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NUCLEAR SAFETY LEFT HANGING AS CRANE DANGLED FUEL RODS
MICHIGAN INCIDENT GOT WARNING BUT NO FINE

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A 110-ton load of **nuclear** waste dangled for 55 hours above a cooling pool last October as two workers at a southwest Michigan **nuclear** power plant improperly manipulated a crane that had frozen, federal regulators concluded in a recent review of the incident.

The **Nuclear** Regulatory Commission cited the **Palisades Nuclear** Power Plant for a minor safety violation but did not impose a fine - a response considered weak by at least one former federal **nuclear** reactor inspector and several activists who have examined the case. Under the NRC's worst-case scenario, if the suspended load had accidentally dropped, a fire could have ignited, leading to formation of a radioactive cloud. The cloud could have put thousands of people downwind of the plant - all the way to Kalamazoo - at risk of fatal radiation poisoning.

Ross Landsman, an inspector with the NRC for 25 years till his retirement last year, said that even though the odds of such a sequence were infinitesimally remote - the scenario would have to be triggered by an unusual incident such as an earthquake - the NRC was too lenient.

"They have words now to make it seem all right. It's not. This is the worst possible place" to have an unsealed cask of **nuclear** fuel "suspended. To me, it's a big deal," he said.

Palisades spokesman Mark Savage disagreed.

"In this case, the fuel was always in a safe condition," he said. The 14-foot-tall cask had barely broken the surface of the 40-foot-deep cooling pool when the crane stopped, he said. The incident, however, illustrates how the combination of human error and equipment failure can combine to whittle away the multiple, redundant safeguards that protect the public and plant workers from **nuclear** hazards.

Palisades, the smallest of Michigan's three **nuclear** plants, produces enough electricity to power about 500,000 homes. The Fermi 2 plant in Monroe County on the shore of Lake Erie is the closest plant to metro Detroit. **Palisades** and Cook are both in southwestern Michigan along Lake Michigan.

The incident, which did not appear on the daily log of **nuclear** plant irregularities compiled by the NRC, was detailed in an NRC quarterly report published Jan. 25. The log often notes things as seemingly minor as an accidentally tripped alarm.

The load was safely lowered 55 hours after an improperly calibrated fail-safe system stopped the load as it was being raised. The citation from the NRC was of "minor safety significance" - a type that U.S. **nuclear** plants typically receive several times each year. But in its report, the NRC said the workers' actions were neither authorized by their supervisors, nor allowed under safety rules, and "represented an increase in the risk of a load drop" that could have cracked the cooling pool below. A cracked pool could have drained the water that cools tens of thousands of spent **nuclear** fuel rods - creating the possibility of a fire.

A more plausible, though still very unlikely, scenario would have been an accident contained to the plant grounds but creating a radioactive mess that could have shut down the plant for years, said Landsman.

"It would have made a hole in the fuel pool and made a huge mess," he said. "Spent fuel rods all over the floor and a cracked pool. It would have shut the plant down" for years. Dave Lochbaum, director of the **nuclear** safety project at the Union of Concerned Scientists and a former **nuclear** reactor engineer, said that having the waste dangle in the air for more than two days increased risks of a serious accident.

"What's most troubling is that workers with years and years of experience undertook that action without" authorization, he said. "That's shifting the balance from skill and careful thinking to luck."

Regulators and plant officials say the mechanical safeguards operated as they should have. "I don't want to trivialize it. It clearly had our attention," said Jan Strasma, spokesman for the **Nuclear** Regulatory Commission. "But there was no threat to health and safety."

The incident at **Palisades** has few precedents.

In 1995, a 122-ton cask of fuel hung above a cooling pool at Prairie Island **Nuclear** Plant in Minnesota when its brake improperly engaged. That load was safely lowered after 16 hours. Other plants have had similar problems during practice transfers.

Kevin Kamps, **nuclear** waste specialist at the Washington D.C.-based **Nuclear** Information and Resource Service, said the lack of public notice of the **Palisades** problem is troubling. The incident was not included on the NRC's Internet listing of daily incident reports, nor on event reports that are filed by plant operators with the NRC and available to the public online.

Strasma said the **Palisades** problem did not fit the criteria for an event report, and said that the agency was in frequent contact with an inspector on the scene even though it wasn't listed on daily reports.

The daily reports are informal communications about events as significant as radiation leaks and as mundane as inadvertently tripped fire alarms and plant management changes.

Strasma acknowledged that far less serious matters than the **Palisades** incident are routinely included in the daily reports, and said there's "not a clear-cut answer" why the crane problem wasn't included.

Palisades is owned by CMS Energy Corp, which plans to sell the plant by the end of 2007. (SIDEBARS)

THE WORST CASE

The scariest **nuclear** accident in Michigan was the 1966 partial meltdown of the Fermi 1 **nuclear** reactor near Monroe that inspired the 1975 book "We Almost Lost Detroit."

The trouble started when a piece of metal plate dislodged, clogging the flow of sodium coolant throughout the reactor.

Plant officials maintained that only 1% of the uranium fuel melted, but critics say the plant came close to a runaway reaction that could have killed people for miles around the plant. No radiation was released, but the plant never returned to useful operation.

3 PLANTS IN STATE

Michigan has three operating **nuclear** power plants. They supply about 25% of Michigan's electrical needs.

***Palisades**, near South Haven on Lake Michigan's shore, has operated since 1971, with a generating capacity of 798,000 megawatts - enough to power 500,000 typical homes.

*Cook **Nuclear** Power Plant at Bridgman on Lake Michigan's shore has two units, operating since 1975 and 1978. Combined, they can generate 2 million megawatts, enough to power 1.25 million homes.

*Fermi 2 **Nuclear** Power Plant near Monroe began operations in 1985, and has a capacity of 1.1 million megawatts, enough to power about 688,000 homes.

MEETINGS SCHEDULED

Public meetings related to the **Palisades Nuclear** Power Plant's proposed license renewal are scheduled for April 5 at 1:30 and 7 p.m. at Lake Michigan College, 125 Veterans Blvd., South Haven.

Federal regulators will be available for questions one hour before each meeting. The plant seeks a 20-year renewal of its license, which expires in 2011. For more information on the proposed renewal go to:

www.nrc.gov/reactors/operating/licensing/renewal/applications/palisades.html

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ILLUSTRATION: Drawing Detroit Free Press;Map;Photo Herald-Palladium photo via AP

CAPTION: The **Palisades Nuclear** Power Plant near South Haven is seeking a 20-year renewal of its operating license, which expires in 2011.

CAPTIONWRITER: Herald-Palladium photo via AP

MEMO: SIDEBARS ATTACHED;SEE MAP AND DRAWING IN MICROFILM, PAGE 9A

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