

“The Most Serious Nuclear Incident Since Chernobyl”

By Bonnie Urfer

STOCKHOLM — Forsmark 1, a Swedish boiling water reactor, experienced an emergency shutdown on July 25, when an electrical short in the national power grid caused a blackout that included the site. A lack of power in the control room is said to have caused chaos as instruments stopped working. Without enough back up power the operator loses instrumentation and control over the reactor and then faces an inability to cool the core. Two out of four generators worked and helped prevent a catastrophe. The scram (hot shutdown) at Forsmark revealed other faults in the electrical system and three more reactors were subsequently shut down.



A July 25 shutdown of the Forsmark nuclear power reactor in Sweden, north of Stockholm, reportedly could have resulted in a meltdown and it was sheer luck that prevented a catastrophe.

Control rods inserted properly in the core but workers could not verify the position of the rods. Two converters failed and two diesel generators did not automatically start after the scram. The emergency cooling system did, for a short time, pump water into the reactor vessel and the water spraying system in the containment building was activated. The reactor was not considered in safe mode until the internal power grid started 23 minutes after the scram. A reactor of the Forsmark type risks a meltdown in 90 minutes. “If the other two subs had been knocked out as well this would have led to a total loss of power,” stated a report issued by the Swedish government’s nuclear regulatory agency, Swedish Nuclear Power Inspectorate (SNPI).

Two Uninterruptable Power Supply (UPS) units failed leading to the back up engine’s failure to start automatically. The loss of power resulted in the loss of two auxiliary feed water pumps.

According to Vattenfall, Forsmark’s owner-operator, the generator frequency protection breakers in the UPS failed due to a design error.

“The flaw in nuclear power [reactors] is their complexity,” said Michael Sailer, a nuclear energy expert at the Institute for Applied Ecology in Darmstadt near Frankfurt. “Based on

BLM Denies PFS a Right-of-way and the BIA “Disapproves the Proposed Lease” — No Nuclear Waste for Skull Valley

By Bonnie Urfer

For 12 years, Private Fuel Storage (PFS), a shrinking consortium of eight electric utilities, and the Skull Valley Band of Goshutes, a small tribe with a reservation 45 miles west of Salt Lake City, had been negotiating a deal to store 44,000 tons of reactor irradiated fuel rods atop a giant concrete slab. That deal evaporated on September 6, when the Bureau of Indian Affairs refused a land lease to PFS and the Interior Department’s Bureau of Land Management ruled against rail traffic through reservation land and the recently designated Cedar Mountain Wilderness Area. PFS has spent more than \$20 million on the plan — including licensing costs and payments to the Skull Valley Goshutes.

Utah has no nuclear reactors but would have been home to the unwanted deadly reactor waste for up to 50 years — longer if the federal government fails to open a national repository at Nevada’s Yucca Mountain. Some of the waste is so old that the reactors that generated it have been torn down.

Residents worried that Utah could have become a “de facto” dump. Thousands of Utah residents wrote letters and phoned the Interior Department to express their opposition to radioactive waste transport across native land and the wilderness area. The Skull Valley band of Goshute has been divided on the issue of waste storage. Utah’s former Governor, Mike Leavitt and current Governor Jon Huntsman, Jr., have fought the plan. And all members of the state’s congressional delegation opposed the deal.

Healthy Environment Alliance of Utah, Shundahai Network and Nuclear Information and Resource Service among many others actively campaigned to prevent PFS from transporting the waste across the U.S. and abandoning it on Native American land.

Utah sued the Nuclear Regulatory Commission for issuing a license in February for dry cask storage in Skull Valley.

Nukewatch board member Gail Vaughn, in LaCrosse, Wisconsin (also home to PFS), has been dedicated to the struggle against Goshute storage from the start. “It’s thrilling to see a responsible, sensible judgment delivered on the national level regarding nuclear waste. Let’s hope this starts a trend,” says Vaughn.”

PFS plans to challenge the decisions. Failing that, if a new Goshute site is targeted by PFS, the consortium must start over and can look forward to another 12 years of opposition.

its principle alone it is impossible to test all the contingencies with nuclear power.”

According to Lars-Olov Höglund, chief construction engineer of the Forsberg reactor, this is the most serious nuclear incident since Chernobyl and it was pure luck that all four reserve generators had not been knocked out after the power grid short circuit. “It’s a bit like a lottery,” said Höglund. “Although two generators kicked in it could have been one, or zero.”

Greenpeace called for immediate closure of all Swedish reactors on August 3. The SNPI considered shutting down all but one of the country’s reactors but Sweden’s reactors supply 50 percent of the country’s energy and Forsmark 3, Oskarshamn 3, and Ringhals 1, 2, 3 and 4 were allowed to continue operating.

Japan Plagued by Violations, Malfunctions, Accidents

By John LaForge

A long-running series of radiation leaks and worker contamination incidents caused by Japan’s nuclear industry has soured the general perception of nuclear power. On May 18, just prior to a new string of accidents, the president of Japan Nuclear Fuel, Inc. (JNFI), Isami Kojima, said to the press, “All parties must ... contribute to improving the image of nuclear in public opinion.”

But Mr. Kojima’s own operations promptly made things worse by exposing two workers to plutonium in the span of four weeks. Improving nuclear’s image is a tall order considering the following list of problems.

* In late May, JNFI’s nuclear waste reprocessing experiment at Rokkasho exposed a 36-year-old worker who may have ingested the plutonium.

* May 22, a leak of radioactive steam inside a reactor near Fukushima forced it to shutdown temporarily. The operator, Tokyo Electric Power Company (TEPCO) said, “A pin-sized hole in the fuel rod may have caused the leak” and they asserted that, “There was no danger of a leak outside the compound in northern Japan.”

(Note: A steam leak from an operating fuel rod is extremely dangerous. Holes in fuel rod cladding indicate “embrittlement” of the material, a chronic and industry-wide fault that haunts all aging reactors. Further, the radioactive steam bathes everything in the room with deadly isotopes, and there is no way to clear the area of radioactivity without releasing it, diluted, to the environment.)

* June 15, violent shaking of one of the Hermosa nuclear power station’s giant turbines — 100 miles west of Tokyo — forced it to shut down. The London *Guardian* reported that, “The nuclear industry in Japan has been plagued by safety violations, reactor malfunctions and accidents.”

* June 24, the deadly Mihama reactors, operated by Kansai Electric Power Company, also near Fukushima, had a radioactive steam leak in Unit Number 2 and was also forced to shut down. The company, of course, said no radiation was released to the environment. The site is where five workers were killed in 2004 by high-pressure steam that burst from a ruptured corroded pipe.

* June 25, the internal contamination of another JNFI worker, who was found to have plutonium in his nose, moved the governor of the prefecture to personally condemn the operator of the experimental reprocessing system — none other than Isami “improve the image” Kojima, of JNFI. “I’m giving a strict reprimand,” said Governor Shingo Mimura to Kojima who then promised to require workers to wear masks. The 19-year-old worker was not wearing one while he was inspecting solid reactor fuel made of a mixture of uranium



In Reagan Era-Like Move, the DOE to “Strengthen” Radiation Health and Safety Regulation by Eliminating it Altogether

By John LaForge

WASHINGTON, DC — While claiming with a straight face that the Department of Energy is “trying to strengthen the way we do environment, safety and health policy,” Deputy Energy Secretary Clay Sell announced May 22, that the department will eliminate its office for environment, safety and health. The *Energy Daily* reported that the office, established in 1986 — after the nation-wide extent of radioactive contamination in the nuclear weapons production system was publicized — would be closed down. Headed by an assistant secretary of energy, that position “is now vacant,” the *New York Times* reported.

The office’s responsibility for monitoring radioactive contamination and pollution at nuclear weapons sites, as

The Swedish Green Party has demanded an independent inquiry into the safety of the nuclear reactors.

In the classic industry response, Claes-Inge Andersson, head of public relations for Forsmark, said the risk of a meltdown had been “nonexistent” — a preposterous claim — yet both he and a spokesman at the SNPI said they rated the event “serious.” SNPI stated that the five reactors left on-line do not have the same construction flaw. Vattenfall is redesigning and changing components effecting electrical wiring, installing a parallel power supply and speed measurement device.

After the near meltdown at Three Mile Island in the U.S. in 1979, Sweden committed to phasing out nuclear energy by 2010. The phase out has been revised to let the reactors run their 30-year life spans. Only Sweden’s two-unit Barsebäck reactors, located 25km from Copenhagen (the capital of anti-nuclear Denmark), have been closed at a cost of \$2.5 billion.

In early May, the Swedish government and SNPI allowed the Forsmark reactors to increase power at its three units.

Vattenfall operates similar facilities in other European countries. A report about Forsmark is forthcoming.

and plutonium. A JNFI representative said, “No immediate health problems were found, and no radiation leaked outside,” although the worker “took in a small amount of radioactive material.” The company also said “no radioactivity was found in his lungs,” but admitted that results of an internal examination would not be available for 10 days.

(Note: The denial of “immediate” health problems is another public relations trick, since the effects of radioactive contamination — cancer, leukemia, birth defects and immune dysfunction — normally take 20 or 30 years to appear.)

* July 20, a swarm of jellyfish caused the shutdown of a cooling system at the Hamaoka reactor site in central Japan when they clogged intake filters on pipes that draw cold water from the sea. The two reactors had their power reduced 60 percent for three hours while the jellyfish were cleared from the filters.

(Note: Nuclear reactors are all built near large bodies of cold water which is used in gigantic volumes to cool both the reactor vessels themselves and the tons of waste fuel rods that remain thermally as well as radioactively hot for thousands of years. One contribution to climate change rarely attributed to nuclear power is its artificial heating up of these huge volumes of water which is continuously returned to rivers, lakes and oceans.)

Colorado Leak

DENVER — The U.S. Geological Survey has notified the Nuclear Regulatory Commission that a tank containing radioactive water and used reactor equipment has been leaking in Lakewood, Colorado. The storage tank is at the site of an experimental reactor at the Denver Federal Center. Some 575 gallons of the hot waste water spilled, with three gallons per day leaking after the tank was patched. USGS officials emphasized that no evidence of the leak has been detected at a nearby groundwater monitoring well at the Denver Federal Center. — *Denver Post*, June 27, 2006

Palo Verde Shutdown

PHOENIX, Arizona — During a summer heat wave the Palo Verde nuclear reactor suffered a loss of pressure incident that spilled thousands of gallons of water into the reactor’s turbine building and shutdown one of the two working reactors. A third reactor has been out of commission since December when it was shut down due to a vibrating pipe.

— *The Arizona Republic*, July 4, 2006

Vermont Yankee

VERNON, Vermont — A low-level emergency was declared at the Vermont Yankee Nuclear reactor after a short circuit caused smoke to appear in the plant’s turbine building. The problem caused the plant to shut down two of its six pumps that feed water back to the reactor after it is condensed from steam. A spokesperson for the site was quick to point out that there was no evidence that the pump problem was related to the reactor’s recent 20 percent power boost. The pump was replaced and the plant returned to full power.

— *Rutland Herald*, June 1, 2006

well as workers’ health and safety regulation compliance meant that it was in charge of “investigating military contractors’ violations and penalizing them.” Even so, its first director, Paul Ziemer, told the press that bomb production schedules were put ahead of safety or environmental protection by the giant contractors.

In the past, the office has penalized contractors at the Hanford Reservation in Washington State for contaminating workers. And at Pantex in Texas for botching the disassembly of an H-bomb and for retaliating against a whistle blower.

Most significant among the office’s duties has been a research program into the effects of low-dose radiation exposure on both former nuclear weapons workers and Japanese survivors of the U.S. atom bomb attacks.