

EDO Principal Correspondence Control

FROM: DUE: 04/10/02 EDO CONTROL: G20020184  
DOC DT: 03/28/02  
FINAL REPLY:

Representative Marcy Kaptur

TO:

Chairman Meserve

FOR SIGNATURE OF : \*\* PRI \*\* CRC NO: 02-0228

Chairman Meserve

DESC: ROUTING:

Review of Safety and Operating Concerns at the  
Davis-Basse Nuclear Power Plant

Travers  
Paperiello  
Kane  
Norry  
Craig  
Burns/Cyr  
Dyer, RIII  
Wessman, IRO

DATE: 04/01/02

ASSIGNED TO: CONTACT:  
NRR Collins

SPECIAL INSTRUCTIONS OR REMARKS:

OFFICE OF THE SECRETARY  
CORRESPONDENCE CONTROL TICKET

Date Printed: Mar 29, 2002 16:48

---

**PAPER NUMBER:** LTR-02-0228 **LOGGING DATE:** 03/29/2002  
**ACTION OFFICE:** EDO

**AUTHOR:** REP Marcy Kaptur  
**AFFILIATION:** REP  
**ADDRESSEE:** CHRM Richard Meserve  
**SUBJECT:** Requests expeditious review of the safety and operating concerns at the Davis-Besse nuclear power plant in Ottawa County, Ohio

**ACTION:** Signature of Chairman  
**DISTRIBUTION:** RF

**LETTER DATE:** 03/28/2002

**ACKNOWLEDGED** No  
**SPECIAL HANDLING:** OCA to Ack  
OCM #9983

**NOTES:** COMMISSION CORRESPONDENCE

**FILE LOCATION:** ADAMS

**DATE DUE:** 04/12/2002 **DATE SIGNED:**

EDO --G20020184

9983

MARCY KAPTUR  
MEMBER  
9TH DISTRICT, OHIO

COMMITTEES:  
APPROPRIATIONS

SUBCOMMITTEES:  
AGRICULTURE, RURAL DEVELOPMENT,  
FDA AND RELATED AGENCIES  
VA, HUD, AND INDEPENDENT AGENCIES  
LEGISLATIVE BRANCH



**Congress of the United States**  
**House of Representatives**  
**Washington, DC 20515-3509**

WASHINGTON OFFICE:  
2366 RAYBURN BUILDING  
WASHINGTON, DC 20515-3509  
(202) 225-4146  
FAX: (202) 225-7711

DISTRICT OFFICE:  
THE OHIO BUILDING  
420 MADISON AVE., STE. 1250  
TOLEDO, OH 43604  
(419) 259-7500  
FAX: (419) 255-9623

March 28, 2002

Richard A. Meserve, Chairman  
Nuclear Regulatory Commission  
One White Flint North Building  
11555 Rockville Pike  
Rockville, MD 20852

Dear Chairman Meserve:

I write your agency with the utmost urgency to ask your expeditious review of the safety and operating concerns at the Davis-Besse nuclear power plant in Ottawa County, Ohio.

My paramount concern is for public safety. I realize that both the Commission and FirstEnergy, the private company that owns Davis-Besse, share that concern. Therefore, I ask the Commission to organize and facilitate as soon as possible an on-site fact-finding session for Members of Congress and key elected officials from northern Ohio, southeastern Michigan and other areas that might have plants with similar problems. I believe this on-site session is necessary for concerned Members of Congress to grasp the situation fully and assess the necessary steps to address any shortcomings.

The recent discovery that boric acid in cooling water had eaten a hole almost completely through the six-inch-thick cover lid of the reactor at Davis-Besse causes me grave concern. Indeed, this is the second major mishap in the last two decades—both of which went undetected by the NRC—related to this plant's operations.

At a minimum, one fundamental short-term issue is whether the plant should be allowed to operate without a complete replacement of the affected areas and components. A longer-term question is whether this particular type of plant should be allowed to continue operation at all, even if temporarily repaired, or if our region should be considering the development of other energy alternatives for the future. Again, my primary concern is for public health and safety.

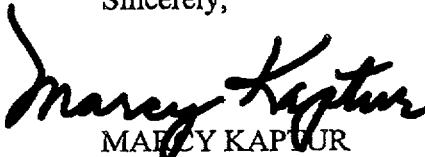
According to available information, boric acid, a principal component of the coolant, ate through the six inches of carbon steel comprising the lid of the reactor vessel. Only 3/16 inch of stainless steel liner remains. I understand that the high pressure (2,200 pounds per square inch) inside the reactor was creating a bulge in this stainless steel. This

clearly indicates the integrity of the reactor could have been compromised and it might have been just a matter of time before the steel liner ruptured and caused a loss of coolant.

I have enclosed an article that appeared in the *New York Times* on Tuesday March 26, 2002. This article outlines the problems experienced at the plant and the proposed responses by the plant's owner, FirstEnergy Corporation, as well as the nuclear industry and the Commission.

I look forward to NRC's prompt response.

Sincerely,



MARCY KAPTUR  
Member of Congress

www.nytimes.com

# The New York Times

ON THE WEB

March 26, 2002

## U.S. Orders Checks for Corrosion at Nuclear Reactors

By MATTHEW L. WALD

**W**ASHINGTON, March 25 — Nuclear reactor operators have been ordered to check their reactor vessels after the discovery that acid in cooling water had eaten a hole nearly all the way through the six-inch-thick lid of a reactor at a plant in Ohio. The corrosion left only a stainless-steel liner less than a half-inch thick to hold in cooling water under more than 2,200 pounds of pressure per square inch.

At the 25-year-old Ohio plant, Davis-Besse, near Toledo, the stainless steel was bent by the pressure and would have broken if corrosion had continued, according to the Nuclear Regulatory Commission, where officials were surprised by the discovery. They said they had never seen so much corrosion in a reactor vessel.

The commission, which has warned plants for years to watch for any corrosion, has ordered all 68 other plants of similar design — pressurized-water reactors — to check their lids. The commission is particularly worried about a dozen of the oldest plants and ordered them to report by early April whether they were safe enough to keep in service. The commission told these plants to demonstrate that technicians there would have noticed such corrosion in their normal inspections, had it occurred.

If the liner had given way in the Ohio reactor, experts say, there would have been an immediate release of thousands of gallons of slightly radioactive and extremely hot water inside the reactor's containment building.

The plants have pipe systems that are meant to pump water back into a leaking vessel, but some experts fear that if rushing steam and water damaged thermal insulation on top of the vessel, the pipes could clog. In that event, the reactor might have lost cooling water and suffered core damage — possibly a meltdown — and a larger release of radiation, at least inside the building.

Such extensive corrosion "was never considered a credible type of concern," said Brian W. Sheron, associate director for project licensing and technology assessment at the regulatory commission.

Small leaks of cooling water are common, Mr. Sheron said, but engineers always thought that if cooling water leaked from the piping above the vessel and accumulated on the vessel lid, the water would boil away in the heat of over 500 degrees, leaving the boric acid it contains in harmless boron powder form. At Davis-Besse, however, it appears that the water was held close to the metal vessel lid, or head, perhaps by insulation on top of the vessel.

The reloadable  
**Starbucks**  
Card

You fill it up



Boric acid is used in cooling water to absorb surplus neutrons, the subatomic particles that are released when an atom is split and go on to split other atoms, sustaining the chain reaction.

Engineers are not yet certain why the corrosion occurred.

A nuclear engineer at the Union of Concerned Scientists, a nonprofit watchdog group that is often critical of the Nuclear Regulatory Commission, said the discovery was troubling.

"This is really something that shouldn't happen," said the engineer, David Lochbaum. "You shouldn't get such a huge hole in a pressure-retaining vessel."

Edwin S. Lyman, the scientific director of the Nuclear Control Institute, an anti-proliferation group based here, said: "This is a pretty serious issue, and it has generic implications. And it was discovered by accident."

Workers stumbled on the problem in the process of fixing a leaking tube that connects to the vessel head, which is 17 feet in diameter and weighs 150 tons. The tube is part of the reactor control system; inside it there is a control rod, which operators can lower into the core to smother the flow of neutrons and stop the chain reaction, or raise to allow the reactor to run.

Technicians discovered that the metal that supports the tube had mostly disappeared.

The plant owner, FirstEnergy Corporation, is hoping to patch the hole, an irregular opening about 4 by 5 inches. But the commission is skeptical about whether this is possible.

No one in this country has replaced a reactor vessel head, although several plants have ordered parts to do so. FirstEnergy ordered a new head just before the extent of the problem became obvious. A company spokesman said the company hoped to install it in the spring of 2004.

That date reflects how the industry, with no new reactor orders in decades in this country, has limited production capacity for such parts.

The plant might also be able to use a vessel head from a reactor in Midland, Mich., that was never completed, or from a similar plant that was retired in 1989.

Davis-Besse, which began operating in 1977, was not designed with the idea that the head would be replaced; technicians would have to cut a bigger hole in the steel-reinforced concrete containment building to get the new head into it.

The company has not said what the job will cost, but Duke Power Company, which operates three reactors similar to Davis-Besse, plans to replace the heads of all three for about \$20 million. FirstEnergy could spend nearly that much each month for electricity from alternative sources if it must wait for the replacement part.

Because of the discovery at Davis-Besse, the regulatory commission ordered a dozen other plants to report back within two weeks and prove that inspections they have done in the past would have found any corrosion.

The inspection cannot be done while the plant is running, and if the utilities cannot convince the commission, they presumably face shutdowns of perhaps several weeks just for the checks.

Such shutdowns occurred intermittently in the 1970's and 80's but have become extremely rare as reactors have improved their reliability.

The industry is hopeful, however, that inspections it began under commission orders several years ago, to look for leaks, would have found any similar cases. Those inspections began after the heads of French reactors showed signs of leaks and corrosion.

"It could be something unique to Davis-Besse," said Alexander Marion, director of engineering at the Nuclear Energy Institute, the industry's trade association. A goal for the investigation at the plant, he said, would be to find out not only why the corrosion occurred but also why it was not noticed sooner.

"The plants are getting older and we're starting to see these kinds of problems," Mr. Marion said.

[Home](#) | [Back to National](#) | [Search](#) | [Help](#)

[Back to Top](#)

[Copyright 2002 The New York Times Company](#) | [Privacy Information](#)



OFFICE OF CONGRESSWOMAN  
MARCY KAPTUR

2366 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515  
202 225-4146 202 225-7711 (FAX)

FACSIMILE TRANSMITTAL SHEET

TO: Chairman Meserve FROM: Rep Marcy Kaptur

FAX NUMBER: (301) 415-1757 DATE: 3/28/02

TOTAL NUMBER OF PAGES,  
INCLUDING COVER:

RE:

URGENT  FOR REVIEW  PLEASE COMMENT  PLEASE REPLY