

MOX Project is moving forward

The Aiken community's role in international nuclear nonproliferation is taking shape at the Savannah River Site as work continues on the massive Mixed Oxide Fuel Fabrication Facility, known as the MOX Project or simply MOX, after the nuclear fuel that will be manufactured there.

Despite years of tight federal budgets, construction is advancing steadily, and the facility, which will cover 600,000 square feet, is more than 70 percent complete. Status reports are impressive. Twelve of 16 support buildings are built and 72 of 73 storage tanks have been installed, as have 165 glove boxes for handling nuclear materials, with 55 more onsite awaiting placement.

About 59 percent of the piping in the Active Gallery, where plutonium will be purified before conversion to MOX fuel, has been installed. Overall the finished complex will use 172,000 cubic yards of



Aerial view of MOX

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concrete and 38,000 tons of rebar. By the beginning of 2017, 93 percent of the concrete had been poured and 96 percent of the rebar was installed.

The story of the MOX Project is rooted in the history of the post-Cold War era. As the nuclear arms

race waned and both superpowers began reducing their numbers of nuclear weapons, U.S. leaders began considering what to do with a growing stockpile of surplus weapons-grade plutonium.

Studies by the prestigious National Academies of Science in 1994 and 1995 concluded that one of the best methods for disposing of the plutonium was to convert it to MOX, a blend of uranium and plutonium oxides that can be used as fuel in civilian nuclear power plants. Plutonium irradiated in nuclear reactors cannot be used in weapons.

In 2000, the United States and the Russian Federation signed the Plutonium Management and Disposition Agreement, which committed each country to eliminate 34 metric tons of surplus weapons-grade plutonium – enough, taken together, to fuel 17,000 nuclear weapons.

nuclear safety, consistently earning highest marks in construction reviews by the Nuclear Regulatory Commission.

Aiken and the surrounding community have been good neighbors to the MOX Project, and the people who are building the facility have responded in kind. The employees of CBI AREVA MOX Services have given their time and treasure to community action and a host of charities.

In the past 12 months alone they have raised more than \$70,000 for causes like Children's Place, the Golden Harvest Food Bank, and the Horse Creek/Graniteville Community. Other organizations that have received support include the American Cancer Society, the Boy Scouts, the Child Advocacy Center of Aiken and the James E. Clyburn Research & Scholarship Foundation, to name just a few.

The benefits of MOX extend far beyond the community. As the first major nuclear construction in the U.S. in 20 years, MOX created a new demand for trained nuclear engineers and skilled technical workers that helped staff a resurgence in the industry. The need for special equipment and supplies also helped rejuvenate the nuclear supply chain so critical to a vibrant industry.

The most significant benefit of the MOX facility, however, will be its role in reducing the world's stock of weapons-grade plutonium, both here and in Russia, that otherwise could be a continuing temptation to those who might wish to exploit the stocks for future nuclear weapons. Like beating swords into plowshares, the work we do here will play a big part in reducing the global nuclear danger, improving our national security and international stability.



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Glovebox hoisted into MOX.

The agreement provided that each country convert its plutonium to MOX fuel. The American response to its commitment is the Mixed Oxide Fuel Fabrication Facility. Construction began in 2007.

The project has been good to the community, bringing 2,000 skilled jobs during construction and promising 1,000 jobs during operation, plus additional jobs for support contracts.

One of the proudest achievements of the team building the MOX Facility is its outstanding workplace safety record. At one point, the project went for an astounding 24 million work hours without any lost time due to a work-related injury.

Through this past June, employees have accumulated another 5 million hours without an injury-related lost day. The MOX team has also excelled at



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MOX glovebox installation.