3.8 Seismic Category I Structures

The information in this section of the reference ABWR DCD, including all subsections is incorporated by reference with the following standard departures and supplements.

STD DEP 3.8-1

STD DEP Admin

3.8.4.1.3 Radwaste Building Substructure

STD DEP 3.8-1

The Radwaste Building is a reinforced concrete structure ~~60.4~~ 66.2m by ~~41.2~~ 38.8m and a height of ~~29.5~~ 27.4m from the top of the basemat. The building consists of a below grade substructure consisting of walls (1.2m thick) and slabs of reinforced concrete forming a rigid box structure which serves as a container to hold radioactive waste in case of an accident. This substructure is located below grade to increase shielding capability and to maximize safety. It is supported on a separate foundation mat whose top is 13.7m below grade. In addition, a reinforced concrete superstructure ~~15.7~~ 13.4m high extends above grade floor level and houses the balance of the radwaste equipment.

3.8.4.2.3 Radwaste Building Substructure

STD DEP Admin (Subsection is inconsistent with 3H.3)

In addition, the non-Seismic Category ~~1~~ I reinforced concrete portion of the superstructure is designed ~~according to the seismic provisions of the uniform building code~~ to resist Seismic Category ~~1~~ I loads.

3.8.4.5.3 Radwaste Building Substructure

STD DEP Admin

[Structural acceptance criteria are defined in ANSI/AISC-N690 and ACI 349 Codes.] In no case does the allowable stress exceed 0.9Fy where Fy is the minimum specified yield stress. The design criteria preclude excessive deformation of the ~~Reactor~~ Radwaste Building. The clearances between adjacent buildings are sufficient to prevent impact during a seismic event.*

3.8.5.1 Description of the Foundations

STD DEP 3.8-1

The Radwaste Building foundation is a rectangular reinforced concrete mat ~~60.4~~ 66.2m by ~~41.2~~ 38.8m and 2.5m thick. The top of the Radwaste Building mat is ~~13.5m~~ 13.7m below grade. The foundation mat is constructed of cast-in-place conventionally reinforced concrete. It supports the Radwaste Building structure.

3.8.6 COL License Information

3.8.6.1 Foundation Waterproofing

The following standard supplement addresses COL License Information Item 3.23.

Foundation waterproofing is done by placing a chemical agent on the exposed concrete surface of the mudmat. The concrete foundation is poured directly onto the concrete mudmat. A waterproof membrane that could degrade the ability of the foundation to transfer loads is not used.

3.8.6.2 Site Specific Physical Properties and Foundation Settlement

The following site-specific supplement addresses COL License Information Item 3.24.

Physical properties of the site-specific subgrade medium and the settlement of foundations are assessed in Sections ~~3H.6~~ 3H.6.4.2 and 2.5S.4.

3.8.6.3 Structural Integrity Test Result

The following standard supplement addresses COL License Information Item 3.25.

Structural Integrity Test (SIT) of the containments will be performed in accordance with Subsection 3.8.1.7.1. The first containment will be considered a prototype and its SIT performed accordingly. The details of the test and the instrumentation, as required for such a test, will be provided to NRC for approval.

3.8.6.4 Identification of Seismic Category I Structures

The following site-specific supplement addresses COL License Information Item 3.26.

A complete list of Seismic Category ~~1~~ I Structures, Systems, and Components can be found in Table 3.2-1, which includes the following site-specific Seismic Category ~~1~~ I Structures:

- Ultimate Heat Sink
- Reactor Service Water Piping Tunnel

A description of these structures can be found in section 3H.6.