

BellBendCOLPEm Resource

From: Bhatia, Bhupendra
Sent: Tuesday, March 16, 2010 12:16 PM
To: BellBendCOL Resource
Cc: Johnson, Robert; Kang, Peter
Subject: FW: NUMARK Documents for the NRC Hearing File For TO #49, Bell Bend, Chapter #8-
NON PUBLIC
Attachments: Response to PQOG_comments_on_8.1_BB TO#49.doc

From: Hearing File [<mailto:HearingFile@numarkassoc.com>]
Sent: Monday, March 15, 2010 10:15 AM
To: Bhatia, Bhupendra
Subject: NUMARK Documents for the NRC Hearing File For TO #49, Bell Bend, Chapter #8.

The attached information is being provided to you from Numark Associates, Inc pursuant to 10 CFR 2.1203(b) for inclusion in the NRC Hearing File.

Please contact Ms Karen Hall if you have any questions.

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-----Original Message-----

From: George Morris
Sent: Monday, February 23, 2009 10:49 PM
To: Marty Bowling
Cc: Marty Bowling; Stan Kobylarz; Hearing File
Subject: Resolution of PQOG comments on Section 8.1

Marty,

Attached [is](#) the revised file [and](#) PQOG Form 3 for Section 8.1 for BBNPP, To 49.

George Morris

Hearing Identifier: BellBend_COL_Public
Email Number: 508

Mail Envelope Properties (87B1F1BDFE5A554CA9DC5EAA75EB6D0D1C9364C996)

Subject: FW: NUMARK Documents for the NRC Hearing File For TO #49, Bell Bend, Chapter #8- NON PUBLIC
Sent Date: 3/16/2010 12:16:24 PM
Received Date: 3/16/2010 12:16:26 PM
From: Bhatia, Bhupendra

Created By: bhfysp.bhfysp@nrc.gov

Recipients:
"Johnson, Robert" <Robert.Johnson@nrc.gov>
Tracking Status: None
"Kang, Peter" <Peter.Kang@nrc.gov>
Tracking Status: None
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Tracking Status: None

Post Office: HQCLSTR01.nrc.gov

| Files | Size | Date & Time |
|---|-------------|------------------------|
| MESSAGE | 1457 | 3/16/2010 12:16:26 PM |
| Response to PQOG_comments_on_8.1_BB TO#49.doc | | 164930 |

Options
Priority: Standard
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date:
Recipients Received:

**NUMARK FORM-3
DOCUMENT TRANSMISSION RECORD FORM**

**DOCUMENT TITLE/NUMBER
Draft TER for SCOL Section 8.1 – Introduction
(Bell Bend)**

| | |
|-------------------------|---------------|
| NRC Task Order # | 49 |
| NRC Task # | 4 |
| NRC JCN # | Q-4159 |

| DOCUMENT RECEIVED BY TM FROM AUTHOR | DATE |
|--|----------------|
| | |
| DOCUMENT SENT TO PQOG | 1/26/09 |
| | |
| DOCUMENT SENT TO TD | NA |
| | |
| DOCUMENT SENT TO TM FROM PQOG | 2/5/09 |
| | |
| DOCUMENT SENT TO TM FROM TD | NA |
| | |
| ALL COMMENTS RESOLVED BY TM | |
| | |
| FINAL DRAFT SENT TO PM | |
| | |
| FINAL DOCUMENT SENT TO NRC | |
| | |

**NUMARK FORM F-2
COMMENT AND DISPOSITION RECORD FORM**

DOCUMENT TITLE/NUMBER

**Draft TER for SCOL Section 8.1 – Introduction
(Bell Bend)**

NRC Task Order # 49
NRC Task # 4
NRC JCN # Q-4159

PQOG COMMENTS/RESOLUTIONS

REVIEWER NAME / ORGANIZATION: Brian Grimes/PQOG

**Steve Lewis: Regulatory Review; George Skinner: Technical Review; Brian Grimes:
template subsections review**

Regulatory Review Comments: See attached checklist.

Technical Review Comments: See attached checklist.

Template Subsections Comments: See three attached checklists.

Brian Grimes, Chair, PQOG

**PQOG Regulatory Review of TERs for Bell Bend SCOL Section 8.1
Technical Evaluation, Conclusions, RAI**

PQOG Reviewer: Stephen Lewis____ Date: 01/29/09

| Checklist Item | PQOG Review Comments | Disposition |
|---|---|--------------------|
| Technical Evaluation | Note: Comments apply to SCOL TERs unless otherwise indicated. | |
| Sections incorporated by reference (IBR) use the standard wording in the NUMARK COL Guidance Document. Outstanding DC RAI or Open Items for the corresponding DC section are noted. | Yes. | |
| For sections not entirely IBR, system/program description is provided for the scope of COL information being reviewed (synopsis) | Yes. | |
| For sections not entirely IBR, a general description of the review process is provided including any confirmatory analyses, site visits, or audits. | Yes. | |
| Material is not copied from the FSAR | This reviewer did not identify any material in Section 8.1 of the FSAR as being copied from the FSAR. | |
| For sections that are not entirely IBR, the following subheadings are used in the Technical Evaluation section (<u>only</u> if applicable to this TER section): | | |
| Tier 1 Departures | Done correctly | |
| Tier 2 Departures | Done correctly. | |
| Interfaces Requirements (Plant or Site Parameter) COL Table 1.8-1 | Done correctly. | |
| Combined License Information Items The adequacy of the COL | Done correctly. There are no COL Information Items that are being left to the post-COL stage. | |

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| disposition of the U.S. EPR COL Information Items is addressed. Deferral of information or actions to the post-COL stage is determined appropriate and the need for any additional items is addressed. A positive statement confirming this is required. | | |
| Site-specific information replacing Conceptual Design Information An assessment is made as to the adequacy of the information, (whether included or IBR) and the FSAR content. A positive statement confirming this is required. Statements are consistent with any review of this information in the U.S. EPR SER. | N/A because there was no Conceptual Design Information provided in the U.S.EPR FSAR Section 8.1. | |
| Supplemental Information | This TER treats the supplemental information provided by the COL Applicant. | |
| License Conditions | No license conditions are proposed by the Applicant or considered by the NRC. | |
| Initial Test Program Adequacy of applicable initial testing requirements applicable to the COL scope of review is addressed. A positive statement confirming this is required. | There is no Initial Test Program for the Section 8.1 area of review. | |
| Technical Specifications Adequacy of Technical Specifications applicable to the COL scope of review is addressed. A positive statement confirming this is required. | This reviewer suggests inserting this Subtitle in the TER. Under this Subtitle it should be noted that relevant Technical Specifications are addressed in Part 10, section 3.8 of the Applications. | |
| ITAAC Adequate additional COL ITAAC are proposed, if appropriate. A positive statement confirming this is required. | This subtitle should be included in this Subsection. Under this subtitle the ITAAC identified in Tier 2, Table 14.3-3 of these applications. Further, Part 10, Tables 2.4-20, -21, and -22 of these applications should be noted under this subtitle. | (Did not include the ITAAC tables in section 8.1) |
| Cross-cutting requirements (TMI, USI/GSI, Op Experience) | N/A. | |
| Evaluation elements for each | | |

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| applicable review area: | | |
| GDC/Regulations that apply to the COL information being reviewed are stated | Yes. | |
| What reviewer did to evaluate the submittal is stated and related to the SRP section Review Procedures | Yes. | |
| There are placeholders in bold type for any related section reviews that need to be done before the conclusions stated in the TER are valid | N/A. | |
| How the acceptance criterion is met is stated (e.g., followed regulatory guidance) | Yes. | |
| A conclusion is reached on each GDC/regulation applicable to the COL information being reviewed. A positive statement confirming this is required. | Yes. | |
| If TER is not comparable to another COL or ESP SER level of detail there is a reason (not to be stated in the TER). Note: only if such becomes available. | N/A. | |
| If the COL FSAR incorporates by reference U.S. EPR conceptual design information rather than replacing it, the SER for the US EPR adequately evaluates the information. | N/A, in that the equivalent section of the U.S. EPR does not include any conceptual design criteria. | |
| | | |
| Conclusions | | |
| Applicable standard wording in the NUMARK COL Guidance Document is used. SRP section Evaluation Findings wording applicable to the COL scope of review is generally followed: Length is typically one paragraph for a mostly IBR section. | Yes. | |

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| Brief statements are added on the bases for each conclusion that a GDC/regulation is met. | Yes. | |
| Conclusions are consistent with Technical Evaluation section and supported by a discussion in the technical evaluation section. | Yes. | |
| | | |
| RAI | | |
| Reason for RAI is briefly addressed in Technical Evaluation section of draft TER | It appears that only the bolded wording is meant to be the RAIs, but that wording does include all the required attributes for RAIs. The statement of why the additional information is needed is stated in non-bolded text. This reviewer seeks clarification of what constitutes the RAI and surrounding wording will not be listed as part of the RAI. It would be prudent to include all of the paragraphs, so that the reason for any particular RAI “rides with it.” | Reformatted RAIs and incorporated NRC comments on RAIs. |
| RAI number is inserted in Technical Evaluation section text and bolded . | Yes. | |
| Additional post-COL Action Items proposed in the TER have an RAI to determine whether applicant will add to their list in the FSAR. | N/A. | |
| The regulatory basis is provided at the beginning of each RAI (or RAI cluster). This includes the applicable GDC or reg. and may also refer to acceptance criteria. | This is generally done, but the regulatory basis for each RAI is not bolded, so that it is unclear as to whether it will accompany the RAI. See comment above. | Bolding removed to clarify RAIs. |
| RAI is within the scope of the COL information reviewed in the section. | Yes. | |
| RAI is phrased as a question or questions. | No, but the RAIs are clear. In these RAIs, regulatory reviewer suggests that the wording be left as is. | |
| RAIs noting inconsistencies are generated (but the regulatory basis is to “assure completeness and accuracy of the plant design and licensing basis.”). These should be collected into one RAI if possible. | N/A. | |

PQOG Template Subsections Review for Bell Bend SCOL Section 8.1 - Introduction
Introduction, Summary of Application, Regulatory Basis, COL Information Items

PQOG Reviewer: Brian Grimes Date: 28 January 2009

| Checklist Item | PQOG Review Comments | Disposition |
|---|---|------------------------------------|
| Title | Note: Comments apply to SCOL TERs unless otherwise indicated. | |
| The FSAR title, rather than the NUREG-0800 section title is used | OK | |
| For the first template in a chapter, the Chapter title and a short summary paragraph are inserted. If there are additional sections without templates after the Chapter title (typically an X.1 section), the title for these should also be listed and a short summary paragraph inserted. | OK | |
| Sections incorporated by reference (IBR) use the standard wording in the NUMARK COL Guidance Document. Outstanding DC RAI or Open Items for the corresponding DC section are noted. | OK | |
| Where multiple sections in the same chapter are incorporated by reference, summarization at a higher level is acceptable. | N/A | |
| | | |
| Note: the following is for sections IBR with departures, additional information, or that are primarily COL-specific. | | |
| Introduction | | |
| Length: one or two paragraphs | OK | |
| Description: generic summary of section topic, not FSAR wording. Can use SRP wording. Can use DC section Introduction if applicable. | OK | |
| | | |
| Summary of Application | | |
| Length: Up to one page. Roadmap provided to FSAR information for following subtitles. | Length OK. See individual comments below. | |
| Information not quoted from the FSAR. | Bell Bend: the sentences starting "The BBNPP transmission system" are literal from the FSAR and should be reworded. | Rephrased sentences where possible |

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| Roadmap references correct and complete. | See comments below. | |
| Uses the standard wording in the NUMARK COL Guidance Document for partial IBR. For no IBR, describes the system or program for the section that is proposed in the COL FSAR. | OK | |
| Note: list and provide a brief description only for the following headings that are applicable. | | |
| FSAR Tier 1 Departures (Exemptions): (The small number of Calvert Cliffs COL departures from U.S. EPR Tier 1 with related exemption requests are listed in Part 7 of the application. Additional exemption requests are also listed. The departures are also listed in COL FSAR section 1.8.2.) | N/A | |
| FSAR Tier 2 Departures: (Departures from U.S. EPR Tier 2, from the COL FSAR section text.) | N/A | |
| Interface Requirements: This should include information related to plant and site parameter interfaces (COL FSAR Table 1.8-1) | N/A | |
| Combined License Information Items: (From COL FSAR Table 1.8-2. The wording of these may be different than in the US EPR FSAR.) | OK. Included in Summary of Application text. | |
| Replacement of Conceptual Design Information: (Or incorporation by reference of conceptual information in the U.S. EPR Tier 2 section.) | N/A | |
| Supplemental Information: | OK. Included in Summary of Application text. | |
| License Conditions: | N/A | |
| Initial Test Program: | No site-specific items proposed in the FSAR. | |
| Technical Specifications: | Suggest inserting this subtitle and noting the Part 10, section 3.8 Technical Specifications. | Included comment |
| ITAAC: | Tier 2 Table 14.3-3 provides a number of Chapter 8 ITAAC. These need to be noted under an ITAAC subheading in one of the Chapter 8 TER subsections. Also Part 10 Tables 2.4-20, 21, and 22. | Not Included in 8.1 |
| Cross Cutting Requirements (TMI, USI/GSI, Operating Experience): | N/A | |
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| Regulatory Basis | | |
| Length: Up to one page. | OK | |
| The applicable standard introductory wording used from the NUMARK COL Guidance Document followed by list of requirements, followed by acceptance criteria wording, followed by brief paragraph summarizing acceptance criteria (e.g., listing R.G.) | Introductory wording is OK. | |
| Words from NUREG-0800 may be used without quotes | OK | |
| The 52.80(a) requirement should not be listed as it is the same for all sections (will be covered in COL SER Chapter 1) | OK | |
| GDC 5 should not be listed (will be covered in COL SER Chapter 1) | Delete this item. | Deleted |
| Requirements may be abbreviated from those listed in NUREG-0800, but all requirements relevant to the COL scope of review (and only those requirements) should be listed. | NUREG-0800, Section 8.1 mentions only GDC-17, not the list of other requirements and R.G. in this section of the TER. Recommend deleting these from TER section 8.1. (Only GDC-17 is (appropriately) addressed in the TER Technical Evaluation section. | Requirements other than GDC-17 removed. (Suggest revising the CCNPP U3 template used for guidance.) |
| Requirements and Acceptance Criteria are those found in the relevant NUREG-0800 section. | No. See above comment. | |
| | | |
| Post Combined License Activities | | |
| Those U.S. EPR Combined License Information Items that will continue beyond granting the Combined License are correctly extracted and listed from COL FSAR Table 1.8-2. (These are the items with a "Y" in the COL Holder column of U.S. EPR FSAR Tier 2 Table 1.8-2.) | N/A | |
| Standard language from the NUMARK COL Guidance Document is Used | OK | |
| | | |

**PQOG Technical Review for TER of Bell Bend COL Section 8.1 -
Technical Evaluation, Conclusions, RAI**

PQOG Reviewer: George Skinner Date: 2/5/09

| Checklist Item | PQOG Review Comments | Disposition |
|---|--|--------------------|
| Technical Evaluation | | |
| Assumptions and logic of the FSAR safety evaluation are addressed and TER evaluation appears technically correct and is logically supported in each of the following areas. System information needed to reach a conclusion is included. Applicable Generic Letters and NRC Knowledge Transfer Guides are considered (if listed in the SRP (NUREG-0800)). | See individual items. | |
| List and evaluate specific Areas of Review (from SRP 8.1 Section I) and additional items from Review Procedures (from SRP 8.1 Section III) <i>Note: only those that are applicable to the COL scope of review for this section.</i> | See individual items | |
| Description of the offsite power system with regard to the interrelationships between the nuclear unit, the utility grid, and the interconnecting grid provided | Yes | |
| The descriptions state whether facilities are existing or planned; if planned, the respective completion dates should be provided. | The description of planned facilities does not include completion dates. | |
| General Design Criterion (GDC) 17 is met for connection of the nuclear unit to the utility grid. | OK - addressed | |
| General Design Criterion (GDC) 17 is met for capacity and capability of EDGs and Class 1E Batteries | OK – addressed | |
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| Conclusion | | |
| List and evaluate EVALUATION | See individual items. | |

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| FINDINGS (from SRP 8.1 Section IV – also include any important Technical Rationale items in the SRP that bear on the conclusions). <i>Note: only those that are applicable to the COL scope of review for this section.</i> | | |
| Section 8.1 provides a brief description of the offsite power system with regard to the interrelationships between the nuclear unit, the utility grid, and the interconnecting grid provided | OK | |
| Findings summarize staff's evaluation of requirements and restrictions (e.g. interface requirements and site parameters) | OK | |
| Findings summarize staff's evaluation of COL Action Items | N/A | |
| Findings summarize staff's evaluation of ITAAC | No – ITAAC Table 2.4-20, appears to address topics affecting COL Information Item 8.1-1. These should be addressed. | Reference should have been to BBNPP Table 2.4-24. OSP ITAACs are addressed in 8.2 |
| | | |
| RAI | | |
| Technical adequacy of each RAI proposed (list RAIs) | See individual items | |
| Misc | The heading for the RAI attachment is “COL Action Items”. Table 1.8-2 does not show any COL Action Items for Section 8.1. Suggest deleting this heading. | Deleted heading |
| Misc | The Draft TER included the following statement in the Combined License Information Items section: “The BBNPP design provides adequate information on the load differences with the U.S. EPR design for the Class 1E EDG and battery site-specific loading to address the capacity and capability of the onsite power system requirements of GDC 17.” This statement appears to be conclusions that are contrary to the statement in the Conclusions section that indicates the need for additional information on this matter. | The RAI is for clarification. The Assumptions in Tables 8.1-1 through 8.1-4 are based on the cooling systems operating, not the heating loads. The tables show the heating loads are 4 kW higher than the cooling loads. The response will not change the conclusion but may affect the FSAR. |
| RAI 8.1-1 | This RAI addresses the capacity and capability of the offsite power system. The area of review described in SRP 8.1 appears to be limited to a brief description of the interconnection of the nuclear unit with the grid. This topic would more appropriately be addressed under SRP 8.2, Offsite Power System, which directly addresses the capacity and capability of the offsite | Moved to 8.2 |

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| | power system. | |
| RAI 8.1-2 | This RAI requests additional information on 10CFR50.65, Maintenance Rule, implementation relative to the availability of the offsite power supply. This item appears to be outside the scope of SRP 8.1. SRP 8.2 does address 10CFR50.65 but indicates that this should actually be addressed as part of the Chapter 17 review. I suggest considering this topic under the review of Section 8.2 and/or Chapter 17. | Moved to 8.2. This is not a comment on the program but a comment on the interface agreement. |
| RAI 8.1-3 | OK | |
| Other RAI that should be considered, including additional COL holder Action Items | N/A | |