

REGULATORY DOCKET FILE COPY

VIRGINIA ELECTRIC AND POWER COMPANY

RICHMOND, VIRGINIA 23261

July 28, 1978

Mr. James P. O'Reilly, Director  
Office of Inspection and Enforcement  
U. S. Nuclear Regulatory Commission  
Region II, Suite 818  
230 Peachtree Street, Northwest  
Atlanta, Georgia 30303

Serial No. 433  
PO&M/DLB:das  
Docket No. 50-281  
License No. DPR-37

1978 AUG 1 AM 11:17  
RECEIVED DISTRIBUTION SERVICES UNIT  
NRC LICENSES

Dear Mr. O'Reilly:

Pursuant to Surry Power Station Technical Specifications, the Virginia Electric and Power Company hereby submits the following Licensee Event Reports for Surry Unit No. 2.

Report No.	Applicable Technical Specification
LER 78-021/03L-0	T. S. 6.6.2.b.(2).
LER 78-022/03L-0	T. S. 6.6.2.b.(3).
LER 78-023/03L-0	T. S. 6.6.2.b.(2).
LER 78-024/03L-0	T. S. 6.6.2.b.(2).

These reports have been reviewed by the Station Nuclear Safety and Operating Committee and will be placed on the agenda for the next meeting of the System Nuclear Safety and Operating Committee.

Very truly yours,

*C. M. Stallings*  
C. M. Stallings  
Vice President-Power Supply  
and Production Operations

Enclosures (3 copies)

cc: Dr. Ernst Volgenau, Director (30 copies) ✓  
Office of Inspection and Enforcement

Mr. William G. McDonald, Director (3 copies)  
Office of Management Information  
and Program Control

782140102

A002  
5/1



# LICENSEE EVENT REPORT

CONTROL BLOCK: \_\_\_\_\_ (1)

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | V A S P S 2 | 2 | 0 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 | L | 6 | ) | 5 | 0 | 0 | 0 | 2 | 8 | 1 | 7 | 0 | 6 | 2 | 8 | 7 | 8 | 8 | 0 | 7 | 2 | 8 | 7 | 8 | 9  
 7 8 | 60 | 61 | 68 | 69 | 74 | 75 | 80  
 DOCKET NUMBER | EVENT DATE | REPORT DATE

### EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | During normal plant operations the inlet circulating water temperature exceeded 85°F.  
 0 3 | NRC approval for operation above 85°F was pending. This is contrary to Technical  
 0 4 | Specification 6.6.2.b.(2).  
 0 5 | \_\_\_\_\_  
 0 6 | \_\_\_\_\_  
 0 7 | \_\_\_\_\_  
 0 8 | \_\_\_\_\_

0 9 | SYSTEM CODE | CAUSE CODE | CAUSE SUBCODE | COMPONENT CODE | COMP. SUBCODE | VALVE SUBCODE  
 Z Z | X | Z | Z Z Z Z Z Z | Z | Z | Z  
 9 10 | 11 | 12 | 13 | 18 | 19 | 20  
 LER/RO REPORT NUMBER | EVENT YEAR | SEQUENTIAL REPORT NO. | OCCURRENCE CODE | REPORT TYPE | REVISION NO.  
 7 8 | 7 8 | 0 2 1 | 0 3 | L | 0  
 21 22 | 23 | 24 26 | 27 | 28 29 | 30 | 31 | 32  
 ACTION TAKEN | FUTURE ACTION | EFFECT ON PLANT | SHUTDOWN METHOD | HOURS | ATTACHMENT SUBMITTED | NPRD-4 FORM SUB. | PRIME COMP. SUPPLIER | COMPONENT MANUFACTURER  
 X | Z | B | Z | 0 0 0 5 | Y | N | Z | Z 9 9 9  
 33 34 | 35 | 36 | 37 | 40 | 41 | 42 | 43 | 44 | 47

### CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | The cause of this event was the solar heating of the James River. This is an event  
 1 1 | over which control cannot be exercised, therefore no corrective action is necessary.  
 1 2 | \_\_\_\_\_  
 1 3 | \_\_\_\_\_  
 1 4 | \_\_\_\_\_

1 5 | FACILITY STATUS | % POWER | OTHER STATUS | METHOD OF DISCOVERY | DISCOVERY DESCRIPTION  
 E | 1 0 0 | NA | B | NA  
 7 8 | 9 10 | 12 | 13 | 44 | 45 | 46 | 80  
 1 6 | ACTIVITY CONTENT | AMOUNT OF ACTIVITY | LOCATION OF RELEASE  
 Z | Z | NA | NA  
 7 8 | 9 10 | 11 | 44 | 45 | 80  
 1 7 | PERSONNEL EXPOSURES | DESCRIPTION  
 0 0 0 | Z | NA  
 7 8 | 9 11 | 12 | 13 | 80  
 1 8 | PERSONNEL INJURIES | DESCRIPTION  
 0 0 0 | NA  
 7 8 | 9 11 | 12 | 13 | 80  
 1 9 | LOSS OF OR DAMAGE TO FACILITY | DESCRIPTION  
 Z | NA  
 7 8 | 9 11 | 12 | 13 | 80  
 2 0 | PUBLICITY ISSUED | DESCRIPTION  
 Z | NA  
 7 8 | 9 10 | 80

NAME OF PREPARER T. L. Baucom

PHONE: (804) 357-3184

Surry Power Station, Unit 2  
Docket No: 50-281  
Report No: 78-021/03L-0  
Event Date: 6-28-78

Cooling Water Inlet Temperature:

1. Description of Event:

At about 1700 6-28-78, with the unit operating at full rated power, inlet circulating water temperature was observed to exceed 85°F. This inlet temperature exceeds the limit for operation specified in the Order for Modification of License dated January 18, 1978. An orderly shutdown was commenced. This event is reportable in accordance with Technical Specification 6.6.2.b.(2).

2. Probable Consequences/Status of Redundant Systems:

Accident analysis for unit operation with service water temperature greater than 85°F was pending NRC approval. The health and safety of the general public were not affected.

3. Cause:

The temperature increase was due to solar heating of the lower James River estuary. The warm water was brought to the station by the flooding tide.

4. Immediate Corrective Action:

An orderly shutdown was commenced. At about 2000, inlet water temperature decreased below 85°F and the unit was returned to rated power after a reduced power period of about 5 hours.

5. Scheduled Corrective Action:

A revision of the accident analysis data to permit operation up to 87°F was approved and implemented on or about 7-1-78.

6. Action to Prevent Recurrence:

Since the heating of the river is a natural summer condition, the event may recur and will be handled as required by license provisions.

7. Generic Implications:

None.

LICENSEE EVENT REPORT

CONTROL BLOCK: 1 | | | | | | 6 (1)

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | V | A | S | P | S | 2 | (2) 0 0 - 0 0 0 0 0 0 - 0 0 | 3 | 4 | 1 | 1 | 1 | 1 | 4 | | | (5)

CON'T

0 1 | REPORT SOURCE | L | (6) 0 5 0 0 0 2 8 1 | (7) 0 6 2 9 7 | 8 | (8) 0 7 2 8 7 8 | (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | During normal plant operations the inlet circulating water temperature exceeded 85°F. |

0 3 | NRC approval for operation above 85°F was pending. This is contrary to Technical |

0 4 | Specification 6.6.2.b.(2). |

0 5 | |

0 6 | |

0 7 | |

0 8 | |

0 9 | SYSTEM CODE: Z Z (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: 7 8 EVENT YEAR: 7 8 SEQUENTIAL REPORT NO.: 0 2 3 OCCURRENCE CODE: 0 3 REPORT TYPE: L REVISION NO.: 0

ACTION TAKEN: X (18) FUTURE ACTION: Z (19) EFFECT ON PLANT: B (20) SHUTDOWN METHOD: Z (21) HOURS: 0 0 0 0 ATTACHMENT SUBMITTED: Y (23) NPRD-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 | The cause of this event was the solar heating of the James River. This is an event |

1 1 | over which control cannot be exercised, therefore no corrective action is necessary. |

1 2 | |

1 3 | |

1 4 | |

FACILITY STATUS: E (28) % POWER: 1 0 0 (29) OTHER STATUS: NA (30) METHOD OF DISCOVERY: B (31) DISCOVERY DESCRIPTION: NA (32)

ACTIVITY CONTENT: Z (33) AMOUNT OF ACTIVITY: NA (35) LOCATION OF RELEASE: NA (36)

PERSONNEL EXPOSURES: 0 0 0 (37) Z (38) DESCRIPTION: NA (39)

PERSONNEL INJURIES: 0 0 0 (40) DESCRIPTION: NA (41)

LOSS OF OR DAMAGE TO FACILITY: Z (42) DESCRIPTION: NA (43)

PUBLICITY ISSUED: Z (44) DESCRIPTION: NA (45)

Surry Power Station, Unit 2  
Docket No: 50-281  
Report No: 78-023/03L-0  
Event Date: 06-29-78

Cooling Water Inlet Temperature

1. Description of Event:

At about 1800 on 6-29-78, with the unit operating at full rated power, the inlet circulating water temperature was observed to exceed 85°F. This inlet temperature exceeds the limit for operation specified in the Order for Modification of License dated January 18, 1978. An orderly shutdown was then commenced. This event is reportable in accordance with Technical Specification 6.6.2.b(2).

2. Probable Consequences/Status of Redundant Systems:

Accident analysis for unit operation with service water temperatures greater than 85°F was pending NRC approval. The health and safety of the general public were not affected.

3. Cause:

The temperature increase was due to solar heating of the James River estuary. The warm water was brought to the station by the flooding tide.

4. Immediate Corrective Action:

An orderly shutdown was commenced. At about 1930, inlet water temperature decreased below 85°F and the unit was returned to rated power after a reduced power period of about 3 hours.

5. Scheduled Corrective Action:

A revision of the accident analysis data to permit operation up to 87°F was approved and implemented on or about 7-1-78.

6. Action to Prevent Recurrence:

Since the heating of the river is a natural summer condition, the event may recur and will be handled as required by license provisions.

7. Generic Implications:

None.

# LICENSEE EVENT REPORT

CONTROL BLOCK: \_\_\_\_\_ ①

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

⑦ ⑧ | V | A | S | P | S | 2 | 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      57 CAT 58  
 LICENSEE CODE      LICENSE NUMBER      LICENSE TYPE

CON'T  
 ⑦ ⑧ | ① | L | ⑥ | 0 | 5 | 0 | 0 | 0 | 2 | 8 | 1 | ⑦ | 0 | 6 | 3 | 0 | 7 | 8 | ⑧ | 0 | 7 | 2 | 8 | 7 | 8 | ⑨  
 7 8 9      60 61      68 69      74 75      80  
 REPORT SOURCE      DOCKET NUMBER      EVENT DATE      REPORT DATE

### EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩

⑦ ⑧ | 0 | 2 | During normal plant operations, the inlet circulating water temperature exceeded 85°F.  
 ⑦ ⑧ | 0 | 3 | NRC approval for operation above 85°F was pending. This is contrary to Technical  
 ⑦ ⑧ | 0 | 4 | Specification 6.6.2.b(2).  
 ⑦ ⑧ | 0 | 5 | \_\_\_\_\_  
 ⑦ ⑧ | 0 | 6 | \_\_\_\_\_  
 ⑦ ⑧ | 0 | 7 | \_\_\_\_\_  
 ⑦ ⑧ | 0 | 8 | \_\_\_\_\_

⑦ ⑧ | 0 | 9 | \_\_\_\_\_  
 9 10 | Z | Z | ⑪ | X | ⑫ | Z | ⑬ | Z | Z | Z | Z | Z | ⑭ | Z | ⑮ | Z | ⑯  
 9 10 11 12 13 18 19 20  
 SYSTEM CODE      CAUSE CODE      CAUSE SUBCODE      COMPONENT CODE      COMP. SUBCODE      VALVE SUBCODE  
 ⑦ ⑧ | ⑰ | LER/RO REPORT NUMBER | ⑱ | 7 | 8 | ⑲ | 0 | 2 | 4 | ⑳ | / | ㉑ | 0 | 3 | ㉒ | L | ㉓ | \_\_\_\_\_ | ㉔ | 0 |  
 7 8 9 21 22 23 24 26 27 28 29 30 31 32  
 EVENT YEAR      SEQUENTIAL REPORT NO.      OCCURRENCE CODE      REPORT TYPE      REVISION NO.  
 ⑦ ⑧ | X | ⑱ | Z | ⑲ | B | ⑳ | Z | ㉑ | 0 | 0 | 0 | 5 | ㉒ | Y | ㉓ | N | ㉔ | Z | ㉕ | Z | 9 | 9 | 9 | ㉖ | 0 |  
 7 8 9 33 34 35 36 37 40 41 42 43 44 47  
 ACTION TAKEN      FUTURE ACTION      EFFECT ON PLANT      SHUTDOWN METHOD      HOURS      ATTACHMENT SUBMITTED      NPRD-4 FORM SUB.      PRIME COMP. SUPPLIER      COMPONENT MANUFACTURER

### CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ⑳

⑦ ⑧ | 1 | 0 | The cause of this event was the solar heating of the James River estuary. This is an  
 ⑦ ⑧ | 1 | 1 | event over which control cannot be exercised, therefore, no corrective action is ne-  
 ⑦ ⑧ | 1 | 2 | cessary.  
 ⑦ ⑧ | 1 | 3 | \_\_\_\_\_  
 ⑦ ⑧ | 1 | 4 | \_\_\_\_\_

⑦ ⑧ | 1 | 5 | E | ⑳ | 1 | 0 | 0 | ㉑ | NA | B | ㉒ | NA  
 7 8 9 10 12 13 44 45 46 80  
 FACILITY STATUS      % POWER      OTHER STATUS      METHOD OF DISCOVERY      DISCOVERY DESCRIPTION  
 ⑦ ⑧ | 1 | 6 | Z | ㉓ | Z | ㉔ | NA | NA  
 7 8 9 10 11 44 45 80  
 ACTIVITY CONTENT RELEASED OF RELEASE      AMOUNT OF ACTIVITY      LOCATION OF RELEASE  
 ⑦ ⑧ | 1 | 7 | 0 | 0 | 0 | ㉕ | Z | ㉖ | NA  
 7 8 9 11 12 13 80  
 PERSONNEL EXPOSURES NUMBER      TYPE      DESCRIPTION  
 ⑦ ⑧ | 1 | 8 | 0 | 0 | 0 | ㉗ | 0 | NA  
 7 8 9 11 12 13 80  
 PERSONNEL INJURIES NUMBER      DESCRIPTION  
 ⑦ ⑧ | 1 | 9 | 0 | 0 | 0 | ㉘ | NA  
 7 8 9 11 12 80  
 LOSS OF OR DAMAGE TO FACILITY TYPE      DESCRIPTION  
 ⑦ ⑧ | 2 | 0 | Z | ㉙ | NA  
 7 8 9 10 80  
 PUBLICITY ISSUED      DESCRIPTION  
 ⑦ ⑧ | 2 | 0 | Z | ㉚ | NA

NAME OF PREPARER T. L. Baucom      PHONE: (804)-357-3184

Cooling Water Inlet Temperature

1. Description of Event:

At about 1700 on 6-30-78, with the unit operating at full rated power, the inlet circulating water temperature was observed to exceed 85°F. This inlet temperature exceeds the limit for operation specified in the Order for Modification of License dated January 18, 1978. An orderly shutdown was commenced. This event is reportable in accordance with Technical Specification 6.6.2.b.(2).

2. Probable Consequences/Status of Redundant Systems:

Accident analysis for unit operation with service water temperatures greater than 85°F was pending NRC approval. The health and safety of the general public were not affected.

3. Cause:

The temperature increase was due to solar heating of the James River estuary. The warm water was brought to the station by the flooding tide.

4. Immediate Corrective Action:

An orderly shutdown was commenced. At about 2000, inlet water temperature decreased below 85°F and the unit was returned to rated power after a reduced power period of about 5 hours.

5. Scheduled Corrective Action:

A revision of the accident analysis data to permit operation up to 87°F was approved and implementation on or about 7-1-78.

6. Action to Prevent Recurrence:

Since the heating of the river is a natural summer condition, the event may recur and will be handled as required by license provisions.

7. Generic Implications:

None.