Enclosure 1

MFN 15-051

GEH Response to Item #10 – Gas Accumulation Locations

NRC- Suggested Design Changes Item #10 – Gas Accumulation Locations:

Address three major review areas from ISG-019: identification of potential gas accumulation locations and intrusion mechanisms, addition of ITAAC to confirm identification and prevention measures, and development of procedures for surveillance and venting.

GEH Response:

GEH will amend ABWR DCD Tier 1 Section 2.6.1, and Tier 2 Section 5.4, to describe features that mitigate the possible accumulation of gases in important piping systems. GEH will add a COL item to establish a program for surveillance and venting of accumulated gases. This COL item will be added to Tier 2 Table 1.9-1.

To ABWR DCD rev 5 Tier 1 Section 2.6.1, Table 2.6.1, the following text will be added:

Design Commitments	Inspections, Tests, Analyses	Acceptance Criteria
7. RPV Head Spray line will have a high point vent line with the proper slope to prevent buildup of Hydrogen Gas during operation.	7. Inspections will be performed on the as built CUW piping to confirm proper elevation and slope.	7. Elevations and slopes of the RWCU System piping are consistent with design drawings.

To the ABWR DCD rev 5 Section 5.4-8, the following text will be added:

> A vent line down to the main steam line is provided at the high point of the RPV head spray line in order to avoid accumulation of hydrogen generated by radiolysis of reactor water during normal reactor operation.

To ABWR DCD rev 5 Section 5.4.15, the following COL action item will be added:

> **5.4.15.5 Program for Surveillance and Venting of Accumulated Gases.**
>
> The COL applicant shall develop periodic (monthly) surveillance procedures to ensure the Main Steam Equalizing Valve and the Main Steam Drain Valve are opened for short durations to vent any potential accumulation of hydrogen in the main steam vent and equalizing lines.

This COL Information Item will also be added to Table 1.9-1.

Figure 5.1-3 and Figure 5.4-12 will be updated to show the new vent line modification to the Main Steam and RWCU Head Spray piping.

Impact on DCD:

The ABWR DCD Tier 1 Section 2.6.1 and Tier 2 Section 5.4, Table 1.9-1, Figure 5.1-3 and Figure 5.4-12 are being revised. The ABWR DCD R5 marked up pages are provided in Enclosure 2.