Panel on Nuclear Waste Disposal to Propose Above-Ground Storage

By MATTHEW L. WALD

WASHINGTON — A commission created to help resolve the impasse over the disposal of the nation’s nuclear waste will propose establishing one or more sites where used reactor fuel could be stored in steel and concrete structures on the earth’s surface for decades, members of the commission said this week.

A draft recommendation for such sites is to be discussed on Friday at a meeting of the panel, which was set up last year by the Department of Energy after President Obama canceled a longstanding plan to bury waste at Yucca Mountain, a site in the Nevada desert.

The commission will also recommend opening a new effort to find a burial site, members said, and suggest that it be led by an organization that is independent of the Department of Energy, which has been working on the waste disposal effort for decades.

Commission members say they will suggest securing the assent of local and state governments before a burial site is chosen. With a selection process that is based more on science than politics and the promise of local economic benefit, a host site could potentially be found, some of them said. Yucca Mountain was chosen by Congress in 1987 after a battle driven by not-in-my-backyard politics.

Friday’s meeting will be the first public discussion of draft recommendations by the panel, which is scheduled to issue a draft report this summer and a final report next year.

The quest for a national repository for spent fuel has been a festering issue for decades but gained higher visibility after a March 11 earthquake and tsunami hit the Fukushima nuclear plant in Japan. The disaster not only damaged reactors but led to the loss of cooling water in at least one pool of spent radioactive fuel, raising the risk of the release of radioactive materials.
At nuclear plants in the United States, pools of spent fuel are far more heavily loaded. The National Academy of Sciences warned in a study in 2005 that the presence of vast stores of radioactive fuel could make the plants an attractive target for terrorists.

For now, members of the waste commission say, the panel is unlikely to make a recommendation for starting work on two controversial disposal methods: reprocessing the spent fuel to recover plutonium for reuse, as France and Japan do, or building a new class of reactors that would break up the most troublesome wastes into materials that are easier to handle. Instead, it will recommend more research, the members said. “Neither the technology nor the economics are ready to compel us to make a decision on that at this point,” said Phillip A. Sharp, an Indiana Democrat on the commission.

The 2005 study by the National Academy of Sciences, ordered by Congress after the attacks of Sept. 11, 2001, made a variety of recommendations for nuclear waste disposal, some of which were kept secret. One obvious approach has been moving the fuel into dry casks, or steel and concrete structures in which the fuel is cooled by the natural circulation of air rather than any moving parts. Such casks are already in use at a variety of reactor sites.

The commission will recommended that storage of such casks be centralized at a handful of sites, starting with “orphan” sites where the reactors have been retired and torn down. The number of orphaned nuclear sites will grow significantly before the United States can establish a permanent burial place, commission members predict.

Some nuclear industry experts have been hoping for a stronger commitment to recycling, in which the fuel is chopped up and the plutonium that was created during reactor operations is scavenged and purified for use in new fuel. Leftover uranium is purified and could also be reused, but most of it is stockpiled. But recent studies argue that there is plenty of virgin uranium and thus no reason to recycle. And American utilities have been reluctant to use the plutonium fuel, even when asked by the Energy Department in an effort to help dispose of surplus plutonium from the weapons program.

Areva, the French nuclear company, has been arguing that recycling cuts the cost of disposal and eliminates the need to mine uranium, which itself is environmentally damaging. If the fuel is moved to above-ground casks, said David C. Jones, a senior vice president of the company, “We’re essentially back to where we were 30 years ago,” when Congress first told the Energy Department to look for a burial site.

The draft recommendations to also include a plan to provide steady financing for the site selection and development process from money collected by utility companies that generate nuclear waste. Congress has been intermittently stingy in appropriating money, prodded
partly by one of the opponents of the Yucca project, Senator Harry Reid of Nevada, the Democratic majority leader. Citing Senator Reid’s stance, Republicans in Congress have in recent months stepped up their criticism of President Obama’s decision to cancel the Yucca project, saying that it was driven purely by politics.