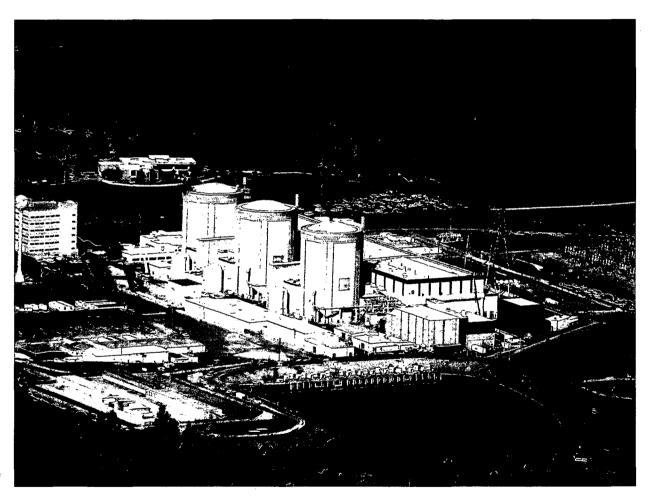
Duke Energy



Oconee Nuclear Station

RPS/ESPS Digital LAR

March 18, 2008





- Confirm that the NRC has required information to complete the LAR Acceptance Review
- Provide Technical Information associated with RPS/ESPS V&V Process and ISG 4 Data Communication
- Discuss NRC LAR Review/Plan and Milestones to facilitate resource planning by Duke
- Communicate Duke Unit 1 RPS/ESPS Schedule to facilitate NRC site visits/audits

Agenda

Buke Energy

- RPS/ESPS Project V&V Process
- Duke Oversight of AREVA documents
- LAR Submittal Quality
- ISG 4 Data Communication Compliance Matrix
- Status of LAR Acceptance Review
- NRC LAR Review/Plan and Milestones
- Duke Plan To Support Staff Licensing Phase
- ❖ Unit 1 RPS/ESPS Schedule
- LAR Document Availability
- Action Items
- Closing Remarks



Requirements and Guidance

for V&V

- NRC Regulations for V&V Processes
 - > 50.55a(h) IEEE Std 603
 - Appendix B Criterion I, II, III, XI, and XVIII
- Regulatory Guidance provides an acceptable method for meeting the applicable requirements
 - > RG 1.152 IEEE Std 7-4.3.2
 - > RG 1.168 IEEE Std 1012
- Applicable requirements and guidance addressed in RPS/ESPS LAR - Enclosure 1, Section 4.2



AREVA V&V Process

- AREVA V&V organization is outlined in several documents including:
 - Software Quality Assurance Plan
 - V&V Plan
 - V&V Position Paper
 - AREVA Operating Instructions for V&V
- These documents, as a whole, demonstrate that the V&V team is independent from a managerial, financial, and technical standpoint
- AREVA V&V organization discussed in LAR Enclosure 1 Sections 3.4.3.2.4 & 5



Duke Review of AREVA V&V

- Performed detail review of the AREVA V&V documents
- ❖ Initial review determined compliance with IEEE 1012 not clear
- Requested Position Paper be developed to justify exception from IEEE 1012
- Several meetings and reviews ensued to gain an understanding of the adequacy of the AREVA V&V process
- AREVA pointed to the Westinghouse Common Q SPM Topical Report and NRC SE as describing a similar methodology to the AREVA process
- Following Duke's review and comment resolution Duke concluded that the AREVA V&V documents provided an acceptable method of complying with NRC regulations
- LAR Sections 3.3.3 and 3.4.3 provide detailed information on the Duke quality review efforts



Duke Oversight of AREVA Documents

- RPS/ES QMP LQST implemented to address LAR document completeness and accuracy
- LQST consist of steering team members and core team reviewers from Duke plant engineering, Duke Major Projects engineering, AREVA AE group, and AREVA I&C group.
- 35 AREVA documents subject to LQST review from 3/07 to 1/08
- ❖ 43 comment resolution meetings involving 8 12 individuals (average length of meeting - 2.5 hrs)
- Approved by LQST Steering Team only after LQST core team reviewer comments were resolved satisfactorily





- LAR based on numerous technical documents that support the contents of the LAR which were reviewed and approved by Duke
- LAR sections 3.3.3 and 3.4.3 provide information on quality of hardware and software respectively
- LAR provides information recommended by the regulatory guidance
- LAR submitted under oath and affirmation following a rigorous development process



ISG 4 Compliance Matrix

- Data communication addressed in:
 - ➤ Numerous Sections of the LAR as noted in compliance matrix particularly 3.4.6 of Enclosure 1 and 9.2 of Enclosure 2
 - Separate cyber security submittal
 - > TXS Topical Report
 - TXS Safety Evaluation
 - December 13-14, 2006 meeting
- Handout Compliance Matrix





- Status of LAR Acceptance Review
- NRC LAR Review Plans and Milestones



Duke Plan To Support Staff Licensing Phase

- Overall objective is to resolve concerns in a timely and appropriate manner
- Staff Level
 - > Several phone calls each week
 - > Technical level meetings monthly or as needed
 - Written submittals made as needed to support the LAR review plan
- Management Level
 - Phone calls as needed
 - > Periodic drop-in visits
 - Status review meetings as needed
- Executive Level meetings
 - > At least one during the licensing review



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Unit 1 RPS/ESPS Schedule/Milestones

•••	3/1 - 9/06	ractory Acceptance Test procedure development
*	10/24 - 12/19/08	Factory Acceptance Test
*	3/1 - 3/21/09	Site Acceptance Test
*	4/08 — 3/09	Installation Procedures/PMT Procedure Development
*	3/31/09	Latest NRC SE date for Unit 1 Installation in Fall 2009
*	4/09 — 12/09	Plant Personnel Training
*	4/09 - 12/09	Plant Procedure Development
*	10/09 – 12/09	Install Unit 1 RPS/ESPS

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LAR Document Availability

Document	<u>Date</u>	LAR Encl. 1, Table 1-2
RTM - Post FAT	2/09	Item 2
FAT Procedures	9/08	Item 16a
FAT Report	1/09	Item 16b
Power Imb. SLs & TS Setpoints Calc.	7/09	Item 34
Duke I&C procedures	10/09	Item 39
SAT Plan	8/08	Item 44
SAT Procedures	2/09	Item 44a
SAT Report	5/09	Item 44b



Action Items and Closing Remarks