



Private Fuel Storage

While the nuclear industry is positioning itself to be the “clean energy” of the 21st century, it still faces numerous problems. One of the most urgent is what to do with the highly radioactive waste created by the nuclear process. The proposed geologic repository at Yucca Mountain, Nevada has many issues, including unresolved questions about the suitability of the site to safely contain the waste. Presently, it faces an uncertain future. Desperate still to sell the public and policy makers on a “solution” to the nuclear waste problem, several nuclear power corporations have been pushing for a project known as Private Fuel Storage (PFS). This so-called solution, however, would actually exacerbate our nuclear waste problems instead of diminish them.

The Proposal

PFS, a limited liability company (LLC) formed from eight commercial nuclear utilities, is seeking to establish an interim waste storage facility on the Skull Valley Goshute Reservation in Utah. The project proposes to “temporarily” store 40,000 metric tons of irradiated fuel in dry cask containers aboveground on concrete pads. PFS is attempting to get a 20-year license from the Nuclear Regulatory Commission (NRC) for the facility, which would be located about 45 miles southwest of Salt Lake City, with a possible 20-year license extension.

The Companies

The following eight utilities are members of the PFS consortium. They own or operate a combined total of 22 operating nuclear reactors and three decommissioned reactors in nine states. Two members, Southern California Edison and Indiana-Michigan Power, may have withdrawn from the consortium in the last few years, but this has not been confirmed. While Private Fuel Storage has no track record, the PFS member utilities do have established reputations for heavy pollution, safety violations, and environmental injustice. Some examples are listed below.

- **Indiana-Michigan Power (subsidiary of American Electric Power):** In 1998, after being shut down because its emergency core cooling system was declared inoperable, AEP’s Cook nuclear plant in Michigan was cited for 37 separate safety violations, and fined \$500,000, one of the largest fines in nuclear history.
- **Northern States Power (subsidiary of Xcel Energy):** The Minnesota Department of Public Service revealed that Northern States Power hid serious defects in the steam generators at the Prairie Island nuclear power plant from investigators in 1992. For years, Xcel also denied that pollution levels were increasing in the Mississippi River due to the Prairie Island plant. Eventually Xcel conceded that tritium (a known carcinogen) had been released into the water near the facility, but never compensated the Prairie Island community for this contamination.
- **Consolidated Edison Company of New York:** In 2001, Con Ed sold its nuclear assets – its two reactors at the Indian Point nuclear power plant and the waste stored there - to Entergy. Entergy presently owns 10 nuclear units in 6 states, and is applying for a permit to site one or two new reactors at its Grand Gulf site in Mississippi.
- **GPU Nuclear Corporation (subsidiary of First Energy):** GPU Nuclear Corporation, now a subsidiary of First Energy, owned and operated the Three Mile Island nuclear reactor during the worst nuclear accident in U.S. history. For six months prior to the accident, GPU falsified reactor coolant leak rate data sent to the NRC, thereby avoiding a shutdown order that would have averted the disaster.

- **Florida Power and Light:** Between 1995 and 1998, Florida Power & Light's St. Lucie nuclear power plant was fined \$388,000 by the NRC for numerous safety problems, including leaking radioactive water, broken equipment, inadequate fire protection, lack of emergency planning, and failure to make repairs. In 1997, FPL nuclear plant employees had more complaints substantiated by federal investigators than any of the nation's other 65 nuclear plants.
- **Southern Nuclear Operating Co. (subsidiary of Southern Company):** In 1990, Southern Nuclear faked the results of safety tests on the emergency diesel back-up generators at its Vogtle-1 reactor, and submitted the information to the NRC. In 1994, the NRC fined the company \$200,000 for supplying the agency with falsified information.
- **Southern California Edison (subsidiary of Edison International):** In 1994, Edison was sued by an employee at its San Onofre nuclear power plant. The employee had been diagnosed with chronic myelogenous leukemia, which was linked to radiation exposure from the plant. The exposure could have been prevented, as San Onofre's operators had identified 105 defective fuel rods but chose to wait 18 months until the next scheduled overhaul to replace them.
- **Genoa FuelTech:** Genoa owns the decommissioned Dairyland Power Reactor in LaCrosse, Wisconsin. The Chairman of PFS, John Parkyn, hails from Dairyland Power, where he oversaw Dairyland's nuclear division.

Problems with the PFS proposal

- **PFS does not solve the waste problem:** While concerns about on-site waste storage are justified, moving some waste to an interim storage facility will not resolve this problem, nor significantly improve security at reactor sites. As long as we continue to produce nuclear waste, it will be stored at every operating reactor around the country. Irradiated fuel just removed from a reactor, for instance, is required to cool and decay on-site for five to ten years before it can be transported.
- **PFS means unnecessary transport of dangerous waste:** As the handling and transport of nuclear waste increases, so does the risk of accidents. The more often waste containers are moved, and the farther distances they travel, the more likely it is that problems will occur. For this reason, the transportation of high-level nuclear waste should be absolutely minimized. Moving waste from reactors around the country to Utah, and then eventually to a permanent repository, would clearly not do this. Waste moved to Utah for so-called "interim" storage would just have to be moved somewhere else at a later date.
- **PFS may become de-facto permanent storage:** Because of the close proximity of the two sites, the PFS proposal is inseparable from the Nevada repository debate. The "temporary" nature of the PFS proposal is dependent on Yucca Mountain opening. If Yucca Mountain is not approved, the waste would be left in Utah indefinitely. At a time when there remain significant technical and policy questions about Yucca Mountain, this is inappropriate. The recent news that scientific documentation surrounding Yucca Mountain's safety and competency was falsified calls into question the argument that the site is suitable for containing the waste. The opening of PFS would put pressure on the approval of Yucca, undermining the integrity of the site's characterization and licensing processes. This aside, the capacity at Yucca Mountain is also limited to 70,000 metric tons, which is less than the total waste expected to be produced by 2010. This total will increase with trends for reactor license renewal and the nuclear industry's push to construct new nuclear power plants. Thus, even if Yucca Mountain opens, a "temporary" PFS facility would likely lapse into a secondary permanent storage facility for surplus waste – a task for which it is unsuited.
- **PFS would derail national nuclear waste policy:** The NRC decision to consider the PFS license application under its routine procedure for approving Independent Spent Fuel Storage Installations is inappropriate. Those installations are orders of magnitude smaller than the PFS proposal, and do not involve transporting waste over long distances. Remote-site high level nuclear waste storage was intended to only be approved with careful Congressional oversight. Approving PFS this way, because of its scope and private nature, would set a disturbing precedent for granting private industry the authority to direct national waste policy.

- **PFS poses safety risks:** The PFS proposal would be an aboveground dry cask storage facility, where waste containers would be placed in steel and concrete casks, and set outside upon concrete slabs. This storage, while more stable and secure than irradiated fuel pools, is still a relatively new and unproven technology. Dry casks have had several problems in their short history, including hairline fractures from manufacturing, explosions due to chemical reactions during loading, and welding failures. Outside aboveground storage also directly exposes the waste casks to sun and water, as well as to chemicals in the air and soil from nearby mining and industrial activities. All of these will accelerate corrosion. Since PFS is such a minimal facility, there will be no way to repackage waste on-site. Thus if there is any problem with cask containment, the facility will be unable to deal with it.
- **PFS LLC bears minimal liability:** As an LLC, PFS has the minimal liability of a corporation within a corporation. To date, PFS has not adequately addressed its financial responsibility and liability. Even if the Price Anderson Act – which limits liability for nuclear operators - fully applies to PFS, there would be little ground on which the company could be held accountable beyond the minimal insurance it would be required to have. PFS LLC has few assets and is expected to have little income. As a result, taxpayers would likely bear most of the cost of any accident that might occur.
- **PFS is unfair to Utah:** The state of Utah has no reactors and produces no nuclear waste. In fairness, Utah should not be made to shoulder a burden it is not responsible for creating.
- **PFS would threaten public health:** If the storage casks fail for any reason - human error during shipping or handling, natural disaster, accident, act of sabotage, or because of gradual cask corrosion - the waste would be released with significant consequences. Radioactive material in the soil, water, and air, and its accumulation in the food chain, would seriously threaten public health. Since there will be no repackaging facility at the site, it will be difficult to address problems with the casks.

Recent Developments

Probability of Plane Crashes: In March 2003, the NRC's Atomic Safety and Licensing Board (ASLB) issued a Partial Initial Decision on PFS's license application. Based on concerns brought by the State of Utah that a fighter jet could crash into the facility, which is located adjacent to Hill Air Force Base and the Utah Test and Training Range (UTTR), the Board ruled that it could not recommend a license until PFS had addressed the risk of such an accident. In August 2004, several weeks of closed-door hearings were held between ASLB, the State of Utah, and PFS, concerning the possible consequences of such a crash. All of the information on the consequences of a crash into the facility is being treated as safeguards information. On February 24, 2005, the ASLB ruled in favor of licensing PFS, dismissing the remaining contentions brought by the State of Utah. The ASLB decision theoretically allows the Private Fuel Storage license application to move forward before the Commission for final approval. The State of Utah, however, has already appealed the decision to the entire ASLB body. The appeal is based on the dissenting opinion by Judge Lam in the ruling on crash probability

DOE/NRC Disagreement: In October 2004, at the Nuclear Waste Technical Review Board meeting in Salt Lake City, the DOE announced that it would not be able take PFS waste to Yucca Mountain. DOE's Standard Contracts for the Disposal of Spent Nuclear Fuel require it to only take bare uncanistered fuel directly from nuclear utilities at reactor sites. Waste stored at PFS will be in welded canisters, and with no repacking facility on-site to change that, the waste would not be eligible for transport.

Wilderness Proposal: Legislation offered by Rep. Rob Bishop (R-Utah) at the start of the 108th Congress would create a wilderness area adjacent to the proposed PFS storage site. The 100,000-acre Cedar Mountain wilderness area, if approved, would interfere with the plans PFS has for a rail spur into Skull Valley. A rail spur coming south from the Great Salt Lake into the valley has been discussed as the most feasible way to move waste to the storage site on the Goshute Reservation. The legislation would prohibit the rail spur because the Department of the Interior cannot grant a right of way across wilderness land. The Senate attempted but failed to attach Bishop's legislation to the 2005 Defense Authorization Bill in June 2004. The bill will have to be reintroduced in the new 109th Congress.

*For more information please refer to “[Another Nuclear Rip-off: Unmasking Private Fuel Storage](#)”,
Public Citizen's Critical Mass Energy & Environment Program, July 2001.*