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Compliance Audit Report

Public Version

Marblehead Municipal Light Department

NCR00208

September 30 to October 19, 2009

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

10/19/2009

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Executive Summary

This final compliance audit report is the public version. Confidential information (including privileged and critical energy infrastructure information) has been redacted from this report. The full final compliance audit report was submitted to the audited entity and NERC.

An off-site compliance audit of Marblehead Municipal Light Department (MMLD), NERC ID # NCR00208 was conducted from September 30 to October 19, 2009. At the time of the audit, Marblehead Municipal Light Department was registered for the Distribution Provider (DP) and Load Serving Entity (LSE) functions.

The audit team evaluated Marblehead Municipal Light Department for compliance with thirty-two (32) requirements and sub-requirements in eleven (11) NERC Reliability Standards in the 2009 NERC Compliance Monitoring and Enforcement Program (CMEP). The audit reviewed reliability standards identified in the NERC 2009 Implementation Plan for the audit period from June 1, 2008 unless a different retention period is specified in an individual reliability standard. Marblehead Municipal Light Department submitted information and documentation to aid the audit team's evaluation of compliance with requirements and provided subject matter experts for the standards resulting in a more clear understanding of the Marblehead Municipal Light Department business model which helped accelerate the audit process. When the evidence provided to demonstrate compliance or non-applicability required additional requests for information and evidence, the Marblehead Municipal Light Department team responded to these requests in an expeditious manner. The audit was conducted using the data submitted by Marblehead Municipal Light Department, as well as telephone and email data exchanges. The audit team reviewed and evaluated all information provided by Marblehead Municipal Light Department to assess compliance with the standards applicable to the Distribution Provider (DP) and Load Serving Entity (LSE) functions.

The Audit Team evaluated Marblehead Municipal Light Department on 32 requirements and sub-requirements in 11 Reliability Standards. Based on the information and documentation provided by Marblehead Municipal Light Department, the audit team found Marblehead Municipal Light Department to be compliant with 9 of 32 applicable requirements and sub-requirements and 4 of the 11 applicable NERC Reliability Standards. The audit team determined that 23 requirements and sub-requirements and 7 NERC Reliability Standards were not applicable to Marblehead Municipal Light Department. There were no possible violations found.

There were no ongoing or recently completed mitigation plans and, therefore, none were reviewed by the audit team.

All additional information requested was provided promptly and comprehensively. The audit team would like to thank the Marblehead Municipal Light Department team for the support offered throughout the audit.

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.¹ The audit objectives are to:

- Independently review Marblehead Municipal Light Department's compliance with the requirements of the reliability standards that are applicable to MMLD based on Marblehead Municipal Light Department's registered functions.
- Validate compliance with applicable reliability standards from the NERC 2009 Implementation Plan list of actively monitored standards and additional NERC reliability standards selected by NERC.
- Validate compliance with applicable Regional Standards from the NPCC 2009 Implementation Plan list of actively monitored standards.
- Validate evidence of self-reported violations and previous self-certifications and confirm compliance with other requirements of the reliability standard.
- Review the status of associated mitigation plans.
- Observe and document Marblehead Municipal Light Department's compliance program and culture.

Scope

The audit included all standards identified in the July 9, 2009 audit letter. The audit was a regularly scheduled audit. Based on auditor review of NPCC site documentation and files, no Marblehead Municipal Light Department self-reported violations, made pre or

¹ North American Electric Reliability Corporation CMEP, paragraph 3.1, Compliance Audits

post June 18, 2007, mitigation plans, spot checks, previous audits, or compliance investigations were involved. There were no separate requests made by Compliance Enforcement to the entity to supply information as it pertains to compliance other than for this regularly scheduled audit.

At the time of the audit, Marblehead Municipal Light Department was registered for the functions DP and LSE. The audit team evaluated MMLD for compliance during the period of June 18, 2007 to October 19, 2009.

Confidentiality and Conflict of Interest

Confidentiality and Conflict of Interest of the audit team are governed under the Delegation Agreement with NERC and Section 1500 of the NERC Rules of Procedure. Confidentiality agreements executed by the independent contractors and code of conduct documentation for the NERC representative and regional entity staff were provided to the audited entity, Marblehead Municipal Light Department, in advance of the audit. The audited entity 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. The audited entity accepted the audit team member participants with no objections.

Off-site Audit

Marblehead Municipal Light Department was provided with a pre-audit request letter identifying the standards and requirements subject to audit for the Distribution Provider (DP) and Load Serving Entity (LSE) functions, which included CIP-001-1 R1, R2, R3, R4; EOP-002-2 R9, R9.1; IRO-001-1 R8; IRO-004-1 R4; IRO-005-1 R13; PRC-004-1 R1, R3; PRC-005-1 R1, R2; PRC-008-0 R1, R2; PRC-017-0 R1; TOP-001-1 R4; and TOP-002-2 R3, R18. The audit letter was sent to Marblehead Municipal Light Department more than 60 days in advance of the scheduled audit.

This is an off-site audit conducted every six years or as determined to be necessary by the region. Based on auditor review of NPCC site documentation and files, no Marblehead Municipal Light Department self-reported violations, made pre or post June 18, 2007, mitigation plans, spot checks, previous audits, or compliance investigations were involved. There were no separate requests made by Compliance Enforcement to the entity to supply information as it pertains to compliance other than for this regularly scheduled audit.

The audit team leader requested that Marblehead Municipal Light Department employees representing subject matter expertise regarding the registered functions of Marblehead Municipal Light Department be made available for interviews should the need arise.

These interviews, in conjunction with evidence submitted, would then provide the audit team with a basis for professional judgment when validating compliance with reliability standards.

Generally accepted government auditing standard 3.31 - Auditors must use professional judgment in planning and performing audits and attestation engagements and in reporting the results.

Generally accepted government auditing standard 3.39 places responsibility on each auditor and audit organization to exercise professional judgment in planning and performing an audit or attestation engagement; it does not imply unlimited responsibility nor does it imply infallibility on the part of either the individual auditor or the audit organization. Absolute assurance is not attainable because of the nature of evidence and the characteristics of fraud. Professional judgment does not mean eliminating all possible limitations or weaknesses associated with a specific audit but rather identifying, considering, minimizing, mitigating, and explaining them.

Methodology

The audit team prepared reliability standards audit worksheets (RSAWs) to evaluate each standard. The RSAWs are used to ensure consistency and to document evidence of compliance, non-compliance or non-applicability with the standards. All relevant documents are considered and to the extent they form a portion of the audit trail are included in the RSAWs.

Audit Overview

The audit overview was conducted on October 2, 2009 at 11:00 AM EDT via telephone conference call. The call was between the NPCC auditor, the General Manager of Marblehead Municipal Light Department, and the Principal and observers of Utility Services LLC.

The auditor reviewed his career and noted that he had signed confidentiality agreements with NERC and NPCC and that all submitted audit material would be handled confidentially, including Critical Energy Infrastructure, during the audit. An explanation of the audit process was given and the audit timelines were discussed. The auditor stated that the auditor has the ability and authority to expand the audit beyond the initial set of the standards and requirements identified in the audit notification letter should the need arise. The auditor further stated that the audit would conclude with the exit briefing, which would be scheduled after the auditor completed his review of the submitted evidence and documentation, and that evidence would not be accepted after the audit exit

briefing. The auditor also stated that corroborating evidence from other entities might be required to substantiate Marblehead Municipal Light Department's compliance.

Marblehead Municipal Light Department was given the opportunity to reject the auditor should they feel that there was a possible conflict of interest, any concerns regarding the auditor's background or if they thought that the auditor would not be impartial. Marblehead Municipal Light Department accepted the auditor.

Audit

The auditor performed the audit off-site. The auditor reviewed the information submitted by Marblehead Municipal Light Department and then developed a list of questions and requests for further information; the list was then sent to Marblehead Municipal Light Department for their review. Marblehead Municipal Light Department then took the time necessary to gather the necessary information and submitted the information back to the auditor via email. A telephone exchange was also conducted for evidence clarification.

Exit Briefing

The exit briefing was conducted via conference call on Monday, October 19, 2009 at 11:00 AM EDT. The conference call was between the NPCC auditor, the General Manager of Marblehead Municipal Light Department, and the Principal of Utility Services LLC. The NPCC auditor reviewed the audit process and summarized the findings of the audit for each standard and requirement.

The Audit Team evaluated Marblehead Municipal Light Department on 32 requirements and sub-requirements in 11 Reliability Standards. Based on the information and documentation provided by Marblehead Municipal Light Department, the audit team found Marblehead Municipal Light Department to be compliant with 9 of 32 applicable requirements and sub-requirements and 4 of the 11 applicable NERC Reliability Standards. The audit team determined that 23 requirements and sub-requirements and 7 NERC Reliability Standards were not applicable to Marblehead Municipal Light Department. There were no possible violations found. The auditor also provided audit suggestions for Marblehead Municipal Light Department's consideration.

The auditor advised that entities have a right to due process, i.e. the right of the entity to appeal conclusions and findings by the Regional Entity. An overview of the process is found in CMEP Section 5. However, there were no possible violations found. Also, it was stated that NPCC would provide Marblehead Municipal Light Department with an audit confidential feedback form.

Marblehead Municipal Light Department was presented an opportunity to question the audit findings and provide comments on the audit. Marblehead Municipal Light Department commented that the audit was comprehensive, and they appreciated that the auditor provided audit suggestions, which would be followed-up and incorporated.

Company Profile

The Marblehead Municipal Light Department (MMLD) is a municipal light plant that serves the town of Marblehead and is located in northeastern Massachusetts, also known as the North Shore, approximately 20 miles northeast of Boston. The town of Marblehead is a peninsula and is bordered by the town of Swampscott, Massachusetts and the city of Salem, Massachusetts. MMLD serves approximately 10,000 electric customers with a peak of load of 24.417 MW, occurring on both June 8th 2008 hour ending 20:00, and July 19th 2008 hour ending 18:00. Annual sales of electricity in 2008 were 103,168,110 kWhs. The utility resides entirely within the ISO-New England control area. MMLD is part of the Town of Marblehead government with its own independently elected Light Board. The organization consists of 25 full-time employees and 3 part-time employees. The Manager of MMLD is appointed by the Municipal Light Board pursuant to provisions of Massachusetts General Laws Chapter 164, Section 56.

MMLD is interconnected at 23 kV by 2 lines, the 2374 and the 2323, originating from the National Grid Railyard number 49 Substation located in Salem, Massachusetts. Within the system, MMLD utilizes operating voltages of 13.2 kV and 4.16 kV. MMLD owns and operates 6 MW of diesel generation capacity. The Commercial Street facility is a 1 MW diesel, which is designated as settlement only. The second facility consists of 2 diesel units with a capacity of 2.5 MW each. They are designated as the Marblehead Diesels Asset number 467 and are fully dispatched by ISO New England. MMLD is a market participant with ISO New England, who is registered as the local Balancing Authority, Reliability Coordinator, Transmission Operator, and has oversight on the local control center. National Grid is the Transmission Operator to whom MMLD is directly interconnected with. MMLD is registered with NERC as both a Distribution Provider and a Load Serving Entity.

Audit Specifics

The compliance audit was conducted from September 30 to October 19, 2009 at the offices of the NPCC Audit Staff.

Audit Team Role	Title	Company
Lead	Contracted Consultant	NPCC-Compliance Audit Program
Member	Manager Compliance	NPCC-Compliance Audit Program

Marblehead Municipal Light Department

Title	Organization
General Manager	Marblehead Municipal Light Department
Principal	Utility Services LLC
Associate (Observer)	Utility Services LLC
Office Coordinator (Observer)	Utility Services LLC

Audit Results

Marblehead Municipal Light Department provided data used to demonstrate their compliance or non-applicability with the standards identified in the audit letter from NPCC. When the auditor had additional questions, emails and telephone calls were used to request additional documentation and clarifications.

The audit team prepared reliability standards audit worksheets (RSAWs) to evaluate each standard. The RSAWs are used to ensure consistency and to document evidence of compliance, non-compliance or non-applicability with the standards. All relevant documents are considered and to the extent they form a portion of the audit trail are included in the RSAWs.

The Audit Team evaluated Marblehead Municipal Light Department on 32 requirements and sub-requirements in 11 Reliability Standards. Based on the information and documentation provided by Marblehead Municipal Light Department, the audit team found Marblehead Municipal Light Department to be compliant with 9 of 32 applicable requirements and sub-requirements and 4 of the 11 applicable NERC Reliability Standards. The audit team determined that 23 requirements and sub-requirements and 7 NERC Reliability Standards were not applicable to Marblehead Municipal Light Department. There were no possible violations found.

Findings

The following table details findings for compliance with the reliability standards listed in the NERC 2009 Implementation Plan.

Reliability Standard	Requirement	Finding
CIP-001-1	R1	Compliant
CIP-001-1	R2	Compliant
CIP-001-1	R3	Compliant
CIP-001-1	R4	Compliant

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Critical Energy Infrastructure Information) Has Been Removed

EOP-002-2	R9	Not Applicable
EOP-002-2	R9.1	Not Applicable
IRO-001-1	R8	Not Applicable
IRO-004-1	R4	Compliant
IRO-005-1	R13	Not Applicable
PRC-004-1	R1	Not Applicable
PRC-004-1	R3	Not Applicable
PRC-005-1	R1	Not Applicable
PRC-005-1	R1.1	Not Applicable
PRC-005-1	R1.2	Not Applicable
PRC-005-1	R2	Not Applicable
PRC-005-1	R2.1	Not Applicable
PRC-005-1	R2.2	Not Applicable
PRC-008-0	R1	Compliant
PRC-008-0	R2	Compliant
PRC-017-0	R1	Not Applicable
PRC-017-0	R1.1	Not Applicable
PRC-017-0	R1.1.1	Not Applicable
PRC-017-0	R1.1.2	Not Applicable
PRC-017-0	R1.1.3	Not Applicable
PRC-017-0	R1.1.4	Not Applicable
PRC-017-0	R1.2	Not Applicable
PRC-017-0	R1.3	Not Applicable
PRC-017-0	R1.4	Not Applicable
PRC-017-0	R1.5	Not Applicable
TOP-001-1	R4	Not Applicable
TOP-002-2	R3	Compliant
TOP-002-2	R18	Compliant

Compliance Culture

The audit team reviewed the Marblehead Municipal Light Department compliance culture. During all contacts, the Marblehead Municipal Light Department representative was very professional and positive in his approach to compliance and understood the importance of the compliance and its role in maintaining reliability. All additional information requested was provided promptly, comprehensively and well organized.

The General Manager is the Compliance Manager and oversees the management of the compliance activities, and to the extent necessary, other personnel are utilized to satisfy the compliance requirements. The General Manager reports directly to the Board of Commissioners. In addition, Marblehead Municipal Light Department uses the services of the consulting firm of Utility Services LLC to assist them in meeting the compliance requirements.