

Forum: Historical Security Council (HSC)
Crisis Issue: The Chernobyl Disaster
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Introduction

The rise of nuclear power has brought great advancements in energy security, but along with it has come risk. On April 26, 1986, Unit 4 of the Chernobyl Nuclear Power Plant (CNNP) exploded during design testing of a safety system as a result of a combination of operator failure and design flaws with the plant. The initial incident remained unreported from the USSR until questioned by the Swedish government, who had been able to detect radiation and planned on providing an alert to the International Atomic Energy Agency. Attempts at covering up the disaster from the USSR were revealed, causing the situation to, from the start, contain international tension.

The initial explosion and its immediate ramifications killed dozens while causing the hospitalization of hundreds. Clean-up efforts involved extinguishing the fires, which released radioactive airborne material, alongside containing radioactive debris. Fire containing efforts killed several, with many of the firefighters being unaware a radioactive accident had even happened. It is unknown the extent to which radiation has leaked as well as how many deaths have been directly and indirectly caused, but extremely high degrees of radiation are known to be present in the Ukrainian Soviet Socialist Republic and the Byelorussian Soviet Socialist Republic. The debris from the reactor prevents additional work, needing to be cleared first before long-term containment can begin. Evacuations were initiated, aiming to relocate the estimated ~120,000 residents in the nearby region affected. The evacuation, said to those in Pripjat to have been 3 days, has since been indefinite with a 30 km radius exclusion zone having

been established. This explosion of reactor 4 has left the Union of Soviet Socialist Republics seemingly unrepealed; though reactor 3 was shut down, reactors 1 and 2 are still in use.

The Chernobyl disaster poses challenges to the global community and efforts in nuclear energy. Questions regarding the safety of nuclear energy as a whole are being discussed, with concerns of society regarding the future handling of nuclear energy being questioned. The disaster itself is still present, with no clear indication of when clean-up efforts are to be completed. Thousands still remain permanently displaced from their homes, unable to return as a result of the extreme danger of the radioactivity present, with concerns as to radioactivity sickness being possibly present to residents of Chernobyl and nearby communities. The global community will need to decide how to handle the region as well as those affected in addition to how to handle nuclear energy as a whole.

Major Parties Involved and Their Views

Union of Soviet Socialist Republics (USSR)

The Chernobyl Disaster's effects are most prevalent in the USSR, especially the Ukrainian Soviet Socialist Republic, where the accident occurred, and the Byelorussian Soviet Socialist Republic, which received a majority of the damage from radioactive material that arose from the fires. The USSR hopes to quell civil anxiety regarding the incident while taking containment procedures, aiming to be able to use the land once more and ideally able to even re-enable the entire CNNP complex.

International Atomic Energy Association (IAEA)

The IAEA is dedicated to monitoring atomic energy's safe use. Given their strong understanding of atomic energy and the promotion of it, they would hope to ensure the continued use of atomic energy beyond the incident through ensuring public support despite the damages caused by the Chernobyl Disaster. In addition, they would hope for

additional safeguards to prevent incidents such as this from happening again alongside the desiring cleaning up of the contamination to prevent its spread, without harming those aiding in the clean up.

Nuclear Nations

Similar to the IAEA, nations already with a foothold in nuclear technology, whether for energy or more destructive purposes, desire to ensure the continuation of nuclear practices while under strict inspection to avoid catastrophes. This inspection would likely be done by the IAEA.

Non-Nuclear Nations

Opposing nuclear nations, non-nuclear nations are likely to advocate in one of two ways. The first would be to support the further development of nuclear power for all while ensuring it remains safe, supporting the development of nuclear power and its subsidized use within their territories. The alternative view would be to advocate for the complete disarmament of nuclear energy due to the threat of nuclear proliferation for violent purposes and to ensure safety from future accidents like seen in Chernobyl; the recent events caused by the disaster have shifted public and governmental view more towards this viewpoint, with support for nuclear energy at an all-time low.

Kingdom of Sweden

The Kingdom of Sweden has, for decades until now, safely been developing nuclear energy. As the nation to have initially discovered nuclear radiation within the USSR, Sweden holds a high concern regarding the safety of the nuclear practices taking place. In addition, they hope for the continuation of nuclear energy while improving security measures taken for nuclear power plants internationally.

United Kingdom (UK) and Norway

Despite being thousands of kilometers away, radioactive caesium fallen onto higher altitude regions in the UK and Norway have impacted livestock and brings the potential for radioactive contamination within food supplies. Means to contain damage as well as decide how to handle the contaminated animals and feed are required to be addressed, lest the entire food chain within these regions becomes harmed. In addition, these nations are expecting heavy compensation (financial or otherwise) to come directly from the USSR.

United States of America (USA)

Seeing the failures of nuclear energy through the Chernobyl disaster, the USA wishes to gain intel from IAEA reports and push for further investigation of the disaster to ensure safety is not to be compromised. Cooperation by the USA with Sweden have found that the explosion of the reactor is predicted to have an effect magnitudes greater than the last nuclear explosion, to the point that the USA claims that nuclear enrichment may have been being done at the Chernobyl plant for the purposes of creating nuclear weapons. Deploring this, the USA hopes to shut down the USSR's nuclear program, though may be content with strict monitoring in which they are directly involved.

Development of Issue/Timeline

Date	Event	Outcome
April 26, 1986	The explosion of Unit 4 of the CNNP occurs, additionally causing an open-air fire stemming from the reactor. Fire spreads	The initial explosion directly killed 2 engineers and hospitalized 237 workers, with many of those hospitalized either containing symptoms of radiation sickness, dying within 3 months, or having severe burns.

		Massive doses of radiation are released into the nearby area as result from the explosion.
April 27, 1986	Evacuation of residents of nearby regions such as the town of Chernobyl and Pripyat begin. Exclusion zone of 10 km was established soon after.	~50,000 people evacuated.
April 28, 1986	Workers from Forsmark Nuclear Power Plant in Sweden (over 1,000 km from the CNNP), report high detected levels of radiation, determined that the radiation had originated elsewhere. The Soviet Government initially denied Swedish inquiry as to whether any nuclear accidents had occurred in the USSR, later admitting fault when the Swedish government suggested altering the International Atomic Energy Agency.	Official announcement of the nuclear incident with it being reported an investigative commission was being set up. Beginnings of realization of the scale of the issue to the global community.
May 2, 1986	The Chernobyl Nuclear Power Plant Zone of Alienation exclusion zone expanded to 30 km.	Evacuation of ~120,000 residents. Region becomes uninhabited.
May 4, 1986	Fires caused by the explosion end upon fire containment efforts.	The fire had released radioactive contaminants into nearby regions of the USSR alongside remaining parts of Europe, of which ~70% landed in Belarus.

		<p>It is predicted that, collectively, the fire released about the same amount of radioactive material as the initial explosion. Firefighting efforts lead to several more dead as a result of radiation sickness.</p>
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Crisis Stages

Prelude

April 29, 1986

Evacuations by the USSR of citizens from regions near Chernobyl have suggested the possibility of a large-scale disaster within the region, verified by the USSR to be as a result of the meltdown of a nuclear reactor. Given that nuclear technology is newly developing and is known for its potential to cause immense harm, cooperation to ensure damage control is crucial. Uncertainty regarding the health effects the radiation may have on nearby residents further exacerbates the need to prioritize health while ensuring rapid agency.

The UN and IAEA may propose to take action to ensure safe containment of the radioactive material present, avoiding early leakage through temporary measures later enforced by a more long-term solution. Some may argue the dangerousness of nuclear power; the potential for this to happen once suggests a possibility for this to happen again. Skeptics of nuclear energy as such may propose this event as a signal to end the pursuing of nuclear energy, while those against this notion may see it as a sign to reinforce safety measures taken and bolstering investment into nuclear energy to ensure its functionality and developing it.

Crisis Stage 1: Immediate Containment

May 4, 1986

Since the meltdown of the reactor, evacuation procedures have led to over 100,000 residents nearby leaving alongside the establishment of an exclusion zone of radius 30 km, the radius picked seemingly arbitrarily, have helped protect nearby citizens. Recent extinguishment of the fires within the reactor have allowed for medium-term and long-term containment means to begin. The effects of the fires and any means to address them after the fact are still unknown.

Large amounts of debris still remain within the region, such as on the rooftops. This material is highly radioactive, dangerous to life, and makes any additional containment infeasible until addressed. It is strongly discouraged for long-term exposure for any human being near the debris; a suggested limit is of one minute in close proximity to the debris given appropriate protective gear is worn.

The USSR has begun work on robotic means of addressing the debris, hoping to avoid the problem of human interaction entirely. Criticisms of this have arose, with the possibility of the radioactive material destroying the circuitry from functioning, as other methods are proposed such as to introduce 40 second shifts of material clearing for soldiers. As well, a decision needs to be made regarding handling the other plants at Chernobyl, which the USSR has decided to continue using.

The house should note that those evacuated may have still been affected; they were not evacuated nor even aware of the radioactivity in the region until a day after its occurrence. Thus, not only will containment need to be addressed, but at the very least rudimentary means of helping those evacuated are suggested.

In addition, the claims by the USA of highly enriched uranium potentially being present may be of desire to be investigated as the presence of highly enriched uranium may suggest malicious intent behind the Chernobyl nuclear plant alongside other nuclear

power plants in the USSR. Resolving this issue may involve either the IAEA getting access to vast amounts of intelligence of the USSR or the USA becoming directly involved. The USSR would likely be against both solutions, especially the latter, to which the USA would have opposite sentiments.

Crisis Stage 2: Medium and Long-Term Containment and Care

May 15, 1986

Upon the completion of immediate containment procedures, the possibility to move onto long-term containment has come. A few key factors need to be addressed as a result. These include the continuing well-being of those evacuated as well as diagnosing damage caused to them by radioactivity, ensuring food production upon the loss of farmland within the region, protecting the food chain in regions outside of the exclusion zone that have been affected such as the UK and Norway, and containing radioactive material to within the exclusion zone for which the UK and Norway are demanding compensation for the damage done.

The USSR is reported as aiming to create a sort of ‘sarcophagus’ that would help store radioactive material, ensuring to keep holes within it to allow monitoring. This would help to ensure containment but comes with downsides; the region would still be vulnerable to spreading of radioactivity through smoke from wildfires and from rain leaking material into the ground. In addition, the sarcophagus would not be permanent and would be resource-intensive to create. However, there has not been another feasible method proposed as of yet. The UNSC would hence need to determine how to proceed forward with these containment measures alongside addressing the previous problems discussed for the medium-term.

The USA still insists on danger from Chernobyl and, even without evidence, has chosen to set up missiles within Japan and other nations, for which the USSR is strongly against and has begun work on setting up their own missiles against the USA. The house

needs to tread carefully. Not only do they need to address the immediate issues of containment within Chernobyl, but they will need to delicately handle the tensions between the USA and USSR.

Crisis Stage 3: Rebuilding

January, 1987

Upon the completion of most containment methods for at least the next couple of decades, the house is proposed to move onto handling the rest of the aftermath of the Chernobyl Disaster. Efforts need to be made to find other means of generating power upon the closure of the CNNP and to manage the nuclear waste within the region through finding long-term storage of radioactive material. More complete assessments of the situation have now found alarming health concerns with the spread of radiation into more farms than expected, such as dairy farms, leading to human ingestion of radioactive isotopes.

Further investigation by the IAEA of the claims of the USA have revealed that no such highly-enriched uranium was present at Chernobyl and that the scale of the disaster only seemed so large due to its unprecedented nature. In the heat of the moment, the head of the CIA of the USA resigned and the investigation shut down. It seems the house no longer needs to concern themselves as heavily regarding tensions between the USSR and USA, but the USA still supports further involvement from the IAEA into ensuring the safety of nuclear energy.

Aside from this, the long-term question of nuclear energy and health need to be addressed. The public's view of nuclear energy has dropped immensely, with fears growing larger even under safe conditions of nuclear energy. It is now the time for the UNSC to determine how it will handle it in the future and whether to work towards a nuclear-free future relying on other, potentially safer, energy sources, or to attempt to

strive towards safety within nuclear energy while addressing its other issues such as the creation of radioactive waste. This is the time for the UN to decide on the future of nuclear energy.

Positive Outcome

The positive outcome would be the complete containment of the Chernobyl Disaster, with plans prepared to address its long-term effects. Nuclear safety measures across the world would be bolstered to prevent future nuclear meltdowns, addressing human and natural causes of reactor failures. This would ideally be accompanied by support for nuclear energy until a shift into ideal forms of energy that can be indefinitely sustained without negative impact to the environment. In addition, those evacuated would need to be properly addressed to ensure their well-being, alongside avoiding radiation damage to those who help in the cleanup. This outcome would require international cooperation to ensure the continued and safe use of nuclear energy while handling the cleanup of the accident, but note that it may also be achieved even with a complete prohibition of nuclear energy though this would be discouraged such as by the IAEA. Tension between the USSR and USA would be dispelled, with them able to at least somewhat cooperate.

Negative Outcome

The negative outcome would be the failure to properly contain the disaster, leading to widespread impacts across Europe. Chernobyl and nearby communities would be most affected, with a radius far greater the 30 km exclusion zone becoming uninhabitable. The movement of radioactivity through the surface flow of water and from airborne particles would spread radiation potentially to other nations, leading to the potential for radioactive material to be consumed by humans from either food or water supplies. Nuclear energy as a whole could be unsafely continued, harming society as a whole. Public views on nuclear energy would likely reach a critical point, leading to protests or riots to stop its

usage as per the large damage it can cause. This failure would greatly harm nuclear energy as a whole alongside staining parts of the world with the damage of radioactivity for years to come.

Alongside, tension between the USSR and USA would reach a breaking point. The worst case would be an international nuclear war, better cases still likely including a long war of attrition between both parties as was seen in the Cold War. Regardless, clear damage would be present.

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