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SUBJECT: Responds to 830420 & 21 requests for clarification of specific items re pressure/temp analysis for pipe break outside containment submitted in 830413 ltr.

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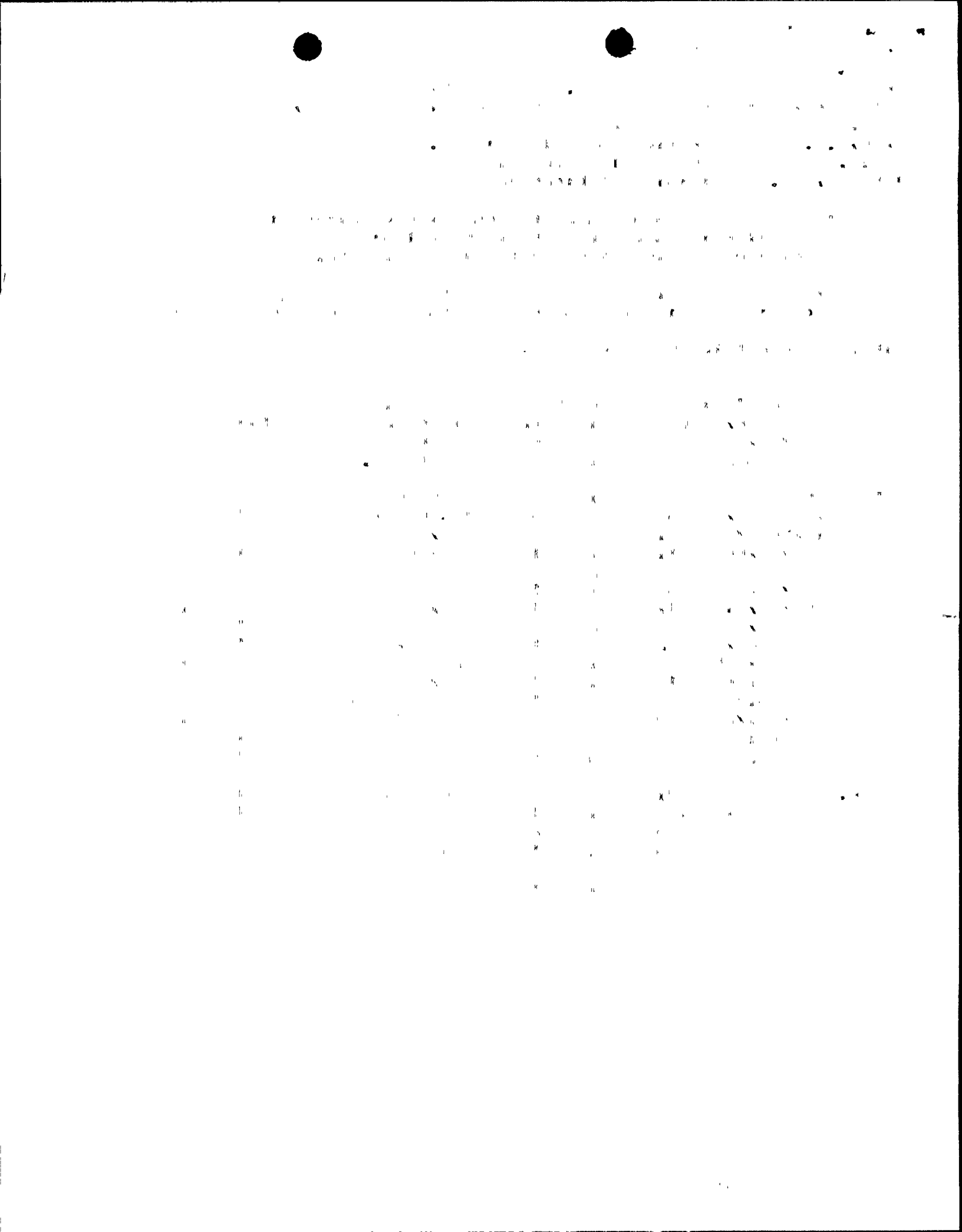

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May 9, 1983

Mr. D. G. Eisenhut, Director
Division of Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Re: Docket No. 50-275, OL-DPR-76
Diablo Canyon Unit 1
Pressure/Temperature Analysis for
Pipe Break Outside Containment

Dear Mr. Eisenhut:

On April 13, 1983, PGandE submitted to the Staff information related to the pressure and temperature analysis in the auxiliary building. On April 20 and 21, 1983, the Staff verbally requested clarification of certain items contained in the April 13 submittal. Pursuant to that request, the specific items and PGandE's responses are included in Enclosure 1.

Very truly yours,

Philip A. Crane, Jr.

Enclosure

cc: Service List (w/o enc.)

B001

ENCLOSURE 1

Item 1 - Verify that the GE-GW elevation 85' will be sealed from the Component Cooling Water (CCW) pump rooms.

Response: The opening between elevation 85' of the GE-GW areas and the CCW pump rooms will be sealed. The opening was assumed closed in the analysis.

Item 2 - With respect to Calculation No. M-222, page 9:

a. Verify that interconnection K will be closed.

Response: The CCW compartment at elevation 85' shown on page 9 of Calculation No. M-221 is the CCW heat exchanger (Hx) room and not the CCW pump room. The CCW Hx room was conservatively excluded from the GE-GW analysis.

b. Verify that the atmospheric vent used in the model is only roof monitor A and not the sum of all interconnections from the operating deck.

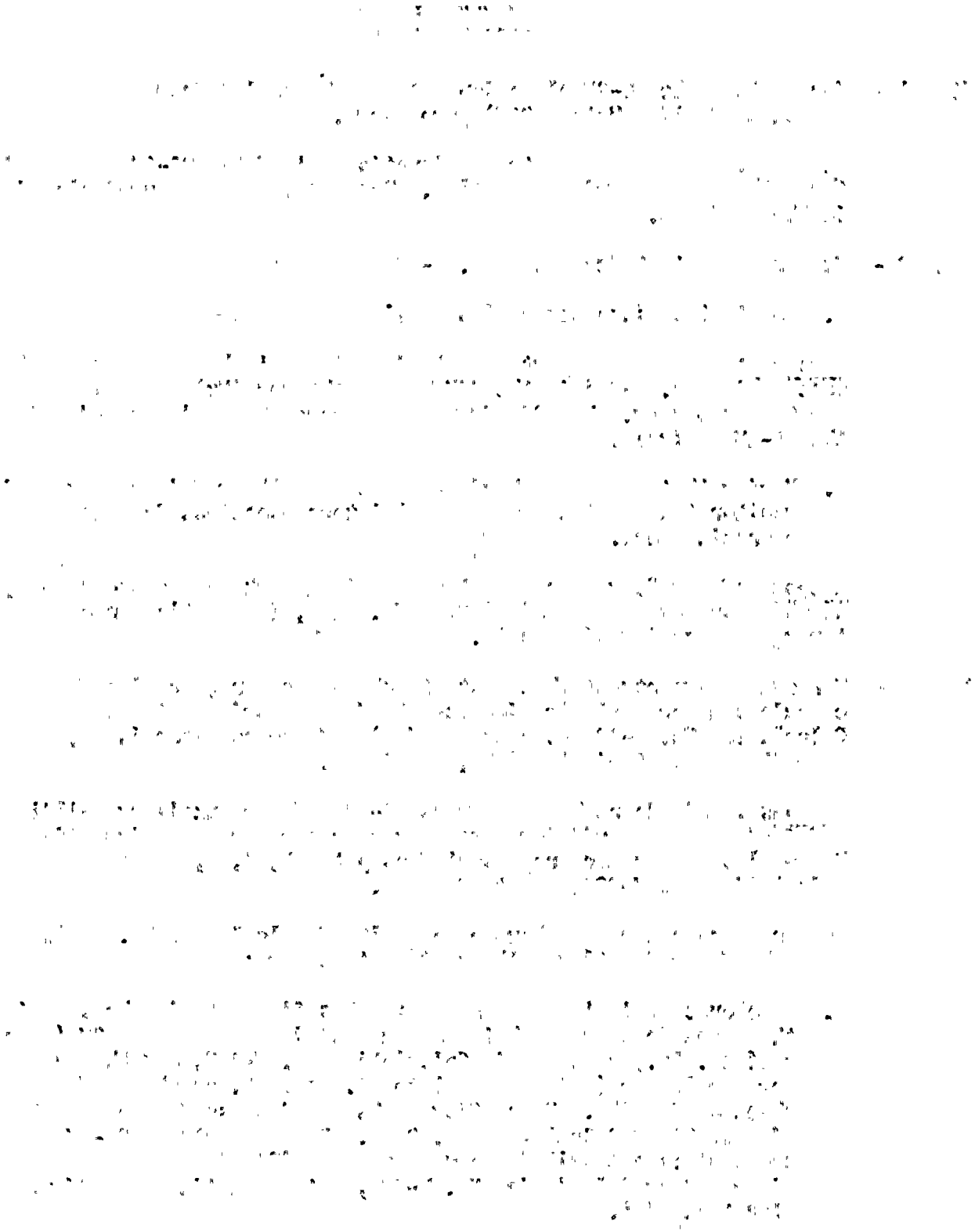
Response: The flow area from the operating deck to the atmosphere, as shown on page 16 of Calculation No. 2203, is the flow area through the roof monitor only.

Item 3 - For every compartment that vents to the atmosphere, provide the calculations or justification for the discrepancies between Calculation No. M-222 (sheets 3 and 4) and the computer input, page 109 of the April 13, 1983, submittal.

Response: All doors between areas GE-GW and the auxiliary building and fuel handling buildings are assumed closed in the calculation. These closed doors are represented as paths L, M, P, and Q in Calculation No. M-222, sheets 3 and 9.

Referring to the model shown on page 16 of Calculation No. 2203, we have the following flow paths to the atmosphere:

a. GW elevation 115' to atmosphere: This flow path is the sum of the areas for the gap between the containment and area GW (area = 54 sq. ft.) as shown in Calculation No. M-287, and the area for the louver (path J) equal to 23.8 sq. ft. as shown on sheet 3 of M-221. These flow paths are discussed on pages 20, 24, and 29 of Calculation No. 2203. The gap between GE-GW and the containment building occurs at the 140' elevation as discussed in Calculation No. M-287, but is venting area GW at elevation 115'.



b. GE elevation 115' to atmosphere: This flow path includes only the area for the gap between the containment and area GE-GW. As shown in Calculation No. M-287, sheet 2, the flow area is 42 sq. ft. Flow paths L and M as shown on sheet 3 of Calculation No. M-222 are paths leading to area J and K of the auxiliary building. For this analysis, the doors leading to these areas were assumed closed and were not considered as part of the model. The flow path through the gap is discussed on pages 18 and 29 of Calculation No. 2203.

c. North pipeway to atmosphere: This flow path includes only the area available through the door (path DD on page 14 of Calculation No. 2203). Path CC, i.e., the fan openings, was omitted due to difficulty in determining the correct flow area through the fans. Omission of flow path CC is conservative for the analysis.

d. GE-GW at elevation 100': This flow area only includes that for the louvers to the atmosphere. Paths P and Q (as noted in Calculation No. 2203) lead to areas J and K at elevation 100' of the auxiliary building. For the same reason as Item 3.b. above, these two flow paths were not included in the model.

e. GE-GW at elevation 85': This flow area includes that for the louver to the atmosphere. This is mentioned on pages 22 and 30 of Calculation No. 2203. Path E (as shown on page 14 of Calculation No. 2203) is an HVAC duct, and because the HVAC group was rerouting ducts, this path was omitted for conservatism.

f. Operating deck to atmosphere: As discussed for Item 2.b. above, this flow area represents the flow area for the roof monitor. This is mentioned on page 32 of Calculation No. 2203.

Item 4 - For every case, provide the pressure of the source fluid.

Response: The pressure of the source fluid for case 33, 34, and 35, and 36 was provided in the steam blowdown data included in our March 4, 1983 submittal. The pressure of the source fluid for case 17, 18, 19, and 20 is provided in the steam blowdown data included as Attachment 1.

Discussion of Westinghouse steam blowdown data:

Westinghouse provided data for Loop 1 (broken loop), and Loops 2, 3, and 4. However, for the double-ended ruptures, during the inventory period of inventory depletion of steam in the piping and isolation of the other three loops, the blowdown data shown in the columns for Loops 2, 3, and 4 actually include blowdown data from Loop 1. After isolation of Loops 2, 3, and 4, the data from Loop 1 was used. For the split ruptures, the data provided for Loop 1 was combined with Loops 2, 3, and 4. For all of the blowdown cases, the first data

point for Loop 1 always showed an erroneous value for enthalpy. The value shown for Loops 2, 3, and 4 was used for the split break cases.

For the double-ended rupture cases, the data shown for Loops 2, 3, and 4 include the valve isolation time and steam depletion in the lines after valve closure.

ATTACHMENT 1

WESTINGHOUSE STEAM BLOWDOWN DATA

CASE 17, 18, 19, AND 20