Security Council
Safety of Zaporizhzhia Ukrainian Nuclear Plant Due to the Conflict.

Topic Background

Almost half a year has passed since the beginning of the Russian invasion at Ukraine, and it has caused the greatest humanitarian crisis in Europe since the Second World War.[1] Many refugees and civilians have suffered, buildings have collapsed and now the risk of a bigger problem is rising, a nuclear disaster that would bring a crisis never seen before to the whole of Europe and a considerable part of Asia.

In March 2022, Russian troops occupied the Ukrainian Zaporizhzhia plant, Europe's largest nuclear power facility, in what experts described as a risky and reckless assault.[2] Rafael Grossi, the head of the International Atomic Energy Agency (AEA), warned that the situation at the power station could spiral out of control.

Much of the anxiety has been about the plant coming under fire from artillery shells or rockets. Lately, the strikes of the war are coming closer to and have already damaged some critical parts of the sprawling nuclear complex. Ukraine has accused Russian forces of using the nuclear plant as a shield from which to fire on nearby cities. Russia denies that is the case, but satellite photos have shown their military stationed near some of the buildings.[3]

The plant has been laid near the front lines for most of the war, with Russian forces invading and threatening the safety of operations of the nuclear power station adding rocket systems around the plant, ostensibly to protect against Ukrainian

[1] *War in Ukraine: Lives and livelihoods, lost and disrupted.* Mckinsey.com
[2] *Here's just how close the war in Ukraine has come to Europe's largest nuclear plant.* NPR.
[3] *Ukraine nuclear plant: How risky is stand-off over Zaporizhzhia?* BBC.

attacks.[4] Making it difficult to Ukraine forces to take action, because in words of Rafael Grossi, "Military action jeopardizing the safety and security of the Zaporizhzhya nuclear power plant is completely unacceptable and must be avoided at all costs".

This topic can't be ignored by the Security Council for the matter of fact that if an accident occurs at the nuclear power plant it is occupying in southern Ukraine, radioactive material would cover Germany, Poland and Slovakia and that several countries in Europe could be at risk.[5]

The site at the complex has also drawn the attention of the Ukraine government, especially because it continues to be operated by Ukrainian staff, physically stationed by Russian troops. As Edwin Lyman, director of nuclear power safety at the Union of Concerned Scientists says, the invaders "puts pressure on the Ukrainian staff at the plant".[6] If the plant doesn't get the right attention, nuclear fuel could begin melting, "resulting in a release of radioactive substances to the environment".[7]

The 1986 disaster at Chernobyl is considered the worst of its kind, leading to the evacuation of more than 100,000 people and radiation being detected across Europe. Zaporizhzhia is almost twice the size and more modern reactors are reinforced to deal with huge forces such as a plane crashing into them. But, according to Hamish de Bretton-Gordon, who led the chemical, biological, radiological and nuclear defense forces known as CBRN "this is a warzone, there

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[4] *Russian forces threaten integrity of Zaporizhzhia nuclear plant*. Power Technology.

[5] *Russia warns radioactive waste could hit Germany if accident occurs at damaged nuclear power plant*. CNBC.

[6] *Here's just how close the war in Ukraine has come to Europe's largest nuclear plant*. NPR.

[7] *Ukraine nuclear plant: How risky is stand-off over Zaporizhzhia?* BBC.

are some munitions being used that are far more deadly than an airplane hitting them. Fighting from a nuclear power station is bonkers, it's just not a good idea."[8]

General History

In the late 1700s, much of Ukraine's territory became part of the Russian empire under Catherine the Great. Ukraine fought for independence in the early 20th century but lost and became part of the Soviet Union. Zaporizhzhia plant was built by it in the 1980s, six light-water reactors make it among the 10 most powerful nuclear power stations in the world.

Ukraine declared its independence after the Soviet Union collapsed in 1991. Russia and Ukraine then collapse in a conflict that led to the war at the year 2022. After the invasion began on Feb. 24, the Kremlin war machine took a little over a week to capture the plant at Enerhodar, a city that is around a 2-hour drive southwest of the larger Zaporizhzhia. A satellite image taken on July 3 by Planet shows roughly a dozen military vehicles parked near some administrative buildings. The Russians also erected several large tents in a nearby lot, presumably to house the troops tasked with protecting the plant.

This is not the first time Ukrainian citizens had a nuclear plan problem, in 1986, Chernobyl incident happened. It was the result of a flawed reactor design that was operated with inadequately trained personnel. The resulting steam explosion and fires released at least 5% of the radioactive reactor core into the environment, with the deposition of radioactive materials in many parts of Europe. Two Chernobyl plant workers died due to the explosion on the night of the accident, and a further 28

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[8] *Why is the world so worried about Ukraine's Zaporizhzhia nuclear plant?* CNBC.

people died within a few weeks as a result of acute radiation syndrome. Some 350,000 people were evacuated as a result of the accident.

The accident caused the largest uncontrolled radioactive release into the environment ever recorded for any civilian operation, and large quantities of radioactive substances were released into the air for about 10 days. This caused serious social and economic disruption for large populations in Belarus, Russia, and Ukraine. [9] And that is exactly what Ukraine and must part of the world want to avoid to happen.

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[9] *Chernobyl. (n.d.).* World-nuclear.org.

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