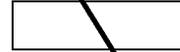


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SWDR 83-131

# Science and Weapons Daily Review

18 February 1983

APPROVED FOR RELEASE  
DATE: FEB 2008

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SIW SWDR 83-131  
18 February 1983

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RADIOACTIVE WASTE MANAGEMENT POLICIES

The French decision to continue spent fuel reprocessing operations at La Hague reflects the belief that prudent waste management justifies continuing reprocessing even without considering the recovery of uranium and plutonium for use as reactor fuels.

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FRANCE: NUCLEAR FUEL REPROCESSING AND RADIOACTIVE WASTE  
MANAGEMENT POLICIES

In a report in January 1983, the Irradiated Fuel Management Working Group, a commission set up in 1981 by the French Government, made the following recommendations:

- The spent fuel reprocessing plant at La Hague is operating safely and without harm to the environment. The expansion that currently is under way should be completed.
- Reprocessing plants should be equipped to extract the long-lived, alpha-emitting components from the bulk of shorter-lived wastes to allow for the shallow burial of the shorter-lived components.
- After being isolated, alpha-emitting wastes might be consolidated by vitrification or other methods and packaged for future disposal in specially constructed vaults, burned up by irradiation in nuclear reactors, or even shot into space. Irretrievable deep burial of wastes containing long-lived alpha emitters is not yet feasible.

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- Interim storage of spent fuel should be considered as a way to delay the need for another new reprocessing plant by 1995, the time when stocks of French spent-power-reactor fuel will grow faster than reprocessing capacity.
  
- Prudent waste management justifies fuel reprocessing even without considering the benefits from the recovery of uranium and plutonium for use as reactor fuels. [ ]

The government-controlled Compagnie Generale Des Materieres Nucleaires (COGEMA) operates the La Hague spent-nuclear-fuel reprocessing plant. The plant was built to reprocess fuel for a gas-graphite reactor, and was modified in 1975 to accommodate light-water power reactor fuel, with a rated capacity of 400 metric tons per year. [ ]

La Hague is the only operational commercial fuel reprocessing plant in the world. France has contracts to reprocess fuel at La Hague for several foreign countries up to 1990. These contracts include the provision for the return to those countries of recovered uranium and plutonium for use as nuclear reactor fuel. After these contracts are fulfilled, the entire future plant capacity will be required for reprocessing French fuel. [ ]

Comment:

The Working Group's support for spent-fuel reprocessing almost certainly guarantees the continued operation of the La Hague plant in spite of recent opposition by antinuclear and environmentalist elements. COGEMA's foreign customers, particularly Japan and West Germany, should be reassured their fuel will be reprocessed as called for by contract, relieving fears that they might need to construct additional spent-fuel storage facilities in the near future. [ ]

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The recommendation to install special equipment at La Hague to extract long-lived, alpha-emitting components from reprocessing wastes probably cannot be implemented for several years. Such separation has been accomplished in laboratories by researchers in France and other nations, but the process will require scale-up and testing before it is commercially introduced.

Although expensive, the advanced waste treatment process would enhance French prestige in radioactive waste management technology. The French already are recognized as leaders in waste vitrification techniques.

The Working Group's suggestion that, only after further study, could vitrified alpha-emitting wastes be disposed of in deep depositories or in special vaults indicates a reluctance on the part of France to make a decision on irretrievable burial of such wastes until the United States takes the lead.

French disposal of alpha emitters in space cannot be taken seriously, but the idea of burning them up by bombardment in reactors might be a useful method in the future. Such a technique was proposed by a prominent US expert several years ago.

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