II. RADIOACTIVITY

NUCLEAR WEAPON ACCIDENTS

Every day there are reports about human and technical failure in this world. Unfortunately 20.000 nuclear weapons are not excluded. There is an own definition of the understanding of accidents concerning nuclear weapons: for example unauthorized launches of nuclear capable weapon-systems, unintentional detonations or radioactive contamination.

Even though information about such accidents is rare there are plenty of examples of incorrect treatment. In the following some chosen examples:

1966: Palomares, Spain
A B-52 bomber from the United States collides with another airplane. The cargo of four nuclear bombs was dropped. Two of them were found on the ground and in the ocean respectively. The other two bombs exploded after the impact. Though there was no nuclear explosion over 1.400 tons of soil and vegetation have been contaminated.

1968: US-Airbase near Thule, Greenland
Crash of an US B-52 airplane at the coast in the Northwest of Greenland. There were four nuclear bombs on board. None of them triggered a nuclear explosion, but the conventional explosive-charges did and the components of the bombs melt down into the ground – radioactive material included. With the aid of Greenlandic and Danish workers there was a comprehensive search. After three months the US-government officially declared the end of the search. Nowadays it is known that the US military still was secretly looking for the bombs. There never has been a report about success.

1985: Heilbronn, Germany
During an exercise a Pershing-II missile suddenly caught fire and burned down under explosions. Parts of the missile flew in a distance up to 120 meters. About 250 meters away from the place of accidents there were combat-ready Pershing-II missiles with nuclear warheads deployed. Three US-soldiers dies and 16 more were badly injured because of the accident.

1989: North Cave Pool
The soviet submarine K-278 »Komsomolez« (Mike Class) with a nuclear-engine lost its bore away and sunk a few hours later. Because of burnings, injuries, suffocation and under cooling 42 crewmembers died. A core reactor and two torpedoes with nuclear warheads are still lying on the sea bottom.

METHOD: WRITE A NEWSPAPER ARTICLE

MATERIALS: newspaper, internet
TIME AND LOCATION: 30 – 45 minutes

The basic information about nuclear accidents is airy, but sufficient enough to get an impression of the treatment with the nuclear components. This method requires the participants to take a deeper look into the topic. Using the Internet as an additional source for research they are supposed to write an article in a fictional newspaper. They can choose their accident topic themselves. It may also be possible to get more information about a certain accident via the archives of newspapers in the Internet.