

## *Field Notes: Art, Space, and Politics at the Edge of Skull Valley*

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In 2003, while making aerial photographs around Utah's Great Salt Lake as part of my ***Terminal Mirage*** series, I encountered a site in the Tooele Valley, near the western slope of the Oquirrh Mountains. Spread along the desert floor in uniform rows were hundreds of small buildings. They suggested a Donald Judd installation, or perhaps some new suburban housing prototype. What were they? The pilot of the Cessna I was working from radioed to the nearby army base—could we make a spin over the classified military air space to make some photographs? Yes, we could, briefly. I exposed several rolls of film, coming in low over the site, filling the frame with these enigmatic structures.

What I eventually learned about this gridded array was quite extraordinary. The buildings, called igloos, comprised the Tooele Army Depot. They held aging mustard gas and nerve agents such as sarin and tabun. Thirty million pounds of these chemical weapons were stored on site, awaiting their destruction as mandated by international treaty. The process of their incineration had begun in 1996 at the nearby Tooele Chemical Agent Disposal Facility incinerator.

As someone relatively unfamiliar with military history, and not native to the vast expanses of the American West, I found these facts profoundly disturbing. I began to read more deeply on the subject of Tooele, including Chip Ward's 1999 book ***Canaries on the Rim: Living Downwind in the West***. Learning about the transformation of the region's landscape into a repository of weapons of mass destruction triggered many questions for me. And those questions—pertaining to issues of chemical and biological weapons, land use in the American West, how space becomes militarized and politicized, the ways in which such sites are made off-limits, and therefore to some degree invisible—led me to research Dugway Proving Ground, about 45 miles to the southwest of Tooele. I became fascinated with the idea of making photographs at Dugway—a site that had, since its inception in 1942, been devoted to the development and production testing of chemical and biological weaponry and defense programs.

Gaining access to Dugway took nearly a decade. My friend John Balfe made an initial inquiry on my behalf to his Pentagon contacts in 2004. In the years immediately after 9/11, the Bush administration declined. The response was not "never," however, but a significantly less discouraging "not now." In 2013, under the Obama administration, John introduced me to Richard Danzig, a former Secretary of the Navy and chairman of the Center for a New American Security, a think tank focused on national security issues. I presented him with a copy of my book, ***Black Maps: American Landscape and the Apocalyptic Sublime***, and described my interest in looking at Dugway in similar terms, as part of the evolution of the American West. Richard, in turn, introduced me to James (Ben) Petro, the Deputy Assistant Secretary of Defense for Chemical and Biological

Defense (Acting). With Ben's support, and that of the facility commander, Colonel Ronald F. Fizer, I received permission to photograph Dugway in 2013, provided I was "comfortable with a few requirements that they have to ensure everyone's safety, security, and continued success of their ongoing activities."

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It is about a twelve-hour drive from San Francisco to Dugway Proving Ground. Route 80 travels northeast across Nevada through the staggered valleys of the Great Basin, and past the blistering salt pans of Utah's Great Salt Lake Desert. At Rowley Junction near the southwestern shore of the lake, my assistant Chris and I head south through Skull Valley on a two-lane road surrounded by pastureland dotted with cottonwood trees. After 37 miles we arrive at the barbed-wire enclosure and security station marking Dugway Proving Ground's north entry, just a stone's throw beyond a low-slung, steeple-topped edifice housing a Church of Jesus Christ of Latter-Day Saints.

In the parking lot, a sign indicates **No Cameras Permitted**. Inside the guard building, we hand over our identification. In the small waiting area, a banner reads **Dugway Proving Ground: Science Serving Warfighters + Citizens**. In a glass vitrine, a plaque dated 1990, inscribed **Presented to the Dugway Proving Ground By the Soviet Inspection Team in Appreciation For Outstanding Support of the On-Site Inspection**. On a nearby shelf, a self-described Flag of Heroes, labeled **This flag is created from the names of emergency service personnel who gave their lives to save others in the terrorist attacks of 9/11. Now and forever it represents their immortality—We shall never forget them.**

We are met by **B.**, an animated, voluble representative from the Public Affairs Office. She leads us to English Village, an area of Dugway whose bucolic name and mundane appearance seem incongruous within the wider expanse of Dugway. It contains basic services for residents: a gas station, a Subway restaurant, a school, and suburban-style homes in neat rows. We transfer our camera gear to the back of her minivan, and head through additional security points. Along the way, **B.** offers a condensed version of Dugway's history. There are about 1,700 employees of Dugway, including military, Department of Defense civilians, contractors and other civilian personnel. About 850 people live on site. We chat about Dugway's drone program, and she tells me the names of some of the unmanned aircraft. **Hunter, Shadow, Raven, Grey Eagle**. I learn that, for training purposes, Granite Mountain is used to simulate the terrain of Afghanistan and Iraq. I learn that Dugway is so isolated that it has no encroachment problems. I learn that its airspace is restricted, and that, "We own the airspace as high as you can go."

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Dugway Proving Ground was established in 1942 during World War II as a testing environment for chemical weapons. Shortly after its establishment, biological warfare testing and evaluation began at the facility. Both chemical and biological weapons testing have continued since then, although open-air tests were banned in 1969. Interest in biological and chemical weapons testing was rekindled at Dugway during

the 1980s with use of chemical weapons in Iran and Iraq, and an incident in the Ukraine in which the most toxic form of anthrax was accidentally released from a military facility in the city of Sverdlovsk on April 2, 1979. This accident is sometimes called “the biological Chernobyl.”

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We are joined by **A.**, a civilian employee of Dugway whose title is Chief, Chemical Test Branch. **A.** serves as my guide and my primary handler, and becomes a critical advocate for me and for my work at Dugway. He slips into the role of intermediary between the Office of the Commander and me, negotiating on my behalf to help gain access to specific sites.

On this first day at Dugway, brutally hot and dry, **A.** drives us through many miles of open, dusty range. We stop periodically at sites I’ve requested to photograph, and **A.** details their history and function. At Mustang Village I spend time making pictures of a series of buildings constructed to look like an apartment block, a pharmacy, and a motel; these structures are where test raids occur, fictional scenarios to thwart potential terrorist activity involving chemical or biological toxins. The site is remote in the extreme. And yet, while I’m focused on composing an image, something happens that begins to reveal the deep strangeness of this place. A pickup truck blasts its way up the road to our promontory, kicking up a trail of dust behind it. The driver skids to a halt, leaps out of the vehicle and accosts us—***What are you doing, why are you here, what are you making pictures of?*** It’s the last question that seems the most critical. Whatever this person (wearing Oakley sunglasses and civilian clothes) has been doing in a building nearly a mile away, he cannot have it seen or recorded; moreover, he had observed my camera and tripod from that distance, and raced over to challenge us. **A.** is implacable, explains what I am working on, but we are clearly viewed as interlopers and a potential threat to the secrecy of our challenger’s work. It seems this encounter could escalate into physical violence. Time to pack up and move on.

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Why does Dugway exist? Anthrax, sarin gas, and other toxins have historically been weaponized by governments and terrorists alike. In 1995, a sarin attack by domestic terrorists on the Tokyo subway killed twelve people and caused temporary vision problems for nearly a thousand others. Anthrax attacks by mail proliferated in the US in the months after 9/11, killing five people and infecting at least seventeen. More recently, the United Nations determined that sarin was deployed by pro-government forces in 2013 and 2014 attacks on Syrian civilians near Damascus and Aleppo that claimed between 350 and 1,400 lives, as well as reports of chlorine attacks in 2015 and 2016. Dugway is devoted to developing defense systems against such attacks, whether on the battlefield or in domestic settings.

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In a strange bit of serendipity, my first trip to Dugway, on September 15, 2014, coincides with their first S/K Challenge, a kind of annual trade fair in which civilian vendors pitch their technological developments to the military, and the military in turn demonstrate Dugway's capacity to disseminate and referee chemical and biological simulant clouds on an outdoor range. The intention is to allow civilian vendors to challenge their experimental devices and systems against releases of chemical and biological threats. Dugway essentially proffers their facilities as a "proving ground" for further field testing and development.

The base commander, Colonel Fizer, has deemed that I may not bring cameras on the S/K Challenge, for reasons that aren't stated but that seem apparent as the day goes on. Nevertheless, my assistant Chris and I join the group of civilians who will tour the various test sites where chemical and biological testing demonstrations will take place. About forty of us are escorted onto a yellow school bus, along with about six representatives of Dugway in military fatigues, and driven from the HQ building far out into the empty, hot desert along dusty gravel roads.

The assemblage of characters seem like casting from a Robert Altman film. Most of the people on the tour are in groups, but one guy is a lone wolf. He's a hipster, with three-day scruff, rectangular, thick-rimmed designer glasses, selvedge jeans and desert boots. A few seats away sits a rockabilly dude, with three buttons undone on his shirt and pointy black leather shoes. At one of the test sites I see him vaping in a way that seems only slightly surreptitious. He is accompanied by a woman clad entirely in black: black stretch leggings, black tunic, black stilettos, black wraparound sunglasses. Her long, jet-black hair has been ironed straight. ***Who are these people, and why are they here?*** I imagine they might be wondering the same thing about me.

We make a few stops. Each successive zone of the S/K Challenge we pass through brings a deepening and profound sense of dislocation. There are trailers in parallel rows, set up like booths at a trade fair. A man from Bethesda is working on infrared telemetry. There are two or three guys with a handheld drone. At some point, we all are instructed to gather on a ridge to watch the detonation of a mortar round with a chemical agent simulant. We watch the explosions, feel the shock waves, and see the dust cloud rising and dispersing. We return to a trailer where LIDAR (Light Detection and Ranging) tracks the now-invisible cloud in 3-D as it continues to disperse across many kilometers. A bearded man in fatigues identifies himself as from Aberdeen Proving Grounds, and talks to us about infrared spectroscopy and its capacity to determine cloud content with a high degree of accuracy. He pauses, and then asks what our story was, and we fumblingly answer that we didn't really know what we were doing here. The expression passing over his face seems to say, "Should I report them? Are they dangerous?" (In hindsight, I should have explained that we were artists, though that might really have confused him).

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International groups like the Organisation for the Prohibition of Chemical Weapons have been leading a process of verifying, securing, and transporting Syria's chemical weapons stocks, though as of February 5 the year I first visit Dugway, Syria had missed another deadline in the scheduled destruction of its chemical weapons arsenal. Less than 5 percent of Syria's chemical arsenal, thought to total more than 1,300 tons, has been shipped out for destruction. By that date, more than 90 percent should have been surrendered, according to a timeline prescribed by the UN and the OPCW.

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Military sponsorship of technological research has shown that the more powerful a technology is, the more likely it will be abused. Indeed, there is an inherent paradox intrinsic to our technological age; we are both the masters of technology and slaves to it. The philosopher Bruno Latour, in his 2016 exhibition and catalogue titled *Reset Modernity*, writes:

***. . . (t)he question for us becomes that of understanding why humans touched by hypermodernism have so much difficulty taking seriously that they are of this earth and thus must stay inside the boundaries they keep pushing beyond.***(1)

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The October morning that I am to fly over Dugway dawns clear. The sites I have requested to photograph have been vetted, and I've received a map indicating in green those that have been approved, and in yellow those zones where permission has been denied. My pilot Alejandro has submitted the required forms to the Michael Army Air Field Air Traffic Specialist, and has been cleared for security, though the fact that he is not a US native had made the outcome of that process a bit uncertain. A. will be on board during the flight—he is Dugway's representative, present during all my activities on site to insure that all protocols are followed.

I had spent many hours on Google Earth prior to this flight researching the grids and test patterns, and pored over aeronautical charts of the area, including those zones marked "Restricted" and "Special Military Activity." Seeing these sites from above at last, I am immediately struck by the various ways that the testing patterns are inscribed into the desert floor. Some seem woven delicately into the landscape, others seem rigorously applied to it.

Months later, as I work on the prints of these geometric testing zones, I decide to grid each image into nine parts. The overlay of the rectilinear grid suggests the cartographic urge for order, clarity, and objectivity. Two forms of rendering are made to overlap and collide—the handheld camera tethered to a body whirling through space in a tiny speck of a Cessna, and the Cartesian grid, pure order that exists outside of the body, without the body. The gridded images are printed directly onto aluminum in a dye-sublimation process with each element measuring 40 by 40 inches. The space between the images in the grid separate each element into its own distinct zone, further

abstracting the image, and further disturbing its capacity to be read.

***In the spatial sense, the grid states the autonomy of the realm of art. Flattened, geometricized, ordered, it is anti natural, anti mimetic, anterior. It is what art looks like when it turns its back on nature. In the flatness that results from its coordinates, the grid is the means of crowding out the dimensions of the real and replacing them with the lateral spread of a single surface. In the overall regularity of its organization, it is the result not of imitation, but of aesthetic decree.(2)***

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I find myself reading books like ***A Higher Form of Killing: The Secret Story of Chemical and Biological Warfare***. I find myself researching the Jack Rabbit tests at Dugway, in which tons of chlorine gas are released to study dispersal patterns, ultimately emanating into the atmosphere. I find myself on websites like that of the American Meteorological Society, listening to a recorded presentation from Wednesday, January 13, 2016, at 8:45 am, titled Jack ***Rabbit II—A Field Experiment on Dense Gas Dispersion in a Built Environment***. The presenter describes his report as “an overview with a lot of cool photo- graphs of a field experiment where tons and tons of chlorine were released at Dugway Proving Ground last summer.” He cites the experiment’s sponsors as Homeland Security and DTRA (the Defense Threat Reduction Agency), and mentions the cost at about three million dollars. Pausing at a slide showing green clouds of gas curling around shipping containers set up to replicate an urban setting, he describes, “a view of the array itself, kind of lonely out there in the middle of the desert.” He goes on to say, with a laugh, “I think it looks like a Mad Max set . . . This would be something you could expect Mad Max to come driving up, that’s where everybody lives.”

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There’s a kind of Romantic myth of the American West that much of my work interrogates: the West as pure, as sublime. The West as what the photographer Robert Adams has termed “a landscape of mistakes.” In the more than thirty years that I’ve been making aerial photographs of environmentally transformed and transfigured sites throughout this region, none has seemed to encapsulate the problematic realities of our present day as much as Dugway.

And yet, I recognize that the photographs that interest me most show us what we don’t yet know or understand. They limn the spaces that are outside our comprehension. The processes of visualization and abstraction form a code that cannot be fully deciphered, a language that cannot be completely translated. The photograph is not a futile endeavor, however—rather, the map it creates forms something unique, a ghost of the thing photographed. (Perhaps this is what has been lost in the transition to the digital—the physical negative, that fragile shadow of film that offers a window into another realm.)

At the crux of all of these projects, and of ***Proving Ground*** perhaps most essentially,

lies the question of what we demand from the land of the American West. What needs does it fulfill, and to what has it been sacrificed? I see Dugway as a hidden, walled-off, and secret site that offers the opportunity to reflect on who and what we are collectively, as a society.

The photographer Walker Evans spoke of the “enchantment of the aesthetically rejected subject.” Similarly, I recognize that the site of Dugway offers a strangely compelling *terra prohibita*. I am interested in the cartographic powers of photography, and in making an art of the actual, that renders the uncompromising realities of a flawed, complex world.

#### ENDNOTES

1. Bruno Latour, ed., *Reset Modernity!* (Karlsruhe: ZKM Center for Art and Media and Cambridge, Massachusetts : MIT Press, 2016), 11.
2. Rosalind Krauss, “Grids,” in *October*, Vol. 9 (Summer 1979): 50-64.