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MFN 10-039

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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Subject: **Transmittal of ESBWR Tier 2, Chapter 2 DCD Markups Related to GEH Internal Corrective Action**

The purpose of this letter is to submit markups to the ESBWR DCD, Tier 2, Appendix 2B, which are the result of GEH internal review to clarify the purpose of Appendix 2B and to consistently define ESBWR grade elevation through out the DCD. This transmittal letter closes out a GEH Internal Corrective Action. These minor changes will be incorporated into DCD Revision 7.

The error of the site finished grade elevation was discovered during internal GEH review of the DCD. The site finish grade elevation did not have a consistent basis when reviewing drawings for the ESBWR Reactor/Fuel, Control, Turbine/Electrical and Radwaste buildings. All effected DCD chapters were reviewed and the correct grade elevation was determined and effected DCD pages corrected. This has resulted in the attached corrections to DCD Appendix 2B, Rev 6. Table 2B-1, 'Height of Building Above Grade' for Reactor/Fuel, Turbine/Electrical and Radwaste has been changed to match the height of the buildings based on Finished Ground Level Grade of 4500mm.

The revised pages of Appendix 2B are contained in Enclosure 1.

If you have any questions or require additional information, please contact me.

Sincerely,

Richard E. Kingston

Richard E. Kingston
Vice President, ESBWR Licensing

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NRO

Enclosure:

1. Document Improvements and Specific Changes to DCD Related to ESBWR Design Certification Application DCD Tier 2, Section 2B.1 and Table 2B-1 VENTILATION STACK PATHWAY INFORMATION FOR LONGTERM X/Q

cc:

| | |
|---|---|
| AE Cubbage | USNRC (with enclosures) |
| JG Head | GEH/Wilmington (with enclosures) |
| DH Hinds | GEH/Wilmington (with enclosures) |
| HA Upton | GEH/San Jose (with enclosures) |
| eDRF Section | 0000-0081-5955R3 |

# Enclosure 1

# MFN 10-039

# Document Improvements and Specific Changes to DCD

# Related to ESBWR Design Certification Application

# DCD Tier 2, Section 2B.1 and Table 2B-1

# VENTILATION

# STACK PATHWAY INFORMATION FOR LONGTERM X/Q

# VALUES

# APPENDIX 2B VENTILATION STACK PATHWAY INFORMATION FOR LONG-TERM X/Q VALUES

## 2B.1 Discussion

This appendix provides the gaseous effluent release pathway information for each of the three ventilation stacks ~~used in calculating~~that support the standard plant long term X/Q values; this gaseous effluent release pathway information may also be used in generating site-specific long term X/Q values. Table 2B-1 provides the relevant ventilation stack parameters for use with the XOQDOQ computer code (Reference 2B-1).

## 2B.2 COL Information

None.

## 2B.3 References

2B-1 U.S. Nuclear Regulatory Commission, "XOQDOQ: Computer Program for the Meteorological Evaluation of Routine Effluent Releases at Nuclear Power Stations," NUREG/CR-2919, September 1982.

## Table 2B-1

## Ventilation Stack Parameters

| Building Stack (Release Point) | Stack Average Velocity m/sec (ft/min) | Stack Inside Diameter m (ft) | Stack Release Height Above Grade m (ft) | Height of Building Above Grade m (ft) | Building Dimensions m |
|---|---|---|---|---|---|
| Reactor/ Fuel Building Stack | 17.78 (3,500) | 2.40 (7.9) | ~~52.62~~52.77 ~~(172.6)~~(173.09) | ~~48.05~~48.20 ~~(157.6)~~(158.09) | Reactor Building: X-Z plane: 49 x ~~48.05~~48.20 Y-Z plane: 49 x ~~48.05~~48.20 Fuel Building: X-Z plane: 21 x ~~22.85~~23.00 Y-Z plane: 49 x ~~22.85~~23.00 |
| Turbine Building Stack | 17.78 (3,500) | 1.95 (6.4) | 71.3 (234.0) | 52.0 (170.6) | X-Z plane: 115 x 52 Y-Z plane: 59 x 52 |
| Radwaste Building Stack | 17.78 (3,500) | 1.34 (4.4) | ~~18~~18.15 ~~(59.1)~~(59.59) | ~~12.0~~12.15 ~~(39.4)~~(39.89) | X-Z plane: 32.8 x ~~12~~12.15 Y-Z plane: 65 x ~~12~~12.15 |