

Beshore Allan

From: Schau, Gerald E. [schauge@bp.com]
Sent: Tuesday, September 03, 2002 7:49 AM
To: Beshore Allan (E-mail)
Cc: Katchmar, Peter (E-mail)
Subject: FW: Two reports - Olympic

Importance: High

Allan,

The following note from Gerald Moreland summarizes the revised findings of the Stoner analysis that he discussed (via teleconference) during the NTSB Technical meeting last May. As I mentioned Gerald is updating his report accordingly.

Hope this meets your needs.

Jerry

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-----Original Message-----

From: Gerald Moreland [mailto:Gerald.Moreland@advanticatechinc.com]
Sent: Tuesday, May 07, 2002 5:59 AM

Subject: Two reports - Olympic

Stoner has (I have) re-run the June 10 model with original data sets (appears to have check valves in place) and adjusted data set (insures that check valves are removed). Difference in pressure at break site is 1442 vs. 1433 (0.8% error).

Paragon report is supportive of Stoner maximum pressure at break site based on simulations

Stoner - 1422 psig (appears to have check valves)
Paragon - 1437 psig

Error = 1.05%

If I adjust the model to insure NO check valves in pipeline line, the number change slightly:

Stoner - 1433 psig (NO check valves)
Paragon - 1437 psig

Error = 0.28%

Mr. Whaley prediction (without any simulations) is pure speculation and conjecture. He has no simulations to support his numbers.

Stoner - 1422 psig (appears to have check valves)
Bethel - 1451 psig

Error = 2.04% (Hardly significant)

Stoner - 1433 psig (NO check valves)
Bethel - 1451 psig

Error = 1.05% (less significant)

All these values are less than MASP (1602 psig) of pipe or predicted bursting pressure (by Paragon - 2028 psig without detects). Bethel highest estimated pressure of 1476 psig is only 72.8% (2028/1476) of burst pressure and 92% (1476/1602) of maximum allowable surge pressure. Bottom line is still the same:

A pipe in good condition (no detects) should not have failed during the June 10, 1999 event.

Regards,

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