

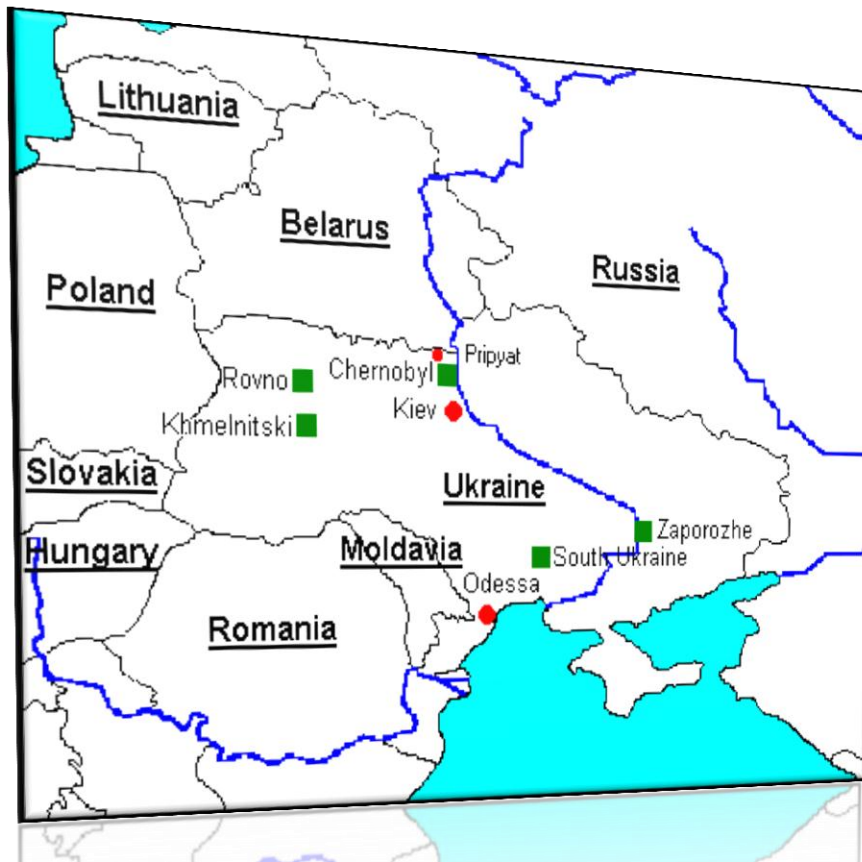
Getting Critical with Chernobyl



Presented by:
Zac Valley

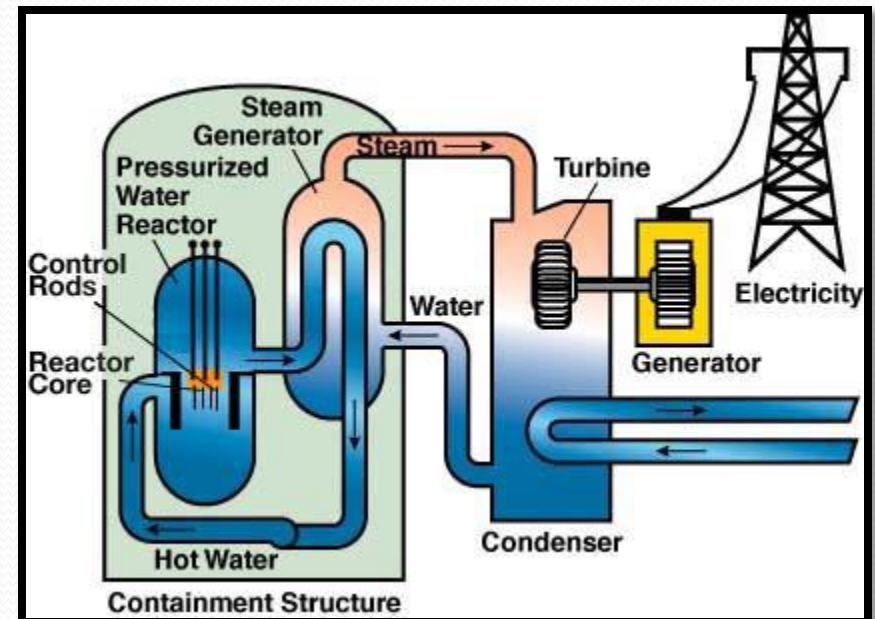
The calm before the storm

- April 26th, 1986 the city of Pypriat, Ukraine
- Population of about 49,360 people
- Many of the plants workers lived here with their families



The delicate dance known as Nuclear energy

- Nuclear energy is basically a giant steam engine which generates electricity by driving a turbine
- The balancing of water and heat is essential in preventing damage to the nuclear core
- The control rods are made from Uranium
- Communication is essential at all times between the water and control rod operators, yet the two operators were in separate rooms



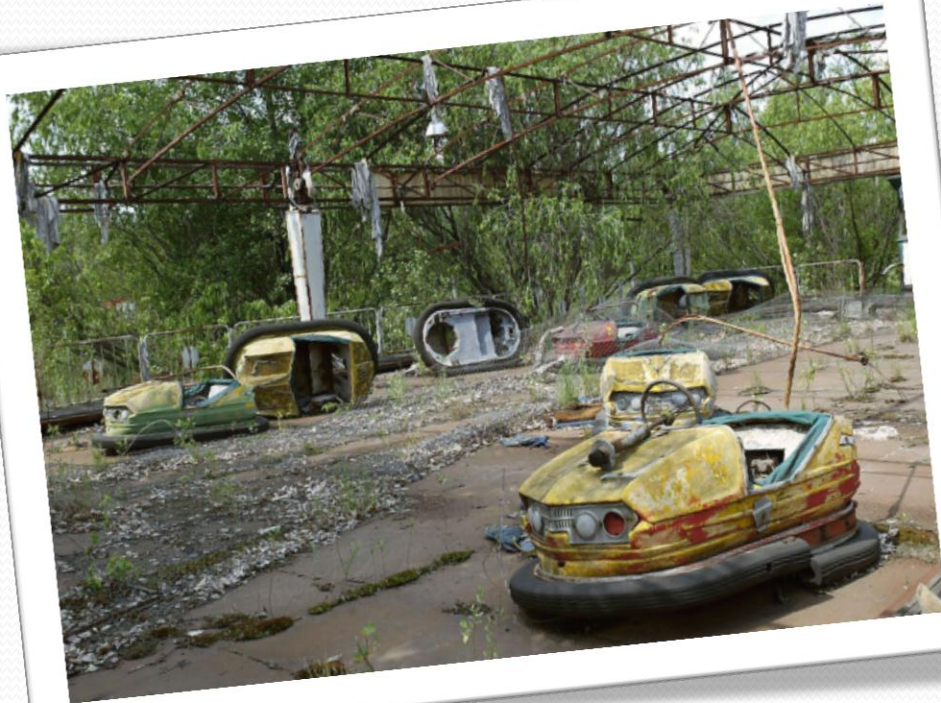
An Atomic Disaster

- Poor operations resulting in a massive steam explosion
- Huge wave of radiation released initially, considered worse than Hiroshima and Nagasaki
- Fires broke out everywhere
- Rescue crews and workers becoming fatally ill from exposure
- The other reactors were all still in operation and in danger from fires

Containment

- Battling of severe fires
- In response the Soviet union decided to build a “sarcophagus” of cement surrounding the reactor
- Unfortunately this exposed more people to high levels of radiation
- Dumping of chemicals on the core to block releasing of radiation
- Stabilizing of under the core to prevent from contamination of underground rivers

Aftermath



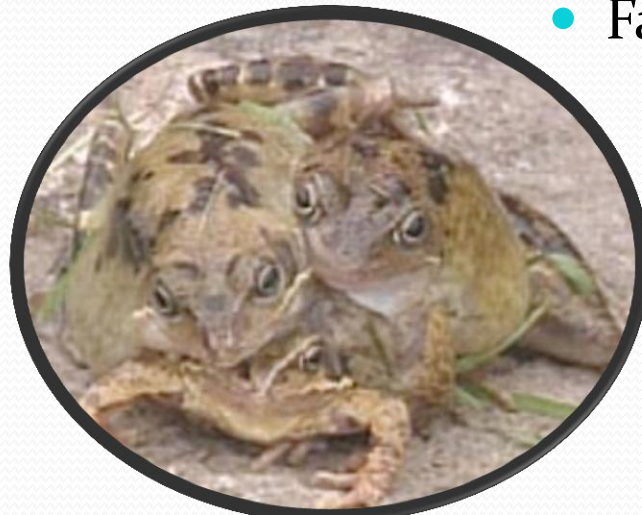
Whose to Blame

Design Error

- Control rod operator and water operator separate rooms
- Flawed control design
- Positioning near populated area

Human Error

- communication breakdown between control rooms
- Running test as planned despite reason enough to abort it
- Failure to follow protocol



Chernobyl Today



- Abandoned and still a radioactive wasteland
- Thousands of homes lost for generations
- New plans to build a larger and better designed “sarcophagus” structure expected completion in 2013
- Still inhabited by illegal squatters
- Access is limited to about an hour and considered enter at your own risk

Seconds from Disaster

- http://www.youtube.com/watch?v=t7Jfx2kEi_k&feature=related
 - 29mins-34:10mins