U.S.NRC

United States Nuclear Regulatory Commission

Protecting People and the Environment

BRIEFING BOOK

FOR

COMMISSIONER KRISTINE L. SVINICKI

OCONEE NUCLEAR STATION

February 1, 2012

CONTENTS

TAB

AGENDA 1
Executive Summary

FACILITY DATA
Facility Location Map and Directions 2
Facility Data 3
Facility Unique Features 4

FACILITY PERFORMANCE
Reactor Oversight Process Info 5
Current Issues 6

FACILITY MANAGEMENT DATA
Facility Organization 7
Biographical Data of Principal Managers . . . 8

NRC OVERSIGHT DATA
Resumes of Resident Inspectors 9

TAB 1

Agenda for Commissioner Svinicki's visit to Oconee Nuclear Station

January 31, 2012
Depart DC for Greenville-Spartanburg (GSP) airport and drive to Clemson

February 1, 2012

7:20 a.m. Leave the hotel for Oconee Nuclear Station

7:50 a.m. Arrive at the World of Energy visitors center for overview discussion of the Keowee-Toxaway Project

8:20 a.m. Depart the World of Energy for the Jocasse Hydro-Electric Facility

9:00 a.m. Arrive at the Jocasse Hydro-Electric Facility for tour of powerhouse and dam structure (dam face drive-over, west saddle dyke, spillway, monitoring wells and powerhouse)

10:50 a.m. Depart the Jocasse Hydro-Electric Facility for the Oconee Nuclear Station

11:30 a.m. Arrive back at the Oconee Nuclear Station and the tour the current / planned external flood protection modifications along with the B.5.b Hale Pump location at the intake canal (NEO to be prepared to address questions and provide access to storage building)

12:15 p.m. Process into the Protected Area (The Senior Resident Inspector will be the assigned escort for HQ personnel)

12:30 p.m. Working lunch with the station management team (includes a Q&A portion with the attendees)

1:45 p.m. Tour of the Protected Area to include:

- Main Steam Isolation Valve project
- The Natural Phenomena Barrier System
- Standby Shutdown Facility (SSF) DG and control room
- Alternate SSF power feed from Protected Service Water (PSW) – Raceway and cables entering the Auxiliary Building
- The PSW building
- Turbine Building basement (drain on South end, Unit 3 EFW pumps) and ground floor (train separation and bus duct issues)
- The Unit 1 / Unit 2 Control Room / Cable Room (new digital RPS / ES equipment)
- Outage Command Center

3:45 p.m. Meeting between Commissioner Svinicki and the senior management team

4:15 p.m. Tour the Keowee Hydro Facility (emergency power source for the Oconee Nuclear Station)

5:00 p.m. Depart site for Greenville-Spartanburg airport and return to DC

PROTECTED AREA TOUR ROUTE

- Depart Resident Inspector Office
- Go to the 6th floor of the OOB for an overview of the site (ISFSI, Intake, power block, SSF, discharge)
- Discuss the pending MSIV modification using the north end of Unit 1 for visualization
- Enter the north end of the SSF building, go past the SSF DG's and up to the SSF control room. Discuss the function of the portable pump and cable reel.
- Discuss the Unit 2 BWST NPBS project and the work that was done (FiberWrap, siding, steel plating, etc.)
- Walk past the raceway and discuss the power cables being installed
- Walk through the PSW building and explain function and status of project
- Enter the Turbine Building on the south end and descend to the basement level and walk past the drain opening and the EFW pumps.
- Take the center stairs to the ground floor and show the bolted bus ducts and the Unit 3 4160V switchgear to show the vulnerability from a HELB along the west wall
- Return to the center stairs on the east side of the building and go up to the operating deck
- Tour the Unit 1 / 2 main control room to include a board walk down, TSC walkthrough and discussion of the new RPS/ES system as well as the cable room (EPSL cabinets, etc.)
- Tour the Outage Command Center
- Return to the Admin Building. Commissioner Svinicki to meet privately with the senior management team.
- Depart the Protected Area and arrive at Keowee Hydro Unit for tour
- Complete tour and leave site for airport

Executive Summary

Purpose of the visit/meeting
- Meet the Oconee Resident office staff
- Meet the Oconee senior management team
- Tour the Jocasse Hydro Facility
- Tour portions of the plant including ongoing tornado and HELB modifications
- Tour the Unit 1 / Unit 2 Main Control Room including the new digital RPS/ES equipment installed during the Spring 2011 refueling outage
- Tour the Keowee Hydro Facility

Issues to be addressed (See TAB 6)
- External flooding / GI-204
- NFPA 805 transition
- Tornado and HELB mitigation
- Digital Reactor Protective System / Engineered Safeguards Protective system project

Personnel to meet

Oconee Personnel (See TAB 8)
- Bill Pitesa, Senior Vice President of Nuclear Operations
- David Baxter, Vice President of Nuclear Engineering
- Preston Gillespie, Site Vice President
- Tom Ray, Engineering Manager
- Richard Freudenberger, Manager, Regulatory Affairs
- Bob Guy, Organizational Effectiveness Manager
- Terry Patterson, Safety Assurance Manager
- Dean Hubbard, External Flood Regulatory Support Manager

Region II Personnel (See TAB 9)
- Rick Croteau, Director, Division of Reactor Projects
- Andy Sabisch, Senior Resident Inspector
- Kevin Ellis, Resident Inspector
- Geoffrey Ottenberg, Resident Inspector
- Rebekah Wilbanks, Site Secretary

Activities on site
- Meet with Resident office staff
- Working lunch with Oconee staff including a question-&-answer session
- Meeting with the Duke management team to discuss plant, corporate and industry issues
- Plant tour with the resident inspectors and members of the licensee's staff
- Tour the Jocasse and Keowee hydro facilities

Messages to be communicated (Reference TAB 6)
- Continue to focus on safe plant operation
- Important to keep Tornado/HELB modifications on track
- Recognize the challenge of managing multiple major projects
- Seek opportunities to modify schedule based on risk reduction

Licensee's briefing topics

- The Duke Fleet is implementing actions to improve corporate governance and oversight
- Oconee Performance and Direction
- Major investments to enhance safety, improve reliability, resolve licensing basis issues, and reduce overall station risk profile are continuing

Licensee Ownership Information

Duke Energy Carolinas owns and operates the three-unit Oconee Nuclear Station located near Seneca, SC and the two-unit McGuire Nuclear Station located near Huntersville, NC. In addition, Duke Energy Carolinas operates and has a partial ownership interest in the two-unit Catawba Nuclear Station located in York, SC.

Duke Energy and Progress Energy have delayed the closing date of their $13.7 billion corporate merger, which they had hoped to wrap up in 2011, but in December, federal regulators rejected a proposal in which the companies offered to sell power for eight years under a "virtual divestiture" plan in the Carolinas. The merger could be completed in May or June pending regulatory approval from the Federal Energy Regulatory Commission (FERC).

Recent Oconee Management Changes (Reference TAB 7)

The following management changes have been implemented over the past six months:

- Rich Freudenberger was reassigned from the Safety Assurance Manager position to Manager, Regulatory Interface. In this role he is responsible for management of site programs and processes related to regulatory compliance.
- Dave Baxter is vice president of nuclear engineering for Duke Energy. In his role, he is responsible for corporate engineering support of Duke Energy's fleet of reactors including fuel management, reactor core design, and nuclear safety analysis; reload analysis methods, fleet program engineering, fleet procurement engineering, fleet component engineering, fleet electrical engineering and nuclear fuel procurement. Since November 2011, Dave has been on temporary assignment providing regulatory support for Oconee Nuclear Station.

ROP Assessment - Significant ROP Inspection Findings (Reference TAB 5)

A Special Inspection was initiated when the licensee identified that the breakers for pressurizer heaters powered from the SSF could trip prematurely. As a result of the inspection, three potentially greater than Green findings were identified for failing to maintain design control of SSF components and failing to perform adequate operability evaluations. A Final Significance Determination letter was issued on December 6, 2011, and resulted in one Yellow finding with an associated notice of violation and one Green non-cited violation.

Potential Discussion Topics (Reference TAB 6)

External Flood Action Plan

An issue related to the potential impact that external flooding would have on the Oconee Nuclear Station is currently being addressed by both the licensee and NRC. The licensee has developed Interim Compensatory Measures (ICMs) to address the external flooding concerns and is working on permanent actions to ensure the station is not adversely affected by a potential external flooding scenario. A Confirmatory Action Letter (CAL) was issued on June 22, 2010, to confirm that the ICMs would remain in place until final modifications have been completed. The CAL also requested the licensee to provide a list of modifications to enhance the capability of the Oconee Nuclear Station to withstand the postulated failure of the Jocassee Dam. By letter dated April 30, 2011, the licensee

responded to that CAL request. The NRC staff has reviewed the licensee's response, and by letter dated August 18, 2011, requested the licensee to provide clarifying information. The staff is reviewing the licensee's response.

NFPA 805 Transition

Oconee is one of two pilot plants that are in the process of transitioning to NFPA 805 for fire protection. The NRC staff completed its review of the License Amendment Requests (LAR) and issued the final licensee amendment on December 29, 2010. The licensee is currently performing modifications to be in compliance with NFPA 805.

Tornado & High Energy Line Break (HELB) Mitigation

The licensee is implementing a number of major modifications designed to minimize the risk exposure resulting from events such as tornado and a high-energy line break. The licensee submitted several LARs to update the Updated Final Safety Analysis Report (UFSAR). The staff has issued numerous Requests for Additional Information and the licensee is in the process of responding to the requests. The modifications to reinforce the outer masonry block walls of the Auxiliary Building and Cask Decontamination Tank rooms, as well as provide missile protection for the Borated water storage tanks have been completed. Remaining modifications are in progress and on schedule.

Digital Computer Based Reactor Protective System (RPS)/Engineered Safeguards Protective System (ESPS)

The licensee is currently implementing a major modification to all three units' Reactor Protection System and Engineered Safeguards Features Actuation System (RPS/ESFAS). The licensee has installed the new digital system on Unit 1 (performed during the Spring 2011 refueling outage) and is preparing to install the system on Unit 3 in the Spring 2012 outage followed by Unit 2 in the Spring of 2013.

William States Lee III Nuclear Station Combined Operating License (COL) Application

The licensee submitted a 10 CFR 52 application for a combined operating license to the NRC on December 12, 2007, which was docketed on February 25, 2008. This project is on the site of the old Cherokee Nuclear Station project that was cancelled in the 1980's.

Tritium

Elevated levels of tritium have been detected in a single ground water monitoring well within the Owner Controlled Area; however, mitigation actions that the licensee initiated in 2011 have shown a significant reduction in the levels of tritium present and the latest values were below the 20,000 pCi/l reporting threshold.

TAB 2

Facility Location Map and Directions

Directions to Oconee Nuclear Station from Clemson, SC

1.	Head west on S Carolina 28 W/US-123 S/US-76 W/Tiger Blvd Continue to follow S Carolina 28 W/US-123 S/US-76 W	~ 6 mi
2.	Turn right onto S Carolina 130 N/Rochester Hwy Destination will be on the right approximately 0.5 miles past the traffic light at junction SC HWY 183	7.8 mi
3.	Turn right onto S Carolina 183/E Pickens Hwy	0.7 mi
4.	Turn left into Oconee Nuclear Station	

The Resident Inspector office numbers are 864-882-6927 or 864-873-3001.

TAB 3

Facility Data

Utility: Duke Energy Carolinas, LLC
Location: 8 miles northeast of Seneca, SC
County: Oconee County, SC

	UNIT 1	UNIT 2	UNIT 3
Docket Nos.	50-269	50-270	50-287
License Nos.	DPR-38	DPR-47	DPR-55
Full Power License Date	02/06/1973	10/06/1973	07/19/1974
Commercial Operation Date	07/15/1973	09/09/1974	12/16/1974
OL Expiration Date	02/06/2033	10/06/2033	07/19/2034

PLANT CHARACTERISTICS	All Units
Reactor Type	PWR
Containment Type	Dry Ambient
Power Level	2568 MWt (900 MWe)
NSSS Vendor	B & W

TAB 4

Facility Unique Features

Emergency Supply to 4160 Volt-AC Safety-Related Buses

Power to the safety-related buses is provided from the two Keowee Hydro Station generating units. A single Keowee Hydro Unit (KHU) will supply all emergency power. This power is supplied to Oconee by two connections; an overhead transmission line and an underground line. Gas turbines at the Lee Steam Station can also be made available manually via a separate overhead line to provide power if neither KHU is available.

Standby Shutdown Facility (SSF)

The SSF provides an alternate and independent means to achieve and maintain a hot standby condition for all three units following postulated turbine building flood, fire, and sabotage events. It consists mainly of one diesel generator, an auxiliary service water pump, and supporting equipment (in a seismically qualified building) and three standby makeup pumps (one in each unit's reactor building). Powered by the SSF diesel generator, the standby makeup pumps deliver water at approximately 26 gpm from the associated spent fuel pool to the reactor coolant pump seals. In support of primary decay heat removal, the SSF auxiliary service water pump supplies water from the condenser circulating water (CCW) system to the once-through steam generators. The SSF is able to maintain all three units in Mode 3 (525 degrees) for 72 hours. The proposed Tornado/HELB mitigation strategies also take credit for the SSF.

Low Pressure Service Water (LPSW)

As originally designed, long-term decay heat removal has relied on the non-safety, non-seismically qualified CCW piping system and its pumps to provide water to the safety-related LPSW pumps located in the turbine building basement. During loss of offsite power events, the CCW pumps lose power; therefore, decay heat removal and cooling water for safety-related pumps rely on the use of a siphon effect (between the lake and the CCW system) to provide water to the safety-related LPSW system.

Emergency Feedwater (EFW)

The safety-related EFW pumps (two per unit) are located in the turbine building basement. Each unit's EFW system must rely on the limited source of water in its seismically qualified upper surge tank and on the water contained in the condenser hotwell. However, cross-connect valves are provided between all three units' EFW systems. Identified EFW single failure vulnerabilities have been addressed through plant modifications and licensing basis changes/clarifications.

Containment Isolation

Several piping systems penetrating containment were designed without isolation valves (Main Steam), or redundant, reliable (QA-1) isolation devices (Main Feedwater). In 2002, a new automatic feedwater isolation system (AFIS) modification was installed that secures/isolates both main and emergency feedwater to the affected steam generator. Supplemental diesel air compressors are used to compensate for the expected bleed off of valve operating air pressure should a coincident loss of offsite power occur.

TAB 5

Reactor Oversight Process Info

The following URLs are for the Oconee Nuclear Station (Units 1, 2 and 3) ROP Performance Summary web pages.

http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/OCO1/oco1_chart.html

http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/OCO2/oco2_chart.html

http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/OCO3/oco3_chart.html

http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/pi_summary.html

ROP Performance Status (1st Quarter 2011 – 4th Quarter 2011)

The licensee was in the Licensee Response Column of the NRC's Action Matrix based on all inspection findings being classified as having very low safety significance (Green) and all PIs indicating performance at a level requiring no additional NRC oversight (Green). However, a Yellow Mitigating Systems Cornerstone finding for Units 1, 2, and 3, originated in the third quarter of 2011. This finding is being evaluated to determine whether it meets the criteria for treatment as an old design issue per IMC 0305. A partial 95002 inspection is being conducted the week of February 6, 2012, in order to gather information to help the NRC determine how the finding should be treated. If the finding is determined not to meet the criteria for an old design issue, the licensee will be moved to the Degraded Cornerstone Column effective third quarter of 2011.

TAB 6

Current Issues

A. EXPECTED DISCUSSION TOPICS

External Flood

An issue related to the potential impact of external flooding on the Oconee Nuclear Station site has been raised as a result of the potential random failure of the Jocassee Dam, which is located approximately 12 miles upstream from the Oconee site. On August 15, 2008, the NRC issued a request for information pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.54(f), regarding the protection against external flooding at the Oconee site, including the potential failure of the Jocassee Dam.

In January 2010, the licensee began taking actions to ensure the Oconee site would be protected from external flooding as a result of the potential failure of the Jocassee Dam by implementing interim compensatory measures (ICMs). The NRC inspected the ICMs in June 2010 and no significant issues were identified.

On June 22, 2010, the NRC issued a confirmatory action letter (CAL) The CAL confirmed the following actions to be taken by the licensee concerning external flooding:

- ICM's to remain in place until final resolution of external flooding at the Oconee site has been agreed upon between the licensee and the NRC staff. **COMPLETE**

- Licensee to submit to the NRC all documentation necessary to demonstrate that the inundation of the Oconee site from the failure of the Jocassee Dam has been bounded – **COMPLETE**

- The licensee is to provide a list of all modifications necessary to mitigate the inundation and a schedule when they would be completed. **COMPLETE**

NRC Safety Evaluation of Site Inundation Study Results issued 01/28/2011. **COMPLETE**

The licensee provided modification descriptions and schedule on 04/30/2011. **COMPLETE**

NRC responded to licensees 04/30/2011, letter with RAIs 08/18/2011. **COMPLETE**

Licensee responded to RAIs 10/11/2011. **COMPLETE**

The NRC is currently reviewing the licensee's 10/11/2011 letter, and will be coordinating with the JLD task force to ensure there is regulatory consistency between the licensee's proposed modifications, and forthcoming requirements concerning external flooding.

The licensee's permanent solution is to erect flood barrier walls to mitigate the inundation of the site as a result to the potential failure of the Jocassee Dam. The licensee is finalizing the design inputs (velocity, height, etc) that will go into the actual modification and construction design of the walls.

Tornado & High Energy Line Break (HELB) Mitigation

The licensee is implementing a number of major modifications designed to minimize the risk exposure resulting from events such as tornado and a HELB , as well as adding equipment that was not part of Oconee's initial design basis; i.e., protected service water (PSW) system modification, main steam isolation valves, fiber reinforced polymer (FRP) on exterior walls, and hardening of structures.

The application of FRP on building exterior walls, and the hardening of structures at the Oconee help the site to withstand wind loads, differential pressure and missiles generated by a tornado.

The PSW system modification includes a new main pump and a booster pump to provide a diverse source of water to feed the steam generators in all 3 units and provide cooling to the reactor coolant pump seals in the event of a fire, tornado or HELB, if normal plant systems have been damaged. In addition, the PSW system modification includes installing new diverse power sources to existing plant high pressure emergency core cooling systems pumps. The licensee is scheduled to complete the modification by July 2012.

As part of the PSW modification and the design basis reconstitution for the tornado and HELB mitigation strategies, the licensee has submitted license amendments requesting review and approval of the PSW system modification, incorporating the system into the plant's Technical Specifications, and approving the new proposed mitigation strategies. The NRC staff is currently reviewing the amendments. The NRC staff has requested additional information from the licensee which is required for the NRC staff to completes its' review. The licensee is scheduled to have all the necessary information submitted to the NRC in March, 2012.

Digital Computer Based Reactor Protective System (RPS)/Engineered Safeguards Protective System (ESPS)

In January, 2010, the NRC issued a license amendment approving a first of a kind application of a digital computer based RPS/ESPS systems to replace the existing analog RPS/ESPS systems at Oconee. The licensee has installed the new digital system on Unit 1 (performed during the Spring 2011 refueling outage) and is preparing to install the system on Unit 3 in the Spring 2012 outage followed by Unit 2 in the Spring of 2013. The Region II Division of Reactor Safety is currently leading the NRC inspection effort supported by the resident inspectors.

NFPA 805 Transition

Oconee is one of two pilot plants that are in the process of transitioning to NFPA 805 for fire protection. The NRC staff completed its review of the License Amendment Requests (LAR) and issued the final licensee amendment on December 29, 2010. The licensee is currently performing modifications to be in compliance with NFPA 805. The licensee is scheduled to complete all modification associated with the transition by December, 2012.

William States Lee III Nuclear Station Combined Operating License (COL) Application

By letter dated December 12, 2007, Duke Energy Carolinas, LLC (Duke) tendered a COL application for two Westinghouse AP1000 advanced passive pressurized water reactors designated as Units 1 and 2 of the William States Lee III Nuclear Station. The proposed site is located in the eastern portion of Cherokee County in north central South Carolina, approximately 35 miles southwest of Charlotte, North Carolina, and approximately 7.5 miles southeast of Gaffney, South Carolina.

Tritium

Elevated levels of tritium have been detected in a ground water monitoring well within the Owner Controlled Area. In February 2010, one well exceeded the 20,000 pCi/l threshold which initiated the NEI Groundwater Communication plan. The local media outlets carried the story for several days and additional interest was indicated during the annual public meeting for 2009. The licensee has installed additional monitoring wells and is conducting sampling & analysis to determine if the source is an active leak or a legacy issue. The latest sample values indicate that the tritium levels in the well have decreased below the 20,000 pCi/l threshold.

B. OTHER TOPICS OF INTEREST

Labor/Management Issues

None

License Renewal Activities

The Oconee Site-Specific Independent Spent Fuel Storage Installation (ISFSI) license was renewed on May 29, 2009, for 40 additional years. This included a 20 year renewal plus an exemption which allows for an additional 20 years. The license will now expire on January 31, 2050.

Escalated Enforcement, Non-Green Findings and Non-Green Performance Indicators

A licensee-identified Yellow violation of 10 CFR 50 Appendix B, Criterion III, Design Control, was identified when the licensee installed Standby Shutdown Facility (SSF) pressurizer heater breakers that would not have functioned during certain SSF-credited events. The failure to maintain design control of the SSF was a performance deficiency.

Open Investigations

There is one open OI investigation.

Open Allegations

There is one open allegation related to access authorization.

Congressional Interest

None

Harassment and Intimidation Issues

None

2.206 Petitions

None

Recent News Articles

(b)(4)

(b)(4)

(b)(4)

(b)(4)

(b)(4)

(b)(4)

(b)(4)

(b)(4)

(b)(4)

TAB 7

Facility Organization

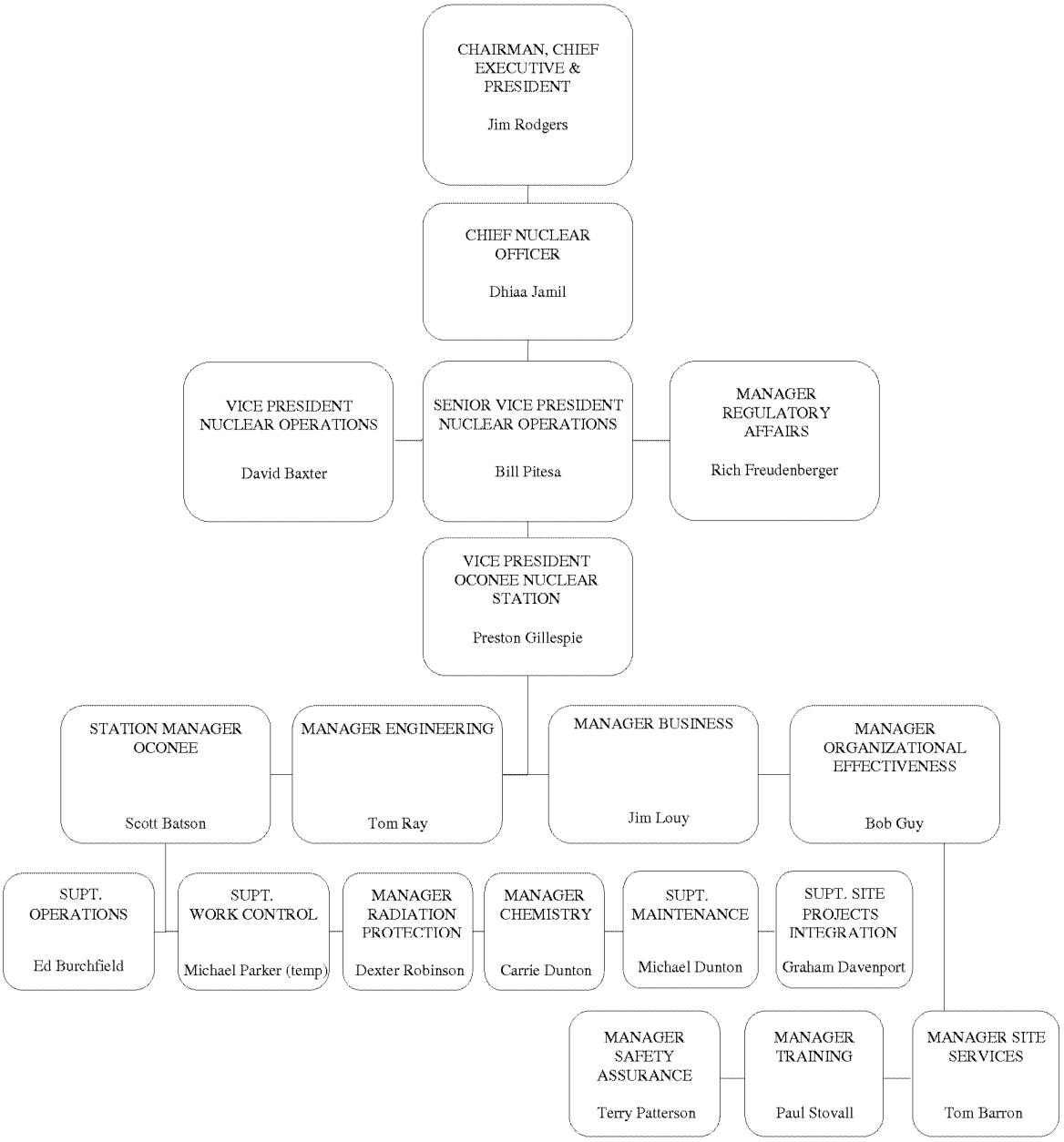
OVERVIEW OF DUKE ENERGY

Duke Energy Carolinas

Duke Energy Carolinas operations include nuclear, coal-fired, natural gas, and hydroelectric generation. This diverse fuel mix provides nearly 19,000 megawatts (MW) of electricity to approximately 2.4 million electric customers in North Carolina and South Carolina. Duke Energy Carolinas owns and operates the two-unit McGuire and the three-unit Oconee nuclear stations. In addition, Duke Energy Carolinas operates and has a partial ownership interest in the two-unit Catawba Nuclear Station.

Duke Energy submitted a 10 CFR 52 application for Lee Nuclear Station for a combined operating license to the NRC on December 13, 2007, which was docketed on February 25, 2008. A public scoping meeting was also held on May 1, 2008, near the proposed site location. The license application references the Westinghouse AP1000 as the reactor type and two reactors are planned for the site. The location is just south of the North Carolina/South Carolina border near Gaffney, S.C.

DUKE ENERGY
OCONEE NUCLEAR STATION
ORGANIZATIONAL CHART



TAB 8

Biographical Data of Principal Managers

John W. (Bill) Pitesa
Senior Vice President – Nuclear Operations

Bill Pitesa is senior vice president of nuclear operations for Duke Energy. He provides oversight for the safe and reliable operation of the three Duke Energy-operated nuclear stations – Catawba, McGuire and Oconee. Having served as senior vice president of nuclear operations for Oconee Nuclear Station since January 2010, Pitesa assumed the additional responsibility for Catawba and McGuire nuclear stations in December 2010. Pitesa has more than 30 years of experience in the nuclear field.

He joined the company in 1980 as an engineer at McGuire Nuclear Station. He was named senior reactor operator in 1986 and later served as a nuclear fuel handling supervisor and operations staff lead. In 1992, he served two years as a loaned employee for the Institute of Nuclear Power Operations.

Pitesa returned to McGuire Nuclear Station in 1995 as an independent oversight manager and later moved to the corporate office as the nuclear operating experience manager. In 2000, he moved to Catawba Nuclear Station as an engineering supervisor. After a series of promotions, including operations training manager, Pitesa was named as the station's operations manager in 2004 and station manager of Catawba Nuclear Station in 2005. In 2009, Pitesa was named vice president of nuclear support for Duke Energy. He was responsible for corporate nuclear engineering, major projects, licensing and regulatory support, fleet outage management and other plant support functions.

Pitesa earned a Bachelor of Science degree in electrical engineering from Auburn University. He is a registered professional engineer in North Carolina. In support of the International Atomic Energy Agency (IAEA) and the World Association of Nuclear Operators (WANO), Pitesa has served on nuclear plant review teams in the United States, Korea, France, South Africa, and Ukraine.

David A. Baxter
Vice President – Nuclear Engineering

Dave Baxter is vice president of nuclear engineering for Duke Energy. Since November 2011, Dave has been on temporary assignment providing regulatory support for Oconee Nuclear Station. Previously in his role as vice president of nuclear engineering, he was responsible for corporate engineering support of Duke Energy's fleet of reactors including fuel management, reactor core design, and nuclear safety analysis; reload analysis methods, fleet program engineering, fleet procurement engineering, fleet component engineering, fleet electrical engineering and nuclear fuel procurement. Duke Energy operates seven pressurized water reactors at Catawba, McGuire and Oconee nuclear stations in North Carolina and South Carolina. He was named to this position in October 2010.

Previously, Baxter served as site vice president of Oconee Nuclear Station in Seneca, S.C., a position he held since January 2008. In that role, he was responsible for the safe and reliable operation of Oconee Nuclear Station, a three-unit, pressurized water-reactor nuclear generating facility. He also directed station and facilities management, operations, maintenance, chemistry and radiation protection, engineering, nuclear and industrial safety, and business operations. Baxter has over 30 years of experience in nuclear engineering with Duke Energy. He joined the company in 1979 as a junior engineer at McGuire Nuclear Station in Huntersville, N.C. After a series of promotions at McGuire, including operations staff engineer, operations shift technical advisor, operations shift engineer and operations section manager, he was named nuclear engineering manager for modifications at Catawba Nuclear Station in 1998; and nuclear engineering manager for mechanical and civil engineering in 1999. He was named engineering division manager of Oconee Nuclear Station in 2002; and station manager in 2006. In that role, he was responsible for managing all aspects of Oconee's day-to-day operations.

Baxter earned a Bachelor of Science degree in nuclear engineering from Pennsylvania State University. Additionally, he has received a U.S. Nuclear Regulatory Commission Senior Reactor Operator License and the Institute of Nuclear Power Operations' Senior Nuclear Plant Management Certification.

T. Preston Gillespie Jr.
Site Vice President - Oconee Nuclear Station

Preston is responsible for the safe and reliable operation of Oconee Nuclear Station, a three-unit, pressurized water-reactor nuclear generating facility. He directs station and facilities management, operations, maintenance, chemistry and radiation protection, engineering, nuclear and industrial safety, and business operations. He joined Duke Power in 1986 as an assistant engineer at Oconee Nuclear Station. He served in a variety of positions while at the station, including nuclear operations shift manager, shift operations manager, and nuclear engineering manager. He moved to Catawba Nuclear Station in 2007 to serve as the station's operations superintendent. He was named Oconee Station Manager in October 2008 and moved to his current position in September 2010.

Preston graduated from Clemson University with a Bachelor of Science degree in mechanical engineering. He is a registered professional engineer in South Carolina. He held a senior reactor operator license at Oconee Nuclear Station. He is also a past recipient of the company's Robinson Award, which recognized employees for their outstanding contributions to the company's operations.

Robert (Bob) H. Guy
Organizational Effectiveness Manager

Bob is responsible for managing station support functions including training, site services, security, emergency preparedness, performance improvement, environmental and safety, and regulatory compliance. Bob joined Duke Energy in May 2011.
Prior to joining Duke Energy, Bob had over thirty years of experience in military, government and commercial nuclear fields. Guy trained in nuclear power after graduating from the Naval Academy. He served in a variety of positions on several submarines including supervision of the nuclear propulsion department. Other assignments included operations training instructor and training manager at the Nuclear Power Training Unit Idaho Falls, on the staff of the Director of Naval Reactors and overseas duty in Australia and Japan. He commanded the nuclear submarine USS Greeneville (SSN 772) from 1996 to 1999, commanded Naval Nuclear Power Training Unit Charleston from 2002 to 2006 and Naval Nuclear Power Training Command from 2006 to 2007. After retiring from the Navy, he served as a Nuclear Safety Specialist in the Office of Independent Oversight, U.S. Department of Energy and was later employed as Manager of Nuclear Oversight, Salem Nuclear Generating Station with PSEG Nuclear.

Bob earned a Bachelor of Science degree in Marine Engineering from the United States Naval Academy.

Thomas (Tom) D. Ray
Engineering Manager

Tom is responsible for managing and directing activities at the station related to system, component, and design engineering. He joined the company in 1989 as an associate engineer in the nuclear generation department in Charlotte. He was named senior engineer of reactor engineering at McGuire Nuclear Station in 1994; engineering supervisor in 1999; maintenance manager in 2002; and outage manager in 2003. He was named safety assurance manager at Catawba Nuclear Station in 2004, maintenance superintendent in 2005, and most recently engineering manager. Ray was named engineering manager of Oconee Nuclear Station in September 2010. Before joining the company, Ray was an engineer for Bechtel Power Corporation, from 1987 to 1989.

Ray earned a Bachelor of Science degree in nuclear engineering from North Carolina State University. He is a registered professional engineer in North Carolina and has a technical nuclear certification. He also serves as a Duke Energy management committee representative for the Pressurized Water Reactor Owners Group.

Terry L. Patterson
Safety Assurance Manager – Oconee Nuclear Station

Terry is responsible for the management of site programs and processes related to environmental health and safety, regulatory compliance, performance improvement, emergency planning and security. He filled this position in October 2010 coming from Constellation Energy Nuclear Group (CENG). Terry has over 30 years of commercial nuclear power experience. Prior to joining Duke Power, Terry spent five years in the nuclear submarine service where he served as the Main Propulsion Assistant on a nuclear ballistic missile submarine. He also spent three years with Combustion Engineering, Inc., fifteen years at Omaha Public Power District's (OPPD) Fort Calhoun Station and thirteen years at Florida Power and Light's (FPL) St. Lucie Nuclear Station.

Terry earned a Bachelor of Science degree in Physics from the U. S. Naval Academy, Annapolis, Maryland and a Masters in Business Administration from the University of Nebraska.

Richard (Rich) J. Freudenberger
Manager, Regulatory Affairs – Oconee Nuclear Station

Rich is responsible for the management of site programs and processes related to regulatory compliance and licensing. He was named to his current position in February 2010. Previously, Rich served as safety assurance manager of Oconee Nuclear Station since 2008. He was responsible for the management of site programs and processes related to environmental health and safety, regulatory compliance, performance improvement, emergency planning and security. Prior to joining Duke Power in 1997, Rich had 12 years of commercial nuclear power experience as a resident and senior resident inspector for the Nuclear Regulatory Commission at the Maine Yankee, Crystal River, and Catawba nuclear stations. His first position with Duke Power was as the regulatory audit supervisor. He was responsible for implementation of performance-based audits required by the Duke Energy Nuclear Quality Assurance program. In February 2000, Rich was assigned to the Oconee Nuclear Station as the secondary systems engineering supervisor and was responsible for the power conversion and standby shutdown systems mechanical design and licensing basis, testing support and equipment reliability. Between 2001 and 2007, he held several other supervisory positions within engineering. He successfully completed the operator training program and was licensed as a senior reactor operator in July 2004.

Rich earned a Bachelor of Science degree in marine engineering from the Maine Maritime Academy in Castine, Maine.

Dean Hubbard
Regulatory Affairs Manager – Oconee Nuclear Station

Dean Hubbard is the Regulatory Affairs Manager at Oconee Nuclear Station for Duke Energy. He is responsible licensing activities associated with the External Flood Mitigation Project. Hubbard joined the company in December 1980 as a Junior Engineer in Charlotte, NC. He has held numerous positions at the General Office and at Oconee including Engineer Performing system wide ASME Section 11 and PTC Acceptance Testing, Engineering Supervisor of the Systems Results Group, Performance Manager, (Instant) Senior Reactor Operator (SRO), Component Engineering Manager, Site Maintenance Manager, Site Modification Engineering Manager, Special Projects Manager for Steam Generator Replacement, and Site Training Manager. In December 2011, he was named the Regulatory Affairs Manager for the External Flood Mitigation Project. Hubbard has over 31 years of experience in engineering and plant operations with Duke Energy.

Hubbard earned a Bachelor of Science Degree in Civil Engineering from the University of North Carolina at Charlotte. Hubbard is a Registered Professional Engineer in South Carolina and North Carolina. He received a Senior Reactor Operator License from the U.S. Nuclear Regulatory Commission.

TAB 9

Resumes of Oconee Resident Inspectors

Andrew (Andy) T. Sabisch
Senior Resident Inspector

Andy joined the NRC in 2003. He is a (b)(6) Mr. Sabisch attended SUNY Maritime College and received his Bachelor degree in Nuclear Science with a minor in Computer Science.

Andy joined MetEd at the Three Mile Island Generating Station in Middletown, PA and worked in both the Operations department and the Unit 1 Recovery Group. He served as Shift Test Director in 1982 during hot functional testing conducted to support the restart of Unit 1 following the 1979 Unit 2 accident. Andy worked for Louisiana Power & Light from 1982 to 1984 as a Plant Engineering section manager supporting the construction and turnover of plant systems during startup of the Waterford 3 Steam Electric Station. In this role, he also was responsible for the development of the plant technical specifications and worked with the NSSS vendor, architect engineering firm and the NRC to obtain final approval to support license issuance. Andy worked for Public Service Electric & Gas at the Salem and Hope Creek Generating stations from 1984 to 1988 in the Operations, Start-up & Test and Licensing departments supporting restart of Salem following the ATWS event and initial startup of the Hope Creek 1 reactor. Andy worked for the Institute of Nuclear Power Operations (INPO) from 1988 to 2000 conducting plant inspections, technical assistance visits and event follow-up reviews at 42 U.S. reactor sites and 12 international sites. During this period, Andy served as the Refueling Coordinator at the Peach Bottom Atomic Power Station and team leader for the international Nuclear Plant Reliability Data System (NPRDS) project with WANO as a loaned employee while at INPO. Andy worked for Pennsylvania Power & Light Corporation at the Susquehanna Steam Electric Station from 2000 to 2002 as a Unit Supervisor in the Operations Department.

Andy's career with the NRC began in 2003 with his assignment to the Catawba Nuclear Station as the Resident Inspector following a five-month period in Region II as a Project Engineer for Branch I. He was promoted to the Catawba Senior Resident Inspector in 2006 and was transferred to the Oconee Nuclear Station as Senior Resident Inspector in September 2009. In addition to baseline inspection program activities associated with Catawba, Andy has participated in or led PI&R inspections, 95-001 and 95-003 inspections, Augmented and Special Inspections, a Component Design Basis Inspection and a B.5.b inspection. Andy has received numerous awards in his tenure with the NRC including a Regional Administrator's Employee Excellence Award.

Mr. Sabisch received honorable discharges from the U.S. Navy and the Pennsylvania Army National Guard.

Kevin M. Ellis
Resident Inspector

Kevin joined the NRC in 2007. He is a (b)(6) (b)(6) He has been a resident inspector at the Oconee Nuclear Station since July 2009. Kevin began his career in 2002 as a nuclear engineer for Norfolk Naval Shipyard where he qualified as a shift refueling engineer. Kevin was initially hired as a project engineer in Region II, Division of Reactor Projects. He acted as the resident inspector at the V. C. Summer Nuclear Plant and then worked as the project engineer for Branch 4, Division of Reactor Projects.

He graduated Cum Laude from Florida Institute of Technology with a Bachelor of Science degree in Mechanical Engineering in (b)(6)

Geoffrey K. Ottenberg
Resident Inspector

Geoff joined the NRC in 2004. He is a (b)(6) (b)(6) He has been a resident inspector at the Oconee Nuclear Station since September 2008. Previously, he worked as a researcher at Argonne National Laboratory on a fellowship assignment. In the NRC, Geoff was initially hired as a reactor engineer in Region I, Division of Reactor Projects. After qualifying as an inspector, Geoff worked in Region I, Division of Reactor Safety, as a reactor inspector doing primarily Component Design Basis Inspections, and also completed a 6-month rotation as resident inspector at the Susquehanna Steam Electric Station.

Geoff received his bachelor's degree in Mechanical Engineering from the Florida State University in (b)(6) and is a registered engineer intern in the State of Florida.

Rebekah A. Wilbanks
Site Administrative Assistant

Rebekah joined the NRC in 2011. She is a (b)(6) (b)(6) She has been the site secretary for Oconee Nuclear Station since June 2011. Previously, she was enlisted in the United States Navy as a Yeoman for eight years before receiving an honorable discharge with multiple awards for superior performance and dedication. She was hired on as the site secretary for Oconee but currently works two sites in Branch 1: Oconee and McGuire.

Rebekah received an associate's of arts degree from American Military University in (b)(6)