

Power Reactor

Event # 44295

|  |                       |   |  |
|--|-----------------------|---|--|
| <b>Site:</b> THREE MILE ISLAND                 |                       | <b>Notification Date / Time:</b> 06/13/2008 12:05 (EDT) |  |
| <b>Unit:</b> 1                                 | <b>Region:</b> 1      | <b>State:</b> PA  | <b>Event Date / Time:</b> 06/13/2008 11:00 (EDT) |
| <b>Reactor Type:</b> [1] B&W-L-LP,[2] B&W-L-LP |                       | <b>Last Modification:</b> 06/13/2008                    |  |
| <b>Containment Type:</b> DRY AMB               |                       |   |  |
| <b>NRC Notified by:</b> ADAM MILLER            |                       | <b>Notifications:</b> ROBERT SUMMERS R1                 |  |
| <b>HQ Ops Officer:</b> STEVE SANDIN            |                       | VERN HODGE (email)                                      |  |
| <b>Emergency Class:</b> NON EMERGENCY          |                       | JOHN THORP (email)                                      |  |
| <b>10 CFR Section:</b>                         |                       |   |  |
| 21.21  | UNSPECIFIED PARAGRAPH |   |  |

  

| Unit | Scram Code | RX Crit | Init Power | Initial RX Mode | Curr Power | Current RX Mode |
|------|------------|---------|------------|-----------------|------------|-----------------|
| 1    | N          | Yes     | 100        | Power Operation | 100        | Power Operation |

**PART 21 REPORT INVOLVING COMMERCIAL GRADE RELAY CONTACTS CONTAINING POTENTIAL DEFECTS**

The following Part 21 notification was received via fax:

"On June 13, 2008, AmerGen Energy Company, LLC (AmerGen) completed a reportability determination which concluded that relay contacts contained an underlying design vulnerability that created a failure mode, and were reportable under Part 21, since the underlying vulnerability could create a substantial safety hazard. The relay contacts are Commercial Grade items dedicated by AmerGen. The relay contacts are provided by Joslyn Clark Controls Inc. (formerly AO Smith) as Normally Closed (N/C) open top contact assemblies (part numbers KPM-44, KPM-46, KPM-6A, and KPM-4A). These contacts are used in safety related applications, primarily in the engineered safeguards actuation system (ESAS). They are also used in safety related applications in the makeup/high pressure injection (HPI) system, main steam system, and the heat sink protection system (HSPS).

"The underlying vulnerability associated with the N/C Joslyn Clark contact is the design of the nylon contact arm. The design allows the contact to become configured incorrectly during assembly or following maintenance. If installed improperly, the moving contactor can hang up on the lip of the slot in the nylon actuator. The hang up results in failure of the contact to fully close and perform its function.

"Following proper assembly, the N/C Joslyn Clark contacts will not become hung-up during normal relay operation.

"As a result of this exposed design vulnerability, the Commercial Grade Dedication (CGD) plans as well as the maintenance procedures have been enhanced to prevent a relay from being placed into service with an improperly configured contact. Extent of condition reviews performed to date on relays installed in the plant, have not identified any of these deficiencies.

TE19  
NRR

06/13/2008

*U.S. Nuclear Regulatory Commission Operations Center Event Report*

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"The NRC resident inspector was notified of this part 21 notification by the licensee."

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*Jay 1-301-816-5151*

*Man # - 1-800-532-3469*

Facility: TMI-1  
Region: 1 State: PA  
Rx Type: B&W

Notification Date: 6/13/08  
Notification Time:  
Event Date: 6/13/08  
Event Time: 11:00

Emergency Class: Non-Emergency  
10 CFR 21

100 % Power, Power Operation

### Commercial Grade Relay Contacts Contain Potential Defects

On June 13, 2008, AmerGen Energy Company, LLC (AmerGen) completed a reportability determination which concluded that relay contacts contained an underlying design vulnerability that created a failure mode, and were reportable under Part 21, since the underlying vulnerability could create a substantial safety hazard. The relay contacts are Commercial Grade items dedicated by AmerGen. The relay contacts are provided by Joslyn Clark Controls Inc. (formerly AO Smith) as Normally Closed (N/C) open top contact assemblies (part numbers KPM-44, KPM-46, KPM-6A, and KPM-4A). These contacts are used in safety related applications, primarily in the engineered safeguards actuation system (ESAS). They are also used in safety related applications in the makeup/high pressure injection (HPI) system, main steam system, and the heat sink protection system (HSPS).

The underlying vulnerability associated with the N/C Joslyn Clark contact is the design of the nylon contact arm. The design allows the contact to become configured incorrectly during assembly or following maintenance. If installed improperly, the moving contactor can hang up on the lip of the slot in the nylon actuator. The hang up results in failure of the contact to fully close and perform its function.

Following proper assembly, the N/C Joslyn Clark contacts will not become hung-up during normal relay operation.

As a result of this exposed design vulnerability, the Commercial Grade Dedication (CGD) plans as well as the maintenance procedures have been enhanced to prevent a relay from being placed into service with an improperly configured contact. Extent of condition reviews performed to date on relays installed in the plant, have not identified any of these deficiencies.

The NRC resident inspector was notified of this part 21 notification by the licensee.