



Metropolitan Edison Company
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Writer's Direct Dial Number

May 23, 1980
TLL 249

Office of Inspection and Enforcement
Attn: B. H. Grier, Director
Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pa. 19406

Dear Sir:

Three Mile Island Nuclear Station, Unit II (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Licensee Event Report 80-014/01L-0

Attached please find Licensee Event Report 80-014/01L-0 concerning the interrelated conditions of a high boron concentration in the Boric Acid Mix Tank on April 22, 1980 and of a high dissolved gas concentration in the Standby Pressure Control System on April 23, 1980.

These events constitute a violation of Section 3.1.1.1 and are considered reportable under Section 6.9.1.8.b of the Interim Recovery Technical Specifications.

Sincerely,

/s/ G. K. Hovey

G. K. Hovey
Director, TMI-II

GKH:SDC:hah

Attachments

cc: J. T. Collins
~~██████████~~

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Metropolitan Edison Company is a Member of the General Public Utilities System

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LICENSEE EVENT REPORT
NARRATIVE REPORT

TMI-II

LER 80-014/01L-0
EVENT DATE-April 4, 1980

I. EXPLANATION OF OCCURRENCE

On 4/22/80 at 1100 hours the Boric Acid Mix Tank (BAMT) boron concentration was analyzed as 13,370 ppm boron and in excess of the 13,125 ppm boron limit per Technical Specification 3.1.1.1.a.

While in the action period specified above, at 1500 hours on 4/23/80 the Standby Pressure Control (SPC) system dissolved gas concentration analysis showed that the dissolved gas concentration was 27 sec/kg of H₂O which is in excess of the 15 sec/kg of H₂O limit per specification 4.1.1.1.i.2. This condition constituted a violation of Specification 3.1.1.1.b and resulted in violation of the associated action statement which is reportable per Technical Specification 6.9.1.8.b.

II. CAUSE OF THE OCCURRENCE

The cause of the BAMT being out of spec is believed to have been the result of concentrating effects of the boric acid solution in the presence of an air mixing sparger which was causing evaporation of the water in the tank. The SPC high dissolved gas concentration results from the natural tendency of the N₂ overpressure blanket to go into solution.

III. CIRCUMSTANCES SURROUNDING THE OCCURRENCE

At the time of the occurrence, the Unit II facility was in a long term cold shutdown state as described by the Technical Specifications. The reactor decay heat was being removed via natural circulation to the A steam generator which is operating in a 'steaming' mode. Throughout the event there was no Loss of Natural Circulation in the RCS system.

IV. CORRECTIVE ACTION TAKEN OR TO BE TAKEN

IMMEDIATE

Water was added to the BAMT to lower the boric acid concentration through dilution. The BAMT boron concentration was returned to an acceptable level by 0635 hours on 4/24/80.

A program of recirculation of SPC tank water using relatively degassed borated water was undertaken and resulted in bringing the water within surveillance requirements by 2015 hours on 4/24/80.

LONG TERM

A program was undertaken to repair the BAMT mixer and eliminate the air sparger. Also, the temporary fill hose in use since the accident

will be removed so as to facilitate closing the tank fill lid which is believed to minimize or preclude further water evaporation.

The mode of operation of the SPC system has been modified in terms of the way the pressure tank inventory is maintained in order to keep the dissolved gas concentration low.

LICENSEE EVENT REPORT

CONTROL BLOCK: 1 (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | P | A | T | M | I | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | 5
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 7 8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | During recovery mode operation (decay heat removal-cold shutdown core) at 1100 hrs
 0 3 | on 4/22/80 the Boric Acid Mix Tank (BAMT) boron concentration was above Tech. Spec.
 0 4 | 3.1.1.1.a limits (13,370 ppm VS 13,125 ppm). While in the action period for the
 0 5 | above, at 1500 hrs on 4/23/80 the dissolved gas concentration in the Standby Pressure
 0 6 | Control (SPC) System was found to be above ^{Tech}surveillance Spec. 4.1.1.1.i.2 limits
 0 7 | (27 vs 15 scc/kg H₂O). This constituted a violation of Tech. Spec. 3.1.1.1.b and
 0 8 | was reportable under Section 6.9.1.8.b. This event had no effect on (continued)

0 9 | SYSTEM CODE 11 | CAUSE CODE X 12 | CAUSE SUBCODE Z 13 | COMPONENT CODE Z Z Z Z Z Z 14 | COMP. SUBCODE Z 15 | VALVE SUBCODE Z 16 |
 17 | LER/RO REPORT NUMBER 8 0 | EVENT YEAR 8 0 | SEQUENTIAL REPORT NO. 0 1 4 | OCCURRENCE CODE 0 1 | REPORT TYPE L | REVISION NO. 0 |
 ACTION TAKEN X 18 | FUTURE ACTION X 19 | EFFECT ON PLANT Z 20 | SHUTDOWN METHOD Z 21 | HOURS 0 0 0 0 22 | ATTACHMENT SUBMITTED Y 23 | NPPD-4 FORM SUB. N 24 | PRIME COMP. SUPPLIER Z 25 | COMPONENT MANUFACTURER Z 9 9 9 26 |

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | Increased BAMT boron concentration is ~~believed to have been caused~~ ^{was} by the use of
 1 1 | an air sparger and the resultant water loss to evaporation. The BAMT contents were
 1 2 | diluted to an acceptable concentration. The use of the air sparger is being dis-
 1 3 | continued and the BAMT mixer repaired. SPC system high gas concentration resulted
 1 4 | from the natural tendency of the N₂ overpressure blanket ~~to go~~ ^{going} into (continued)

1 5 | FACILITY STATUS X 28 | % POWER 0 0 0 29 | OTHER STATUS 30 | METHOD OF DISCOVERY B 31 | DISCOVERY DESCRIPTION 32 |
 Recovery Mode Surveillance Test Requirement

1 6 | ACTIVITY CONTENT Z 33 | Z 34 | AMOUNT OF ACTIVITY 35 | N/A | LOCATION OF RELEASE 36 |
 N/A

1 7 | PERSONNEL EXPOSURES NUMBER 0 0 0 37 | TYPE Z 38 | DESCRIPTION 39 | N/A

1 8 | PERSONNEL INJURIES NUMBER 0 0 0 40 | DESCRIPTION 41 | N/A

1 9 | LOSS OF OR DAMAGE TO FACILITY TYPE Z 42 | DESCRIPTION 43 | N/A

2 0 | PUBLICITY ISSUED Z 44 | DESCRIPTION 45 | N/A

NAME OF PREPARER Steven D. Chaplin PHONE (717) 948-8553
 8005290 431

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (Continued)

the plant, its operation or the health and safety of the public.

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (Continued)

solution. ~~Short term action consisted of recirculation of SPC tank water~~ ^{was recirculated} ~~with relatively degassed borated water, which resulted in lowering the dissolved gas concentration.~~ ¹ The mode of operation of the SPC system has been modified, []] in terms of the way the pressure tank inventory is maintained in order to keep the dissolved gas concentration low.