



# **Compliance Audit Report Public**

**Confidential Information (including Privileged and  
Critical Energy Infrastructure Information)  
Has Been Removed**

**Grand River Dam Authority**  
NCR01101

**Audit  
April 8-10, 2008**

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## Executive Summary

This public version of the final compliance audit report will be posted on the Southwest Power Pool Regional Entity's (SPP RE) and NERC websites. Confidential information has been redacted from this report. The report will be submitted to Grand River Dam Authority (GRDA) and to NERC after any Possible Alleged Violations have been processed through the Southwest Power Pool Regional Entity's (SPP RE) 2008 Compliance Monitoring and Enforcement Program.

GRDA was scheduled for an on-site audit in 2008 as part of the NERC Compliance Monitoring and Enforcement Program (CMEP). The CMEP requires all Balancing Authorities (BAs) and Transmission Operators (TOPs) to be audited on-site every three years. The audit team reviewed the material provided by GRDA and additional information that was requested during the audit. The SPP RE audit team reviewed the material and developed the audit finding on GRDA's compliance to the standards.

SPP RE audit team arrived and reviewed 40 NERC Standards with the GRDA staff. The audit team reviewed the company evidence for each requirement in the standards with GRDA subject matter experts. GRDA provided evidence to support their compliance with the standards. SPP RE staff also reviewed 8 standards at their office. These 8 standards concern information that is collected at Southwest Power Pool (SPP) or performed by SPP staff for the Region (Control Performance Standard, Disturbance Control Standard, Data submission, Transmission planning, etc.).

After reviewing all of the evidence presented, the audit team found GRDA to be compliant with all 43 of the NERC standards reviewed and applicable to GRDA at this time.

## Audit Process

The compliance audit process steps are detailed in the NERC CMEP. The NERC CMEP generally conforms to the United States Government Accountability Office Government Auditing Standards and other generally accepted audit practices.

### **Objectives**

All Registered Entities are subject to audit for compliance with all reliability standards applicable to the functions for which the Registered Entity is registered.<sup>1</sup> The audit objectives are:

- Independently review the company's compliance with the requirements of the NERC and regional reliability standards that are applicable to the company based on the company's registered functions.

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<sup>1</sup> North American Electric Reliability Corporation CMEP, paragraph 3.1, Compliance Audits

- Validate compliance with applicable reliability standards from the NERC 2008 Implementation Plan list of actively monitored standards.
- Review self-reported violations and previous self-certifications, confirm compliance with other requirements of the reliability standard, and review the status of associated mitigation plans.
- Validate coordination with neighboring BAs, TOPs, and the Reliability Coordinator.
- Document the company's compliance culture.

## **Scope**

The compliance on-site audit includes all reliability standards applicable to the Registered Entity monitored in the NERC Implementation Plans in the current and two previous years, and may include other reliability standards applicable to the Registered Entity. Some periodically monitored standards were reviewed at the SPP RE office. The results of the off-site reviews are included in the audit report.

There are 62 NERC standards in the 2008 Monitored Compliance Program. The audit team reviewed 40 standards on site along with SPP RE staff reviewing 8 standards at their office before the audit. There were 5 standards covering functions not performed by GRDA that were not applicable to the company at this time. Eight CIP standards will be reviewed by NERC self certification this summer.

The audit included questionnaires from the neighboring Balancing Authorities, Transmission Operators, and the Reliability Coordinator. Any indentified issues found in the neighboring and Reliability Coordinator questionnaires were addressed during the audit.

If a company has an outstanding mitigation plan or has just completed a mitigation plan, the progress or completion of the plan was validated on-site by the audit team. GRDA did not have any outstanding mitigations plans.

This audit report includes the findings from the on-site and off-site review of the company's evidence.

## ***Confidentiality and Conflict of Interest***

Confidentiality agreements executed by the independent contractors and code of conduct documentation for the NERC representative and Regional Entity staff were provided to the SPP RE and the audited entity in advance of the audit. The work history of each audit team member was provided to SPP RE and the company. The company was given an opportunity to object to an audit team member on the basis of a possible conflict of interest or the existence of other circumstances that could interfere with the audit team member's impartial performance of duties. GRDA accepted the final audit team member participants with no objections. SPP RE found no conflict of interest for any of the audit team members.

## ***On-site Audit***

The on-site audit is part of the NERC Compliance Monitoring and Enforcement Program (CMEP). Every Transmission Operator (TOP) and Balancing Authority (BA) registered in the NERC Functional Registration Data Base is required to have an on-site audit once every three years. The on-site audit covers the 2008 NERC monitored standards, any Regional standards identified and possible other NERC standards listed in the pre-audit information. Companies on the 2008 on-site audit list were notified in the Fall of 2007 about their upcoming audit and scheduled for the audit. Sixty days in advance, a letter explaining the audit was sent to the company. SPP RE sent the company a request for data and documents to complete. The pre-audit material included the audit team members, audit agenda, standards to be reviewed on-site, a pre-audit survey, the standards questionnaires, and the option to reject any audit team member. The pre-audit material received from the company provided the audit team an explanation of how the company operates for the functions they are registered.

The standards and supporting evidence to show compliance with the standards were reviewed with the company. The audit team received evidence supporting compliance with each requirement of the audited standards. Evidence included summary reports, company procedures, processes, work schedules, training schedules, on-line tools, data bases, and other sources. Information gathered from neighboring Balancing Authorities, Transmission Operators, and the Reliability Coordinator was considered during the review of evidence. The audit team reviewed the evidence for each standard and requirement with the company's subject matter experts. This process enabled the team to get immediate answers to questions that arose. This process also exposed other company staff to the audit process which helped solidify why a company follows certain procedures and processes. Any self-reported violations or open mitigation plans were reviewed by the audit team. The audit team used the evidence, the discussions with the company subject matter experts along with their professional judgment to decide on the recommended findings for the report.

On the final day, the lead auditor presented the findings of the audit to the company staff. GRDA brought in several staff members for the presentation. The presentation covered the findings for the standards reviewed on on-site and off-site. The final report process was explained along with the security of the audit information. GRDA was informed that the public report will be posted on the NERC and SPP RE websites after all due processes are complete. GRDA was also notified that a post-audit questionnaire will be provided for them to make any comments about the audit or audit team. There was a question and answer session after the presentation. The lead auditor answered all the questions and thanked GRDA for their hospitality.

## ***Methodology***

The audit team reviewed the evidence supplied by the company for each requirement of all NERC standards that apply to the functions performed by the company to determine if the company complied with that requirement. The company would be found to be noncompliant with requirements where compliance cannot be confirmed.

GRDA provided room in a temporary office trailer for the audit while the office and control center is undergoing remodeling. The audit team members completed individual assignments during the audit process. GRDA brought in its subject matter experts as the audit team reviewed the standards with them. The subject matter experts explained the evidence and answered all questions the team asked. GRDA presented most of their evidence on an overhead projection screen. They also provided additional hard copies of the material for the team to review. The overhead presentation was very useful for all of the team to review the evidence at one time.

The audit team toured the control room and verified the information that was presented as evidence in the preceding days. The team was able to see live screens and ask several questions about their processes and procedures. The tour confirmed the information learned during the audit.

The audit team met privately after being presented the evidence from the company. The team reviewed each requirement and discussed the levels of compliance and addressed each team member's notes from the audit. The audit team decided on the findings to present to the company and the SPP RE. The audit team developed the closing presentation of audit findings. The lead auditor gave the presentation to the GRDA staff and answered all their questions.

## ***Audit Overview***

The audit team met with the GRDA representative on the first morning of the audit. Facilities and the audit process were discussed to verify if any changes to the agenda were warranted. There were no changes identified by either party.

## ***Audit***

The GRDA audit was performed as planned. The agenda was followed with only minor staff adjustments.

## ***Exit Briefing***

The audit team gave an exit presentation for the GRDA staff. The team lead explained the findings from the audit. The presentation was attended by GRDA staff that participated in the audit and other staff. The presentation was open for comments and discussion about the findings. The exit presentation also covered any possible violations and mitigation requirements. GRDA was informed that they will receive an audit evaluation to complete and return to NERC.

The audit team uses the exit presentation to help verify that the information presented is correct.

## **Company Profile**

GRDA performs the following NERC functions and is registered with NERC/SPP RE for these functions:

- Balancing Authority
- Transmission Operator
- Transmission Owner
- Transmission Planner
- Generation Operator
- Generation Owner
- Resource Planner
- Purchasing Selling Entity
- Load Serving Entity
- Distribution Provider

GRDA is an agency of the state of Oklahoma, created by the Oklahoma Legislature in 1935 to be a conservation and reclamation district for the waters of the Grand River. It was formed to control and sell water and to generate and sell electricity.

GRDA operates and maintains 746 miles of 100 kV and above transmission lines. It has 69 interconnections with six Balancing Authorities. GRDA provides wholesale power to 24 counties in Northeastern Oklahoma and into Arkansas, Kansas, and Missouri. It provides wholesale power to 17 Oklahoma municipal customers, to Coffeyville, Kansas, to Siloam Springs Arkansas, and to two municipal power authorities, Kansas Municipal Electric Authority (KMEA) and Oklahoma Municipal Power Authority (OMPA.)

GRDA's is a summer peaking system with a peak of 909 MW. GRDA has a total generation capacity of 1306 MW. It has 234 MW of hydro capacity, 260 MW of pumped hydro, and 812 MW of fossil fuel steam generation. One of the fossil units is a jointly owned unit. GRDA is the generator operator for this unit.

SPP is the Reliability Coordinator for GRDA. GRDA participates in the SPP energy imbalance market and the SPP reserve sharing group. It uses SPP as the transmission provider for its transmission system.

GRDA has agreements with the wholesale distribution providers to accept responsibility for the distribution provider functions. GRDA directly performs the other functions for which it is responsible.

### **Audit Specifics**

The compliance audit was conducted on April 8-10, 2008 at the GRDA office in Locust Grove, Oklahoma.

### **Audit Team**

<b>Audit Team Role</b>	<b>Name</b>	<b>Title</b>	<b>Company</b>
Lead	Kevin Goolsby, P.E.	SPP RE, Lead Engineer	SPP RE
Member	Shon Austin	SPP RE, Specialist II	SPP RE
Member	Paul Reber	SPP RE Contractor	SPP RE
Member	Tom Hess	SPP RE Contractor	SPP RE
Observer	Roger Lampila	Regional Coordinator	NERC

### **GRDA Audit Participants**

<b>Title</b>	<b>Organization</b>
Chief Operating Officer and Compliance Officer	GRDA
Superintendent of Transmission Operations	GRDA
Superintendent of Generation & Off-System Marketing	GRDA
System Operations Supervisor/Operations Training Coordinator	GRDA
System Operations Supervisor Generation/Marketing	GRDA
Senior System Operator	GRDA
Chief Engineer	GRDA
Engineering Superintendent	GRDA
Superintendent of Power Line Department	GRDA
Superintendent of Relay Services	GRDA
Superintendent of Vegetation Management	GRDA
Assistant. Superintendent Programs Management	GRDA
Superintendent of IT PMO	GRDA
IT Director	GRDA
Superintendent of Technical Service	GRDA
Superintendent of Energy Management	GRDA
SCADA System Superintendent	GRDA
SCADA Technician	GRDA
Relay Technician	GRDA
Department of Homeland Security	GRDA
Relay Superintendent	GRDA

<b>Title</b>	<b>Organization</b>
Transmission Superintendent	GRDA
Assistant General Manager Transmission	GRDA
Assistant General Manager Thermal Generation	GRDA
Senior System Operator	GRDA

## Audit Results

GRDA did not have any violations or mitigation plans open for review during this audit. After reviewing the evidence presented to the audit team, GRDA is found to be compliant with all 43 applicable standards reviewed.

Senior management attended the opening presentation but did not attend the audit findings presentation. GRDA was prepared for the audit and presented its documentation in a concise manner. GRDA subject matter experts presented the material supporting its compliance to the standard requirements for their area. They showed that they are in compliance with the NERC standards and are working to improve their process and procedures to insure that they continue to remain compliant.

**Findings**

**GRDA On-site Audit Findings**

\*N/A – Not Applicable

PAV – Possible Alleged Violation

<b>Reliability Standard</b>	<b>Requirement</b>	<b>Finding</b>
BAL-001-0	R1.	Compliant
BAL-001-0	R2.	Compliant
BAL-001-0	R3.	N/A
BAL-001-0	R4.	N/A
BAL-002-0	R1.	Compliant
BAL-002-0	R2.	Compliant
BAL-002-0	R3.	Compliant
BAL-002-0	R4.	Compliant
BAL-002-0	R5.	Compliant
BAL-002-0	R6.	Compliant
BAL-003-0	R1.	Compliant
BAL-003-0	R2.	Compliant
BAL-003-0	R3.	Compliant
BAL-003-0	R4.	Compliant
BAL-003-0	R5.	Compliant
BAL-003-0	R6.	Compliant
BAL-004-0	R1.	N/A
BAL-004-0	R2.	N/A
BAL-004-0	R3.	Compliant
BAL-004-0	R4.	Compliant
BAL-005-0	R1.	Compliant
BAL-005-0	R2.	Compliant
BAL-005-0	R3.	N/A
BAL-005-0	R4.	N/A
BAL-005-0	R5.	N/A
BAL-005-0	R6.	Compliant
BAL-005-0	R7.	Compliant
BAL-005-0	R8.	Compliant
BAL-005-0	R9.	Compliant
BAL-005-0	R10.	Compliant
BAL-005-0	R11.	Compliant
BAL-005-0	R12.	Compliant
BAL-005-0	R13.	Compliant
BAL-005-0	R14.	Compliant
BAL-005-0	R15.	Compliant

Confidential Information (including Privileged and  
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BAL-005-0	R16.	Compliant
BAL-005-0	R17.	Compliant
BAL-006-1	R1.	Compliant
BAL-006-1	R2.	Compliant
BAL-006-1	R3.	Compliant
BAL-006-1	R4.	Compliant
BAL-006-1	R5.	Compliant
CIP-001-1	R1.	Compliant
CIP-001-1	R2.	Compliant
CIP-001-1	R3.	Compliant
CIP-001-1	R4.	Compliant
COM-001-1	R1.	Compliant
COM-001-1	R2.	Compliant
COM-001-1	R3.	Compliant
COM-001-1	R4.	Compliant
COM-001-1	R5.	Compliant
COM-001-1	R6.	N/A
COM-002-2	R1.	Compliant
COM-002-2	R2.	Compliant
EOP-001-0	R1.	Compliant
EOP-001-0	R2.	Compliant
EOP-001-0	R3.	Compliant
EOP-001-0	R4.	Compliant
EOP-001-0	R5.	Compliant
EOP-001-0	R6.	Compliant
EOP-001-0	R7.	Compliant
EOP-002-2	R1.	Compliant
EOP-002-2	R2.	Compliant
EOP-002-2	R3.	Compliant
EOP-002-2	R4.	Compliant
EOP-002-2	R5.	Compliant
EOP-002-2	R6.	Compliant
EOP-002-2	R7.	Compliant
EOP-002-2	R8.	N/A
EOP-002-2	R9.	Compliant
EOP-003-1	R1.	Compliant
EOP-003-1	R2.	Compliant
EOP-003-1	R3.	Compliant
EOP-003-1	R4.	Compliant
EOP-003-1	R5.	Compliant
EOP-003-1	R6.	Compliant
EOP-003-1	R7.	Compliant
EOP-003-1	R8.	Compliant

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EOP-004-1	R1.	N/A
EOP-004-1	R2.	Compliant
EOP-004-1	R3.	Compliant
EOP-004-1	R4.	N/A
EOP-004-1	R5.	N/A
EOP-005-1	R1.	Compliant
EOP-005-1	R2.	Compliant
EOP-005-1	R3.	Compliant
EOP-005-1	R4.	Compliant
EOP-005-1	R5.	Compliant
EOP-005-1	R6.	Compliant
EOP-005-1	R7.	Compliant
EOP-005-1	R8.	Compliant
EOP-005-1	R9.	Compliant
EOP-005-1	R10.	Compliant
EOP-005-1	R11.	Compliant
EOP-008-0	R1.	Compliant
EOP-009-0	R1.	Compliant
EOP-009-0	R2.	Compliant
FAC-003-1	R1.	Compliant
FAC-003-1	R2.	Compliant
FAC-003-1	R3.	Compliant
FAC-003-1	R4.	N/A
FAC-008-1	R1.	Compliant
FAC-008-1	R2.	Compliant
FAC-008-1	R3.	Compliant
FAC-009-1	R1.	Compliant
FAC-009-1	R2.	Compliant
FAC-013-1	R1.	N/A
FAC-013-1	R2.	N/A
INT-001-2	R1.	Compliant
INT-001-2	R2.	Compliant
INT-003-2	R1.	Compliant
INT-004-1	R1.	Compliant
INT-004-1	R2.	Compliant
IRO-001-1	R1.	N/A
IRO-001-1	R2.	N/A
IRO-001-1	R3.	N/A
IRO-001-1	R4.	N/A
IRO-001-1	R5.	N/A
IRO-001-1	R6.	N/A
IRO-001-1	R7.	N/A
IRO-001-1	R8.	Compliant

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IRO-001-1	R9.	N/A
IRO-004-1	R1.	N/A
IRO-004-1	R2.	N/A
IRO-004-1	R3.	N/A
IRO-004-1	R4.	Compliant
IRO-004-1	R5.	N/A
IRO-004-1	R6.	N/A
IRO-004-1	R7.	Compliant
IRO-005-1	R1.	N/A
IRO-005-1	R2.	N/A
IRO-005-1	R3.	N/A
IRO-005-1	R4.	N/A
IRO-005-1	R5.	N/A
IRO-005-1	R6.	N/A
IRO-005-1	R7.	N/A
IRO-005-1	R8.	Compliant
IRO-005-1	R9.	N/A
IRO-005-1	R10.	N/A
IRO-005-1	R11.	N/A
IRO-005-1	R12.	Compliant
IRO-005-1	R13.	N/A
IRO-005-1	R14.	N/A
IRO-005-1	R15.	N/A
IRO-005-1	R16.	N/A
IRO-005-1	R17.	N/A
IRO-006-3	R1.	N/A
IRO-006-3	R2.	N/A
IRO-006-3	R3.	N/A
IRO-006-3	R4.	N/A
IRO-006-3	R5.	N/A
IRO-006-3	R6.	Compliant
IRO-014-1	R1.	N/A
IRO-014-1	R2.	N/A
IRO-014-1	R3.	N/A
IRO-014-1	R4.	N/A
IRO-015-1	R1.	N/A
IRO-015-1	R2.	N/A
IRO-015-1	R3.	N/A
IRO-016-1	R1.	N/A
IRO-016-1	R2.	N/A
PER-002-0	R1.	Compliant
PER-002-0	R2.	Compliant
PER-002-0	R3.	Compliant

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PER-002-0	R4.	Compliant
PER-003-0	R1.	Compliant
PRC-004-1	R1.	Compliant
PRC-004-1	R2.	Compliant
PRC-004-1	R3.	Compliant
PRC-005-1	R1.	Compliant
PRC-005-1	R2.	Compliant
PRC-008-0	R1.	Compliant
PRC-008-0	R2.	Compliant
PRC-010-0	R1.	N/A
PRC-010-0	R2.	N/A
PRC-011-0	R1.	N/A
PRC-011-0	R2.	N/A
PRC-016-0	R1.	N/A
PRC-016-0	R2.	N/A
PRC-016-0	R3.	N/A
PRC-017-0	R1.	N/A
PRC-017-0	R2.	N/A
PRC-021-1	R1.	N/A
PRC-021-1	R2.	N/A
TOP-002-2	R1.	Compliant
TOP-002-2	R2.	Compliant
TOP-002-2	R3.	Compliant
TOP-002-2	R4.	Compliant
TOP-002-2	R5.	Compliant
TOP-002-2	R6.	Compliant
TOP-002-2	R7.	Compliant
TOP-002-2	R8.	Compliant
TOP-002-2	R9.	Compliant
TOP-002-2	R10.	Compliant
TOP-002-2	R11.	Compliant
TOP-002-2	R12.	N/A
TOP-002-2	R13.	Compliant
TOP-002-2	R14.	Compliant
TOP-002-2	R15.	Compliant
TOP-002-2	R16.	Compliant
TOP-002-2	R17.	Compliant
TOP-002-2	R18.	Compliant
TOP-002-2	R19.	Compliant
TOP-003-0	R1.	Compliant
TOP-003-0	R2.	Compliant
TOP-003-0	R3.	Compliant
TOP-003-0	R4.	N/A

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TOP-004-1	R1.	Compliant
TOP-004-1	R2.	Compliant
TOP-004-1	R3.	Compliant
TOP-004-1	R4.	Compliant
TOP-004-1	R5.	Compliant
TOP-004-1	R6.	Compliant
TOP-005-1	R1.	Compliant
TOP-005-1	R2.	Compliant
TOP-005-1	R3.	Compliant
TOP-005-1	R4.	Compliant
TOP-007-0	R1.	Compliant
TOP-007-0	R2.	Compliant
TOP-007-0	R3.	Compliant
TOP-007-0	R4.	N/A
TPL-001-0	R1.	Compliant
TPL-001-0	R2.	Compliant
TPL-001-0	R3.	Compliant
TPL-002-0	R1.	Compliant
TPL-002-0	R2.	Compliant
TPL-002-0	R3.	Compliant
TPL-003-0	R1.	Compliant
TPL-003-0	R2.	Compliant
TPL-003-0	R3.	Compliant
TPL-004-0	R1.	Compliant
TPL-004-0	R2.	Compliant
VAR-001-1	R1.	Compliant
VAR-001-1	R2.	Compliant
VAR-001-1	R3.	Compliant
VAR-001-1	R4.	Compliant
VAR-001-1	R5.	Compliant
VAR-001-1	R6.	Compliant
VAR-001-1	R7.	Compliant
VAR-001-1	R8.	Compliant
VAR-001-1	R9.	Compliant
VAR-001-1	R10.	Compliant
VAR-001-1	R11.	Compliant
VAR-001-1	R12.	Compliant
VAR-002-1	R1.	Compliant
VAR-002-1	R2.	Compliant
VAR-002-1	R3.	Compliant
VAR-002-1	R4.	Compliant
VAR-002-1	R5.	Compliant

## ***Compliance Culture***

GRDA completed a questionnaire prior to the compliance audit. GRDA stated that it does not have a formal internal compliance program. The responsibilities of compliance have been assigned to the Chief Operating Officer and Compliance Officer. GRDA describes its program as an informal distributed compliance program with each area of expertise assigned the responsibility for compliance with the standards. The chain of command for compliance is Chief Operating Officer and Compliance Officer report to the Chief Executive Officer (CEO). The CEO in turn reports to the Board of Directors. The compliance program is not independent from the departments responsible for performance to the reliability standards. GRDA does not have a formal procedure for self-assessment and self-enforcement of internal controls.

GRDA has participated in the regional compliance program since 2000. They have always had someone participating in the regional workshops, survey activities, self certification process, and spot checks. The Chief Operating Officer and Compliance Officer distribute compliance information to the departments responsible for compliance.

Overall, the staff is aware of the importance of continual compliance. GRDA is refining a process to track and keep documentation up to date.