

A photograph of a large, dark, conical cooling tower at night. The tower is illuminated from below, and its top is lit with a bright green light. The sky is dark blue with some light clouds. In the background, another similar cooling tower is visible, also illuminated from below. The overall scene is dark and atmospheric.

Three Mile Island, Unit 2, (TMI-2) Post-Shutdown Decommissioning Activities

Meeting 8/28/2013

Scott D. Portzline

Three Mile Island Alert

Importance of TMI

Three Mile Island is to the
US Nuclear Industry



as

Gettysburg is to US History



Record Preservation

Before TMI is decommissioned, the public, and specifically Three Mile Island Alert wants to participate in some special “ground rules” regarding the timing, the conditions and the handling of TMI’s decommissioning.

Unit 2 is of special interest because of the partial core melt accident. We want extensive input and additional meetings.

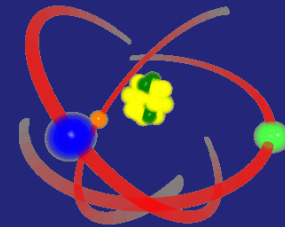
Record Preservation

Issue #1

The record is incomplete.

High levels of radiation prevented proper investigations of certain equipment malfunctions.

Man-hours exposures



Record Preservation

Issue #2

- There remain many unanswered questions about what went wrong with components and systems.
- The NRC's investigators along with GPU/MED Ed and the President's Commission investigators could not explain numerous malfunctions.

Record Preservation

Issue #3

Examining these components provides further opportunity to increase the technical knowledge database.

Historical accuracy is ALWAYS important.

Record Preservation

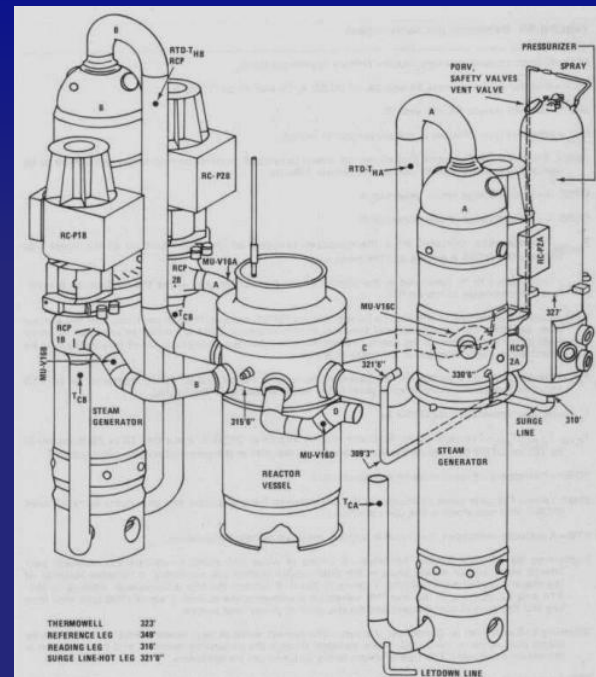
Issue #4

Examine for additional evidence of tampering or sabotage.

Record Preservation

Issue #5

There need to be a complete inventory of what remains at Unit 2. The inventory should be made publicly available.



Record Preservation

Issue #6

Certain components should be preserved and sent to museums such as the Smithsonian Institution and the PA State Museum.



Smithsonian display



State Museum Harrisburg PA

Public Oversight

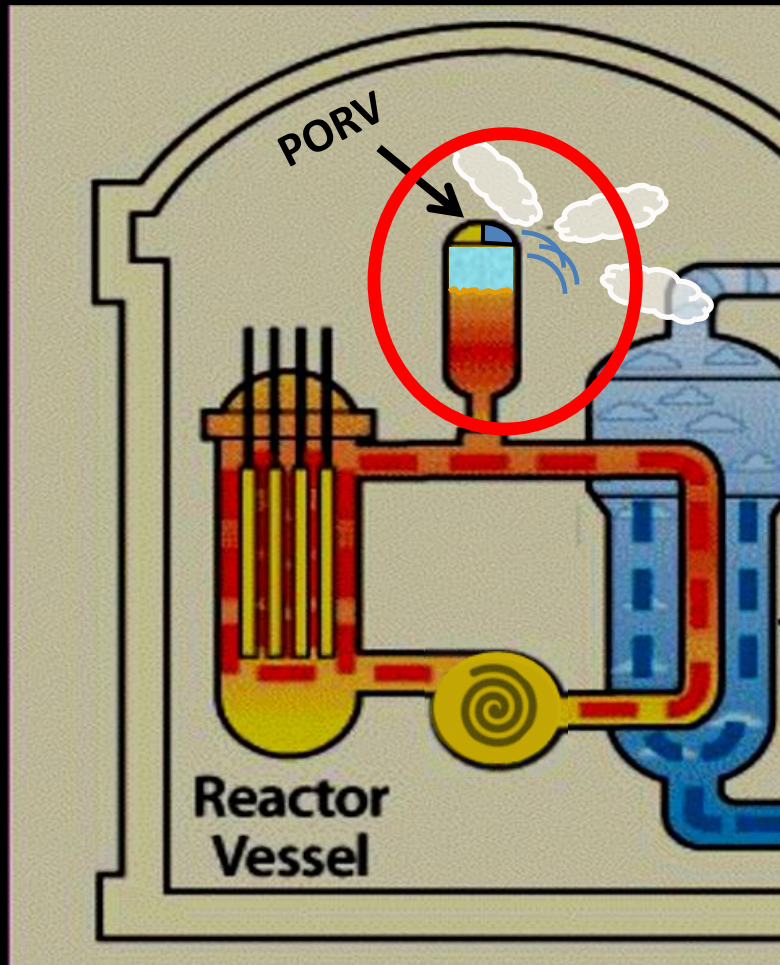
In order to meet these objectives, the public must be fully engaged.



Issue #1

radiation prevented a proper investigation

The point of Loss of Coolant is unexplained



220 gallons per minute

The reason the PORV valve stuck open has not been identified.

Radiation levels not worth the “man-hours exposures.”

Issue #2

Investigative Failures

No one knows the triggering event

a confirmatory test would be needed. The test performed by the licensee casts some doubt on the apparent initiating cause, but the investigators consider the testing performed thus far to be insufficient to be conclusive.

This investigation was not able to identify the specific initiating cause which led to the turbine trip on March 28, 1979. The initiating cause is of interest for reasons stated in Section 4.2.1. The inability to identify a specific cause is not a concern in that this plant was designed to sustain a turbine trip irritated by a loss of main feedwater as a routine operational event. The availability of the condensate system is not critical to the sequence of events in this accident.

4.2 Closed Emergency Feedwater Block Valves

4.2.1 Sequence

At approximately 8 minutes after the start of the accident, the operator found the OTSG level at 10 inches on the startup range. The operator considered this level to indicate that the OTSG was "dry." (This level indication is appropriate for a steam filled OTSG with no liquid phase present.) The operator verified that the emergency feedwater (EFW) pumps were running and examined the valve lineup, and found that the EF-V12A and 12B valves were shut. The position-indicating lights on 12A were obscured by a caution tag hanging from another valve controller. The position indicating lights for 12B may have been obscured by operator as he leaned over the panel. (This was due to the light positions on the panel and the operator's location, not his physical stature.) The operator drove the valves open, resulting in the dry OTSG being fed with relatively cool water. (Int. 4, 9)

It should be noted that on March 23, 1979, an NRR Operator Licensing Branch (OLB) examiner conducted operator examinations which included the EFW System. The valves were open on that day based on control room indications. Moreover, a routine scheduled surveillance test was performed on the A and B

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This investigation was not able to identify the specific cause which led to the turbine trip on March 28, 1979



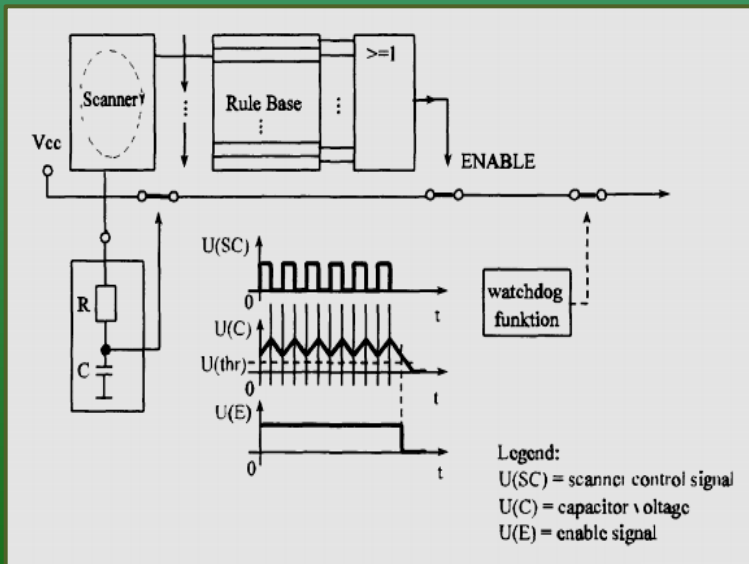
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Issue #2 Investigative Failures

Integrated Control System Failure



The integrated Control System did not trigger a reactor runback as it was supposed to do three seconds into the events. This assured a SCRAM. No one knows why it failed.

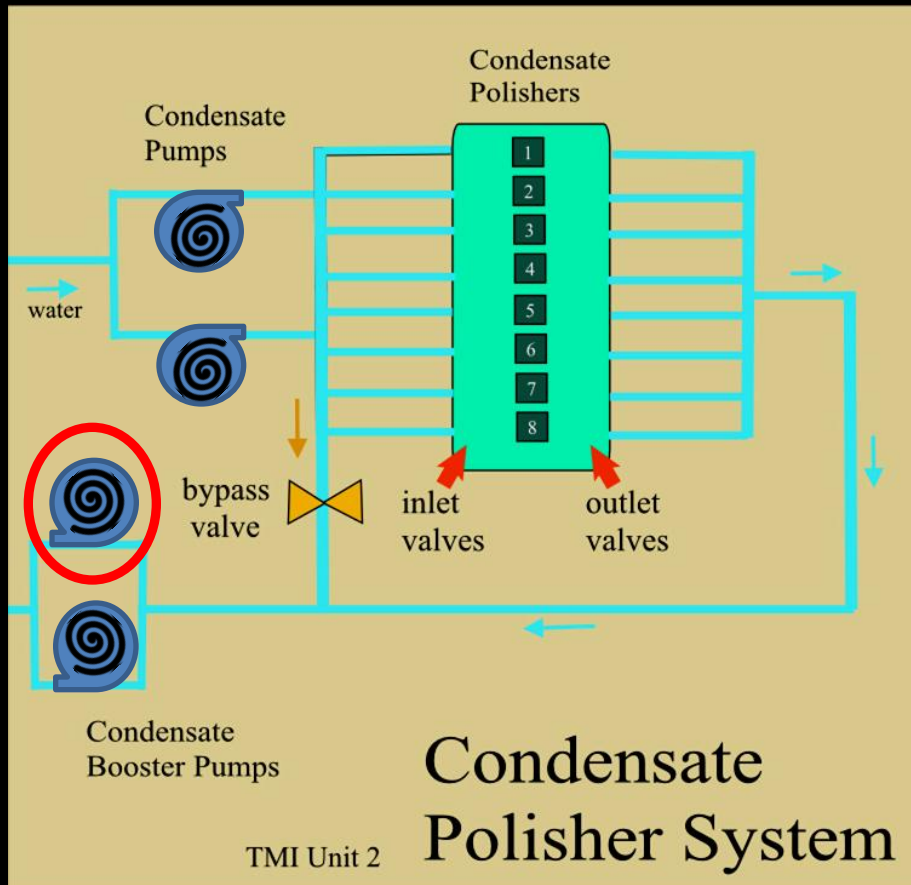


SCRAM

Issue #2

Investigative Failures

An important switch was rewired

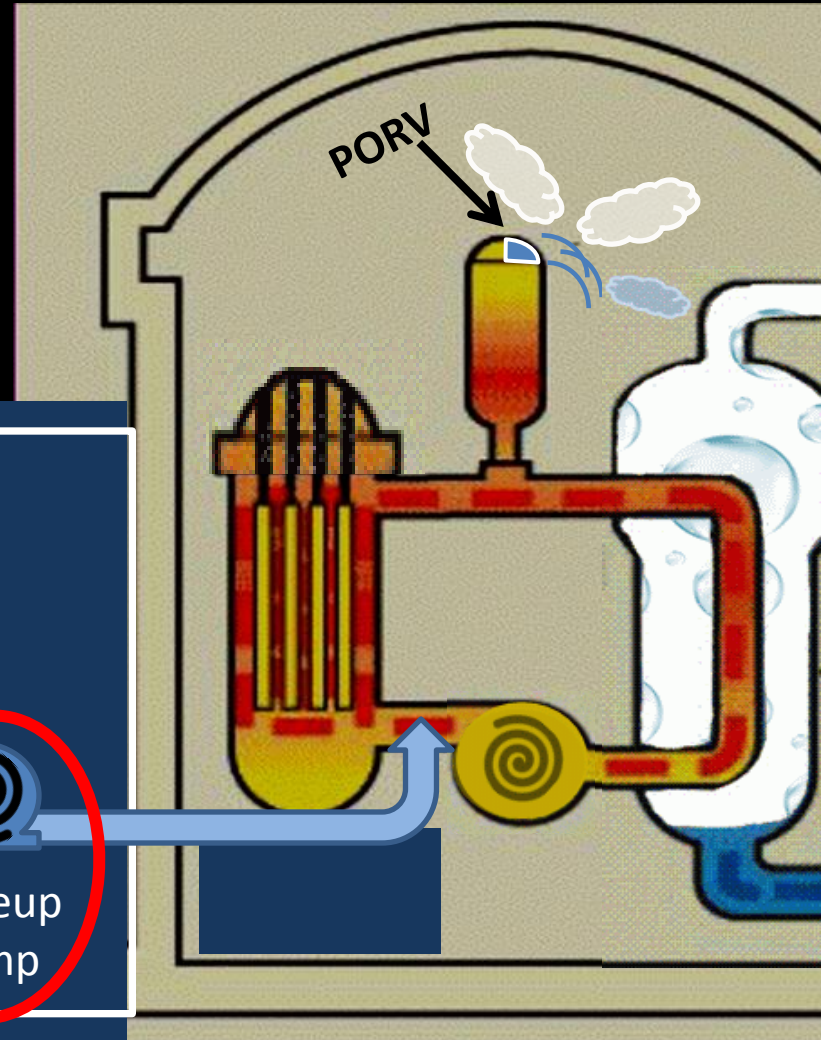
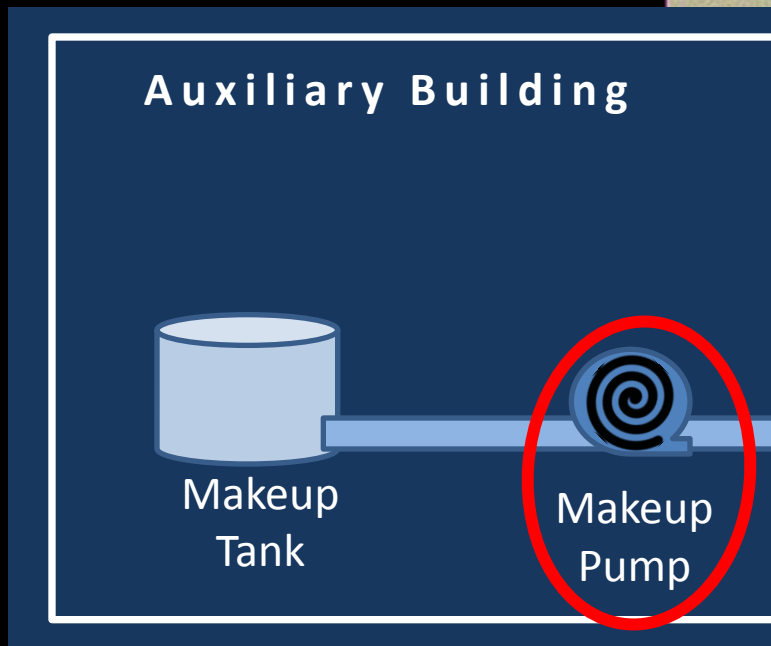


There is no explanation for a jumper wire which was added to a switch which caused a condensate booster pump to fail. Investigator wanted to know who and why it was added.

Issue #2

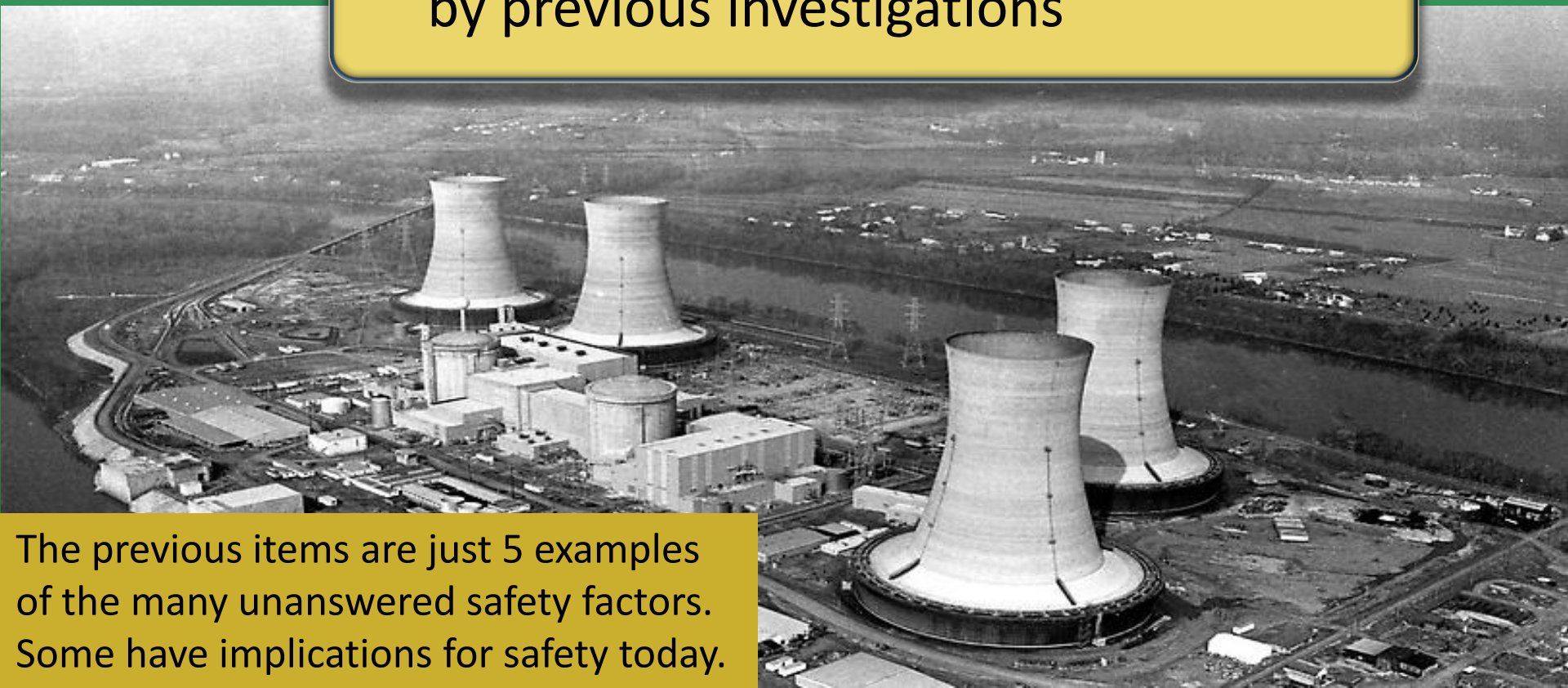
Investigative Failures A Makeup Pump Fails to Start

Injects water into the reactor to compensate for the loss of coolant.



Issue #3 Technical and Historical Accuracy

Before destroying the record, investigate the events and evidence which was not covered or understood by previous investigations



The previous items are just 5 examples of the many unanswered safety factors. Some have implications for safety today.

Issue #4

Criminal Evidence

The President's Commission and the US Senate investigations suspected and requested sabotage investigations because of suspicious evidence and events at TMI. Further evidence may yet be discovered.

There has been more than 120 acts of sabotage and tampering at US nuclear plant. So much so that the FBI issued a warning about the increase of sabotage events at nuclear plants in 1983.

Issue #4

Letter requesting an FBI investigation

REPRODUCED AT THE NATIONAL ARCHIVES
Page 2
Kemeny to FBI/Webster

Intentional closure of these valves was not considered by Messrs. Miller and O'Connor. Moreover, the adequacy of the investigation is questionable. Indeed, it appears that the sole reason for conducting any investigation at all was that the utility was under pressure from the Nuclear Regulatory Commission to determine why the valves were closed. For further detail on this investigation, I have included copies of the depositions of Messrs. Miller and O'Connor taken by the Commission staff.

This Commission, given its limited life and resources, cannot pursue this issue thoroughly. However, we believe that the Federal Bureau of Investigation can and should undertake such an investigation. Section 1-304 of Executive Order 12130 states:

The Commission may request any Executive agency to furnish such information, advice or assistance as it deems necessary to carry out its functions. Each such agency is directed, to the extent permitted by law, to furnish such information, advice or assistance upon request by the Chairman of the Commission.

As instructed by vote of the President's Commission, I request the assistance of the FBI in determining the feasibility of an FBI investigation as to whether the auxiliary feedwater valves at TMI-2 were closed accidentally or intentionally. In view of the short life of the Commission, I would appreciate your early attention to this request.

Thank you for your cooperation.

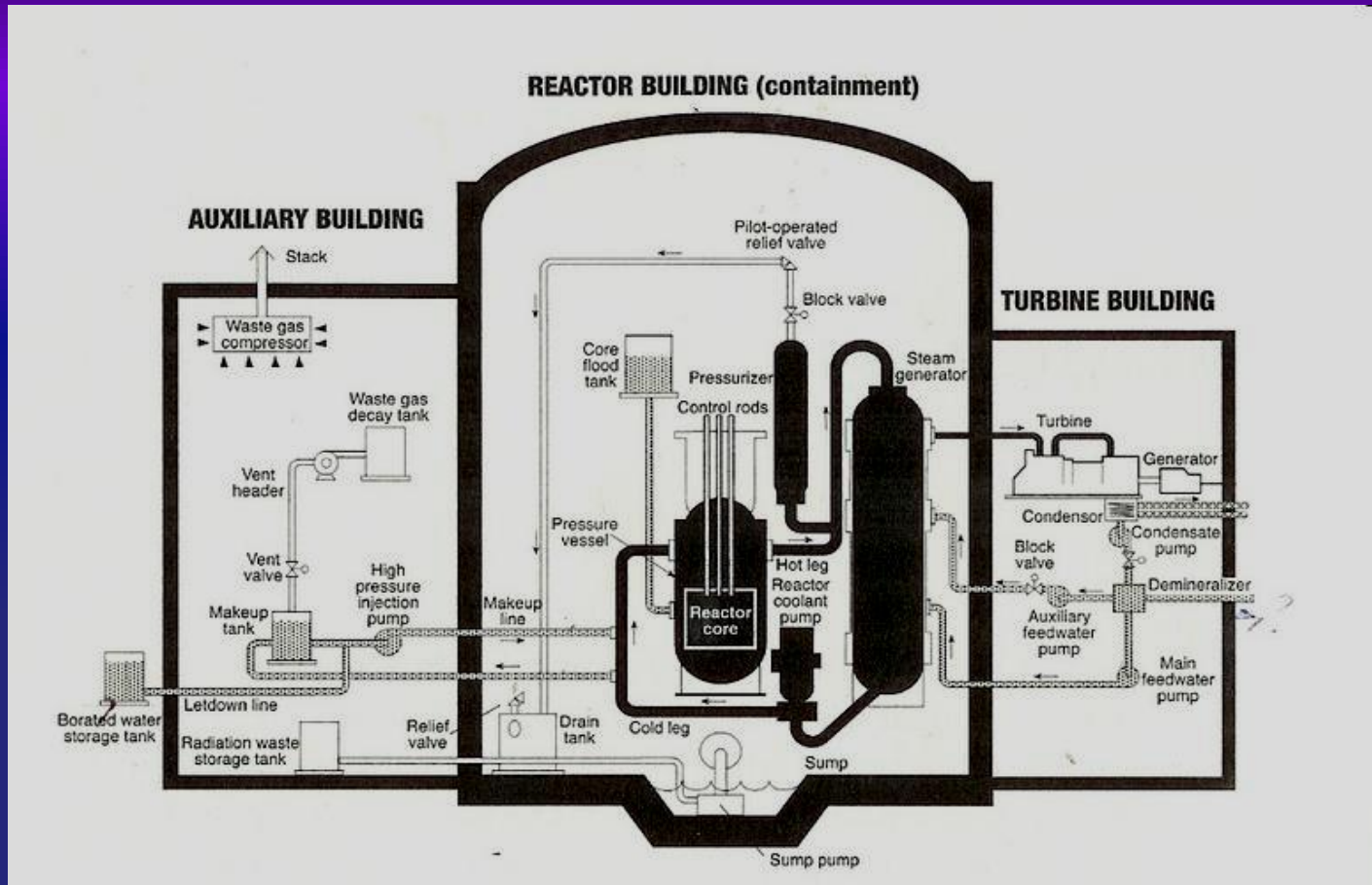
Sincerely,
/s/
John G. Kemeny
Chairman

We believe that the FBI can and should undertake such an investigation.

President's Commission

Issue #5

Component Inventory



Necessary to accommodate public input and engagement

Record Preservation

Issue #6

Certain components should be preserved and sent to museums such as the Smithsonian Institution and the PA State Museum.



Smithsonian display



State Museum Harrisburg PA

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