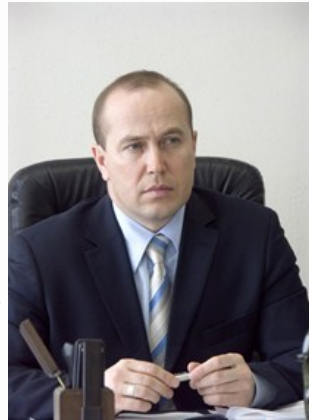


HOLTEC HIGHLIGHTS

A Summary Report to Our Clients, Suppliers, and Company Personnel

Chernobyl's Director General Shares His Perspective On Fukushima

As our readers are aware, Holtec International is tasked with placing Chernobyl's 21,217 fuel assemblies in dry storage for the 100-year service life. The Chernobyl dry storage project is a multi-national donor funded project administered by the European Bank for Reconstruction and Development (EBRD). Holtec Highlights interviewed Mr. Igor Gramotkin, Chernobyl's Director General, to seek his insights in decommissioning a stricken plant that might be valuable in tackling the challenges at Fukushima. (Japan is a donor country involved in funding the Chernobyl Project.)



*Mr. Igor Gramotkin
Director General
Chernobyl Nuclear Power Plant*

HH: Mr. Gramotkin, how do you compare the magnitude of the disaster at Chernobyl and Fukushima?

IG: During the first news reports from Japan regarding the accident at Fukushima, the comparison with Chernobyl did come to my mind. It is sad for me to say that Chernobyl has become the pseudonym for all major industrial disasters – nuclear and non-nuclear. However, Chernobyl and Fukushima, from a technical point of view, are absolutely two different accidents, based on the initiating events and the circumstances of their occurrence. Without going into details, I will say that our accident (at Chernobyl) was related to reactivity characteristics of the system; however, the accident in Japan was related to issues of heat transfer and lack of adequate cooling of nuclear fuel. The consequences (radiological consequences, dose to personnel and the public, level of contamination of surrounding areas) are hard to quantify, primarily because of the limited information from Japanese Authorities. I think the full analysis of these consequences will be able to be assessed in the future. Even though I am a technical expert, I am still worried about the sociological and psychological factors of the accident. During the early phases of both accidents (Chernobyl and Fukushima) there was confusion and fear with admirable heroism on the part of a few.

Like most of your readers, I am a firm believer in Nuclear energy. I am sure we will all work together to learn the lessons from Fukushima, as we have from Chernobyl, to make nuclear energy safe and secure from future accidents no matter what continent we live on.

HH: What were the biggest technical challenges associated with placing Chernobyl's fuel in dry storage?



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IG: Our problems early on had to do with the contractor we had selected. Unfortunately, limited capabilities of the previous Contractor created barriers in the way of one of the most important goals during decommissioning – removal of spent fuel and its placement for long term storage. To be honest certain technical difficulties exist today as well. The most important concerns we have are with cutting of the fuel assemblies in the hot cell, and with the system for handling the fuel during various postulated accidents inside hot cell rooms while handling highly radioactive waste. As you can see, our biggest interest is connected to the implementation of the highest levels of safety measures in the key processes of the Project. My confidence in successful implementation of this project is based on our confidence in Holtec International, which became our contractor in the project in 2007 for establishing a processing and dry storage facility for Chernobyl spent nuclear fuel.

HH: How do you plan to deal with Chernobyl's failed fuel?

IG: The precise definition of terms is very important. Therefore, let's talk about two types of fuel – fuel with defects (defective fuel) and fuel with substantial damage (damaged fuel). The fuel is considered defective when it has no severe defects and it can be transported and processed with the existing processes and equipment. I am fully confident that such fuel will be safely handled in the new storage facility. On the other hand, damaged fuel is a fuel assembly which has significant or severe damage including failures and disintegration of the fuel rods. This fuel has to undergo a stabilization process (from nuclear and radiological perspectives) in order to be safely placed in storage. To resolve this issue, we would like to get support from our strategic partner, Holtec International, who has significant experience based on completion of relatively similar projects in the U.S. such as the Trojan NPP site. Further, we need to review questions associated with transport and process of this fuel in a new interim storage facility. One of our main goals is to put damaged fuel in storage. Without this, all our attempts to place fuel in storage by removing all of the fuel from the Chernobyl reactors will not be achieved. It is clearly unacceptable to transport more than twenty thousand of the fuel assemblies to a new storage facility and leave approximately fifty damaged fuel assemblies at the reactors.

HH: What advice do you have for the authorities in Japan to win the hearts and minds of the people?

IG: As a technical expert, I would normally refrain from commenting on public relations matters. But based on our experiences here in Ukraine, this is what I would like to counsel the authorities in Japan with: I recommend complete truthfulness and openness. The area savaged by the wrath of nature and failure of the nuclear plants requires one precious commodity – the truth. Sympathy and compassion, and actual help and support, are impossible without absolute transparency, no matter how bitter or inconvenient the truth may be to swallow.



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HH: How has the Chernobyl region recovered in the past twenty years after the accident? Will your experience apply to Fukushima?

IG: The works executed in the Chernobyl Exclusion Zone, on the rehabilitation of the territories that were contaminated with radioactive pollution, even in the dry language of statistics, evoke respect and admiration for our people. It can become quite apparent that the borders of this Exclusion Zone can, and should be, reconsidered. Nevertheless, it is necessary to recognize that use of the Exclusion Zone territory (in the meaning of the word "use") will not be foreseeable in the near future. Therefore the most probable way of rehabilitating these territories will be the creation (in the Exclusion Zone) of industrial facilities, such as for storage of nuclear fuel and radioactive waste. Based on my view, this is the most optimum way for rehabilitation of these territories.

HH: In your view, how badly are the prospects of commercial nuclear energy damaged by Fukushima?

IG: I would be very cautious in forecasts. Undoubtedly, the accident will render its influence on the nuclear renaissance. The cost of energy made by nuclear power will increase because of necessary modernization of the existing and new plants to increase the safety of the equipment and structures. However, it is safe to say that in the nearest foreseeable future, nuclear power, as an energy source, does not have any adequate alternative.

HH: What would be your foremost advice to our colleagues in Japan engaged in the horrendous challenge of decommissioning Fukushima?

I would like to provide one important recommendation. As was shown by the experiences during the aftermath of the consequences of the Chernobyl accident, the priority objective of the authorities of Fukushima should be the creation of a barrier system to stop the propagation of radioactive substances and ionizing radiation with a reliable system of monitoring. Only after that is it possible to develop and carry out a strategy to liquidate the consequences of the accident. I understand TEPCO is on the same page.

HH: Mr. Gramotkin, thank you for sharing your thoughts and insights on the subject of Fukushima.



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