La Hague, France

Nuclear facility

The reprocessing facility La Hague produces plutonium and uranium from spent nuclear fuel. Large amounts of plutonium and nuclear waste are stockpiled, creating a dangerous proliferation risk. Also, radioactive discharge from the plant pollutes the sea and the atmosphere. Several studies have already shown increased rates of childhood leukemia around La Hague.

La Hague is a nuclear reprocessing plant on the Normandy coast. 50 tons of pulverized plutonium are stockpiled on the site – enough fissile material for more than 5,000 nuclear warheads. Photo credit: duvalmickael50 / creativecommons.org/licenses/by-nc-nd/2.0

La Hague reprocesses up to 1,600 tons of nuclear fuel per year and is the world's largest producer of separated plutonium. Photo credit: UMP Photos / creativecommons.org/licenses/by-nc-nd/2.0

Anti-nuclear protests in front of the AREVA headquarter in Paris on Chernobyl Day 2008. Photo credit: Philippe Leroyer / creativecommons.org/licenses/by-nc-nd/2.0

History

La Hague is a vast nuclear complex on the Normandy coast of France. Commissioned in 1966 and run by the state-owned French company AREVA, La Hague comprises two nuclear reprocessing plants. The facility's initial task was to produce plutonium for use in nuclear warheads. In 1969, when the French military had produced enough plutonium for their weapons program, La Hague began to reprocess civilian nuclear fuel from France, Germany, Switzerland, Japan, Belgium, and The Netherlands. La Hague processes up to 1,600 tons of spent fuel per year and is the world's largest producer of separated plutonium.[1] It currently stockpiles 50 tons of pulverized plutonium oxide, which, if chemically enhanced, could be used to produce more than 5,000 nuclear warheads.[2] Each year, more than 10 tons of this plutonium are transported across France. The proliferation threat that arises from the production, separation, storage, and transport of plutonium in any form cannot be underestimated, especially in times of global terrorism, given France's pro-active policy on nuclear exports.[3] The production of mixed-oxide plutonium fuel (MOX) has only added to this danger, as MOX fuel is technically easier to handle and weapons-grade plutonium can be separated from it relatively easily.[4]

Health and environmental effects

La Hague is contaminating the surrounding countryside in two ways: first of all, radioactive gases like krypton-85 are released into the atmosphere. Greenpeace found 93,000 Bq/m^3 of krypton-85 in the air above La Hague. Normal values range between 1–2 Bq/m^3.[5] Secondly, an estimated 230 million liters of radioactive waste from reprocessing are dumped into the sea each year.[1] After fallout from atmospheric nuclear weapons tests and the meltdown of Fukushima, radioactive discharge from the two nuclear reprocessing facilities of Sellafield and La Hague constitutes the biggest source of radioactive pollution of the world's oceans, even surpassing the effects of the Chernobyl accident.[6]

While the normal concentration of radioactive cesium-137 in the Southern Atlantic is 0.6 Bq/m^3, the English Channel near La Hague has concentrations of 8 Bq/m^3 – more than ten times higher.[6] In 1997, Greenpeace confirmed the contamination of water, marine animals and sediment around the La Hague discharge pipes: water samples showed radioactive isotopes such as americium, a byproduct of plutonium, as well as cobalt, cesium and a beta-activity of more than 200 million Bq/l; normal sea-water activity lies at 12 Bq/l.[1]

Independent studies later found an increased incidence of leukemia in children aged 5 to 9 in the 10 km around La Hague.[7] Moreover, a case-control study published in the British Medical Journal found a significant correlation of childhood leukemia with the use of local beaches and the consumption of local seafood.[8]

Outlook

Despite these scientific findings of detrimental environmental and health effects at La Hague, the widely known uselessness of reprocessing for energy production, and international criticism of the proliferation risk inherent to the facility, France continues to separate plutonium and is even exporting the fissile material to African states. In this way, more and more people are being exposed to the dangerous plutonium from La Hague, and more and more people run the risk of becoming casualties of the nuclear industry, of becoming Hibakusha.

Further reading

The European Parliament recently published a report on the environmental and health effects of the nuclear reprocessing plants in Sellafield and La Hague, which is available online: **www.wise-paris.org/english/reports/STOAFinalStudyEN.pdf**

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