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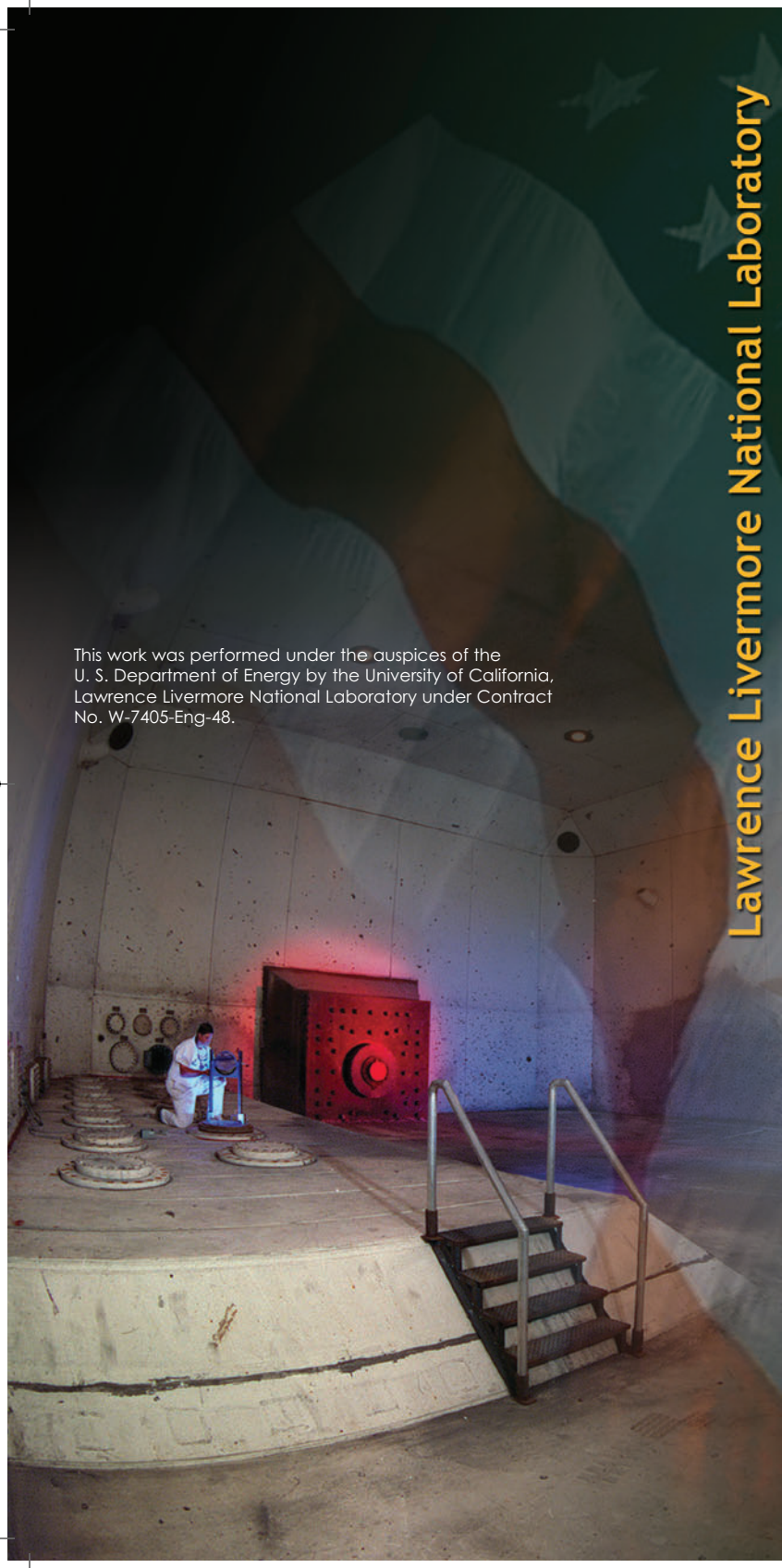

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SITE 300

Managed by the University of California for the Department of Energy's National Nuclear Security Administration

UCRL-BR-224872

What is Site 300?

Lawrence Livermore National Laboratory's Site 300 is an experimental test site operated by the University of California for the U.S. Department of Energy's National Nuclear Security Administration. It is situated on 7,000 acres in rural foothills approximately six miles southwest of downtown Tracy and 15 miles southeast of Livermore.

Site 300 was established in 1955 as a non-nuclear explosives test facility to support Livermore Laboratory's national security mission. The site gets its name from the early days of Lawrence Livermore, when the main laboratory was called Site 200 and the test facility was Site 300 (Lawrence Berkeley National Laboratory was Site 100). Today, work at Site 300 supports the Laboratory's nuclear weapons program by assessing the operation of non-nuclear weapon components using hydrodynamic testing and advanced diagnostics, such as high-speed optics and X-ray radiography. These efforts support the nation's Stockpile Stewardship Program (SSP), which is designed to ensure the safety, security and reliability of the U.S. nuclear weapons stockpile.

Site 300 Operations

Site 300 operates several facilities that perform unique experiments, such as shock physics, which examines how materials behave under high pressure and temperatures. Site 300 also fabricates explosives that are instrumental to the Laboratory's SSP program.

Site 300 employs approximately 200 people, with expertise in such fields as engineering, chemistry, biology and environmental restoration. In addition to its scientific staff, the site also has a fire department, security force, and administrative and facility support personnel.

Throughout its more than 50 years of operation, Site 300 has maintained a stellar safety and security record. All employees and contractors requiring access to the site must undergo site-specific safety training. Site security is maintained by stringent access controls, including armed security personnel.

To help minimize offsite impacts, such as minor blast pressure and noise to neighbors and debris to the local on-site environment from explosives testing, Site 300 constructed the Contained Firing Facility in 2000. This concrete-reinforced, 28,000-square-foot facility allows the Laboratory to conduct explosives tests indoors. These include hydrodynamic tests, which involve explosive detonations that create temperatures and pressures so great that solids behave like liquids. These tests use replacement metals such as steel, copper and depleted uranium in place of nuclear materials that would actually be used in a weapon. On days when outdoor tests are planned, Site 300 monitors the atmosphere to determine when conditions are best for minimal sound travel.

Site 300 and the Environment

Site 300 has unique environmental qualities. It is home to a large plant and wildlife population, including rare and endangered plants such as *Amsinckia grandiflora*. Noted wildlife includes the rare Alameda whipsnake and California tiger salamander, raptors such as the golden eagle and the red-tailed hawk, and many varieties of small birds. Access to these unique populations is controlled, and site operations have successfully co-existed with them for more than 50 years.

Environmental stewardship at Site 300 also involves the careful restoration of portions of the site contaminated by past releases of chemicals from various early program activities. The U.S. Department of Energy began investigation and characterization of contamination at Site 300 in 1981, following the detection of contaminants in shallow aquifers onsite. In 1990, the U.S. Environmental Protection Agency placed Site 300 on the National Priorities List (Superfund program). Throughout this time, due to improved operational practices and the cooperative efforts of the U.S. Department of Energy, U.S. Environmental Protection Agency and the State of California, significant progress has been made to cleanup contaminated soil and ground water. This has been accomplished with no adverse impacts on the surrounding environment.

With its rural setting and unique technical capabilities, Site 300 will continue to play a pivotal role in Livermore Laboratory's national security mission.