



# ***PBMR Design Certification Pre-Application Planning***

**September 21-22, 2005  
Rockville, MD**

## ***Agenda – Day 1***

<u>Time</u>	<u>Topic</u>	<u>Lead by</u>
9:00 am	Opening Remarks	NRC/PBMR (Pty) Ltd.
9:15 am	LBE Selection	Dr. F. Silady
10:30 am	Break	
10:40 am	SSC Classification	Dr. F. Silady
11:50 am	Physical Security Implications	E. Burns
12:20 am	Lunch	
1:20 pm	Codes and Standards, Materials	W. Kriel
2:45 pm	Break	
3:00 pm	Codes and Standards, Materials (Cont'd)	W.Kriel
4:30 pm	Opportunity for Public Comment	All
4:45 pm	1 <sup>st</sup> Day Wrap-up and Summary	NRC/PBMR (Pty) Ltd.
5:00 pm	Adjourn	

## ***Agenda – Day 2***

<u>Time</u>	<u>Topic</u>	<u>Lead by</u>
8:30 am	Fuel Design and Qualification	S. Ritterbusch
10:15 am	Break	
10:30 am	Computer Code V&V	Dr. C. Kling
12:30 am	Lunch	
1:15 pm	Single v. Multi-Module Certification	E. Burns
2:15 pm	Break	
2:30 pm	Discussion, Conclusions and Next Steps	NRC/PBMR (Pty) Ltd.
3:30 pm	Opportunity for Public Comment	All
4:00 pm	Adjourn	

- **Provide additional background on details of PBMR design and safety case**
- **Discuss in greater detail the issues and pre-application outcome objectives for each focus topic**
- **Identify additional NRC issues that need to be addressed during the pre-application period**
- **Agree on a list of work items that are needed to achieve the outcome objectives for each focus topic during the Phase 2 period**
- **Agree on the Project Management tasks to complete the plan**

- **Restatement of the pre-application issues and outcome objectives (from 1<sup>st</sup> planning meeting)**
- **Extended discussion of issues**
- **Confirmation of schedule and approach for addressing relevant Exelon RAIs**
  - Recapture significant NRC staff work expended during Exelon pre-application review
- **Identification of proposed work steps for Phase 2**
  - Work list to be used in establishing agreed-upon deliverables, schedules, and review products for phase 2 activities

## ***Exelon RAIs – Resolution Approach***

- **PBMR's approach:**

- Review each RAI for technical understanding and continued relevance to the current design.
- Reconfirm the timing for resolution (proposed by the NRC in its RAI numbering approach).
  - *Appropriate for discussion during pre-application (Category 1), or*
  - *Sufficiently understood such that the RAI can be properly addressed within the DCA itself (Category 2/2\*).*
- Establish agreed-upon work deliverables for RAIs deemed appropriate for discussion during pre-application Phase 2.

- **NRC action:**

- Reconfirm the validity of each Category 2\* RAI to ensure readiness for receipt of the DCA.
  - *Identify RAIs that may benefit from pre-application discussions.*

## ***Acronyms Used in Presentations***

<b>ANL</b>	<b>Argonne National Laboratory</b>	<b>DCD</b>	<b>Design Control Document</b>
<b>AOO</b>	<b>Anticipated Operational Occurrence</b>	<b>DLOFC</b>	<b>Depressurized Loss of Forced Cooling</b>
<b>BDBE</b>	<b>Beyond Design Basis Event</b>	<b>DSRS</b>	<b>Dry Gas Seal Supply and Recovery System</b>
<b>CBCS</b>	<b>Core Barrel Conditioning System</b>	<b>EAB</b>	<b>Exclusion Area Boundary</b>
<b>CCS</b>	<b>Core Conditioning System</b>	<b>EMDAP</b>	<b>Evaluation Model Development and Assessment Process</b>
<b>CFRC</b>	<b>Carbon Fiber Reinforced Composite</b>	<b>EPBE</b>	<b>Emergency Planning Basis Event</b>
<b>COL</b>	<b>Combined Construction Operating License</b>	<b>FHSS</b>	<b>Fuel Handling and Storage System</b>
<b>COTS</b>	<b>Commercial-Off-The-Shelf</b>	<b>FIMA</b>	<b>Fissile Initial Metal Atom</b>
<b>CSC</b>	<b>Core Structure Ceramics</b>	<b>HICS</b>	<b>Helium Inventory Control System</b>
<b>CUD</b>	<b>Core Unloading Device</b>	<b>HMS</b>	<b>Helium Make-up System</b>
<b>DBE</b>	<b>Design Basis Event</b>	<b>HPB</b>	<b>Helium Pressure Boundary</b>
<b>DCA</b>	<b>Design Certification Application</b>	<b>HPS</b>	<b>Helium Purification System</b>

## ***Acronyms Used in Presentations***

<b>HTGR</b>	<b>High Temperature Gas Reactor</b>	<b>PLOFC</b>	<b>Pressurized Loss of Forced Cooling</b>
<b>HX</b>	<b>Heat Exchanger</b>	<b>RCCS</b>	<b>Reactor Cavity Cooling System</b>
<b>ICS</b>	<b>Inventory Control System</b>	<b>RCS</b>	<b>Reactivity Control System</b>
<b>INL</b>	<b>Idaho National Laboratory</b>	<b>RPS</b>	<b>Reactor Protection System</b>
<b>ITAAC</b>	<b>Inspections, Tests, Analyses, and Acceptance Criteria</b>	<b>RPV</b>	<b>Reactor Pressure Vessel</b>
<b>LBE</b>	<b>Licensing Basis Event</b>	<b>RSS</b>	<b>Reserve Shutdown System</b>
<b>MDSS</b>	<b>Manual Diverse Shutdown System</b>	<b>SAS</b>	<b>Small Absorber Spheres</b>
<b>MPU</b>	<b>Main Power Unit</b>	<b>SSC</b>	<b>Structure, System, Component</b>
<b>PAG</b>	<b>Protective Action Guideline</b>	<b>SUD</b>	<b>Software Under Development</b>
<b>PB</b>	<b>Pressure Boundary</b>	<b>SVVP</b>	<b>Software Verification &amp; Validation Plan</b>
<b>PCU</b>	<b>Power Conversion Unit</b>	<b>TLRC</b>	<b>Top-Level Regulatory Criteria</b>
<b>PIRT</b>	<b>Phenomena Identification and Ranking Tables</b>		