

LICENSEE EVENT REPORT

CONTROL BLOCK: \_\_\_\_\_ ①

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

⑦ ⑧ ⑨ V A S P S ① ② 0 0 - 0 0 0 0 0 0 - 0 0 ③ 4 1 1 1 1 ④ \_\_\_\_\_ ⑤  
LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 57 CAT 58

CONT

⑦ ⑧ ⑨ REPORT SOURCE ⑥ X ⑥ 0 5 0 0 0 2 8 0 ⑦ 1 1 2 8 7 9 ⑧ 1 2 1 2 7 9 ⑨  
DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩

⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰  
① ② During unit operation, on November 27, 1979, Vepco was notified by the architect-  
③ engineer of an error in the current containment depressurization analysis for Surry  
④ Unit 1. Specifically, the spray effectiveness values assumed for the containment  
⑤ spray systems were higher than can conservatively be expected. Revised analyses  
⑥ indicate a slightly higher offsite dose for certain accidents than was originally  
⑦ estimated. There was no effect on the public health and safety.  
⑧ \_\_\_\_\_ ⑨ \_\_\_\_\_ 80

⑦ ⑧ ⑨ SYSTEM CODE ⑩ S B ⑪ CAUSE CODE ⑫ X ⑬ CAUSE SUBCODE ⑭ Z Z Z Z Z Z Z ⑮ COMP. SUBCODE ⑯ Z ⑰ VALVE SUBCODE ⑱ Z ⑲

⑰ LER/RO REPORT NUMBER ⑱ EVENT YEAR ⑲ 7 9 ⑳ SHUTDOWN METHOD ㉑ Z ㉒ HOURS ㉓ 0 0 0 0 ㉔ ATTACHMENT SUBMITTED ㉕ Y ㉖ NPRD-4 FORM SUB. ㉗ N ㉘ PRIME COMP. SUPPLIER ㉙ Z ㉚ COMPONENT MANUFACTURER ㉛ Z 9 9 9 ㉜  
SEQUENTIAL REPORT NO. ㉝ 0 3 6 OCCURRENCE CODE ㉞ 0 1 REPORT TYPE ㉟ T REVISION NO. ㊱ 0

ACTION TAKEN ㉟ X ㊱ FUTURE ACTION ㊲ Z ㊳ EFFECT ON PLANT ㊴ Z ㊵ SHUTDOWN METHOD ㊶ Z ㊷ HOURS ㊸ 0 0 0 0 ㊹ ATTACHMENT SUBMITTED ㊺ Y ㊻ NPRD-4 FORM SUB. ㊼ N ㊽ PRIME COMP. SUPPLIER ㊾ Z ㊿ COMPONENT MANUFACTURER ㉞ Z 9 9 9

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ⑳

① ② The error was caused by the architect-engineer's incorrect application of an approved  
③ spray effectiveness model. As a result, the spray effectiveness assumed in perfor-  
④ ming the containment depressurization analysis was erroneously high. More restrictive  
⑤ limiting conditions for unit operation have been imposed based on corrected analysis.  
⑥ \_\_\_\_\_ ⑦ \_\_\_\_\_ ⑧ \_\_\_\_\_ ⑨ \_\_\_\_\_ 80

⑦ ⑧ ⑨ FACILITY STATUS ㉟ E ㊱ % POWER ㊲ 1 0 0 ㊳ OTHER STATUS ㊴ NA ㊵ METHOD OF DISCOVERY ㊶ D ㊷ DISCOVERY DESCRIPTION ㊸ Notification by Architect-Engineer ㊹  
ACTIVITY CONTENT ㊺ Z ㊻ RELEASED OF RELEASE ㊼ Z ㊽ AMOUNT OF ACTIVITY ㊾ NA ㊿ LOCATION OF RELEASE ㉞ NA

⑦ ⑧ ⑨ PERSONNEL EXPOSURES NUMBER ㉟ 0 0 0 ㊱ TYPE ㊲ Z ㊳ DESCRIPTION ㊴ NA ㊵  
PERSONNEL INJURIES NUMBER ㊶ 0 0 0 ㊷ DESCRIPTION ㊸ NA ㊹

⑦ ⑧ ⑨ LOSS OF OR DAMAGE TO FACILITY TYPE ㉟ Z ㊱ DESCRIPTION ㊲ NA ㊳  
PUBLICITY ISSUED ㊴ N ㊵ DESCRIPTION ㊶ NA ㊷

⑦ ⑧ ⑨ PUBLICITY ISSUED ㉟ N ㊱ DESCRIPTION ㊲ NA ㊳

⑦ ⑧ ⑨ PUBLICITY ISSUED ㉟ N ㊱ DESCRIPTION ㊲ NA ㊳

⑦ ⑧ ⑨ PUBLICITY ISSUED ㉟ N ㊱ DESCRIPTION ㊲ NA ㊳

⑦ ⑧ ⑨ PUBLICITY ISSUED ㉟ N ㊱ DESCRIPTION ㊲ NA ㊳

⑦ ⑧ ⑨ PUBLICITY ISSUED ㉟ N ㊱ DESCRIPTION ㊲ NA ㊳

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### Description of Event

On November 27, 1979, Veeco was notified by the architect-engineer, Stone and Webster, that an error has been identified in the current containment depressurization analysis for Unit No. 1. Specifically, spray effectiveness values had been assumed for the containment spray systems which were higher than can be conservatively expected.

### Probable Consequences

Reanalysis, using conservative values for spray effectiveness, indicate that for the worst case LOCA, assuming the most detrimental extremes of initial plant operating conditions, the containment depressurization criteria might not have been met. That is, while the containment would have been restored to subatmospheric conditions within one hour, the third pressure peak occurring after the first hour could have caused the containment pressure to return slightly positive (approximately 0.5 psi) for approximately 1.5 hours. This would have resulted in a slight increase in offsite dose over the original estimate.

### Cause of Occurrence

Following the completion of interim modifications to ensure adequate NPSH to the Low Head Safety Injection and Outside Recirculation Spray pumps, containment depressurization analyses were performed which established limiting conditions for operation. The spray effectiveness values used for the containment depressurization analyses were developed using an approved model. However, the architect-engineer has now determined that the spray effectiveness model was inappropriately applied yielding an erroneously high value.

### Corrective Actions

Containment depressurization analyses, using conservative values for spray effectiveness have been performed to establish revised limiting conditions for operation. The revised limits are slightly more restrictive than those originally established. Operation of Surry Unit 1 is in accordance with the revised operating limits.

The current limiting conditions for Surry Unit 2 are similarly affected. However, since the final modifications to address NPSH concerns are currently in progress on Unit 2, that unit will return to operation under a different revised set of LCO's.