

## BellBendCOLPEm Resource

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**From:** Bhatia, Bhupendra  
**Sent:** Tuesday, March 16, 2010 12:13 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 8.4 BB TO #49.doc

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**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.

Shaareem Wall, Administrative Assistant  
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-----Original Message-----

**From:** George Morris  
**Sent:** Monday, February 23, 2009 10:53 PM  
**To:** Marty Bowling  
**Cc:** Brian Grimes; Stan Kobylarz; Hearing File  
**Subject:** Resolution og PQOG comments and revised files for 8.4 TO #49

Marty,

Attached is the revised file and PQOG Form 3 for Section 8.4 for BBNPP, To 49.

George Morris

**Hearing Identifier:** BellBend\_COL\_Public  
**Email Number:** 509

**Mail Envelope Properties** (87B1F1BDFE5A554CA9DC5EAA75EB6D0D1C9364C98E)

**Subject:** FW: NUMARK Documents for the NRC Hearing File for TO #49, Bell Bend, Chapter #8- NON PUBLIC  
**Sent Date:** 3/16/2010 12:13:29 PM  
**Received Date:** 3/16/2010 12:13:31 PM  
**From:** Bhatia, Bhupendra

**Created By:** bhfyasp.bhfyasp@nrc.gov

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

**Post Office:** HQCLSTR01.nrc.gov

Files	Size	Date & Time
MESSAGE	1474	3/16/2010 12:13:31 PM
Response to PQOG comments on 8.4 BB TO #49.doc		158274

**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 8.4 – Introduction**  
**(Bell Bend)**

<b>NRC Task Order #</b>	<b>49</b>
<b>NRC Task #</b>	<b>4</b>
<b>NRC JCN #</b>	<b>Q-4159</b>

<b>DOCUMENT RECEIVED BY TM FROM AUTHOR</b>	<b>DATE</b>
<b>DOCUMENT SENT TO PQOG</b>	<b>1/26/09</b>
<b>DOCUMENT SENT TO TD</b>	<b>NA</b>
<b>DOCUMENT SENT TO TM FROM PQOG</b>	<b>2/9/09</b>
<b>DOCUMENT SENT TO TM FROM TD</b>	<b>NA</b>
<b>ALL COMMENTS RESOLVED BY TM</b>	
<b>FINAL DRAFT SENT TO PM</b>	
<b>FINAL DOCUMENT SENT TO NRC</b>	

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

**DOCUMENT TITLE/NUMBER**  
**Draft TER for SCOL Section 8.4 – 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**

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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 8.4**  
**Technical Evaluation, Conclusions, RAI**

PQOG Reviewer: Steve Lewis Date: 02/04/09

<b>Checklist Item</b>	<b>PQOG Review Comments</b>	<b>Disposition</b>
<b>Technical Evaluation</b>		
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.	This item is satisfied.	
For sections not entirely IBR, system/program description is provided for the scope of COL information being reviewed (synopsis)	This item is satisfied.	
For sections not entirely IBR, a general description of the review process is provided including any confirmatory analyses, site visits, or audits.	This item is satisfied.	
Material is not copied from the FSAR	This reviewer identified no material in the 8.4 Draft TER, as being copied from the FSAR	
NRC metrication policy is followed (metric units followed by English units in parentheses)	Callaway and Bell Bend: No. In the Draft TER, measurements of distances are provided in English units followed by metric units in parentheses. NMP: No numerical units were in the NMP3 section 8.4, so there is no issue regarding use of the NRC metrication policy.	Reversed units to 1.6 km (1 mi)
<b>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):</b>		
<b>Tier 1 Departures</b>	N/A	
<b>Tier 2 Departures</b>	N/A	
<b>Interfaces Requirements (Plant</b>	This item is satisfied.	

<b>or Site Parameter)</b> COL Table 1.8-1		
<b>Combined License Information Items</b> The adequacy of the COL 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.	This item is satisfied.	
<b>Site-specific information replacing Conceptual Design Information</b> 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.	This item is inapplicable, since no Conceptual Design Information was used in the FSAR for the U.S. EPR regarding Station Blackout	
<b>Supplemental Information</b>		
<b>License Conditions</b>	The FSARs do not contain any license conditions.	
<b>Initial Test Program</b> Adequacy of applicable initial testing requirements applicable to the COL scope of review is addressed. A positive statement confirming this is required.	The initial testing as to Station Blackout is identified as a post-COL item.	
<b>Technical Specifications</b> Adequacy of Technical Specifications applicable to the COL scope of review is addressed. A positive statement confirming this is required.	The Draft TERs identify where the reader should look for the applicable Technical Specifications.	
<b>ITAAC</b> Adequate additional COL ITAAC are proposed, if appropriate. A positive statement confirming this is required.	The Draft TERs identify where the reader should look for the applicable ITAACs.	

<b>Cross-cutting requirements</b> (TMI, USI/GSI, Op Experience)	None raised with respect to Station Blackout.	
<b>Evaluation elements for each applicable review area:</b>		
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 <b>bold</b> type for any related section reviews that need to be done before the conclusions stated in the TER are valid	There were placeholders for related section reviews, however they were not printed in Bold format.	
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 U.S. EPR FSAR for Station Blackout did not contain any Conceptual Design Information.	
<b>Conclusions</b>		
Applicable standard wording in the NUMARK COL Guidance Document is used. SRP section Evaluation Findings wording applicable to the COL scope of	This item is satisfied.	

review is generally followed: Length is typically one paragraph for a mostly IBR section.		
Brief statements are added on the bases for each conclusion that a GDC/regulation is met.	This item is met.	
Conclusions are consistent with Technical Evaluation section and supported by a discussion in the technical evaluation section.	Yes.	
Conclusions are generally positive, conditional on resolution of any RAI.	N/A. There are no RAIs with respect to Section 8.4.	Added RAI 8.4-1, Coping Procedures, and RAI 8.4-2, Coping Duration
<b>RAI</b>	N/A. There are no RAIs with respect to Section 8.4	Added RAI 8.4-1 and RAI 8.4-2
Reason for RAI is briefly addressed in Technical Evaluation section of draft TER		
RAI number is inserted in Technical Evaluation section text and <b>bolded</b> .		
Additional post-COL Action Items proposed in the TER have an RAI to determine whether applicant will add to their list in the FSAR.		
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.		
RAI is within the scope of the COL information reviewed in the section.		
RAI is phrased as a question or questions.		
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.		



**PQOG Template Subsections Review for Bell Bend SCOL Section 8.4 – Station Blackout  
Introduction, Summary of Application, Regulatory Basis, COL Information Items**

PQOG Reviewer: Brian Grimes Date: 5 February 2009

<b>Checklist Item</b>	<b>PQOG Review Comments</b>	<b>Disposition</b>
<b>Title</b>	<b>Note: Comments apply to SCOL TERs unless otherwise indicated.</b>	
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.	N/A	
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. Conclusion section has an adequate general statement on the ongoing review.	
Where multiple sections in the same chapter are incorporated by reference, summarization at a higher level is acceptable.	N/A	
<b>Note: the following is for sections IBR with departures, additional information, or that are primarily COL-specific.</b>		
<b>Introduction</b>		
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	
<b>Summary of Application</b>		
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: some FSAR words, but probably OK.	
Roadmap references correct and complete.	See comments below.	
Uses the standard wording in the NUMARK COL Guidance Document for partial IBR. For	OK	

no IBR, describes the system or program for the section that is proposed in the COL FSAR.		
<b>Note: list and provide a brief description only for the following headings that are applicable.</b>		
<b>FSAR Tier 1 Departures (Exemptions):</b> (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	
<b>FSAR Tier 2 Departures:</b> (Departures from U.S. EPR Tier 2, from the COL FSAR section text.)	N/A except NMP: Could insert this subheading above the paragraph starting “The applicant also indicated”.	Added to Technical Evaluation
<b>Interface Requirements:</b> This should include information related to plant and site parameter interfaces (COL FSAR Table 1.8-1)	N/A	
<b>Combined License Information Items:</b> (From COL FSAR Table 1.8-2. The wording of these may be different than in the US EPR FSAR.)	OK.	
<b>Replacement of Conceptual Design Information:</b> (Or incorporation by reference of conceptual information in the U.S. EPR Tier 2 section.)	N/A	
<b>Supplemental Information:</b>	OK.	
<b>License Conditions:</b>	N/A	
<b>Initial Test Program:</b>	No site-specific items proposed in the FSAR.	
<b>Technical Specifications:</b>	OK.	
<b>ITAAC:</b>	Consider whether Part 10 Table 2.4-20 should be referenced.	N/A Applies to 8.2, not 8.4
<b>Cross Cutting Requirements (TMI, USI/GSI, Operating Experience):</b>	N/A	
<b>Regulatory Basis</b>		
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,	Introductory wording is OK.	

followed by brief paragraph summarizing acceptance criteria (e.g., listing R.G.)		
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)	OK	
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 8.4 also lists GDC-17, GDC-18, and 50.65(a) (4). If these are within the scope of the COL review, they should be listed	GDC 17 , 18 and 50.65 are N/A for 8.4
Requirements and Acceptance Criteria are those found in the relevant NUREG-0800 section.	The wording describing the applicability of 50.63 is different than NUREG-0800 Section 8.4.	Reworded to agree with NUREG-0800
<b>Post Combined License Activities</b>		
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.)	The item given does not appear in COL FSAR Table 1.8-2. This item is similar to item 8.4-2 in FSAR Table 1.8-2. This item in the USEPR is not marked as a COL Holder responsibility. If the TER developer believes that this item should be a COL holder responsibility, then an RAI should be developed. In the meantime, delete this item.	Added RAI to clarify timing of the procedure writing and training
Standard language from the NUMARK COL Guidance Document is Used	OK	

**PQOG Technical Review** for TER for Bell Bend SCOL Section 8.4 -  
Technical Evaluation, Conclusions, RAI

PQOG Reviewer: George Skinner Date: 2/6/2009

<b>Checklist Item</b>	<b>PQOG Review Comments</b>	<b>Disposition</b>
<b>Technical Evaluation</b>		
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.	
<b>List and evaluate specific Areas of Review (from SRP 8.4 Section I) and additional items from Review Procedures (from SRP 8.4 Section III) Note: <i>only those that are applicable to the COL scope of review for this section.</i></b>	See individual items	
Site specific information that identifies any additional local power sources and transmission paths that could be made available to resupply the power plant following an LOOP is reviewed.	OK	
Proposed coping durations less than eight hours based on site-specific coping durations reviewed.	N/A	
RG 1.155 position C.3.4 related to procedures and training to cope with SBO reviewed.	OK	
Misc.	If there isn't any site specific ITAAC relating to SBO in Part 10 of the application, it would be better to say this rather than referring to other Tars.	No Change made
<b>Conclusion</b>		
<b>List and evaluate EVALUATION FINDINGS (from SRP 8.4 Section IV – also include any important Technical Rationale items in the SRP that bear on the</b>	See individual items.	

<b>conclusions). <i>Note: only those that are applicable to the COL scope of review for this section.</i></b>		
Conclusion statement provided verifying that the applicant has provided sufficient information and the review supports the conclusions.	OK	
<b>RAI</b>		
Technical adequacy of each RAI proposed (list Rays)	See individual items	
	N/A (No Rays)	
Other RAI that should be considered, including additional COL holder Action Items	N/A (None Identified)	