

# Lag in Reporting Reactor Damage Laid to Experts

By The Associated Press

MIDDLETOWN, Pa., May 7 — A technician from the Three Mile Island nuclear plant told visiting Congressmen today that control room personnel and Federal inspectors knew that the plant's fuel core was seriously damaged two days before the damage was formally reported and the seriousness of the accident made public.

Jim Floyd, a control room supervisor, told members of a House energy subcommittee that inspectors from the Nuclear Regulatory Commission were standing by as the tracing needle on a reactor pressure monitoring gauge leaped.

That so-called "pressure spike," caused by an explosion of hydrogen in the reactor vessel and showing that the reactor core itself had been damaged, was recorded at 1:58 P.M. Wednesday, March 28, about 10 hours after the start of the nation's most serious nuclear accident.

### Reported 2 Days Later

The commission has said that it was not aware of the explosion until Friday, March 30, when it was formally reported by the Metropolitan Edison Company, which operates the reactor. Company officials have said the significance of the event was not realized until then.

In another development in the growing concern over nuclear power, President Carter told organizers of yesterday's antinuclear demonstration that shutting down all the nation's nuclear generating plants, as the protesters were demanding, was "out of the question," but he added that his Administration was trying to minimize the need for nuclear power. Senator Edward M. Kennedy told constituents that he favored a moratorium on building new nuclear plants and a thorough examination of all existing reactor. [Page A18.]

At the crippled nuclear generator, Mr.

Continued on Page A18, Column 3

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Continued From Page A1

Floyd, the technician, told the touring Congressmen that the gas explosion had been clearly monitored by the control room instruments in full view of both plant operators and the N.R.C. inspectors, whom he did not identify. "We assumed they knew what we were doing," he added.

He said the explosion had triggered an automatic fire control spray inside the reactor building that had to be turned off by operators, again in full view of the commission inspectors.

In Washington, Frank Ingram, a commission spokesman, said that existing regulations might require plant operators and Federal inspectors to report safety incidents to N.R.C. officials, "depending on the circumstances." But he said the circumstances of this incident were still to be determined by the agency's investigation, which will also consider whether any reporting requirement existed or was violated.

Mr. Ingram said the commission could impose penalties for infractions of its regulations ranging from an "enforcement letter" requiring a correction of the infraction to revocation of an operating license and fines up to \$25,000.

### 'Disturbing' to Udall

At Middletown, Representative Morris K. Udall, Democrat of Arizona, who is chairman of the subcommittee, said the disclosure was extremely disturbing.

"The fact that there was an explosion that first morning and that the company knew about it certainly should have been reported to the Governor, who had evacuation responsibility," he said.

Victor Gilinsky, a commission member who came along on the tour, said he was concerned about the report that N.R.C. inspectors on the site may have known about the explosion two days before their superiors.

"This is the first I have heard that they observed it at the time it happened," Mr. Gilinsky said. "It will be a subject of meticulous review."

Mr. Floyd attempted to reconstruct the night of the accident for the visitors. "A lot of things happened real quick," he said.

He showed the Congressmen a yellow tag dangling from a control board instrument that he said might have covered a light showing that a critical valve was closed instead of open.

He said that control room operators ap-

parently misread signs of the true nature of the accident in those first few hours, not believing their instruments and not understanding what they meant. "It was a very unusual situation to find yourself in," he remarked.

The group was taken to the base of the 190-foot-high reactor containment building, where John G. Herbein, a Metropolitan Edison vice president, pointed at the huge circular concrete structure and said: "We figure there are about 400,000 gallons of radioactive water in the basement of this building." He indicated an imaginary line on the structure, saying, "It's up to about the six-foot level."

The Congressmen, who were receiving the first full tour of the stricken plant since President Carter arrived at the height of the crisis, were shown a variety of systems under construction designed to guarantee that the reactor can be continuously cooled without taking radioactive water out of the reactor building.

Herman Dieckamp, president of the General Public Utilities Corporation, Metropolitan Edison's parent company, said there was at least one known instance of human error — two valves on a backup water system closed during a test were never reopened. Yet, he said, the operator who had closed the valves indicated on a check list that he had reopened them.

"We have the name of this person. We have interviewed him. His response was, 'I thought I completed that,'" and reopened the valves, Mr. Dieckamp said.

Commission officials told the Congressmen that the plant was now stable and that no more radioactivity was being released from it than from a normal operating plant.

After the tour, Mr. Udall told reporters: "You get inside one of these things and you realize how enormously complex and complicated they are. Maybe the technology is so complex it's beyond the ability of even well-intentioned people to control. The future of nuclear power hangs in doubt."

*Handwritten note:* This is not a duplicate

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MR VICTOR GILINSKY, COMMISSIONER  
THE NUCLEAR REGULATORY COMMISSION  
WASHINGTON DC 20555

THIS IS A COPY OF MAILGRAM SENT TO THE HONORABLE MORRIS K UDALL  
WASHINGTON DC 20515

THE STORY IN THE NEW YORK TIMES OF MAY 8 1979 REPORTING ON THE VISIT OF  
YOUR SUBCOMMITTEE TO THE THREE MILE ISLAND PLANT IS GROSSLY IN ERROR.

THE "PRESSURE SPIKE" WAS NOT IN THE REACTOR VESSEL. THE PRESSURE GAGE  
WHICH SHOWED A SPIKE AT ABOUT 1500H ON THE DAY OF THE ACCIDENT READS  
PRESSURE WITHIN THE REACTOR CONTAINMENT BUILDING.

THE PRESSURE SPIKE DID INITIATE CONTAINMENT BUILDING SPRAY WHICH IS  
DESIGNED TO COOL THE STEAM RELEASED INTO THE CONTAINMENT BUILDING AND  
TO SCRUB ANTICIPATED IODINE IN THE DESIGN BASIS ACCIDENT. SINCE  
BUILDING PRESSURE DID NOT INDICATE THE CONTINUING NEED FOR BUILDING  
SPRAY, THE OPERATOR TURNED OFF THE SPRAY PUMPS. IT WAS THIS ACTION AND  
THE BUILDING PRESSURE RECORDER THAT MR FLOYD REFERRED TO AS BEING IN  
VIEW OF THE NRC INSPECTORS IN THE CONTROL ROOM AT THE TIME.

THERE IS NO EVIDENCE THAT ANYONE INTERPRETED THE "PRESSURE SPIKE" AND  
THE SPRAY INITIATION IN TERMS OF REACTOR CORE DAMAGE AT THE TIME OF THE  
SPIKE NOR THAT ANYONE WITHHELD ANY INFORMATION.

ON THE EVENING OF THURSDAY MARCH 29 WHEN THE TECHNICAL STAFF SENT TO  
THE SITE TO INVESTIGATE THE ACCIDENT WAS REVIEWING AND CORRELATING  
PLANT DATA FROM THE NUMEROUS SOURCES, THE SPIKE WAS NOTED AND  
POSTULATED TO BE THE RESULT OF A HYDROGEN OXYGEN EXPLOSION WITHIN THE  
CONTAINMENT BUILDING. THE TECHNICAL STAFF RECOGNIZED THAT THE PROBABLE  
SOURCE OF ANY HYDROGEN WAS A ZIRCONIUM WATER REACTION IN THE REACTOR  
CORE. THE PRESENCE OF HYDROGEN WOULD INDICATE THAT HIGH TEMPERATURE  
CONDITIONS MUST HAVE EXISTED IN ORDER TO RESULT IN SIGNIFICANT REACTION  
AND HYDROGEN PRODUCTION. THIS RECOGNITION LED TO MEASUREMENTS TO DEDUCE  
THE EXTENT OF A HYDROGEN BUBBLE WITHIN THE PRIMARY REACTOR COOLING  
LOOP. THE RESULTS OF THESE MEASUREMENTS WERE PROMPTLY REPORTED TO THE  
NRC ON FRIDAY MARCH 30. IN ADDITION THE FIRST GAS SAMPLE FROM THE  
CONTAINMENT BUILDING ATMOSPHERE TAKEN AT 8AM ON MARCH 31 REVEALED THE  
PRESENCE OF HYDROGEN GAS AND A REDUCED OXYGEN LEVEL WHICH WERE  
SUPPORTIVE OF THE PREVIOUS POSTULATE.

I REGRET THAT THIS ASPECT OF THE ACCIDENT HAS BEEN MISUNDERSTOOD AND  
INACCURATELY REPORTED. I THINK THE FULL UNDERSTANDING OF THE THREE MILE  
ISLAND ACCIDENT IS OF SUCH VITAL IMPORTANCE TO THE NATION THAT THE WORK

OF YOUR COMMITTEE AND THE OTHER BODIES THAT WILL BE INVESTIGATING THE  
ACCIDENT SHOULD NOT BE DEFLECTED BY INACCURATE REPORTING FOUNDED ON  
PRESUMPTIONS OF DUPLICITY. SINCERELY

M DIECKAMP, PRESIDENT  
GENERAL PUBLIC UTILITIES CORP  
1001 BROAD ST  
JOHNSTON PA 15907

11155 EST

NGRCOMP #6M

RELATED CORRESPONDENCE

November 1, 1984

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USNRC

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

OFFICE OF GENERAL  
DOCKETING & SERVICE  
BRANCH

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	
	)	
METROPOLITAN EDISON COMPANY	)	Docket No. 50-289 SP
	)	(Restart-Management Remand)
(Three Mile Island Nuclear	)	
Station, Unit No. 1)	)	

TESTIMONY OF THOMAS LEROY VAN WITBECK

My name is Thomas Leroy Van Witbeck. I currently hold the position of Corporate Vice President Plant Services Group for Energy Incorporated. The Plant Services Group provides consulting services and management information systems to the utility industry, primarily to the nuclear utility companies. The consulting services are provided in the areas of plant startup, operation and maintenance. The management information systems are designed to support operation and maintenance of capital intensive facilities such as nuclear power plants.

My background encompasses 25 years of association with the nuclear industry, of which seven years were in the U.S. Navy Nuclear Program, four years in facility operation, 10 years in plant startup and operations consulting, and the past four years in the management of a consulting business.

I hold a Bachelor of Science Degree in Nuclear Engineering from Oregon State University. I am a member of the American Nuclear Society, a registered Professional Engineer, and have held a reactor operator's license.

On March 30, 1979, Energy Incorporated was requested to provide assistance to GPU at Three Mile Island. I arrived at the TMI visitors center at approximately 8:00 AM on March 31, 1979, with a crew of six EI employees. The resumes of the EI personnel and a letter of introduction were presented to GPU. By 2:00 PM all personnel were checked in and had received assignments.

My initial assignment was to participate in the preparation of a sequence of events. After several weeks I was placed in charge of the group developing the sequence of events. This group grew in charter and number to become the Accident Assessment Group (AAG), having about 15 members at the peak of activity. The AAG prepared in excess of a dozen technical data reports covering events surrounding the accident. To prepare these reports the AAG reviewed plant records and interviewed plant staff and drew upon their experience and knowledge. As a leader of this group I reviewed all reports which I personally did not prepare.

As a result of the review of records and discussions with the TMI staff the AAG became aware of the pressure spike on

March 31, 1979. My appreciation for the significance of the pressure spike as a measure of core damage however was not gained until I was exposed to calculations of the volume of H2 involved which was somewhere in the period April 2nd through April 4th.

As head of the AAG, I was involved in several sessions with the GPU management regarding the development of a sequence of events during the period April 6, 1979 through May 1, 1979. Herman Dieckamp was present at each of these review sessions and asked questions regarding the sequence which were indicative of his desire to have a detailed knowledge of the accident and events surrounding the accident.

During the early days of the accident I also saw Herman Dieckamp in the trailer city and the dining tent periodically. At these chance meetings we would discuss some technical point or Mr. Dieckamp would ask questions regarding the AAG work progress which indicated a knowledge of the technical aspects of the investigation.

On September 15, 1979, I made the last formal presentation to Mr. Dieckamp and Mr. Arnold that I recall making. At this meeting I covered three topics:

Initiating events of the accident,  
HPI/MU performance, and  
Operator actions during the first 72 hours following the  
accident.

These topics and their technical content are typical of the de-  
tailed technical knowledge Mr. Dieckamp required and over which  
he maintained cognizance.