

June 11, 2010

Mr. James Scarola
Senior Vice President
and Chief Nuclear Officer
Progress Energy, Inc.,
P.O. Box 1551
Raleigh, NC 27602

SUBJECT: NRC INSPECTION REPORT NOS. 05200029/2010-201 AND
05200030/2010-201

Dear Mr. Scarola:

From April 12, 2010, through April 16, 2010, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Progress Energy Inc., offices in Raleigh, NC. The enclosed report presents the results of this inspection.

The purpose of the NRC inspection was to verify that quality assurance processes and procedures applied to activities related to the Levy Nuclear Plant Units (LNP) 1 and 2 combined license application (COLA) were effectively implemented. The inspection focused on assessing compliance with the provisions of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21, "Reporting of Defects and Noncompliance," and selected portions of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Processing Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities." This NRC inspection report does not constitute NRC endorsement of your overall quality assurance or 10 CFR Part 21 programs.

No violations or nonconformances were identified during this inspection.

In accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," the NRC will make a copy of this letter, its enclosures, and the your response available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), which is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

Sincerely,

Juan Peralta, Chief
Quality and Vendor Branch 1
Division of Construction Inspection
& Operational Programs
Office of New Reactors

Docket Nos.: 05200029 and 05200030

Enclosure:
Inspection Report Nos. 05200029/2010-201
and 0520030/2010-201 and Attachments

Sincerely,

Juan Peralta, Chief
 Quality and Vendor Branch 1
 Division of Construction Inspection
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**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NEW REACTORS
DIVISION OF CONSTRUCTION INSPECTION AND
OPERATIONAL PROGRAMS**

Docket Nos.: 05200029 and 05200030

Report Nos.: 05200029/2010-201 and 05200030/2010-201

Applicant: Progress Energy, Inc.,
P.O. Box 1551
Raleigh, NC 27602

Applicant Contact: Mr. James Scarola
Senior Vice President
and Chief Nuclear Officer

Background: Progress Energy, Inc. is pursuing a combined license for two new units in Levy County, FL.

Inspection Dates: April 12–16, 2010

Inspectors: Greg Galletti, NRO/DCIP/CQVA, Team Leader
Yamir Diaz-Castillo, NRO/DCIP/CQVA
Raju Patel, NRO/DCIP/CQVA
Paul Coco, NRO/DCIP/CQVA
Dan Pasquale, NRO/DCIP/CQVB
Brian Anderson, NRO/DNRL/NWE1

Approved by: Juan D. Peralta, Chief
Quality and Vendor Branch 1
Division of Construction Inspection
& Operational Programs
Office of New Reactors

ENCLOSURE

EXECUTIVE SUMMARY

Progress Energy, Inc.
Report Nos. 05200029/2010-201 and 05200030/2030-201

The U.S. Nuclear Regulatory Commission (NRC) inspection focused on quality assurance (QA) policies and procedures implemented to support the combined license (COL) application for Levy Nuclear Plant (LNP), Units 1 and 2, as described in NRC Inspection Manual Chapter 2502, "Construction Inspection Program: Pre-Combined License (Pre-COL) Phase." The purpose of this inspection was to verify that Progress Energy, Inc., (PGN) Nuclear Plant Deployment (NPD) had implemented an adequate QA program that complies with the requirements of Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities." The inspection also verified that PGN NPD had implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance," that meets NRC regulatory requirements.

The NRC inspection was based on the following:

- 10 CFR Part 21
- Appendix B to 10 CFR Part 50

During this inspection, the NRC inspection team implemented Inspection Procedure 35017, "Quality Assurance Implementation Inspection," dated July 29, 2008, and Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Noncompliance," dated October 3, 2007.

The NRC conducted a Pre-COL audit at PGN for the LNP Units 1 and 2 COL application in November 2007.

10 CFR Part 21 Program

The NRC inspection team concluded that the requirements of the PGN NPD 10 CFR Part 21 program are consistent with the regulatory requirements of 10 CFR Part 21, "Reporting of Defects and Noncompliance." Based on its review, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

Procurement Document Control

The NRC inspection team concluded that the requirements of the PGN NPD procurement document control process are consistent with the regulatory requirements of Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50. Based on the samples reviewed, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

Document Control (site characterization work)

The NRC inspection team concluded that the requirements of the PGN NPD document control program are consistent with the regulatory requirements of Criterion VI, "Document Control," of Appendix B to 10 CFR Part 50. Based on the samples reviewed, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

Nonconforming Materials, Parts, or Components

The NRC inspection team concluded that the requirements of the PGN NPD nonconforming materials, parts, and components program are consistent with the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. Based on its review, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

Corrective Action

The NRC inspection team concluded that the requirements of the PGN NPD corrective action program are consistent with the regulatory requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. Based on the sample reviewed, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

Audits

The NRC inspection team concluded that the requirements of the PGN NPD external and internal audit programs are consistent with the regulatory requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. Based on the sample reviewed, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

REPORT DETAILS

1. 10 CFR Part 21 Program

a. Inspection Scope

The NRC inspection team reviewed the implementation of PGN NPD 10 CFR Part 21 program for the development of the LNP COLA. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of PGN NPD control processes to verify compliance with regulatory requirements of 10 CFR Part 21, "Reporting of Defects and Noncompliance." The NRC inspection team also discussed this process with members of the PGN NPD management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- Nuclear Generation Group (NGG) Program Manual NGGM-PM-0030, "Quality Assurance Plan (QAP) for the Development of New Nuclear Plants," Revision 3
- Standard Procedure REG-NGGC-0013, "Evaluating and Reporting of Defects and Noncompliance in Accordance with 10 CFR Part 21," Revision 2
- CAP-NGGC-0200, "Corrective Action Program," Revision 32
- CAP-NGGC-0205, "Significant Adverse Condition Investigations and Adverse Condition Investigations—Increased Rigor," Revision 11
- Crystal River Unit 3 Part 21 Report for Nuclear Condition Report (NCR) 348108-23 dated September 25, 2009
- Purchase Order (PO) No. 255934, issued to Joint Venture Team (JVT) on January 1, 2006
- PO No. 414310, issued to Westinghouse Electric Corporation (WEC)/Shaw Stone & Webster on December 31, 2008
- SOP-1405, Revision 5A, dated November 30, 2009, CAP for Sargent & Lundy's (S&L) 10 CFR Part 21
- NOM-06, Revision 4, dated October 26, 2006; CAP for WorleyParsons Group 10 CFR Part 21
- NBG-QA-1602, Revision 7, dated January 29, 2010 CAP for CH2M HILL 10 CFR Part 21

b. 10 CFR Part 21 Procedures and Implementation

REG-NGGC-0013 establishes the methods to ensure that PGN NPD evaluates potential deviations or failures to comply, as defined in 10 CFR Part 21, are evaluated for potential substantial safety hazards and that notification and reporting to the NRC are made pursuant

to the requirements of 10 CFR Part 21. The NRC inspection team determined that REG-NGGC-0013 contains adequate procedural guidance to initiate PGN NPD's 10 CFR Part 21 process when an NCR determines that a reportable defect might exist.

PGN NPD personnel are responsible for reporting potential defects, failures to comply, or deviations to their supervisors and for documenting these occurrences on an NCR. NCRs are generated for potentially reportable conditions when they are discovered through external correspondence or generic information that may apply to PGN NPD applicants. Activities involved in evaluating conditions for 10 CFR Part 21 reporting include: (1) screening to determine if a deviation or failure to comply exists; (2) evaluating whether to determine if the condition could cause a substantial safety hazard; and (3) determining the appropriate reporting activities. The responsibility of processing potentially reportable conditions are defined for directors and responsible officers who are subject to the notification provisions of 10 CFR 21.21(d)(5). The procedure addresses the posting requirements of 10 CFR 21.6, "Posting Requirements," and provides guidance for adhering to the explicit timing requirements of 10 CFR Part 21.

The NRC inspection team verified that PGN NPD had posted 10 CFR Part 21 regulations, as required, in conspicuous places at its Raleigh NC, offices where personnel working on the combined license application (COLA) were assigned. The NRC inspection team reviewed PGN's JVT PO No. 255934 and its work authorizations, and the engineering, procurement, and construction (EPC) PO No. 414310. These contracts impose 10 CFR Part 21 requirements on the contractors responsible for engineering and licensing services and support for COLA preparation, as well as for the procurement of materials, items and components for the Levy Nuclear Plant (LNP) COLA. PO's No. 255934 and No. 414310 include these requirements, which the contractors must pass on to any subcontractors.

The NRC inspection team also reviewed the 10 CFR Part 21 programs of the principal contractors and found them to provide a level of detail sufficient for evaluating and notifying the NRC of potential defects and noncompliance.

The NRC inspection team reviewed the implementation activities of PGN NPD's 10 CFR Part 21 program. Since there were no identified potential deviations or failures requiring a 10 CFR Part 21 evaluation specific to LNP Units 1 and 2, the NRC staff used a Crystal River Unit 3 10 CFR Part 21 report, related to NCR No. 348108-23, as an example to verify PGN NPD effectively implemented its 10 CFR Part 21 process.

In addition, the NRC inspection team reviewed a sample of three qualification cards and confirmed that PGN NPD had adequately trained and qualified personnel responsible for performing the 10 CFR Part 21 reportability/operability screening process.

c. Conclusions

The NRC inspection team concluded that the requirements of the PGN NPD 10 CFR Part 21 program are consistent with the regulatory requirements of 10 CFR Part 21, "Reporting of Defects and Noncompliance." Based on its review, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

2. Procurement Document Control

a. Inspection Scope

The NRC inspection team reviewed the implementation of PGN NPD procurement document control processes for the development of the LNP COLA. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of PGN NPD control processes to verify compliance with Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50, and a representative sample of procurement records.

The NRC inspection team reviewed the following documents for this inspection area:

- Section 6.4, "Procurement Document Control," of the PGN NPD's QAP NGGM-PM-0030, "Quality Assurance Plan for the Development of New Nuclear Plants," Revision 3
- Section 4.0, "Procurement Control," of the PGN NPD QA Program Manual, NGGM-PM-0007, Revision 16
- MCP-NGGC-0001, "NGG Contract Initiation, Development and Administration," Revision 14
- NGGS-EPC-0112, "Engineering, Procurement & Construction Contract Approval Authority for Change Orders and Addenda," Revision 1
- NGGS-EPC-0202, "EPC Contract Consortium Subcontracting," Revision 1
- NGGS-EPC-0203, "EPC Contract Change Control," Revision 3
- NGGS-EPC-0300, "EPC Contract Engineering Document Reviews," Revision 1
- PO No. 255934, issued to JVT on January 1, 2006
- PO No. 414310, issued to WEC/Shaw Stone & Webster on December 31, 2008

b. Observations and Findings

b.1 Policies and Procedures

NGGM-PM-0007 establishes the requirements for controlling activities and documents associated with procurement. Section 4.0, "Procurement Control," establishes requirements for controlling the activities and documents associated with the procurement of items and services. It includes requirements for procurement document content and reviews, vendor selection and qualification, and surveillance after award.

Section 6.4, "Procurement Document Control," of NGGM-PM-0030 describes the applicable programs and procedures to be used for activities associated with the development of the LNP Units 1 and 2 COLA.

MCP-NGGC-0001 provides instruction for the initiation, development, and administration of contracts within the NGG.

NGGS-EPC-0012 addresses the final approval levels for EPC expenditure amounts required for issuing change orders and addenda.

NGGS-EPC-0203 provides instructions for the control of requests for change orders by owner directed changes, and permitted consortium changes. This procedure describes the process of processing of change orders as well as the resolution of disputed changes.

NGGS-EPC-0300 provides instructions to assigned qualified technical reviewers to perform engineering product review for engineering documents submitted to PGN NPD for review and comment specific to the scope identified in the EPC agreement. This review confirms that interfaces, interchangeability, safety, fit, and function are not adversely or contrary to applicable codes and that regulatory requirements are adequately implemented.

b.2 Implementation of Procurement Document Control

The NRC inspection team reviewed the following procurement documents associated with the development of the LNP COLA:

Engineering, Procurement, and Construction Agreement 414310

An EPC agreement associated with the two AP1000 nuclear units that will be constructed in Levy County, FL, was entered into on December 31, 2008, by a consortium consisting of WEC, Shaw Stone & Webster, and Florida Power Corporation d/b/a Progress Energy Florida, Inc., acting on behalf of itself and as an agent for co-owner Progress Energy Inc. The NRC inspection team reviewed the original master contract and associated change orders and amendments through June 24, 2009.

The NRC inspection team learned that PGN NPD had issued a partial suspension of work on EPC in letter LNP-EPC-2009-0017, dated April 30, 2009 for LNP Units 1 and 2. No further procurement activity has been processed since then.

The NRC inspection team reviewed elements of the EPC agreement, with particular attention to the provisions of Article 5, "Quality Assurance." The scope of the EPC agreement includes all activities necessary to comply with the commitments in the COL application to the design, procurement, construction, and startup of the facilities.

Article 5 states that the consortium has sole responsibility for the QA and quality control of activities within the scope of the contract. Contracted activities will be conducted under the QA programs of the consortium members for their scope of supply. Article 5 imposes quality requirements on subcontractors consistent with the nuclear safety quality classification of their work. Article 5 requires contractor compliance with the reporting requirements of 10 CFR Part 21 and of 10 CFR 50.55, "Conditions of Construction Permits, Early Site Permits, Combined License, and Manufacturing Licenses." Article 5 also addresses owner access and auditing at contractor and subcontractor facilities, witness and hold points, and an owner's right to inspect and stop work.

The NRC inspection team discussed the contract change process with the Owner EPC Manager with respect to Change Order-003 "Authorization of Incremental Work due to

Partial Suspension,” dated June 24, 2009 issued to PGN NPD by the consortium for LNP EPC Contract No. 414310. Based on discussion with Owner EPC Manager and verification of the contract change control process documented in PGN NPD’s PassPort Contract Change Module, the NRC inspection team confirmed that the contract changes were subjected to the same degree of control as applied the preparation of the original contract. The NRC inspection team also verified that the applicable technical, regulatory, administrative, quality and reporting requirements were invoked for procurement of items and services, and that the contract change order also invoked the requirements for the contractors to have a documented QA program that is determined to meet the applicable requirements of Appendix B to 10 CFR Part 50.

The NRC inspection team selected the following project deliverables to verify compliance with regulatory and PGN NPD procedural requirements associated with the development of the LNP COLA:

- PGN NPD Letter LNP-EPC-ENG-2009-0022 dated May 11, 2009 to Shaw Stone & Webster indicating review and approval of LNG-XE01-Z0-008, “Domestic AP1000 Project Specification, Engineering Fill,” Revision B, with technical review documented on NGGS-EPC-0300 Revision 1 form.
- PGN NPD Letter LNP-EPC-ENG-2009-0016, dated May 5, 2009 to Shaw Stone & Webster indicating review and approval of LNG-RWS-EVR-001, “Variable Frequency Drive Versus Motor Soft Starter Feasibility for the Raw Water System Salt Water Pumps,” Revision A, with technical review documented on NGGS-EPC-0300 Revision 1 form.

Joint Venture Team (JVT) PO No. 255934

A JVT agreement to perform engineering and licensing services was entered into on January 1, 2006, between JVT—which consists of S&L, CH2M HILL Inc, and WorleyParsons Group Inc., — and Progress Energy Services Company, LLC, sole agent for Progress Energy Carolinas, Inc., and Progress Energy Florida, Inc. Purchase orders related to the provision of engineering and licensing services to support COLA preparation until COLA approval. The master contract required implementation of QA programs conforming to the requirements of Appendix B to 10 CFR Part 50 and 10 CFR Part Part 21, including reporting nonconformance items to PGN NPD. The master contract consists of a work authorization number with contract work orders that require the contractor to perform the engineering tasks listed on a time-and-materials and target-price basis as authorized by individual contract work orders to support preparation of the LNP COLA.

The NRC inspection team reviewed elements of the work authorization agreement, with particular attention to the provisions of Section D, “Part 21,” and Section F, “Quality Assurance.” Section D requires contractor compliance with the reporting requirements of 10 CFR Part 21. Section F states that contracted activities will be conducted under their relevant QA programs and procedures for their scope of supply. Section F imposes quality requirements on contractors consistent with the nuclear safety quality classification of their work. Section F also addresses owner access and auditing at contractor and subcontractor facilities, witness and hold points, and an owner’s right to inspect and stop work. In addition, Section F requires contractors to immediately notify the owner- designated-representative of any QA nonconformances or any violations of owner-approved documents.

The NRC inspection team reviewed sample work authorizations to ensure PGN NPD imposed the requisite technical and quality, and regulatory requirements. The contract work authorizations reviewed adequately specified the scope of work to be performed, technical and quality requirements, and contract deliverables.

The NRC inspection team selected the following project deliverables to verify compliance with regulatory and PGN NPD procedural requirements associated with the development of the LNP COLA:

- PGN NPD Letter No. NPD-SL-2010-13, dated January 20, 2010 documents the owner's approval review (OAR) of calculation LNG-0000-X7C-046, "Determination of the Rock Properties of Weatherhead-In place Bedding Zones at LNP," Revision 0, performed by Paul C. Rizzo Associates (PCR), a subcontractor of S&L. This calculation was approved, and submitted by the JVT project manager in S&L Letter No. SLLNP-2010-014 dated January 15, 2010, for work breakdown structure (WBS) 7 Task 7.
- PGN NPD Letter No. NPD-SL-2009-169 dated April 29, 2009 documents the OAR of calculation LNG-1000-XCC-007, "LNP Elastic Settlement Analysis of the Nuclear Island," Revision 0, performed by PCR. This calculation was approved and submitted by the JVT project manager in S&L letter No. SLNP-2009-038 dated April 28, 2009 for WBS 14 Task 14.
- PGN NPD Letter No. NPD-SL-2008-605 dated November 19, 2008, documents the OAR of calculation LNG-0000-XGC-003, "Elastic Stress for Reinforced Concrete Cement Bridging Mat with 20' Cavity," Revision 1, performed by PCR. This calculation was approved and submitted by the JVT project manager in S&L Letter No. SLPEF-2008-513, dated November 17, 2008 for WBS 14 Task 14.
- PGN NPD letter No. NPD-SL-2008-606 dated November 17, 2008 documents the OAR of calculation LNG-1000-XCC-005, "Bearing Capacity of NI subsurface using FEM," Revision 5, performed by PCR. This calculation was approved and submitted by the JVT project manager on S&L Letter No. SLPEF-2008-513 for WBS 14 Task 15.
- PGN NPD letter No. NPD-SL-2008-372 dated May 18, 2008 documents the OAR of calculation LNG-0000-XG-010, "Conceptual Grading and Drainage Plan Sheet 8," Revision 2, performed by CH2M HILL. This calculation was approved and submitted by the JVT project manager on S&L letter No. SLPEF-2008-332, dated May 15, 2008 for WBS 12.13 Task 12.

CH2M HILL Purchase Order (PO) No.932791

CH2M HILL subcontracted soil structure interaction (SSI) information to Amex Geometrix under CH2M HILL PO No. 932791 on February 20, 2009. Amex Geometrix provided engineering calculations to provide support for NRC LNP Seismic Request For Additional Information Letter No. 046 under the CH2M HILL QA program. Calculation LNG-0000-X7C-044, "Geotechnical Seismic Hazard," Revision 0, dated October 14, 2009, consists of providing design input and assumptions, full-column site response analysis, characterization of the LNP site properties, shear wave velocities and materials. The calculations were performed using qualified computer programs and their validation reports were maintained in the project files. Section A7—"QA Requirements," of CH2M HILL purchase order imposes

regulatory requirements, including the provisions of Appendix B, 10 CFR Part 50, 10 CFR Part 21 and other provisions similar to those discussed for the PGN NPD master contract No. 255934.

Sargent & Lundy, LLC., Purchase Order No. 23186 dated October 30, 2008

S&L subcontracted grout test program to PCR under S&L PO No. 23186 Change Order No. 6, dated October 30, 2008 on the basis of a qualification audit of PCR facilities. The grout test program consist of validation of the grout design, obtain grout take, and measure changes in the shear wave velocity due to grouting for the Avon Park Limestone at the LNP site. The document describing the supplemental terms and conditions for professional and technical services for S&L PO No. 23186 invokes procurement requirements, including regulatory requirements, such as the provisions of Appendix B to 10 CFR Part 50, and 10 CFR Part 21. The change order was subjected to the same degree of control as applied to the preparation of the original purchase order.

Sargent & Lundy, LLC Purchase Order No. 25946, Revision 0, dated August 18, 2009

S&L administered all subcontracted safety-related site activities. The Offset Boring Program (a safety related program), turbine boring building services (non-safety- related), and geotechnical and test samples/field test were awarded to PCR under S&L PO No. 25946 on the basis of a qualification audit of PCR. This PO invokes the QA program for PCR to perform activity under its QA program Revision, 4. The document describing supplemental terms and conditions for professional and technical services under S&L PO No. 25496 invokes procurement requirements, including regulatory requirements such as the provisions of Appendix B to 10 CFR Part 50, and 10 CFR Part 21.

c. Conclusions

The NRC inspection team concluded that the requirements of the PGN NPD document control process are consistent with the regulatory requirements of Criterion IV, "Procurement Document Control," of Appendix B to 10 CFR Part 50. Based on the samples reviewed, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

3. Document Control

a. Inspection Scope

The NRC inspection team reviewed the implementation of PGN NPD procurement document control processes for the development of the LNP COLA. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of PGN NPD control processes to verify compliance with Criterion VI, "Document Control," of Appendix B to 10 CFR Part 50, and a representative sample of document records.

The NRC inspection team reviewed the following documents for this inspection area:

- ADM-NGGC-0106, "Configuration Management Program Implementation," Revision 7

- EGR-NGGC-0003, “Design Review Requirements,” Revision 10
- NGGS-EPC-0300, “EPC Contract Engineering Document Reviews,” Revision 1
- NGGS-NPD-0001, “Process for Document Reviews and Affirmation,” Revision 3
- NGGS-PRO-0001, “NGGS Procedure Review & Approval Process,” Revision 7
- NGGS-PRO-0003, “Nuclear Plant Development Information Exchange,” Revision 2
- NGGS-PRO-0200, “Procedure Use and Adherence,” Revision 12
- Project No. 07-3935, “Quality Assurance Project Plan—Offset Boring Program Levy Nuclear Plant,” Revision 4, dated August 27, 2009

b. Observations and Findings

b.1 Policies and Procedures

The NRC inspection team reviewed the PGN NPD policies and procedures governing the document control processes, to ensure that those guidelines describe their implementation, consistent with the requirements of Criterion VI, “Document Control,” of Appendix B to 10 CFR Part 50.

b.2 Implementation of Document Control Programs

The NRC inspection team reviewed a representative sample of QA documents to verify that implementation of the document control processes including approval, issuance, and revisions were consistent with the applicable QA guidance. These documents are electronically controlled within the PassPort database, and are transmitted using a “read only” format. Documents and their revisions are electronically signed, date stamped and distributed and include an electronic acknowledgment from the recipient.

The NRC inspection team reviewed the following types of documents; PGN NPD implementing procedures, owner’s reviews associated with deliverables from the JVT, owner’s reviews associated with deliverables from PGN NPD’s EPC contract, and vendor supplied documents. In performing this activity, the NRC inspection team verified that revisions were reviewed and approved appropriately by the originating organization(s), and that superseded documents were recorded in the various records of revisions for each document. The NRC inspection team’s review included the document interchange process (referred to as “the owner’s review process”) between PGN NPD and its contractors (EPC and JVT).

The NRC inspection team reviewed a sample of the owner’s acceptance review forms, and verified that they were completed in accordance with the applicant’s documented owner review process. The NRC inspection team did observe that the specific attributes evaluated for the sample reviews performed were not individually identified. As a result, PGN NPD initiated an Action Request (AR) (AR0393668) to further enhance the owners review process specified in EGR-NGGC-0003, if warranted.

c. Conclusions

The NRC inspection team concluded that the requirements of the PGN NPD document control program are consistent with the regulatory requirements of Criterion VI, "Document Control," of Appendix B to 10 CFR Part 50. Based on the samples reviewed, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

4. Nonconforming Materials, Parts or Components

a. Inspection Scope

The NRC inspection team reviewed the implementation of PGN NPD nonconforming materials, parts, and components processes for the development of the LNP COLA. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of PGN NPD processes to verify compliance with Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. The NRC inspection team also discussed this process with members of the PGN NPD management and technical staff.

The NRC inspection team reviewed the following documents for this inspection area:

- NGGM-PM-0007, Revision 16
- NGGM-PM-0030, Revision 3
- MCP-NGGC-0401, "Material Acquisition (Procurement, Receiving and Shipping)," Revision 27
- CAP-NGCC-0200, Revision 32

b. Observations and Findings

NGGM-PM-0007 provides the basis for the control and performance of safety-related and quality-related activities associated with the development of the LNP Units 1 and 2 COLA. PGN NPD based the QA provisions in NGGM-PM-0007 on the ANSI N45-series of quality standards. The ANSI N45-series establishes the essential requirements for compliance with Appendix B to 10 CFR Part 50 for contract oversight, design control, corrective actions, document control, and records management. NGGM-PM-0007 requires that nonconformances reported by a supplier be evaluated by the individual or group within the PGN NPD organization that is responsible for that requirement. Written approval of a supplier's disposition or an alternative PGN NPD disposition shall be provided to the supplier and retained as a QA record.

Section 6.15, "Nonconforming Materials, Parts and Components," of NGGM-PM-0030 describes the applicable programs and procedures to be used for activities associated with the development of the LNP Units 1 and 2 COLA.

MCP-NGGC-0401 provides a description and instructions for the procurement, receiving, and shipping of materials and services, including software and computing hardware.

CAP-NGCC-0200 describes the process for initiating and resolving NCRs. The NCR process provides the administrative controls for identifying, documenting, tracking, investigating, correcting, and trending significant adverse conditions, adverse conditions, and improvement items under the CAP.

The NRC inspection team verified that MCP-NGGC-0401 and CAP-NGCC-0200 provide for the identification, documentation, evaluation, segregation, and disposition of nonconformances. Both procedures include provisions for evaluating significant conditions adverse to quality and nonconformances reported from vendors to determine whether these conditions are reportable in accordance with 10 CFR Part 21. In addition, the NRC inspection team interviewed PGN NPD staff and management responsible for the nonconformance process, and determined that PGN NPD staff was knowledgeable in this area.

c. Conclusions

The NRC inspection team concluded that the requirements of the PGN NPD nonconforming materials, parts, and components program are consistent with the regulatory requirements of Criterion XV, "Nonconforming Materials, Parts, or Components," of Appendix B to 10 CFR Part 50. Based on its review, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

5. Corrective Action

a. Inspection Scope

The NRC inspection team reviewed the implementation of PGN NPD corrective action process for the development of the LNP COLA. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of PGN NPD processes to verify compliance with Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50, and a representative sample of NCRs.

The NRC inspection team reviewed the following documents for this inspection area:

- NGGM-PM-0007, Revision 16
- NGGM-PM-0030, Revision 3
- CAP-NGCC-0200, Revision 32
- CAP-NGGC-0205, Revision 11
- CAP-NGGC-0206, "Corrective Action Program Trending and Analysis," Revision 5

b. Observations and Findings

NGGM-PM-0007 provides the basis for the control and performance of safety-related and quality-related activities associated with the development of the LNP Units 1 and 2 COLA.

Section 6.16, "Corrective Action," of NGGM-PM-0030 describes the applicable programs and procedures to be used for activities associated with the development of the LNP Units 1 and 2 COLA.

CAP-NGCC-0200 describes the process for initiating and resolving NCRs. The NCR process provides the administrative controls for identifying, documenting, tracking, investigating, correcting, and trending significant adverse conditions, adverse conditions, and Improvement Items under the CAP.

CAP-NGGC-0205 provides guidance to effectively conduct a structured significant adverse conditions investigation; and an adverse condition investigation; identify cause(s), develop appropriate corrective action(s), and prepare a Significant Adverse Condition Investigation Report and an Adverse Condition Investigation—Increased Rigor Report. This procedure supplements CAP-NGGC-0200, which describes program requirements regarding significant adverse conditions and adverse conditions that require increased rigor.

The NRC inspection team verified that CAP-NGCC-0200 includes provisions for evaluating significant conditions adverse to quality and nonconformances reported from vendors to determine whether these conditions are reportable in accordance with 10 CFR Part 21.

CAP-NGGC-0206 provides guidance for performance assessments and trending analyses of issues contained in a wide variety of documented performance information, including corrective action data or data trends, benchmarking, and self-assessment results.

The NRC inspection team reviewed 17 NCRs generated by PGN NPD, including both opened and closed NCRs. The NRC inspection team also examined approximately 12 trending reports, which are issued on a quarterly basis. The NRC inspection team noted that in the 17 NCRs reviewed: (1) identified deficiencies were dispositioned in accordance with PGN NPD's approved procedures, (2) an appropriate technical justification was presented for each disposition, (3) PGN NPD took adequate action to address the deficiency, and (4) all identified deficiencies, as appropriate, were evaluated to determine whether they were reportable in accordance with 10 CFR Part 21. The NRC inspection team noted that PGN NPD policies and implementing procedures provided the necessary guidance to adequately document, evaluate, correct, report, and verify the resolution of conditions adverse to quality.

c. Conclusions

The NRC inspection team concluded that the requirements of the PGN NPD corrective action program are consistent with the regulatory requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. Based on the sample reviewed, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and

associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

6. Audits

a. Inspection Scope

The NRC inspection team reviewed the implementation of PGN NPD auditing processes for the development of the LNP COLA. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of PGN NPD processes to verify compliance with Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50, and a representative sample of audits.

The NRC inspection team reviewed the following documents for this inspection area:

- NGGM-PM-0007, Revision 16
- NGGM-PM-0030, Revision 3
- Nuclear Oversight (NOS)-NGCC-1000, "Nuclear Oversight Conduct of Operations," Revision 7
- NOS-NGGC-0100, "Nuclear Oversight Assessment Process," Revision 5
- NOS-NGGC-0600, "Nuclear Oversight Assessment and Independent Review Personnel, Training and Development, Qualification, and Certification Program," Revision 2
- NOS-NGGC-0200, "Supplier Qualification, Surveillance, and Audits," Revision 0

In addition, the NRC inspection team selected the following audits performed during the preparation of the LNP Units 1 and 2 COLA:

- Internal Annual Performance Evaluation Support Assessment of Nuclear Plant Development, conducted September 28–October 3, 2008
- Internal Annual Nuclear Oversight Assessment of Nuclear Plant Development, conducted September 28–October 2, 2009
- PGN audit of CH2M Hill, conducted October 1–5, 2007; March 31–April 4, 2008; and March 30–April 2, 2009
- PGN source surveillance of CH2M Hill on COLA development activities, conducted July 24–28, 2008
- Nuclear Procurement Issues Committee (NUPIC) audit of WorleyParsons, conducted November 14–18, 2008
- LNP Grout Test QA Readiness surveillance of S&L and PCR conducted December 1–2, 2008

- NUPIC Audit of S&L, conducted December 8–12, 2008
- LNP Grout Test Post “Stop-Work” Restart Surveillance of S&L and PCR, conducted January 27–29, 2008
- LNP Surveillance of Field Activities of S&L and PCR, conducted April 7–9, 2009
- NUPIC Audit of Shaw, Stone & Webster, conducted April 7–May 7, 2009
- LNP Offset Boring Program Surveillance of S&L and PCR, conducted September 1–24, 2009
- NUPIC Audit of WEC, conducted July 27–31, 2009

b. Observations and Findings

NGGM-PM-0007 provides the basis for the control and performance of safety-related and quality-related activities associated with the development of the LNP Units 1 and 2 COLA.

Section 6.18, “Audits,” of NGGM-PM-0030 describes the applicable programs and procedures to be used for activities associated with the development of LNP Units 1 and 2 COLA.

NOS-NGGC-1000 provides guidance for the conduct of operations for the Nuclear Oversight (NOS) Department and describes the NOS organization including the general responsibilities of the organization and the principal duties of key positions.

NOS-NGGC-0100 establishes the assessment process and provides direction on planning, preparation, performance, reporting, and follow-up for the NOS Department performance-based assessments.

NOS-NGGC-0600 provides direction to ensure that Independent Assessment, Vendor & Equipment Quality and Independent Review personnel become informed about NOS work practices, and acquire basic knowledge, skills, and abilities needed to meet job requirements and specific qualification and certification requirements.

NOS-NGGC-0200 provides a description of and instructions for supplier qualification, source surveillance, vendor audits, and commercial-grade surveys performed to support procurement activities.

Based on its review of audits, the NRC inspection team verified that the audit plans identifying the audit scope, focus, and applicable criteria had been prepared and approved before to the initiation of the audit activity and confirmed that the audit reports identified conditions and corrective actions associated with these conditions. The NRC inspection team also verified that PGN NPD took corrective actions in a timely manner to respond to any identified findings and provided an adequate level of objective evidence to support closing their closeout.

In addition, the NRC inspection team reviewed the qualification records for several lead auditors and auditors. For records reviewed, the NRC inspection team confirmed that PGN NPD had satisfied all requirements for auditors and audit team leaders and that audit team leaders had properly maintained their qualification in accordance with NOS-NGGC-0600.

c. Conclusions

The NRC inspection team concluded that the requirements of the PGN NPD external and internal audit programs are consistent with the regulatory requirements of Criterion VII, "Control of Purchased Material, Equipment, and Services," and Criterion XVIII, "Audits," of Appendix B to 10 CFR Part 50. Based on the sample reviewed, the NRC inspection team also determined that PGN NPD is effectively implementing its policies and associated procedures to support the LNP Units 1 and 2 COL application. No findings of significance were identified.

7. Entrance and Exit Meetings

On April 12, 2010, the NRC inspection team presented the inspection scope during an entrance meeting with Robert Kitchen, Licensing Manager, NPD, LNP Units 1 and 2 and other PGN NPD staff and contractor personnel. On April 16, 2010, the NRC inspection team presented the inspection results during an exit meeting with John Elnitsky, Vice President, NPD; Robert Kitchen, Licensing Manager, NPD and other PGN NPD staff and contractor personnel.

ATTACHMENT 1

1. PERSONS CONTACTED

John Elnitsky	Vice President, New Plant Development (NPD)
Robert Kitchen	Licensing Manager, NPD
Tillie Wilkins	Engineering Licensing, NPD
Michael Janus	Quality Assurance (QA) Lead, NPD
Kenneth Heffner	Lead Engineer, Nuclear Regulatory Affairs, NPD
Mike Verrilli	Corporate Self Evaluation Program Manager, NPD
Dave Waters	Lead Licensing Engineer, NPD
Vann Stephenson	Engineering Manager, NPD
Lewis Spragins	Supervisor Project Support Services, NPD
Mike Franklin	Supervisor, Site Engineering, NPD
Chase Thomas	Mechanical Engineer, NPD
Bettie Byrd	Senior Document Control Specialist, NPD
Randall Kurtz	Vice President QA Director, Sargent & Lundy (S&L)
A.K. Singh	Joint Venture Team (JVT) Project Manager, S&L
Bobbie Hickman	Project Manager, CH2M HILL
Ted Manning	Nuclear QA Manager, WorleyParsons Group

2. INSPECTION PROCEDURES USED

Inspection Procedure 35017, "Quality Assurance Implementation Inspection," dated July 29, 2008

Inspection Procedure 36100, "Inspection of 10 CFR Part 21 and 50.55(e) Programs for Reporting Defects and Noncompliance," dated October 3, 2007

3. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

The NRC had not performed any previous implementation inspections of the quality assurance program governing the combined license application for Levy Nuclear Plants, Units 1 and 2. There are no open items.

ATTACHMENT 2

Levy Nuclear Plants, Units 1 and 2, Quality Assurance Implementation Inspection Entrance and Exit Meeting Attendance

List of Attendees: (1) Entrance Meeting April 12, 2010, and (2) Exit Meeting on April 16, 2010

<u>(1)</u>	<u>(2)</u>		
X	X	Greg Galletti	NRC Inspection Team Leader
X	X	Yamir Diaz Castillo	NRC Inspection Team
X	X	Raju Patel	NRC Inspection Team
X	X	Paul Coco	NRC Inspection Team
X	X	Dan Pasquale	NRC Inspection Team
X	X	Brian Anderson	NRC Project Manager
	X	Terri Spicher	NRC Project Manager
	X	John Elnitsky	PGN, NPD
X	X	Robert Kitchen	PGN, NPD
X	X	Tillie Wilkins	PGN, NPD
X	X	Michael Janus	PGN, NPD
X	X	Kenneth Heffner	PGN, NPD
X	X	Mike Verrilli	PGN, NPD
X	X	Dave Waters	PGN, NPD
X	X	Vann Stephenson	PGN, NPD
X	X	Lewis Spragins	PGN, NPD
X	X	Mike Franklin	PGN, NPD
X	X	Dana Rose	PGN, NPD
X	X	Tony Pilo	PGN, NPD
X	X	Lewis Spragins	PGN, NPD
X	X	Wayne Cutright	PGN, NPD
X	X	Paul Snead	PGN, NPD
	X	Jan Kerin	PGN, NPD
	X	Sean O'Connor	PGN, NPD
	X	Leo Martin	PGN, NPD
X	X	Randall Kurtz	S&L
X	X	A.K. Singh	S&L
X	X	Bobbie Hickman	CH2M HILL
X	X	Lorin Young	CH2M HILL
X	X	Ted Manning	WorleyParsons Group

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