

Stage design and cooling not provided' voids what

[Media](#), [Television](#)



Stage 2 INTRODUCTION Accidents occur daily all over the world, but can all the repercussions of the accidents be mended? The INES (The International Nuclear and Radiological Event Scale), is a scale used to measure the danger of a nuclear or radiological event.

There are 7 levels, each level above is 10 times as dangerous as the one below. Chernobyl and Fukushima are the only 2 nuclear accidents that are level 7 on the INES scale. Because of the mistakes and ignorance of the Soviet Union, they are to be blamed for the damages of the Chernobyl Nuclear Power Plant catastrophe. This is because the engineer's poor design of the reactor and didn't provide satisfactory cooling, the accident was held a secret for too long and poor steps taken after the accident had occurred.

FRAMEWORK Argument 1: Poor design and cooling not provided' Voids What is it? - An uncontrollable burst of power leads to the formation of huge steam bubbles form in the reactor core. When the cooling water is gone, the power level increases and the unit begin to run away.

If they do not, water would absorb neutrons, keeping them from creating a chain reaction. This was known as the positive void effect When the tests were being run steam bubbles were formed in the water of the reactors cooler Fission accelerated, heat wattage increased by 330 million watts in 3 seconds, causing the explosion- The RBMK reactors are being changed to make it less sensitive to these types of error. This is done by decreasing uranium-235 from 2.5% to 2%. However, this costs more. Analysts say, the Soviets must have known this and took it into account when running the cost. Soviet chose saving money > safety- The graphite core of reactor was

extremely hot, even hotter than the fuel. Hot graphite contributed to the explosion of the steam.

In Britain, the graphite has a lower temperature than the fuel.- (bike and helmet analogy)- its ok to cut costs, but not when dealing with your safety
 Argument 2:-Changing the scale-Radiation got worse, but people got better?-
 Kremlin increased the acceptable radiation levels to 10 times as former levels, and in some location even up to 50 times as much-Women and newly born children lived in a location with 2-5 millirems per hour. On the other hand, the U. S say adults working with radioactive materials were met required to face less than 6000 milligrams in a year and newly born children no more than 50 a month.- Caused damage to other countries eg downfall of Soviet Union 1 day after the accident a black and white tv announcement was made saying that it was a fire and damages were minor ' trouble has passed'-Sweden reported Few milli-rien of radiation 700 miles away, I'd hate to be within 10 miles - A U.

S scientist- Took a week to get the story account- When the news revealed, T. V reporter says fought bravely even though it was a ' Saturday'- Increase in deformities, disorders and diseases in this area - Belarus absorbed around 70% of the radiation, then Russia and Ukraine - a sharp rise in 1986 now more than 20% of adolescents have a birth defect or disability - of the 600 workers, 134 suffered from radiation. 28 died in the first month - Increase in leukemia diagnostics - 6000 children died from thyroid cancer by 2005 - 4 million affected, with 100, 000 died of cancer
 Argument 3: Poor steps to take care of accident
 Won't be safe for 20, 000 years (Not about

fixing the solution but treating the symptoms) Later it was taken seriously
CRDP formed A metal piece called sarcophagus was placed on it, later had
holes needing replacement Late to providing clean fodder to animals, animals
gained mutations and defects Sarcophagus Giant metal concrete used to stop
the radiation from expanding Placed on unit 4 reactor Dangerous condition,
and time constraints First needed a cooling slab so the fuel doesn't burn
through the sarcophagus Estimate 30 years of use, in 2010 there was water
leakage Largest object people have ever moved Chernobyl New Safe
Confinement Goal to contain radiation for 100 years Cost around 1.6 billion
dollars (U. S) 35,000-tonne structure (taller than the statue of
liberty) Conclusion All accidents happen for a reason, and the CNPP disaster is
no exception.

The CNPP disaster happened because of the mistakes made by the
engineers, the fact that the president kept it a secret for so long and the
substandard methods used to clean up after the mishap. "Accidents are not
accidents but precise arrivals at the wrong right time." -Dejan Stojanovic.

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<http://www.businessinsider.com/birth-defects-related-to-chernobyl->

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