



# Site A/Plot M, Illinois, Decommissioned Reactor Site History Timeline

1940s

1950s

1960s

1970s

1980s

1990s

2000s

## 1940s

### July 31, 1942

The U.S. Army Corp of Engineers leases 1,025 acres of the Cook County Palos Forest Preserve to build a research facility.

### November 1942

Under direction of Enrico Fermi, a group of scientists at the University of Chicago begin building the world's first reactor and named it Chicago Pile 1 (CP-1). Security and secrecy are essential to the project.

### December 2, 1942

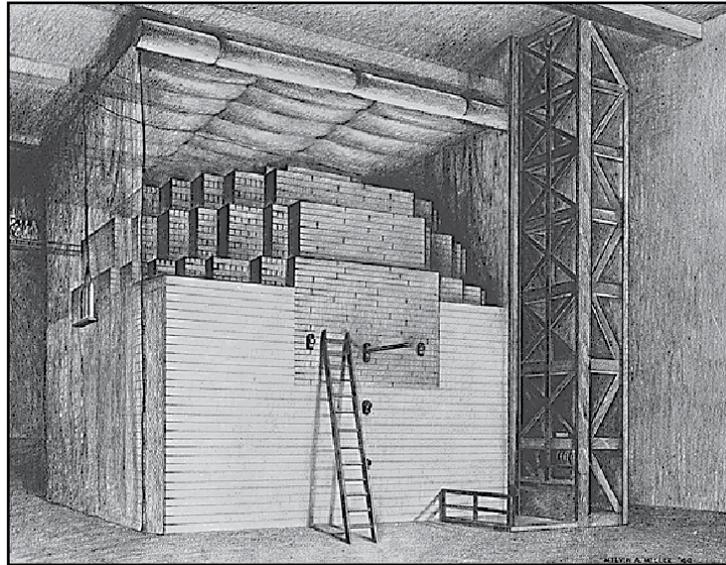
Enrico Fermi's team creates the world's first self-sustaining, nuclear chain reaction unit under Stagg Field at the University of Chicago.

### February 1943

Experiments under Stagg Field cease, and the scientists move to a 19-acre section of the leased forest preserve, known as Site A. CP-1 is reconstructed and modified at Site A and renamed Chicago Pile 2 (CP-2).

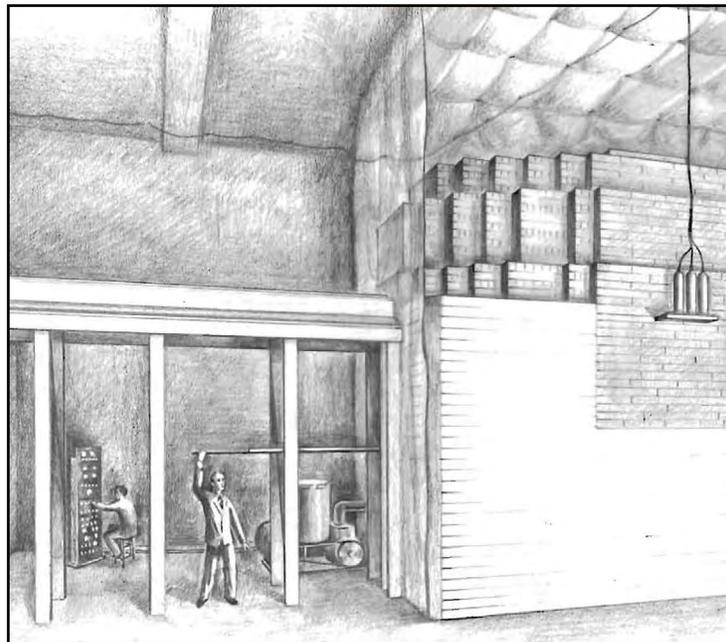
### March 1943

Construction starts at Site A to build Chicago Pile 3 (CP-3), the world's first heavy-water nuclear reactor.



Artist's Drawing of CP-1

Source: DOE Office of History and Resources



Artist's Drawing First Chain Reaction at CP-1

### 1944

Plot M is established near Site A for the disposal of waste (both radioactive and nonradioactive) from Manhattan Project research activities. The laboratory-waste disposal procedure is to bury the waste in trenches and cover the trenches with soil.

CP-3 begins operating at Site A.

### 1947

The U.S. Atomic Energy Commission (AEC) purchases land 6 miles northwest of Site A to build a larger nuclear-research complex, the future site of Argonne National Laboratory.

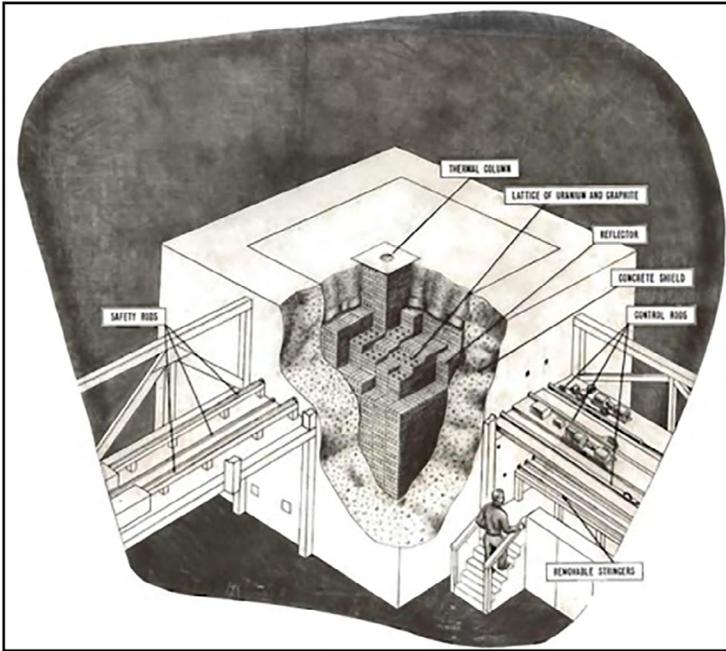
### 1948

Procedures for waste removal are updated and researchers begin to contain waste in steel bins before burial at Plot M.

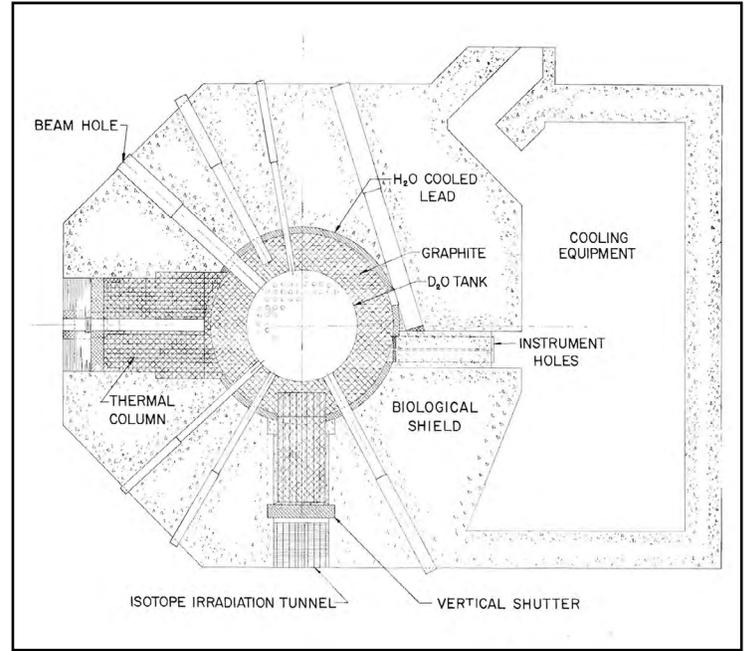
### May-June 1949

It is discovered that a piece of uranium-235 is missing. The steel bins at Plot M are unearthed to search for the missing uranium. The uranium-235 is found, and the bins and waste are subsequently sent offsite for disposal.

Waste material burial at Plot M is discontinued. Soil is placed over the area.



CP-2



CP-3

## 1950s

### 1950

CP-3 is modified to increase its power.

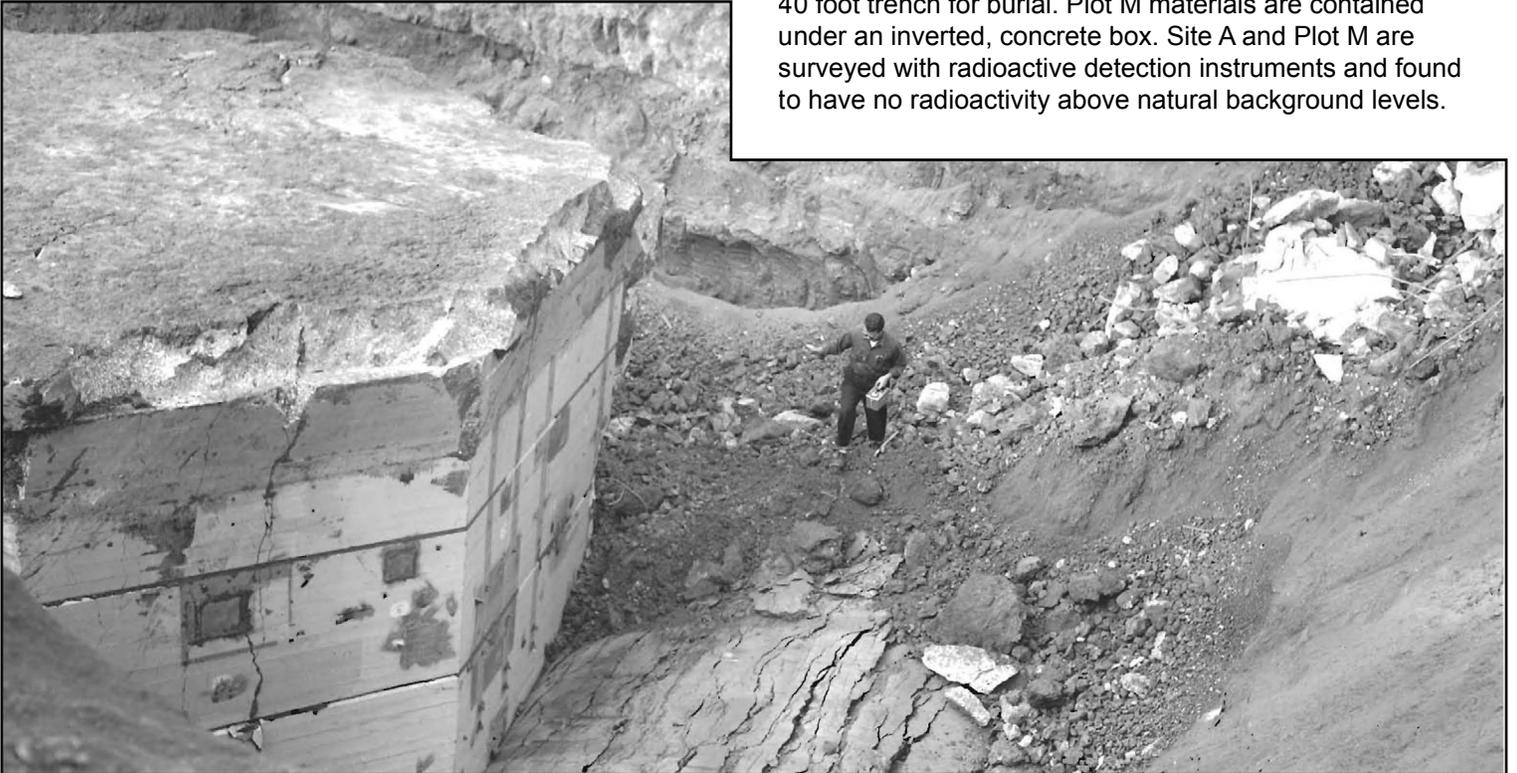
### May 15, 1954

Site A's operations cease, and reactors at the site are removed from service. Preparation for demolition of the site is initiated.

### 1955–1956

Radioactive fuel and other radioactive materials are removed from the site and shipped to Oak Ridge, Tennessee, for disposal.

The reactors are dismantled. Some radioactive materials are encased in cement inside the biological shield of CP-3. Explosives are used to topple the biological shield into a 40 foot trench for burial. Plot M materials are contained under an inverted, concrete box. Site A and Plot M are surveyed with radioactive detection instruments and found to have no radioactivity above natural background levels.



CP-3 Scanning After Blast in Hole



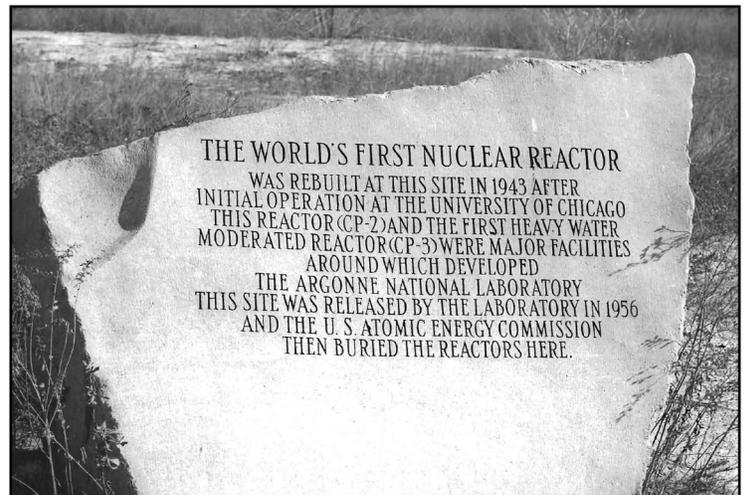
*Plot M Capped*

## 1960s

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### 1963

Sensitive radiochemical analyses of surface soil samples taken near Plot M show low levels of radioactivity. Subsequent environmental monitoring from 1963 to 1973 concludes that there is no increased movement of radioactivity from Site A or Plot M.



*Site A Marker*

## 1970s

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### 1973

AEC successor, Energy Research and Development Administration (ERDA), expands federal government monitoring activities of decommissioned AEC sites.

Monitoring of the picnic wells in Red Gate Woods near Plot M begins.

### 1975

Conclusive data shows that low levels of tritium are present in three forest wells. This is the first indication of any hazardous material movement from Plot M. Tritium levels are below U.S. Environmental Protection Agency (EPA) standards for drinking water limitations. Still, environmental monitoring initiatives at Site A and Plot M increase.

### 1976–1977

A detailed radiological survey at Site A and Plot M begins. The survey's purpose is to document site conditions, discover the source of the tritium, and trace any radioactive material movement.

### 1979

The *Formerly Utilized Site Remedial Action Report* is completed. A decision is made to keep the waste buried at Site A and Plot M and plans are created to monitor the waste on a regular basis to insure there is no migration of radioactive materials.

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## 1980s

### 1980

Locals raise concerns about health and public safety, and the Technical Review Committee, (consisting of local landowners and laboratory and government agency representatives) is formed to monitor the site's status by reviewing monitoring reports.

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## 1990s

### 1990

The Illinois Department of Nuclear Safety discovers radioactive contaminants near Site A. Several small radioactive sources, including a piece of uranium, are removed. The Site Characterization Program is started to identify the full extent of residual radioactive and chemical contamination on and near Site A and Plot M.

### 1992–1993

The Forest Preserve District of Cook County requests that the U.S. Department of Energy (DOE) (successor of AEC and ERDA) post informational signs at Red Gate Woods and install a fence around Site A while radiochemical characterization studies are conducted and surface debris is moved.

DOE posts the informational signs and fences off 35 acres.

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## 1990s

### 2002

The Illinois Department of Public Health (IDPH) conducts a public-health assessment of Site A and Plot M. IDPH concludes that the cleanup of Site A adequately protects the public from any risks the site may have posed in the past. IDPH also concludes that Plot M does not pose a public health hazard.

### 1996–1997

The Limited Source Removal Action is initiated to remove surface soil after characterization studies are completed. Approximately 500 cubic yards of low-level radioactive soil and debris are removed.

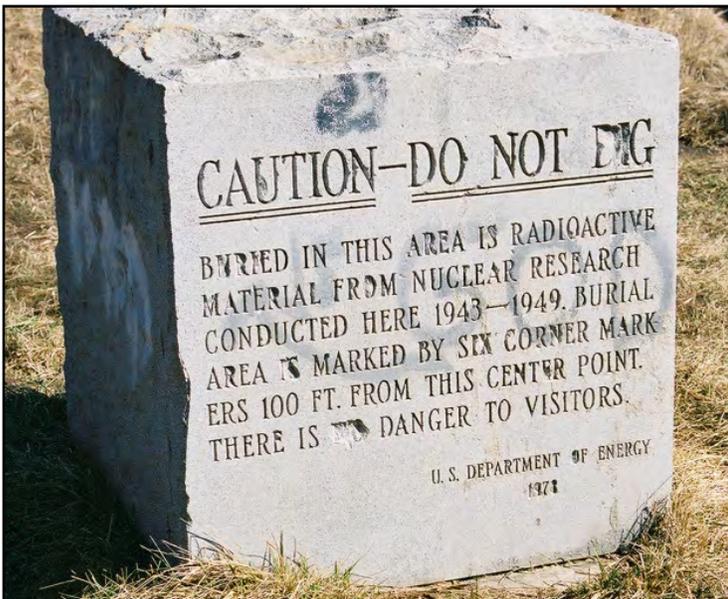
Waste from what is believed to be an unmarked disposal area near Site A is mixed with cement and shipped to DOE's Hanford, Washington, facility for disposal.

### 1998–Present

DOE consolidates management of all closed, nuclear sites to the DOE Grand Junction, Colorado, Office. Most of the environmental monitoring activities of Site A and Plot M are transferred to the Grand Junction office, which later becomes the DOE Office of Legacy Management (LM) (in 2003).

### 2002–Present

LM regularly tests the environmental conditions of Site A and Plot M and reports that no movement of radioactive material has been recorded. Tritium in the Red Gate Woods picnic wells has decreased over time.



Marker at Plot M

## Contacts

Documents related to the Site A/Plot M site are available on the LM website at [http://www.lm.doe.gov/sitea\\_plotm/Sites.aspx](http://www.lm.doe.gov/sitea_plotm/Sites.aspx).

For more information about LM activities at Site A/Plot M Site, contact:

U.S. Department of Energy  
Office of Legacy Management  
2597 Legacy Way, Grand Junction, CO 81503

(970) 248-6070 (monitored continuously), or  
(877) 695-5322 (toll-free)