

LICENSEE EVENT REPORT

U. S. Nuclear Regulatory Commission

UPDATE REPORT:

PREVIOUS REPORT DATE: 9-16-80

CONTROL BLOCK:

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 N C B E P 1 2 0 0 - 0 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

CONT

0 1 REPORT SOURCE L 6 0 5 0 - 0 3 2 5 2 0 8 2 4 8 0 8 0 5 1 7 8 4 9
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 During unit power operation, reactor coolant conductivity exceeded the specified
0 3 limit of 2.0 μ mho/cm for 35.8 hours with a maximum recorded value of 3.32 μ mho/cm
0 4 as a result of organics which accumulated in the reactor and ionized at vessel rated
0 5 pressure and temperature. Within 11.8 hours of this event, an orderly reactor
0 6 shutdown was performed. This event did not affect the health and safety of the public.

0 7

0 8 Technical Specifications 3.4.4, 6.9.1.9b

0 9 SYSTEM CODE C G 11 CAUSE CODE D 12 CAUSE SUBCODE Z 13 COMPONENT CODE Z Z Z Z Z Z 14 COMP. SUBCODE Z 15 VALVE SUBCODE Z 16
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

17 LER RO REPORT NUMBER 8 0 EVENT YEAR 8 0 SEQUENTIAL REPORT NO. 0 6 5 OCCURRENCE CODE 0 3 REPORT TYPE L REVISION NO. 1
21 22 23 24 25 26 27 28 29 30 31 32

ACTION TAKEN G 18 FUTURE ACTION Z 19 EFFECT ON PLANT B 20 SHUTDOWN METHOD A 21 HOURS 9 0 5 ATTACHMENT SUBMITTED Y 23 NRPD-4 FORM SUB. Y 24 PRIME COMP. SUPPLIER Z 25 COMPONENT MANUFACTURER X 9 9 9 25
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The limit for total organic carbon (TOC) concentration in reactor condensate system
1 1 makeup was less stringent than required to adequately control introducing organics
1 2 into the reactor. The organics were removed by utilizing carbon filters. The plant
1 3 TOC limit has been lowered from 5 to 1 ppm TOC to help prevent future similar events.

1 4

1 5 FACILITY STATUS C 28 % POWER 0 5 2 29 OTHER STATUS NA 30 METHOD OF DISCOVERY A 31 DISCOVERY DESCRIPTION Routine Reactor Coolant Sampling
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

1 6 ACTIVITY CONTENT Z 33 RELEASED OF RELEASE Z 34 AMOUNT OF ACTIVITY NA 35 LOCATION OF RELEASE 36
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

1 7 PERSONNEL EXPOSURES NUMBER 0 0 0 37 TYPE Z 38 DESCRIPTION 39
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

1 8 PERSONNEL INJURIES NUMBER 0 0 0 40 DESCRIPTION 41
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

1 9 LOSS OF OR DAMAGE TO FACILITY TYPE Z 42 DESCRIPTION 43
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

2 0 PUBLICITY DESCRIPTION 45
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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

NAME OF PREPARED

M. J. Pastva, Jr.

PHONE

919-457-9521

NRC USE ONLY

LER SUPPLEMENT ATTACHMENT--RO# 1-80-65

Facility: Brunswick Unit 1

August 24, 1980

During Unit 1 power operation, reactor coolant conductivity exceeded the specified limit of 2.0 $\mu\text{mho/cm}$ for 35.8 hours and reached a maximum recorded value of 3.32 $\mu\text{mho/cm}$. A direct consequence of this event was the performance of an orderly Unit 1 reactor shutdown within 11.8 hours done in accordance with technical specifications.

The conductivity increase resulted from the ionization of organic compounds in the reactor vessel inventory at rated pressure and temperature. The origin of the organic compounds, which accumulated in the reactor vessel, was the volume of brackish water contained in the Unit 1 main condenser pit area. The brackish water was processed through portable carbon filter trains to the plant radiological waste control floor drain waste recovery system where it was further processed before transfer to the Unit 1 condensate storage tank (CST). At the time, the procedural limit on the amount of total organic carbon (TOC) in makeup volume to the CST was 5 ppm. The TOCs in the reactor vessel accumulated such that a significant increase in reactor vessel conductivity occurred causing the event.

The reactor vessel organics were subsequently removed by utilizing reactor condensate makeup and reject flow through carbon filters.

As a result of this event, the procedural limit on the amount of TOCs in reactor condensate makeup to either Unit 1 or 2 was lowered to less than or equal to 1 ppm.



Carolina Power & Light Company

84 MAY 22 P12:02

Brunswick Steam Electric Plant
P. O. Box 10429
Southport, NC 28461-0429

May 17, 1984

FILE: B09-13510C
SERIAL: BSEP/84-1164

Mr. James P. O'Reilly, Administrator
U. S. Nuclear Regulatory Commission
Region II
Suite 3100, 101 Marietta Street N. W.
Atlanta, GA 30303

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1
DOCKET NO. 50-325
LICENSE NO. DPR-71
SUPPLEMENT TO LICENSEE EVENT REPORT 1-80-65

Dear Mr. O'Reilly:

In accordance with Section 6.9.1.9b of the Technical Specifications for Brunswick Steam Electric Plant, Unit 1, the enclosed supplemental Licensee Event Report is submitted. The original report fulfilled the requirement for a written report within thirty (30) days of a reportable occurrence and both are in accordance with the format set forth in NUREG-0161, July 1977.

While performing a detailed review of past LER commitments, it was determined that the supplement for this LER had not been submitted. Corrective actions were taken in a timely manner and this submittal completes the administrative requirement for reporting.

Very truly yours,

C. R. Dietz, General Manager
Brunswick Steam Electric Plant

RMP/kal/LETJA

cc: Mr. R. C. DeYoung
NRC Document Control Desk

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