Nalcor Energy – Lower Churchill Project

INFORMATION MANAGEMENT PLAN

Nalcor Doc. No. LCP-PT-MD-0000-IM-PL-0003-01

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Supersedes LCP-PT-MD-0000-IM-PR-0016-01 – Site(s) Information Management Procedure	16
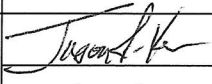
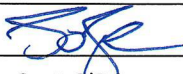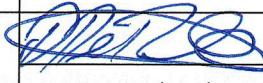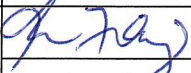| Status / Revision	Date	Reason for Issue	Prepared by	Functional Manager Approval	Quality Assurance Approval	General Project Manager Approval
B3	13. May. 2015	Re-issued for Use	V. Stanford	C. Fernandez	D. Green	R. Power

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Inter-Departmental / Discipline Approval (where required)

Department	Department Manager Approval	Date
Deputy General Project Manager	Jason Kean	2-MAY - 2015
Project Manager Muskrat Falls Generation	Scott O'Brien	06 May 2015
Project Manager HVDC Specialties	Darren Debourke	04 May 2015
Project Manager Overland Transmission	Kumar Kandaswamy	01 May 2015
Project Manager Marine Crossing	Greg Fleming	May/1/2015

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1   PURPOSE

The purpose of the Information Management Plan (IMP) is to provide guidelines to the Lower Churchill Project (LCP) Team for proper management of technical, contractor/supplier and correspondence documents during the execution phase of the LCP.

One of the key enabling components of a successful project is a well-planned and executed information management plan. Information Management (IM) is an encompassing term that includes the people, processes, and tools within an organization that are required to manage information throughout its life cycle; from its creation to its ultimate disposition.

All decisions made during the life of the project during the course of business are the only permanent record of the information required to make those decisions. Therefore these assets must be managed and controlled.

This plan is prepared to meet the following objectives:

- The Lower Churchill Project Management Team is committed to providing an effective IM environment where people can work collaboratively and with a confidence that information is accessible, accurate, reliable and timely throughout the full life cycle of the asset.

- To deliver accurate, relevant, timely and consistent information to those who need it, and have authorization to access it, and do this in a cost-effective manner.

- Information and knowledge resources are essential for successful execution of the Project.

- Good IM practice is the responsibility of everyone working on the Lower Churchill Project.

- IM considerations and requirements must be inherent in all LCP program and processes.

- IM group will establish a secure electronic environment that will provide efficiencies by facilitating the collection, storage and retrieval of data and information generated for and by the project with the ability to access, use and present the information in order to meet the specific needs of users.

- Maintain a close alignment with all Site(s) for an effective implementation of IM.

- IM goal will be to produce and deliver a quality 'information asset' that will support and enable the on-going operation and maintenance of the 'physical asset'.

This document is to be reviewed annually to ensure IM objectives are being achieved.

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2   SCOPE

The scope of the IM plan embodies all LCP information created, generated, or received as a result, or in support of, the activities required for planning, execution, and project delivery and organized into the following main components:

- Information Flow and Control
- Integrated Management System
- Orientation and Training
- Archiving and Offsite Storage

This plan applies to:

- All LCP Delivery Team in Project Home Office, remote offices or construction sites.
- Contractors and or Suppliers engaged by Nalcor Energy for the Lower Churchill Project.

This scope does not cover the management of GIS Data. (See LCP-PT-MD-0000-IS-SD-0001-01)

3   DEFINITIONS

Revision Controlled Documents

Aconex	Electronic Document Management System (EDMS) which is a secure on-line platform for storing, managing and distributing information.
Home Office	St. Johns Torbay Road Complex
RID	Request for Issue/Distribution Form
LCPDCC	Lower Churchill Project Document Control Center
Supplier Document	Documentation received from suppliers & contractors for review and approval. Includes fabrication and installation documents and operation/maintenance manuals.
Administrative Document	Correspondence or non-revision controlled documents received or sent such as minutes of meetings, contractor administration type records, letters, etc.

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Distribution   The issuing of documentation, both electronic and/or paper, to internal and external parties.

Transmittal   Tracks and establishes a history of documentation transfer to internal or external parties within the Aconex Electronic Information Management System

Revision Controlled   A document deliverable resulting from a service related contractual relationship or a Supplier/Contractor document created in support of engineering, construction, procurement, manufacture, preservation, installation, commissioning and operation. Revision Controlled documents are also considered IMS documents.

4   RESPONSIBILITIES

The following defines the primary roles and responsibilities for IM:

LCP Delivery Team - responsible for:

- Applying good IM practices to all aspects of work execution.
- Utilizing the solutions provided for the management of information as they execute functional activities.

General Project Manager - responsible for:

- Approving and implementing the Information Management Plan
  for the effective execution of all project activities.
- Ensuring that the LCP Delivery Team
  apply IM practices to all aspects of work execution.

Component Project Manager(s) - responsible for:

- Implementing the Information Management Plan for the effective execution of all project activities.
- Ensuring that the project team members apply IM practices
  to all aspects of work execution.

Deputy Project Control Manager - responsible for:

- Championing and supporting IM practices for the effective execution of all project activities.

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- Providing guidance and instruction to the project team members in the quality of documents to meet the Company standards.
- Ensuring that appropriate resources are allocated to the IM team and processes and tools are used effectively.

Project Controls Manager - responsible for:

- Implementing the Information Management Plan for the effective execution of all project controls activities.
- Ensuring that Document Control procedures, processes and tools are implemented amongst project team members.

Engineering Manager(s) - responsible for:

- Implementing the Information Management Plan for the effective execution of all engineering activities on the project.
- Ensuring accuracy and quality for the preparation of all engineering drawings and documents.

Supply Chain Manager - responsible for:

- Implementing the Information Management Plan for the effective execution of all procurement activities on the project.
- Ensuring accurate information on all procurement documentation.

Construction Manager - responsible for:

- Implementing the Information Management Plan for the effective execution of all construction activities on the project.
- Ensuring that the project team members on site apply IM practices to all aspects of site works execution.

Information Management Lead - responsible for:

- Implementing the Information Management Plan for the effective execution of all document control activities for the project.
- Aligning document control procedures, processes and tools with IM principles.
- Leading the IM team for the control and management of technical, administrative records and supplier/contractor documentation.
- Ensuring to deliver a quality information asset that will support and enable other teams in the effective execution of the project.
- Performing spot checks on issued documentation including transmittals and taking corrective action in a timely manner when issues have been identified.

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Information Management Team - responsible for:

- Implementation of this plan and provides the overall functional guidance, direction, coordination of the IM function and resulting quality information among the LCP Project Delivery Team.
- Performing LCP technical, vendor and correspondence documents management in a timely fashion and ensuring quality of the deliverables.

5   IM ORGANIZATION

The IM organization below has been established and resourced to complete the following activities:

- Develop and implement the Information Management (IM) Plan, procedures and work instructions for the project. IM components shall include Document and Administrative Records Management;
- Develop and maintain role descriptions and oversee the selection of IM personnel;
- Ensure structural framework for content organization within the Electronic Document Management System (EDMS);
- Ensure of effective Security for access to information managed by the IM team
- Ensure EDMS tools are effective for users and contributors;
- Ensure project support to end users in use of EDMS tools;
- Manage EDMS requirements such as pick lists, requests, Confidential groups, end user inquires and requests;
- Ensure the level and frequency of quality checks of EDMS is effective;
- Agree with project team the standard reports required from EDMS;
- Ensure training material has been developed and issued for use;
- Allocate resources to copy, distribute and process documentation;
- Ensure interfaces are established internal /external submitters of documentation;
- Ensure information search is available;
- Ensure guidance is available;
- Establish and continually improve workflow process;
- Ensure information integrity through regular quality checking of electronic system content and metadata;

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- Ensure IM metrics are established as required;

- Ensure IM support at each the of the work places based on project needs;

- Ensure check on quality of documentation and electronic documents including metadata;

- Manage the day to day processing of revision controlled documentation and administration records including registration, distributing, tracking;

- Ensure individual documents contained within a report and break out for individual numbering as required;

- Facilitate the purchase of codes and standards; and

- Ensure sufficient training has been provided to project staff in IM plans, requirements, procedures and work instructions and EDMS.

To perform activities as indicated above, the LCP IM team has been structured and organized as indicated in Figure 1

Figure 1 : IM Organization (See Organization Chart LCP-PT-MD-0000-PR-CR-0001-01)
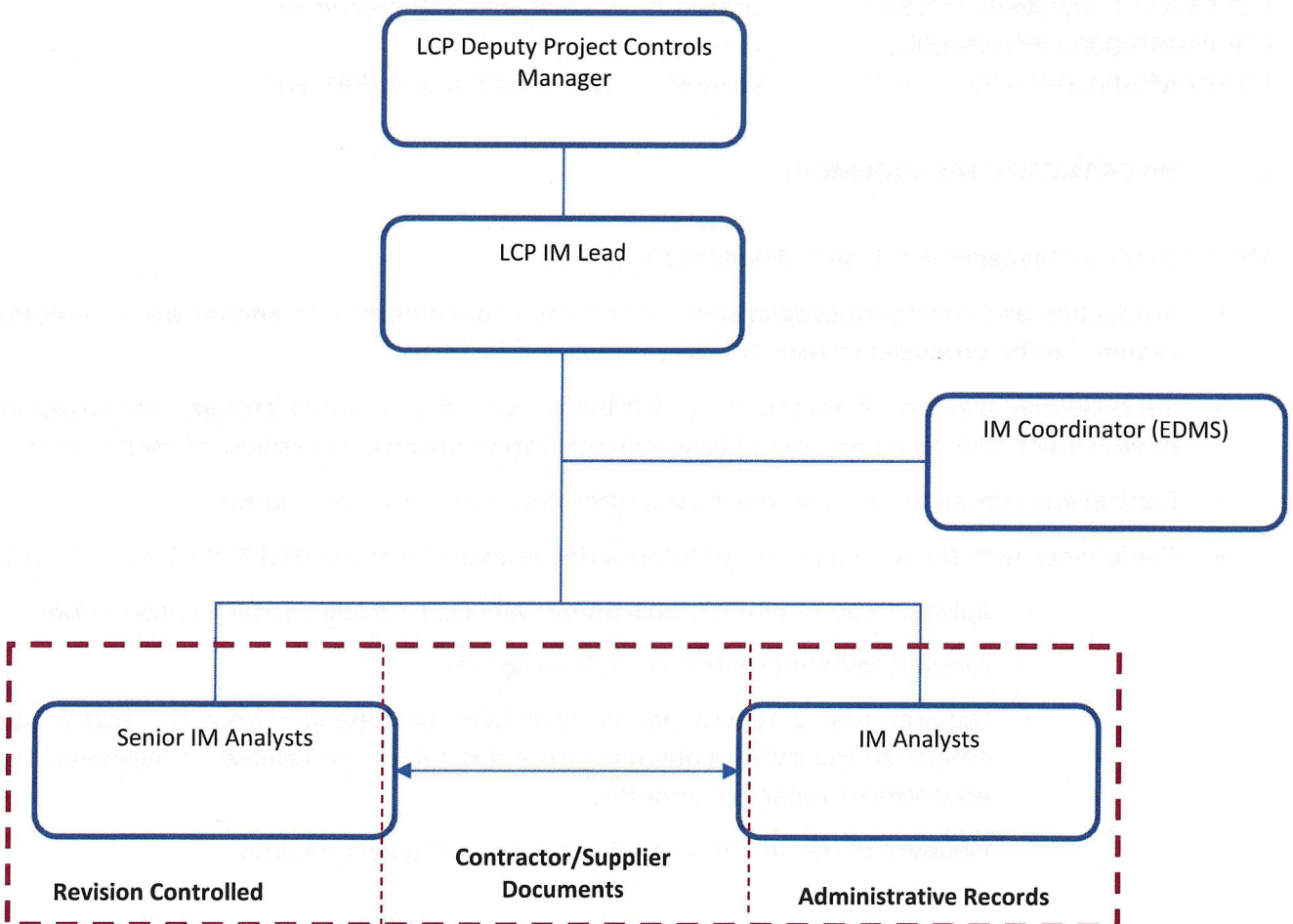
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REFERENCES

LCP-PT-MD-0000-PM-LS-0001-01	Project Dictionary, Acronyms and Abbreviations List
LCP-PT-MD-0000-IM-LS-0001-01	Distribution Matrix for Documents
LCP-PT-MD-0000-IM-PR-0001-01	Management of Revision Controlled Documents
LCP-PT-MD-0000-IM-PR-0003-01	Administrative Records Management Procedure
LCP-PT-MD-0000-IM-PR-0008-01	Directions to Contractors for Document Requirements
LCP-PT-MD-0000-IM-PR-0003-01	Administrative Records Management Procedure
LCP-PT-MD-0000-IM-PR-0008-01	Directions to Contractors for Document Requirements
LCP-PT-MD-0000-IM-PR-0009-01	Review Process for External - Revision Controlled Documents
LCP-PT-MD-0000-IM-SD-0001-01	Coding Standard
LCP-PT-MD-0000-PM-LS-0001-01	Project Dictionary, Acronyms & Abbreviations List
LCP-PT-MD-0000-IM-PL-0001-01	Procedure for Requesting Access to Codes and Standard
LCP-PT-MD-0000-IM-PR-0015-01	Supplier/Contractor Document Requirements
LCP-PT-MD-0000-IM-PR-0018-01	Change Advice Notice (CAN) Procedure
LCP-PT-MD-0000-IM-MN-0001-01	Aconex Project Manual
LCP-PT-MD-0000-IM-FR-0011-01	Request for Issue/Distribution (RID) Form

6   INFORMATION MANAGEMENT

The Information Management Plan is developed to facilitate:

- production and control of project revision controlled documents and administrative records as required to be produced or used for operations;

- life cycle management (from creation, distribution, use, maintenance/storage, and disposition) of all revision controlled documents and Administration Records, regardless of media; and

- Control and processing of data which comprises document or records above.

- Compliance with the Management of Information Management Act (SNL2005 ChapterM-101)

  - applies to government departments and public bodies (crown corporations)

  - requires implementation of an IM program

  - requires that a record not be destroyed or removed from the ownership or control of the public body unless the destruction or removal is approved by the government records committee

  - violation of this act may result in financial or legal penalties

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Electronic documents like their paper counterparts need to be recorded, captured in a form which ensures their authenticity and integrity, and made accessible. For the project the electronic documents retained in Aconex and or Documentum will be declared the official record for LCP as they provide the only official record of evidence of the business activities.

Electronic documents and administrative records will be managed to meet the immediate and future needs of Nalcor Energy.

7 INFORMATION FLOW AND CONTROL

The processing of all revision controlled documents shall be through LCPDCC without exception. IM work instructions are developed to ensure consistency in handling of the information.

LCP Delivery Team shall use a Request for Issue /Distribution (RID) Form, LCP-PT-MD-0000-IM-FR-0011-01 for the issuance and distribution of revision controlled documents that are not listed as part of an approved distribution matrix. The RID form is not required to be used for return of contractors' documents as they will be approved for return on the Document Front Sheet.

Upon receipt of the RID form, LCPDCC shall transmit the documents using the Aconex transmitting process. Workflow notifications will be issued by LCDCC for the return of documents back to the Contractor.

The distribution of revision controlled documents shall comply with all approved distribution matrices unless otherwise noted on the completed RID form. Distribution of documents will be electronic with the exception of certain size drawings that may be required on Site(s).

The LCPDCC function within LCMC shall perform but not be limited to the following quality checks when transmitting or receiving documents:

- Correct page numbers, number of pages and if any pages are missing;
- Correct titles and revision (reason for issue is stated);
- Correct document number;
- All tables, graphs, figures, etc. are included;
- Quality of PDF image & printed quality, pdf searchable;
- Inverted or incorrect orientation of pages;
- Approvals signatures;
- Colour (if applicable);

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- Document is on the correct template (if applicable);

- Electronic format standards; and

- All relevant Metadata is available for population in Aconex.

The processing of all Administrative Records shall be through Aconex or Documentum if applicable. Reference the Adminstrative Records Management Procedure - LCP-PT-MD-0000-IM-PR-0003-01 outlining the use of each system. It is incumbent on the issuer to ensure that relevant Administrative Records are maintained.

LCP Delivery Team shall use a Request for Issue /Distribution (RID) Form, for the issuance and distribution of Administrative Records unless otherwise and listed as part of an approved distribution matrix.

LCDCC upon receipt or transmittal of Administrative Records including those emailed in Aconex construction management module from Contractors and Suppliers shall perform but not be limited to the following quality checks:

- Correct page numbers, number of pages and if any pages are missing;

- Correct Subject;

- All tables, graphs, figures, etc. are included;

- Quality of PDF image & printed quality, pdf searchable;;

- Inverted or incorrect orientation of pages;

- Approval signatures;

- Colour (if applicable);

- Record is on the correct template (if applicable);

- Electronic format standards; and

- Ensure all relevant meta data is available and populated in Aconex and Documentum

7.1   REVISION CONTROLLED DOCUMENTS

7.1.1   Revision Controlled Documents Standards

Standards	Drawings	Non-Drawings
Electronic format		
Native Files:	Auto Cad 2011	MS Word, MS Excel

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Final Files:	PDF searchable (Aconex)	PDF searchable (Aconex)
Physical format:		
SLI:	Lower Churchill Project Drafting Standards LCP-SN-CD-0000-EN-PR-0001-01	LCP-PT-MD-0000-IM-PR-0001-01, Management of Revision Controlled Documents
Other Contractors:	LCP-PT-MD-0000-IM-PR-0015-01 Supplier/Contractor Document Requirements LCP-PT-MD-0000-IM-PR-0008-01 Directions to Contractors/Suppliers for Document Requirements – SOBI Only	
Document Coding	LCP-PT-MD-0000-IM-SD-0001-01 Coding Standard	

7.1.2   Internal Revision Controlled Documents

The process for the creation, registration, capture, issue and distribution of internally created Lower Churchill Project (LCP) revision controlled documents shall comply with LCP-PT-MD-0000-IM-PR-0001-01, Management of Revision Controlled Documents

7.1.3   External Revision Controlled Documents

The procedure for the LCP Delivery Team to receive, review and provide formal comments and/or feedback to Contractors/Suppliers, suppliers for externally created, revision controlled documents, submitted to LCMC for review, comment, acceptance and/or approval shall comply with LCP-PT-MD-0000-IM-PR-0009-01, Review Process for External - Revision Controlled Documents

7.1.4   Document Matrices

Document Matrices including Administrative Records developed internally shall be maintained on the project for each individual entity i.e. Contractors/Suppliers who produce revision controlled documents for the project. All updates will be approved and provided for processing to LCPDCC.

7.1.5   Document Retention

During the course of the project, LCPCC will present only the latest electronic files in Aconex. Final revision controlled document will be maintained and only those specified to be retained in hard copy.

Contractors and Suppliers shall be responsible to maintain their revision controlled documents for a minimum of five years after the close out of their respective contracts with LCMC.

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7.1.6　Document Access And Security

LCP Delivery Team shall have full access to all revision controlled documents within Aconex with an active account unless restrictions have been put into place by the issuer of process owner of the documents.

Only those documents sent and received to Contractors, and suppliers who have an active Aconex account established will have access to LCP Information.

Aconex, will record all events which happen to a document i.e. when it was reserved, created, transmitted, viewed, downloaded, etc. for each user.

Issued documents that require updating are required to be obtained from Aconex or Documentum by requesting from LCPDCC.
Any hardcopy documents retained with Information Management will also be required to be signed out by LCPDCC.

7.2　ADMINISTRATIVE RECORDS MANAGEMENT

The procedure for Administrative Records for LCP, regardless of their medium, are captured, indexed, organized and maintained in accordance with LCP-PT-MD-0000-IM-PR-0003-01, Administrative Records Management Procedure.

The following Administrative Records (E-mail, Letters, Faxes, Memorandum, etc.) are required to be captured as part of this procedure when it is created or received in connection with the transaction of LCMC business (e.g. when it records official decisions; communicates LCMC decisions about LCP project, contains background information used to develop other LCP documents; etc.).

7.2.1　Administrative Records Standards

Standard	Records
Electronic format	
Native Files:	MS Word, MS Excel
Final Files:	PDF searchable (Aconex)
Physical format:	
LCMC:	LCP-PT-MD-0000-IM-PR-0003-01, Administrative Records Management Procedure
Records Type and File Classification (if applicable):	LCP-PT-MD-0000-IM-PR-0003-01, Administrative Records Management Procedure

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7.2.2 Internal Administrative Records

All LCP Delivery Team are responsible to ensure all internally produced Administrative Records comply with this plan and referenced procedures. This will comprise a permanent audit trail for the development of the project from conceptual design through to operations.

7.2.3 External Administrative Records

It is incumbent on the recipient of external Administrative Records to ensure this information is captured for future reference in Aconex or, Documentum if applicable.

7.2.4 Administrative Records Registers

Administrative Record Registers may be produced from Aconex or Documentum. Allocation of the Administrative Record number shall be conducted by LCPDCC, Administrative Assistants if applicable, or Contract Coordinators.

7.2.5 Administrative Records Retention

During the course of the project, LCMC will maintain Administrative Records in Aconex and Documentum. Only hard copies identified and required to be kept will be located with Information Management i.e. electronic files will not be printed and stored as hard copy files.

Contractors and Suppliers shall be responsible to maintain their Administrative Records for a minimum of five years after the close out of their respective contracts with LCMC.

Administrative Records for LCMC shall be retained for five years after project completion unless determined otherwise through development of administration records retention schedule built into the Nalcor Energy overall current Retention Schedule.

7.2.6 Administrative Records Access And Security

LCP Delivery Team, who has an Aconex and Documentum account, shall have full access to all Administrative Records within Aconex or Documentum. Information Management unless restrictions have been placed in effect by the issuer of the record or an Access Control List has been which shall be defined upon creation.

Only those documents sent and received to Contractors, and suppliers who have an active Aconex account established will have access to LCP Information.

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Aconex, will record all events which happen such as when it was reserved, created, transmitted, viewed, downloaded, etc. for each user.

8   LCP INTEGRATED MANAGEMENT SYSTEM

To ensure consistency, to establish a more holistic approach to project management and to augment best-in-class planning and execution practices, the Lower Churchill Project Management Team (LCPMT) is committed to developing and implementing an Integrated Management System (IMS) to achieve project objectives and success drivers. Management System documentation can be found in LCP's Electronic information Management System Aconex. Each functional group is broken down into two different saved searches. One saved search is for all approved forms pertaining to the particular functional group and the other is for approved documents (charters, manuals, plans, policies, procedures, standards, strategies and work instructions. All project plans, policies, procedures, forms, templates can be found there.

9   ORIENTATION AND TRAINING

Orientation and mandatory training will be provided weekly for new system users. IM will coordinate all training on systems for general use (e.g. Aconex, Documentum, IMS, etc.) as required and work with each of the functional areas to ensure their needs are met.

10   ARCHIVING AND OFFSITE STORAGE

Archiving and offsite storage is planned to be done at the completion of the project and will be performed in accordance with Nalcor Energy procedure.

For all SLI Engineering Document deliverables any hardcopies produced at home office and received by LCPDCC for processing will be archived and returned to SNC BAE Newplan, Topsail Road Office. For those produced from the SNC-Lavalin Hydro Division, Montreal Office will be returned via Aconex transmittal back to Montreal Office.

All electronically created Aconex documentation produced by SLI will be provided on an FTP on monthly basis or as requested to the SNC-Lavalin Hydro Division, Montreal Office.

11   ATTACHMENTS

N/A