull Valley sheep kill .

The incident log at Dugway Proving Ground indicated that the sheep incident began with a phone call on March 17 , 1968 , at 12 : 30 a.m. The director of the University of Utah 's ecological and epidemiological contract with Dugway , a Dr. Bode , phoned Keith Smart , the chief of the ecology and epidemiology branch at Dugway to report that 3 @, @ 000 sheep were dead in the Skull Valley area . The initial report of the incident came to Bode from the manager of a Skull Valley livestock company . The sheep were grazing in an area about 27 mi (43 km) from the proving ground ; total sheep deaths of 6 @, @ 000 ? 6 @, @ 400 were reported over the next several days as a result of the incident . The Dugway Safety Office 's attempt to count the dead sheep compiled a total of 3 @, @ 843 .

= = Possible causes = =

Previously obtained documents said one such demonstration also occurred the day before the sheep deaths . On 13 March 1968 , an F @-@ 4 Phantom strike aircraft flew a test mission over the Dugway Proving Ground with chemical dispensers containing VX . One of the dispensers was not completely emptied during the test , and as the F @-@ 4 gained altitude after its bombing run , VX trickled out in a trail behind the aircraft , drifted into Skull Valley , north of the proving ground , and settled over a huge flock of sheep .

One explanation in the aftermath of the incident was that a chemical or biological agent had escaped from the Dugway Proving Ground . Circumstantial evidence seemed to support this assertion ; the United States Army admitted to conducting open @-@ air tests with the nerve agent VX in the days preceding the sheep kill . The Army intimated that a spray nozzle had malfunctioned

during the test causing an aircraft to continue spraying VX as it climbed to higher altitudes . It was reported that a small amount of VX was found in the tissue of the dead sheep .

Other information contradicted the initial assumptions . One contradiction to nerve agent exposure as a cause came in the symptoms of some of the sheep following the incident . Several sheep , still alive , sat unmoving on the ground . The sheep refused to eat , but exhibited normal breathing patterns and showed signs of internal hemorrhaging . Regular breathing and internal hemorrhaging are inconsistent with nerve agent exposure , and " no other animals of any type , including cows , horses , dogs , rabbits , or birds , appeared to have suffered any ill effects , a circumstance that was hard to explain if VX had in fact caused the sheep deaths . "

= = Aftermath = =

The incident affected the Army , and U.S. military policy within a year . The international infamy of the incident contributed to President Richard Nixon 's decision to ban all open @-@ air chemical weapon testing in 1969 . The sheep incident was one of the events which helped contribute to a rise in public sentiment against the U.S. Army Chemical Corps during and after the Vietnam War . Ultimately , the Chemical Corps was almost disbanded as a result .

Following the incident , the Army and other state and federal agencies compiled reports , some of which were later characterized as " studies " . A report which remained classified until 1978 and unreleased to the public until nearly 30 years after the incident was called the " first documented admission " by the Army that VX killed the sheep . In 1998 , Jim Woolf , reporting for The Salt Lake Tribune , made the content of the report public for the first time . The report described the evidence that nerve agent was the cause of the sheep kill as " incontrovertible " . The 1970 report , compiled by researchers at the U.S. Army 's Edgewood Arsenal in Maryland , stated that VX was found in both snow and grass samples recovered from the area three weeks after the sheep incident .

The report concluded that the " quantity of VX originally present was sufficient to account for the death of the sheep . " Even after the report surfaced , the Army maintained that it did not accept responsibility for the incident and did not admit negligence . As late as 1997 , one year before the report went public , U.S. Department of Defense officials stated that " the reason it (the report) was never published is because it wasn 't particularly revealing . " Deseret News reported in June 1994 that Ray Peck , who owned the sheep that were killed , was outside working during the May 13 , 1968 , incident ; members of his family developed nervous @-@ system illnesses that were similar to those reported by people exposed to low levels of VX in lab experiments . Also , the probe showed that medical tests the Army had used to claim humans were not affected are now considered inconclusive , and the Pecks had shown other signs of low @-@ level VX exposure .