

LICENSEE EVENT REPORT

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

[0] [1] M I R B R P L I [2] 0 0 1 0 1 0 1 0 1 0 1 0 - 1 0 1 0 [3] 4 1 1 1 1 1 [4] [ ] [5]  
 7 8 9 14 15 25 26 30 37 CAT 38  
 LICENSEE CODE LICENSE NUMBER LICENSE TYPE CAT

CON'T [0] [1] REPORT SOURCE [L] [6] 0 1 5 1 0 - 1 0 1 5 1 5 [7] 0 1 6 0 9 7 1 9 [8] 1 1 0 7 1 7 1 9 [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 shutdown conditions for inspection of leakage in the control  
 [0] [3] rod drive room on 4/20/79, a vibration type noise was heard in the primary  
 [0] [4] system with the #1 reactor recirculation pump in service. Investigation on  
 [0] [5] 6/9/79 revealed a diffuser dislodged from the #1 recirculation inlet and a  
 [0] [6] loose diffuser on the #2 recirculation inlet was found on 6/13/79. No  
 [0] [7] flow blockage occurred and there was no effect on public health and  
 [0] [8] safety. Incident is not repetitive. Reportability based on T/S 6.9.A (9).  
 7 8 9 80

[0] [9] [2] [11] [E] [12] [B] [13] [X] [X] [X] [X] [X] [X] [14] [Z] [15] [Z] [16]  
 7 8 9 10 11 12 13 14 15 16 17 18 19 20  
 SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP SUBCODE VALVE SUBCODE  
 [17] 7 9 [21] [ ] [24] 0 2 0 [27] [ ] [28] 0 1 [30] [X] [31] [ ] [32] 1  
 7 8 21 22 23 24 25 26 27 28 29 30 31 32  
 LER/RO REPORT NUMBER EVENT YEAR SEQUENTIAL REPORT NO. OCCURRENCE CODE REPORT TYPE REVISION NO.  
 ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NPRO-4 FORM SUB. PRIME COMP. SUPPLIER COMPONENT MANUFACTURER  
 [18] [C] [33] [Z] [34] [Z] [35] [NA] [36] [NA] [37] 0 0 0 0 [40] [Y] [41] [N] [42] [N] [43] [N] [44] [G] [45] [O] [46] [I] [47] [8] [48] [0] [49]  
 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  
 CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

[1] [0] Fastener bolt wear and/or fatigue are postulated as the failure mechanism.  
 [1] [1] New diffusers with redesigned bolt fasteners were installed in October, 1979.  
 [1] [2] All diffuser pieces have been accounted for and removed from the NSSS and  
 [1] [3] in addition a thorough cleaning has been conducted in the lower portions  
 [1] [4] of the reactor vessel.  
 7 8 9 80

[1] [5] [G] [28] 0 0 0 [29] NA [30] [C] [31] Noise observation during inspection [32]  
 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  
 FACILITY STATUS % POWER OTHER STATUS METHOD OF DISCOVERY DISCOVERY DESCRIPTION  
 [1] [6] [Z] [33] [Z] [34] [NA] [35] [NA] [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  
 ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY LOCATION OF RELEASE  
 [1] [7] 0 0 0 [37] [Z] [38] [NA] [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  
 PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION  
 [1] [8] 0 0 0 [40] [NA] [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  
 PERSONNEL INJURIES NUMBER DESCRIPTION  
 [1] [9] 0 0 0 [42] [NA] [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  
 LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION  
 [1] [9] [Z] [42] [NA] [43] 1323 161  
 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  
 PUBLICITY ISSUED DESCRIPTION  
 [2] [0] [N] [44] [NA] [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  
 NRC USE ONLY

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Attachment to LER-79-020-01X-1  
Consumers Power Company  
Big Rock Point Plant  
Docket 50-155

During shutdown conditions on April 20, 1979, an inspection of the control rod drive room for leakage associated with control rod drive housing F-2 (LER 79-18) a vibration type noise was noticed in the primary system associated with operation of reactor recirculation pump #1.

In parallel with activities associated with LER 79-18, fuel and other internals were removed from the reactor for accessibility to the lower areas of the vessel. On June 9, 1979, the main portion of the diffuser over the #1 recirculation pump 20" diameter inlet was found completely loose and lodged in the cavity between the vessel wall, the core support plate and the large flow baffle. A small portion of the diffuser, including one of the two upper attachment ears, was found below the core support plate.

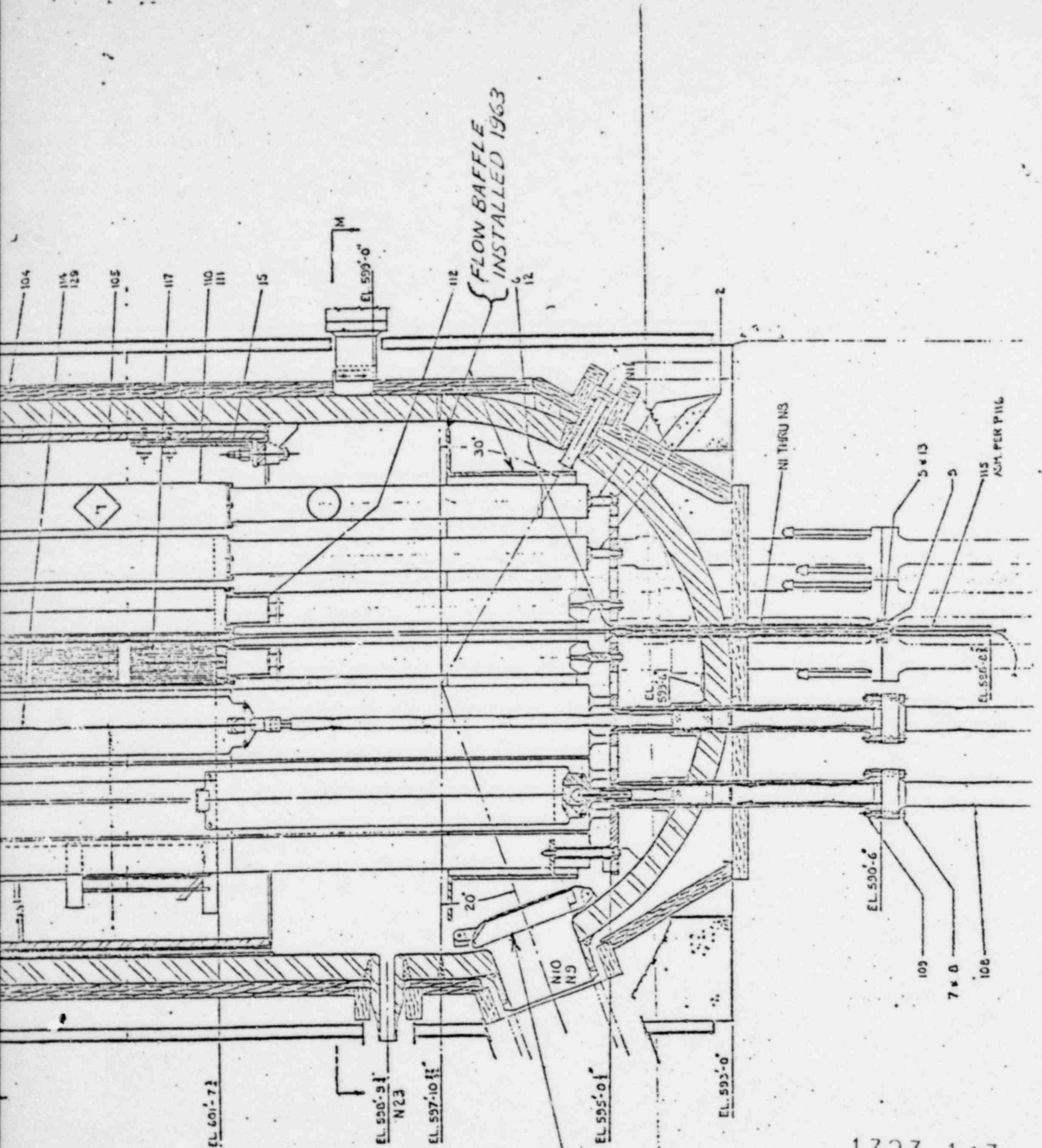
Inspection of the diffuser over the #2 recirculation pump 20" diameter inlet revealed that the single lower attachment was loose which would allow that diffuser to move on its upper attachments in a hinge fashion and make contact with the large baffle. This probably was the source of the vibration type noise first noticed on April 20, 1979.

Based on geometry factors and flow data, no flow blockage occurred. The incident is not repetitive and there was no effect on public health and safety.

Fastener bolt wear and/or fatigue are postulated as the failure mechanism. The failed bolts (3 on the #1 diffuser and 1 on the #2 diffuser) are 5/8" diameter shoulder bolts with 1/2" diameter threaded section, and were installed for initial plant operation in 1962. All diffuser pieces have been accounted for and removed from the reactor. New diffusers with bolt fasteners of improved design were installed in October of 1979. Since many reactor components were removed for the repair work, a thorough cleaning of the lower portion of the reactor vessel was accomplished.

1323 162

POOR ORIGINAL



ONE OF TWO  
DEFECTIVE  
DIFFUSERS  
LER 79-20

1323 163