

## Ukraine's Regulator Authorizes Operations to Commence Unrestricted Loading of Chornobyl Reactors' Used Fuel using Holtec-Supplied Technology on the 35<sup>th</sup> Anniversary of the Tragic Accident

Today, on April 26, 2021, 35 years from the day the horrendous accident struck Chornobyl, Ukraine has made history by achieving a major milestone that launches the stricken site's path to recovery. After an extensive battery of pre-commissioning and commissioning tests, Ukraine's State Nuclear Regulatory Inspectorate (SNRIU) has authorized the Owner [Chornobyl Nuclear Power Plant (ChNPP)] to load used fuel from the Chornobyl three reactors with immediate effect. The license was issued by the regulator after their acceptance of the Final Safety Analysis Report and after Holtec-trained technicians successfully demonstrated the efficacy of the installed systems by expertly loading two double-walled canisters (DWCs) [a Holtec patented design] with Chornobyl's RBMK spent nuclear fuel into the site's Interim Storage Facility (ISF-2) as the last step in a string of required commissioning operations.

Handover of the full operating license occurred at the ISF-2 in a ceremony attended by the President of Ukraine, Mr. Volodymyr Zelensky; SNRIU Chairman, Mr. Grigoriy Plachkov; Mr. Denys Shmyhal, Prime Minister of Ukraine; Mr. Roman Abramovsky, Minister of the Ministry of Environmental Protection and Natural Resources of Ukraine; Mr. Sergiy Kostyuk, Head of the State Agency of Ukraine on Exclusion Zone Management; Mr. Valery Seyda, ChNPP Acting General Director; Mr. Sergiy Tarakanov, Holtec International Program Manager for the ISF-2 Project; Mr. James Hope, U.S. Agency for International Development Ukraine Mission Director; Ms. Valerie Brusilovsky, U.S. Department of Energy Office Director - U.S. Kyiv Embassy; as well as representatives of the Government of Ukraine and other entities. The event was widely covered in the local news media and on the official Government of Ukraine websites [See Government of Ukraine announcements [here](#) and [here](#)].



*Ukrainian President Volodymyr Zelensky  
Addressing Attendees at the ISF-2 License Handover Event*

The successful issuance of the operating license and the safe loading of used fuel assemblies from Chornobyl's aging storage facility, mark the culmination of over two decades of effort to bring this important facility to full operation.

The Chornobyl ISF-2 is the world's largest and most complex dry storage project with numerous unique challenges overcome by Holtec that had stymied the project for over a decade. Holtec subsequently took over the stricken project in 2011 and completed it successfully handing over the complex to the Owner in December 2019. We are proud of the robustness of the Holtec-designed pool-to-pad system exhibited by the successfully demonstrated commissioning operations culminating in the issuance of full operating license last week.

The challenges at Chornobyl spurred our company to develop several innovative technologies such as the *double-walled canisters* which renders any risk of leakage seven orders of magnitude more non-credible than that required by the regulations in the US as well as most regulatory regimes. The deployment of our *forced gas dehydrator* to extract the last trace of entrained moisture from the fuel for guaranteed storage safety and the use of extruded Metamic tubes to efficiently dissipate the residual heat from the used fuel, and the commissioning of a purpose-built hot cell (the world's largest) are among other innovations that enabled the triumph at Chornobyl that we celebrate today.

*"Issuance of the Full Operating License to commence loading of the Chornobyl Reactors' used fuel into the Interim Spent Fuel Storage demonstrates an important and long-awaited milestone. Now, the Licensee can begin full operations to transfer the Chornobyl's Spent Nuclear Fuel to a long-term safe dry storage at ISF-2 over the next 10 years. This is one of key milestones in the transformation of the ChNPP into an ecologically safe system,"* stated SNRIU Chairman Mr. Grigoriy Plachkov.



Grigoriy Plachkov,  
SNRIU Chairman



Valery Seyda, ChNPP Acting  
General Director

*"This major milestone accomplishment has been achieved by the hard work and diligent joint efforts of ChNPP, Holtec and its contractors, SNRIU, SSTC NRS, and other involved parties over the past many years. The issuance of the Full Operating License clearly demonstrates that the technology and processes for handling of spent nuclear fuel implemented at the ISF-2 meet up-to-date requirements of the Ukrainian law and IAEA Guidelines, and guarantee safe management of spent nuclear fuel of Chornobyl NPP. Transfer of spent fuel assemblies from the Chornobyl wet storage facility to ISF-2 will remain one of the key priorities for our enterprise,"* said Mr. Valery Seyda, ChNPP Acting General Director.

*"We thank the Assembly of Donors, consisting of the governments of Belgium, Canada, Denmark, European Union, Finland, France, Germany, Italy, Japan, the Netherlands, Norway, Russia, Sweden, Switzerland, Ukraine, the United Kingdom, and the United States of America who provided the financial support and the Fund Administrator, EBRD, for their understanding as we wrestled with the multitude of unexpected challenges to bring this project, internationally significant and critical to Ukraine, to today's glorious success,"* stated Holtec International's President/CEO Dr. Kris Singh.



*Dr. Kris Singh, President/CEO,  
Holtec International*

*"Unfortunately, the Chernobyl's name is associated in the world with the tragic accident of April 26, 1986; however, today's landmark event sends an unambiguous message of Ukraine's global leadership in the field of safety of used nuclear fuel. As the first country to demand a double wall canister and the forced gas drying technology to ensure unconditionally dry canisters, the Ukrainian regulatory authorities have set a new bar of safety. The obstacles and problems that we faced were undoubtedly daunting, but we never wavered in our belief that we had the technical and financial capacity to bring forth the success that had eluded others who preceded us. We gratefully recognize the innovative spirit and extreme diligence of our people in the US and Ukraine, the dedicated support of our Ukrainian and international contractors, and especially our on-site staff who worked around the clock to accomplish this milestone. What many considered to be impossible has been rendered possible,"* said Holtec VP Riaz Awan who has spent most of the past 25 years in Ukraine, first as a Department of Energy official and then as Holtec's top expat based in Kiev.



*Riaz Awan, Vice President  
for Ukraine Operations*

The ChNPP spent fuel will be stored safely and securely for a minimum period of 100 years. Once all fuel has been transferred to the new ISF-2 facility, the existing wet fuel storage facilities, in service well past their initial design life, will be decommissioned marking another major step towards increased nuclear safety at Chernobyl. All fuel loading operations will be monitored by the International Atomic Energy Agency and the State Nuclear Regulatory Inspectorate of Ukraine.