

**ROCKY FLATS
NUCLEAR
GUARDIANSHIP**

Cover photo:
Model of Uranium Atom
Robert Del Tredici, Atomic Photographers Guild

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WHAT YOU NEED TO KNOW ABOUT ROCKY FLATS



Plutonium button or "puck," the raw metal that will be formed into a plutonium pit, the fissile core of a nuclear warhead, the principal product of Rocky Flats. Note that the hand holding the puck wears lead-lined gloves to provide protection from radiation.

Photo courtesy of the DOE.

Rocky Flats was a U.S. nuclear weapons plant that produced more than 70,000 plutonium "pits" for nuclear warheads from 1952 to 1989.

A "pit" is the fissile core of a nuclear warhead; in hydrogen or thermonuclear bombs the fission explosion of a pit triggers the fusion of hydrogen atoms. A pit by itself is an atom bomb, such as the plutonium bomb that incinerated the city of Nagasaki on August 9, 1945.

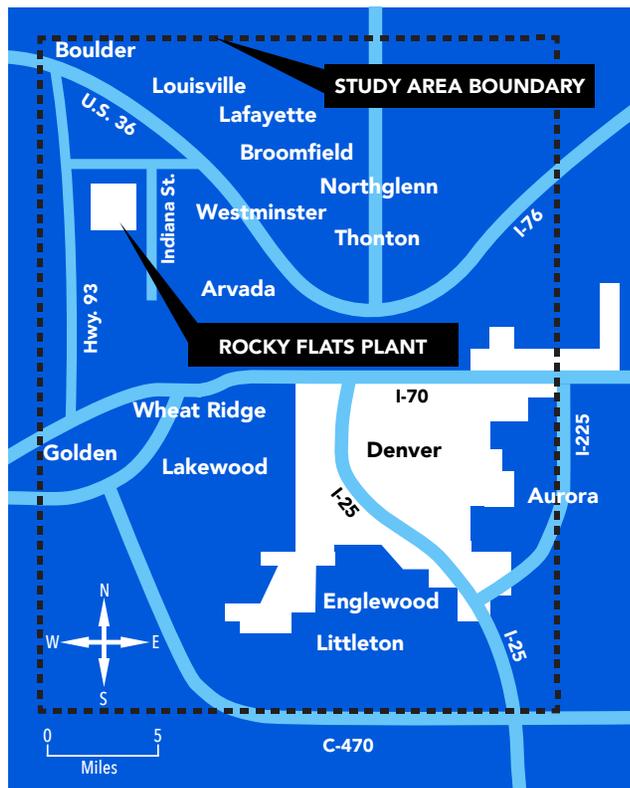
Each pit (if fractured into breathable particles) contains enough plutonium to harm the health of every person on earth.

Most residents of Colorado were not aware of Rocky Flats' activities, and workers weren't allowed to talk about them.

Extensive contamination of air, water, and soil occurred in residential areas near Rocky Flats; frequent fires spread contaminants across the metro area.

The Rocky Flats Plant was located 16 miles NW of central Denver.

Map from *Summary of Findings: Historical Public Exposures Studies on Rocky Flats* (Denver: CDPHE, August 1999).



Selecting the Rocky Flats site was a fatal mistake because the wind there is severe, blowing at times 100 miles per hour toward Denver. In choosing the plant site, wind readings were taken not at Rocky Flats but 25 miles away at the old Stapleton Airport east of downtown Denver, where wind blew toward the mountains.



This truck was overturned by wind on highway 93 near the entry to Rocky Flats. Picture from *Rocky Mountain News*, Dec. 14, 1990.

WHAT YOU NEED TO KNOW ABOUT PLUTONIUM

All work with plutonium was done in gloveboxes.

Keeping the plutonium inside the box isolates and protects the worker who can see it through a window and handle it wearing lead-lined gloves. The dark disk visible in the picture is plutonium.

The glass rings help protect from neutron radiation.

Photo courtesy of the Department of Energy.

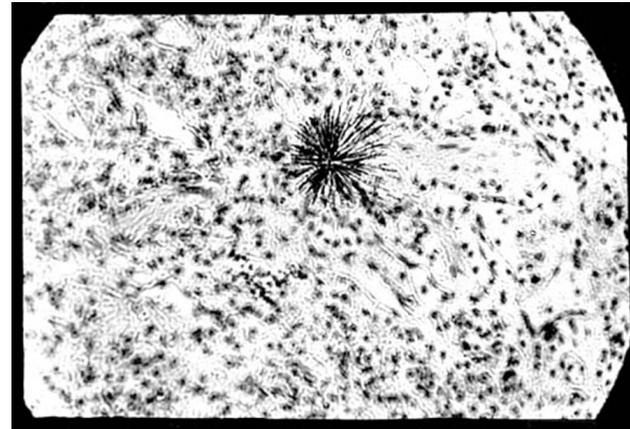


Plutonium is created from uranium in nuclear reactors. With a half-life of 24,110 years, plutonium-239, the type used at Rocky Flats, remains radioactive for more than 250,000 years. Plutonium can be harmful only if inhaled, ingested, or otherwise taken into the body, as through an open wound or scrape.

As long as plutonium is lodged in the body – likely for the rest of one's life – it continually bombards surrounding cells with radiation. The

result can be cancer, immune deficiencies, birth defects, and other health problems.

Nobel Prize-winning chemist Glenn Seaborg, who discovered plutonium in 1941, called it "fiendishly toxic, even in small amounts." Physicist Jeremy Bernstein declared plutonium to be "the world's most dangerous element."



Particle of plutonium in the lung tissue of an ape.

The black star in the middle of the picture shows tracks made by alpha rays emitted from a microscopic speck of plutonium in the lung tissue of an ape. Alpha rays do not travel very far, but once inside the body, they can have a major impact on the more than 10,000 cells within their range. These tracks were made over a 48-hour period. Plutonium has a half-life of 24,110 years. Lawrence Radiation Laboratory, Berkeley, California. September 20, 1982.

Photo by Robert Del Tredici, Atomic Photographers Guild.

Edward Martell, a radiochemist at the National Center for Atmospheric Research, pointed out in 1970 that the radioactivity from plutonium dust particles at Rocky Flats is "millions of times more intense than that from naturally occurring radioactive dust particles (uranium) of the same size. Minute amounts . . . are sufficient to cause cancer."

Martell maintained that standards for permissible exposure to plutonium are at least 200 times too lenient.

These scientific assessments notwithstanding, official response to plutonium at Rocky Flats has so far been one of carelessness rather than caution. But it is not too late to let caution be our guide.

ROCKY FLATS TIMELINE

1952 The plant begins production of plutonium pits.

1957 A major plant fire spreads plutonium particles across the metro Denver area. There is no warning, no evacuation, and the public is not informed.

After extinguishing the Sept. 11, 1957 fire at the plant, exhausted firefighters stand next to a totally destroyed bank of filters meant to protect the public from particles of plutonium. This was the largest single release of plutonium in the plant's history. Smoke carried tiny particles across Denver and beyond.

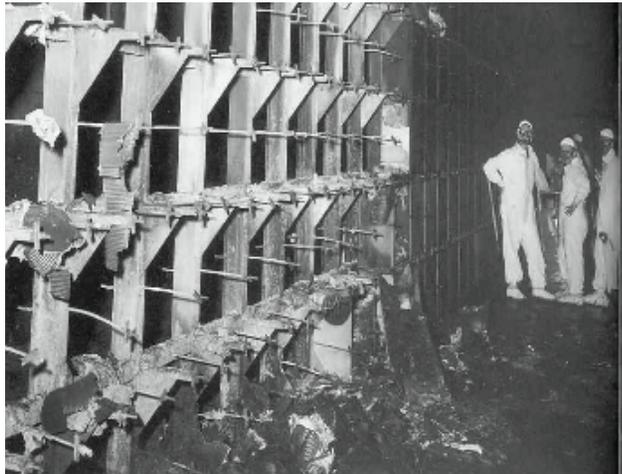


Photo courtesy of the Department of Energy.

1967 Five thousand barrels of plutonium-laden waste have been stored outdoors for more than 11 years. This area, called the "903 Pad," becomes a principal source of contamination for nearby neighborhoods. Barrels are removed in 1967, and the area is paved over in 1969 in an attempt to control ongoing windblown contamination.

1969 On May 11, Mother's Day, a second major plutonium fire occurs, the most expensive industrial fire to date in U.S. history. After the fire, independent scientists find plutonium in off-site areas, including residential neighborhoods, at levels up to 400 times the amount of plutonium deposited from global fallout from the explosion of nuclear bombs. The Atomic Energy Commission (now Department of Energy), which has denied off-site contamination, now admits to it and reveals for the first time both the 1957 fire and the 903 area releases.

1974 Newly elected Governor Dick Lamm and U.S. Representative Tim Wirth create the Lamm-Wirth Task Force to provide information to the public. The group's report, issued in 1975, says Rocky Flats should never have been built in a major population center, and calls for it to be shut down and its work moved elsewhere.

1975 Rockwell International replaces Dow Chemical as managing contractor.

1977 *Local Hazard, Global Threat*, the first citizen's handbook on Rocky Flats, is published.

1978 Studies by Carl Johnson, MD, Director of the Jefferson County Health Department., show 10 to 20% higher rates of cancer in areas near Rocky Flats by comparison with other areas, as well as more leukemia, autoimmune disorders, and other ailments.

Large-scale protests begin at Rocky Flats and attract supporters from Colorado and around the country. Following a large legal rally on April 28, protesters block the railroad tracks leading into the plant and continue the occupation until January 1979. This becomes the longest sustained act of civil disobedience in U.S. history.

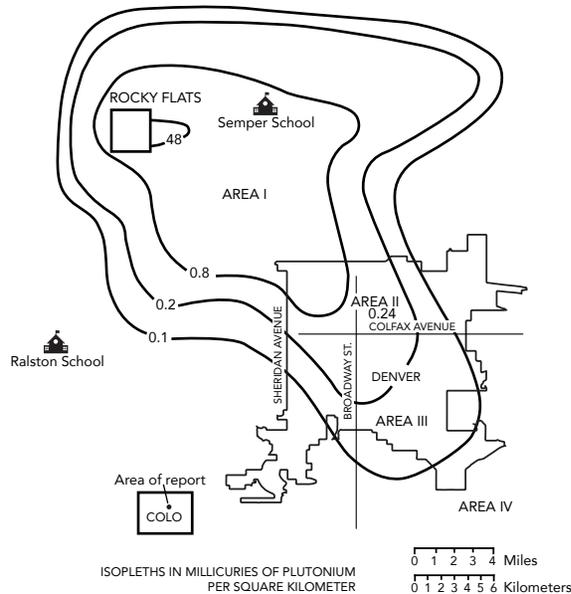
1979

Homebuyers who purchase federally-insured properties within 10 miles of Rocky Flats are required by the U.S. Department of Housing and Urban Development to sign the "Rocky Flats Advisory Notice," a public warning regarding potential contamination from Rocky Flats. When President Reagan takes office in 1981 the notice is abolished, although the plant continues to contaminate the environment onsite and beyond.

On April 28, approximately 12,000 protesters rally at Rocky Flats. 300 are arrested for civil disobedience.

In 1981, shortly after Dr. Johnson's dismissal, he published an article showing a correspondence between areas of plutonium contamination and cancer incidence in the same areas for 1969-71.

This map indicates three off-site areas of increased plutonium contamination. Area I, nearest to Rocky Flats and the most contaminated, had 16% more cancer than the non-contaminated Area IV; Area II had 10% more cancer; Area III had 6% more. From Johnson, *Cancer Incidence in an Area Contaminated with Radionuclides Near a Nuclear Installation*, AMBIO, vol. 10, no. 4, October 1981



1981

Based on studies showing off-site contamination and subsequent health effects, Jefferson County Health Director Dr. Carl Johnson opposes housing development near Rocky Flats. He is forced to resign. The Colorado Supreme Court

later reverses his dismissal by Jefferson County, but Dr. Johnson has already moved away.

1982

Dark Circle, a film directed by Judy Irving, focuses on the connections between the nuclear weapons and the nuclear power industries, using Rocky Flats as its case study. The film receives wide audiences and numerous awards including the Grand Prize for documentary at the Sundance Film Festival and a national Emmy Award for "outstanding individual achievement in news and documentary."

1983

More than 15,000 protesters join hands around the 17-mile perimeter of Rocky Flats. In October, *Dark Circle*, the award-winning documentary about Rocky Flats and the Diablo Canyon nuclear power plant, is shown in Denver.

1989

The FBI and the EPA raid Rocky Flats to collect evidence of violation of federal environmental laws. A federal grand jury is impaneled and an investigation begins. In November, the Secretary of Energy announces production at Rocky Flats has been temporarily suspended; it never resumes.

1990

EG&G assumes management of Rocky Flats. A class-action lawsuit, *Cook v. Rockwell*, is filed on behalf of more than 12,000 residents alleging that Dow and Rockwell contaminated their land with plutonium.

In an effort to resume production, the Department of Energy seeks Congressional funding for a complete reconstruction of Building 371; Congress votes against it, making resumed production unlikely. The Environmental Protection Agency adds Rocky Flats to the Superfund list of the country's most contaminated sites.

1992

Following the grand jury investigation, the U.S. Attorney and Department of Justice bypass the grand jury and negotiate a settlement. Rockwell pleads guilty to less serious violations, including ten violations of the Clean Water Act and Federal hazardous waste laws and illegal storage of hazardous wastes. There are no indictments; the company pays a fine of \$18.5 million, and receives immunity from further prosecution. Outraged grand jury members refuse to be dismissed and write their own report, calling Rocky Flats “an ongoing criminal enterprise,” including ongoing offsite contamination. The judge, who had already sealed all documents in the case, also seals the grand jury report and begins an investigation of some of the jurors. A partial version of the jurors’ report is leaked to the press. A Congressional Committee investigates the case and concludes the Department of Justice “bargained away the truth.” A redacted version of the jurors’ report was officially released in 1993. Today, the full report is posted on the internet.

1994

Energy Secretary Hazel O’Leary reveals that 1.191 metric tons (1.31 U.S. tons) of plutonium are lost from inventories at Rocky Flats.

1995

In the class-action suit *Cook v. Rockwell*, a U.S. district judge holds the Department of Energy in contempt of court for failure to release documentation regarding missing plutonium, health issues and more.

The Department of Energy estimates that it will take 70 years and \$36 billion to clean up and close Rocky Flats. This will be revised in 2002.

The Future Site Use Working Group, funded by the Department of Energy, recommends that the site be cleaned to “average background level,”

which for plutonium is 0.04 picocuries per gram of soil (0.04 pCi/g), the quantity of plutonium from global fallout in local soil. (The curie is a measure of radioactivity.) This proposal is widely supported, but the Department of Energy rejects it, saying the site will be cleaned only to the “risk-based” level required by law.

1996

In an April 26 memo to all staff, DOE Rocky Flats manager Mark Silverman says, “Until further notice, no destruction will take place of any records.”

Boston University epidemiologist Dr. Richard Clapp finds a disproportionate rate of lung and bone cancers in areas around Rocky Flats, and “a continuing excess of cancer and ongoing health effects” in local residents exposed to toxins released from Rocky Flats.

Cleanup levels for plutonium are contested when the Department of Energy, the Environmental Protection Agency, and the Colorado Department of Public Health and the Environment set the acceptable level of plutonium at Rocky Flats to 651 picocuries per gram of soil (very high compared to the background level of 0.04 pCi/g). This level is far higher than the cleanup standard at any other plutonium-contaminated site in the U.S. The public rejects this level but it is adopted as the legally binding cleanup level.

The Colorado Department of Public Health and the Environment issues a report stating that there is no evidence of adverse health effects directly attributable to Rocky Flats.

1998

Energy Secretary Bill Richardson apologizes to Department of Energy weapons workers for the fact that the Department of Energy lied to them about illnesses from workplace exposures.

1999 Legislation is passed to compensate nuclear weapons workers made ill by exposure on the job to various toxins and radionuclides, but missing records and extensive red tape make it hard for ill workers to prove their case.

2000 An independent group funded by the Department of Energy recommends reducing the acceptable level of plutonium in the soil at Rocky Flats from 651 picocuries per gram of soil, established in 1996, to 35 picocuries per gram of soil—a reduction of 96%. The Department of Energy and regulators make no response.

2002 The Department of Energy revises its initial 1995 cleanup and closure estimate of \$37 billion. Kaiser-Hill agrees to do a partial “cleanup” and closure of Rocky Flats for an estimated \$7.3 billion.

The Department of Energy, Environmental Protection Agency, and Colorado Department of Public Health and Environment establish new legally binding “cleanup” standards for plutonium contamination at Rocky Flats. The top three feet of soil must be cleaned to 50 picocuries per gram of soil; soil from 3 to 6 feet must be cleaned to 1,000 to 7,000 pCi/g (dependent upon the size of the contaminated area); and soil at a depth greater than six feet has no limit on the quantity of plutonium that may remain. This standard is rejected by 86% of individuals and parties that commented; nonetheless these standards are formally adopted.

2004 Wes McKinley, who was foreman of the Rocky Flats grand jury, and attorney Caron Balkany publish *The Ambushed Grand Jury*. This book details the 1989 FBI/EPA raid to find and collect evidence of violations of environmental regulations. It

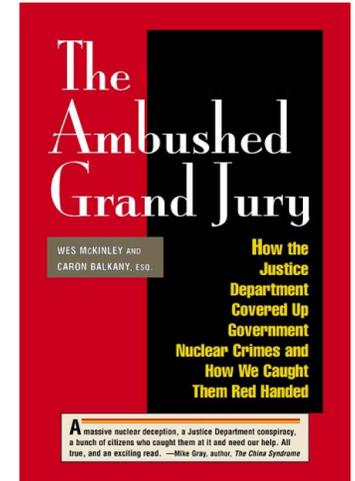
also examines the Justice Department’s intention to conceal rather than reveal criminal behavior, and why documents from the case remain sealed.

2005 Kaiser-Hill says the “cleanup” is complete, although levels of remaining onsite contamination are controversial. Part of the site is so contaminated it will remain closed to the public.

2006 The jury in *Cook v. Rockwell* finds Dow and Rockwell guilty and awards the plaintiffs \$554 million. Eventually the judge issues a final award of \$926 million. Dow denies any wrongdoing and immediately appeals the verdict.

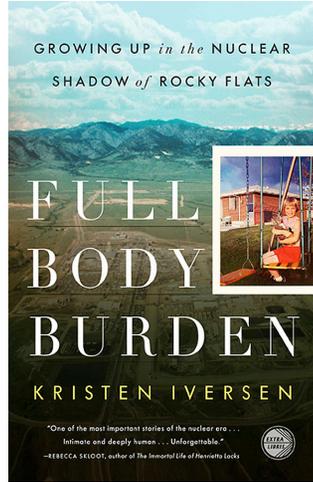
2007 4,480 acres of the Rocky Flats site are transferred to the U.S. Fish & Wildlife Service to operate as a Wildlife Refuge. The Department of Energy retains 1,309 acres, essentially the former industrial area, and permanently closes it to the public. The Environmental Protection Agency removes all Rocky Flats land except this 1,309 acres from the Superfund list of most contaminated sites. The removed land is now deemed suitable for any use.

2010 The Tenth Circuit Court of Appeals overturns the jury’s decision in the *Cook v. Rockwell* case, not due to inadequate evidence or the fact that the jury may have misunderstood the evidence, but because the judge failed to follow certain legal procedures.



2012 The Supreme Court remands the *Cook v. Rockwell* case back to the original court; whether it will be retried is not now known.

2013 Protests begin again at Rocky Flats. Local citizens initiate a petition opposing construction of the Jefferson Parkway, a privately financed toll highway proposed to be built along the eastern, most contaminated edge of the Rocky Flats site.



In 2012 Kristen Iversen, who grew up near Rocky Flats and later herself worked at the plant, publishes *Full Body Burden: Growing Up in the Nuclear Shadow of Rocky Flats*. This book of narrative nonfiction informs old and young about the history and hazards of Rocky Flats, past and present. Winner of numerous awards including the Colorado Book Award and the Reading the West Book Award in Nonfiction, and named Best Book about Justice by *The Atlantic*.

A local group concerned about public health and the environment expresses opposition to the large Candelas residential development along the southern edge of Rocky Flats. They establish a website entitled “Candelas Glows” (<http://candelasglows.com>) to engage and educate people about the danger of living so close to the contaminated site.

In September 2013, Rocky Flats and the surrounding area experience severe flooding, raising concerns about water and soil contamination being carried offsite into local

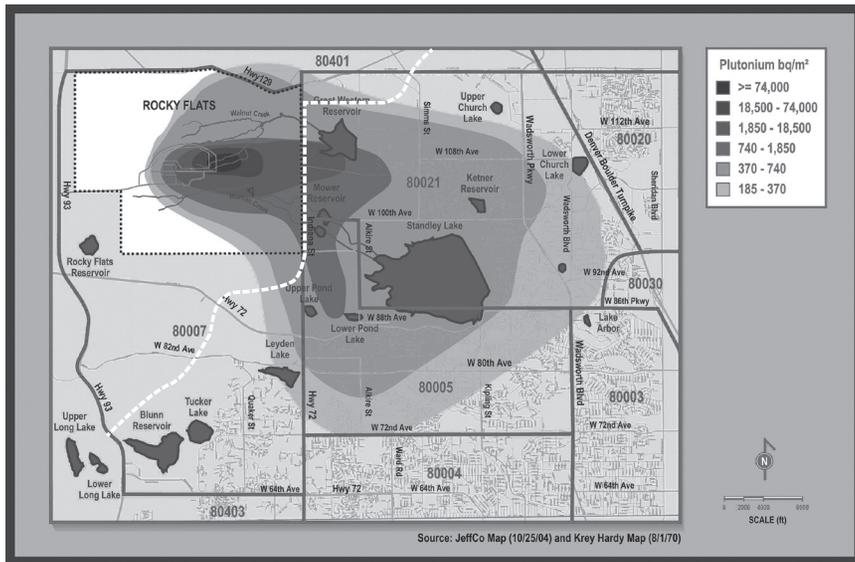
neighborhoods. The Department of Energy cannot provide full information regarding the possible transport of plutonium into local neighborhoods and fields because extreme flooding rendered measuring equipment partially inoperable.

2014 The Colorado Fish and Wildlife Service, which manages the larger portion of the site, plans a “prescribed burn” at the Rocky Flats Wildlife Refuge in spring 2015. Burning grass will almost certainly release plutonium into the air where it can be readily inhaled—the worst way to be exposed to plutonium.

In February 2015, a 701-acre “controlled burn” on the southwest corner of the Rocky Flats site was cancelled due to citizen opposition.

C O N C L U S I O N

As in the past, many people who live in the proximity of Rocky Flats continue to suffer from health problems that may be due to exposure to toxins and radioactive materials released from the former nuclear weapons plant. Numerous veterinarians report higher rates of cancer and illnesses in animals as well. Because of the plutonium remaining in the environment and the fact that plutonium has a half-life of more than 24,110 years, Rocky Flats is a local hazard forever.



This map shows plutonium contamination on and off the Rocky Flats site. Because of its half-life of 24,110 years, most of the plutonium is still in the soil where it was originally deposited, especially in off-site areas and in the Wildlife Refuge land. The dotted white line on this map of plutonium contamination on and off the Rocky Flats site is the route proposed for the Jefferson Parkway. Note that the proposed route traverses the most contaminated area along the eastern edge of the Rocky Flats site. The original version of this map was based on soil sampling done in 1970 by two scientists from the Atomic Energy Commission.

THE NUCLEAR GUARDIANSHIP ETHIC

The Nuclear Guardianship Ethic is proposed as an evolving expression of values to guide decision-making on the management of radioactive materials.

1. Each generation shall endeavor to preserve the foundations of life and well-being for those who come after. To produce and abandon substances that damage following generations is morally unacceptable.
2. Given the extreme toxicity and longevity of radioactive materials, their production must cease. The development of safe, renewable energy sources and non-violent means of conflict resolution is essential.



All the Warheads in the U.S. Nuclear Arsenal

This field of ceramic nose-cones represents, in miniature, all the warheads in the U.S. nuclear arsenal at the height of the Cold War. Estimates have set that total at 25,000. Some warheads are being dismantled, but the long-term disposition of the plutonium cores inside these bombs has not yet been determined. *Amber Waves of Grain installation by Barbara Donachy, Boston Science Museum, Massachusetts. 15 February 1985. Photo by Robert Del Tredici, Atomic Photographers Guild.*

to the health and survival of life on Earth. Radioactive materials are not to be regarded as an economic or military resource.

3. We accept responsibility for the radioactive materials mined and produced for our alleged benefit.

4. Future generations have the right to know about their nuclear legacy and the dangers it brings.

5. Future generations have the right to protect themselves from these dangers. Therefore, it is our responsibility to pass on the information they will need, such as the nature and effects of radiation, and methods for monitoring and containing it. We acknowledge that deep burial of radioactive materials precludes these possibilities and risks widespread contamination.



Maids of Muslyumovo

Women from the Tartar/Bakshir village of Muslyumovo watch Western scientists measure radiation levels in the Techa River as it flows past their town. The Chelyabinsk reactor, 35 km. upstream, made plutonium for the first Soviet a-bombs. From 1949 until 1953 the plant dumped liquid high-level waste directly into the Techa. Its waters turned black; villagers downstream fell ill; many perished. Forty years later, women discover that the illnesses that befell their neighbors were related to radioactivity in their river. Soviet doctors, forbidden to say "radiation sickness," were ordered to tell victims they had contracted "vegetative syndrome." *Village of Muslyumovo, Chelyabinsk, Russia.* 23 May 1992. Photo: Robert Del Tredici, Atomic Photographers Guild.

6. Transport of radioactive materials, with its inevitable risks of accidents and spills, should be undertaken only when storage conditions at the site of production pose a greater hazard than transportation.

7. Research and development of technologies for the least hazardous long-term treatment and placement of nuclear materials should receive high priority in public attention and funding.

8. Education of the public about the character, source, and containment of radioactive materials is essential for the health of present and future generations. This education should promote understanding of the interconnectedness of all life forms and a grasp of the extraordinary time spans for which containment is required.

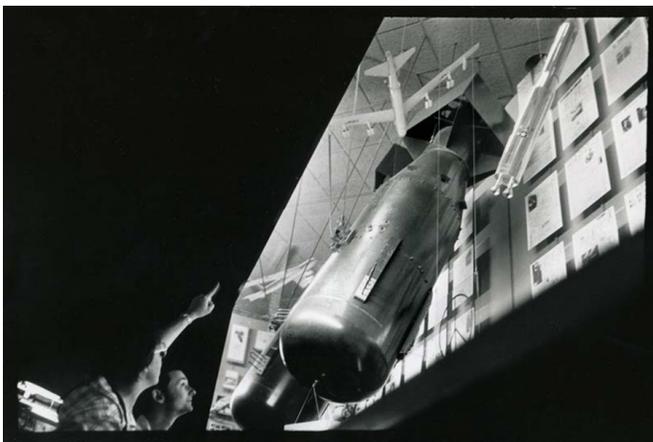


Spent Fuel in Dry Storage

These air-cooled silos hold irradiated fuel from the Gentilly 1 CANDU reactor, which operated for 180 days then got shut down without producing off-site electricity. Each silo is inspected by the IAEA to verify that no fuel has been removed for its plutonium to make bombs. Plutonium has a half-life of 24,400 years. Used nuclear fuel must be cooled in pools for at least ten years, then put in dry storage for ten more years before it can be buried underground. The industry favors irretrievable burial of these wastes. Critics oppose this because the wastes will remain dangerous for millions of years. *Gentilly Nuclear Generating Station, near Trois Rivières, Québec. March 19, 1995.* Photo: Robert Del Tredici, Atomic Photographers Guild.

9. The formation of policies for managing radioactive materials requires full participation of the public. For this purpose, the public must have ready access to complete and comprehensible information.

10. The vigilance necessary for ongoing containment of radioactive materials requires a moral commitment. This commitment is within our capacity, and can be developed and sustained by drawing on the cultural and spiritual resources of our human heritage.



The Hiroshima Bomb

This is a duplicate outer casing for the first atomic bomb used on a living city. Ten and a half feet long, weighing 9,700 pounds, nicknamed "Little Boy," this uranium-fueled atomic bomb completely destroyed the city of Hiroshima. *Smithsonian Air and Space Museum exhibit: "The Social Impact of Flight," Washington D.C. 25 June 1981.* Photo: Robert Del Tredici, Atomic Photographers Guild.

A CALL TO ACTION

Plutonium is a serious hazard that endangers human life and the environment for many generations. People in Colorado continue to report health problems that may be due to exposure to toxins and radioactive materials released from Rocky Flats. Because of the plutonium remaining in the environment, Rocky Flats is a local hazard forever.

The surface soil at Rocky Flats should be cleaner than what is now required, which provides only a modicum of protection for a wildlife refuge worker and disregards the risks of others who may live or work near the site. The subsurface environment (below six feet) should be cleaned to the fullest extent possible because of the enormous uncertainties regarding both the condition and use of the site long after fences fall and memory fades, and the risk of contaminants in the air, water, or soil carrying into local neighborhoods and beyond.

Lacking this better cleanup, the US Fish and Wildlife Service should declare the Rocky Flats Wildlife Refuge off limits to the public until at least the year 2215, during which time the DOE's Legacy Management Office should implement a program of ongoing research to reduce contamination and help allay the more negative aspects of the Rocky Flats "cleanup."

There are times when humans must make a choice, and no alternative that presents itself will result in unmitigated good. In such a situation, from the perspective of democratic process, the decision needs to be made by the widest range possible of those likely to be affected by the outcome, with special weight given to the most vulnerable. Those who participate in the decision must also act for any who lack a voice because they are removed in time or space or because they belong to mute nature.

To take action and become involved, the following organizations and projects can use your support:

Rocky Flats Nuclear Guardianship

Nuclear Guardianship combines art, science, and remembrance to address the human-caused problem of nuclear contamination with wisdom and creativity. It is guided by scientific curiosity and openness, and establishes a model for perpetual ecological stewardship and environmental democracy. Nuclear Guardianship requires a powerful cultural shift away from secrecy and denial of our nuclear legacy towards an ethic of ecological responsibility. The Rocky Flats Nuclear Guardianship Project works diligently to prevent Rocky Flats from being opened for public recreation. Much of the former nuclear weapons site has already been renamed the Rocky Flats National Wildlife Refuge, and maps with hiking and biking trails have been designed. Join us in working to keep the site closed to recreation and development and open for on-going monitoring and further environmental remediation.

www.rockyflatsnuclearguardianship.org

The Atomic Photographers Guild

The Atomic Photographers Guild is dedicated to making visible all aspects of the nuclear age. It was founded in 1987 by Robert Del Tredici and now has 25 international members with exhibitions in Russia, the United States, South America, Canada, Australia, throughout Europe, and in Hiroshima, Japan. Key themes in Guild exhibitions have been the birth of the Bomb; its mass-production and deployment; nuclear testing; nuclear power; nuclear accidents; nuclear waste; and radiation and human health.

www.atomicphotographers.com

Full Body Burden

Full Body Burden: Growing Up in the Nuclear Shadow of Rocky Flats (Crown) is a haunting work of narrative nonfiction about a young woman, Kristen Iversen, growing up in a small Colorado town close to Rocky Flats, the secret nuclear weapons plant once designated “the most contaminated site in America.” It’s the story of a childhood and adolescence in the shadow of the Cold War, in a landscape at once startlingly beautiful and—unknown to those who lived there—tainted with invisible yet deadly particles of plutonium.

As this memoir unfolds, it reveals itself as a brilliant work of investigative journalism—a detailed and shocking account of the government’s sustained attempt to conceal the effects of the toxic and radioactive waste released by Rocky Flats, and of local residents’ vain attempts to seek justice in court. Here, too, are vivid portraits of former Rocky Flats workers—from the healthy, who regard their work at the plant with pride and patriotism, to the ill or dying, who battle for compensation for cancers they got on the job. Based on extensive interviews, FBI and EPA documents, and class action testimony, this taut, beautifully written book promises to have a very long half-life.

<http://www.kristeniversen.com>

Candelas Glows

Candelas, one of Colorado's largest new housing developments, is being built adjacent to the site of the former Rocky Flats nuclear weapons plant, 16 miles northeast of Denver. The Rocky Flats site is contaminated with plutonium and, according to the Department of Labor, over 1,000 other carcinogenic chemicals. Despite a well-documented history of accidents, plutonium fires, and spills during production years and the inadequacy of the subsequent Superfund "cleanup," much of the Rocky Flats site is now labeled a "Wildlife Refuge," and development is being encouraged along its borders. Candelas Glows, a group of concerned citizens, draws attention to the true nature of Rocky Flats. We believe Rocky Flats needs to be remembered for what it was, with plant workers recognized as the atomic veterans that they are. The Wildlife Refuge designation needs to be immediately stripped and the area must not be opened to the public. We believe the site should be memorialized, calling on artists to help us build permanent structures that speak to the site's past. Optimally, an institution should be created to oversee Rocky Flats and monitor the site focusing on remediation and monitoring — especially in the case of extreme weather, such as the recent floods which caused the migration of plutonium off site. Our primary focus is to stop the development of the area around Rocky Flats.

<http://candelasglows.com>

Westminster Hills Dog Park and Open Space

Just east of the former Rocky Flats Plant site, and directly downwind and downstream from the radioactive contamination that remains there, is the Westminster Hills Dog Park and Open Space. This beautiful area is very popular among residents and dog owners, though it is unfortunately the likely cause of a spike in cancers in the local dog population. Veterinarians in the Arvada and Westminster area report alarmingly high incidences of cancers in dogs. Bill Johnson, a retired veterinarian who owned animal hospitals in California and Colorado, was quoted in the *Denver Post*: "My biggest concern when I came back to Arvada to practice was seeing all these dogs with cancer. I saw more in one week than I would in a few months in California."

Dogs that frequent the park are known to get bone cancers primarily in their front legs as well as cancerous growths between the pads of their paws. Sadly, there are no signs warning visitors of the potential hazards, so family pets continue to recreate there, bringing any number of known carcinogens back with them into their homes. Activist Alesya Casse has been outspoken in her attempts to warn residents after dogs she knew contracted rare cancers.

You Reading This Be Ready

William Stafford

Starting here, what do you want to remember?

How sunlight creeps along a shining floor?

What scent of old wood hovers, what softened
sound from outside fills the air?

Will you ever bring a better gift for the world
than the breathing respect that you carry
wherever you go right now? Are you waiting
for time to show you some better thoughts?

When you turn around, starting here, lift this
new glimpse that you found; carry into evening
all that you want from this day. This interval you spent
reading or hearing this, keep it for life.

What can anyone give you greater than now,
starting here, right in this room, when you turn around?



On October 15, 1983, an estimated 17,000 people joined hands to encircle Rocky Flats and call for nuclear disarmament. Photo by Sri Jodha Singh Kalsa.

ACKNOWLEDGMENTS

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Special thanks to Joanna Macy, whose brilliance birthed the Nuclear Guardianship concept with Francis Macy and others, in the Chernobyl Time Lab, Berkeley, California, 1988.

May future beings live in peace, and be empowered to take responsible care of radioactive materials.

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<http://www.rockyflatsnuclearguardianship.org>

Design by Yuko Tonohira <http://sansnuclear.net>

**ROCKY FLATS
N U C L E A R
GUARDIANSHIP**