



NORTHEAST POWER COORDINATING COUNCIL, INC.
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Régie Identification Number:	NIR018		
Registered Entity Name:	Rio Tinto Alcan		
Registered Entity Acronym:	RTA		
Reliability Standards Scope:	Operations & Planning Standards		
Compliance Monitoring Process:	Compliance Audit		
Distribution:	Public Version. Confidential Information Has Been Removed, Including Privileged and Critical Energy Infrastructure Information.		
Regional Entity:	Northeast Power Coordinating Council, Inc. (NPCC)		
Date of Opening Presentation:	August 17, 2017	Date of Closing Presentation:	December 20, 2017
Date of Report:	May 4, 2018	IP Year:	2017
Potential Noncompliance:	None (zero)		
Jurisdiction:	Quebec, Canada		

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I. Executive Summary

Northeast Power Coordinating Council, Inc. (NPCC) conducted a Operations & Planning Standards Compliance Audit of Rio Tinton Alcan (RTA), NIR018, from August 17, 2017 to December 20, 2017.

At the time of the Compliance Audit, RTA was registered for the functions of Generator Operator (GOP), Generator Owner (GO) , Transmission Owner (TO) and Distribution Provider (DP).

The Compliance Audit team (the Audit team) evaluated RTA for compliance with seven (7) reliability standards and thirteen (13) requirements in the 2017 Quebec Reliability Standards Compliance Monitoring and Enforcement Program (QCMEP) Annual Implementation Plan (2017 Annual Implementation Plan). The Audit team assessed compliance with the NERC Reliability Standards for the periods as indicated below:

Registered Function	Reliability Standards	Requirement(s)	Applicable Audit Period
DP/GO/ GOP/TO	COM-002-2	R1	January 1, 2016 to August 17, 2017
	IRO-001-1.1	R8	April 1, 2016 to June 30, 2017
	PRC-001-1	R3, R5	January 1, 2016 to August 17, 2017
	TOP-001-1a	R3, R6	January 1, 2016 to June 30, 2017
	TOP-002-2.1b	R13, R14, R15	July 1, 2016 to June 30, 2017
	TOP-006-2	R1	July 1, 2016 to June 30, 2017
	VAR-002-3	R1, R3, R4	January 1, 2017 to August 17, 2017

RTA submitted evidence for the Audit team’s evaluation of RTA’s compliance with all requirements. The Audit team reviewed and evaluated all evidence provided to assess compliance with Reliability Standards applicable to RTA at this time.

Based on the evidence provided, No Findings of non-compliance were noted for the seven (7) Reliability Standards and the Thirteen (13) applicable Requirements in scope for this audit engagement.

There were no open Mitigation Plans; therefore, none were reviewed by the Audit team.

The Audit Team Lead certifies that the Audit team adhered to all applicable requirements of the NERC Rules of Procedure (ROP), the QCMEP, and the September 24, 2014 Agreement on the Implementation of the Québec reliability standards compliance monitoring and enforcement program (the 2014 Agreement).

II. Compliance Audit Process

The Compliance Audit process steps are detailed in the QCMEP. NPCC’s application for the QCMEP conforms to the United States Generally Accepted Government Auditing Standards (GAGAS) and other accepted audit practices.

Objectives

All registered entities are subject to compliance assessments with all Reliability Standards applicable to the functions for which the registered entity is registered. The Compliance Audit objectives are to:

- Provide reasonable assurance of compliance with the requirements of Reliability Standards applicable to RTA;
- Review compliance with applicable Reliability Standards;
- Observe and document RTA’s compliance program and culture.

Scope

The scope of this Compliance Audit considered the NERC Reliability Standards in the 2017 Quebec Annual Implementation Plan.

The Reliability Standards and Requirements in-scope for this Compliance Audit are illustrated in **Table 2** below:

Registered Function	Standards	Requirement(s)
DP/GO/GOP/TO	COM-002-2	R1
	IRO-001-1.1	R8
	PRC-001-1	R3, R5
	TOP-001-1a	R3, R6
	TOP-002-2.1b	R13, R14, R15
	TOP-006-2	R1
	VAR-002-3	R1, R3, R4

The Audit team did not expand the scope of the Compliance Audit beyond what was stated in the notification package.

Confidentiality and Conflict of Interest

Confidentiality and conflict of interest of the Audit Team are governed under the QCMEP and the 2014 Agreement. RTA was informed of NPCC’s obligations and responsibilities under the QCMEP and the 2014 Agreement. The work history for each Audit team member was provided to RTA, which was given an opportunity to object to a Team member’s participation on the basis of a possible conflict of interest or the existence of other circumstances that could interfere with a Team member’s impartial performance of duties. RTA had not submitted any objections by the stated objection due date based on the QCMEP and accepted the Audit team member participants without objection. There were no denials or access limitations placed upon this team by RTA.

Methodology

The Electric Reliability Organization (ERO) Compliance Monitoring and Enforcement Manual documents the ERO Enterprise's current approaches used to assess a registered entity's compliance with the NERC Reliability Standards. While the ERO Enterprise does not necessarily perform compliance monitoring activities that must be in accordance with GAGAS and other generally accepted audit practices, NPCC uses these standards as framework to conduct compliance monitoring activities under the QCMEP, and recognizes that these standards provide information used in oversight, accountability, transparency, and improvements in operations.

NPCC provided RTA with a Compliance Audit notification package to commence the Compliance Audit. RTA provided evidence at the time requested, or as agreed upon, by NPCC. The Audit team reviewed the evidence submitted by RTA and assessed compliance with the requirements of the applicable Reliability Standards. Additional evidence could be submitted until the agreed-upon deadline prior to the exit briefing. After that date, only data or information deemed relevant to the content of the report or its finding could be submitted, with the agreement of the Audit team lead.

The Audit team reviewed documentation provided by RTA and requested additional evidence and sought clarification from subject matter experts during the Compliance Audit. The evidence submitted in the form of policies, procedures, emails, logs, studies, data sheets, etc. were validated, substantiated, and cross-checked for accuracy as appropriate. Where sampling is applicable to a requirement, the sample set was determined by a statistical methodology, along with the use of professional judgment.

The findings were based on the facts and documentation reviewed, the Audit team's knowledge of the Register, the NERC Reliability Standards, and the use of professional judgment. All findings were developed based upon the consensus of the Audit team.

Company Profile

The Rio Tinto Alcan hydroelectric Network in Saguenay – Lac-Saint-Jean has 28 dams and regularization structures, 44 turbine-generator units, 4 interconnections with Hydro-Québec, 884 kilometres of power transmission lines, 2200 Towers. RTA also owns a network of about 40 hydrometeorological stations as well as an independent telecommunications network.

The following table shows the location, number of dams and turbine-generator units of this network.

Location	Number of Dams	Number of Turbine-Generator units
Riviere Saguenay		
Centrale de l'Isle-Maligne (1926)	9	12
Centrale de Chute-à-Caron (1931)	1	4
Centrale de Shipshaw (1943)	6	12
Centrale de Shipshaw 13 (2012)	0	1
Riviere Peribonka		
Centrale de Chute-des-passes (1959)	4	5
Centrale de Chute-du-Diable (1952)	2	5
Centrale de Chute-à-la-Savane (1953)	1	5
Lac Manouane	5	-
Total	28	44

III. Compliance Audit Findings

Based on the results of this Compliance Audit, No Findings were noted for the seven (7) Reliability Standards and the thirteen (13) applicable Requirements in scope for this audit engagement.

Recommendations

There were two (2) recommendations provided by the Audit team:

1. **TOP-001-1a R3** and **IRO-001-1.1 R8**: RTA operators should log when an Instruction or Directive from Hydro-Québec TransÉnergie (HQT) has been received as well as when such Instruction or Directive has been completed, with notice of completion to HQT.
2. **TOP-002-2.1b R13**: All generation capability tests should be completed as scheduled and results submitted to HQT as required by the Hydro-Québec TransÉnergie's IQ-P-001 procedure "Procedure for the Québec Balancing Authority Area - Verification of the Maximum Active and Reactive Power of Generating Facilities Rated at 50 MVA or Above".

Positive Observations

The Audit team identified and informed RTA of one (1) positive observation. The specific details of the positive observation are described below.

1. **VAR-002-3**: AVR status is transmitted via SCADA to RTA operator and alarms are generated upon a status change.

IV. Compliance Culture

Comments on RTA Compliance culture: Observed during the audit: RTA responded to the initial submittal and first round of questions in the time frame agreed. The Audit team would like to thank the RTA Team for their cooperation and professionalism displayed during the audit.

Northeast Power Coordinating Council, Inc. (NPCC) Contact Information

Any questions regarding this Compliance Audit report can be directed to:

Northeast Power Coordinating Council, Inc. (NPCC)
1040 Avenue of the Americas
10th Floor
New York, NY 10018-3703

On behalf of Northeast Power Coordinating Council, Inc. (NPCC), this report was prepared and reviewed by:

Compliance Audit Team Lead	Date
Scott Nied	December 20, 2017
Management Representative	Date
John Muir	May 4, 2018

Appendix 1

Compliance Audit Participants

Following is a list of all personnel from the Audit team and RTA who were directly involved during the meetings and interviews.

Table 3: Compliance Audit Team		
Role	Title	Entity
Audit Manager	Manager, Compliance Audits	NPCC
Compliance Audit Team Lead	Manager, Operations & Planning Compliance Audits	NPCC
Team Member	Auditor	NPCC
Team Member	Auditor	NPCC
Team Member	Audit Coordinator	NPCC
Team Member	Audit coordinator	NPCC

Table 4: RTA Participants	
Title	Entity
Surveillant Opération Réseau	RTA
Ingénieur réseau	RTA
Coordonnateur de retraits	RTA
Ingénieur en planification du réseau	RTA