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March 11, 2013 *10 CFR 52*

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Generation mPower LLC
Establishment of Responsibility for B&W mPower™ Small Modular Reactor Licensing and Response to NRC Regulatory Issue Summary (RIS) 2012-12
Ltr. No. LTR-13-0012

References: (1) Regulatory Issue Summary (RIS) 2012-12, *Licensing Submittal Information and Design Development Activities for Small Modular Reactor Designs*," dated December 28, 2012

(2) Letter, Halfinger to Document Control Desk, *Voluntary Response to NRC Regulatory Issue Summary (RIS) 2011-02, Revision 1, "Licensing Submittal Information and Design Development Activities for Small Modular Reactor Designs," dated December 28, 2012,* Ltr. No. MPWR-LTR-13-00006, dated February 8, 2013 (ML13043A006)

This letter affirms that Generation mPower LLC (GmP) intends to assume responsibility for submittal of the Babcock & Wilcox (B&W) mPower™ Small Modular Reactor (SMR) design certification application (DCA), and requests U.S. Nuclear Regulatory Commission (NRC) support in confirming the requirements for a timely transition in responsibility for the DCA to GmP. GmP was formed by subsidiaries of B&W and Bechtel Enterprises. With the support of both these parties, GmP will act as the applicant for the NRC Design Certification for the B&W mPower SMR.

This letter also provides the NRC Staff with background information on GmP and its affiliates in development of the B&W mPower SMR, including an overview of GmP, its primary affiliates, and a discussion of associated commercial relationships; and provides updated information responsive to the subject RIS.

Enclosure 1 to this letter provides additional background information on GmP.

Enclosure 2 to this letter supplements the information provided by B&W mPower in Reference 2, which was submitted by B&W mPower in response to Reference 1.

Concurrent with this letter, B&W mPower is submitting a letter indicating their concurrence and endorsement of the transition to GmP as prospective applicant for the design certification. To ensure continuity, GmP requests that ongoing review activities associated with prior B&W mPower submittals continue apace.

GmP requests a non-technical meeting with the NRC Staff at our earliest mutual convenience to discuss implementation of this transition in a timely manner, including but not limited to: timing of the

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transition; assignment of NRC fees; confirmation of interfaces between the NRC Staff and the GmP/mPower team; and related issues.

If you have any questions or need any additional information, please contact me at your convenience at (980) 365-2071 or at pshastings@generationmpower.com.

Peter Hastings
Director of Licensing
Generation mPower LLC

Enclosures: (1) Generation mPower LLC Organizational Overview
(2) Generation mPower Response to Requested Information, RIS 2012-12

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Generation mPower LLC
Organization Overview

Babcock & Wilcox (B&W) has been engaged in SMR development for several years. Formation of Generation mPower LLC (GmP) was a step forward in fulfilling B&W's vision for SMR development in terms of joining with highly qualified partners to assist in module design, engineering, and construction planning.

GmP is headquartered in Charlotte, NC, and was formed as a limited liability company by wholly-owned subsidiaries of B&W mPower, Inc. (B&W mPower) and Bechtel Enterprises Holdings, Inc. (Bechtel Enterprises), Inc. (Bechtel) to offer a turnkey solution for the design, licensing, and deployment of nuclear power plants based on the B&W mPower™ small modular reactor. Additional general background may be found at GmP's website: www.generationmpower.com.

GmP was formed to: (a) obtain NRC design certification for the B&W mPower light water SMR technology; (b) contract with customers for designing, licensing, and constructing B&W mPower plants; (c) support plant owners' pursuit of NRC licenses, including, as applicable, early site permits, construction permits, operating licenses, and combined construction and operating licenses (COLs) for deployment of B&W mPower units; (d) manufacture, engineer, procure, and construct the B&W mPower modules and plants; and (e) service operating B&W mPower plants. By design of the LLC, GmP is to perform these functions with its own staff supplemented by contract support from its parents' affiliates B&W mPower and Bechtel Power Corporation (BPC).

Currently, B&W controls a majority interest in GmP and Bechtel Enterprises controls the remaining interest. Funding from each of the parent companies supports initial development, design certification, marketing, and other business functions of GmP. GmP is governed by a Board of Directors comprised of representatives from its parent companies. B&W mPower and BPC have secondment agreements whereby each provides personnel to support GmP and each other. GmP serves as the primary customer contact and will enter into contracts with customers for professional services as well as engineering, procurement, and construction of the B&W mPower plants. GmP will also be the applicant for NRC design certification for the B&W mPower design, and will ensure design elements are integrated into a single cohesive, consistent licensing basis. B&W mPower is responsible for the development of the nuclear steam supply system and B&W mPower module, which will include an integrated reactor, steam generator, and pressurizer design. BPC has primary responsibility for balance-of-plant engineering as well as responsibility for development of significant portions of the plant engineering.

Organizational details for GmP are described further in the GmP Quality Assurance Program Document, which will be discussed with the NRC Staff in the near future.

Generation mPower LLC
Response to Requested Information
Regulatory Issue Summary 2012-12

The following information constitutes Generation mPower LLC's (GmP's) voluntary response to RIS 2012-12, effective upon completion of the transition in responsibility for the DCA from B&W mPower to GmP. This information supplements B&W mPower Letter No. MPWR-LTR-13-00006, dated February 8, 2013, containing B&W mPower's response to the subject RIS. Except where noted below via supplemental responses, GmP reaffirms B&W mPower's responses to the RIS.

Design and Licensing Submittal Information

- **When (month and year) are applications planned for design-related applications and what NRC action will be requested (i.e., DC, DA, ML, or COL that does not reference a DC or DA)?**

  B&W mPower indicated its intent to submit a Design Certification Application (DCA) for the B&W mPower™ Reactor design to the NRC in the third quarter of calendar year (CY) 2014. GmP affirms that schedule. As anticipated in the B&W mPower letter, GmP will be the applicant. GmP will continue to coordinate with and be supported by B&W mPower and Bechtel Power Corporation.

- **Will the applicants be organized into DCWGs? If known, what is the membership of the DCWG and which party is the primary point-of-contact designated for each DCWG? Have protocols been developed to provide coordinated responses for RAIs with generic applicability to a design center?**

  GmP affirms B&W mPower's response without amendment.

- **Which applicant that references the design will be designated as the reference COL applicant or, alternatively, how will various applications (e.g., CP, DC, COL) be coordinated to achieve the desired design-centered licensing review approach?**

  GmP affirms B&W mPower's response, and affirms GmP's commitment to standardization for future applications referencing the B&W mPower design.

- **When (month and year) will CP, COL, or ESP applications be submitted for review? In addition, what are the design, site location, and number of units at each site.**

  GmP affirms B&W mPower's response without amendment.

- **Are vendors or consultants assisting in the preparation of the application(s)? If so, please describe roles and responsibilities for the design and licensing activities.**

  B&W mPower's response included a list of contractors assisting in design and licensing activities. This list remains applicable. Additionally, B&W mPower will continue support of design and licensing activities associated with the B&W mPower Reactor Design under a GmP DCA, responsible for Nuclear Steam Supply Design and Fuel Design.

Design, Testing, and Application Preparation

- **What is the current status of the development of the plant design (i.e., conceptual, preliminary, or finalizing)? Has the applicant established a schedule for completing the design? If so, please describe the schedule.**

  GmP affirms B&W mPower's response without amendment.

- **What is the applicant's current status (i.e., planning, in progress, or complete) for the qualification of fuel and other major systems and components? Has the applicant established a schedule for completing the qualification testing? If so, please describe the schedule.**

  GmP affirms B&W mPower's response, noting that certain of the activities described in that response remain within B&W mPower scope of work in the context of supporting GmP as the design certification applicant.

- **What is the applicant's status (i.e., planning, in progress, or complete) in developing computer codes and models to perform design and licensing analyses? Has the applicant defined principal design criteria, licensing-basis events, and other fundamental design/licensing relationships? Has the applicant established a schedule for completing the design and licensing analyses? If so, please describe the schedule.**

  GmP affirms B&W mPower's response, noting that certain of the activities described in its response remain within B&W mPower scope of work in the context of supporting GmP as the design certification applicant.

- **What is the applicant's status in designing, constructing, and using thermal-fluidic testing facilities and in using such tests to validate computer models? Has the applicant established a schedule for the construction of testing facilities? If so, please describe the schedule. Has the applicant established a schedule for completing the thermal-fluidic testing? If so, please describe the schedule.**

  GmP affirms B&W mPower's response, noting that certain of the activities described in its response remain within B&W mPower scope of work in the context of supporting GmP as the design certification applicant.

- **What is the applicant's status in defining system and component suppliers (including fuel), manufacturing processes, and other major factors that could influence design decisions? Has the applicant established a schedule for identifying suppliers and key contractors? If so, please describe the schedule.**

  GmP affirms B&W mPower's response without amendment.

- **What is the applicant's status in the development and implementation of a quality assurance program?**

  B&W mPower's response discussed the approved Quality Assurance Program Topical Report (08-00000320-000-A, Rev. 2, *Quality Assurance Program for the Design Certification of the B&W mPower Reactor*). GmP is currently working under its own Quality Assurance Program Document (pursuant to 10 CFR Part 50 Appendix B and NQA-1), and plans to discuss with the NRC Staff a path forward for NRC review of that GmP Quality Assurance program.

- **What is the applicant's status in the development of probabilistic risk assessment models needed to support applications (e.g., needed for Chapter 19 of safety analysis reports or needed to support risk-informed licensing approaches)? Does the applicant plan to use PRA for risk-informed applications (i.e., risk-informed technical specifications, risk-informed inservice inspection, risk-informed categorization and treatment, risk-informed inservice testing, etc.). What are the applicants' plans for using the PRA models in the development of the design? At what level will the PRA be prepared and when will it be submitted in the application process?**

  GmP affirms B&W mPower's response, noting that certain of the activities described in its response remain within B&W mPower scope of work in the context of supporting GmP as the design certification applicant.

- **What is the applicant's status in the development, construction, and use of a control room simulator?**

  GmP affirms B&W mPower's response, noting that certain of the activities described in its response remain within B&W mPower scope of work in the context of supporting GmP as the design certification applicant.

- **What are the applicant's current staffing levels (e.g., full-time equivalent staff) for the design and testing of the reactor design? Does the applicant have plans to increase staffing? If so, please describe future staffing plans.**

  GmP affirms B&W mPower's response without amendment. The re-assignment of responsibility for the DCA to GmP does not change total staffing at this time.

- **What are the applicant's plans on the submittal of white papers or technical/topical reports related to the features of their design or the resolution of policy or technical issues? Has the applicant established a schedule for submitting such reports? If so, please describe the schedule.**

  GmP affirms B&W mPower's response, including its attached list of expected submittals, noting that some of these submittals will be made by GmP while others will remain within B&W mPower's domain. Given B&W mPower's scope as an integral part of the GmP design certification effort, it is essential that the priority for review of these submittals, and continued review of previous submittals, not be adversely impacted by the transition in responsibility for the DCA to GmP. GmP

expects to provide additional details on this aspect of the transition in a near-term meeting with the NRC Staff.

- **Will ESP applicants seek approval of either "proposed major features of the emergency plans" in accordance with 10 CFR 52.17(b)(2)(i) or "proposed complete and integrated emergency plans" in accordance with 10 CFR 52.17(b)(2)(ii)?**

  GmP affirms B&W mPower's response; this question is not applicable.

- **Describe the possible interest in the use of the provisions of Subpart F, "Manufacturing Licenses," of 10 CFR Part 52 instead of, or in combination with, other licensing approaches (e.g. DC or DA).**

  GmP affirms B&W mPower's response and also does not have plans at this time to pursue a manufacturing license.

- **Describe the desired scope of a possible ML and what design or licensing process would address the remainder of the proposed nuclear power plant. For example, would the ML address an essentially complete plant or would it be limited to the primary coolant system that basically comprises the integral reactor vessel and internals?**

  GmP affirms B&W mPower's response; this question is not applicable.

- **Describe the expected combination of manufacturing, fabrication, and site construction that results in a completed operational nuclear power plant. For example, what systems, structures, and components are being fabricated and delivered? Which of these are being assembled on site? Which of these are being constructed on site?**

  GmP affirms B&W mPower's response without amendment.