

NOWHERE TO HIDE

THE INVISIBLE ENEMY

AT TONOPAHA TEST RANGE

BY DAVE CRETE, USAF VETERAN





Tonopah Test Range (TTR)

A highly classified, restricted federal government installation located in Nye County, Nevada

- 625 square miles
- 211 miles northwest of Las Vegas
- 20 miles northwest of the Nevada Test Site (NTS)
- 32 miles southeast of Tonopah, NV
- Part of the immense Nevada Test and Training Range (NTTR)







Tonopah Test Range (TTR)

Owned by the Department of Energy (DoE)

- Controlled by the DoE and
 - Department of Defense (DoD)
 - United States Air Force (USAF)
 - Other federal agencies

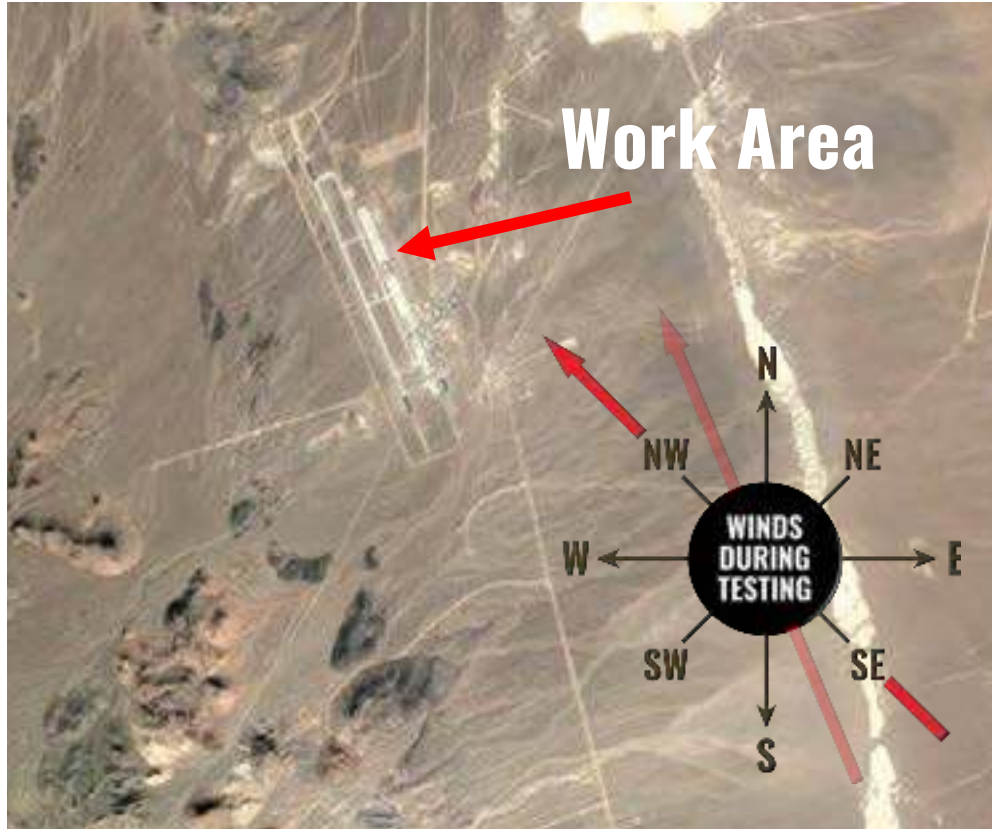


Tonopah Test Range (TTR)

Primary TTR activities:

- DoE nuclear and conventional weapons development and testing site
 - Radiological and chemical waste disposal and storage site
- Base for classified USAF aircraft





Tonopah Test Range (TTR)

The installation includes:

- The Work Area, which contains:
 - The main TTR airstrip, hangars and its support facilities
 - The predominant wind directions are from the southeast and northwest
 - The Operations Control Center
 - Managed by Sandia National Laboratories, the major civilian contractor conducting research at TTR

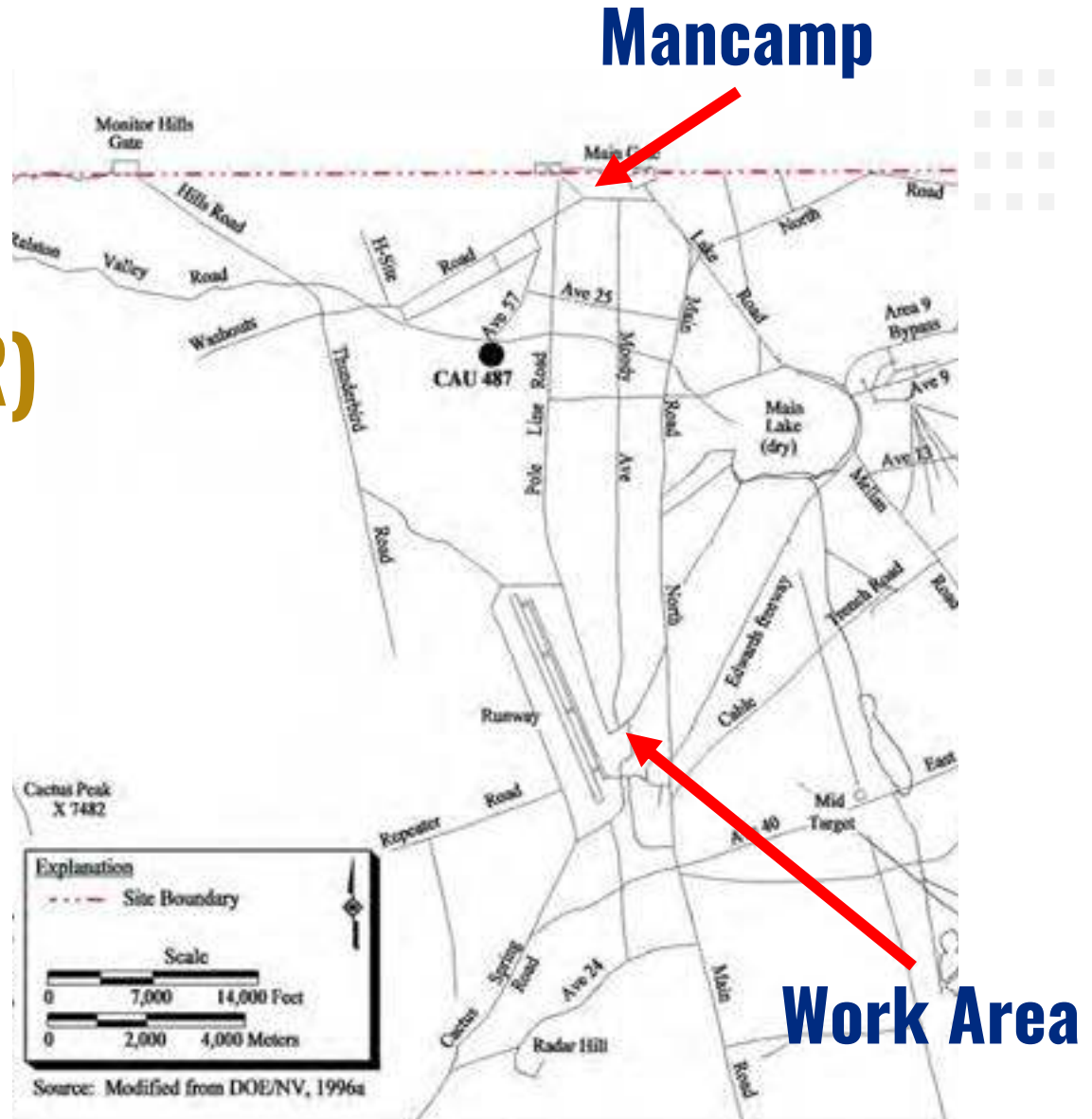




Tonopah Test Range (TTR)

The installation includes:

- The Mancamp, a large military and civilian compound six miles north of the Work Area
 - Contains housing, support and recreational facilities for:
 - DoE and DoD personnel and family members based at TTR
 - Other civilians supporting DoE and DoD personnel





Tonopah Test Range (TTR)

- Between 1957 and 1963, five classified surface and subsurface bomb detonations took place
- A wide range of radiation and toxic materials were released into the surrounding environment
- Fallout from these detonations contaminated the entire TTR, including the Work Area and the Mancamp



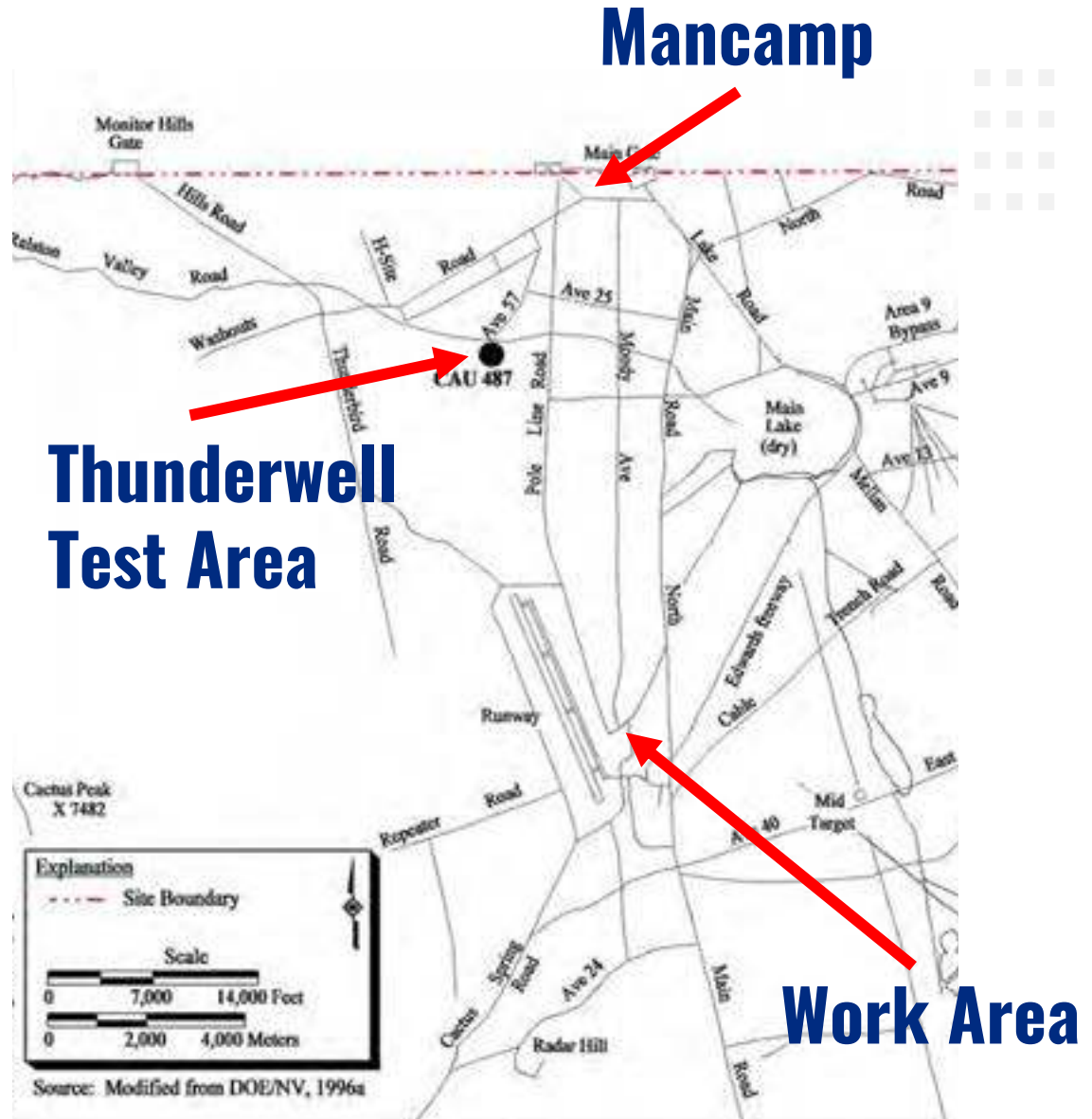


Thunderwell Site

1957

Objective: Evaluate the feasibility of using controlled nuclear explosions to propel spacecraft (as an alternative to Project Orion)

- Distance from Work Area: 3 miles
- Distance from Mancamp: 2 miles
- A 300-kiloton fission bomb with a plutonium core was placed at the bottom of a 500-foot shaft
 - The Hiroshima bomb was 15 kilotons
- The bomb was covered by a 6,600-pound concrete plug
- The shaft was sealed with a 2,000-pound steel plate





Thunderwell Site

1957

Results:

- Upon detonation, the concrete plug was vaporized, and the steel plate was blown off
- Nuclear radiation and other fission products created by the explosion were released into the soil and atmosphere
- The groundwater at TTR was contaminated
- The plutonium 239 (Pu 239) used in nuclear bombs has a half-life of 24,110 years



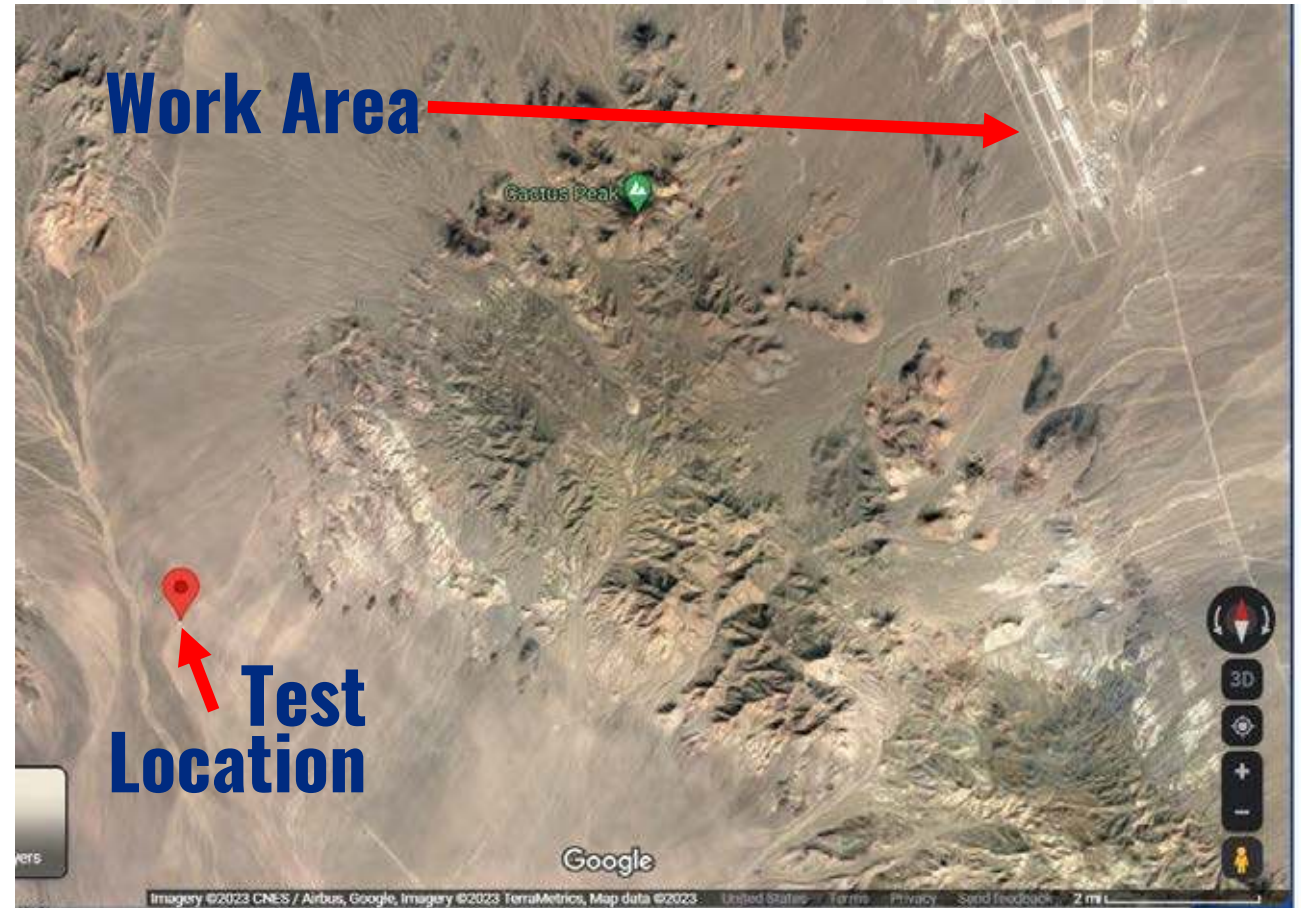
Operation Roller Coaster

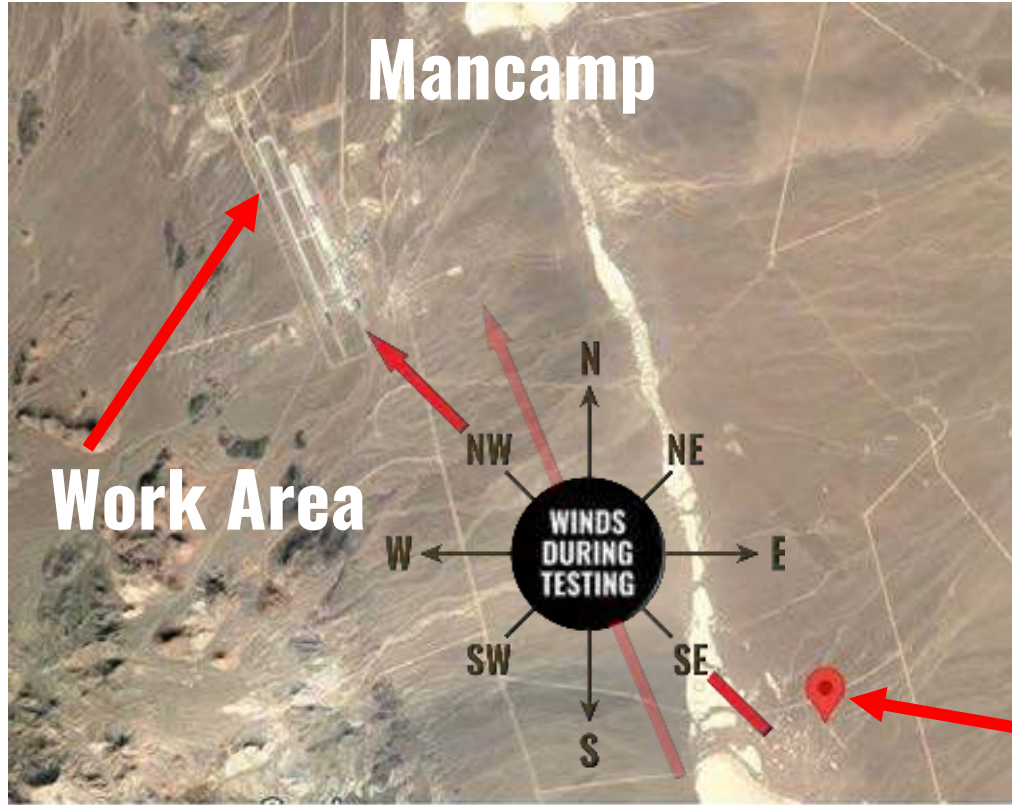
1963

Objective: A series of four tests to study the impact of exploding “dirty” bombs – conventional warheads laced with Pu 239 – and the effects of Pu 239 fallout on the area surrounding the test sites

Test 1: Double Tracks

- Date: May 15, 1963
- Location: 37° 42' 18.97" N, 116° 59' 13.74" W
- Distance from Work Area: 13 miles





Operation Roller Coaster 1963

Test 2: Clean Slate 1

- Date: May 25, 1963
- Location: 37.70853° N 116.65786° W
- Distance from Work Area: 8 miles

Test Location

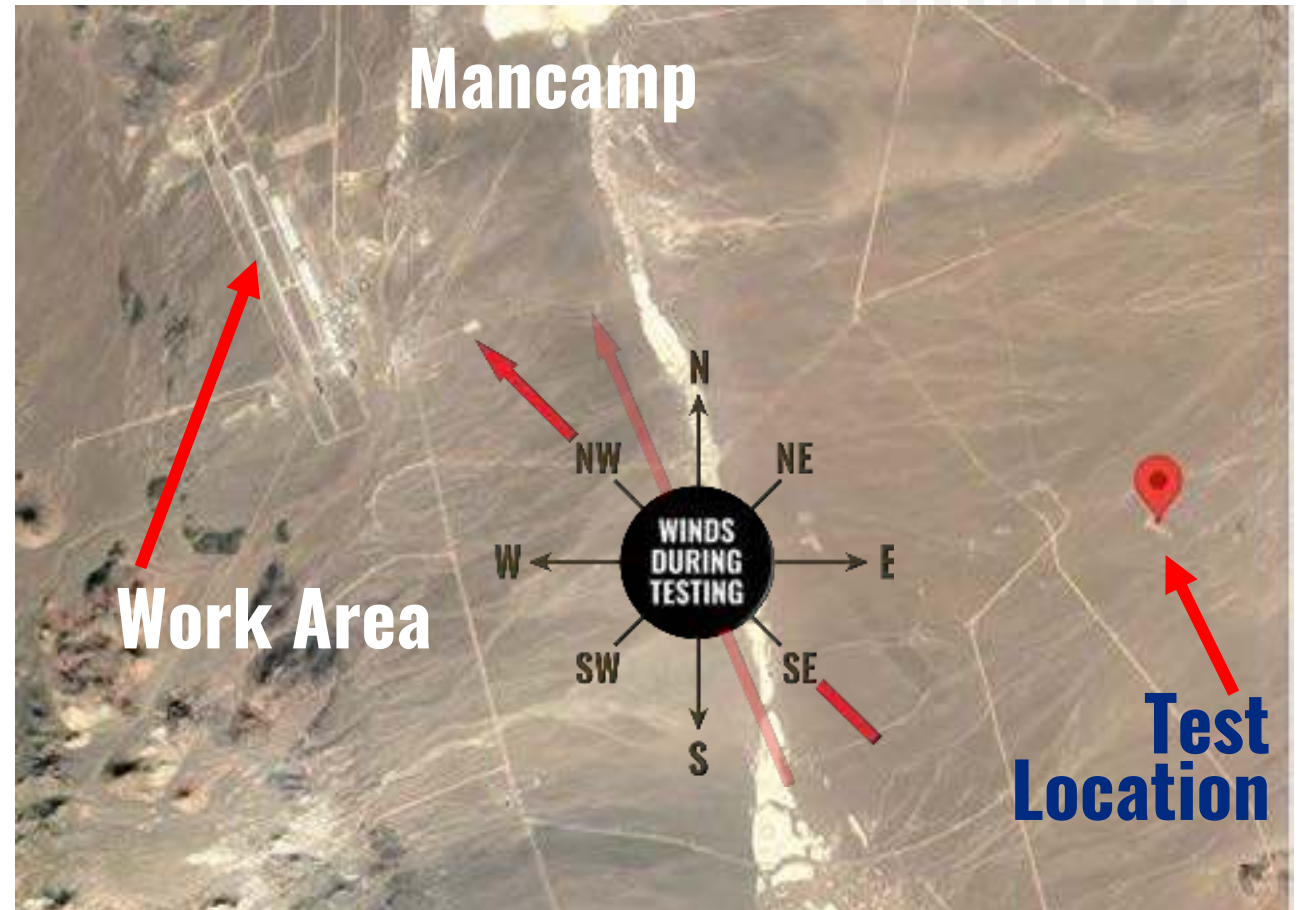


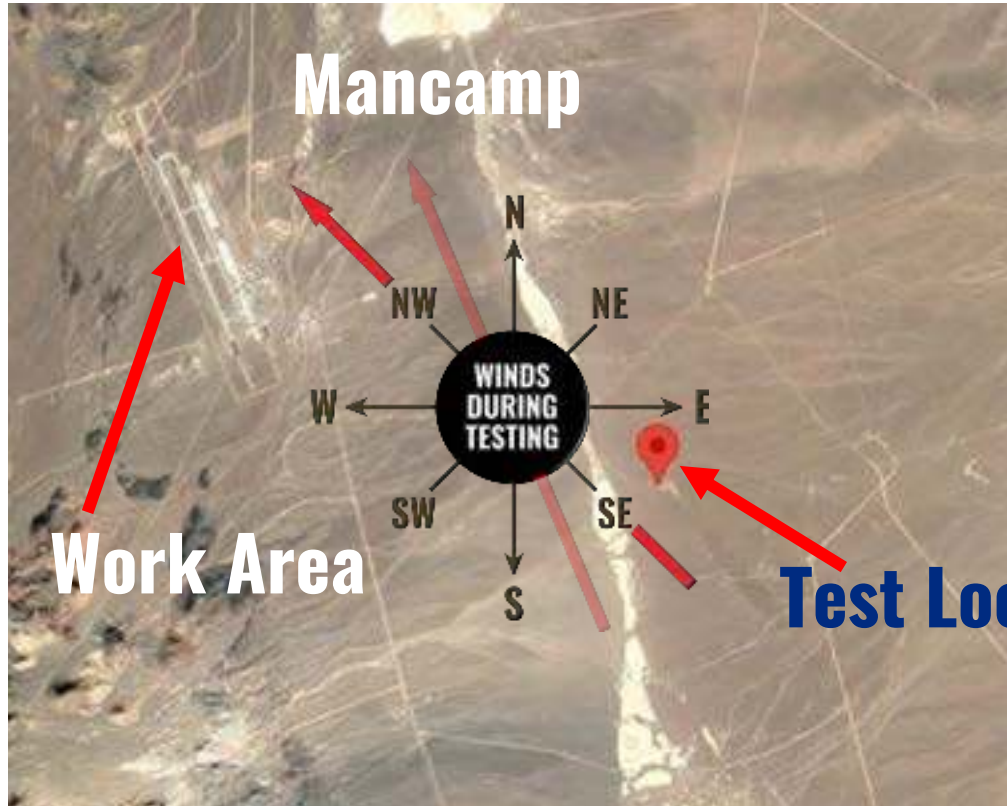


Operation Roller Coaster 1963

Test 3: Clean Slate 2

- Date: May 31, 1963
- Location: 37° 37.7614° N 116.61378° W
- Distance from Work Area: 7 miles





Operation Roller Coaster 1963

Test 4: Clean Slate 3

- Date: June 9, 1963
- Location: 37.75914° N 116.68123° W
- Distance from Work Area: 5 miles





Operation Roller Coaster

1963

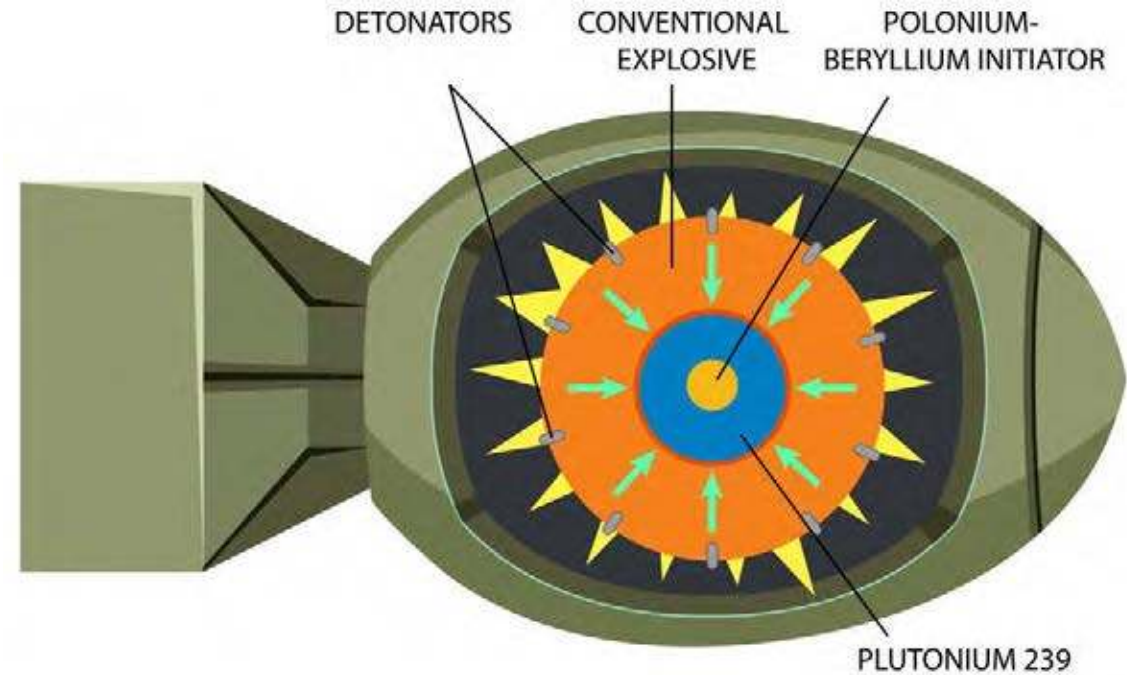
- All four explosions released plutonium into the soil and atmosphere
- Approximately 1,150 square miles around the test sites were contaminated with Pu 239
- The TTR itself is only 625 square miles
- Both the Work Area and Mancamp were contaminated





The Dangers of Plutonium 239

- Pu 239 is used in the majority of American nuclear weapons
- It has a radioactive half-life of 24,110 years
- Its alpha particle emissions are ~ 20 times more carcinogenic than x-rays
- Highly dangerous gamma radiation emissions continue throughout the radioactive decay process – more than 100,000 years





The Dangers of Plutonium 239

When inhaled, plutonium particles less than a few microns in diameter can:

- Penetrate deep into the lungs and cause scarring and other lung problems, including cancer
 - One pound of plutonium oxide dust dispersed in the air could give cancer to two million people
- Enter the bloodstream, travel throughout the body and be deposited in bones and various organs





Was Contamination A Threat to TTR Personnel?

A 1975 environmental assessment of TTR, published by the U.S. Energy Research & Development Administration (ERDA), determined:

“There are three areas of the Range (the Roller Coaster sites) that are contaminated with plutonium from tests carried on in 1963. These areas are well fenced and there is no indication of migration of this surface contamination outside the fence, let alone outside the Range; nor is there any indication that this plutonium has entered significantly into the local biological systems or food chains.”





Was Contamination A Threat to TTR Personnel?

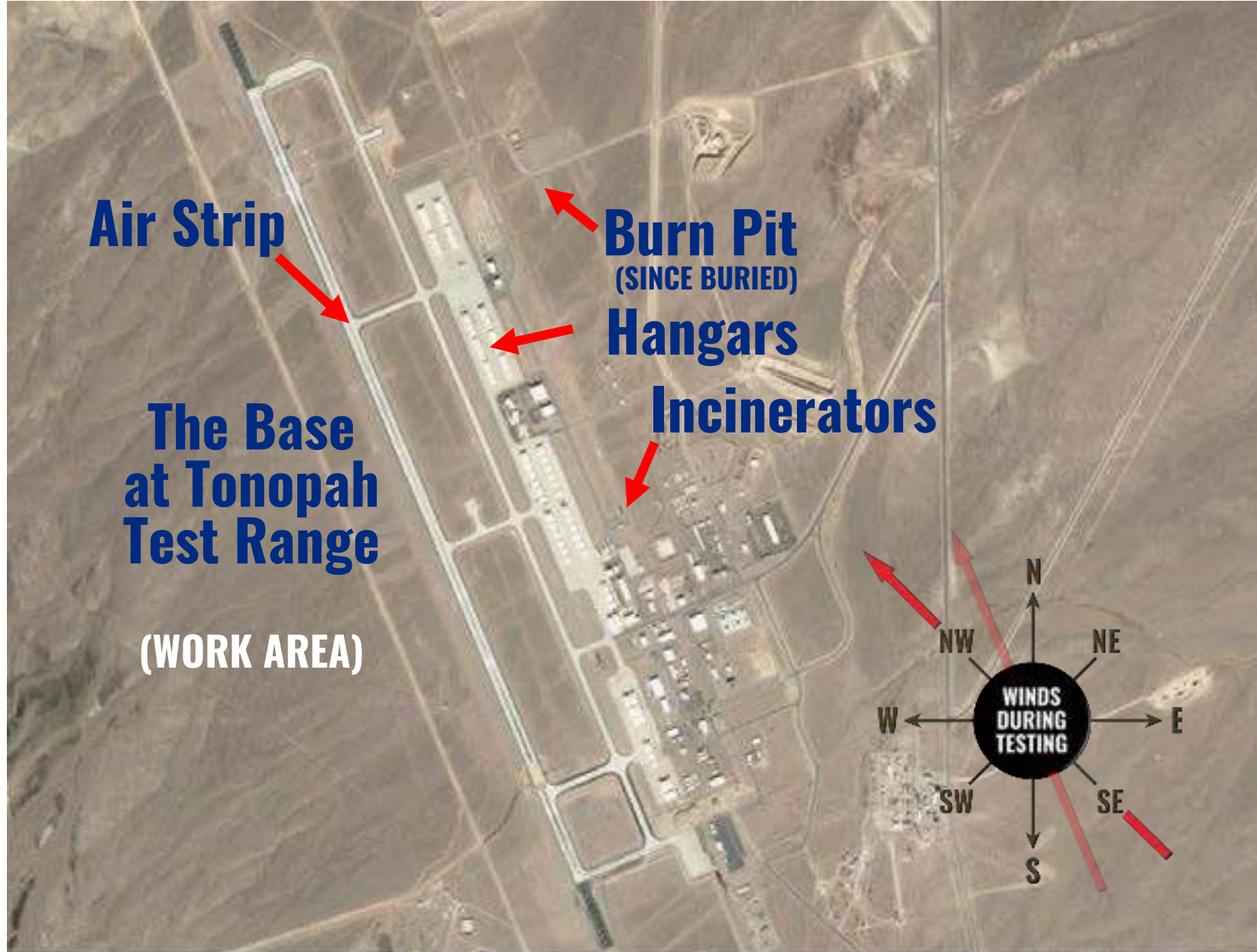
The 1975 ERDA environmental assessment of TTR also determined

- “A current set of tests of explosions in shipping containers have scattered and may yet scatter some beryllium and depleted uranium.”
- “Solid wastes are disposed of in landfills. Explosive wastes are burned in the open.”

The TTR’s waste incinerators and burn pit were located within the Work Area next to the main airstrip. Both locations were upwind of Mancamp.



Was Contamination A Threat to TTR Personnel?





Was Contamination A Threat to TTR Personnel?

Other Potential Contamination Sources At TTR include:

- The Nevada Test Site (NTS) where hundreds of atmospheric and subsurface nuclear detonations took place between 1951 and 1992
- Most of these tests took place at Pahute Mesa and Yucca Flat
- In 1963, Operation Storax detonated a 104-kiloton bomb that created Sedan Crater and exposed 13 million people to hazardous radiation and fallout
- NTS, one of the most contaminated places in the U.S., is located upwind of TTR



Was Contamination A Threat to TTR Personnel?



Mancamp

Work Area

Double Tracks

Clean Slate 1

Clean Slate 2

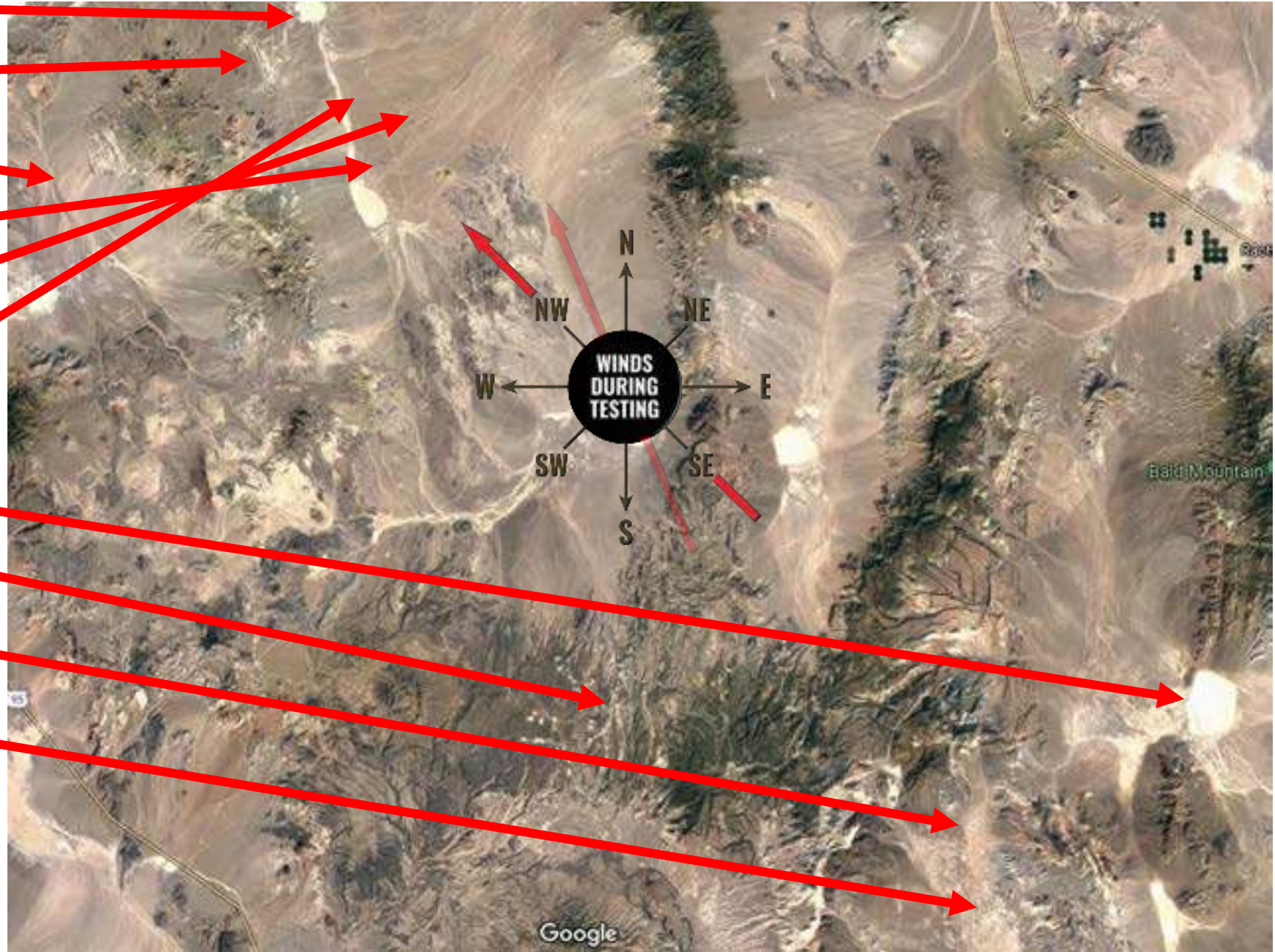
Clean Slate 3

Area 51

Pahute Mesa

Sedan Crater

Yucca Flat





Was Contamination A Threat to TTR Personnel?

- In 1992, the TTR was suddenly shut down
- Only a skeleton crew remained to maintain the facilities
- The DoE conducted a reclamation project to decontaminate the soil and groundwater
- The project lasted 17 years
- The USAF returned to TTR in 2008 while the project was still under way





Was Contamination A Threat to TTR Personnel?

Yes. And the DoE and DoD knew it.

- They knew the Thunderwell test released radiation and fission products into the soil and atmosphere
- They knew the Double Track and Clean Slate tests released toxic PU-239 dust into the soil and atmosphere
- They knew atomic bomb tests at NTS released radiation and deposited radioactive fallout over a huge geographic area, including TTR
- They knew the radiation and fallout remained highly dangerous for thousands of years





Was Contamination A Threat to TTR Personnel?

Yes. And the DoE and DoD knew it.

- They knew contaminated waste and unexpended ordinance were being burned in open pits and buried in local landfills, releasing toxic materials into the soil and atmosphere
- Despite the 1975 ERDA environmental assessment's claim that Pu-239 surface contamination did not migrate throughout the Range or significantly affect the local environment, TTR was completely shut down in 1992 and the DoE began a 17-year reclamation project to decontaminate its soil and groundwater



Was Contamination A Threat to TTR Personnel?

Yes. Since 1957, thousands of TTR workers and visitors have been exposed to dangerous residual radiation and toxic substances in the air, soil and water, including:

- DoE personnel involved in nuclear testing
- Civilian employees of Sandia National Laboratories
- TTR's civilian support personnel
- DoD personnel involved in:
 - Observing weapons tests
 - Flying, maintaining and securing classified USAF aircraft





Was Contamination A Threat to TTR Families?

- Many of these people unknowingly transferred toxic contaminants off the site
- Their families, friends and colleagues were also exposed to these contaminants
- As a result, thousands have experienced significant negative health impacts

How do we know this?

The Federal Government Admitted It.



Federal Recognition and Relief

On October 30, 2000, President Bill Clinton signed the Energy Employee Occupational Illness Compensation Act (EEOICPA) into law.

This program provides fair and timely compensation for:

1. Nuclear weapons workers and others who were exposed to hazardous substances as a result of weapons testing or uranium production, and...
2. Subsequently contracted certain illnesses





Recognized **Illnesses**

Cancers

Bile Duct
Bone
Brain
Breast
Colo-Rectal
Esophageal
Gall Bladder
Leukemia
Liver
Lung

Lymphomas
Multiple Myeloma
Ovarian
Pancreatic
Pharynx
Renal
Salivary Gland
Skin
Small Intestinal
Stomach
Thyroid

Urinary Bladder

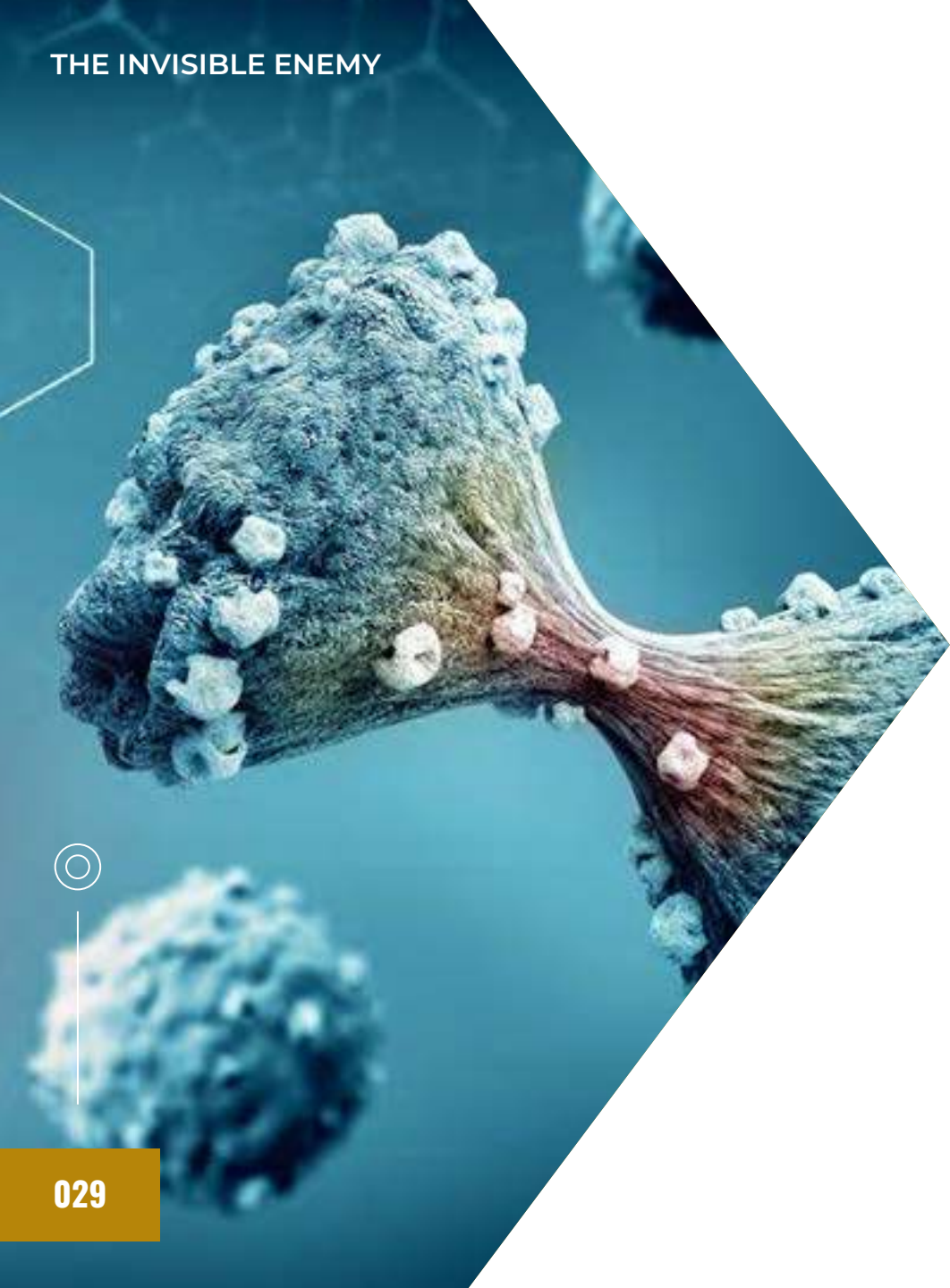
Beryllium Related

Beryllium
Sensitivity

Chronic Beryllium
Disease

Any injury,
impairment,
disability or illness
as a result of
exposure

Chronic Silicosis





EEOICPA Compensation To Date

	CLAIMS	CASES
APPLICATIONS FILED	341,589	229,887*
COMPENSATION PAYMENTS	139,007	103,440
TOTAL COMPENSATION DOLLARS PAID	\$13,944,242,846	<ul style="list-style-type: none"> • Represents 137,195 unique individual workers
TOTAL MEDICAL BILLS PAID	\$ 8,977,952,387	
TOTAL COMPENSATION & MEDICAL BILLS PAID	\$22,992,195,233	





EEOICPA: A Glaring Omission

- The EEOICPA applies to employees of the DoE and its civilian contractors, as well as the survivors of these employees
- DoD personnel were specifically omitted from the EEOICPA
 - Except DoD personnel who witnessed DoE above-ground bomb detonations
 - DoD personnel not involved in the DoE tests remain ineligible
- DoD (USAF) personnel stationed at TTR may have been omitted for national security reasons – the USAF presence at TTR was classified top secret at the time



Dave Crete

Sergeant, United States Air Force (Veteran)

- Assigned to the 4461st Security Police Squadron Unit to provide security for all (then) top-secret F-117A stealth aircraft
- Stationed at TTR from 1983-1987
 - Prior to the 1992 TTR shutdown and DoE reclamation project
- On duty at TTR for four consecutive days
- Returned to Las Vegas for four consecutive days



“For it is the lot of some men to be assigned duties about which they may not speak... Such work is not for every man. But those who accept the burdens implicit in their silent labor realize a camaraderie and sense of value known to few. These memories cannot be stolen. They will last always, untarnished, even better.”





Dave Crete

Sergeant, United States Air Force (Veteran)

Other USAF (DoD) units based at TTR during this time included:

- 4461st Support Group
- 4450th Tactical Group
- 4477th TEF "Red Eagles"
- While on base, all personnel worked in the Work Area and lived at Mancamp





Dave Crete

Sergeant, United States Air Force (Veteran)

4461st Support Group and Security Squadron personnel were also deployed at other locations in the NTTR, including:

- The NTS
- "Area 51" at Groom Lake
- The personnel were exposed to nuclear contamination while on duty
- USAF personnel from other units stationed at these sites also were exposed



Dave Crete

Sergeant, United States Air Force (Veteran)

- We inhaled airborne contaminants
- We drank and showered in contaminated water
- We had extended, direct contact with contaminated soil and surfaces
- We carried these contaminants back home to our families and any others we came in contact with



Dave Crete

Sergeant, United States Air Force (Veteran)

- I developed tumors throughout my body
- I developed silicosis and lung problems
- My wife had a miscarriage
- My son was born with neurofibromatosis



Dave Crete

Sergeant, United States Air Force (Veteran)

Other unit members and their families have reported:

- Tumor disorders and cancer-related issues (at abnormally high rates)
- Miscarriages
- Birth defects
- Premature or unexplained deaths
- Many other illnesses and health issues





Equal Risk. Equal Treatment.

Claims submitted to the Veteran's Administration have been denied

- The DoD does confirm the top-secret USAF operations at TTR
- The DoD will not release the names of USAF personnel stationed there
- Claimants cannot prove they were actually stationed at TTR
- Claimants cannot prove exposure to contaminants at TTR





Equal Risk. Equal Treatment.

Qualified DoE employees and other civilians who worked at TTR have received billions in compensation

- As much as \$400,000 per individual, in some cases more
- Lifetime medical coverage
- Many qualified for compensation after only 250 days at TTR or anywhere else on the NTTR





Equal Risk. Equal Treatment.

All DoD personnel who served at TTR
deserve equal or similar compensation

- Some served at TTR for up to nine years
- We were exposed to significant, known health risks in our workplace that negatively impacted us and jeopardized our families and friends
- For some, this resulted in hardship, suffering and even death





Equal Risk. Equal Treatment.

All DoD personnel stationed at TTR should receive:

- 100% VA Permanent Disability and all associated benefits
- Compensation equal to or greater than what TTR civilian contractors received under EEOICPA
 - We did not volunteer to be stationed at TTR, we were assigned

Our family members who have been negatively impacted by our nonvoluntary exposure should be compensated no less than other civilians

- They are unsuspecting victims



Do The Right Thing

- DoD decisionmakers knew the risks and potential liabilities associated with the TTR
- The DoD should have factored this into its decision to deploy USAF units to the TTR in the first place
- If the DoD ignored the risks, our compensation should reflect this negligence
- We deserve respect, fairness and equity – at the very least





About Dave Crete

Sergeant, United States Air Force (Veteran)

Dave Crete joined the United States Air Force in 1983 and entered its Security Police Academy with the goal of becoming an Air Force Security Policeman. He was quickly promoted to Senior Red Rope, the highest-ranking student in his class, in charge of 129 fellow trainees.

Upon graduation, Airman First Class Crete was hand-picked for a four-year special assignment to the newly created 4461st Security Police Squadron that would provide operational security for all of the Air Force's new, top-secret F-117A stealth aircraft.



About Dave Crete

The planes, known only as “the resources,” were based at the Tonopah Test Range (TTR), a highly classified weapons testing site in Nevada. Like the legendary Area 51, the TTR officially did not exist. As a part of what, at that time, was the largest Black Operation in Air Force history, Crete’s mission was to protect the resources and their base against all threats at all costs.

After three and a half years of providing F-117A security at TTR, a severe knee injury forced Crete to transfer to Nellis Air Force Base in Las Vegas, Nevada where he served the remainder of his commitment. Crete received his Honorable Discharge in 1989 and is still actively involved in the 4461st veterans’ support group.





THANK YOU

