Refueling Outage & Dry Cask Shielding Improvements at US Nuclear Plants

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NATC performed shielding studies at US PWRs in 2015. 5 senior nuclear engineers at University of Illinois developed shielding alternatives for their senior engineering design class in the spring semester, 2015.
To remove the radiological hazard, the Cook NPP Unit 1 and 2 has been working with NPO to eliminate high radiation areas in the auxiliary building using permanent shielding designs. Cook NPP unit1 and 2 is also employing new neutron and gamma shielding for the dry cask campaigns. For the Cook's dry cask worker dose per cask, it could achieve 85.5% reduction; the dose went down successfully from 6mSv in 2012 to 0.87mSv in 2015.