

<JCO 事故の際の巻頭言:[付2]の原文>

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Perils of inadequacies in safety regulation

Last week's nuclear accident in Japan is a major blow to the nuclear power industry. But it also reflects broader problems in that country's management of technology.

Proponents of nuclear power must be shaking their heads in disbelief at last week's accident at a nuclear-fuel processing plant in Tokai, Japan. It seems that untrained and unprotected workers at the plant were blithely mixing excessive quantities of concentrated uranium solution in steel buckets with spoons in order to cut corners and speed up production. This led to a container of the solution going critical, exposed the workers to potentially lethal levels of neutron radiation, necessitated the evacuation of neighbouring houses and terrified the 310,000 citizens of Tokai as they were advised to take refuge in their homes and batten down the windows.

The nuclear accident at Tokai is just the worst of many in recent years. The responsibility lies squarely on the shoulders of the government and, more specifically, on those of the Science and Technology Agency, which is proving itself incapable of adequately regulating the safety of nuclear power. But the problem of the effectiveness of safety regulation in Japan is not confined to nuclear power—or the Science and Technology Agency. Similar deficiencies can, for example, be seen in Japan's regulation of the pharmaceutical industry, where drugs that are of questionable efficacy or downright dangerous—such as non-heat-treated blood products—are allowed onto the market.

The Japanese government seems unable to set up competent regulatory bodies with sufficient staff and expertise. The Science and Technology Agency's Nuclear Safety Commission is a group of part-time academic experts who rubber-stamp documents produced

by a small team of officials, who are far too few in number, and lack the expertise needed to regulate the safety of such a huge and potentially dangerous industry. Similarly, the country has no equivalent of the US Food and Drug Administration, even though its pharmaceutical market is of comparable size to that of the United States.

Will the situation improve significantly after this accident? Based on the record to date, probably not. When the Science and Technology Agency merges with the ministry of education in 2001, responsibility for most aspects of nuclear safety will probably pass to the Ministry of International Trade and Industry and/or a strengthened prime minister's office. But some responsibilities may remain with the merged ministry and agency. Unless the government commits adequate funding, manpower, expertise and accountability to a new regulatory body, the problems of the past will continue. However, there is little public pressure to do this in a society where respect for authority, despite its failings, remains high.

This is bad news for the world's nuclear industry. Despite calls in some circles for greater use of nuclear power to curb carbon dioxide emissions, the use of nuclear power is expected to decline in most of the developed world over the next 20 years. Only in Asia is significant expansion expected, in China, Japan, Korea, and to a lesser extent in Southeast and South Asia. But resistance to the siting of nuclear plants in Japan has been growing year by year, and the Tokai accident will no doubt pump opposition to new heights for many years to come.