editorial

Nuclear power after Chernobyl

The Chernobyl accident confirmed some things that were already known, and it conveyed some new information. It also had important implications for international efforts to improve reactor safety.

It was already known that if an accident were to destroy a large power reactor and there were no effective containment to prevent dispersal of fission products, the effects would be widespread and severe. But now it has been demonstrated.

The effects were not altogether as would have been expected (see the news story on page 17). There were fatalities, but these were confined to the group of reactor operators and firefighters immediately engaged in limiting the scope of the accident. Among the 135 000 people evacuated from a 30-kilometer radius about the plant, there were no fatalities and no apparent cases of radiation sickness.

On the other hand, the financial cost was huge, and the dislocation of population and contamination of land over a large distance from the accident have placed a heavy burden on Soviet society. There has been a severe cost in human terms in psychological reactions and upset living patterns. The long-term health effects are not expected to be statistically measurable against the background of normal incidence of these problems, but no doubt many individuals in the Soviet Union and elsewhere who are stricken by cancer at some future date will wonder if Chernobyl had a part in their misfortune.

The Soviet Union has announced its intention to continue operating the other 14 reactors of similar design and to complete construction of the additional ones being built. Steps to ensure that the Chernobyl accident will not be repeated have been announced. The nuclear-reactor community throughout the world will be deeply interested in the details of the changes being made and their efficacy. No one wants another reactor accident to take place, least of all those whose technical interests are directed toward continuing the contribution of nuclear power to the world's energy supply.

The reactions to Chernobyl should be regarded as a demand to improve and consolidate the activities devoted to making nuclear plants safer. Interest in nuclear-plant safety now crosses national boundaries. Every nation has become interested in obtaining assurance that nuclear plants are safe enough in every other country. The exceptional fear of nuclear technology that was evident after Three Mile Island and even more so after Chernobyl makes it essential that nuclear power be safer than alternative ways of generating electricity.

Despite these two reactor accidents, the safety record of nuclear power has remained good compared with the alternatives. But the heightened realization that nuclear-plant accidents can have effects across national boundaries has generated a call for new international efforts to improve the record in all countries and to generate the safety assurance that is sought worldwide. The plans of the International Atomic Energy Agency to assume a stronger role in uniting world action for a safer nuclear future are certainly in the right direction. These include new agreements for international notification and cooperation if other accidents take place. They also include more visits by international safety-inspection teams to nuclear plants in member states of IAEA and improved international cooperation in distributing information that can help avert unsafe situations.

If one result of the accident is new measures to take nuclear-plant safety to a higher plane wherever the need appears, Chernobyl will not have been all bad.

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