



NEW PLANT DEPLOYMENT ...

THEN VERSUS NOW

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New Plant Deployment ... Then and Now

Then

- Build, then license
- Custom designs & configuration control challenges
- Project management – develop plan as it is executed
- Design-as-you-build
- Industry and NRC inexperience
- CAP Version 1.0

Now

- License, then build
- Certified designs & standardization
- Project management – fully integrated schedule up front
- Design, then build
- Lessons learned integrated
- CAP Version 3.1

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Lessons Learned

■ NEI New Plant QA Task Force Review

- INPO Document- Important findings, construction project evaluations
- INPO Document – Results of self-identified construction project evaluation program
- STUK Investigation Report – Management of the safety requirements in subcontracting during Okiluoto #1 Nuclear Power Plant construction phase
- NUREG-1055, Improving Quality and the Assurance of Quality in the Design and Construction of Nuclear Power Plants
- Information Notice 2007-04, Construction Experience Related to the Assurance of Quality in the Construction of Nuclear Facilities
- NRC Inspection Report No. 70-3013/2006-001 - Louisiana Energy Services

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Lessons Learned

■ Results

- More than 270 total items identified – Some items were placed in multiple Appendix B Criteria, resulting in fewer total items
- Five areas identified as the most significant, including:
 1. Quality Assurance
 2. Corrective Action Program
 3. Nuclear Construction Project Problems
 4. Design Problems
 5. Training, Knowledge and Experience Problems

Quality Assurance

■ Industry template (NEI 06-14-A)

- Uniform industry implementation
- Allows sharing of implementation products

■ Standard QA/QC qualification requirements

- Standard training and qualification requirements
- Operating plants application
- Consistent compliance and implementation

■ Developing the QA/QC workforce

- Standardized two year college degree to QC personnel
- Standard training programs

■ Developing model for owner and contractor oversight of fabrication

- Critical attributes QA template

■ Developing model for owner and contractor oversight of fabrication

- Critical attributes

Corrective Action Program

■ Same fundamental elements as operating plant CAPs

■ NEI 08-XX

- Guidance for application of CAP during construction
- Definitions and elements
- Roles and responsibilities
- Owner – Contractor interfaces
- Example thresholds

Design

- Design for Nuclear Safety
- Design for Personal Safety
- Design for Cost Effectiveness
