

# Three Mile Island 1

## 3Q/2011 Plant Inspection Findings

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### Initiating Events

**Significance:**  Dec 31, 2010

Identified By: NRC

Item Type: FIN Finding

#### **Inadequate Preventive Maintenance for Signal Converter Causes Turbine Trip and Plant Transient**

A self-revealing Green finding was identified, because station personnel did not establish a periodic task to calibrate and/or replace the integrated control system (ICS) to digital turbine control system (DTCS) signal converter, a critical component, in accordance with procedure MA-AA-716-210, Performance Centered Maintenance (PCM) Process, Rev. 10. Consequently, the signal converter remained in operation past the vendor recommended service life and failed due to age related degradation, causing a turbine trip and a plant power transient from 100 to 14 percent reactor power. Station personnel replaced the failed signal converter, entered the issue into the corrective action program (Issue Report 1115086), and performed extent-of-condition reviews regarding other critical station components.

The finding is more than minor because it adversely affected the equipment performance attribute of the initiating events cornerstone and the associated cornerstone objective to limit the likelihood of those events that upset plant stability. The inspectors evaluated the finding in accordance with IMC 0609.04, Phase I – Initial Screening and Characterization of findings. The finding was of very low safety significance because although it contributed to increased likelihood of a plant trip, it did not affect the likelihood that accident mitigation equipment or functions would be available. The finding had a cross-cutting aspect in the area of Problem Identification & Resolution, Operating Experience (OE) component because station personnel did not properly collect and evaluate industry OE, including vendor recommendations, to establish appropriate preventive maintenance (PM) tasks (e.g., calibration, replacement) for the ICS to DTCS signal converter to minimize consequential failures [P.2(a)].

Inspection Report# : [2010005](#) (*pdf*)

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### Mitigating Systems

**Significance:**  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Deficient Internal and External Flood Barrier Inspection Program**

The inspectors identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures and Drawings for deficient internal and external flood barrier inspection procedures. Specifically, no instructions, procedures, or drawings existed to periodically inspect all openings that are potential leak paths to prevent water intrusion into areas of the plant containing safety related equipment during a design basis internal or external flood event. Consequently, TMI failed to identify two external flood barriers in the air intake tunnel (AIT) structure that had been missing since original construction, which were needed to protect safety-related equipment in the auxiliary building.

This finding is more than minor because it was associated with the protection against external factors (floods) attribute and affected the mitigating systems cornerstone objective of ensuring the availability, reliability and capability of systems (including flood barriers) that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the finding in accordance with IMC 0609.04, Phase I – Initial Screening and Characterization of findings. This finding was of very low safety significance because the condition did not result in an actual failure of any safety-related system or component, or result in the system being declared inoperable for greater than its allowed

technical specification outage time, or screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Operating Experience (OE), because station personnel did not properly implement and institutionalize internal and external OE through changes to station procedures to address safety related flooding inspection and design vulnerabilities [P.2(b)].

Inspection Report# : [2010005](#) (*pdf*)

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## **Barrier Integrity**

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## **Emergency Preparedness**

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## **Occupational Radiation Safety**

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## **Public Radiation Safety**

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## **Physical Protection**

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## **Miscellaneous**

Last modified : January 04, 2012