

International Concerns About Reprocessing
By Carah Ong¹
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Although there have been major expansions of both the La Hague reprocessing plant in France and the Sellafield reprocessing plant in the United Kingdom in recent years, there is growing concern about the cost of reprocessing and managing the resulting waste, which has led some customers, notably in Germany to cancel contracts in favor of long-term storage.

Many countries, including Germany, Belgium and Switzerland, have decided to end reprocessing programs for the foreseeable future. Even the United Kingdom, previously one of the principal enthusiasts, is likely to end all reprocessing within the next few years because of the decline in foreign and domestic interest.

- **Reprocessing sites endanger the health of citizens.**

There is widespread concern about the health risks of reprocessing, especially clusters of childhood leukemia around reprocessing plants. Independent research from Pr Viel previously found a leukemia cluster in the region around France's La Hague reprocessing plant. A 1997 study by the British Department of Health entitled "Variations in the Concentration of Plutonium, Strontium-90, and Total Alpha-emitters in Human Teeth Collected within the British Isles" found traces of plutonium from the Sellafield reprocessing plant in teeth of children throughout Britain. The Greenland, Iceland, Faroe, Norway and Danish Governments and Parliaments have all protested the UK reprocessing facilities to the British government and at international conventions. The Irish Republic, which is closest to the Sellafield plant, has been a long-term critic because of health concerns.

- **Reprocessing causes serious environmental contamination.**

The reprocessing industry in Europe is responsible for illegal levels of radioactive contamination in the north-east Atlantic Ocean. Virtually all of Europe's radioactive pollution comes from reprocessing plants and its marine pollution has been measured as far away as the west coast of Greenland.

In May 2001, the European Parliament received a report from its Scientific and Technological Option Assessment (STOA) Program which found that gaseous discharges from the reprocessing plant at La Hague, France, are around 35,000 times higher than for a standard French reactor. Its liquid discharges are 1000 times higher. The report also says that alternative methods of managing spent nuclear fuel can be 20 times cheaper than reprocessing.²

In June 2000, the Oslo Paris Commission (OSPAR) decided that nuclear waste reprocessing in Europe should be stopped. Participating parties in the OSPAR Convention for the Protection of the North East Atlantic are: Belgium, Denmark, Finland, France, Germany, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, the UK and the European Union.

Norway has long been concerned about the UK's Sellafield plant and its on-shore liquid radioactive waste tank, which released its contents into the Irish Sea three times yearly until Spring 2003. Norway has long

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² Schneider, Mycle. *Energy and Security*, "Reprocessing in France." Issue #2, December 1997
<http://www.ieer.org/ensec/no-2/france.html>

suffered from emissions of the radioactive chemical Technetium-99 (Tc-99) along its coastline as the Gulf Stream carries the toxin north along the country's fishery dependent coast. The liquid waste underwent substantial cleansing, but Tc-99 remained the most prevalent toxin released. Tc-99 contamination has been measured as far north as Norway's Arctic Spitsbergen Island.

UK to Halt Reprocessing?

Reprocessing Plants in Europe have been plagued by incidents and radioactive releases into the environment. The most recent incident occurred on April 18, 2005 when 20 tons of highly radioactive material leaked from a broken pipe at the Sellafield nuclear reprocessing plant in the United Kingdom.³ The leak occurred in an isolated area of the Thermal Oxide Reprocessing Plant (THORP). The leaked material is a mix of highly radioactive uranium and plutonium in concentrated nitric acid. The affected area of the Sellafield reprocessing plant will remain closed for months as officials devise a way of cleaning up the mess. Special robots may have to be built to clean up the waste as the area is too radioactive for people to enter.

Senior officials at the UK's Nuclear Decommissioning Authority, which owns the Sellafield reprocessing are pushing to close THORP altogether, arguing that it is more cost-effective to close the plant now rather than repair the problems only to decommission the plant as planned in 2012.

Rokkasho Reprocessing Plant, Japan

By the end of 2003, Japan's total plutonium stockpile was between 24.1 and 40.6 metric tons – enough for some 5,000 nuclear weapons (some 5.4 metric tons are currently in Japan, and the rest is held for Japan at the French and British reprocessing plants).⁴

Despite the existence of this huge plutonium stockpile, Japan's nuclear utilities plan to begin commercial operation of a new spent fuel reprocessing plant at Rokkasho-mura in 2007, and to test the plant using spent nuclear fuel beginning in December 2005.

Rokkasho has drawn both international and domestic concern. The Rokkasho plant is the first industrial-scale reprocessing plant in a country not possessing nuclear weapons. Operating at its design capacity, the Rokkasho plant will separate approximately 8 metric tons of plutonium per year, enough to make 1,000 bombs. The operation of the Rokkasho plant would greatly increase Japan's domestic plutonium stockpile and postpone for years Japan's achievement of its stated goal of "no surplus plutonium." Ultimately, Rokkasho's operation in the face of large Japanese stocks of surplus plutonium would raise serious concerns about Japan's commitment to strengthening the international non-proliferation regime.

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³ Sources: Reuters UK, 10 May 2005; Bellona Foundation, 11, 15 May 2005; Greenpeace UK, 13 May 2005.

⁴ International Atomic Energy Agency, Communication Received from Japan Concerning Its Policies Regarding the Management of Plutonium, INFCIRC/549/Add. 1/7, 23 December 2004. Available at <http://www.iaea.org/Publications/Documents/Infcircs/2004/infcirc549a1-7.pdf>.