#### NRC LIAISON REPORT

**Senate Panel Clears Ostendorff For Second Term On Commission.** The Dow Jones Newswires (6/9, Tracy) reports that the Senate Environment and Public Works Committee unanimously approved William Ostendorff's nomination for a second term as an NRC commissioner.

**Diablo Canyon Relicensing On Hold Until Seismic Studies Done.** The Orange County Register (6/10, Sforza) reports, "The controversial re-licensing of Central California's Diablo Canyon Nuclear Power Plant has entered a state of suspended animation - something officials at your neighborhood nuclear power plant are watching very closely." The NRC's "Atomic Safety and Licensing Board ordered Diablo's operator to report monthly on the progress of seismic studies probing hidden earthquake risks" and the agency says it "won't consider giving the plant an extra 20 years to operate until those studies are done."

### U.S. Nuke Industry Sets Fukushima Response Plan: The building blocks call for the industry to:

- Maintain focus on excellence in existing plant performance, assigned to INPO;
- Develop and issue lessons learned from the Fukushima events (INPO):
- Improve the effectiveness of U.S. industry response capability to global nuclear events (INPO/NEI);
- Develop and implement a strategic communications plan (NEI);
- Develop and implement the industry's regulatory response to the accident (NEI);
- Participate and coordinate with international organizations to ensure that findings from international investigations into the accident are used to inform U.S. industry response actions (INPO/EPRI): and
- Provide technical support and R&D coordination necessary to address safety and other issues identified by the industry (EPRI/nuclear plant owners' group).

**TEPCO Admits Fuel Melt In Two More Fukushima Reactors:** Two weeks after admitting a fuel meltdown in the site's Unit 1 reactor, the operator of the damaged Fukushima Daiichi nuclear plant said Tuesday preliminary analyses indicate that fuel also melted in the plant's Units 2 and 3 reactors several days after the March 11 earthquake and tsunami devastated the facility.

In a report delivered Monday night to Japan's Nuclear and Industrial Safety Agency (NISA), Tokyo Electric Power Co. (TEPCO), the operator of the plant, admitted the cores of Units 2 and 3 "partially melted" due to a loss of cooling systems, although it indicated there was some question about the extent of the meltdowns and potential damage to the bottom of the steel reactor containment vessels—the key factor in determining radiation leakage. TEPCO laid out two accident

scenarios, one in which water injections by the utility into the cores succeeded in keeping the fuel partially covered, resulting in partial fuel melting but no major collapse of fuel into the bottom of the steel containment vessels.

NRC Flags More 'Technical' Issues On New Reactor:In new concerns that could slow two leading U.S. nuclear expansion projects, Nuclear Regulatory Commission Chairman Gregory Jaczko announced late Friday that agency staff has discovered "additional technical issues" with Westinghouse's AP1000 reactor that the company must address before NRC will approve the design, including questions about the strength of the reactor's protective shield. Jaczko's announcement is somewhat surprising because NRC moved close to approving the design in February, issuing a proposed rule that, when finalized, would certify the technology for use in the United States. But Jaczko noted Friday that the proposed rule was issued under the condition that Westinghouse was to provide "additional calculations" to confirm NRC staff's analysis of the reactor's safety.

But instead, that additional more questions regarding the AP1000's shield building, as well as the peak accident pressures expected within containment," Jaczko said Friday. More specifically, an NRC spokesman said Monday that Westinghouse recently acknowledged a miscalculation in trying to answer questions posed by an NRC advisory panel about likely pressure buildup inside the AP1000 following certain accidents. The spokesman said Westinghouse also must conduct a more "comprehensive analysis" on how the reactor's shield building would stand up under multiple simultaneous structural threats, including attacks or natural disasters. The spokesman said Westinghouse previously committed to the more robust analysis, but has not yet done so. Asked to describe staff's level of concern

NRC Throws Red Flag On Faulty Browns Ferry Valve: In the most serious safety citation issued by the agency in eight years, the Nuclear Regulatory Commission Tuesday said the October 2010 failure of a valve used help to cool the Tennessee Valley Authority's Browns Ferry Unit 1 nuclear reactor was "of high safety significance," partly because the device was likely inoperable for up to 18 months prior to the discovery of the problem by plant workers. In a letter Monday to TVA Vice President of Nuclear Licensing Preston Swafford, NRC acknowledged the problem partly stemmed from a manufacturer's design flaw, but cited TVA for failing to discover the faulty valve during months of required inspection and testing at the three-unit plant, located near Huntsville, Ala. During a refueling outage October 23, workers for the federal power agency found a water injection valve in a "significantly degraded condition" and stuck shut, block ing water flow in a cooling system used during plant shutdowns, NRC Region 2 Administrator Victor McCree said in the letter.

"The system is counted on for core cooling during certain accident scenarios and the valve failure left it inoperable, which potentially could have led to core damage had an accident involving a series of unlikely events occurred," NRC said in a

press release Tuesday announcing the Browns Ferry citation. Because Unit 1 was down at the time, the valve problem presented no immediate threat to public health or safety, NRC said. Nevertheless, NRC coded the valve problem "red," the most serious under its four-color system for assessing the significance of reactor safety problems. Significantly, McCree said the valve apparently never worked properly after it was installed in March 2009, and that TVA should have caught the problem during routine system testing.

Inspections confirm US nuclear units' severe accident response, says NRC: NRC inspections conducted in response to the ongoing accident at Fukushima I nuclear power plant in Japan have confirmed "every plant has the capability" to respond to severe accidents and other extreme events, the agency said in a May 20 statement. The inspectors found, however, that out of 65 operating reactor sites in the US, "12 had issues with one or more of the requirements during Inspections confirm US nuclear units' severe accident response, says NRC the inspections; many of these discrepancies deal with training," the agency said. "Three of the 12 sites have already resolved their issues and the remaining sites are actively working to resolve theirs."

**NRC to review petition to shut Mark I BWRs:** An NRC petition review board will hear arguments from petitioners who requested that NRC suspend the operating licenses of BWRs with Mark I containments, a General Electric design also used at five of the six units at Japan's Fukushima I plant.

NRC issues design approval for GE Hitachi's ESBWR: GE Hitachi Nuclear Energy's Economic Simplified Boiling Water Reactor design has received a "positive" final safety evaluation report and "final design approval" from NRC, GEH said in a March 9 statement. GEH said the final design approval "constitutes a finding by the NRC staff that the ESBWR design is safe and all technical issues have been resolved. It clears the way for the ESBWR to be built in countries around the world that recognize [that approval] of a reactor design as acceptance by the 'country of origin."

## **Information Notices - 2011**

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File Name	Date	Description
<u>in2011-11</u>	04/27/2011	Reporting Requirement For Heat And Smoke Detector Failures In 10 CFR Part 36 Irradiators
<u>in2011-10</u>	05/02/2011	Thermal Issues Identified During Loading of Spent Fuel Storage Casks
<u>in2011-09</u>	05/18/2011	Fixed Gauge Shutter Failures Due To Operating In Harsh Working Environments
<u>in2011-08</u>	03/31/2011	Tohoku-Taiheiyou-Oki Earthquake Effects On Japanese Nuclear Power Plants – For Fuel Cycle Facilities
<u>in2011-07</u>	04/14/2011	Specific License Required When Exporting To Embargoed Destinations Listed In 10 CFR 110.28
<u>in2011-06</u>	03/22/2011	Erroneous Criticality Alarm Monitoring Signal Caused By Incorrect Data Acquisition Module Configuration
<u>in2011-05</u>	03/18/2011	Tohoku-Taiheiyou-Oki Earthquake Effects On Japanese Nuclear Power Plants
<u>in2011-04</u>	02/23/2011	Contaminants and Stagnant Conditions Affecting Stress Corrosion Cracking in Stainless Steel Piping Pressurized Water Reactors
<u>in2011-03</u>	02/16/2011	Nonconservative Criticality Safety Analyses for Fuel Storage
<u>in2011-02</u>	01/31/2011	Operator Performance Issues Involving Reactivity Management at Nuclear Power Plants
<u>in2011-01</u>	02/15/2011	Commercial-Grade Dedication Issues Identified During NRC Inspections

### **Regulatory Issue Summary**

Document Number	Date	Title	
RIS 11-03	03/03/2011	Issuance of SFST-14, "Acceptance Review Process"	
RIS 11-02	02/02/2011	Licensing Submittal Information and Design Development Activities for Small Modular Reactor Designs	
RIS 11-01	01/25/2011	NRC Policy On Release Of Iodine-131 Therapy Patients Under 10 CFR 35.75 To Locations Other Than	

Private Residences

# **Regulatory Guides Out For Comment**

Task Number	Title	Publish Date
DG-1229	Assuring the Availability of Funds for Decommissioning Nuclear Reactors (ML103400008)	01/2011
DG-1234	Water Sources for Long-Term Recirculation Cooling Following a Loss-of-Coolant Accident (ML092850003)	06/2010
DG-1237	Guidance on Making Changes to Emergency Plans for Nuclear Power Reactors (ML090080534)	05/2009
DG-1240	Condition Monitoring Program for Electric Cables Used in Nuclear Power Plants (ML100760364)	06/2010
DG-1244	Availability Of Electric Power Sources (ML100840581)	09/2010
DG-1245	Inspection of Water-Control Structures Associated with Nuclear Power Plants (ML093060150)	01/2011
DG-1247	Design-Basis Hurricane and Hurricane Missiles for Nuclear Power Plants (ML100480890)	08/2010
DG-1248	Nuclear Power Plant Simulation Facilities For Use In Operator Training, License Examinations, And Applicant Experience Requirements (ML100770145)	
DG-1249	Criteria for use of Computers in Safety Systems of Nuclear Power Plants (ML100490539)	06/2010
DG-1250	Guidance for ITAAC Closure Under 10 CFR Part 52 (ML102530401)	05/2011
DG-1253	Preoperational Testing of Emergency Core Cooling Systems for Pressurized Water Reactors (ML110110480)	05/2011
DG-1254	Qualification Of Connection Assemblies For Nuclear Power Plants (ML102090535)	02/2011
DG-1264	Thermal Overload Protection for Electric Motors on Motor-Operated Valves (ML110130176)	04/2011

## **Regulatory Guides Issued**

1.34	Control of Electroslag Weld Properties	1	03/2011
1.43	Control of Stainless Steel Weld Cladding of Low-Alloy Steel Components	1	03/2011
1.44	Control of the Use of Sensitized Stainless Steel	1	03/2011
1.50	Control of Preheat Temperature for Welding of Low-Alloy Steel	1	03/2011
1.149	Nuclear Power Plant Simulation Facilities for Use in Operator Training and License Examinations  + HISTORY - HISTORY  • DG-1080, Proposed Revision 3, published 08/1999 • DG-1043, Proposed Revision 2, published 06/1995 • Draft OL 402-5, Proposed Revision 1, published 11/1984 • Draft RS 110-5, Proposed Revision 0, 07/1980	4	04/2011
1.174	An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis  + HISTORY - HISTORY  • Revision 1 issued with SRP Chapter 19 • DG-1110, Proposed Revision 1, published 06/2001 • DG-1061, Proposed Revision 0, published 06/1997	2	05/2011
1.177	An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications  + HISTORY - HISTORY  • Revision 0 issued with SRP Chapter 16.1	1	05/2011

DG-1065, Proposed Revision 0, published 06/1997		

#### **Status of Updating Software Related Regulatory Guides**

- 1. Reg. Guide 1.169, "Configuration Management Plans for Digital Computer Software Used in Safety Systems in Nuclear Plants"
  - Work initiated in December
  - Background research complete
  - Briefing package presenting findings and regulatory position issues to be available end of January
  - Initial draft available soon

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- 2. Reg. Guide 1.170, "Software Test Documentation for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"
  - Work initiated in December
  - Background research complete
  - Briefing package provided to NRC TM on comparison of the differences between 829-1998
  - <u>Key Issue Discussed with NRC TM</u>: Base updated RG on which version of IEEE 829, the soon to be completed 2008 version or on the 1998 version?

Resolution: Since the 2008 version is nearly complete (second balloting), proceed to develop the preliminary draft of this updated RG based upon the 2008 version and wait until 829-2008 has been approved before preparing the final draft of this RG.

Draft for Public Comment soon

- 3. Reg. Guide 1.171, "Software Testing for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"
  - Work initiated in December
  - Background research complete
  - Briefing package presenting findings and regulatory position issues to be available in early February for discussion with NRC TM
  - <u>Key Issue Discussed with NRC TM</u>: Proceed with preparation and discussion of Briefing Package and evaluate whether to proceed on updating this RG based upon any impacts from IEEE-829-2008, from new regulations, and/or IEEE-603 since IEEE 1008-1987 has not been updated.
     Draft for Public Comment by soon
- 4. Reg. Guide 1.172, "Software Requirements Specifications for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"
  - Work to be initiated in February on updating this RG
  - Initial draft available by the end of the year
  - Draft for Public Comment soon
- 5. Reg. Guide 1.173, "Developing Software Life Cycle Processes for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"
  - Work to be initiated in March on updating this RG
  - On Hold for the revision
  - Draft for Public Comment by soon

# **Interim Staff Guidance Associated with Digital Instrumentation & Controls**

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DI&C-ISG-01	Cyber Security
	Interim Staff Guidance on Digital Instrumentation and Control, Cyber Security, December 31, 2007
DI&C-ISG-02	Diversity and Defense-in-Depth (D3)
	<ul> <li>Revision 2, Interim Staff Guidance on Diversity and Defense-in-Depth Issues, June 5, 2009</li> <li>Interim Staff Guidance on Diversity and Defense-in-Depth Issues, September 26, 2007</li> </ul>
DI&C-ISG-03	Risk-Informed Digital Instrumentation and Controls
	Interim Staff Guidance on Review of New Reactor Digital Instrumentation and Control Probabilistic Risk Assessments
DI&C-ISG-04	Highly Integrated Control Rooms – Digital Communication Systems
	<ul> <li>Revision 1, Interim Staff Guidance on Highly-Integrated Control Rooms – Communications Issues (HICRc), March 2009</li> <li>Interim Staff Guidance on Highly-Integrated Control Rooms – Communications Issues (HICRc), September 28, 2007</li> </ul>
DI&C-ISG-05	Highly Integrated Control Rooms – Human Factors
	<ul> <li>Revision 1 to Interim Staff Guidance on Highly Integrated Control Rooms - Human Factors Issues (HICR-HF)</li> <li>Interim Staff Guidance on Highly-Integrated Control Rooms - Human Factors Issues (HICR-HF), September 28, 2007</li> </ul>
DI&C-ISG-06	issued

	Draft ISG Currently Under Revision
DI&C-ISG-07	Fuel Cycle Facilities
	<ul> <li>Digital Instrumentation and Control Systems in Safety Applications at Fuel Cycle Facilities, December 1, 2010</li> <li>Interim Staff Guidance on Digital Instrumentation and Control Systems in Safety Applications at Fuel Cycle Facilities, June 1, 2009</li> </ul>

## Plant Applications for License Renewal

#### **Completed Applications:**

(includes Application, Review Schedule, Supplemental Environmental Impact Statement, and Safety Evaluation Report)

- Calvert Cliffs, Units 1 and 2
- Oconee Nuclear Station, Units 1, 2 and 3
- Arkansas Nuclear One, Unit 1
- Edwin I. Hatch Nuclear Plant, Units 1 and 2
- Turkey Point Nuclear Plant, Units 3 and 4
- North Anna, Units 1 and 2, and Surry, Units 1 and 2
- Peach Bottom, Units 2 and 3
- St. Lucie, Units 1 and 2
- Fort Calhoun Station, Unit 1
- McGuire, Units 1 and 2, and Catawba, Units 1 and 2
- H.B. Robinson Nuclear Plant, Unit 2
- R.E. Ginna Nuclear Power Plant, Unit 1
- V.C. Summer Nuclear Station, Unit 1
- Dresden, Units 2 and 3, and Quad Cities, Units 1 and 2
- Farley, Units 1 and 2
- Arkansas Nuclear One, Unit 2
- D.C. Cook, Units 1 and 2
- Millstone, Units 2 and 3

- Point Beach, Units 1 and 2
- Browns Ferry, Units 1, 2, and 3
- Brunswick, Units 1 and 2
- Nine Mile Point, Units 1 and 2
- Monticello
- Palisades
- James A. FitzPatrick
- Wolf Creek, Unit 1
- Harris, Unit 1
- Oyster Creek
- Vogtle, Units 1 and 2
- Three Mile Island, Unit 1
- Beaver Valley, Units 1 and 2
- Susquehanna, Units 1 and 2
- Cooper Nuclear Station
- Duane Arnold Energy Center
- Kewaunee Power Station
- Vermont Yankee Nuclear Power Station
- Palo Verde, Units 1, 2, and 3



### **Applications Currently Under Review:**

- Pilgrim 1, Unit 1 Application received January 27, 2006
- Indian Point, Units 2 and 3 Application received April 30, 2007
- Prairie Island, Units 1 and 2 Application received April 15, 2008
- <u>Crystal River, Unit 3</u> Application received December 18, 2008
- Hope Creek Application received August 18, 2009
- Salem, Units 1 and 2 Application received August 18, 2009
- <u>Diablo Canyon, Units 1 and 2</u> Application received November 24, 2009
- <u>Columbia Generating Station</u> Application received January 20, 2010
- <u>Seabrook Station, Unit 1</u> Application received June 1, 2010
- <u>Davis-Besse Nuclear Power Station, Unit 1</u> Application received August 30, 2010
- South Texas Project, Units 1 and 2 Application received October 28, 2010

#### TOP

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## **Future Submittals of Applications:**

Fiscal Year	No.	Renewal Application	Applicant	Letter of Intent (ADAMS Accession No.)	Submission Date
2011	1	Grand Gulf Nuclear Station, Unit 1	Entergy Nuclear, Inc.	ML092450109	July 2011
	2	Limerick Generating Station, <u>Unit 1</u> and <u>Unit 2</u>	Exelon Generation Company, LLC	ML110450529	Sept. 2011
2012	1	Callaway Plant, Unit 1	AmerenUE	ML083370203	Oct. to Dec. 2011
2013	1	Strategic Teaming and Resource Sharing (STARS) No. 7	Un-named	ML080590377	Oct. to Dec. 2012
	2	Waterford Steam Electric Station, Unit 3	Entergy Nuclear, Inc.	ML092450109	Jan. 2013
	3	Sequoyah Nuclear Plant, <u>Unit 1</u> and <u>Unit 2</u>	Tennessee Valley Authority	ML092220377	Apr. to June 2013
	4	Strategic Teaming and Resource Sharing (STARS) No. 6	Un-named	ML062550111	July to Sept. 2013
	5	Byron Station, Units 1 and 2/Braidwood Station, Units 1 and 2	Exelon Generation Company, LLC	ML110450529	Apr. to June 2013
2014	1	Perry Nuclear Power Plant, Unit 1	FirstEnergy Nuclear Operating Company	ML102110085	Dec. 2014
2015	1	River Bend Station, Unit 1	Entergy Nuclear, Inc.	ML092450109	Jan. 2015
	2	Un-named	Exelon Generation Company,	ML110450529	July 2015

			LLC		
2017	1	Un-named	Exelon Generation Company, LLC	ML110450529	Apr. 2017

### **Owners' Groups**

Babcock & Wilcox -- The Babcock & Wilcox Owners Group, representing five operating B&W plants, has formulated a generic license renewal program. The B&W Owners Group has submitted generic license renewal reports on the reactor coolant system piping, the pressurizer, the reactor pressure vessel, and reactor vessel internals.

Westinghouse -- The Westinghouse Owners Group also has programs for license renewal and has submitted technical reports on the aging management activities for the reactor coolant system supports, the pressurizer, the Class I piping, the containment structure, and the reactor vessel internals.

General Electric -- The Boiling Water Reactor Owners Group submitted a generic technical report on the containment structure and is currently concentrating their efforts on reports related to the vessel internals program.



### http://www.nrc.gov/reactors/operating/licensing/renewal/applications.html

### **COL Applications Received**

The links in the table below provide information on the COL applications that the NRC has received to date. The activities associated with reviewing these applications are reflected in the individual links for docketed COL applications.

Proposed New Reactor(s)	Design	Applicant
Bell Bend Nuclear Power Plant	U.S. EPR	PPL Bell Bend, LLC
Bellefonte Nuclear Station, Units 3 and 4	<u>AP1000</u>	Tennessee Valley Authority (TVA)
Callaway Plant, Unit 2	U.S. EPR	AmerenUE
Calvert Cliffs, Unit 3	U.S. EPR	Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC

Comanche Peak, Units 3 and 4  ESBWR  Detroit Edison Company, LLC (Luminant)  ESBWR  Detroit Edison Company  Grand Gulf, Unit 3  ESBWR  Entergy Operations, Inc. (EOI)  Levy County. Units 1 and 2  AP1000  Progress Energy Florida, Inc. (PEF)  Nine Mile Point, Unit 3  U.S. EPR  Nine Mile Point 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC (UniStar)  North Anna, Unit 3  US-APWR  Dominion Virginia Power (Dominion)  River Bend Station, Unit 3  ESBWR  Entergy Operations, Inc. (EOI)  Shearon Harris, Units 2 and 3  AP1000  Progress Energy Carolinas, Inc. (PEC)  South Texas Project, Units 3 and 4  ABWR  South Texas Project Nuclear Operating Company (STPNOC)  Turkey Point, Units 6 and 7  AP1000  Florida Power and Light Company (FPL)  Victoria County Station, Units 1 and 2  ESBWR  Exelon Nuclear Texas Holdings, LLC (Exelon)  Virgil C. Summer, Units 2 and 3  AP1000  Southern Nuclear Operating Company (SNC)  William States Lee III, Units 1 and 2  AP1000  Duke Energy			
Grand Gulf, Unit 3  ESBWR  Entergy Operations, Inc. (EOI)  Progress Energy Florida, Inc. (PEF)  Nine Mile Point, Unit 3  U.S. EPR  Nine Mile Point 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC (UniStar)  North Anna, Unit 3  River Bend Station, Unit 3  ESBWR  Entergy Operations, Inc. (EOI)  Shearon Harris, Units 2 and 3  AP1000  Progress Energy Carolinas, Inc. (PEC)  South Texas Project, Units 3 and 4  ABWR  South Texas Project Nuclear Operating Company (STPNOC)  Turkey Point, Units 6 and 7  Victoria County Station, Units 1 and 2  ESBWR  Entergy Operations, Inc. (PEC)  South Texas Project Nuclear Operating Company (FPL)  Victoria County Station, Units 1 and 2  ESBWR  Exelon Nuclear Texas Holdings, LLC (Exelon)  Virgil C. Summer, Units 2 and 3  AP1000  South Carolina Electric & Gas (SCE&G)  Vogtle, Units 3 and 4  AP1000  Southern Nuclear Operating Company (SNC)	Comanche Peak, Units 3 and 4	<u>US-APWR</u>	Luminant Generation Company, LLC (Luminant)
Levy County, Units 1 and 2  Nine Mile Point, Unit 3  U.S. EPR  Nine Mile Point 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC (UniStar)  North Anna, Unit 3  US-APWR  Dominion Virginia Power (Dominion)  River Bend Station, Unit 3  ESBWR  Entergy Operations, Inc. (EOI)  Shearon Harris, Units 2 and 3  AP1000  Progress Energy Carolinas, Inc. (PEC)  South Texas Project, Units 3 and 4  ABWR  South Texas Project Nuclear Operating Company (STPNOC)  Turkey Point, Units 6 and 7  Victoria County Station, Units 1 and 2  ESBWR  Exelon Nuclear Texas Holdings, LLC (Exelon)  Virgil C. Summer, Units 2 and 3  AP1000  Southern Nuclear Operating Company (SNC)	Fermi, Unit 3	<u>ESBWR</u>	Detroit Edison Company
Nine Mile Point, Unit 3  U.S. EPR  Nine Mile Point 3 Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC (UniStar)  North Anna, Unit 3  River Bend Station, Unit 3  ESBWR  Entergy Operations, Inc. (EOI)  Shearon Harris, Units 2 and 3  AP1000  Progress Energy Carolinas, Inc. (PEC)  South Texas Project, Units 3 and 4  ABWR  South Texas Project Nuclear Operating Company (STPNOC)  Turkey Point, Units 6 and 7  AP1000  Florida Power and Light Company (FPL)  Victoria County Station, Units 1 and 2  ESBWR  Exelon Nuclear Texas Holdings, LLC (Exelon)  Virgil C. Summer, Units 2 and 3  AP1000  South Carolina Electric & Gas (SCE&G)  Vogtle, Units 3 and 4  AP1000  Southern Nuclear Operating Company (SNC)	Grand Gulf, Unit 3	<u>ESBWR</u>	Entergy Operations, Inc. (EOI)
Operating Services, LLC (UniStar)  North Anna, Unit 3  River Bend Station, Unit 3  ESBWR  Entergy Operations, Inc. (EOI)  Shearon Harris, Units 2 and 3  AP1000  Progress Energy Carolinas, Inc. (PEC)  South Texas Project, Units 3 and 4  ABWR  South Texas Project Nuclear Operating Company (STPNOC)  Turkey Point, Units 6 and 7  AP1000  Florida Power and Light Company (FPL)  Victoria County Station, Units 1 and 2  ESBWR  Exelon Nuclear Texas Holdings, LLC (Exelon)  Virgil C. Summer, Units 2 and 3  AP1000  South Carolina Electric & Gas (SCE&G)  Vogtle, Units 3 and 4  AP1000  Southern Nuclear Operating Company (SNC)	Levy County, Units 1 and 2	<u>AP1000</u>	Progress Energy Florida, Inc. (PEF)
River Bend Station, Unit 3  ESBWR  Entergy Operations, Inc. (EOI)  Shearon Harris, Units 2 and 3  AP1000  Progress Energy Carolinas, Inc. (PEC)  South Texas Project, Units 3 and 4  ABWR  South Texas Project Nuclear Operating Company (STPNOC)  Turkey Point, Units 6 and 7  AP1000  Florida Power and Light Company (FPL)  Victoria County Station, Units 1 and 2  ESBWR  Exelon Nuclear Texas Holdings, LLC (Exelon)  Virgil C. Summer, Units 2 and 3  AP1000  South Carolina Electric & Gas (SCE&G)  Vogtle, Units 3 and 4  AP1000  Southern Nuclear Operating Company (SNC)	Nine Mile Point, Unit 3	U.S. EPR	
Shearon Harris, Units 2 and 3  AP1000  Progress Energy Carolinas, Inc. (PEC)  South Texas Project, Units 3 and 4  ABWR  South Texas Project Nuclear Operating Company (STPNOC)  Turkey Point, Units 6 and 7  AP1000  Florida Power and Light Company (FPL)  Victoria County Station, Units 1 and 2  ESBWR  Exelon Nuclear Texas Holdings, LLC (Exelon)  Virgil C. Summer, Units 2 and 3  AP1000  South Carolina Electric & Gas (SCE&G)  Vogtle, Units 3 and 4  AP1000  Southern Nuclear Operating Company (SNC)	North Anna, Unit 3	<u>US-APWR</u>	Dominion Virginia Power (Dominion)
South Texas Project. Units 3 and 4  ABWR  South Texas Project Nuclear Operating Company (STPNOC)  Turkey Point, Units 6 and 7  Victoria County Station, Units 1 and 2  ESBWR  Exelon Nuclear Texas Holdings, LLC (Exelon)  Virgil C. Summer, Units 2 and 3  Vogtle, Units 3 and 4  AP1000  South Carolina Electric & Gas (SCE&G)  Vogtle, Units 3 and 4  AP1000  Southern Nuclear Operating Company (SNC)	River Bend Station, Unit 3	<u>ESBWR</u>	Entergy Operations, Inc. (EOI)
Turkey Point, Units 6 and 7    AP1000   Florida Power and Light Company (FPL)	Shearon Harris, Units 2 and 3	<u>AP1000</u>	Progress Energy Carolinas, Inc. (PEC)
Victoria County Station, Units 1 and 2ESBWRExelon Nuclear Texas Holdings, LLC (Exelon)Virgil C. Summer, Units 2 and 3AP1000South Carolina Electric & Gas (SCE&G)Vogtle, Units 3 and 4AP1000Southern Nuclear Operating Company (SNC)	South Texas Project, Units 3 and 4	ABWR	South Texas Project Nuclear Operating Company (STPNOC)
Virgil C. Summer, Units 2 and 3AP1000South Carolina Electric & Gas (SCE&G)Vogtle, Units 3 and 4AP1000Southern Nuclear Operating Company (SNC)	Turkey Point, Units 6 and 7	<u>AP1000</u>	Florida Power and Light Company (FPL)
Vogtle, Units 3 and 4  AP1000  Southern Nuclear Operating Company (SNC)	Victoria County Station, Units 1 and 2	<u>ESBWR</u>	Exelon Nuclear Texas Holdings, LLC (Exelon)
	Virgil C. Summer, Units 2 and 3	<u>AP1000</u>	South Carolina Electric & Gas (SCE&G)
William States Lee III, Units 1 and 2 AP1000 Duke Energy	Vogtle, Units 3 and 4	<u>AP1000</u>	Southern Nuclear Operating Company (SNC)
	William States Lee III, Units 1 and 2	AP1000	Duke Energy

# **Issued Design Certifications**

The NRC staff has issued the following design certifications:

Design	Applicant
Advanced Boiling Water Reactor (ABWR)	General Electric (GE) Nuclear Energy
System 80+	Westinghouse Electric Company
Advanced Passive 600 (AP600)	Westinghouse Electric Company
Advanced Passive 1000 (AP1000)	Westinghouse Electric Company

# Design Certification Applications Currently Under Review

The staff is currently reviewing the following design certification applications:

Design	Applicant
AP1000 Amendment	Westinghouse Electric Company
ABWR Design Certification Rule (DCR) Amendment	South Texas Project Nuclear Operating Company
Economic Simplified Boiling-Water Reactor (ESBWR)	GE-Hitachi Nuclear Energy
U.S. EPR	AREVA Nuclear Power
U.S. Advanced Pressurized-Water Reactor (US-APWR)	Mitsubishi Heavy Industries, Ltd.
ABWR Design Certification Renewal	Toshiba Corporation Power Systems Company
ABWR Design Certification Renewal	GE-Hitachi Nuclear Energy

# **Issued Early Site Permits**

The NRC staff has issued the following ESPs:

Site	Applicant
Clinton ESP Site	Exelon Generation Company, LLC
Grand Gulf ESP Site	System Energy Resources Inc.
North Anna ESP Site	Dominion Nuclear North Anna, LLC
Vogtle ESP Site	Southern Nuclear Operating Company

# Early Site Permit Applications Currently Under Review

The staff is currently reviewing the following ESP applications:

Site	Applicant
Victoria County Station	Exelon Nuclear Texas Holdings, LLC (Exelon)
PSEG Site	PSEG Power, LLC, and PSEG Nuclear, LLC (PSEG)