

Enclosure 5
Regulatory Treatment of Nonsafety Systems (RTNSS) B Long Term Cooling
(Redacted)

generation

mPower

RTNSS B Long Term Cooling

PRELIMINARY

April 30, 2013

(Redacted Version)

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This is a pre-application document and includes preliminary B&W mPower Reactor design or design supporting information and is subject to further internal review, revision, or verification.

Purpose/Objective

- Reiterate regulatory guidance for long-term core cooling
- Describe how B&W mPower™ plant assures long-term core cooling
- Identify B&W mPower nonsafety-related RTNSS “B” SSCs required for long-term core cooling
- Describe B&W mPower conformance with RTNSS “B” SSC design guidance
- Obtain NRC comments/feedback

Long-Term Core Cooling Guidance

- At least first 72 hours after event
 - Onsite, safety-related, passive, automatically aligned
- *72 hours to 7 days*
 - Onsite, nonsafety-related, RTNSS B
- > 7 days
 - Onsite or offsite sources may be utilized, nonsafety-related

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Long-Term (Post-72 Hour) Core Cooling Function

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Post-72 Hour Core Cooling SSCs designated as RTNSS "B"

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[CCI per Affidavit 4(a)-(d)]

Conformance with RTNSS B SSC Guidance

- 72 hour to 7 day functions accomplished with installed, onsite SSCs and supplies
- SSCs designated as RTNSS B designed to Seismic Category II standards
- RTNSS B SSCs are located below grade in [
1]
 - RSB is Safety-Related, Seismic Category I structure
 - Protected from hurricane winds
 - Protected from floods
- RTNSS B SSCs are capable of withstanding adverse effects associated with DBAs (e.g. turbine missiles, pipe whip)

[CCI per Affidavit 4(a)-(d)]



Summary

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[CCI per Affidavit 4(a)-(d)]



Questions

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Abbreviations / Acronyms

RTNSS – Regulatory treatment of nonsafety systems

PCC – Passive containment cooling system

PCCT – Passive containment cooling tank

ECC – Emergency core cooling system

DW – Demineralized water system

RWST – Refueling water storage tank

IPIT – Intermediate pressure injection tank