

Associate Laboratory Director Al Sattelberger, leader of the team that renovated the Nuclear Energy Exhibit at Argonne National Laboratory, cuts the ribbon during the December 2, 2008, opening ceremonies for the exhibit. (Joch)



## Celebration marks opening of renovated historical exhibit at Argonne

ON DECEMBER 2, 2008—the 66th anniversary of the first sustained nuclear chain reaction—a revived Nuclear Energy Exhibit was officially opened at Argonne National Laboratory (ANL), 25 miles southwest of Chicago, Ill. The refurbished and updated exhibit, which takes advantage of advances in computer-generated graphics and displays artifacts dating back to the Manhattan Project, is a fascinating trip that starts with the dawn of the nuclear age and travels through the history of Argonne's unique role in the development of nuclear power.

Al Sattelberger, Energy Sciences and Engineering Associate Laboratory Director, led the renovation of the exhibit, working with a team consisting of Larry Hill, chief facilitator; Renée Nault, project manager/editorial content; Daniel F. Sarro, art direction/design/production manager; Wes Agresta, photography; Sana Sandler and Cindi Andersen, graphic design; Roger Tilbrook, chief technical and historical advisor; and Denise Voss, who provided administrative assistance.

Inside the entrance to the exhibit, in a small, separate room, the “artifact room” (staffed by a guard on the day of the exhibit's opening), is a display of a variety of items, including a protective display case

*Visitors to the Nuclear Energy Exhibit at Argonne National Laboratory can view artifacts dating back to the start of the atomic age and learn about the lab's history, as well.*

that houses a microscope for the viewing of the first piece of plutonium oxide isolated from a chain reaction source in 1943 and presented to Arthur Holly Compton by Glenn Seaborg in 1944, and graphite with identification marks from Chicago Pile-1 (CP-1), the reactor in which the first self-sustaining nuclear chain reaction occurred. An original letter from Enrico Fermi referencing the heavy-water reactor by code is on the wall outside. Notebooks that contain drawings of the first heavy-water reactors and other irreplaceable items are also on display. The rest of the exhibit covers the various areas of research work that has been and is being done at Argonne, showcasing the critical role the lab has played in the development of the various reactor types from the beginning of the nuclear age.

The updating of the exhibit—the original version of which opened in 1996—began last summer. New wall display panels pro-

vide a designerly backdrop for descriptions of the displays, replacing the array of single photos that previously hung on the walls. “Everything in the artifact room is new to the exhibit,” Tilbrook said. “We had been accumulating pieces, but didn't have space to display them.” Tilbrook noted that more items will be added as they are prepared for display, including a Borax V superheater fuel assembly display. Also, several items in the display cabinets in the artifact room will be changed out to include items such as nuclear rocket fuel test pieces. Tilbrook said that it will be possible to make changes to the displays two or three times a year. “It's a live exhibit, not a dead museum,” he added.

The photos that follow tell the story better than pages of words can, so let the tour begin. (Photos: George Joch/Argonne National Laboratory, Roger Tilbrook, and Matt Rumick)

*See photos on pages 57–60 →*

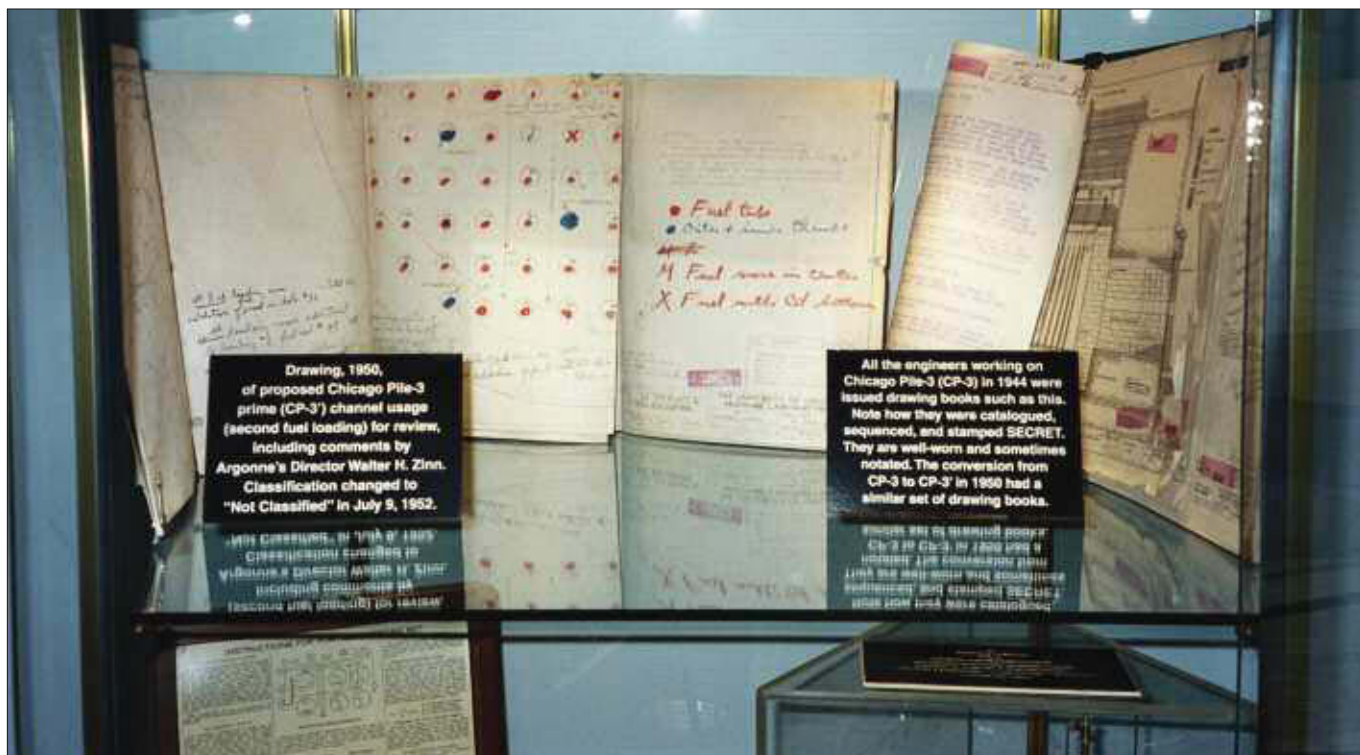


To the right of the entrance to the exhibit is a display of items that were part of a 1992 U.S. National Archives traveling exhibit on Chicago Pile-1, in which the first self-sustained chain reaction occurred. The traveling exhibit was passed on to Argonne in the mid-1990s. (Tilbrook)



Inside the "artifact room," Renée Nault looks into the protective viewing box, and what she sees is in the inset photo. (Rumick)





One of the display cases in the artifact room houses drawings of Chicago Pile-3 prime (CP-3'), including comments by Walter H. Zinn, who was ANL's first director, and one of the drawing books issued in 1944 to all of the engineers working on CP-3. Each drawing and book page was stamped "SECRET," and all were declassified in 1952. (Tilbrook)



Another display case in the artifact room contains items Enrico Fermi used in his lab from 1944 to 1947. On the top shelf are several rheostats; on the second shelf are collimator counters designed and made by Fermi for his research; on the third shelf are several reflectors; and on the bottom shelf are two blocks of the graphite from CP-1 with identification markings on them. (Tilbrook)



A mirrored display case in the artifact room holds one of two trowels used by President Dwight D. Eisenhower on November 8, 1957, to lay the cornerstone of the Atomic Energy Commission's building in Germantown, Md. It is, however, no ordinary trowel: The blade is made of uranium from CP-1; the shank and ferrule are made of zirconium from the U.S.S. *Nautilus*; and the handle is made of wood from the benches in the west stands of Stagg Field at the University of Chicago. (Tilbrook)





**Left:** A visitor examines the CP-I exhibit, which includes a cutaway model of the football stadium at the University of Chicago's Stagg Field to show the reactor underneath. (Joch)

**Below:** The crowd peruses the various displays in the exhibit area. (Joch)



Yoon Chang (right), an Argonne Distinguished Fellow and retired as Associate Laboratory Director at Large, explains to a visitor the Pyroprocessing Technology display, which shows a segmented fuel element component. (Joch)





**Above:** A couple of visitors look over the Experimental Breeder Reactor-II (EBR-II) model. (Joch)



**Above:** Part of the exhibit team (from left): Dan Sarro, Roger Tilbrook, and Renée Nault. (Joch)

**Right:** Taking care of the first slice into the cake at the reception for the exhibit's opening are (from left) Sattelberger; Hussein Khalil, division director, Nuclear Engineering, Argonne; Chang; and Tilbrook. (Joch)

