

**Committee of State Security (KGB) of the Ukraine,
KGB Administration for Kiev and Kiev region, Second Department**

Intelligence Message

Agent Pseudonym: "Garcia"

Case No: 11046

Taken by: Senior Operative of the Second Department Major V.I. Kocherga

February 3, 1987

Source: Reliable

Information verification: Verified

Contents of Message

Chernobyl: Accident.

The text above the panoramic photo of the Chernobyl nuclear power plant:

The accident at the Chernobyl nuclear power plant in the USSR will be in the history of atomic energy. About 30 workers at the station and fire fighters died soon after the accident. 200 people were injured, and more than 100,000 people were evacuated from the zone of 30 kilometres around the station.

So, what happened?

On April 25, 1986 the operators of the Chernobyl nuclear power plant decided to perform the following experiment: lower the power, shut off the steam input to the turbine and use the kinetic energy of alternating current generator to provide electrical power to the reactor's cooling pumps for several tens of seconds.

This experiment was performed in violation of the existing protocols. When the turbine has stopped, the control over the reactor was lost. It did not stop automatically because the operators turned off the safety switches.

At 1:23 a.m. on April 26, 1986, a sudden increase in power of the reactor in the 4th power unit led to a disintegration of the fuel, a uranium oxide. Superheated uranium came into contact with water from the cooling system, causing a steam explosion. This explosion destroyed a steam pipe and blew away a concrete block above the reactor. A second explosion has occurred several seconds later, there could have been different causes for it to occur.

As a result of the explosion, the red-hot debris of the reactor were blown onto the roofs of surrounding structures, causing about 30 fires. All fires were extinguished in 3.5 hours, which is the reason that firefighters have died due to this accident. The reactor's graphite moderator burned after coming into contact with air.

At the same time, some of the radioactive substances from the reactor were ejected to a height of 1,000 m. A radioactive cloud crossed all northern hemisphere and caused radioactive contamination in other countries. This contamination was insignificant and not very dangerous. It was of varying levels in different countries depending on their distance from the source, the direction of the wind and precipitation.

Causes of the Accident

The Soviet side acknowledged six serious mistakes that were made by personnel:

- Two violations of operational instructions;
- Failure to follow the requirements for conducting an experiment; and
- Three cases of deliberate deactivation of the automatic protection systems of the reactor.

Soviet specialists have stated that if just one of these mistakes had not been committed, the accident would not have happened. However, the accident would not have happened if there had not been deeper causes related to the design of this type of the reactor.

The text under the photograph of the IAEA conference in Vienna:

At a conference in Vienna from August 25th to 29th, 1986, the exact reasons for the catastrophe in Chernobyl were presented to the IAEA experts by Soviet specialists. The head of the Soviet delegation, Valery Legasov, has provided a detail description of the causes of the accident, the sequence of events, and the effects of the accident, the RBMK reactor's principal characteristics were not discussed.

The text under the diagram of the RBMK reactor:

Slightly enriched (2%) uranium oxide is used in RBMK reactors as combustible fuel, graphite is used as a moderator and boiling water is used as a thermal conductor. The reactor's core is made of a graphite cell, 1,700 fuel rods containing a fuel mixture are placed into this cell. Water, circulating through the tubes, is heated due to the contact with the fuel, becomes steam and goes directly into the turbine.

The text under a map of atomic energy stations in the USSR text: Soviet atomic park.

At the beginning of 1986 the USSR possessed 51 atomic reactors with an overall power of 28,600 Megawatt. The USSR is the third in the world in terms of production of atomic energy after the USA and France. The RBMK network represents more than half of existing nuclear power industry. This type of reactor was never exported. The Armenia, Shevchenko, and Bilibino stations are not shown on the map.

Analysis of the Accident

Chernobyl demonstrated the deficiency of the technology used in the USSR and, in particular, the organisation of the operation of nuclear power plants, where attention was not paid to the human factor.

The absence of a specialist safety engineer at the time of the experiment, the triple violation of operational instructions by the operators, and the ability to “play” with the reactor’s safety clearly demonstrate the low quality of the station’s operation and unsatisfactory preparedness of its operators. The Soviet side has said that “the personnel of the Chernobyl nuclear power plant has lost all sense of risk.”

It appears that, in difference from all Western countries, particularly France, the USSR has not drawn a lesson from the accident at Three Mile Island (USA 1979), where the human factor played a decisive role.

Unstable reactor

In Western reactors, a change in the reactor’s power is balanced automatically and forms the conditions that limit these changes. In the type of reactor used at Chernobyl, when the power increases, the quantity of steam (“vacuum”) also increases and increases the power even further. It could be said that these reactors have a positive “power coefficient.” RBMK reactors are unstable, and the lower the power, the less stable the reactor becomes.

Inadequate safety systems

In case of a need for the urgent stop of French reactors, the control rods fall due to their own weight at a shutdown signal and the effective stop is achieved a single second.

The safety system of RBMK reactors is inadequate: the control rods are lowered at a maximum speed of 40 cm/sec and it takes 20 seconds to achieve a shutdown.

Lack of a Protective Shield

The analysis of the reliability of this type of reactor is incomplete. The safety criteria are significantly lower than those in Western countries. There is only partial protection around the reactor. A durable protective cover around the working core of the reactor is absent.

At Chernobyl the lack of such cover resulted in the ejection of a significant portion of radioactive materials into the atmosphere.

Note:

Agent “Garcia” provided the message containing a translation of a brochure published in France in relation to the accident at the Chernobyl nuclear power plant. This brochure is illustrated with colour photos of the Chernobyl atomic energy station.

Send a copy of the message to the Comrade A.K. Borisov at the 6th department of the KGB Administration.

Senior Operative Official of the 2nd Department of the 2nd Division of the Ukraine KGB Administration for the city of Kiev and Kiev region
Major V.M. Kocherga