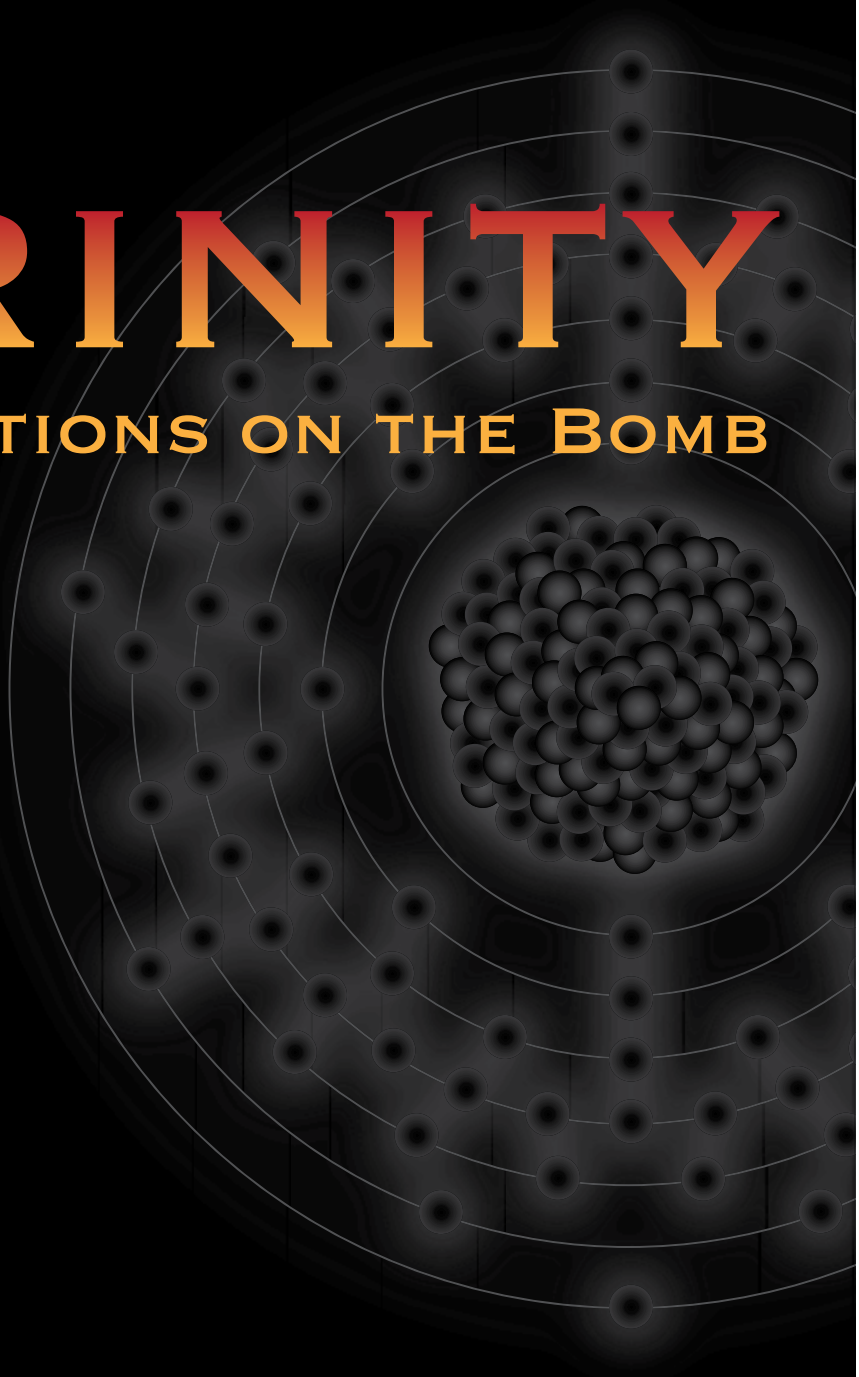
Trinity

Reflections on the Bomb



Presented by the Albuquerque Museum

Trinity: Reflections on the Bomb

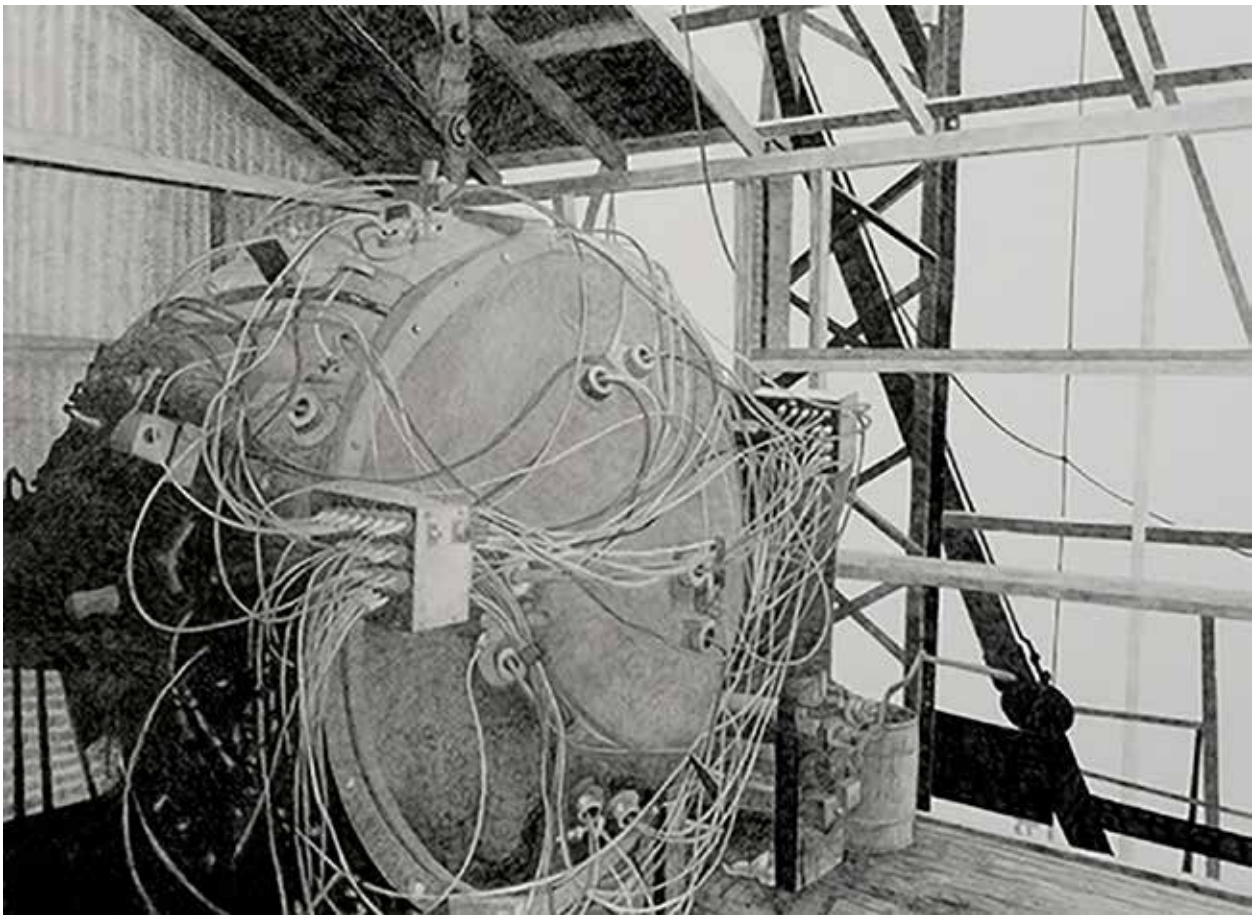
On July 16, 1945 at 5:29 a.m., the first atomic bomb, nicknamed the "Gadget," was detonated in an area known as Jornada del Muerto (Journey of Death) southeast of Socorro, New Mexico. The assembly of the bomb and planning of the test took place primarily in Los Alamos, New Mexico, as part of the top-secret "Manhattan Project." Employees in Los Alamos included scientists from all over the country as well as workers from local New Mexico communities. It is estimated that over 600,000 people worked on the Manhattan Project in sites throughout the United States.

The testing of the first bomb was code-named "Trinity" by Manhattan Project director, J. Robert Oppenheimer. The Gadget was detonated in a 100-foot high tower and left a crater 10 feet deep and over 1,000 feet wide. The explosion melted the sand of the surrounding desert, creating a light green, radioactive, glass-like substance referred to as Trinitite.

The event was described in the Clovis Journal from the same day as an explosion of "a remotely located ammunition magazine containing a considerable amount of high explosive and pyrotechnics." The paper warned the community that the army may evacuate civilians from their homes, though no evacuation took place. US Census data shows that there were at least 40,000 people living within a 50-mile radius of the Trinity test site. Many of those in the surrounding area are members of the Tularosa Basin Downwinders Consortium- an organization that compiles data on the high rate of cancers and other health complications that proliferate in the communities downwind from the Trinity test site.

In New Mexico, nuclear weapons development includes the mining of uranium - often on Diné and Pueblo lands, developing weapons at Los Alamos and Sandia National Labs, testing of weapons at White Sands Missile Range, and disposing of nuclear waste at the Waste Isolation Pilot Plant. The nuclear complex in New Mexico bolstered the economy, but it also created devastating impacts on the health of New Mexicans and raised significant environmental concerns. While views differ about the use and development of the atomic bomb, the Trinity test launched the world into the Nuclear Age, changing it forever.

This exhibition presents 75 years of artistic responses to radioactivity, the bomb, and the dropping of nuclear weapons on Hiroshima and Nagasaki. Many of the works shown here are highly personal and evoke poignant responses. They invite us to consider the consequences of the Atomic Age–intended or not–positive or negative.



Nina Elder

born 1981 Colorado Springs, Colorado; lives Albuquerque

The Gadget (Trinity Test Site, July 15, 1945)

2011

graphite and radioactive charcoal on paper

22 x 30 in.

Albuquerque Museum, museum purchase, 2017 General Obligation Bonds, © 2020 Nina Elder

photo by David Nufer

The residual effects of nuclear testing on humans and the environment is a theme of Nina Elder's work. She completed this drawing using radioactive charcoal gathered from forest fires near nuclear test sites. Elder based her drawing of the Gadget on an official classified photograph of the bomb housed in the 100-foot tower where it awaited detonation. The complex wiring system, rendered in fine detail, connected to different explosives that would burn at different frequencies and compress the inner core of plutonium causing it to explode. According to Elder, "The materiality of the work challenges the amnesia and disregard that is often felt towards the land-based legacy of the atomic era."

Nina Elder

born 1981 Colorado Springs, Colorado; lives Albuquerque

Jumbo (Trinity Test Site, April 7, 1945)

2012

graphite and radioactive charcoal on paper

22 x 30 in.

Albuquerque Museum, museum purchase, 2017 General Obligation Bonds, © 2020 Nina Elder photo by David Nufer

Nina Elder's drawing, *Jumbo,* is based off of a government photograph which depicts large machinery used during the Trinity test being moved across the landscape. "Jumbo" was the code name for a 214-ton steel and concrete pill-shaped container designed to be used during the Trinity test. Scientists involved in the Trinity explosion were unsure if the initial TNT explosion would succeed in starting a chain reaction that would lead to the nuclear blast. If the chain reaction did not happen, the expensive plutonium core would have been scattered across the landscape. Jumbo was designed to house the Gadget during the explosion; if the nuclear component failed to detonate, Jumbo would contain the explosion including the plutonium which could be recovered for further experimentation. By the time of the test, scientists were confident that it would be successful and decided not to use Jumbo, instead they suspended it from a 70-foot steel tower 800 yards away from the explosion. The tower was flattened, but Jumbo remained in tact and remains on site outside the entry gate to the Trinity monument.

Nina Elder

born 1981 Colorado Springs, Colorado; lives Albuquerque

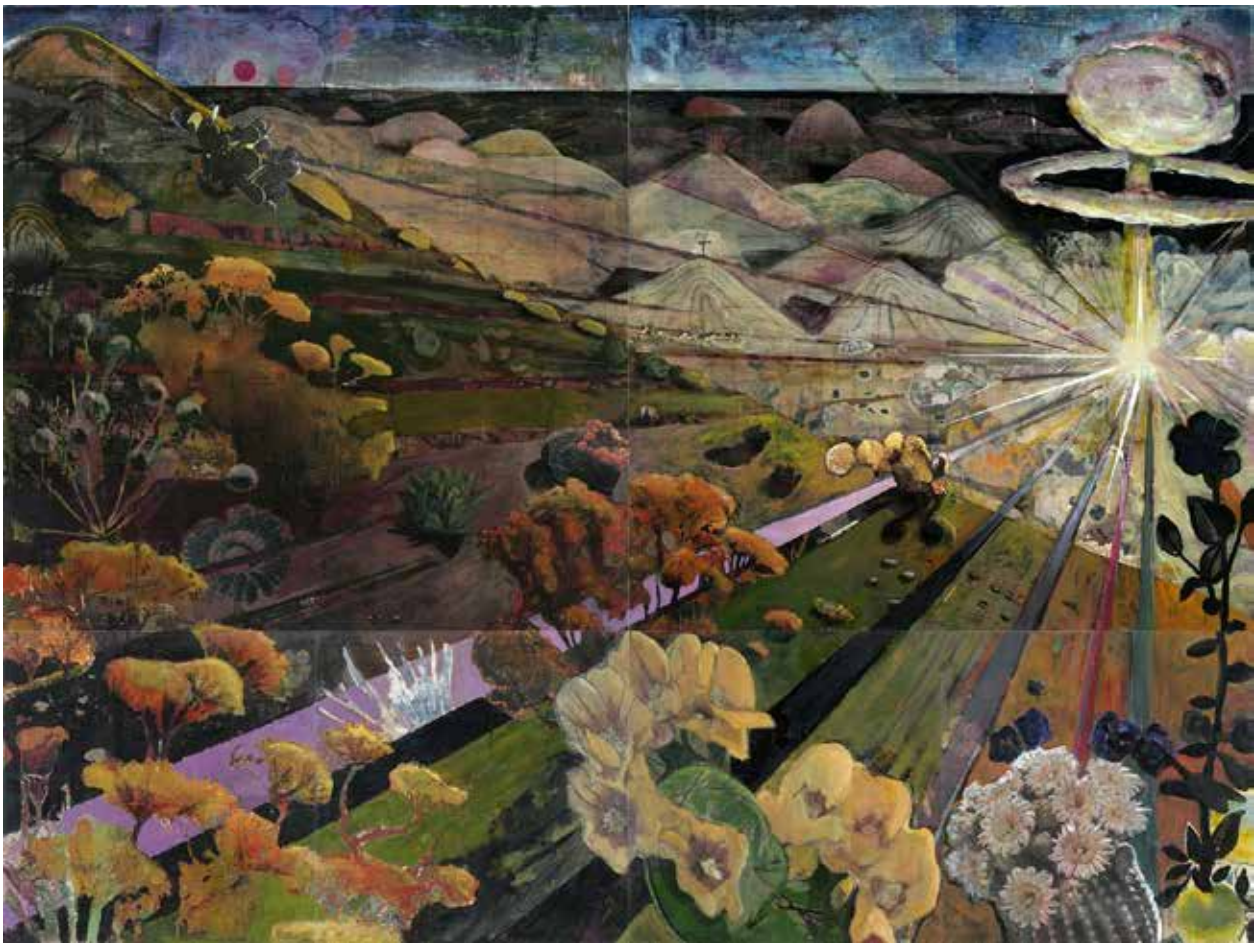
Trinity Test Site (August, 1945)

2012

graphite and radioactive charcoal on paper

22 x 30 in.

Albuquerque Museum, museum purchase, 2017 General Obligation Bonds, © 2020 Nina Elder photo by David Nufer



Karsten Creightney

born 1976 Albuquerque, New Mexico; lives Albuquerque

The Beginning

2011

collage, watercolor, acrylic, oil, and wax on wood

72 x 96 in. (6 panels: 2 panels 48 x 48 in., 4 panels 24 x 24 in.)

lent by Ken Sandoval, © 2020 Karsten Creightney

photo courtesy of the artist

Painter and printmaker Karsten Creightney portrays a view of the Trinity explosion as seen from the perspective of native New Mexican plant life that would have borne witness to the event. Colorful rays emanating from the explosion extend in every direction into the landscape passing through and under the flora. The area is illuminated by the blast, which makes the sun in the sky in the far horizon appear ghostly red in comparison to the center of the explosion. His view captures the ironic relationship between the beginning of the Atomic Age and the natural world in an isolated corner of New Mexico—a locality no longer unknown.

Transforming Science into Art

Science and art have historically been in conversation with one another. While the development of ideas around nuclear energy and atoms was underway, the imagery of these phenomena began to surface from scientific sources. Artists also began to produce imagery relating to conceptualizations of the atom and other scientific ideas, which came to serve as symbols of modernity. Both science and art involve a desire to push boundaries and gain a deeper understanding of the surrounding world. Many artists have incorporated scientific imagery and experimentation into their work.

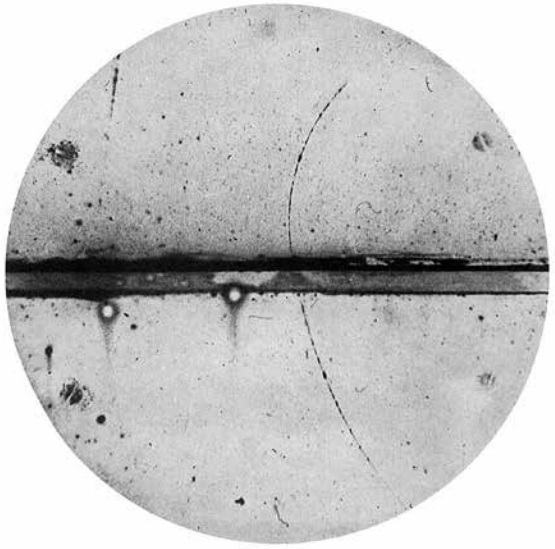
Carl Anderson

1905 New York City, New York – 1991 San Marino, California

Cloud Chamber photograph of a Positron

1932

digital reproduction



Cloud chambers are used to detect charged particles, X-rays, and gamma rays which are not visible. These scientific devices contain water or alcohol and create vapor trails as subatomic particles pass through. Carl Anderson created this photograph of the first positron ever identified.

Positrons are subatomic particles with a positive charge and the same mass as negatively charged electrons. They are also known as anti-matter; almost identical to their matter counterparts, aside from their charge and spin direction. When antimatter like positrons and matter meet, they immediately annihilate into energy.

Emil Bisttram

1895 Nadlac, Hungary–1976 Taos, New Mexico

Projection No. 1

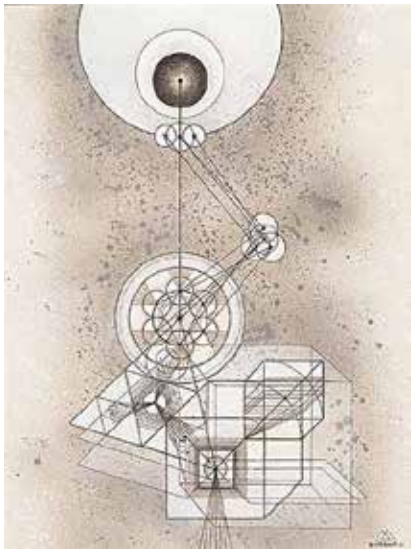
1960

oil on canvas

43 5/8 × 32 1/2 in.

New Mexico Museum of Art, gift of Duncan and Elizabeth Boeckman, 2005, 1997.43.1

photo by Blair Clark



Emil Bisttram produced a series of paintings exploring a macro view of imagery reminiscent of atomic particles and underlying structures of the universe. The Los Alamos National Laboratory acquired six of his drawings and paintings in 1963 and used them in publications to present a humanist face to their atomic research. One of Bisttram's paintings: *Ascending* (1958) was printed on a pamphlet created to recruit scientists.

It appears under the heading "Scientific objectivity characterizes the examination of natural forces in the experimental laboratories at Los Alamos." Bisttram was also a co-founder of the Transcendental Painting Group, active in New Mexico between 1938 and 1942.

Charles Ross

born 1937 Philadelphia, Pennsylvania; lives New York, New York

Cosmic Rain

1993

pigment on paper

60 1/2 x 71 3/4 in.

New Mexico Museum of Art, Gift of Sally and Wynn Kramarsky, New York, 2009, 2009.13.20,

photo by Blair Clark

Charles Ross created series of colorful explosion drawings and paintings in the 80s and 90s. He "drew" linear patterns by detonating cords of dynamite which drove the pigment into the paper. Cosmic Rain references the behavior of light at both quantum and cosmological levels. Ross was inspired to create his explosion drawings and paintings during the early stages of his *Star Axis* sculpture situated in the New Mexico desert, a monumental work that aligns architectural elements with the North Star and other cosmological phenomena. The North

Star does not always align with the earth's axis, but moves in a 10,000 yearlong cyclical path. Ross's work centers on this cycle using light, time and planetary motion to highlight the micro and macro relationships inherent in atomic research.

Steve Madsen

born 1947 Oxnard, California; lives Albuquerque, New Mexico

Table

2001
maple, lacquer based finish
33 ½ x 24 x 24 in.
Albuquerque Museum, museum purchase, 2001 General Obligation Bonds, PC2003.50.2

photo by David Nufer

Steve Madsen's wooden sculpture fuses art and craft. While presenting a vision of the rotational structure of an atom, this object also functions as a table. Madsen's precise fabrication mirrors the simplicity of twentieth-century representations of atomic structures.

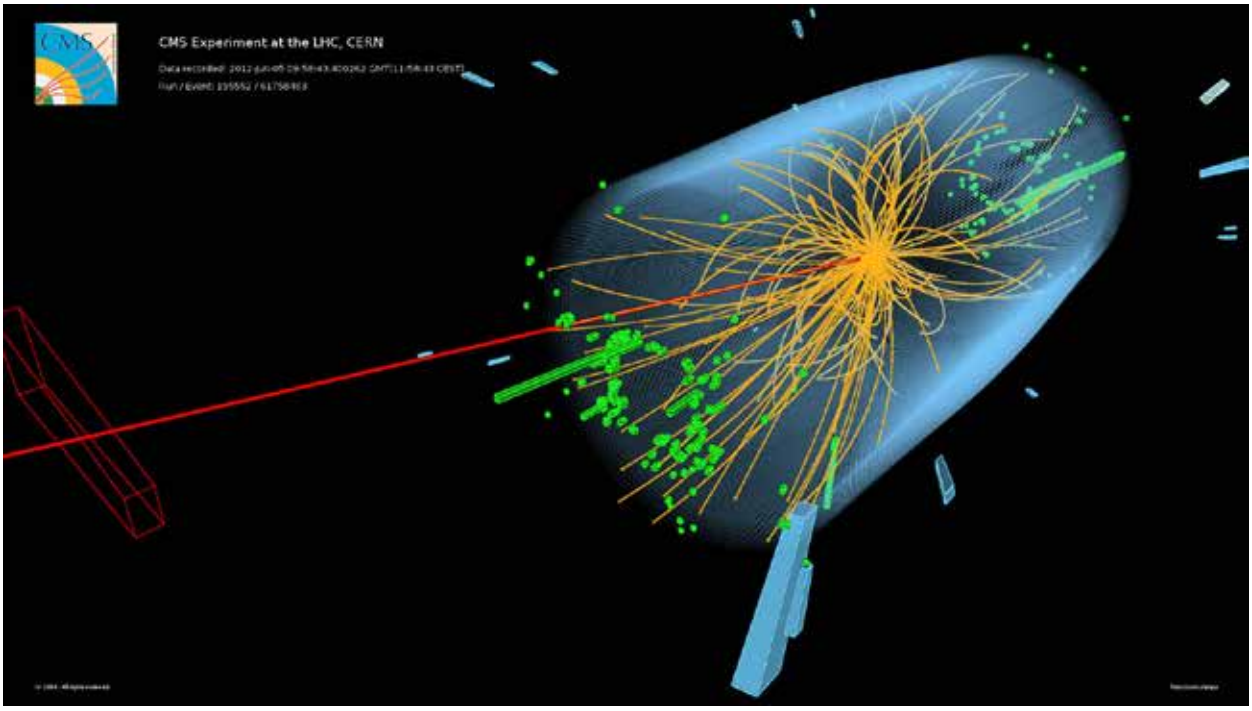
Leigh Anne Langwell

born 1964 Albuquerque; lives Albuquerque

Distant Fires: Private Universe, Galaxy no. 5

2012
map tacks, entomology pins, sewing pins, Cellotex
7 ½ x 10 x 3 in.

Leigh Anne Langwell reflects on the relationship between quantum physics and astrophysics in her sculptures. These constructions refer to sub-atomic particles while simultaneously suggesting the vastness of the cosmos. Or is it the other way around? Using different varieties of tacks and pins, Langwell carefully creates entire universes.



European Organization for Nuclear Research/*Conseil Européen pour la Recherche Nucléaire* (CERN)

Large Hadron Collider

Higgs Boson

2012

digital file

photo courtesy of CERN, © 2020 CERN

The Large Hadron Collider accelerates particles nearly to the speed of light, then smashes them together releasing even smaller sub-atomic particles. The collider is a 17-mile long machine filling an underground circular tunnel beneath the border between France and Switzerland. In order to collect huge amounts of data to test the Standard Model of particles and forces, the Hadron Collider generates about 1 billion particle collisions per second.

Bosons are one category in the standard model of sub-atomic particles. In 1964 physicist Peter Higgs along with five colleagues proposed the mechanism in order to explain why particles have mass. The Higgs mechanism predicted that a matching particle, the "Higgs boson" should exist. It took more than 48 years of experimentation before this image proved their theory correct. The Higgs Boson is a particle, but it can also function as conceptual art in the context of this exhibition.

Uranium Fever

The need for uranium ore to create atomic bombs resulted in the quick spread of uranium fever throughout the American West. After World War II the government promoted prospecting with how-to publications. Simultaneously, small companies developed sophisticated devices for discovering radioactive minerals.

Deposits of uranium ore were often found near Indigenous communities in the Southwest. The large mines that developed did not always provide safety equipment to their workers and tailings piles exposed residents to windblown radioactivity. Cancers and other maladies followed uranium fever through the West, and continue to impact local communities.

Mount Sopris Instrument Corporation, Boulder, Colorado

Scintillator (Geiger counter), model SC 129, serial number 202

1955
mixed electronic components in a wooden case
10 x 14 x 8 in.
lent by a private collector
photo by David Nufer

Uranium mining in the United States has been concentrated in the western states and in particular the Southwest. New Mexico contains the second-largest identified uranium ore reserves of any other state and has produced thousands of tons of uranium ore. Geologist John Jebsen used this scintillator when he prospected for uranium in New Mexico and Colorado during the 1950s and 1960s.

Precision Instruments Inc.

Scintillator (Geiger counter), model 111B

1954
metal, electronic components, battery, sodium iodide crystal
8 x 13 ½ x 3 ¼ in.
Albuquerque Museum, gift of Joseph Traugott, PC2016.48.1.A
photo by David Nufer

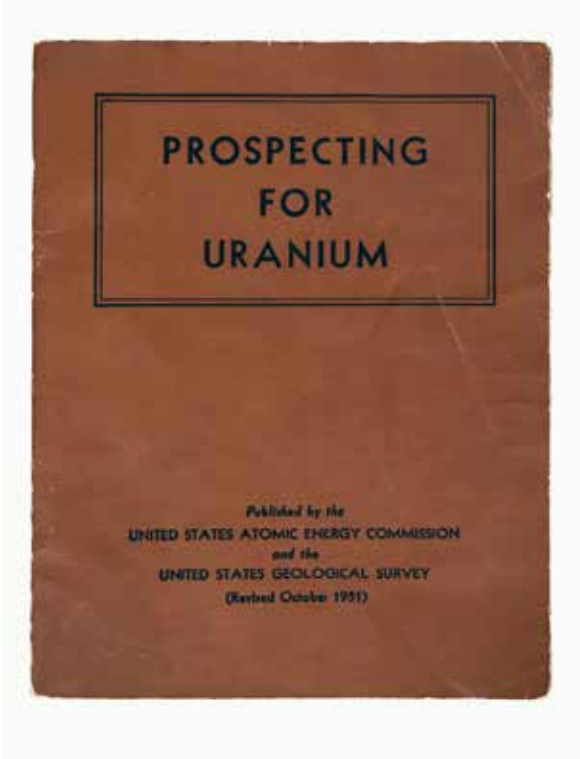
Scintillators can detect minute levels of radioactivity. Allegedly some models could detect uranium deep underground while a prospector was flying in a lightweight Piper Cub airplane, and holding a scintillator out the window. In one advertisement for Precision Radiation Instruments from 1955, potential

customers are informed that owners of small planes can earn up to $30 an hour plus a percentage of claims while surveying with a scintillator. Using this scintillator, which looks like a chrome-plated ray gun from a 1940s science fiction thriller, prospectors set out with hopes of striking it rich.

Uranium Ore Sample
ca. 1945
uranium ore, fabric, ink, cordage
4 x 2 ¾ x 1 ¾ in. (bag)
Albuquerque Museum, gift of the Albuquerque Museum Foundation from the Lucia v.B. Batten Estate, PC2015.26.17
photo by David Nufer

Prospectors may have utilized sophisticated equipment to discover uranium ore, but they often used low tech storage procedures. These uranium ore samples were stored in a small burlap bag decorated with an illustration of a bomb. Attached to the bag is a label that guarantees the contents to be "radio-active and harmless."

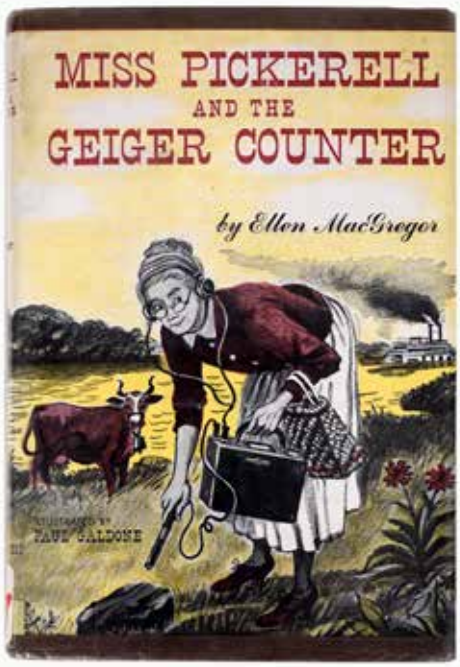
United States Atomic Energy Commission and United States Geological Survey
Prospecting for Uranium
1951
letterpress on paper
5 5/8 x 4 ½ x ¼ in.
lent by private collector



Ellen MacGregor (author)
1906 Baltimore, Maryland - 1954

Paul Galdone (Illustrator)
1907 Budapest, Hungary – 1986 Nyack, New York
Pocket Books (publisher)

Miss Pickerell and the Geiger Counter Book Cover
1953
letterpress on paper
8 ¼ x 5 5/8 x ¾ in.
lent by private collector



Children's book hero Miss Pickerell joined the nuclear club in 1953. Novelist Ellen MacGregor had her hero use a Geiger counter to discover uranium in the mythic Square Toe River, and then claim a $10,000 prize from the government.

Eve Andrée Laramée
born 1956 Los Angeles, California; lives Brooklyn, New York and Santa Fe, New Mexico

Ideology/Uncertainty
1994
handblown glass sculpture with embedded glass text
19 x 4 ¾ x 4 ¾ in. (*Uncertainty*), 15 x 3 ¼ x 3 ¼ in. (*Ideology*)
lent by the artist
photo courtesy of the artist, © 2020 Eve Andrée Laramée

In this sculpture, two hand-blown glass flasks represent the cultures of science and art. *Uncertainty* is large, *Ideology* is small. Eve Laramée explores the disconnect from the contingencies of "reality." The scientists working on the Manhattan Project, for example, decided to go ahead with the Trinity test even though they did not know if it would ignite the atmosphere. The sculpture also represents the spectacle of "big science" and "big art."

Eve Andrée Laramée

born 1956 Los Angeles, California; lives Brooklyn, New York and Santa Fe, New Mexico

Ingredients: Apparatus

1994

handblown glass with embedded black glass text

photos of installations at Massachusetts Museum of Contemporary Art; North Adams, Massachusetts and Randolph Street Gallery; Chicago, Illinois; courtesy of the artist; © 2020 Eve Andrée Laramée

Ingredients: Apparatus functions as a key to Eve Laramées large scale sculptural installation *Apparatus for the Distillation of Vague Intuitions*. The sculpture appears to be a lab based experiment, but a closer look reveals how the work explores human responses and emotions. Laramée's sculpture references the subjectivity that is inherent in scientific inquiry, but often goes unnoticed. Science and technology can be seductive, offering what appears to be a logical and unbiased point of view. Laramée addresses the inescapable ambiguity and biases that are a part of both science and art. The *Ingredients* form a scientific metaphor that calls attention to the function and dysfunction in both fields. Both objectivity and subjectivity are ingredients of scientific inquiry and the creative process. According to Laramée, "this work seeks to inform the way we contrive knowledge, how knowledge is embodied, and how it affects the world. I am interested in how human beings formulate knowledge through art and science that embraces poetry, absurdity, contradiction, and metaphor."

Testing: 10, 9, 8, 7 . . .

Between 1945 and 1992, the United States detonated 1054 nuclear weapons. Of these, 216 were exploded in the atmosphere, underwater, or in outer space, while another 838 were underground blasts. Underground tests created "atomic geodes," cavities of radiation within the earth's crust. Worldwide through 2017, the total number of nuclear tests is 2056: 528 occurred in the atmosphere and 1528 were detonated underground.

Isao Hashimoto

born 1959 Kumamoto prefecture, Japan; lives Kanagawa, Japan

1945–1998

https://www.youtube.com/watch?v=cjAqR1zICA0

2003

digital video

lent by the artist, © 2020 Isao Hashimoto

Isao Hashimoto uses a world map to visualize the proliferation of nuclear tests conducted from the Trinity test in 1945, through 1998. Each second of the video represents one month in history. The blinking lights and sounds represent each bomb tested by the various countries: The blinking lights and sounds represent each bomb tested by the various countries: The United States, The Soviet Union, China, France, the United Kingdom, India, and Pakistan. Each explosion is tallied by each country's flag and in the overall total in the bottom right corner.

Relocating and Imprisoning Japanese Americans

The federal government arrested 1,291 Japanese political and religious leaders within hours after Japan attacked the Navy base at Pearl Harbor on December 7, 1941. On February 19, 1942, Franklin D. Roosevelt signed Executive Order 9066. The decree authorized the government to relocate persons with ties to countries fighting against the United States. Technically the order only applied to Washington, Oregon, California and Arizona and did not specify people of Japanese ancestry.

Officers rounded-up 117,000 persons of Japanese ancestry and held them in relocation camps until the war ended. Almost 70,000 of these individuals were American citizens and others had lived in the country for several decades.

A prison camp for arrested leaders was located in Santa Fe. It held 4,555 Japanese men who were held without formal charges or jury trials. The 1988 Civil Liberties Act compensated more than 100,000 individuals of Japanese descent who were incarcerated during the war.

Miki Hayakawa

1899 Hokkaido, Japan–1953 Santa Fe, New Mexico

Portrait of Bill Ford

1946
oil on canvas board
19 ½ x 15 ½ in.
lent by Astilli Fine Art Services, Santa Fe
photo courtesy of lender

The government first detained noted California painter Miki Hayakawa at the Stockton, California, Assembly Center, and then sent her to the Santa Fe Justice Department Camp. The camp released her and she was then permitted to live in town. Hayakawa spent the war years as an active member of a group of Santa Fe artists organized around the teachings of modernist painter Alfred Morang. In 1947 Hayakawa married Preston McCrosson (1894–1981), another member of Morang's artist group. Her portrayal of Bill Ford offers a sensitive depiction of another painter in the group.

Unidentified artist

One Man Show, Museum of New Mexico - November 1st - 15th, 1944 (Miki Hayakawa with Miss Jones, Curator)

1944
gelatin silver print
7 7/8 x 9 ¾ in.
lent by Astilli Fine Art Services, Santa Fe
photo courtesy of lender

Unidentified artist

Alfred and Dorothy Morang, Mary Hunsacker and Friend, Miki Hayakawa, November 1943

1943
gelatin silver print
3 ½ x 5 in.
lent by Astilli Fine Art Services, Santa Fe
photo courtesy of lender

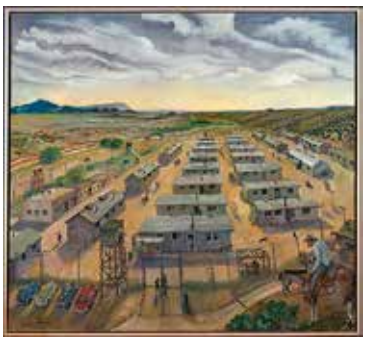
A group of Santa Fe artists pose in front of a sun-drenched adobe house. Alfred Morang is on the left with Miki Hayakawa on the right. The scene reveals none of the racial tensions that drove the internment of individuals of Japanese descent.

Jerry West

born 1933 Santa Fe, New Mexico; lives Santa Fe, New Mexico

Japanese Internment Camp (Santa Fe)

2009
oil on canvas
42 x 26 in.
New Mexico Museum of Art, gift of Meridel Rubenstein, 2011, 2011.5, © 2020 Jerry West
photo by Blair Clark



Japanese Internment Camp (Santa Fe) depicts the prison as Jerry West remembers it. Seen from above, the huge vista and distant landscape contrast with the crowded rows of houses crammed inside a tall barbed-wire fence. The Santa Fe detention facility for Japanese civic and religious leaders was located near downtown. West's father and uncle served as guards at the facility and as a youngster, he would visit them at the prison. His relatives are shown on horseback guarding the perimeter. The area has now been transformed into a middle-class subdivision.

Unidentified artist
Cane from Lordsburg, NM Internment Camp
ca. 1940s
carved wood
30 ½ x 4 x 2 in.
Japanese American Historical Society, 2017.7.5
photo courtesy of Japanese American Historical Society

Detainees often made useful objects and works of art while in detention. This walking cane was made by one of the prisoners at the Lordsburg internment camp in southern New Mexico. The inscription is written in Kanji, a Japanese writing system that uses adopted Chinese characters representing ideas or words. It translates "In enemy camp. North America, New Mexico, Lordsburg."

The Trinity Test

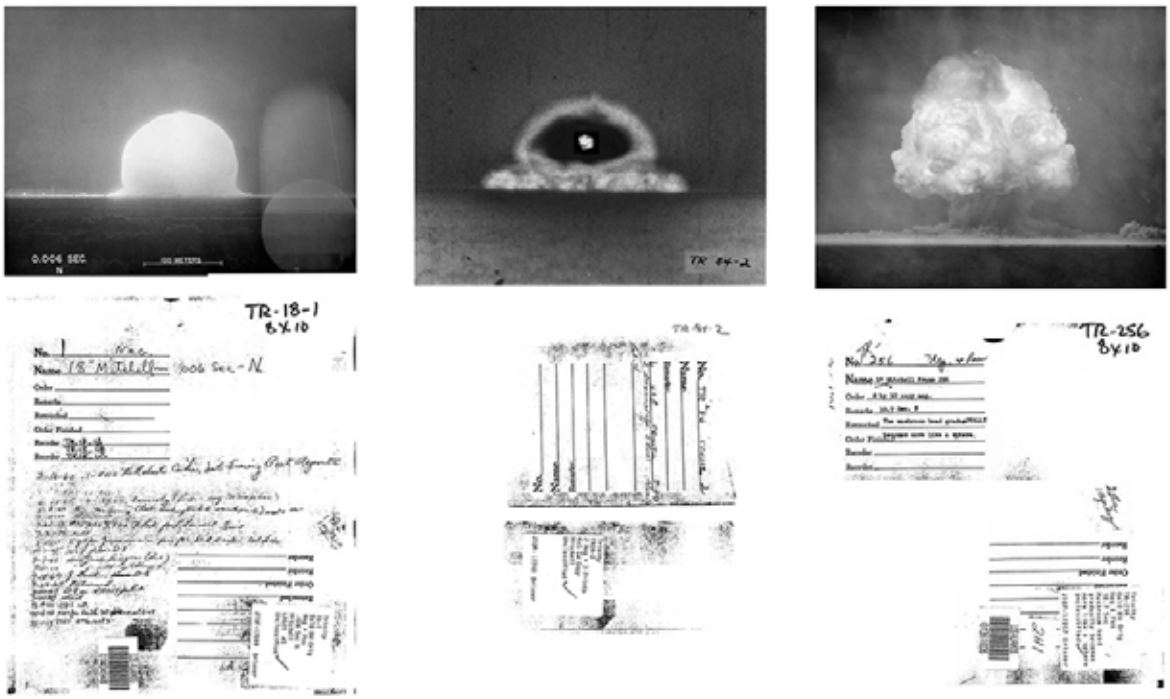
Germany launched a project to develop nuclear weapons in the 1930s. When American physicists learned of German efforts, the United States launched its own secret program in 1939. The Manhattan Project began in New York City, but for security reasons was moved to Los Alamos, New Mexico.

By the summer of 1945, three nuclear weapons were finished in Los Alamos. The scientists tested The Gadget on July 16, 1945 at 5:29:45 A.M. Manhattan Project scientists debated whether an atomic blast might ignite the atmosphere and incinerate the planet. The Trinity detonation solved this theoretical issue. The other two, nicknamed Little Boy and Fat Man, were shipped to Tinian Island in the Pacific, and then detonated over Hiroshima and Nagasaki.

Communities nearby and downwind from the Trinity test were not informed about what

would occur on the morning of July 16, 1945. The Gadget was loaded with 13 pounds of plutonium, but only 3 pounds fissioned. The blast, along with westerly winds spread the remaining 10 pounds of radioactive plutonium into the countryside.

Communities downwind from the test suffered detrimental health effects. Infant mortality rates jumped 21% in the immediate aftermath of the test; cancer rates increased as well. Many areas all around the world have been affected by nuclear testing. Downwinder groups are still fighting for fair compensation for health issues as well as recognition of their unwilling and unknowing involvement in nuclear testing.



Mary Kavanagh

born 1965 Toronto, Ontario, Canada; lives Lethbridge, Alberta, Canada

Selected Images from* Trinity Archive*, 1945-1946 [from* Daughters of Uranium*]

2019-2020

digital files

lent by the artist, © 2020 Mary Kavanagh

In 1999, the U.S. Department of Energy, Albuquerque Operations Office, in cooperation with the U.S. Department of Defense released an archive of photographs and archival material pertaining to the Trinity test. The archive contains over 800 photographs made by official Trinity photographer Berlyn Brixner and his team. Brixner placed fifty cameras containing 16 mm film of various speeds at different locations and operated them from a central control station to create over 100,000 photographs of the Trinity test. Seen here are four images from the archive that Mary Kavanagh has paired with metadata sheets full of cryptic text, signaling the often obscure or impenetrable nature of archival research.

Mary Kavanagh

born 1965 Toronto, Ontario, Canada; lives Lethbridge, Alberta, Canada

Installation view of* Trinity Archive, 1945-1946 *(34 images); part of solo exhibition,* Daughters of Uranium*, Founders' Gallery, University of Calgary, Canada (September 27, 2019 – January 26, 2020)

digital file

photo courtesy of the artist, © 2020 Mary Kavanagh

Trinitite

1945

atomically fused glass from desert sand

4 x 4 x ½ in.

lent by a private collector

photo by David Nufer

The detonation of the Gadget fused the sand at the site into a crusty, green glass called trinitite. The mildly radioactive glass was removed from the site for safety, and visitors at the Trinity site are not permitted to pick up the remaining samples. Nonetheless, trinitite became a curiosity sold to tourists. The Trinity site became a National Historic Landmark in 1965 and is now open to the public each year on the first Saturdays in April and October.

Patrick Nagatani

1945 Chicago, Illinois–2017 Albuquerque, New Mexico

Trinitite, Ground Zero, Trinity Site, New Mexico

1988

Cibachrome print

27 ½ x 31 in. (mat)

Albuquerque Museum, museum purchase, 1989 General Obligation Bonds, PC1991.30.1

photo by David Nufer

The Trinity explosion sucked radioactive dust and trinitite into the resulting fireball,

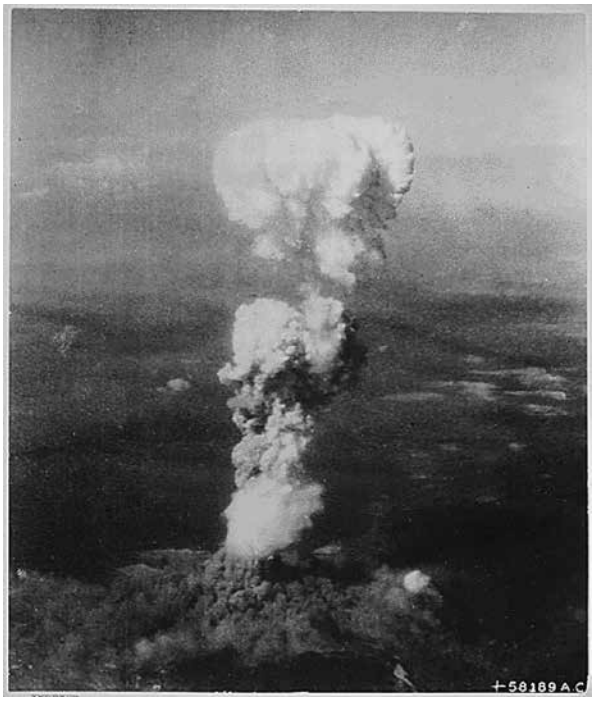
as it rose 38,000 feet into the air. These radioactive particles rained down on the surrounding countryside.

Using a photographic set he constructed, Patrick Nagatani's parodies the event in this image. The artist posed himself wearing a protective suit while holding an umbrella in front of the obelisk marking the Trinity site. Of course all of these precautions would have been futile against the trinitite and radioactive dust raining down from the Trinity test.

Hiroshima and Nagasaki

President Harry S. Truman approved bombing Japan using atomic weapons in 1945. Little Boy exploded over Hiroshima on August 6, and Fat Man was detonated over Nagasaki three days later. Both cities were decimated. World War II ended four days later when Japan surrendered on August 13, 1945. It is difficult to determine how many died or were injured. By the end of 1946, estimates exceeded 250,000 deaths and untold numbers were injured from the initial explosions, radiation poisoning, and other injuries.

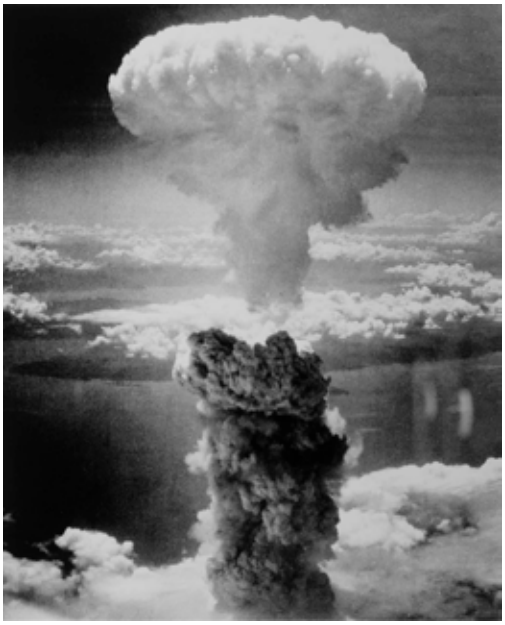
Unidentified Japanese photographer
Hiroshima
August 6, 1945
digital print of black and white negative
10 x 8 in.
lent by a private collector
photo by David Nufer



Unidentified American photographer
Hiroshima
August 6, 1945
digital file
National Archives, 542192

Unidentified Japanese photographer

Nagasaki
August 9, 1945
digital print of black and white negative
10 x 14 in.
lent by a private collector
photo by David Nufer



Unidentified American photographer

Nagasaki
August 9, 1945
digital print of color negative
10 x 8 in.
lent by a private collector

Photographs of the mushroom clouds over Japan are inherently political in their alternative perspectives. Mushroom clouds over Hiroshima and Nagasaki taken by Japanese photographers present emotional views of confusion and human suffering. These are rarely shown in the United States. Views taken by members of the B-29 crews present impersonal, military views that do not provide any context of the human impact on the ground.

Hideo Sakata

born 1935 Nagasaki, Japan; lives Los Angeles, California
Untitled (Memory of Nagasaki August 9, 1945)
oil on canvas
40 x 30 in.
lent by a private collector
photo by David Nufer

Hideo Sakata was a nine year old boy when Fat Man exploded over Nagasaki killing his father and sister. Sakata's painting alludes to the destruction of multistory structures at the center of the city, with the red and orange glow from the detonation visible in the background. This fragmented view of Sakata's memory shows the impact of the devastating event that continues to affect many individuals.

Willard Stone

1916 Oktaha, Oklahoma–1985 Locust Grove, Oklahoma

Our Atomic Baby

1946
carved cherry wood
30 x 3 ¾ x 3 ¾ in.
Gilcrease Museum, 1127.74

Thirteen year old Willard Stone picked up a blasting cap and it exploded. Despite losing two fingers, a thumb and part of his right hand, he persisted and became a noted Cherokee artist. Many of Stone's carvings depicted nuclear subject matter and suggested the negative ramifications of atomic weapons and energy.

Our Atomic Baby visually narrates the beginning of the atomic age using an infant as a metaphor for the newly born era. Viewing the sculpture from bottom to top, Stone described the imagery: a scientific flask with immature babies emerging over the top and spilling down the sides representing scientific failures in past experiments. Continuing upward, the successful blast gives birth to *Our Atomic Baby*. Stone stated, "the world is now molding his character by giving him knives to play with."

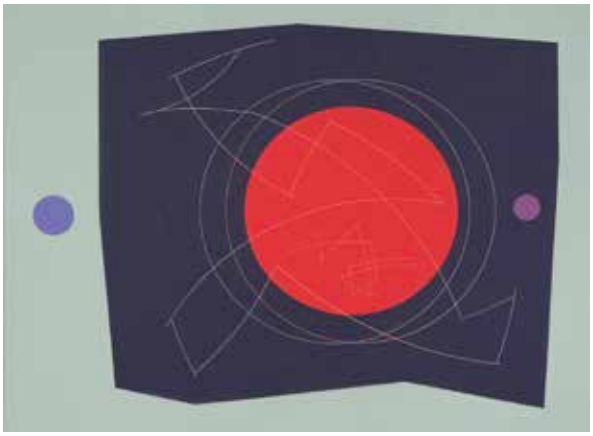
Through poignant symbols and symmetrical composition, *Our Atomic Baby* provides an orderly depiction of the birth of the nuclear age and suggests that what comes next will be nowhere near as neat as Stone's carving.

Life Magazine: August 6, 1945; August 13, 1945; August 20,1945; and August 27, 1945
rotary letterpress on paper
14 x 10 ½ in. each
lent by private collector
photos by David Nufer

Trinity, Hiroshima, and Nagasaki perhaps represent the most important, world-changing events of the 20th century. Nonetheless, they did not appear on the cover of *Life* in any of the editions from August, 1945.

Images taken before and after the destruction of Hiroshima are included in the August 20 issue, as are aerial views of the two mushroom clouds. Nonetheless, the coverage was buried to minimize the importance of the events and the images of them.

Raymond Jonson
1891 Chariton, Iowa–1982 Albuquerque, New Mexico
Pictographic Composition No. 7 (Oil No. 17)
1946
oil on masonite
28 x 36 in.
University of New Mexico Art Museum, bequest of Raymond Jonson, Raymond Jonson Collection, 82.221.0474



As a co-founder of the Transcendental Painting Group, Jonson tended to reject representational images and art with political content. The white lines in *Pictographic Composition No. 7* were inspired by Native American petroglyphs. They were created by physically scraping through layers of paint to reveal the underlying canvas. The dominant red circle undoubtedly relates to the Japanese flag, the war that ended a year before he created the painting, and the distant red glows produced by detonating atomic bombs.

Justino Herrera

1919 Cochiti Pueblo –2006

That is No Longer Our Smoke Sign

ca. 1950s

watercolor and pencil on paperboard

14 x 18 1/8 in.

Smithsonian American Art Museum, Corbin-Henderson Collection, gift of Alice H. Rossin 1979.144.99

That is No Longer Our Smoke Sign is evidence of the impact the development and testing of atomic bombs had on a local and national scale. Smoke signals used by Indigenous Americans were historically implemented to communicate across distances and different tribes had signaling systems unique to their community. Justino Herrera's watercolor suggests that the message of this new smoke sign is clear and evident to all those who witness it. Herrera began painting while attending the Santa Fe Indian School from 1937-1940. He was drafted into the U.S. Army and served in World War II for three years.

An Atomic View of the World

The war affected artists worldwide, and many responded with abstract images expressing angst and unsettled emotions. Artists in New Mexico could not escape the psychological impact of living at the heart of the Nuclear Age. Many Abstract Expressionist paintings are completely non-representational and emulated the fragmentation of the material world caused by nuclear detonations. Albuquerque artists produced exceptional Abstract Expressionist images in the post-war period that challenged the dominance of stereotyped images of New Mexico.

Jack Garver

1921 Larned, Kansas - 1987
Albuquerque, New Mexico

Untitled
1950
oil on canvas
37 ¾ x 72 in.
Albuquerque Museum, gift of Mrs. Marva Vollman
PC1991.59.3
photo by David Nufer

Jack Garver was a central figure in a vibrant (and socially complex) modern art scene occurring in Albuquerque in the 1940s and '50s. He and his wife Alice Garver were closely connected with a network of *avant-garde* artists, poets, and intellectuals in New Mexico and nationwide. Garver created energized images after World War II, that in their gutsy confidence and complexity rival anything that was happening in New York.

Robert Walters

1925 Indianapolis, Indiana – 2008 Albuquerque, New Mexico

Wormwood* from the series: *Prints in the Desert
1950
color woodcut on paper
7 ¼ x 9 ¾ in.
Albuquerque Museum, museum purchase
1989 General Obligation Bonds PC1990.30.1
photo by David Nufer

This woodcut is part of *Prints in the Desert*, a portfolio of abstract works by New Mexico artists. As a frogman (combat diver) during the Pacific theater during World War II, Robert Walters looked up at the world through the refracted light of a green tangle of underwater plants. He studied art on the GI Bill, became an architect, and taught architecture at UNM.

Alice Garver

1924 Toledo, Ohio – 1966 Albuquerque, New Mexico

Untitled

1961
monoprint on paper
40 x 95 in.
Albuquerque Museum, gift of Rose Mary Mack, PC2002.63.23
photo by David Nufer

Alice Garver became known for her large-scale drawings and monotypes during the 1950s. These were not traditional monotypes made by painting an image and transferring it to a sheet of paper on a press. Instead, Garver laid a sheet of handmade paper on an inked surface and then drew on the back of the sheet. Her actions transferred loose, sketchy marks to the paper. By repeating this process over and over with multiple colors, she created large, highly energetic, abstract expressionist works.

Enrique Montenegro

1917 Valparaiso, Chile – 2003 Albuquerque, New Mexico

Reclining Nude

1955
oil on canvas
46 x 63 in.
Albuquerque, Museum, gift of Raymond C. Chatfield, M.D., 1981.147.2
photo by David Nufer

Enrique Montenegro's *Reclining Nude* demonstrates the tensions present in art of the time, hovering between figuration and abstraction. Montenegro was an integral figure in the lively modern art world of Albuquerque in the 1940s and '50s. As a painting professor at UNM, Montenegro championed a young Richard Diebenkorn (later a massively famous California painter) whose graduate degree was threatened with nullification when recalcitrant, realist painting professors resisted Diebenkorn's urge to paint in the Abstract Expressionist style that was even in the late 1950s already becoming passé in New York.

Elaine de Kooning

1918 Brooklyn, New York – 1989 Southampton, New York

Juarez

1959
oil on canvas
56 ½ x 80 ¼ in.
Albuquerque Museum, museum purchase, 2005 General Obligation Bonds, PC2008.39.1

Elaine de Kooning brought her bold New York sensibility to Albuquerque when she taught painting at the University of New Mexico in 1958–59. De Kooning saw a bullfight on a trip to Juárez with Albuquerque writer Margaret Randall and translated the experience into a series of large, abstract canvases. If read metaphorically, this series of paintings embodies the energy traditionally associated with bulls: strength, ferocity, masculinity.

Holly Roberts

born 1951 Boulder, Colorado;
lives Corrales, New Mexico

Woman with Anxiety

1988
oil on silver gelatin print
25 x 35 in.
Albuquerque Museum, gift of the Michael and Jane Nicolais family, PC2009.21.1, © 2020 Holly Roberts

Holly Roberts's work often includes the layering of oil paint on an underlying photographic print combining the more realistic world of the photograph with the imagined expression of a painting. *Woman with Anxiety* is psychologically stirring and reflects the stress and fears felt by many in the modern world.

Accidents and Challenging Situations

During the 1950s scientists and the military continued researching nuclear technologies and the damage caused by nuclear explosions. Test explosions resulted in more effective weapons and structures designed to withstand nuclear blasts. In addition, planners investigated the possibility of non-military uses of nuclear power including atomic trains, medical technology, and nuclear power plants.

Simultaneously, nuclear accidents occurred despite government assurances of the safety of modern nuclear energy. Students in the 1950s were inundated with the fear of nuclear annihilation and regularly practiced "duck-and-cover" drills in case of a nuclear attack. Of course hiding under a student desk would provide little protection from a nuclear attack, but needlessly scared the daylights out of youngsters.

Greg MacGregor

born 1941 La Crosse, Wisconsin; lives Santa Fe, New Mexico

Colorized Los Alamos Archive Negative #3-21-53

2019

pigment inkjet print from black and white negative

17 x 22 in.

lent by the artist, © 2020 Greg MacGregor

photo by David Nufer

Greg MacGregor

born 1941 La Crosse, Wisconsin; lives Santa Fe, New Mexico

Original Black and White Los Alamos Archive Negative #3-21-53

2019

pigment inkjet print from black and white negative

17 x 22 in.

lent by the artist, © 2020 Greg MacGregor

photo by David Nufer

The Defense Department utilized high-speed cameras to document the effects of nuclear explosions on buildings, household furniture, and mannequins. These tests occurred outdoors at the Nevada Proving Grounds between 1951 and 1957 but were not banned until 1962.

Greg MacGregor animated these experiments by coloring them using computer software. His colorizing techniques transform black-and-white military photographs into modern images that mimic the aesthetic of color postcards produced between 1905 and the 1950s but contain subject matter that is unnerving to say the least.

Greg MacGregor

born 1941 La Crosse, Wisconsin; lives Santa Fe, New Mexico

Colorized Los Alamos Archive Negative #5-5-55

2019

pigment inkjet print from black and white negative

17 x 22 in.

lent by the artist, © 2020 Greg MacGregor

photo by David Nufer

Greg MacGregor

born 1941 La Crosse, Wisconsin; lives Santa Fe, New Mexico

Colorized Los Alamos Archive Negative #S-36-2

pigment inkjet print from black and white negative

2019

17 x 22 in.

lent by the artist, © 2020 Greg MacGregor

photo by David Nufer

Greg MacGregor

born 1941 La Crosse, Wisconsin; lives Santa Fe, New Mexico

Colorized Los Alamos Archive Negative #S-35-3

2019

pigment inkjet print from black and white negative

22 x 17 in.

lent by the artist, © 2020 Greg MacGregor

photo by David Nufer

Greg MacGregor

born 1941 La Crosse, Wisconsin; lives Santa Fe, New Mexico

Colorized Los Alamos Archive Negative #S-35-5

2019

pigment inkjet print from black and white negative

17 x 22 in.

lent by the artist, © 2020 Greg MacGregor

photo by David Nufer

Santa Fe Railway

I want a ticket on the Atomic Super Chief!

1953

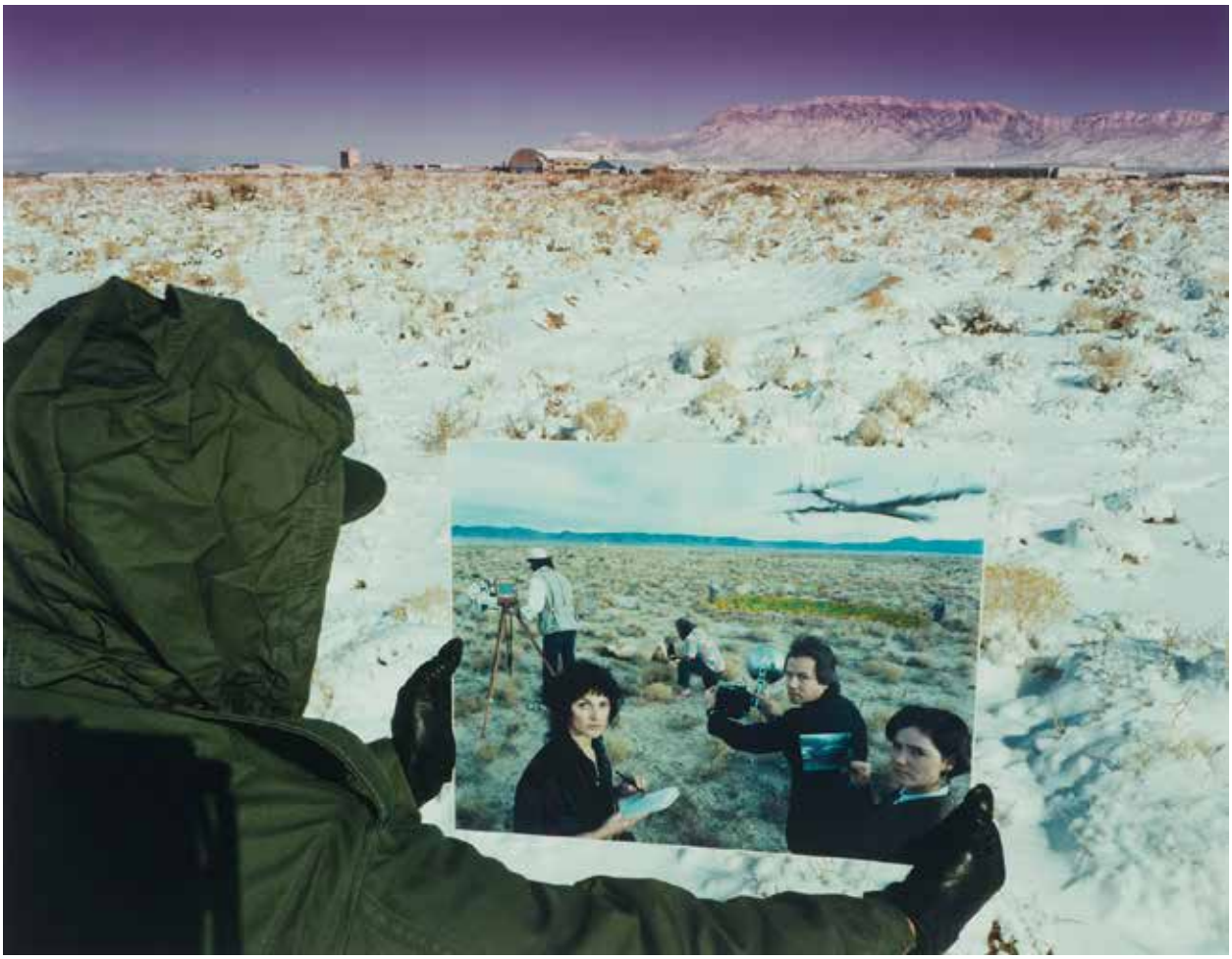
rotary letterpress

14 x 10 ½ in.

lent by a private collector

photo by David Nufer

Santa Fe Railway's advertisement for the imaginary "Atomic Super Chief" emphasizes the company's growth in the name of progress, suggesting nuclear power as a means for this progress. The birth of the nuclear age included the development of nuclear power which presented a possible solution to many energy needs including automobiles, planes, and ships.



Patrick Nagatani

1945 Chicago, Illinois - 2017 Albuquerque, New Mexico

B-36/Mark 17 H-Bomb Accident (May 22, 1957), 5 1/4 miles South of Gibson Road, Albuquerque, New Mexico

1991
IlfocolorDelux print
27 ½ x 31 in. (mat)
Albuquerque Museum, gift of Jonathan Abrams, PC1991.30.20
photo by David Nufer

On May 22, 1957, a B-36 bomber accidentally dropped a 42,000-pound hydrogen bomb south of Albuquerque at 11:50 in the morning. The conventional explosives detonated and only dug a 25-foot hole, but Albuquerque was spared sudden annihilation since the nuclear trigger was not installed.

This photograph documents what a nuclear winter might look like in Albuquerque. Patrick Nagatani depicts himself holding a photograph of the B-36 flying overhead while colleagues investigate the damage.

José Marcos García

1902 Cuesta de David, New Mexico – 1998 Albuquerque, New Mexico

Cuba – Missiles

ca. 1962
carved and treated pine
8 x 9 x 4 in.
Albuquerque Museum, gift of Peachy and Mark Levy, PC2014.28.4
photo by David Nufer

The fear of Nuclear annihilation stunned the world in early October 1962. In response to the placement of American immediate range nuclear weapons in Italy and Turkey that could reach all of the western U.S.S.R, Soviet Union leader, Nikita Khruschev sent nuclear missiles to Cuba. The presence of Russian attack missiles in Cuba and tensions between the United States and Cuba raised fear of a nuclear holocaust. An agreement was reached for the U.S. to remove the missiles from Italy and Turkey and for Khrushchev to remove missiles from Cuba.

José Marcos García, who signed his carved sculptures simply "Marco," responded to the crisis with a sculpture showing Khrushchev removing weapons from Cuba. The sculpture depicts Fidel Castro protesting Cuba's circumstance of being left alone to stand up to the United States.

Beatrice Mandelman

1921 Newark, New Jersey - 1998 Taos, New Mexico

NO War #1

ca. 1965
photographs, collage, and acrylic on board
21 ¼ x 15 ½ in.
New Mexico Museum of Art, gift of the Beatrice Mandelman Ribak Estate, 2003, 2003.3.9, © 2020 Mandelman-Ribak Foundation
photo by Blair Clark

"Collage," Beatrice Mandelman once said, "best represents my concern for the stressful, shifting, transitory nature of human experience." Mandelman's *No War #1* combines materials cut from magazines with acrylic paint to overtly express her opinions about Vietnam. The hard lines and overlay of geometric shapes with text and imagery suggest the complex and disjunct feelings brought about by war. There have been thousands of tests of nuclear

weapons, but they have only been used twice in warfare; in the attacks on Hiroshima and Nagasaki. Though nuclear bombs have not been dropped on humans since 1945, the threat of their use in war cannot be completely eliminated. A document from the CIA in 1966 (released to the public in 2005) reveals that the U.S. considered using nuclear bombs in the Vietnam War.

John L. Doyle

1939 Chicago, Illinois – 2010 Burnsville, North Carolina

Bombardier* (from the series: *Sharpshooters 76)

1976
lithograph
30 x 41 in.
Albuquerque Museum, gift of Estate of Daniel E. Prall, PC2018.7.4.I
photo by David Nufer

John Doyle's series, *Sharpshooters 76,* chronologically depicts soldiers from different U.S. wars. A World War II bombardier can be seen through the windows of a B-29 bomber. Where is he dropping his bomb? Who will suffer? The depiction of the bomber seemingly floating through space further separates him from those who will be impacted by the explosion. Doyle's print emphasizes how technology enables indiscriminate killing at great distances–the bombs are dropped on "targets," not human beings.

NO Nukes March on Washington, May 6, 1979 T-shirt

1979
silkscreen print on cotton T-shirt
26 x 27 in.
lent by a private collector

The anti-nuclear march on Washington, D.C. on May 6, 1979 occurred in response to the Three Mile Island accident in Dauphin County, Pennsylvania which included a partial meltdown of a nuclear reactor and subsequent radiation leak. Three Mile Island was the most significant accident in commercial U.S. nuclear power plant history and prompted a number of anti-nuclear protests. It is estimated that around 65,000 people gathered outside the White House and chanted slogans like: "Hell no, we won't glow!" and "Two, four, six, eight, we don't want to radiate!" Joni Mitchell performed her song *Big Yellow Taxi,* modifying her famous line by singing "they paved paradise and put up a nuclear hotspot."

Vincent Craig

1951 Crownpoint, New Mexico–2010 Scottsdale, Arizona

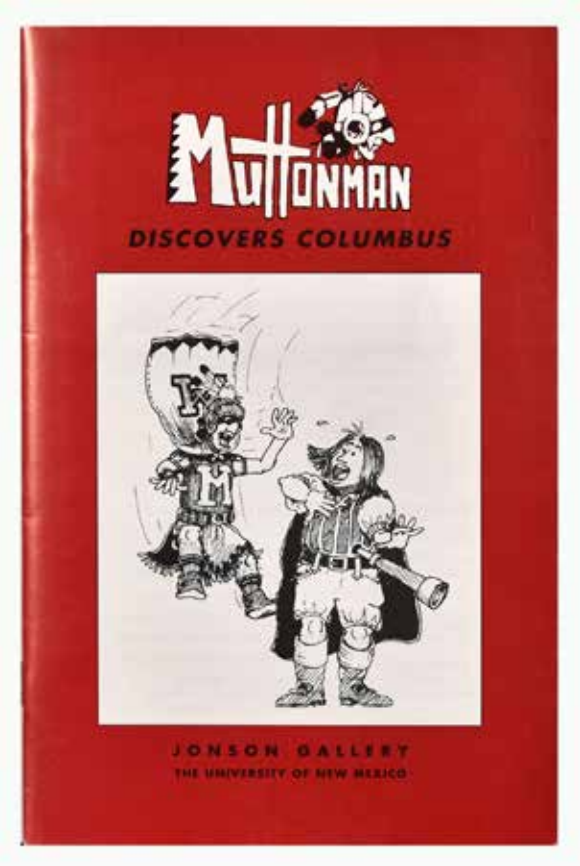
"Muttonman Discovers Columbus" Exhibition from Jonson Gallery, University of New Mexico

1994

pamphlet

lent by a private collector

photo by David Nufer



A tailings pond ruptured at the Church Rock uranium mill on the 34th anniversary of the Trinity explosion. 94,000,000 gallons of acidic water and 200,000 pounds of radioactive tailings flowed into the Rio Puerco in New Mexico. The spill rendered the water toxic and unusable in some communities including Gallup and the Diné homeland in Arizona.

In Vincent Craig's cartoon series, a lonely shepherd ate mutton from sheep that drank from the contaminated Rio Puerco and instantly acquired superhuman powers and became Muttonman. Craig's cartoons in the *Navajo Times* featured Muttonman's heroic adventures on the reservation and beyond.

Mutton Man saved Columbus when the captain of the Niña, Pinta, and Santa Maria became disoriented in 1493. Craig's exhibition, *Muttonman Discovers Columbus* coincided with the 500th anniversary of Columbus's exploits. After displays in Albuquerque, Santa Fe, Gallup, and Window Rock, Arizona, the exhibition traveled to the Smithsonian's Experimental Gallery in Washington, DC.

"Muttonman discovers Columbus" installation at Smithsonian Experimental Gallery, Washington, D.C., 1993, photo by Joe Traugott

Environmental Injustice

Examples of environmental injustice litter the Nuclear Age. Environmental impacts have resulted from accidents. Others occurred because poor planning resulted in unforeseen consequences. Uranium mines often did not take into account the dangers of tailings piles and tailings ponds until disasters struck.

Health issues related to radiation often strike rural communities located close to nuclear tests or uranium mining operations. Companies mining uranium often disregarded safety regulations until it was too late for unprotected miners who developed cancers, lung disease, and other diseases.

These situations are examples of environmental injustice because poor communities in rural areas were the most vulnerable and the most affected by the fallout from nuclear industries and detonations.

Michael P. Berman

born 1956 New York City, New York; lives Silver City, New Mexico

White House 08F.255

2008

carbon pigment print on paper

32 x 40 in.

lent by the artist, © 2020 Michael Berman

photo courtesy of the artist

This abandoned ranch house is located just outside of the White Sands Missile Range and just north of the Trinity site. The mystery surrounding Michael Berman's landscape is intensified by the formality of a massive open space surrounding a small, pristine building.

The photograph presents many questions. Were the residents forced to leave because of contamination left from the Trinity blast? Were they ranchers whose land was taken by eminent domain? Is the site just too remote and isolated to be habitable?

Barbara Grothus

born 1953 Los Alamos, New Mexico; lives Albuquerque, New Mexico

Cultural Palynology: 33 degree latitude (same Parallel)

"Displodi Telum (gunpowder pollen)" Ji'an, China 800 CE
"Globus Pacis (buddha pollen)" Silk Road, China, 200 CE
"Denudus Imperium (pollen of empire)" Babylon, 2400 BCE
"Ignus Omneconsumens (atomic pollen)" Trinity Site, NM/Nagasaki, Japan, 1945

2009–10
ceramic
8 x 8 x10 in., 7 x 7 x 8 in., 4 x 15 x 4 in., 8 x 8 x 8 in.
lent by the artist, © 2020 Barbara Grothus
photos by Pat Berrett

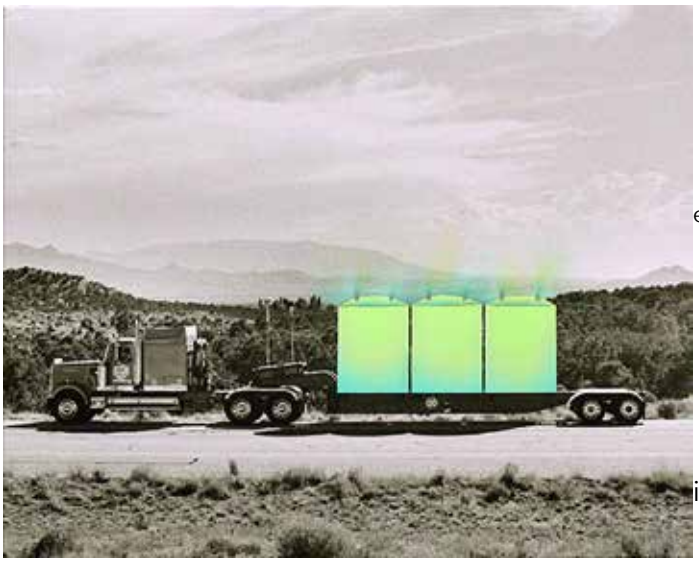
The ecological impact of open-air nuclear blasts is the subject of Barbara Grothus's ceramic models of irradiated pollen grains. These altered samples were collected around the world at the northern latitudes corresponding with above-ground nuclear detonations. The general movement of winds scattered these radioactive genetic samples across the globe. Inevitably the pollen may create genetic hybrids altered by the unintended consequence of nuclear explosions. Grothus implies that the long term effects of nuclear driven genetic change may not yet be realized.

Judy Chicago
born 1939 Chicago, Illinois; lives Belen, New Mexico

Donald Woodman
born 1945 Haverhill, Massachusetts; lives Belen, New Mexico

***WIPP-ed* (from the series *Nuclear Waste(d)*)**
1989
sprayed acrylic, oil, Prismacolor, and photography on PhotoLine
16 x 20 x 7/8 in.
New Mexico Museum of Art, Gift of Judy Chicago and Donald Woodman, 2011, 2011.11.2

photo by Blair Clark



In the series *Nuclear Waste(d)*, Judy Chicago and Donald Woodman address the consequences of the nuclear industry in New Mexico. These photographs document various nuclear-related sites throughout the state. They were photographed by Woodman then painted on by Chicago. WIPP or the Waste Isolation Pilot Plant is located in southern New Mexico near Carlsbad. WIPP-ed is a play on words that references the site where the waste pictured on the truck will be disposed of.

Will Wilson
born 1969 San Francisco, CA, lives Santa Fe, New Mexico

Mexican Hat Disposal Cell, Mexican Hat, Utah
2019
archival pigment print
24 x 36 in.
lent by the artist,

Mexican Hat is just south of Monument Valley in Utah. Dinė people have lived in this region for a long time, and the area is known for its incredible landscape of buttes and mesas. Lifeways changed in the village after uranium was discovered and many men went to work underground. After the mine closed, the land was abandoned by the company and residual contaminated material like tailings was left behind. Eventually, the problem

was mitigated, at least for a while, by burying the tailings in gravel so the dust could not blow them around.

Will Wilson created this aerial landscape of Mexican Hat's nuclear waste by flying a drone 1,000 feet above the community. The photographs show that the village is located literally a stone's throw away from the toxic site. And Monument Valley is barely visible on the horizon.

Will Wilson

born 1969 San Francisco, California; lives Santa Fe, New Mexico

Auto Immune Response, Mexican Hat Disposal Cell, Mexican Hat, Utah

2019

archival pigment print from original tintypes

8 x 32 in.

lent by the artist, © 2020 Will Wilson

Will Wilson began creating his series: *Auto Immune Response* in 2005. Wilson states: "[the series] takes as its subject the quixotic relationship between a post-apocalyptic Diné man and the devastatingly beautiful, but toxic environment he inhabits. The series is an allegorical investigation of the extraordinarily rapid transformation of Indigenous lifeways, the disease it has caused, and strategies of response that enable cultural survival. The latest iteration of the *Auto Immune Response* series features an installation of a hogan greenhouse, entitled, *Auto Immune Response Research Facility,* in which Indigenous food plants are grown. This facility will be accompanied by a set of large-scale photographs illustrating the botany and cultivation of vital resources. My hope is that this project will serve as a pollinator, creating formats for exchange and production that question and challenge the social, cultural and environmental systems that surround us."

Naomi Bebo

born 1979 Los Angeles, California;
lives Phoenix, Arizona

Beaded Mask

2015
seed beads, deer hide, ermine and ribbons on Iraqi gas mask
9 ½ x 7 ½ x 6 ½ in.
lent by the Tweed Museum, © 2020 Naomi Bebo
photo by David Young-Wolff

Within many tribes, masks continue to serve an important purpose. Masks are used in many ways - for war, storytelling, relationship-building, and spirituality, to name a few. Frequently, the masks are not masks at all but rather living and breathing entities that even when not worn must be treated with respect. It is often understood that the mask has the power to transform the wearer into a spirit, gift the wearer with the power of the spirits, or call the spirits into being.

This mask was created with the intent to transform but not in the traditional sense. Naomi Bebo has taken an object of fear and genocide and recreated it. According to Bebo, "While the Beaded Mask is a manifestation of our ability to be better, I have preserved the original function of the gas mask to show that in spite of the beauty of the embellishments, it is still only a beautiful gas mask. In the end, we may choose to march into an apocalypse marked by oil dependence, environmental degradation, and cultural genocide; a world in which our children will actually need gas masks to breathe; or we may choose to be greater than our basest material."

Living and Dying in the Nuclear Age

Many artists in this exhibition view atomic energy as a killer. And for good reason. Radiation kills. And remains a killer for incredibly long periods of time. In spite of the dangers radiation poses to modern life, we also depend on radioactive minerals to prolong our lives. Truly harnessing the atom seems as improbable as returning to a pre-Atomic Age. In short, we can't live with atomic energy, nor can we live without it. Or can we?

Manufacturer unknown
Orange juice squeezer
uranium glass (Vaseline glass)
5 ½ x 5 ½ x 2 ½ in.
lent by private collector
photo by David Nufer

Homer Laughlin China
Uranium Red-Fiesta Ash Tray
1936–38
uranium oxide glaze
5 ½ x 5 ½ x 1 ½ in.
lent by private collector
photo by David Nufer

American Tobacco Company
Lucky Strike cigarettes in tin
1920s–ca 1942
lithograph on tin
4 ½ x 5 ¾ x 6 ¼ in.
lent by private collector
photo by David Nufer

Dangerous objects surround us in our daily lives. Mildly radioactive uranium glass was popular early in the twentieth century and was often called carnival glass at county fairs. Uranium Red Fiestaware, manufactured between 1935 and 1942, got its color from uranium oxide used in the glaze. Tins of Lucky Strike cigarettes were popular with soldiers because the container kept their smokes dry.

So here is the question: How much orange juice squeezed in a uranium glass gadget must you drink before it is dangerous? Or how much radioactive Fiesta ware must you handle or eat from before it is a health risk? And how about the Luckies?

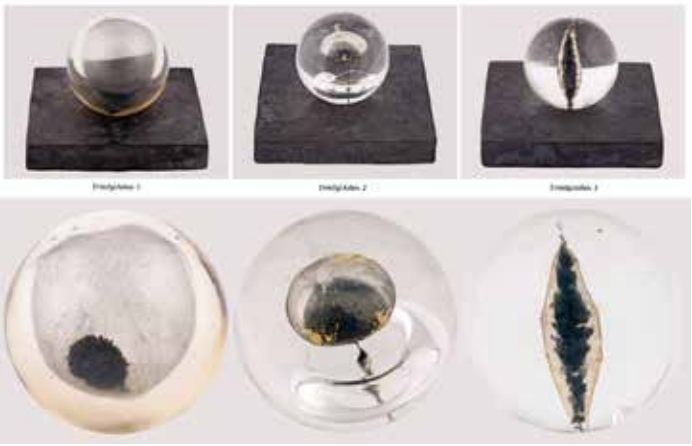
Judy Tuwaletstiwa
born 1941 Los Angeles, California; lives Santa Fe, New Mexico

Tom Joyce (iron base)
born 1956 Tulsa, Oklahoma; lives in Santa Fe

Karen Willenbrink-Johnsen (gaffer)
born 1960 Cincinnati, Ohio; lives Bow, Washington

Trinity/Ashes series (Trinity/Ashes, Trinity/Ashes I, II, III)
2001
blown glass, iron (base)
3 in. diameter (Trinity/Ashes), 4 in. diameter (Trinity/Ashes I, II, III)
lent by Cindy Miscikowski,

photos by Phillip Tuwaletstiwa



Trinity/Ashes is a three-inch black glass sphere representing the amount of plutonium used in the Fat Man bomb detonated over Nagasaki. The quantity of plutonium that actually fissioned was only a fraction of the amount represented by the sphere; today we are capable of fissioning the entire amount. It is difficult to imagine that the power to devastate an entire city could be contained within such a small object. *Trinity/Ashes* reflects on the idea that the human hand can both create and destroy.

The *Trinity/Ashes* series was created while Judy Tuwaletstiwa attended an artist residency at the Pilchuck Glass School in Pennsylvania. Working closely with artist Karen Willenbrink-Johnsen, Tuwaletstiwa created three more glass spheres that incorporated gold leaf and carbon ash from a lightning struck tree. The components combined in sometimes unexpected ways creating a hollow cavity filled with ash, a mushroom cloud, and a chrysalis. The process served as a contemplation of the Trinity test and its aftermath and is summarized in Tuwaletstiwa's own words:

> Silica, carbon ash, gold leaf, fire,
> breath, intention, and the Unconscious
> combined mysteriously
> to take us below political rationalizations,
> into human suffering and beyond,
> to the mystery of the creative/destructive process itself.

Will Wilson

born 1969 San Francisco, CA, lives Santa Fe, New Mexico

Michael Apollo Gomez

2016

archival pigment print from original tintype

17 x 22 in.

lent by the artist, © 2020 Will Wilson

Using historic wet-plate photographic technology, Will Wilson photographed Michael Apollo Gomez while he was undergoing radiation treatment. The patient had been fitted with a protective mask when Wilson captured him staring at a mirror image of a paranormal self. This eerie portrait presents a man plagued by radioactive concerns gazing at his uncertain future.

Patrick Nagatani

1945 Chicago, Illinois - 2017 Albuquerque, New Mexico

Radiation Therapy Room, Albuquerque, New Mexico

1989

Chromogenic print

27 ½ x 31 in. (mat)

Albuquerque Museum, museum purchase, 1989 General Obligation Bonds, PC1991.30.33

photo by David Nufer

Painter Harry Nadler and photographic storyteller Patrick Nagatani were friends, as well as colleagues at the University of New Mexico. Nadler was undergoing radiation treatment for an inoperable tumor behind his ear when his friend created this unforgettable document. Historically, in many cultures, emerald green has symbolized peace, balance, and eternity.

The most distressing aspect of this portrait is that years later Nagatani, too, battled cancer for a decade. A series of computerized tomography images (CT scans) were used to monitor Nagatani's disease. CT machines take multiple X-rays from different points of view. Nagatani addressed atomic energy and the social construct surrounding nuclear weapons for much of his career, yet radiation also played a role in prolonging his life. In the long run, a caustic sense of ironic humor proved to be Nagatani's most effective weapon.

James Drake

born 1946 Lubbock, Texas; lives Santa Fe, New Mexico

Jaynelle Across the Sea

2006
charcoal on paper
120 x 86 in.
New Mexico Museum of Art Museum purchase with funds from the Friends of Contemporary Art and an anonymous donor, 2008, 2008.14,

photo by Blair Clark

James Drake's young cousin, Jaynelle, was living with her family in Japan where her father was stationed with the US Air Force when the bombs were dropped on Hiroshima and Nagasaki. The family was not in the immediate vicinity of the bombs, but when Jaynelle passed away suddenly at the age of 3, it was determined that it was due to a brain tumor that her family attributed to the effects of radiation.

Jaynelle Across the Sea is part of a series entitled *War in Heaven*, which includes large-scale portraits of individuals impacted by war, all created from torn paper, tape, and charcoal. Like millions of others affected by war, Jaynelle's monumental portrait connects New Mexico, as the birthplace of the bomb, to tragic stories around the world.

Conceptual Art about the Bomb

The primary intention of conceptual art is to emphasize the ideas represented in the work more than the aesthetic or formal elements. Often the process of making the art is correlated to the concept of the work. Beginning particularly in the 1970s, artists began addressing political issues associated with nuclear weapons and nuclear power. Irony and humor became a powerful thread within these works. Artists created these works for public display in museums and public places with the intention of encouraging viewers to consider issues and concerns around nuclear weapons and energy.

Luís Jiménez

1940 El Paso Texas - 2006 Hondo, New Mexico

Mountain Spirits Dancing with Nuclear Rods

1974
lithograph
47 ½ x 33 1/2 in.
Albuquerque Museum, museum purchase, 1997 General Obligation Bonds, PC1999.34.1

Luis Jiménez was not bashful about expressing his political beliefs through his art. The bones and the figures holding nuclear rods in Jiménez's print are the personification of mountain spirits. They allude to Jiménez's feelings about the interrelationships between nuclear energy, nature, and death.

In 1994, Jiménez organized an exhibition at the Anderson Museum in Roswell to protest the placement of spent fuel rods from East Coast nuclear power plants on the Mescalero Apache reservation near his home. The exhibition, called *Dumb Dump* seemed to work as an effective protest as the nuclear rods never arrived in New Mexico.

Nuclear rods composed of uranium or plutonium fuel nuclear power plants. By undergoing fission reactions, they release a lot of energy in the form of heat, which creates steam that powers electric turbines. When the fissionable material in the rod is used up, they are removed and remain radioactive for a number of years.

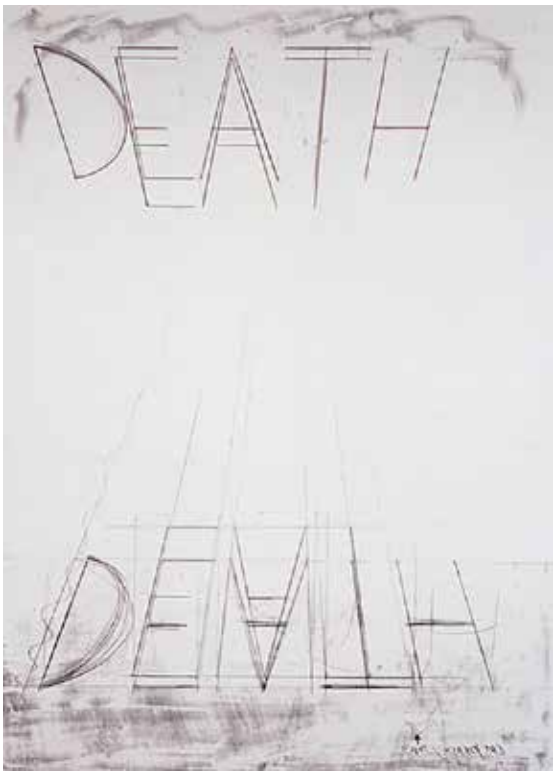
Bruce Nauman

born 1941, Fort Wayne, Indiana; lives Northern New Mexico

Eat Death

1976
lithograph
41 ¼ x 30 1/8 in.
New Mexico Museum of Art, Gift of the Rick Dillingham Estate, 1994.67.64

photo by Blair Clark



Much of Bruce Nauman's work centers around language. Through subtle formal elements, he highlights sometimes juxtaposing ideas within words that are closely related in some way. In this case, he brings attention to the fact that the word "Death" also contains the word "eat," leaving the viewer to contemplate these ideas separately and as they relate to each other.

Bruce Nauman

born 1941, Fort Wayne, Indiana; lives Northern New Mexico

Earth–World

1985
lithograph
30 ¼ x 45 in.
Albuquerque Museum, gift of Jonathan Abrams and Fay Pfaelzer Abrams, 2014.1.43

photo by David Nufer

Nauman once again emphasizes how words juxtaposed influence our interpretation of them. Without the word "earth" in the lower half of this print, the reading of the top word is much more ambiguous and requires far more effort to correctly understand it to say "world". The print considers the subtle differences between these two words that share similar meaning and suggests that the earth will remain stable even when the world is flipped upside down.

Tony Price

1937 Brooklyn, New York - 2000 Santa Fe, New Mexico

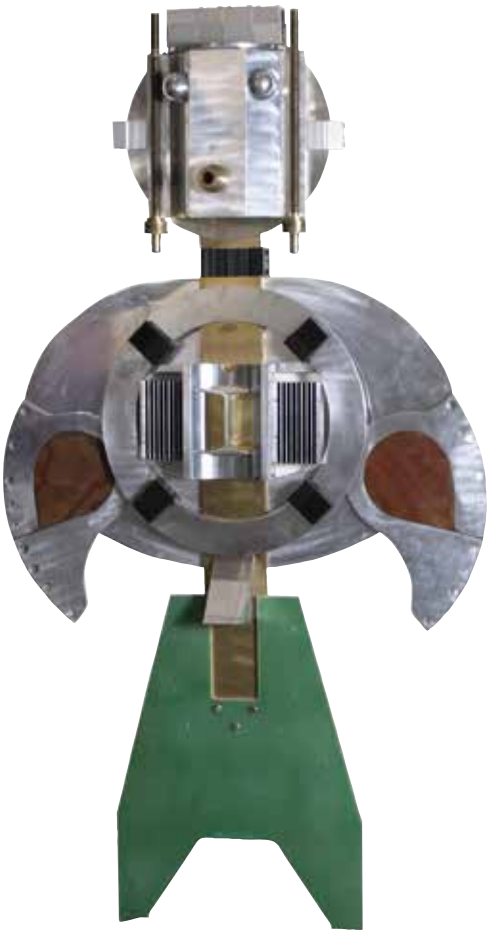
Atomic Thunderbird

1994

cut and assembled stainless steel, bronze, plastic, and fiberglass

57 x 31 x 7 in.

Albuquerque Museum, museum purchase, 1993 General Obligation Bonds, PC1996.51.1



Tony Price created one of a kind sculptures out of discarded materials from nuclear labs that were sold to the public at the Black Hole in Los Alamos. Price drew inspiration from deities and spiritual entities from religions around the world and often invoked Native American imagery. Price transformed these offcast artifacts of destruction into new symbols of positive energy. In his own words: "these sculptures act as valves, bringing the dark and light energies together to balance and thus hold the peace."

Anne Noggle

1922 Evanston, Illinois–2005 Albuquerque, New Mexico

***Vertical Stance* (from the series: *Earthbound*)**

1979

Chromogenic print

18 ¾ x 14 ¼ in.

Albuquerque Museum, gift of Anne Noggle, PC1993.35.26

photo by David Nufer

Vertical Stance shows photographer Judith Golden standing at the old National Atomic Museum wearing a pair of turquoise boots. The rocket missile in the background serves as Anne Noggle's feminist commentary about guided missiles as metaphors for implements of war, power, and masculinity.

Noggle flew bombers to Europe during World War II with the Women Airforce Service Pilots (WASP) and is known for self-portraits taken in the air from her pilot's seat.

Tom Joyce
born 1956 Tulsa, Oklahoma; lives in Santa Fe
Platen I
1994-95
mild steel and incinerated book
16 x 10 x 1 in.
courtesy of the Artist and Gerald Peters Contemporary, © 2020 Tom Joyce
photo by Krysta Jabsczenski

Tom Joyce
born 1956 Tulsa, Oklahoma; lives in Santa Fe
Platen II
1994-95
mild steel and incinerated book
16 x 10 x 1 in.
courtesy of the Artist and Gerald Peters Contemporary, © 2020 Tom Joyce
photo by Krysta Jabsczenski

Platens are objects that can exert great pressure, both physically and psychologically. Tom Joyce created these works 25 years ago as he was contemplating the 50th anniversary of Trinity, Hiroshima, and Nagasaki.

Studies on thermal sciences and metallurgical engineering radically changed after the explosion at Trinity. The metal structure housing the bomb vaporized as the blast reached

temperatures as hot as the sun. To create his *Platen* series, Tom Joyce visited the salvage yard at Los Alamos National Laboratories and collected iron bar and steel plate as well as obsolete technical reference books on mechanical behaviors for iron and steel.

Joyce created these two works by heating the two slabs of steel (platens) to just below the melting point with one of these outdated metallurgical volumes placed between the plates. He then squeezed the stack under 100 tons of pressure until the book incinerated. The remaining chemical residue from the paper and ink became drawings on steel.

As conceptual works of art, the sculptures reference the instantaneous destruction of matter by nuclear explosions. The fact that both the destructive component of the sculpture and the book were sourced from Los Alamos suggests that Trinity destroyed old ways of understanding many things, even some of the science that went into developing the bomb.

Eve Andrée Laramée

born 1956 Los Angeles, California; lives Brooklyn, New York and Santa Fe, New Mexico

Breathing into Each Others Lungs
1994
handblown glass, steel, rubber
35 x 14 x 11 in.
lent by the artist, © 2020 Eve Andrée Laramée
photo courtesy of the artist

This sculpture is a visceral metaphor for a life support system. On two occasions Eve Laramee toured through the Jackpile uranium mine with Curtis Francisco, a geologist from Laguna Pueblo. According to Laramee, " I was shocked by the sheer scale of the operation, in relation to the village of Paguate. I met several retired miners who worked without any lung or ear protection." When explosives were detonated to extract uranium ore, miners would crouch behind their pick-up trucks and were covered with radioactive dust. Women in the village would rush to take their laundry off the line before the blasts so the dust would not settle on their clothing and bedding.

Tom Joyce
born 1956 Tulsa, Oklahoma; lives in Santa Fe
Reservoir I
2013-2015
cast iron, 23 carat gold leaf
18 x 11 x 8 ½ in.
courtesy of the Artist and Gerald Peters Contemporary, © 2020 Tom Joyce

Tom Joyce
born 1956 Tulsa, Oklahoma; lives in Santa Fe
Reservoir II
2013-2015
cast iron, 23 carat gold leaf
12 x 12 ½ x 8 in.
courtesy of the Artist and Gerald Peters Contemporary, © 2020 Tom Joyce

In 1992 Tom Joyce received over 60 dismantled nuclear weapon parts from the United States

and Russia that were originally created for use on nuclear submarines. Joyce had planned on using the materials for a project commissioned by the *World Centre for the United Nations* which included a museum to be constructed in San Francisco. The museum and the project were never realized due to controversies surrounding the UN's effectiveness in its peacekeeping effort.

After laying in wait for 20 years, Joyce began working with the materials again. He retrieved the gold cladding from the nose cones on the warheads and created gold leaf for the sculptures which were created from molten alloy of steel fillings and project remnants made in the studio between 1977 and 2001. Gold is the only effective barrier known to shield the electronic trigger of the warheads from the electromagnetic pulse generated by an atomic blast. The gold's shielding properties makes a "second strike", and the subsequent annihilation of all nearby life possible.

Abbey Hepner

born 1983 Moscow, Idaho;
lives Troy, Illinois

Los Alamos National Laboratory, New Mexico, Radioactive waste shipped to WIPP: 2,424,143 Gallons

2014
uranotype (uranium print)
9 x 13 in.
lent by the artist, © 2020 Abbey Hepner
photo courtesy of the artist

Abbey Hepner

born 1983 Moscow, Idaho; lives Troy, Illinois

Rocky Flats Wildlife Refuge, Arvada, Colorado, Radioactive waste shipped to WIPP: 3,978,943 Gallons

2014
uranotype (uranium print)
9 x 13 in.
lent by the artist, © 2020 Abbey Hepner
photo courtesy of the artist

Abbey Hepner's *Transuranic* series includes images of every nuclear site in the Western United States that sends radioactive waste to the Waste Isolation Pilot Plant (WIPP). Waste stored in this facility in southern New Mexico is buried deep in the earth and is intended to rest for

10,000 years. Hepner printed her photographs using uranium salts instead of gelatin silver technology, resulting in photographs that are radioactive. Hepner's work underscores the hidden consequences associated with radioactive technology in our daily lives and on the unassuming landscape.

Nicola López

born 1975 Santa Fe, New Mexico; lives New York, New York

Ideal Structures for a Dubious Future (Pyramid Temple)

2012
explosive intaglio
16 7/8 x 16 ¾ in.
Albuquerque Museum, museum purchase and gift of the artist, © 2020 Nicola López
photo courtesy of the artist

Nicola López

born 1975 Santa Fe, New Mexico; lives New York, New York

Ideal Structures for a Dubious Future (Globe Sprawl)

2012
explosive intaglio
17 x 17 in.
Albuquerque Museum, museum purchase and gift of the artist, © 2020 Nicola López
photo courtesy of the artist

Nicola López

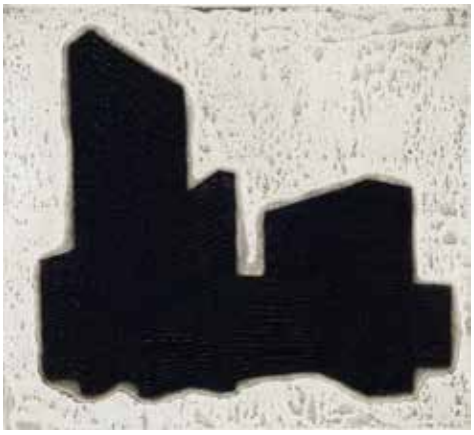
born Santa Fe, New Mexico, 1975; lives New York, New York

Ideal Structures for a Dubious Future (Block Building)

2012
explosive intaglio
11 x 17 in.
Albuquerque Museum, museum purchase and gift of the artist, © 2020 Nicola López
photo courtesy of the artist

Nicola López
born 1975 Santa Fe, New Mexico; lives New York, New York
Ideal Structures for a Dubious Future (Spiral Tower)
2012
explosive intaglio
16 ¾ x 12 7/8 in.
Albuquerque Museum, museum purchase and gift of the artist,
© 2020 Nicola López
photo courtesy of the artist

Nicola López
born 1975 Santa Fe, New Mexico; lives New York, New York
Ideal Structures for a Dubious Future (Slab Complex)
2012
explosive intaglio
13 3/8 x 15 in.
Albuquerque Museum, museum purchase and gift of the artist,
© 2020 Nicola López
photo courtesy of the artist



Nicola López
born 1975 Santa Fe, New Mexico; lives New York, New York
Ideal Structures for a Dubious Future (Industrial Cluster)
2012
explosive intaglio
16 x 15 in.
Albuquerque Museum, museum purchase and gift of the artist,
© 2020 Nicola López
photo courtesy of the artist

Nicola López

born 1975 Santa Fe, New Mexico; lives New York, New York

Ideal Structures for a Dubious Future (Tallest Tower)

2012

explosive intaglio

27 x 11 in.

Albuquerque Museum, museum purchase and gift of the artist, © 2020 Nicola López
photo courtesy of the artist

To create these explosive intaglio prints, Nicola López placed hand-cut stencils on copper plates which she then subjected to explosive blasts, imprinting the images onto the surface of the plates. The buildings depicted in the prints are fusions of existing, imagined, and historical examples of unrealized architecture. By creating them in a moment of violent transformation, the buildings embody their possibility and destruction simultaneously. The prints were made possible with a grant from the New Mexico Small Business Assistance program which connected López with technical support from Los Alamos National Laboratory.

Ehren Natay

born 1985 Santa Fe, NM;
lives Santa Fe, NM

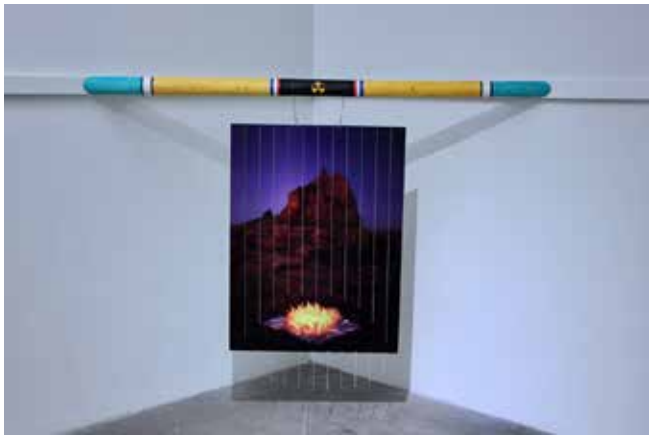
Yellow Cake

2019

dye-sublimation print on aluminum, steel ball chain, metal dog tags

48 x 36 in. (photograph), 79 ½ x 3 ½ x 3 ½ in. (beam)

lent by the artist, © 2020 Ehren Natay
photo courtesy of the artist



Alkaan is the ceremonial, wood-fired corn cake typically made during a *Kinaaldá* - the morphing ceremony when a young Diné girl crosses over to womanhood.

Yellow Cake is also the colloquial term for the solid form of mixed uranium oxide, which is produced in the uranium recovery process. In its natural state, uranium ore is perceived in Diné tradition to be a spiritual energy source that can be used as a medicinal catalyst for change in one's ideas, thoughts, and perceptions. Diné tradition upholds the belief that this energy source should never be uncovered because it would irrevocably change the environment and cause devastation to its people.

In 1942, the Manhattan Project began mining uranium on the Navajo Reservation at the site of Monument Valley. 3.9 million tons of uranium ore was extracted from Navajo lands up until 1986 when the last uranium mine closed. Today, there are over 500 mining sites that remain abandoned with piles of contaminated soil and uranium ore sitting above ground and unattended.

Ehren Natay's, *Yellow Cake,* illustrates the effects that uranium mining has had on Diné communities including radioactive toxicity which can be held in women's bodies and passed down through generations.

Douglas Kent Hall

1938 Vernal, Utah - 2008 Albuquerque, New Mexico

The Book of War: White Sands (selected pages)

2002

gelatin silver print, rag paper, acrylic paint

18 x 15 in.

Albuquerque Museum, museum purchase, 1997 General Obligation Bonds, PC2002.87.1.1-27

photos by David Nufer

The Book of War: White Sands is a collaborative project consisting of Douglas Kent Hall's poetry and photographs of White Sands. The audio component includes Hall's reading of the poetry along with music composed and recorded by the artist's son Devon Hall. The photographs and texts reflect on the history of war, the creating and testing of the bomb, and destruction. The white sand embodies memory and the passage of time as it relates to a specific place.

Thomas Powell

born 1951 Shanghai, China; lives Sacramento, California

For Kafka

2019
welded rebar
18 x 48 x 72 in.
lent by the artist, © 2020 Thomas Powell
photo by David Nufer

Thomas Powell's larger than life dead cockroach suggests the dire consequences of nuclear proliferation. The myth of cockroach resilience seems to have surfaced after roaches were reportedly seen in the ruins of Hiroshima and Nagasaki and the idea spread that cockroaches would be the sole survivors of a hypothetical World War III. Though roaches are more resistant to radiation than humans, it is not confirmed that they would, in fact, survive a nuclear winter.

Meridel Rubenstein

born 1948 Detroit, Michigan; lives Santa Fe, New Mexico

The Meeting

1993
palladium prints, glass, steel, video
each steel grid frame:
79 x 122 ¼ x 2 in.
lent by the Tia Foundation,
© 2020 Meridel Rubenstein
photo by Robert Reck

The Meeting revisits the interactions between nuclear scientists and Native Americans during the making of the first atomic bomb. Edith Warner's home near the Otowi Bridge over the Chama River was a gathering place where she served dinner to the organizers of the Manhattan Project on Sunday afternoons. It was the only place where the physicists could gather safely off the high-security site in Los Alamos.

In 1947 a new road and bridge required Warner to build a new home. Nuclear scientists and members of San Ildefonso Pueblo collaborated to build the new home. *The Meeting* looks at this collaboration around the construction of a second house for Warner.

The Meeting is a component of *Critical Mass,* a large, collaborative photo / text / video installation project. It opened at the Museum of Fine Arts in Santa Fe in 1993 and traveled for more than a year. The title comes from the physics term meaning the smallest amount of

fissionable material that will sustain a nuclear chain reaction. In this context "critical mass," also describes sustained artistic work about the impacts of the bomb. Rubenstein and performance artist and poet Ellen Zweig received an NEA Inter-Arts grant in 1989 to create *Critical Mass*, in collaboration with video artists Steina and Woody Vasulka.

Meridel Rubenstein

born 1948 Detroit, Michigan; lives Santa Fe, New Mexico

Oppenheimer's chair

1993

steel, etched glass, sand, video projection

10 x 7 x 9 ft.

lent by the Tia foundation, © 2020 Meridel Rubenstein

photo by Robert Reck

SITE Santa Fe commissioned Meridel Rubenstein to make *Oppenheimer's Chair* in 1995 for *Longing and Belonging: From the Faraway Nearby,* their first International Biennial. That exhibition opened on the 50th anniversary of the first atomic test at Trinity. This room-size glass house, with sandblasted imagery and a video projection onto a glass chair, is a meditation on nature and the shedding of defensive postures after 50 years of the Cold War. An armored sentry figure, made of transparent film in a standing steel frame, guards the portal. The chair video can be seen through him.

Yukiyo Kawano
born 1974 Hiroshima, Japan; lives Portland, Oregon
Little Boy folded (#2)
2016
silk fabric, kakisibu-dye, bamboo, wood, wire, washi paper, hair
10 x 2 ½ x2 ½ ft.
lent by the artist, © 2020 Yukiyo Kawano
photo courtesy of the artist

Yukiyo Kawano
born 1974 Hiroshima, Japan; lives Portland, Oregon
Fat Man folded (The 1945 Oregonian)
2019
newspaper, kakisibu-dye, adhesive, bamboo grass, wire, fabric (polyester), Polyethylene rod, nylon rope
10 x 5 x 5 ft.
lent by the artist, © 2020 Yukiyo Kawano
photo by David Greber of Yukiyo Kawano's studio at the Joan Mitchell Center, Fall 2019

Yukiyo Kawano is a third-generation *hibakusha* (atomic bomb survivor) of the detonation of Little Boy over Hiroshima on August 6, 1945. Her sculptures are replicas of the bombs detonated over Japan, but their construction alludes to Japanese kites and lanterns.

The understructure of *Little Boy* is covered with silk fabric from her grandmother's kimono and sewn with Kawano's own hair. *Fat Man* is constructed with pages of The Oregonian newspaper from August 1945.

The ghostly forms of Kawano's replicas contrast with the massive physical weight of the actual bombs and the weight of history. The material choice connects the sculptures to Kawano's own history and illustrates the lasting impact the bombs continue to have, generations later.

Video Room

Eve Andrée Laramée

born 1956 Los Angeles, CA; lives Brooklyn, New York & Santa Fe, New Mexico

Uranium Daughters

https://vimeo.com/118267531
2015
video, 6 minutes
lent by the artist, © 2020 Eve Andrée Laramée

The *Uranium Daughters* video is a visual metaphor for the *inverse alchemy* of the Atomic Anthropocene Era. It is a countdown of the half-life of uranium-238, a naturally occurring element, the feed material for uranium-235, and plutonium-239 used in nuclear and thermonuclear weapons and nuclear power. The half-life of uranium-238 is 4.47 billion years –the time it takes for a quantity of the element to decrease one half-fold. Over geological time, uranium undergoes exponential decay into *"uranium daughters"* that cascade into other elements and finally to stable Lead-206. The splitting screen connotes the splitting of atoms, transmutation of elements, and cell division. This video calls attention to legacy radioactive waste produced by the military during the Cold War. The build-up of nuclear weapons created the parallel "peaceful" nuclear energy industry. Thermographs and spectrographic maps of the Fukushima Daiichi nuclear reactor meltdowns and radioactive hotspots, and archival images are overlaid onto the landscape of Mojave Desert ghost towns, Death Valley, and the Nevada Test Site (N2S2).

Mary Kavanagh

born 1965 Toronto, Ontario, Canada; lives Lethbridge, Alberta, Canada

Trinity

https://player.vimeo.com/video/414938052
2019
video, 34 minutes
lent by the artist, © 2020 Mary Kavanagh

Two days each year, the WSMR Public Affairs Office hosts an Open House, during which thousands of visitors come to experience the Trinity site where the atomic age began. Since her first visit in 2012, Mary Kavanagh has collected hundreds of interviews at the site that reveal a wide range of motivations and interests by those making the journey. Several threads emerge across these interviews—an understanding of the site as sacred; an interest in or skepticism about scientific achievement; anxiety about the threat of nuclear war, waste and fallout; and regret about the use of nuclear weapons on the people of Hiroshima and Nagasaki. In *Trinity*, Kavanagh intersperses these interviews with footage of the missile range as well as archival footage of the bomb test preparations, creating a montage film that expresses the contradictions deeply inscribed in the Trinity site.