

LICENSEE EVENT REPORT

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

0 1 | M | D | C | C | N | 1 | 2 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | _____ | 5

7 8 9 14 15 25 26 30 57 58

LICENSEE CODE LICENSE NUMBER LICENSE TYPE CAT 58

CON'T

0 1 | REPORT SOURCE | 6 | 0 | 5 | 0 | 0 | 0 | 3 | 1 | 7 | 7 | 0 | 7 | 2 | 7 | 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 | 9

7 8 60 61 68 69 74 75 80

DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | On 7/27/80, it was confirmed that Unit 1 exceeded 2700 MWth (T.S. 1.3) by

0 3 | 24 MWth while the unit was operating at 100% power for approximately four

0 4 | days due to an undetected leak in #11 steam generator blowdown recovery

0 5 | heat exchanger (SGBDRHX) which resulted in a nonconservative error in

0 6 | computer calorimetric power. The leak was isolated and correct blowdown

0 7 | flow was entered into the calculation at 1530 on 7/21/80. LER 80-34 (U-2)

0 8 | describes a similar event.

0 9 | SYSTEM CODE | CAUSE CODE | CAUSE SUBCODE | COMPONENT CODE | COMP SUBCODE | VALVE SUBCODE

7 8 9 10 11 12 13 14 15 16

Z Z X Z Z Z Z Z Z Z Z Z

17 | LER/RO REPORT NUMBER | 18 | 8 | 0 | 19 | - | 20 | - | 21 | - | 22 | 0 | 3 | 5 | 23 | / | 24 | 0 | 1 | 25 | T | 26 | 0 | 27 | - | 28 | 0 | 29 | - | 30 | 0 | 31 | 0 | 32 | 0 | 33 | 34 | 35 | 36 | 37 | 0 | 38 | 0 | 39 | 0 | 40 | 0 | 41 | Y | 42 | N | 43 | Z | 44 | X | 45 | 46 | 47 | 48 | 49 | 49 | 49 | 49 | 49

EVENT YEAR SEQUENTIAL REPORT NO. OCCURRENCE CODE REPORT TYPE REVISION NO. COMPONENT MANUFACTURER

ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPRD-4 FORM SUB. PRIME COMP. SUPPLIER

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | The cause was due to tube failure in #11 SGBDRHX which is cooled by condensate.

1 1 | This caused an erroneously high blowdown flow rate which resulted in an error

1 2 | in the nonconservative direction for the calorimetric power calculation. A

1 3 | weekly preventative maintenance channel check will be implemented to verify

1 4 | proper blowdown flow rate.

1 5 | FACILITY STATUS | % POWER | OTHER STATUS | METHOD OF DISCOVERY | DISCOVERY DESCRIPTION

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

E 1000 NA A Ineffective Blowdown

1 6 | ACTIVITY RELEASED | CONTENT OF RELEASE | AMOUNT OF ACTIVITY | LOCATION OF RELEASE

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

Z NA NA

1 7 | PERSONNEL EXPOSURES NUMBER | TYPE | DESCRIPTION

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

0 0 0 0 Z NA

1 8 | PERSONNEL INJURIES NUMBER | DESCRIPTION

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

0 0 0 0 NA

1 9 | LOSS OF OR DAMAGE TO FACILITY TYPE | DESCRIPTION

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

Z NA

2 0 | PUBLICITY ISSUED | DESCRIPTION

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

N NA

NAME OF PREPARER: S. M. Davis
 PHONE: (301)269-4742

LER NO. 80-35/1T
DOCKET NO. 50-317
EVENT DATE 07/27/80
REPORT DATE 08/08/80
ATTACHMENT

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES:

On July 27, 1980, it was confirmed that Unit 1 had exceeded rated thermal power of 2700 MWth (T.S. 1.3) for approximately four (4) days when the unit was operating at 100% power. This event was caused by an undetected leak in #11 steam generator blowdown recovery heat exchanger which resulted in an erroneous input to the plant computer's calorimetric power calculation. On July 26, 1980, #11 steam generator blowdown recovery heat exchanger which is cooled by condensate water was discovered to have an approximately 200 gpm leak from the condensate side to the blowdown recovery side. As the leak increased in magnitude, the Operator closed the throttle valve to maintain the required indicated blowdown flow rate. This action resulted in an error in the nonconservative direction between actual blowdown flow rate and indicated blowdown flow rate. It has been estimated by conducting a hand calculated heat balance and confirmed by an actual test that the leak caused an error of approximately 24 MWth in calorimetric power.

At 1530 on July 26, 1980, the heat exchanger was isolated and placed out of service after it was confirmed to have failed tubes. After the heat exchanger was placed out of service and proper response of the blowdown flow rate meter was verified, the correct blowdown flow rate was entered into the computer calorimetric calculation.

An investigation was conducted in an attempt to verify the actual inception date of the leak so that a best estimate could be made as to the actual length of time the unit exceeded 2700 MWth. Two parameters were studied. First a comparison of calorimetric power to incore instrument power was made, however, the results were inconclusive. The second parameter studied was steam generator chemistry. This data showed that blowdown became ineffective on 7/22/80. Therefore, it was concluded that the #11 steam generator blowdown recovery heat exchanger tubes failed on that date. After reviewing the unit's power history and assuming that the leak started on 7/22/80, it has been concluded that the unit exceeded power for 91 hours. An assessment of the significance of the overpower condition on the Safety Analysis concluded that the overpower condition was more than offset, since local peaking factors (F_{t} and F_{yt}) remained at least 8% below their Technical Specification limit during the event. Therefore, an adequate margin of safety remained.

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS:

The cause of this event was due to tube failure in #11 steam generator blowdown heat exchanger which resulted in an erroneous input to the plant computer calorimetric power calculation. Corrective action to prevent recurrence will be to implement a weekly preventative maintenance functional check to verify proper blowdown flow rate.