NRC Question Response Form

Request Number: 20 c Status:

Requested By *(Inspector name)*: Date Requested:
Question / Document Request: (Q) D *(circle one)* System:
Detailed Question or Request:

If pipe contact were to fail a support how would that affect the results of the analysis?

Initiated By *(individual taking the request)*: Potter

Assigned To (Person responding to request): Date Assigned:

CAP / Work Order Issued? Yes / (No) *(circle one)* Number:_____

Response (include a list of documents provided):

The analysis performed was not intended to evaluate all scenarios and be all inclusive of all possible configurations. There are too many variables to define all of the possibilities for a bounding arrangement. Rather the evaluation was performed to evaluate the typical interaction that was postulated. In this typical evaluation we tried to use bounding or representative parameters as much as practical, however detailed evaluations of support configurations and piping layouts was not practical. We used what we considered to be a representative support configuration, with a hit location for the target pipe at mid-span (as this was shown to be bounding in the NUREG). We did not specifically consider the effect of support failure resulting in an increased support span and the potential effect on target pipe damage.

In effect, a failure of one or more pipe supports would result in increased spans for the target pipe between remaining supports. Our parametric studies concluded that when the jet force is considered to continue to act throughout the interaction event (after initial contact), larger spans tend to result in more damage to the target pipe. However, in this scenario there would be offsetting effects. Since this is essentially a conservation of energy problem, any energy dissipated in failing one or more supports would reduce the energy available to deform the target pipe. It is anticipated that these two effects would tend to offset one another, but without detailed analysis of specific configurations, it is difficult to predict to what extent this would occur.

Is this an equipment issue that affects plant operability? ☐ **Yes** ☒ **No**

Use of this form as a procedural aid does not require retention as a quality record.

If yes, contact the Shift Manager immediately. _____

Date/Contacted By

Completed By: AGS/Dave Degrush Date Completed: 7/22/10

Peer / Tech Review / Validation By: _____ Date Completed: 7/23/10

Team Leader / Supervisor Review / Approval: Sean Ford Date Completed: 7/23/10

Sean Ford

Additional Info Attached? Yes / (No) [forward a copy to Regulatory Affairs]

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Reviewer Verification Guidance

- Data Requests:
  - Is the information provided complete? Was any material removed from the information provided?
  - Is the information provided correct? Was the preparer of the response a subject matter expert?
- Information Requests:
  - Does the response answer the question being asked? Is the response on topic and clear?
  - Are inputs and assumptions appropriately validated?
  - If there is an embedded calculation, is the math correct?
  - Is the response well formulated? Was enough work put into the response?
  - Does the response reflect a differing professional opinion between the preparer and the inspector? Is the response professional in tone? Is the response argumentative?
  - Is there a condition adverse to quality? Has a CAP been initiated?

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