

September 27, 2010

Donald Woodlan, Manager
Nuclear Regulatory Affairs
Luminant Generation Company LLC.
P.O. Box 1002
Glen Rose, TX 76043

SUBJECT: NRC INSPECTION REPORT NOS. 05200034/2010-201 AND
05200035/2010-201 AND NOTICE OF VIOLATION

Dear Mr. Woodlan:

From August 2, 2010, through August 5, 2010, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at Comanche Peak Nuclear Power Plant (CP) in Glen Rose, TX. The enclosed report presents the results of this inspection.

The purpose of the NRC inspection was to verify that quality assurance (QA) processes and procedures applied to activities related to the combined license application (COLA) for CP Units 3 and 4 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 an NRC endorsement of your overall QA or 10 CFR Part 21 programs.

Based on the results of this inspection, the NRC has determined that one Severity Level IV violation of NRC requirements occurred. The NRC evaluated this violation in accordance with the agency's Enforcement Policy, which is available on the NRC's Web site at http://www.nrc.gov/about_nrc/regulatory/enforcement/enforce-pol.html.

The enclosed Notice of Violation (Notice) cites the violation, and the subject inspection report describes in detail the circumstances surrounding it. The violation is being cited because a review of the Luminant Generation Company LLC., (Luminant) QA Manual, as it pertains to activities related to the COLA for CP Units 3 and 4, found that certain program policies and implementation procedures were not in compliance with the applicable requirements of Appendix B to 10 CFR Part 50.

Luminant is required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing its response. The NRC will use this response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

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 Luminant 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>. To the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy that deletes such information. If you request that such material be withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide, in detail, the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Protection of Safeguards Information: Performance Requirements."

Sincerely,
/RA/

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

Docket Nos.: 05200034 and 05200035

Enclosures:

1. Notice of Violation
2. Inspection Report Nos. 05200034/2010-201 and 05200035/2010-201 and Attachments

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 Luminant 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>. To the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy that deletes such information. If you request that such material be withheld from public disclosure, you must specifically identify the portions of your response that you seek to have withheld and provide, in detail, the bases for your claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Protection of Safeguards Information: Performance Requirements."

Sincerely,
/RA/

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

Docket Nos.: 05200034 and 05200035

Enclosures:

1. Notice of Violation
2. Inspection Report Nos. 05200034/2010-201 and 05200035/2010-201 and Attachments

DISTRIBUTION:

Public	NRO/REF	RPatel	TRoy
RidsOgcMailCenter	GGalletti	ARamirez	HHamsehee
RidsNroDcipCQVA	RidsNroDcip	ABelen	
RidsNroDcipCQVB	PCoco	SMonarch	

ADAMS Accession No.: ML102440343

NRO-002

OFFICE	NRO/DCIP/CQVA	E	NRO/DCIP/CQVA	E	NRO/DCIP/CQVA	E
NAME	ABelen (P Coco for)		RPatel (GGalletti for)		ARamirez	
DATE	09/14/10		09/14/10		09/ /10	
OFFICE	NRO/DCIP/CQVA	E	NRO/DCIP/CQVA		BC:NRO/DCIP/CAEB	
NAME	PCoco		GGalletti		TFrye	
DATE	09/14/10		09/14/10		09/20/10	
OFFICE	BC:NRO/DCIP/CQVA	E		E		E
NAME	JPeralta					
DATE	09/27/10					

OFFICIAL RECORD COPY

NOTICE OF VIOLATION

Luminant Generation Company, LLC.
CP Units 3 and 4
Glen Rose, TX 76043

Docket Nos.: 05200034 and 05200035
Report No.: 2010-201

During a U.S. Nuclear Regulatory Commission (NRC) inspection conducted at the Comanche Peak Nuclear Power Plant (CP) in Glen Rose, TX, on August 2–5, 2010, one violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is described below:

Criterion XVI, “Corrective Action,” 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,” states that measures shall be established to assure conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

Section 16, “Corrective Action,” of the Luminant Generation Company LLC., (Luminant) Quality Assurance (QA) Manual for CP Units 1 and 2, states in part, that measures have been established to ensure that conditions adverse to quality such as malfunction, deficiencies, and nonconformances will be promptly identified and corrected as soon as possible. It further states that responsibility for corrective action is assigned to the appropriate Luminant organization, contractor, applicable subcontractor, and vendor, so that each is alert to these conditions adverse to quality within its own area of activity; however, overall responsibility remains with Luminant.

Contrary to the above, as of August 5, 2010, Luminant, which has the overall responsibility for the design and development of CP Units 3 and 4, failed to take adequate and timely corrective action for a condition adverse to quality. Specifically, Luminant failed to ensure timely resolution of Mitsubishi Nuclear Energy Services’ supplier deviation report No. SS-09-022-001, dated October 1, 2009, which identified the use of nonsafety-related software for safety-related design calculations by URS-Washington Group without adequate commercial grade dedication of that software. These safety-related design calculations were used, in part, to support the establishment of the design-basis input for the combined operating license application for CP Units 3 and 4.

This issue has been identified as Violations 05200034/2010-201-01 and 05200035/2010-201-01.

This is a Severity Level IV violation (Supplement II).

Pursuant to the provisions of 10 CFR 2.201, “Notice of Violation,” Luminant is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Chief, Quality and Vendor Branch 1, Division of Construction Inspection and Operational Programs, Office of New Reactors, within 30 days of the date of the letter transmitting this Notice of Violation. This reply should be clearly marked as a “Reply to a Notice of Violation” and should include (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level; (2) the corrective steps that have been taken and the results achieved; (3) the corrective steps that will be taken to avoid further violations; and (4) the date when full compliance will be achieved.

ENCLOSURE 1

Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Since your response will be made available electronically for public inspection in the NRC Public Document Room or through the NRC Agencywide Documents Access and Management System (ADAMS), to the extent possible, the response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If Safeguards Information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21, "Protection of Safeguards Information: Performance Requirements."

Dated at Rockville, Maryland, this 27th day of September 2010.

**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NEW REACTORS
DIVISION OF CONSTRUCTION INSPECTION AND
OPERATIONAL PROGRAMS**

Docket Nos.: 05200034 and 05200035

Report Nos.: 05200034/2010-201 and 05200035/2010-201

Applicant: Luminant Generation Company LLC.
P.O. Box 1002
Glen Rose, TX 76043

Applicant Contact: Mr. Donald Woodlan
Manager, Nuclear Regulatory Affairs
254-897-6887

Background: Luminant Generation Company LLC. is pursuing a combined
license for two new US-APWR units at the Comanche Peak site in
Somervell County, TX.

Inspection Dates: August 2 - 5, 2010

Inspectors: Greg Galletti NRO/DCIP/CQVA, Team Leader
Paul Coco NRO/DCIP/CQVA
Raju Patel NRO/DCIP/CQVA
Aixa Belen-Ojeda NRO/DCIP/CQVA
Annie Ramirez NRO/DCIP/CQVA

Project Managers: Stephen Monarque NRO/DNRL/DDLO/NMIP
Tarun Roy NRO/DNRL/DDLO/NMIP

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

EXECUTIVE SUMMARY

Luminant Generation Company LLC.
Report Nos. 05200034/2010-201 and 05200035/2010-201

The U.S. Nuclear Regulatory Commission (NRC) inspection focused on quality assurance (QA) policies and procedures implemented to support the combined license application (COLA) for Comanche Peak Nuclear Power Plant (CP), Units 3 and 4, as described in NRC Inspection Manual Chapter 2502, "Construction Inspection Program: Pre-Combined License (Pre-COL) Phase," dated October 3, 2007. The purpose of this inspection was to verify that Luminant Generation Company LLC. (Luminant) NuBuild 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 Luminant NuBuild had implemented a program under 10 CFR Part 21, "Reporting of Defects and Noncompliance," that meets NRC regulatory requirements.

The NRC based its inspection 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 Parts 21 and 50.55(e) Programs for Reporting Defects and Noncompliance," dated October 3, 2007.

10 CFR Part 21 Program

The NRC inspection team concluded that the implementation of the Luminant 10 CFR Part 21 program is consistent with the regulatory requirements of 10 CFR Part 21. Based on its review, the NRC inspection team also determined that Luminant is effectively implementing its policies and associated procedures to support the COLA for CP Units 3 and 4. No findings of significance were identified.

Design Control

The NRC inspection team concluded that the implementation of the Luminant design control process is consistent with the regulatory requirements of Criterion III, "Design Control," of Appendix B to 10 CFR Part 50. Based on the sample reviewed, the NRC inspection team also determined that Luminant is effectively implementing its policies and associated procedures to support the COLA for CP Units 3 and 4. No findings of significance were identified.

Procurement Control

The NRC inspection team concluded that the implementation of the Luminant procurement control process is consistent with the regulatory requirements of Criterion IV, "Procurement Document Control," and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50. Based on its review, the NRC inspection team determined that Luminant is effectively implementing its policies and procedures to support the COLA for CP Units 3 and 4. No findings of significance were identified.

Corrective Action

The NRC inspection team identified one violation associated with Luminant's failure to implement the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. Violations 05200034/2010-201-01 and 05200035/2010-201-01 identify Luminant's failure to take adequate and timely corrective action to resolve deficiencies identified by MNES of a sub-supplier performing safety-related activities associated with the CP Units 3 and 4 COLA project.

Internal and External Audits

The NRC inspection team concluded that the implementation of Luminant external and internal audits is 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 Luminant is effectively implementing its policies and procedures to support the COLA for CP Units 3 and 4. 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 the Luminant 10 CFR Part 21 program in support of the COLA for CP Units 3 and 4. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of the Luminant 10 CFR Part 21 process to verify compliance with the regulatory requirements of 10 CFR Part 21. The NRC inspection team also discussed this process with members of Luminant management and technical staff.

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

- Luminant CP Units 1 and 2 Quality Assurance Manual (QAM), Revision 16, dated December 3, 2009
- NuBuild Quality Assurance Project Plan (NQAPP), Revision 2, dated July 15, 2010
- STA-422, "Processing Condition Reports," Revision 24, dated November 12, 2009
- STA-501, "Nonroutine Reporting," Revision 14, dated January 22, 2009

b. Observation and Findings

b.1. Policies and Procedures

The NQAPP provides overall QA guidance specific to the COLA project described as NuBuild for CP Units 3 and 4. This document places all NuBuild QA activities for CP Units 3 and 4 under the existing QAM for CP Units 1 and 2.

STA-501 provides instructions in Attachment 8.D/5, "Failure to Comply or Existence of a Defect," to ensure that personnel meet the specific requirements for reporting to the NRC as directed by 10 CFR Part 21. It also identifies the organizational groups responsible for the preparation, review, and submittal of the reports.

STA-422 provides instructions on evaluating a condition report (CR) for reportability under nonroutine reporting, which entails 10 CFR Part 21.

The NRC inspection team reviewed the implementation of the Luminant 10 CFR Part 21 program and learned that Luminant, under the NuBuild project associated with the CP Units 3 and 4 COLA, had not performed any 10 CFR Part 21 evaluations and had not identified any potential 10 CFR Part 21 deviations or failures requiring evaluation.

The NRC inspection team observed that all posting requirements of 10 CFR 21.6, "Posting Requirements," were met, including Section 206 of the Energy Reorganization Act of 1974, the current version of 10 CFR Part 21, and the Luminant procedures that implement this regulation.

The NRC inspection team also met with representatives of Luminant to discuss the reportability evaluations performed by Luminant and that are documented in its corrective

action program database. This program requires cognizant individuals to review the CRs to determine reportability in accordance with 10 CFR Part 21 requirements. The NRC inspection team also discussed CRs evaluated in daily management meetings. As a result of the discussion, the NRC inspection team determined that there were no 10 CFR Part 21 items related to CP Units 3 and 4. No issues were identified.

c. Conclusions

The NRC inspection team concluded that the implementation of the Luminant 10 CFR Part 21 program is consistent with the regulatory requirements of 10 CFR Part 21. Based on its review, the NRC inspection team also determined that Luminant is effectively implementing its policies and associated procedures to support the COLA for CP Units 3 and 4. No findings of significance were identified.

2. Design Control

a. Inspection Scope

The NRC inspection team reviewed the implementation of the Luminant design control process in support of the COLA for CP Units 3 and 4. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of Luminant design control process to verify compliance with the regulatory requirements of Criterion III, "Design Control," of Appendix B to 10 CFR Part 50.

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

- Section 3, "Design Control," QAM, Revision 16
- NQAPP, Revision 2
- Section 3, "Design Control," of MNES SQ-QD-0700001, "US-APWR Quality Assurance Program Description," Revision 3, dated October, 20, 2008
- Mitsubishi Nuclear Energy System (MNES) PQF-HD-18041-024, "Computer Software Control Procedure," Revision 3, dated December 14, 2009
- Mitsubishi Heavy Industries (MHI) PQF-HD-18041-005, "Quality Assurance Program," Revision 0, dated August 20, 2009
- MHI PQF-HQ-18041-020, "Design Control Procedure," Revision 3, dated November 14, 2007
- MHI PQF-HD-18041-023, "Design Change Control Procedure," Revision 2, dated September 18, 2007
- MHI PQF-HD-18041-021, "Design Interface Control Procedure," Revision 3, dated April 21, 2010
- Enercon Services, Inc. (Enercon) TXUT-001, "Quality Assurance Project Planning Document," Revision 4, dated September 11, 2009
- URS, "Nuclear Quality System Manual," Revision 7, dated March 31, 2010

b. Observation and Findings

b.1. Policies and Procedures

The QAM states, in part, that Luminant has the overall responsibility for the preparation, review, and approval of design documents and is responsible for translating the design bases into appropriate instructions, procedures, drawings, and specifications.

The NQAPP states that the CP COLA document is based on the MHI US-APWR (U.S. Advanced Pressurized-Water Reactor) design. It further states that the CP COLA design, engineering, construction, and majority of environmental services for the NuBuild project are performed by contractors and vendors working in accordance with their approved QA programs, based on American Society of Mechanical Engineers (ASME) NQA-1-1994, "Quality Assurance Program Requirements for Nuclear Facilities." Luminant has contracted with MNES for the development of the CP COLA project, which includes design and the conduct of seismic, environmental, and site characteristic activities, but Luminant retains overall responsibility for CP COLA design and development.

MNES procedure TX-ED-080002 defines the methodology for the preparation, review, and acceptance of documents for the COLA for CP Units 3 and 4. It also identifies the process and tools for establishing and maintaining configuration control of the CP COLA.

Section 3 of MNES SQ-QD-0700001 describes the design process for the control of design inputs, outputs, changes, interfaces, records, and organizational interfaces for MNES and its suppliers. This section ensures that design inputs (i.e., design bases, performance, regulatory, and quality requirements) are correctly translated into design outputs.

PQF-HD-18041-020 defines the requirements for design activities, such as the selection of design inputs, studies and analysis, verification, changes, outputs, interfaces, records, and organizational interfaces with the applicant and its suppliers, so that the applicable laws, codes, standards, and customer requirements are correctly translated into the drawings, specifications, and calculations. The procedure specifies the responsibilities of individuals performing verification functions and the responsibilities of each design department or section manager.

PQF-HD-18041-023 establishes provisions for ensuring that the effect of design changes is adequately evaluated and transmitted into design documents.

PQF-HD-18041-021 defines the requirements for interface among departments involved in nuclear design activity for the US-APWR project to ensure the smooth transmission of design requirements. This procedure also establishes the responsibilities for design interface.

TXUT-001 defines the methodology for the collection of information that supports specific statements in Chapter 2 of the final safety analysis report (FSAR). Enercon's QA program is limited to the collection, manipulation, analysis, or control of information that would affect design, construction, or operation of safety-related components. Enercon's major safety-related and nonsafety-related activities involved in and controlled by its QA program include the hydrological characterization of the site area; collection, manipulation, and analysis of data to determine the design-basis flood; and the manipulation and analysis of meteorological data.

Section 3, "Design Control," of the URS Nuclear Quality System Manual defines the roles, responsibilities, and controls necessary to ensure the applicable design requirements. It includes design bases, statutory, and regulatory requirements, and applicable codes and standards, which are correctly translated into specifications, drawings, and instructions.

b.2. Implementation of Design Controls

Site-specific design activities associated with the development of the COLA for CP Units 3 and 4 consist of design documents and calculations prepared for Luminant by MNES and its contractors and reviewed and approved by Luminant. As a primary contractor of Luminant, MNES is responsible for overall COLA project management and development. MNES has subcontracted design activities associated with CP COL documents to Enercon and MHI. Enercon is responsible for performing environmental, seismic, and site characteristic design activities associated with the development of Chapter 2 of the COLA FSAR. MHI is responsible for the US-APWR design certification document, as well as for the site-specific design of CP Units 3 and 4. MHI has subcontracted with URS-Washington Group (URS) to provide consulting and professional services to assist in the design and development of the MHI US-APWR and in the site-specific design activities associated with the development of several chapters of the CP COLA.

The NRC inspection team reviewed the design control process for MNES and the implementation of procedures and policy guidelines governing the process as applied to CP Units 3 and 4. The NRC inspection team selected a sample of 12 design calculation packages that established the design-basis input to several chapters of the CP COLA. Each design calculation package consists of purpose, scope, assumptions, design basis, codes and standards, reference standards, design methodology, design calculations, drawings, and computer verification data.

The NRC team reviewed the following design calculation packages:

- Calculation package TXUT-001-FSAR-2.4.3-CALC-012, "Probable Maximum Flood Calculation for Comanche Peak Units 3 and 4," Revision 1, dated August 6, 2008. This calculation assessed the probable maximum flood at CP Units 3 and 4 caused by the backwater flow of the Squaw Creek dam. Enercon used U.S. Army Corps of Engineers (ACOE) computer software HEC-HMS and HEC-RAS to perform the design calculation. This calculation was used as input to FSAR Chapter 2.
- Calculation package 4DS-CP34-20080048, "Site-Specific Structure Interaction (SSI) Analysis of Reactor Building for Site-Specific COLA," Revision 2, dated April 25, 2008. This calculation, performed by URS, provides a preliminary design for the site-specific analysis of the US-APWR prestressed concrete containment vessel, containment internal structure, reactor building, and fuel handling building of CP Units 3 and 4. For development of the Structural Analysis and Soil Structural Interaction (SASSI) model, URS used computer software ACS SASSI, version 2.2.1, as well as ANSYS, version 11, and documented the results in URS Calculation No. SSI-12-05-100-003, Revision B, dated October 17, 2008. This calculation was used as input for Chapter 3 of the FSAR.
- Design document 4DS-CP34-2008-0052, "Structural Design of Ultimate Heat Sink for COLA Standard," Revision 2, dated June 16, 2008. This calculation, performed by URS, provides a preliminary design for ultimate heat sink (UHS) basins A, B, C, and D as Category 1 structures and in support of the COLA. URS used computer software ANSYS, version 11, with results documented in Calculation No. SSI-12-05-100-009,

Revision A, dated October 21, 2008. This calculation was used as input for Chapter 3 of the FSAR.

The NRC inspection team verified that each calculation package contained the design bases and assumptions and the methodology used to develop the calculations, results, and conclusions. MNES reviewed the sample design calculations and MHI and its contractors have incorporated the comments. The NRC inspection team noted that the samples it reviewed were consistent with the procedural guidance contained in the procedures of MNES and its contractors.

Computer Software Control

The NRC inspection team reviewed MNES contractor programs and policies associated with the control of computer programs used for design analysis. Specifically, the NRC inspection team reviewed a sample of software verification and validation records (SVVRs) used as a basis for qualifying the software before its use in safety-related design calculations.

The NRC reviewed the following SVVRs:

- ANSYS Release 11

The NRC inspectors reviewed documentation associated with the ANSYS Release 11.0 qualification projects to verify whether the process implemented by URS was consistent with the applicable regulatory requirements and relevant industry standards. In addition to reviewing the documents governing the process, the NRC inspectors also interviewed URS management to ensure that the activities performed were commensurate with their responsibilities.

The NRC inspection team reviewed the URS "Software Verification and Validation Report for ANSYS Release 11.0," Revision 0, issued July 2007, for URS Software No. 2774. The SVVR documented a correlation of the verification and validation test result (hand calculation and computer run) with the target value and with results published in the ANSYS Release 11.0 verification manual. The NRC inspection team reviewed and evaluated a sample of 7 of 258 test case problem results and found the results to be acceptable. In addition, the NRC inspection team reviewed CAR No. 0012, which documented the semiannual review and evaluation of a list of software errors provided by ANSYS, concluding that the errors had no impact on existing calculations. Based on its review of ANSYS SVVR files and periodic software error evaluation records, the NRC inspection team determined that URS effectively implemented the procedural guidance contained in URS procedure SQAP-G-02, "Software QA Plan for Upgrading Commercial Grade Engineering and Technical Software for Nuclear Power Safety-Related Applications," and procedure PEP 391-N, "Software Error Notification," Revision 0, dated January 25, 2010.

- ACS SASSI, version 2.2.1

URS procured ACS SASSI, version 2.2.1, as safety-related software from G.P. Technologies Inc., Pittsford, NY, an audited and approved supplier for URS. The NRC inspection team reviewed the URS SVVR file for SASSI, version 2.2.1, and determined that there was an acceptable correlation of the verification and validation test result (hand calculation and computer run) with the target value and the published results and that it was prepared in compliance with the requirements of URS SQAP-G-02.

- HEC-HMS, version 3.4, and HEC-RAS, version 3.13

Enercon used the computer software HEC-HMS, “Hydraulic Modeling System,” version 3.4, and HEC-RAS, “River Analysis Systems,” version 3.13, in calculation package Nos. TXUT-001-FSAR-2.4.3-CALC-011 and TUXT-001-FSAR-2.4.3-CALC-012. Enercon downloaded these two hydraulic modeling computer software programs from the ACOE Web site, performed an extensive verification and validation process to qualify the computational codes using test case problems from ACOE technical manuals, and cross-referenced the results with alternative calculations. The NRC inspection team reviewed Enercon’s SVVR files and found that URS adequately implemented its procedure CSP 3.02, “Control of Computer Software,” Revision 5. The NRC inspection team discussed software error evaluation with Enercon management and requested documentation. Enercon acknowledged that it had failed to implement Sections 3.14 and 4.3, “Error Evaluation,” of CSP 3.02 and initiated CAR No. TXUT-001-CAR-0026 to perform periodic reviews of software issues identified on the ACOE Web site.

Additionally, the NRC inspection team reviewed a sample of training and qualification records for MHI, Enercon, and URS design engineering personnel. The records reviewed included the necessary training and qualifications for design engineering personnel, as required by the MNES contractor training and qualification procedures. The NRC inspection team also reviewed a sample of qualification records for registered professional engineers maintained by URS. These records had documented the necessary qualification records, were current, and met the minimum requirements of ASME Boiler and Pressure Vessel Code, Section III, Division 1, Mandatory Appendix XXIII, “Qualification of Duties of Specialized Professional Engineers.” No discrepancies were identified.

c. Conclusions

The NRC inspection team concluded that the implementation of the Luminant design control process is consistent with the regulatory requirements of Criterion III, “Design Control,” of Appendix B to 10 CFR Part 50. Based on the sample reviewed, the NRC inspection team also determined that Luminant is effectively implementing its policies and associated procedures to support the COLA for CP Units 3 and 4. No findings of significance were identified.

4. Procurement Control

a. Inspection Scope

The NRC inspection team reviewed the implementation of the Luminant procurement document control process in support of the COLA for CP Units 3 and 4. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of Luminant procurement control process to verify compliance with Criterion IV, “Procurement Document Control,” and Criterion VII, “Control of Purchased Material, Equipment, and Services,” of Appendix B to 10 CFR Part 50, and inspected a representative sample of procurement records.

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

- QAM, Revision 16

- NQAPP, Revision 2
- STA-152, "Request for Procurement of Services," Revision 3, dated February 20, 2003
- STA-153, "Management of Contracts," Revision 7, dated December 15, 2006
- NPS 3.01, "Contract Formation," Revision 3, dated October 1, 2004
- NPS 3.02, "Contract Administration," Revision 3, dated October 1, 2004
- ECE 6.02-04, "Engineering Review of Procurement Documents for Services," Revision 5, dated April 17, 2008
- NPS 5.01, "Processing of Procurement Documents," Revision 6, dated July 9, 2004
- Contract No. C-0540212-6C1, MNES, dated July 31, 2007
- Contract No. C-0517564-6C1, Enercon, dated September 27, 2006
- Contract No. TX-CD-070002, Enercon, dated November 16, 2007
- Contract No. TX-SO-070001, MHI, dated November 1, 2007

b. Observations and Findings

b.1 Policies and Procedures

NRC inspection team reviewed NQAPP Section 4, "Procurement Document Control," which establishes the requirements for procurement control in directing activities for CP Units 3 and 4 to be executed under the existing QAM for CP Units 1 and 2. The NQAPP also requires all contracts for the CP Units 3 and 4 COLA project to be developed and issued using NQA-1-1994 and other applicable standards as required to meet new regulations.

Section 4, "Procurement Control," and Section 7, "Control of Purchase Material, Equipment, and Services," of the QAM establish requirements for controlling the activities and documents associated with the procurement of items and services. They include requirements for procurement document content and reviews, vendor selection and qualification, and audits after award.

STA-152 provides instruction for the initiation, development, and administration of contracts to request services at CP.

STA-153 provides a uniform method for managing contracts among TXU Power, the Nuclear Procurement Services Department (NPS), and supplemental personnel performing work related to CP.

NPS 5.01 establishes the method for NPS to process procurement documents for items and services and scope-of-work documents for services intended for use at CP.

ECE 6.02-04 establishes the engineering review requirements for procurement documents for services.

ECE 6.02-05 provides the requirements for the development of a technical and QA requirements document for nuclear safety-related and augmented quality procurement documents at CP.

NPS 3.02 describes the elements of commercial contract administration at CP.

The NRC inspection team discussed contract development, administration, and oversight with responsible Luminant management and as a result verified that all applicable procedures and processes associated with contracts adequately incorporated programmatic and regulatory requirements.

b.2 Implementation of Procurement Control

The NRC inspection team reviewed Contract Nos. C-0540212-6C1 and C-0517564-6C1 from Luminant to its suppliers and Contract Nos. TX-CD-070002 and TX-SO-070001 from suppliers to sub-suppliers to verify the adequacy of contracts in support of services for the CP Unit 3 and 4 COLA.

Contract No. C-0517564-6C1

Luminant originally contracted with Enercon to provide engineering, licensing, environmental, and other technical support as necessary to develop a COLA in accordance with 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants."

Phase 1 would have encompassed all tasks necessary to prepare and submit the COLA, and Phase 2 involved supporting the NRC review of the applications, including responding to requests for additional information, attendance at meetings and hearings, and the review of draft NRC documents, to continue through COLA issuance by the NRC.

The NRC inspection team reviewed elements of the work authorization agreement, with particular attention to the provisions of Section 10.8, "Non Conformance Reporting," and Section 10.6, "Quality Assurance." Section 10.8 requires contractor compliance with the reporting requirements of 10 CFR Part 21. Section 9.6 states that contracted activities will be conducted in accordance with a company-approved QA program that meets the requirements of Appendix B to 10 CFR Part 50.

Section 2.0 in Exhibit D of Attachment 2 to the contract imposes quality requirements on MNES consistent with Appendix B to 10 CFR Part 50 and American National Standards Institute (ANSI) N45.2 or ASME Boiler and Pressure Vessel Code, Section III, Subsection NCA-3800 or NCA-4000. Section 2.0 also extends these QA requirements to the supplier's lower tier suppliers and addresses owner access and auditing at contractor and subcontractor facilities, witness and hold points, and an owner's right to inspect and stop work.

Contract No. C-0540212-6C1 Mitsubishi Nuclear Energy System Inc.

The Luminant contract with MNES provides engineering, licensing, environmental, and other technical support as necessary to develop a COLA in accordance with 10 CFR Part 52.

Phase 1 encompasses all tasks necessary to prepare and submit the COLA, and Phase 2 involves supporting the NRC review of the applications, including responding to requests for additional information, attendance at meetings and hearings, and a review of draft NRC documents; it will continue through COL issuance by the NRC.

The NRC inspection team reviewed elements of the work authorization agreement, with particular attention to the provisions of Section 9.6, "Non Conformance Reporting," and Section 9.4, "Quality Assurance." Section 9.6 requires contractor compliance with the reporting requirements of 10 CFR Part 21. Section 9.4 states that contracted activities will be conducted in accordance with a company-approved QA program that meets the requirements of Appendix B to 10 CFR Part 50.

Section 2.0 of Exhibit D in Attachment 2 to the contract imposes quality requirements on MNES consistent with Appendix B to 10 CFR Part 50 and NQA-1-1994. Section 2.0 also extends these QA requirements to the supplier's lower tier suppliers and addresses owner access and auditing at contractor and subcontractor facilities, witness and hold points, and an owner's right to inspect and stop work.

Contract No. TX-CD-070002 Enercon Services Inc.

This contract imposed additional QA requirement on Enercon to adhere to the QA requirements of NQA-1-1994, as stated in purchase order change notice (POCN) 003.

The scope of this contract was revised to have Enercon perform additional COLA activities including: (1) all work related to the development of the environmental report and FSAR Chapter 2; (2) site investigation and characterization; (3) COLA section development (Part 5—Emergency Plan, Part 7—Departures, Part 8—Physical Security Plan, Part 9—Withheld Information, Part 10—ITAAC, Part 11—Enclosures).

The NRC inspection team confirmed that all quality requirement imposed by Luminant were adequately incorporated into this contract.

Contract No. TX-SO-070001 Mitsubishi Heavy Industries

MNES also contracted with MHI to complete COLA components within the scope of work identified as Scope B. This includes all work required to develop the FSAR, with the exception of Chapter 2. MHI must adhere to the QA requirements of NQA-1-1994, as stated in the purchase order. MNES properly contracted work from MHI to meet the requirements imposed by Luminant.

Based on its review of contract documents, the NRC inspection team determined the contract provisions to be complete and adequate for the scope of work authorized.

c. Conclusions

The NRC inspection team concluded that the implementation of the Luminant procurement control process is consistent with the regulatory requirements of Criterion IV, "Procurement Document Control," and Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B to 10 CFR Part 50 and has been implemented in accordance with the applicable Luminant policies and procedures to support the COLA for CP Units 3 and 4. No findings of significance were identified.

5. Corrective Action Program

a. Inspection Scope

The NRC inspection team reviewed the implementation of the Luminant corrective action program in support of the COLA for CP Units 3 and 4. Specifically, the NRC inspection team reviewed the policies and procedures governing the implementation of the Luminant corrective action process to verify compliance with Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. In addition, the NRC inspection team discussed the corrective action program with members of the Luminant management and technical staff.

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

- QAM, Revision 16
- NQAPP, Revision 2
- STA-421, "Initiation of Condition Reports," Revision 16, dated November 16, 2009
- STA-422, Revision 24
- STA-501, Revision 14
- CR-2006-004164, CR-2007-003335, CR-2008-001349, CR-2009-000089, CR-2009-003673, CR-2009-008164, CR-2010-000785, CR-2010-001550, CR-2010-005183, CR-2010-005245

b. Observations and Findings

b.1 Policies and Procedures

Section 16, "Corrective Action," of the QAM, which describes the controls and corrective measures prescribed to ensure that conditions adverse to quality are reported to responsible management and that appropriate corrective actions are implemented in a timely manner.

The NRC inspection team reviewed the Luminant administrative procedures pertaining to the corrective action program. STA-421 provides guidance for identifying, reporting, documenting, tracking, and trending conditions adverse to quality using the CR module of the Action Way system. STA-422 describes the station problem identification and resolution process used to perform the initial review of a CR, including planning how to resolve the condition, implementing the developed plan, and reviewing the documentation to ensure the condition identified on the report is resolved. STA-501 identifies the nonroutine reporting requirements applicable to CP and the responsibilities for nonroutine report preparation, review, and approval. This procedure contains the necessary requirements for 10 CFR Part 21 reporting.

b.2 Implementation of Procurement Control

The NRC inspection team reviewed a sample of CRs, including opened and closed CRs. During this review, the NRC team witnessed a demonstration of corrective action reporting

using the Action Way program, which is the program that tracks the CR, and Maximo, which is the program used to issue the work order necessary to resolve the CR.

In addition, the NRC inspection team interviewed responsible Luminant staff and management as part of its evaluation of the Luminant corrective action program. The NRC inspection team noted that Luminant policies and implementing procedures provided the necessary guidance to adequately document, evaluate, correct, report, and verify the resolution of conditions adverse to quality.

The NRC inspection team reviewed CRs associated with Luminant's performance of audits and surveillances of sub-suppliers and confirmed that all actions identified in these CRs had been completed in a timely manner consistent with the Luminant CA program requirements.

However, the NRC inspection team also noted that there were open and unresolved items from MNES audits of its sub-suppliers contracted to perform work associated with the CP Units 3 and 4 COLA. Although Luminant has the overall responsibility for the design and development of CP Units 3 and 4, it failed to take adequate and timely corrective action to ensure that the issues identified in MNES supplier deviation report (SDR) No. SS-09-022-001, dated October 1, 2009, were adequately resolved. Specifically, SDR No. SS-09-022-001 identified issues related to URS' computer software dedication process for the use of nonsafety-related software in safety-related design calculations that establishes the design-basis input for the CP Unit 3 and 4 COLA. The design calculations were performed by contract between MNES and MHI and a secondary contract between MHI and URS. Both MNES and MHI performed audits of URS as part of their oversight of the sub-supplier. Based on a review of these documented audit activities, the NRC inspection team also noted that: (1) URS failed to develop adequate and timely corrective action in response to SDR SS-09-022-001; (2) MNES' continued oversight of URS failed to resolve the SDR (surveillance SS10 003, conducted February 18, 2010, surveillance SS-10-007, conducted April 21, 2010, and audit SS-10-003, conducted June 8–9, 2010); and (3) MHI failed to identify the issue on software dedication during its audits of URS from 2007 through 2010. The NRC inspection team identified this issue as Violations 05200034/2010-201-01 and 05200035/2010-201-01.

c. Conclusions

The NRC inspection team identified one violation associated with Luminant's failure to implement the requirements of Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50. Violations 05200034/2010-201-01 and 05200035/2010-201-01 identify that Luminant failed to take adequate and timely corrective action to resolve deficiencies identified in a surveillance done by MNES of a vendor sub-supplier performing safety-related activities associated with the CP Units 3 and 4 COLA project.

7. Internal and External Audits

a. Inspection Scope

The NRC inspection team reviewed the implementation of Luminant's external and internal audit processes in support of the COLA for CP Units 3 and 4. Specifically, the NRC inspection team reviewed a representative sample of audits and the policies and procedures governing the implementation of Luminant 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.

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

- QAM, Revision 16
- NQAPP, Revision 2
- NQA-3.02, “Audits and Surveillance Programs,” Revision 5-01, dated June 3, 2010
- NQA-3.14, “Control of Vendor Activities,” Revision 18-002, dated May 10, 2010
- TRA-316, “Qualification of Audit Personnel,” Revision 6, dated July 22, 2009
- EVAL-2008-016, the evaluation form documenting Luminant’s internal audit of the “Performance Improvement Process Corrective Action Program,” conducted November 10–20, 2008
- EVAL-2009-009, the evaluation form documenting Luminant’s internal audit of the “Management of Documents and Records,” conducted January 1–February 4, 2010
- QAA-09-048, the audit report documenting Luminant’s annual audit of MNES, conducted July 27–30, 2009
- Nuclear Procurement Issues Committee (NUPIC) audit of MHI, conducted April 6–10, 2009, by Detroit Edison
- NUPIC audit of URS, conducted January 26–30, 2009, by Detroit Edison
- SS-09-022, the surveillance report documenting the MNES surveillance of URS, conducted August 24–25, 2009
- MHI audit of URS, conducted June 3, 2008
- MNES SDR No. SS-09-022-001, dated October 1, 2009

b. Observations and Findings

b.1. Policies and Procedures

The QAM provides the basis for the control and performance of safety-related and quality-related activities associated with the development of the COLA for CP Units 3 and 4.

NQAPP Section 18, “Audits,” describes the requirements for the performance of quality oversight of vendors through surveillance and audits using existing CP procedures. It also describes the responsibilities of NuBuild QA for the oversight of vendor controls through audits and surveillance activities.

NQA-3.02 establishes the methodology for the assessment and surveillance performed by Luminant QA at CP and provides direction on scheduling, planning, performing, reporting, and followup actions.

NQA-3.14 defines the methodology and criteria for the vendor selection, vendor qualification, source surveillance, vendor audits, annual performance evaluation, and commercial-grade surveys performed to support procurement activities.

TRA-316 defines the requirements for orientation, training, qualification, and certification of personnel performing QA audits to meet the requirements of ANSI/ASME N45.2.23-1978, "Qualification of Quality Assurance Program Evaluation Personnel for Nuclear Power Plants."

b.2 Review of Audit Activities

b.2.1 Luminant Internal Audits

The NRC inspection team reviewed a sample of internal audit reports to verify that audits were performed in accordance with program requirements. For each of the audits reviewed, the NRC inspection team confirmed that the audit reports identified audit findings and corrective actions associated with these findings. The NRC inspection team noted that corrective actions were taken promptly to respond to any identified findings and the reports contained an adequate level of objective evidence to support closing of the condition. The NRC inspection team also verified that the audit plan identifying the audit scope, focus, and applicable criteria had been prepared and approved before the initiation of the audit or surveillance activity.

b.2.2 Luminant Qualification Audit

The NRC inspection team reviewed Luminant's audit of the MNES QA program, conducted on August 7, 2007, and documented in audit report QAA-07-038. The report included the audit plan, auditor qualification, NUPIC checklist, and findings. The audit of MNES resulted in 13 findings. The NRC inspection team verified that corrective actions were taken promptly in response to any identified findings with an adequate level of objective evidence to support closeout in a timely manner.

The NRC inspection team reviewed Luminant's annual audit of the MNES QA program, conducted on August 8, 2008, documented in audit report QAA-08-042, and a third annual audit conducted on July 27–30, 2009, documented in audit report QAA-09-048. These were followup audits to verify MNES' adequate implementation of completed corrective actions on previous audit findings. The NRC inspection team selected a sample of completed corrective actions and verified that Luminant had reviewed and assessed the effectiveness of the implementation of the completed corrective actions by MNES, and had documented their assessment in accordance with the Luminant audit program requirements.

b.2.3 Luminant's Oversight of Its Contractors

The NRC inspection team reviewed Luminant's evaluation of NUPIC audit report No. 2552 of the URS QA program, dated January 26–30, 2009. Detroit Edison led this audit. The scope of the audit included a review of the URS' software quality control process. The NUPIC audit report stated that the ACS SASSI version 2.2.1 was adequately verified as exemplified by the verification and validation files for ACS SASSI version 2.2.1. The NUPIC audit also evaluated the URS procurement control process associated with ACS SASSI, version 2.2.1, and found it to be adequate. The NUPIC audit resulted in seven findings that were addressed by URS. Detroit Edison reviewed the corrective actions implemented by URS and found them to be satisfactory, as documented in an audit closure letter from

Detroit Edison to URS. Luminant reviewed this audit closure letter, found that it adequately addressed the audit findings, and subsequently accepted the NUPIC audit report.

b.2.4 MNES Oversight of URS

While reviewing URS' software control program, the NRC inspection team learned that URS had procured ANSYS as nonsafety-related software from Mallett Technologies and did not apply a commercial-grade dedication process for its use in safety-related applications. MNES informed the NRC inspection team that it identified this issue in surveillance report SS-09-022. The NRC inspection team asked MNES management to provide records associated with this issue and the use of ANSYS in all design calculations that provided a basis for input to the CP COLA.

The NRC inspection team reviewed the following records:

- MNES surveillance report SS-09-022 of the URS QA program conducted on August 24–25, 2009. The surveillance report documents the verification of URS procurement of ACS SASSI, version 2.2.1, as safety-related from G.P. Technologies, an audited and approved supplier of URS. The surveillance report also stated that URS could not provide a dedication report for ANSYS, which it procured as nonsafety-related software from Mallett Technology. MNES issued SDR No. SS-09-022-001 for failure of URS to perform a commercial-grade dedication process as described in 10 CFR Part 21 and NQA-1-1994 and in guidance from the Electric Power Research Institute (EPRI).
- MNES surveillance report SS10 003 of the URS QA program conducted on February 18, 2010. MNES performed the surveillance to verify the URS response to SDR No. SS-09-022-001. The surveillance report concluded that SDR No. SS-09-022-001 had not been resolved and could not be closed. URS was developing the software dedication packages, as well as developing and implementing new procedures: PEP 360-N, for the control of software, and PEP 385-N, for commercial-grade dedication, to replace NEP-09; it was also revising SQAP-G-02 to reflect dedication activity.
- URS response letter dated April 1, 2010, to MNES SDR No. SS-09-022-001. In its response letter, URS stated that it had completed the development and approval of 22 dedication packages for commercial-grade software listed in the attachment to the letter and stated that this was its complete corrective action response to the MNES SDR.
- MNES surveillance report SS-10-007 of the URS QA program conducted on April 21, 2010. The surveillance report documented that the new URS procedures, PEP 385-N, PEP 360-N, and SQAP-G-02, did not provide any guidance or process for dedicating software. The surveillance report documented the review of two dedication packages and concluded that URS did not have an acceptable software dedication process for the acceptance of commercial-grade software for safety-related use, as described in EPRI NP-5652, "Guidelines for the Utilization of Commercial Grade Items in Nuclear Safety Related Application," or in an equivalent consensus standard. MNES initiated a new SDR No. SS-10-007-01 in response to this surveillance report finding.
- URS CR No. 00000045, dated April 22, 2010. The CAR proposes to revise the commercial-grade dedication packages and form 360-N-305 to change the word "upgrade" to "dedication" of software. URS acknowledged the issues identified in MNES SDR No. SS-10-007-01 and proposed to develop corrective action by October 1, 2010.

- MNES audit report SS-10-003, of the URS QA program, conducted June 8–9, 2010. The audit report concluded that the SDR findings were not adequately resolved.

b.2.5 MHI Oversight of URS

The NRC inspection team reviewed MHI's audit report No. 07-02 of an URS audit that was conducted at the URS Princeton, NJ, facility.

The NRC inspection team also reviewed two MHI's audit reports which documented the results of audits performed by MHI at the URS Princeton, NJ, facility. The first audit (audit report No. 07-02) was performed using the NUPIC checklist, which included a section to verify commercial-grade dedication. The audit report stated that URS has a process and procedure in place for commercial-grade dedication; but the audit scope did not include computer software verification. The second audit, conducted June 3, 2008, focused on the verification of SASSI and the Ultimate Heat Sink basin. The audit scope did not include computer software verification. The audit resulted in two findings and three observations. The audit findings were closed in a timely manner, with MHI oversight to verify implementation documented on CARs.

The NRC inspection team discussed with Luminant, MNES, and MHI the use of nonsafety-related ANSYS software in two technical reports and seven safety-related design calculations supporting the COLA for CP Units 3 and 4 and the unresolved and open SDRs, which identify the issue on computer software dedication, in existence since 2009. MNES acknowledged this issue and initiated CAR No. 10-126. In addition, MHI acknowledged this issue and initiated CAR No. UAP-CAR-HD-22010 to track the development and completion of the software commercial-grade dedication process at URS. The NRC inspection team finding related to this issue is discussed in Section 6 (b.2) of this report.

In addition, the NRC inspection team reviewed the qualification records for a sample of Luminant's auditors and lead auditors. The NRC inspection team confirmed that all requirements for auditors and lead auditors had been satisfied and that all lead auditors had properly maintained their qualification in accordance with the requirements of Luminant procedure TRA-316. No findings of significance were identified.

c. Conclusions

The NRC inspection team concluded that the implementation of Luminant's external and internal audits is 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 Luminant is effectively implementing its policies and procedures to support the COLA for CP Units 3 and 4. No findings of significance were identified.

7. Entrance and Exit Meetings

On August 2, 2010, the NRC inspection team presented the inspection scope during an entrance meeting with Mr. Donald Woodlan, Regulatory Affairs Manager, and other Luminant, MNES, MHI, and Enercon personnel. On August 5, 2010, the NRC inspection team presented the inspection results during an exit meeting with Mr. Bobby Bird, Director of the NuBuild Project, and other Luminant, MNES, MHI, and Enercon personnel.

ATTACHMENT 1

1. PERSONS CONTACTED

Todd Evans	Operating System Engineering Project Controls, Luminant (Luminant)
Donald Woodlan	Regulatory Affairs Manager, Luminant
Nick Kellenberger	Licensing Manager, Mitsubishi Nuclear Energy System (MNES)
Joseph Tapia	Licensing Engineer, MNES
Maaya Hoshi	Senior Technical Advisor, MNES
Justin Eisenach	Quality Assurance (QA) Engineer, MNES
Thomas Beandeu	Lead Engineer, MNES
John Brandon	QA Engineer, ENERCON Services, Inc.(ENERCON)
John Illingworth	Project Controls, ENERCON
Takafumi Noda	Licensing Manager, Mitsubishi Heavy Industries (MHI)
Ikuo Otake	QA manager, MHI
E. Patrick Hays	Project QA Manager, URS
Takanashi Rulian	MNES Interpreter

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 Comanche Peak Nuclear Power Plant, Units 3 and 4.

The following items were found during this inspection:

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
05200034/2010-201-01	Open	NOV	Criterion XVI
05200035/2010-201-01	Open	NOV	Criterion XVI

ATTACHMENT 2

Comanche Peak Nuclear Power Plant, Units 3 and 4, Quality Assurance Implementation Inspection Entrance and Exit Meeting Attendance

List of Attendees: (1) Entrance Meeting August 2, 2010, and (2) Exit Meeting on August 5, 2010

<u>(1)</u>	<u>(2)</u>		
X	X	Greg Galletti	NRC Inspection Team Leader
X	X	Paul Coco	NRC Inspection Team
X	X	Raju Patel	NRC Inspection Team
X	X	Annie Ramirez	NRC Inspection Team
X	X	Aixa Belan	NRC Inspection Team
X	X	Tarun Roy	NRC Project Manager
X	X	Stephen Monarque	NRC Project Manager
X	X	Bobby Bird	Luminant
X	X	Ronald Carver	Luminant
X	X	Tim Clouser	Luminant
X	X	John Conley	Luminant
X	X	Nancy Douglas	Luminant
X	X	Todd Evans	Luminant
X		Tim Gilder	Luminant
X		Fred Madden	Luminant
X		Gary Merka	Luminant
X		Barney Poole	Luminant
X	X	Robert Reible	Luminant
X	X	John Simmons	Luminant
X		Thomas Tigner	Luminant
X	X	David Volkening	Luminant
X		Michael Ware	Luminant
X	X	Matthew Weeks	Luminant
X	X	Donald Woodlan	Luminant
X		David Ambrose	Luminant
X	X	John Brandon	ENERCON
X	X	John Illingworth	ENERCON
X	X	Ikuo Otake	MHI
X	X	Takafumi Noda	MHI
X	X	Shigeharu Yamada	MHI
X	X	Osami Watanabe	MHI
X	X	Thomas Bearden	MNES
X	X	Edward Dawson	MNES
X	X	Justin Eisenach	MNES
X	X	Masaya Hoshi	MNES
X	X	Katsunori Kawai	MNES
X	X	Nick Kellenberger	MNES
X	X	John Mohr	MNES
X	X	Joyce Ng.	MNES
X	X	Joseph Tapia	MNES
X	X	Jeffery Young	MNES
X	X	Patrick Hays	URS

COL - Comanche Peak Mailing List

(Revised 08/24/2010)

cc:

Certrec Corporation
CPNPP 34 LRS
4200 South Hulen Street
Suite 422
Fort Worth, TX 76109

Ms. Michele Boyd
Legislative Director
Energy Program
Public Citizens Critical Mass Energy
and Environmental Program
215 Pennsylvania Avenue, SE
Washington, DC 20003

Director
Division of Compliance & Inspection
Bureau of Radiation Control
Texas Department of State Health Services
1100 West 49th Street
Austin, TX 78756-3189

COL - Comanche Peak Mailing List

Email

APH@NEI.org (Adrian Heymer)
awc@nei.org (Anne W. Cottingham)
bfine@co.hood.tx.us (Brian Fine)
Bill.Moore@luminant.com (Bill Moore)
BrinkmCB@westinghouse.com (Charles Brinkman)
brock.degeyter@energyfutureholdings.com (Brock Degeyter)
chris.maslak@ge.com (Chris Maslak)
cindy@seedcoalition.org (Cindy)
ck_paulson@mnes-us.com (Keith Paulson)
cp34update@certrec.com (CPNPP LRS)
CumminWE@Westinghouse.com (Edward W. Cummins)
cwaltman@roe.com (C. Waltman)
david.lewis@pillsburylaw.com (David Lewis)
Dennis.Buschbaum@luminant.com (Denny Buschbaum)
Derlinda.Bailey@chguernsey.com (Derinda Bailey)
derrell.mccravey@co.somervell.tx.us (Somervell County Chief Deputy Derrell McCravey)
donald.woodlan@luminant.com (Donald Woodlan)
ed.burns@earthlink.net (Ed Burns)
eliza.seedcoalition@gmail.com (Elza Brown)
Fred.Madden@luminant.com (Fred Madden)
gedgar@morganlewis.com (George Edgar)
gzinke@entergy.com (George Alan Zinke)
JCaldwell@luminant.com (Jan Caldwell)
jeff.simmons@energyfutureholdings.com (Jeff Simmons)
jgutierrez@morganlewis.com (Jay M. Gutierrez)
jim.riccio@wdc.greenpeace.org (James Riccio)
John.Conly@luminant.com (John Conly)
Joseph_Hegner@dom.com (Joseph Hegner)
joseph_tapia@mnes-us.com (Joseph Tapia)
jrund@morganlewis.com (Jonathan Rund)
karen@seedcoalition.org (Karen Hadden)
KSutton@morganlewis.com (Kathryn M. Sutton)
kwaugh@impact-net.org (Kenneth O. Waugh)
lchandler@morganlewis.com (Lawrence J. Chandler)
lon.burnam@house.state.tx.us (Lon Burnam)
Marc.Brooks@dhs.gov (Marc Brooks)
maria.webb@pillsburylaw.com (Maria Webb)
mark.beaumont@wsms.com (Mark Beaumont)
Mark.Crisp@chguernsey.com (Mark Crisp)
masanori_onozuka@mnes-us.com (Masanori Onozuka)
matias.travieso-diaz@pillsburylaw.com (Matias Travieso-Diaz)
mayorsouthern@granbury.org (Mayor David Southern)
media@nei.org (Scott Peterson)
mike.blevins@luminant.com (Mike Blevins)

COL - Comanche Peak Mailing List

mike_moran@fpl.com (Mike Moran)
mjohnson@citizen.org (Matt Johnson)
mlucas3@luminant.com (Mitch Lucas)
MSF@nei.org (Marvin Fertel)
nirsnet@nirs.org (Michael Mariotte)
Nuclaw@mindspring.com (Robert Temple)
patriciaL.campbell@ge.com (Patricia L. Campbell)
Paul@beyondnuclear.org (Paul Gunter)
plarimore@talisman-intl.com (Patty Larimore)
pshastings@duke-energy.com (Peter Hastings)
rbird1@luminant.com (Bobby Bird)
rdeeds@co.hood.tx.us (Hood County Sheriff Roger Deeds)
RJB@NEI.org (Russell Bell)
sabinski@suddenlink.net (Steve A. Bennett)
sandra.sloan@areva.com (Sandra Sloan)
sfrantz@morganlewis.com (Stephen P. Frantz)
shinji_kawanago@mnes-us.com (Shinji Kawanago)
stephan.moen@ge.com (Stephan Moen)
tgilder1@luminant.com (Tim Gilder)
tmatthews@morganlewis.com (T. Matthews)
Vanessa.quinn@dhs.gov (Vanessa Quinn)
Wanda.K.Marshall@dom.com (Wanda K. Marshall)