



Document Front Sheet

NE-LCP Contractor/Supplier	Contract or Purchase Number and Description: CH0031		Contractor/Supplier Name: Cahill-Ganotec Partnership		
	Document Title: Monthly Progress Report (October 2017)			Total Number of Pages Incl. Front Sheet 95	
	Contractor Document Number: N/A			Revision Number: -	
	Supplier Document Number: N/A			Revision Number: -	
	NE-LCP Document Number: MFA-CG-SD-3440-PM-A06-0004-01			NE-LCP Issue Number: A1	
	Approver's Signature: <i>E. Percy</i>		Date (dd-mmm-yyyy): 07-Nov-2017		Review Class:
<u>Comments:</u>				Equipment Tag or Model Number: N/A	

NE-LCP	REVIEW DOES NOT CONSTITUTE APPROVAL OF DESIGN DETAILS, CALCULATIONS, TEST METHODS OR MATERIAL DEVELOPED AND/OR SELECTED BY THE CONTRACTOR, NOR DOES IT RELIEVE THE CONTRACTOR FROM FULL COMPLIANCE WITH CONTRACTUAL OR OTHER OBLIGATIONS. <input type="checkbox"/> 01 – REVIEWED AND ACCEPTED – NO COMMENTS <input type="checkbox"/> 02 – REVIEWED – INCORPORATE COMMENTS, REVISE AND RESUBMIT <input type="checkbox"/> 03 – REVIEWED - NOT ACCEPTED <input checked="" type="checkbox"/> 04 – INFORMATION ONLY <input type="checkbox"/> 05 – NOT REVIEWED				
	Lead Reviewer: David Wright		Date (dd-mmm-yyyy): 01-Dec-2017	Project Manager:	Date (dd-mmm-yyyy):
	NE-LCP Management:		Date (dd-mmm-yyyy):		
	<u>General Comments:</u>				




This document has been reviewed & coded electronically via Aconex.



Monthly Progress Report (October 2017) MFA-CG-SD-3440-PM-A06-0004-01 A06

Client Reference:
CH0031-001
Supply and Install Mechanical & Electrical Auxiliaries MF

Project Reference:
TC006

A1	07-Nov-17	Review	Julie Canuel, P.Eng  Project Controls	Elizabeth Percy, P.Eng  Project Engineer	Tim Harrington, P.Eng  Project Manager
Rev.	Date	Issued for	Revised by	Checked by	Approval by



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

Revision History

Rev.	Location of Change	Date of Rev.	Brief Description of Change
A1	N/A	07-Nov-17	Issued for Review and Approval



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

TABLE OF CONTENTS

- 1. EXECUTIVE SUMMARY 5**
- 2. SIGNIFICANT ACCOMPLISHMENTS 5**
- 3. CHALLENGES, DELAYS AND MITIGATIVE MEASURES 6**
- 4. HEALTH AND SAFETY 8**
 - 4.1 SAFETY STATISTIC 8
- 5. PROJECT PROGRESS AND SCHEDULE 9**
 - 5.1 PROGRESS UPDATE 9
 - 5.2 PROGRESS CURVES 10
 - 5.3 DISCIPLINE HISTOGRAMS 10
 - 5.4 COMMODITY REPORTING 10
 - 5.5 PERFORMANCE REPORTING 11
 - 5.6 CRITICAL PATH / LONGEST PATH ANALYSIS 11
 - 5.7 P6 CONTROL SCHEDULE 11
- 6. QUALITY STATISTICS 12**
 - 6.1 QUALITY ASSURANCE / QUALITY CONTROL UPDATE 12
 - 6.2 QUALITY STATISTICS 12
 - 6.3 TESTING AND HOLD POINTS 12
- 7. ENGINEERING 13**
 - 7.1 ENGINEERING UPDATE 13
 - 7.2 INTERFACE MANAGEMENT 13
 - 7.3 SITE QUERIES 14
 - 7.4 ECN 14
- 8. COST AND FINANCIAL REPORT (SECTION 6 & 13) 15**
 - 8.1 CONTRACT PRICE 15
 - 8.2 CONTRACT CHANGES 15
 - 8.3 CONTRACT INCURRED COST FLOW 16
 - 8.4 INVOICE AND PAYMENT STATUS 17
 - 8.4.1 *Payment Certificate* 17
 - 8.4.2 *Invoice and Payment Status* 17
 - 8.5 CASH FLOW FORECAST 18
- 9. CHANGE REQUEST STATUS 19**
- 10. PROCUREMENT STATUS 19**
 - 10.1 AWARD STATUS OF SUBCONTRACTOR OR SUPPLIES 19
 - 10.1.1 *Current EOI's* 19
 - 10.1.2 *Current RFP's* 20
 - 10.1.3 *Package Awards* 20
- 11. ENVIRONMENTAL AND REGULATORY 21**
 - 11.1 STATUS 21
 - 11.2 ENVIRONMENTAL REPORTING 21

**COPIES UNCONTROLLED UNLESS OTHERWISE INDICATED.
VERIFY LATEST ISSUE OF COPIES BEFORE USE.**



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

11.3 PERMITS.....21

 11.3.1 Permit Activities.....21

 11.3.2 Key upcoming permit.....22

12. PROVINCIAL BENEFITS REPORT (EXHIBIT 13)..... 22

13. MONTHLY RISK REPORT..... 22

 13.1 MAJOR RISK ACTIVITIES AND EVENTS23

 13.2 RISK REGISTER24

14. ATTACHMENT 1 – CASH FLOW FORECAST 25

15. ATTACHMENT 2 – DISCIPLINE HISTOGRAMS 25

16. ATTACHMENT 3 - COMMODITY REPORTING 25

17. ATTACHMENT 4 - CRITICAL PATH / LONGEST PATH ANALYSIS 25

18. ATTACHMENT 5 – P6 CONTROL SCHEDULE 25

19. ATTACHMENT 6 – PROCUREMENT TRACKING..... 25

20. ATTACHMENT 7 – CHANGE ORDER LOG..... 25

21. ATTACHMENT 8 – RISK REGISTER..... 25

22. ATTACHMENT 9 – CAHILL-GANOTEC LDR 25

LIST OF FIGURES

FIGURE 1 – INCURRED CASH FLOWERROR! BOOKMARK NOT DEFINED.

FIGURE 2 – INVOICE SUMMARY TEMPLATE 18



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

1. Executive Summary

Permanent works construction has officially started. Contractor has begun working inside the station powerhouse with its first work areas including;

- Wall rough-in installations in the South Service Bay EL 25 mezzanine office / control room areas.
- Cable tray support installations on the Tailrace / Turbine Floor area (EL 6.5).

Contractor is active in Company’s construction interface planning sessions along with daily SIMOPS meetings to coordinate area access and material movement as challenges remain on these fronts.

In parallel, mobilization efforts continue in several locations:

- Contractor admin office assembly is complete and furnished. Management staff is now occupying the complex as temporary power and network services are in place. Permanent power and networking will be completed next period.
- Contractor has taken possession of an existing warehouse complex owned by Astaldi. Material, tooling and equipment deliveries continue and are being stored in this facility.
- First lunch room trailer complex located on the South Service Bay road is being erected by Contractor’s workforce. Contractor continues to work with Company to establish the necessary facility footprint near the powerhouse. Revised permits have been prepared for expansion of trailer facilities at three locations in this area. This effort remains as a challenge due to the land use of others in the area.

Offsite Contractor remains active in upfront design, procurement and coordination procedure development. Powerhouse tray support design work is progressing well along with the station control system packages. Shop drawing development for pipe fabrication and HVAC fabrication is in progress in an effort to have first pipe and duct deliveries available for late November / early December. After an extensive RFP process, Contractor is closing in on award of several key procurement packages including fire protection, all station distribution equipment, powerhouse pumps, compressors, etc.

The content of this document outlines the achievements, activities, and challenges experienced during this reporting period.

2. Significant Accomplishments

Contractor’s noteworthy accomplishments achieved during this reporting period have been provided below for reference:

Contractor’s noteworthy accomplishments achieved during this reporting period have been provided below for reference:

- Continuation of project team assignments including;



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

- Site mobilization of Field Engineers, Deputy Project Manager
- Head office mobilization of Purchasing personnel, Package Electrical Engineer, Administration Assistant
- Contractor admin complex set-up complete, furnished, with temporary power and network in place. Contractor management personnel are now occupying the building.
- Workforce ramp up continues. 19 union workers deployed by the end of October with hiring continuing.
- Construction has started inside the Powerhouse. First work activities include cable tray support fabrication / installation at the EL 6.5 tailrace and wall stub erection at EL 25 South Service Bay Mezzanine area.
- Subcontract LOIs issued to 3rd party vendors for HVAC duct supply / fabrication, pipe supply / fabrication, and control systems supply / fabrication.
- Procurement package award issued for grounding and wiring device materials.
- Package awards nearing completion include fire protection, compressors, distribution, transformers, pumps, lighting, HVAC equipment, and doors / windows.
- Contractor has taken possession of its new site warehouse facility. It is currently occupying.
- Cable tray support design complete for all areas on EL 6.5. Design for remaining areas expected to be complete early next period.
- Contractor Control Schedule resubmission is being readied for publishing. To be submitted early next period.
- Proposals received for key procurement packages including Distribution, Transformers, HVAC Fans, HVAC Dampers, Pumps, Fire Protection system, etc.
- OPS upload and set-up nearly complete and progress measurement system rolled out on site.
- Labour Productivity workshop held on-site with Company representatives. Weekly reviews now scheduled to review labour relations issues, workforce status, and performance metrics.

3. Challenges, Delays and Mitigation Measures

A summary of project challenges and delays identified and updated for this period has been provided below:

#	CHALLENGE / DELAY	MITIGATION MEASURE	UPDATE / RESOLUTION
1.	Contractor's Work Area adjacent to the powerhouse is partially obstructed by other contractor facilities / equipment occupying the area.	Issue has been communicated to Company.	Issue is ongoing; working with Company to resolve. Permit for land use has been reissued to include three trailer locations. Trailer location 1 is in progress.



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

#	CHALLENGE / DELAY	MITIGATION MEASURE	UPDATE / RESOLUTION
	Area will need to be cleared prior to Contractor's mobilization effort.		Location 2 on top of the hill has been cleared by Company for Contractor to start mobilizing trailers. Trailer location 3 is still occupied by others.
2.	"A" Series document approvals potential to impact mobilization. Need to confirm minimum requirements for mob.	C-G working with LCP to define key documents required for mobilization.	Closed: "A" Documents required per the Agreement have been approved; HSE Plan, C-SEPP, Labour Productivity Plan. Construction has started.
3.	South Service Bay is currently fully occupied by Company Other Contractor which could prevent/delay Contractor materials movement and installation scope of work.	Issue has been communicated to Company.	Continue to work with Company through SIMOPS and construction interface program. Material movement has been an early struggle. Access hatch being provided for Contractor between U3 and U4 GSUs.
4.	Powerhouse is not yet fully enclosed and heated by Company Other Contractor. Contractor activities and material are requiring the work areas to be heated.	Issue has been communicated to Company. Clarification required if pricing option for temporary heating to be explored.	Closed: Company to close building and provide heat.
5.	DC drawings on hold from engineering.	Contractor engineering actively communicating with Company counterparts.	Closed: Holds removed.
6.	ECN-0004 includes changes to electrical equipment and distribution. Will result in revisions necessary to supplier proposals and delay procurement.	Contractor reviewing changes within the package and will advise Company.	Ongoing
7.	Readiness of area handover for early work areas per Exhibit 9	Issue has been communicated to Company.	Ongoing. Dates for area access are changing.
8.	New Construction Interface Procedure requires new requirements for area access and handover. Process rolled out after Exhibit 9 area access dates. Requested areas not yet	Issue has been communicated to Company.	



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

#	CHALLENGE / DELAY	MITIGATION MEASURE	UPDATE / RESOLUTION
	transferred to Contractor. New HSE requirements being outlined to Contractor		
9.	Lighting parts spec is obsolete for various fixtures. Query to be issued for approval of fixture alternatives. Will delay vendor / PO award and delivery.	Issue has been communicated to Company.	Substitute models are being clarified. New pricing to be confirmed and agreed prior to orders placed.

4. Health and Safety

4.1 Safety Statistic

BUSINESS UNIT/PROJECT: Lower Churchill Project			WEEK ENDING: October 28 2017
LOCATION: Muskrat Falls (Not on site) / St. John's Office			CONTRACTOR: Cahill Ganotec
MANHOURS	WEEKLY	YEAR TO DATE	PROJECT TO DATE
	577	3129	3129
LEADING INDICATORS	WEEKLY	YEAR TO DATE	PROJECT TO DATE
High Potential Near Miss*	0	0	0
Near Miss Incidents	0	0	0
Orientations Completed	0	19	19
FLRA's Completed	0	60	60
TSAs Completed	0	2	2
Worksite Inspections	0	13	13



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

LAGGING INDICATORS	WEEKLY	YEAR TO DATE	PROJECT TO DATE
First Aid Cases	0	0	0
Medical Aid Cases *	0	0	0
Modified Work Injury Cases *	0	0	0
Lost Time Incidents (LTI) *	0	0	0
Fatalities *	0	0	0
Modified Work Days	0	0	0
Lost Time Days	0	0	0
Medical Aid Frequency	0.00	0.00	0.00
Modified Work Injury Frequency	0.00	0.00	0.00
LTI Frequency	0.00	0.00	0.00
*Recordable Incident Frequency	0	0	0
Property/Equipment Damage	0	0	0
Vehicle Incidents	0	0	0
Safety Absolute Incidents	0	0	0
Security Incidents	0	0	0
Hours since LTI	0		

5. Project Progress and Schedule

5.1 Progress Update

- Schedule Development & Control Plan, Control Schedule and control schedule baseline document were formally submitted to Company on September 8. Contractor currently working on Code 2 comments of the Schedule Development & Control Plan to reissue to company.
- Drywall erection started at Elevation 25.5 with the installation of the studs on Axe 1 and will progress toward Axe 7. Axe 2 will be executed in coordination via SIMPOS with other contractors.



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

- Cable trays started on Elevation 6.5 downstream of column A in Unit 1 and will progress toward Unit 4 in the upcoming weeks.
- Contractor is working on A Series documents. The table below list the A series document with document owner and expected submission dates.

SDRL Code	Document Status	Document #	Document Title	Rev
A01	Code 02	MFA-CG-SD-3440-AD-A01-0001-01	Supplier Document Register (SDR)	A1
A02	Code 03	MFA-CG-SD-3440-PC-A02-0001-01	Control Schedule	A1
A04	Code 02	MFA-CG-SD-3440-RI-A04-0001-01	Risk Management Plan	A3
A04	Code 03	MFA-CG-SD-3440-RI-A04-0002-01	Risk Register	A1
A07	Code 02	MFA-CG-SD-3440-PM-A07-0001-01	Project Execution Plan	A1
A07	Code 02	MFA-CG-SD-3440-PM-A07-0002-01	Project Organization Chart	A3
A28	Code 01	MFA-CG-SD-3440-HS-A28-0001-01	Health and Safety Plan	C1
A28	Pending	MFA-CG-SD-3440-HS-A28-0002-01	Emergency Response Plan	A1
A35	Code 01	MFA-CG-SD-3440-EV-A35-0001-01	Environmental Protection Plan (C- SEPP)	C1
A42	Code 02	MFA-CG-SD-3440-PC-A42-0001-01	Schedule Development and Control Plan	A1
A42	Code 01	MFA-CG-SD-3440-PC-A42-0002-01	Cost Control Plan	C1
A42	Code 02	MFA-CG-SD-3440-PC-A42-0003-01	Schedule of Values	A3
A44	Code 02	MFA-CG-SD-3440-PC-A44-0001-01	Control Schedule Baseline Schedule	A1
A98	Code 02	MFA-CG-SD-3440-PM-A98-0001-01	Interface Register	A1
A98	Code 02	MFA-CG-SD-3440-PM-A98-0002-01	Interface Management Plan	A1
A99	Code 02	MFA-CG-SD-3000-EP-A99-0001-01	90 Day Mobilization Schedule	A2
A99	Code 02	MFA-CG-SD-3440-PC-A99-0001-01	Labour Productivity Management Plan	A1
A99	To Issue	MFA-CG-SD-3440-PM-A99-0002-01	Completions Plan	A1
Q03	Code 02	MFA-CG-SD-3440-QA-Q03-0001-01	Quality Plan	C1

5.2 Progress Curves

See Attachment 2

5.3 Discipline Histograms

See Attachment 2

5.4 Commodity Reporting

See Attachment 3



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

5.5 Performance Reporting

See attach LDR as an appendix. To come when direct work starts in the field. Attachment 9

5.6 Critical Path / Longest Path Analysis

See Attachment 4

5.7 P6 Control Schedule

See Attachment 5



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

6. Quality Statistics

6.1 Quality Assurance / Quality Control Update

Key activities in progress for this period include:

- Project Quality Plan submitted and returned Code 02
- On-Site Piping ITP (MFA-CG-SD-3440-QA-Q04-0003-01) submitted for review
- Off-Site Piping Fabrication ITP (MFA-CG-SD-3440-QA-Q04-0001-01) submitted and returned Code 02
- On-Site Electrical ITP (MFA-CG-SD-3340-QA-Q04-0001-01) submitted for review
- Quality Requirement clarification meetings held with suppliers for packages;
 - M5601 – Pumps
 - E5204 – XFMR’s

Upcoming activities planned for next period include:

- Resubmission of Project Quality Plan
- Resubmission of Off-Site Piping Fabrication ITP - MFA-CG-SD-3440-QA-Q04-0001-01
- Submission of Architectural ITP - MFA-CG-SD-3320-QA-Q04-0001-01
- Submission of HVAC Duct Fabrication ITP - MFA-CG-SD-3351-QA-Q04-0001-01
- Develop quality surveillance plan for off-site fabrication
- Update procurement quality requirement / OSSQ documents
- Define turnover requirements for off-site fabrications

6.2 Quality Statistics

The following table shows the Non-Conformity Reports summary for the project.

This Period				To Date			
Total	Open	Closed	Void	Total	Open	Closed	Void
0	0	0	0	0	0	0	0

6.3 Testing and Hold Points

No testing or hold points during the period.



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

7. Engineering

7.1 Engineering Update

Engineering design is ongoing for temporary construction and power tray supports. Engineering has commenced for the control panels, EMCS and ATS. The remaining engineering design packages are in the RFP stage and will be awarded in the next period.

Package	% Complete	Completion Date			
		Plan	Prev. Forecast	Curr. Forecast	Actual
Fire Protection	0%	Mar. 1/18	Mar. 1/18	Mar. 1/18	
Fire Detection	0%	Mar. 1/18	Mar. 1/18	Mar. 1/18	
EMCS (HVAC Control)	3.5%	Apr. 1/18	Apr. 1/18	Apr. 1/18	
ATS & Load Management	20%	May 1/18	May 1/18	May 1/18	
Lighting Control Panels	17%	Jan. 30/18	Jan. 30/18	Jan. 30/18	
Mechanical Control Panels	8%	Feb. 28/18	Feb. 28/18	Feb. 28/18	
Structural Platforms	0%	Mar. 1/18	Mar. 1/18	Mar. 1/18	
Leak Detection	0%	Mar. 30/18	Mar. 30/18	Mar. 30/18	
Fuel Monitoring	0%	Mar. 30/18	Mar. 30/18	Mar. 30/18	
Housekeeping Pads	0%	Jan. 20/18	Jan. 20/18	Jan. 20/18	
Temp Power	100%	Sept. 25/17	Sept. 25/17	Oct. 2/17	Oct. 12/17
HVAC Seismic Control	0%	Feb. 28/18	Feb. 28/18	Feb. 28/18	
Tray Supports	70%	Oct. 15/17	Oct. 15/17	Nov. 15/17	

7.2 Interface Management

There are two new interfaces for this period. See Details below:

CH0031-001 INTERFACE REGISTER					REQUEST		RESPONSE		
ITEM	INTERFACE NUMBER (TIC-CGP-MFL-###)	INTERFACE DESCRIPTION	INTERFACE TYPE	STATUS	REQUEST DATE	REQUESTING TECHNICAL CONTACT	REQUIRED BY DATE	RESPONSE DATE	RESPONSE TECHNICAL CONTACT
0001	TIC-CGP-MFL-001	HVAC Unit Install-Portion of roof to remain open	Hard Interface	Closed	04-Aug-2017	J. Curlew	18-Aug-2017	14-Aug-2017	A. Mitchelmore
0002	TIC-CGP-MFL-002	Connections from ATS/Load Mangement System to Unit Hoist MCCs	Hard Interface	Interface Submitted	26-Oct-2017	J. Curlew	07-Nov-2017		A. Mitchelmore
0003	TIC-CGP-MFL-003	Details for piping supplied by others for system 3448	Hard Interface	Interface Submitted	27-Oct-2017	J. Curlew	20-Nov-2017		A. Mitchelmore



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

7.3 Site Queries

The table below outlines the status of queries for this period. Query 0007, 0027 & 0028 are open and responses are overdue.

CAHILL RFI NO.	Ref Sub Query	NALCOR Site Query #	TRANSMITTAL DATE	DISCIPLINE	Prepared By	DESCRIPTION	REPLY REQUIRED	REPLY DATE
TC-006-RFI-G-0003	1	SQY-CH00310001-0003	16-Aug-17	ARCH	Justin Curlew	HVAC unit install-Portion of roof to remain open	28-Aug-17	25-Sep-17
TC-006-RFI-G-0005	1	SQY-CH00310001-0005	16-Aug-17	PIPE	Etienne Fortin	Mechanical Coupling Usage	28-Aug-17	1-Sep-17
TC-006-RFI-G-0007	1	SQY-CH00310001-0007	24-Aug-17	ARCH	Justin Curlew	SSB earlier completion of block walls	7-Sep-17	
TC-006-RFI-G-0008	1	SQY-CH00310001-0008	01-Sep-17	ELEC	Justin Curlew	Tray Support CAD drawings	7-Sep-17	5-Oct-17
TC-006-RFI-G-0009	1	SQY-CH00310001-0009	01-Sep-17	PIPE	Etienne Fortin	Mech coupling usage CB11 old	7-Sep-17	22-Sep-17
TC-006-RFI-G-0009	2	SQY-CH00310001-0009	01-Sep-17	PIPE	Etienne Fortin	Mech coupling usage CB11	7-Sep-17	22-Sep-17
TC-006-RFI-G-0009	3	SQY-CH00310001-0009	05-Oct-17	PIPE	Etienne Fortin	Mech coupling usage CB11	19-Oct-17	16-Oct-17
TC-006-RFI-G-0010	1	SQY-CH00310001-0010	05-Sep-17	PIPE	Daniel Parsons	Paint requirements for 3437	14-Sep-17	22-Sep-17
TC-006-RFI-G-0011	1	SQY-CH00310001-0011	05-Sep-17	PIPE	Daniel Parsons	CRN requirement for 3437	14-Sep-17	3-Oct-17
TC-006-RFI-G-0012	1	SQY-CH00310001-0012	05-Sep-17	PIPE	Daniel Parsons	RF or FF flanges for cast iron valves	14-Sep-17	20-Sep-17
TC-006-RFI-G-0013	1	SQY-CH00310001-0013	15-Sep-17	PIPE	Daniel Parsons	Replacing a Reducing Lateral with a Latrolet.	28-Sep-17	25-Sep-17
TC-006-RFI-G-0014	1	SQY-CH00310001-0014	19-Sep-17	PIPE	Daniel Parsons	CS or SS Reducer	03-Oct-17	26-Sep-17
TC-006-RFI-G-0015	1	SQY-CH00310001-0015	21-Sep-17	PIPE	Daniel Parsons	Accepted Valve for VBA12. System 3442	05-Oct-17	26-Sep-17
TC-006-RFI-G-0016	1	SQY-CH00310001-0016	27-Sep-17	ARCH	Curtis Doyle	Conflicting Information on DWG's	04-Oct-17	20-Oct-17
TC-006-RFI-G-0017	1	SQY-CH00310001-0017	27-Sep-17	ARCH	Curtis Doyle	Securing Stud Track to Floor and Ceiling	04-Oct-17	16-Oct-17
TC-006-RFI-G-0018	1	SQY-CH00310001-0018	03-Oct-17	PIPE	Daniel Parsons	VBA07 or VBA06, System 3441, Class GB11	17-Oct-17	16-Oct-17
TC-006-RFI-G-0019	1	SQY-CH00310001-0019	03-Oct-17	PIPE	Daniel Parsons	Drain Trap, System 3441, Class GB11	17-Oct-17	16-Oct-17
TC-006-RFI-G-0020	1	SQY-CH00310001-0020	06-Oct-17	PIPE	Daniel Parsons	Vent Caps, system 3437	20-Oct-17	20-Oct-17
TC-006-RFI-G-0021	1	SQY-CH00310001-0021	05-Oct-17	PIPE	Daniel Parsons	Supports - Model vs Iso, System 3446	19-Oct-17	16-Oct-17
TC-006-RFI-G-0022	1	SQY-CH00310001-0022	06-Oct-17	PIPE	Daniel Parsons	PA02 Material - 3444	20-Oct-17	20-Oct-17
TC-006-RFI-G-0023	1	SQY-CH00310001-0023	06-Oct-17	PIPE	Daniel Parsons	Support Type S-J51-42	20-Oct-17	16-Oct-17
TC-006-RFI-G-0024	1	SQY-CH00310001-0024	06-Oct-17	PIPE	Daniel Parsons	GB11 fittings	20-Oct-17	20-Oct-17
TC-006-RFI-G-0025	1	SQY-CH00310001-0025	06-Oct-17	PIPE	Daniel Parsons	Y Strainer Drain Sizes	20-Oct-17	20-Oct-17
TC-006-RFI-G-0026	1	SQY-CH00310001-0026	11-Oct-17	PIPE	Daniel Parsons	24in Pipe Shoes	25-Oct-17	20-Oct-17
TC-006-RFI-G-0027	1	SQY-CH00310001-0027	16-Oct-17	ALL	Justin Curlew	Identified Method Statements and Critical Lifts	26-Oct-17	
TC-006-RFI-G-0028	1	SQY-CH00310001-0028	17-Oct-17	ELEC	Justin Curlew	Alternate/Obsolete Lighting Types	26-Oct-17	
TC-006-RFI-G-0029	1	SQY-CH00310001-0029	18-Oct-17	EMCS	Justin Curlew	Distech products for EMCS	27-Oct-17	26-Oct-17
TC-006-RFI-G-0030	1	SQY-CH00310001-0030	18-Oct-17	PIPE	Daniel Parsons	Painting Pipe	01-Nov-17	26-Oct-17
TC-006-RFI-G-0031	1	SQY-CH00310001-0031	18-Oct-17	PIPE	Daniel Parsons	Location of 3352-DF-7000	01-Nov-17	
TC-006-RFI-G-0032	1	SQY-CH00310001-0032	18-Oct-17	ARCH	Etienne Fortin	Securing Stud Track to Ceiling (Q-Decking)	01-Nov-17	
TC-006-RFI-G-0033	1	SQY-CH00310001-0033	18-Oct-17	PIPE	Etienne Fortin	Onsite RT Clarification	01-Nov-17	30-Oct-17
TC-006-RFI-G-0034	1	SQY-CH00310001-0034	20-Oct-17	PIPE	Justin Curlew	Drawing CAD files	03-Nov-17	
TC-006-RFI-G-0035	1	SQY-CH00310001-0035	23-Oct-17	PIPE	Etienne Fortin	Substitution for 390 high lintel block	04-Nov-17	
TC-006-RFI-G-0036	1	SQY-CH00310001-0036	27-Oct-17	QA	Justin Curlew	Supplier Manuals	07-Nov-17	
TC-006-RFI-G-0037	1	SQY-CH00310001-0037	30-Oct-17	QA	Justin Curlew	Shop drawing Submittal	10-Nov-17	
TC-006-RFI-G-0038	2	SQY-CH00310001-0038	01-Nov-17	ARCH	Etienne Fortin	Relocation North wall room 2032 and Structural bracing	11-Nov-17	
TC-006-RFI-G-0039	1	SQY-CH00310001-0039	01-Nov-17	ELEC	Justin Curlew	Anti-condensation Heater requirements	11-Nov-17	
TC-006-RFI-G-0040	1		01-Nov-17	PIPE	Daniel Parsons	Copper Brazing or Soldering	11-Nov-17	

7.4 ECN

There are two ECN's received for this period:

NALCOR Engineering Change Notice #	RECEPTION DATE	DISCIPLINE	DESCRIPTION	REPLY REQUIRED	REPLY DATE
ECN-CH0031001-0001	1-Sep-17	ARCH	Revised Architectural Technical Specification (cementitious fireproofing)	15-Sep-17	
ECN-CH0031001-0002	19-Sep-17	PIPE	Revised Mechanical Technical Specification (Ball Valve VBA10)	3-Oct-17	
ECN-CH0031001-0003	29-Sep-17	PIPE	Revised Isometric Drawing (Addition of Butterfly Valve - VBU01)	13-Oct-17	
ECN-CH0031001-0004	29-Sep-17	ELEC	Revised Electrical Drawing Submissions	13-Oct-17	
ECN-CH0031001-0005	20-Oct-17	ARCH	Elevator Masonry Walls - Architectural Drawing	3-Nov-17	



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

8. Cost and Financial Report (Section 6 & 13)

8.1 Contract Price

No change order has been approved during this period. Therefore, the actual contract status is as follow:

Original Contract Amount:	\$ 192,843,148.06
Approved Change Orders:	\$ 0.00
Total Contract Amount:	\$ 192,843,148.06

8.2 Contract Changes

Change Order 0002 for a credit of \$140,000 is pending execution.

Contractor to submit CHR-CH0031001-0007 proposal for ECN 0004 by November 10, 2017.

Contractor to submit CHR-CH0031001-0009 proposal for ECN 0005 by November 3, 2017.

See appendix 7 – Change order log

Previous Period	Current Period	Variance
\$192,843,148.06	\$192,843,148.06	\$0.00



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

8.3 Contract Incurred Cost Flow

The table below represent the incurred cost flow amount for the period and the remaining cost to be incurred until end of Term.

Description	Original Contract Price	Actual Cost Incurred to Date	Cost to be Incurred to Remainder of Term	Total Cost
Mobilization (Price Item 1)	\$1,083,805.37	\$303,465.50	\$ 780,339.87	\$ 1,083,805.37
Mobilization - LABOUR (Price Item 1)	\$833,302.62	\$255,423.38	\$ 577,879.24	\$ 833,302.62
Site Installation (Price Item 2)	\$4,091,564.88	\$113,745.50	\$ 3,977,819.38	\$ 4,091,564.88
Demobilization (Price Item 3)	\$384,818.37	\$ -	\$ 384,818.37	\$ 384,818.37
Demobilization - LABOUR (Price Item 3)	\$505,201.37	\$ -	\$ 505,201.37	\$ 505,201.37
Staff Labour (Price Item PM)	\$34,202,483.60	\$4,397,071.29	\$ 29,805,412.31	\$ 34,202,483.60
Estimate of Travel Cost for Trades Labour (Price Item 4)	\$4,975,871.23	\$21,661.27	\$ 4,954,209.96	\$ 4,975,871.23
Letter of Credit - (Price Item 4c & 4d)	\$3,549,260.39	\$2,697,437.90	\$ 851,822.49	\$ 3,549,260.39
PIPING/MECHANICAL (Price Items 5-1258b, 1659 - 1673)	\$22,179,026.56	\$116,354.56	\$ 22,062,672.00	\$ 22,179,026.56
PIPING/MECHANICAL - LABOUR (Price Items 5-1258b, 1659 - 1673)	\$18,111,388.51	\$ -	\$ 18,111,388.51	\$ 18,111,388.51
HVAC SYSTEM (Price Items 1259-1286.5, 1674 - 1701.4)	\$14,386,754.65	\$ -	\$ 14,386,754.65	\$ 14,386,754.65
HVAC SYSTEM - LABOUR (Price Items 1259-1286.5, 1674 - 1701.4)	\$9,335,770.40	\$ -	\$ 9,335,770.40	\$ 9,335,770.40
ELECTRICAL (Price Items 1287-1587a, 1702 - 1725)	\$29,988,173.53	\$161,813.53	\$ 29,826,360.00	\$ 29,988,173.53
ELECTRICAL - LABOUR (Price Items 1287-1587a, 1702 - 1725)	\$27,608,104.34	\$ -	\$ 27,608,104.34	\$ 27,608,104.34
ARCHITECTURAL (Price Items 1588- 1656)	\$4,986,924.86	\$158,819.57	\$ 4,828,105.29	\$ 4,986,924.86
ARCHITECTURAL - LABOUR (Price Items 1588- 1656)	\$15,597,627.44	\$ -	\$ 15,597,627.44	\$ 15,597,627.44
DIESEL GENERATOR SYSTEM (Price Items 1657 - 1658, 1726)	\$784,070.16	\$ -	\$ 784,070.16	\$ 784,070.16
DIESEL GENERATOR SYSTEM - LABOUR (Price Items 1657 - 1658, 1726)	\$238,999.78	\$ -	\$ 238,999.78	\$ 238,999.78
Total	\$ 192,843,148.06	\$ 8,225,792.50	\$ 184,617,355.56	\$ 192,843,148.06

Figure 1 - Incurred Cash flow



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

8.4 Invoice and Payment Status

8.4.1 Payment Certificate

Payment certificates sent during the period:

Item	Payment Certificate Description	Amount (\$)	Issue Date	Status	Approval/Rejection Date	Amount (\$) Approved	Comments
1	LOC-Work	\$3,796,705.72	25-Jul-2017	Approved	2-Aug-2017	\$ 2,697,437.90	Rejected \$1,099,267.82 - staff labour
2	Neutral Funding - Sept/17	\$225,161.64	27-Jul-2017	Approved	2-Aug-2017	\$ 225,161.64	
3	Neutral Funding - Oct/17	\$1,679,612.56	22-Aug-2017	Approved	24-Aug-2017	\$ 1,679,612.56	
4	Staff Labour - Jul/Aug17	\$2,198,535.65	25-Aug-2017	Rejected	13-Sep-2017		Rejected \$2,198,535.65 - staff labour
5	Mob - A Series Doc's	\$162,570.75	15-Sep-2017	Approved	20-Oct-2017	\$ 162,570.75	
6	Neutral Funding - Nov/17	\$1,421,617.70	22-Sep-2017	Approved	6-Oct-2017	\$ 1,421,617.70	
7	Monthly Progress - Sept/17	\$3,083,293.48	25-Sep-2017	Approved	16-Oct-17	\$ 3,073,054.09	\$10,239.38 reconciliation PLA rejected pending approval of billing template.
8	Neutral Funding - Dec/17	\$2,199,228.97	6-Oct-2017	Approved	30-Oct-17	\$ 2,199,228.97	
9	PO Issuance	\$3,042.78	6-Oct-2017	Pending-Company		\$ -	
10	Neutral Funding - Jan/18	\$2,218,925.41	20-Oct-2017	Approved	30-Oct-17	\$ 2,218,925.41	
11	Monthly Progress - Oct/17	\$1,212,922.40	25-Oct-2017	Pending-Company		\$ -	
Total		\$ 18,201,617.06				\$ 13,677,609.02	

Figure 1 - Payment Certificate

8.4.2 Invoice and Payment Status

CH0031-001 - Supply & Install Mechanical & Electrical Auxiliaries											
Invoicing Summary - (CAD)											
Invoice #	Payment Certificate	Invoice Description	Invoice Date	Forecasted Payment Date	Subtotal	Holdback	Net	Tax	Invoice Total (including holdback & taxes)	Date Paid	Amount Paid
9000085099	CH0031001-0001	LOC-Work	4-Aug-17	3-Sep-17	\$ 2,697,437.90	\$ -	\$ 2,697,437.90	\$ 404,615.69	\$ 3,102,053.59	5-Sep-2017	\$ 3,102,053.59
9000085106	CH0031001-0002	Neutral Funding - Sept/17	4-Aug-17	3-Sep-17	\$ 225,160.64	\$ 22,516.06	\$ 202,644.58	\$ 30,396.69	\$ 233,041.26	5-Sep-2017	\$ 233,041.26
9000086263	CH0031001-0003	Neutral Funding - Oct/17	25-Aug-17	24-Sep-17	\$ 1,679,612.56	\$ 167,961.26	\$ 1,511,651.30	\$ 226,747.70	\$ 1,738,399.00	5-Oct-2017	\$ 1,738,399.00
9000090539	CH0031001-0005	Mob - A Series Doc's	20-Oct-17	19-Nov-17	\$ 162,570.75	\$ 16,257.08	\$ 146,313.68	\$ 21,947.05	\$ 168,260.73		
9000089814	CH0031001-0006	Neutral Funding - Nov/17	6-Oct-17	5-Nov-17	\$ 1,421,617.70	\$ 142,161.77	\$ 1,279,455.93	\$ 191,918.39	\$ 1,471,374.32		
9000090344	CH0031001-0007	Monthly Progress - Sept/17	16-Oct-17	15-Nov-17	\$ 3,073,054.09	\$ 307,305.41	\$ 2,765,748.68	\$ 414,862.30	\$ 3,180,610.98		
9000091478	CH0031001-0008-R2	Neutral Funding - Dec/17	30-Oct-17	29-Nov-17	\$ 2,199,228.97	\$ 219,922.90	\$ 1,979,306.07	\$ 296,895.91	\$ 2,276,201.98		
9000091479	CH0031001-0010	Neutral Funding - Jan/18	30-Oct-17	29-Nov-17	\$ 2,218,925.41	\$ 221,892.54	\$ 1,997,032.87	\$ 299,554.93	\$ 2,296,587.80		
				Total:	\$ 13,677,608.02	\$ 1,098,017.01	\$ 12,579,591.01	\$ 1,886,938.65	\$ 14,466,529.66		\$ 5,073,493.85

Figure 2 - Invoicing Summary Template



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

8.5 Cash flow Forecast

The table below represent the cash forecast report for the next three (3) months of the project. A complete cash flow forecast is available as Attachment 1 –Cash flow Forecast.

Figure 2 - Appendix J Cash flow Forecast

17-Oct MONTH	17-Nov 4	17-Dec 5	17-Jan 6
Mobilization (Price Item 1)	\$ 509,388	\$-	\$ 270,952
Mobilization - LABOUR (Price Item 1)	\$ 369,274	\$ 208,605	\$-
Site Installation (Price Item 2)	\$ 113,655	\$ 113,655	\$ 113,655
Demobilization (Price Item 3)	\$-	\$-	\$-
Demobilization - LABOUR (Price Item 3)	\$-	\$-	\$-
Staff Labour (Price Item PM)	\$ 1,099,268	\$ 1,099,268	\$ 1,099,268
Estimate of Travel Cost for Trades Labour (Price Item 4)	\$ 164,596	\$ 120,659	\$ 186,540
Letter of Credit - (Price Item 4c & 4d)			
PIPING/MECHANICAL (Price Items 5-1258b, 1659 - 1673)	\$ 242,705	\$ 1,195,380	\$ 343,734
PIPING/MECHANICAL - LABOUR (Price Items 5-1258b, 1659 - 1673)	\$-	\$ 17,412	\$ 438,067
HVAC SYSTEM (Price Items 1259-1286.5, 1674 - 1701.4)	\$ 29,734	\$ 381,862	\$ 742,667
HVAC SYSTEM - LABOUR (Price Items 1259-1286.5, 1674 - 1701.4)	\$-	\$-	\$ 608,478
ELECTRICAL (Price Items 1287-1587a, 1702 - 1725)	\$ 828,581	\$ 1,073,409	\$ 1,444,433
ELECTRICAL - LABOUR (Price Items 1287-1587a, 1702 - 1725)	\$ 782,714	\$ 603,434	\$ 510,602
ARCHITECTURAL (Price Items 1588- 1656)	\$ 298,318	\$ 59,080	\$ 73,557
ARCHITECTURAL - LABOUR (Price Items 1588- 1656)	\$ 1,294,759	\$ 923,950	\$ 1,150,366
DIESEL GENERATOR SYSTEM (Price Items 1657 - 1658, 1726)	\$	\$ -	\$ 73,759
DIESEL GENERATOR SYSTEM - LABOUR (Price Items 1657 - 1658, 1726)	\$-	\$-	\$-
INVOICE AMOUNT	\$ 5,732,992	\$ 5,796,714	\$ 7,056,078
Mechanics Lien Holdback	\$ (573,299)	\$ (579,671)	\$ (705,608)
Repayment - Upfront Neutral Funding Payment		\$ 12,061,275	
Letter of Credit - Work - Agreement Article 7.1(a)			
Letter of Credit - Warranty Period - Agreement Article 7.1(b)			
TOTAL INVOICE AMOUNT	\$ 5,159,693	\$ 17,278,318	\$ 6,350,470



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

9. Change Request Status

CHR-CH0031001-0002 – Company and Contractor met on September 20, 2017 to discuss Contractor’s Change Request Response. Company requested additional information on the price breakdown, particularly in regards to staff time, and Contractor provided its philosophy on staff costs. Currently being discussed with sponsors.

CHO-0002 – Execution of this Change Order is pending discussion with Company on changes to the form. Change Order is for a credit of \$140,000.

CHR-CH0031001-0004 – Contractor submitted its Change Request Response on October 16, 2017 for \$195,033.75.

CHR-CH0031001-0005 – Contractor submitted its Change Request to Company on October 5, 2017. No response to date.

CHR-CH0031001-0006 – Contractor submitted its Change Request Response to Company on October 17, 2017 for \$1,589.63.

CHR-CH0031001-0007 – Contractor will provide a proposal for this Change Request on ECN 0004 by November 10, 2017.

CHR-CH0031001-000XX – Contractor submitted its Change Request for Company review on October 21, 2017 on Schedule 9 and Associated Delays. Waiting on Company number.

CHR-CH0031001-0008 – Contractor received this Change Request for ECN 0005 and is preparing a response.

10. Procurement Status

10.1 Award Status of Subcontractor or Supplies

10.1.1 Current EO’s

- C5509 Bathroom Accessories and Toilet Partitions
- J5600 Tubing, Fittings and Manifolds
- J5601 Tagged Field Instruments (Switches, Gauges, Transmitters)
- M5602 Strainers and Filters
- M5603 Water Heaters
- M5607 Waste Water Treatment
- M5609 Hoist in Dewatering Gallery
- M5610 MOBILE PUMP-FILTERING UNIT



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

- L5110 Misc Piping Materials And Accessories

10.1.2 Current RFP's

- E5200 Electrical / Instrumentation / Telecom Cables
- E5207 Cable Connectors (Glands)
- E5208 Electrical Termination Devices
- M5606 DOMESTIC WATER TREATMENT PLANT
- L5101 Valves
- SC004 Powerhouse Fire Detection System

Under Technical Review

- C5504 Insulation and Vapor Barrier
- C5507 Fire Stop Materials
- C5508 Doors and Windows
- E5203 Interior Lighting
- E5204 Transformers
- E5205 Electrical Distribution
- E5208 Electrical Termination Devices
- H5300 HVAC Air Handling Units
- H5301 HVAC Fans
- H5302 Dampers
- H5304 Duct Heaters and HVAC Terminal Units
- H5305 HVAC Condensers
- H5307 Humidifiers
- M5601 Pumps
- M5605 Compressors
- L5101 Valves
- SC005 Powerhouse Fire Protection System

10.1.3 Package Awards

- C5501 Masonry Block Walls
- C5502 Drywall, Drop Ceiling and Accessories



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

- E5201 Grounding
- SC009 Lighting Control Panel
- SC009 Temporary construction power design
- SC009 ATS & Load Management System
- SC009 Custom Built Control Panels (Mech Systems)
- SC009 EMCS HVAC CONTROL SYSTEM
- SC009 Telecoms Panels
- SC010 HVAC Duct Fabrication
- SC006 Pipe Fabrication (Mugafab)

11. Environmental and Regulatory

11.1 Status

Environmental plan has been approved on October 6.

11.2 Environmental Reporting

	MOE Reportable Spill											
	Total Spills - On Land (Liters)			On Land (Liters)			Total Spills - In Water (Liters)			Total Sediment Spills (Liters)		
	≤ 10	≥ 10	≥ 100	≤ 10	≥ 10	> 100	≤ 10	≥ 10	≥ 100	≤ 10	≥ 10	≥ 100
Period	0	0	-	-	-	0	-	-	-	-	-	-
Cumulative to-date	0	0	-	-	-	0	-	-	-	-	-	-

11.3 Permits

11.3.1 Permit Activities

Contractor’s construction manager has begun early steps to define and secure early permit requirements required for site mobilization activities.



Doc. Name:	MONTHLY PROGRESS REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-PM-A06-004-01
Rev:	A1

11.3.2 Key upcoming permit

Full list of permits outlined in the below table.

PERMIT #	DOCUMENT TITLE	Date Required	STATUS
4E-CON-3000-0001	Building Accessibility Design Registration / Exemption Registration - Temporary Admin Trailer Complex	Sept. 15/17	Approved
4E-CON-3000-0003	Building Accessibility Design Registration / Exemption Registration - Temporary Lunch Trailer Complex	Oct. 15/17	Approved
TBD	GAP Registration - Double Wall Daytank 3437-TK-6002	Mar. 30/18	Not Submitted
TBD	GAP Registration - Above Ground Storage Tank 3437-TK-6001	Mar. 30/18	Not Submitted
TBD	GAP Registration - Oil Storage Tank 3446-TK-6000	Mar. 30/18	Not Submitted
TBD	GAP Registration - Oil Storage Tank 3446-TK-6001	Mar. 30/18	Not Submitted
TBD	GAP Registration - Oil Water Separator 3441-OWS-5000	Mar. 30/18	Not Submitted
TBD	GAP Registration - Oil Water Separator 3442-OWS-5000	Mar. 30/18	Not Submitted
TBD	GAP Registration - Oil Water Separator 344A-OWS-5000	Mar. 30/18	Not Submitted
TBD	Diesel Generator Registration Form	June 30/18	Not Submitted
TBD	Design Registration of Pressure Piping System- high pressure compressed air 3442	Nov. 20/ 17	Not Submitted
TBD	Design Registration of Pressure Piping System- air brake system	Nov. 20/ 17	Not Submitted
TBD	Used Oil Storage Tank System Application	Nov. 30/ 17	Not Submitted
4E-CON-2000-0105	Building Accessibility Design Registration / Exemption Registration - Astaldi warehouse	Oct. 15th	Received
TBD	Design Registration of Pressure Piping System- low pressure compressed air 3441	Nov. 20/ 17	Submitted
TBD	Building Accessibility Design Registration / Exemption Registration - Temporary Lunch/office Trailer-Warehouse Area	Nov. 20/ 17	Submitted
TBD	Building Accessibility Design Registration / Exemption Registration - Temporary Office Trailers E2 Area	Nov. 30/ 17	Submitted
TBD	Septic Systems less than 4,546 L/day flow - Admin Area Trailer Complex	Oct. 1/17	Submitted
PE-2017 107596 00	Electrical Permit - Admin Area	Sept. 15/17	Submitted & Received
PE-2017 107602 00	Electrical Permit - Powerhouse Area	Sept. 15/17	Submitted & Received

12. Provincial Benefits Report (Exhibit 13)

Contractor has implemented processes to facilitate monthly reporting requirements. First upload of Contractor data was processed October 6th, 2017 for September reporting period.

13. Monthly Risk Report

Risk Management Plan approved.

Update of the Risk Register and internal risk review.

Exhibit P-02346 Pages 24 – 96
have been fully redacted and
replaced with this page.



Discipline	POP No.	Long Lead	Description	EOI Posted Date Forecast (Green = Actual)	RFP Release Date Original Forecast	RFP Release Date Current Forecast	RFP Release Date Actual	Purchase Order Issue Date Planned	Purchase Order Issue Date Forecast	Purchase Order Issue Date Actual	Date of 1st Material Received Planned	Date of 1st Material Received Forecast	Date of 1st Material Received Actual
Architectural	C5501		Masonry Block Walls	24-Aug-17	25-Aug-17	31-Aug-17	1-Sep-17	22-Sep-17	6-Oct-17	5-Oct-17	22-Oct-17	16-Oct-17	13-Oct-17
Architectural	C5502		Drywall, Drop Ceiling and Accessories	24-Aug-17	25-Aug-17	31-Aug-17	1-Sep-17	22-Sep-17	2-Oct-17	2-Oct-17	6-Oct-17	9-Oct-17	9-Oct-17
Architectural	C5503		Flooring Materials (Vinyl, Ceramic, etc...)	1-Dec-17	29-Dec-17	19-Jan-18		21-Dec-17	9-Feb-18		23-Feb-18	1-Jun-18	
Architectural	C5504		Insulation and Vapour Barrier	23-Aug-17	6-Sep-17	15-Sep-17	15-Sep-17	6-Oct-17	3-Nov-17		22-Nov-17	29-Dec-17	
Architectural	C5504		Duct Insulation	23-Aug-17	6-Sep-17	13-Oct-17	15-Sep-17	3-Nov-17	3-Nov-17		15-Dec-17	29-Dec-17	
Architectural	C5504		Pipe Insulation	23-Aug-17	6-Sep-17	13-Oct-17	15-Sep-17	3-Nov-17	3-Nov-17		26-Jan-18	16-Feb-18	
Architectural	C5505		Signage	3-Mar-18	17-Mar-18	17-Mar-18		7-Apr-18	7-Apr-18		25-Mar-18	30-Jun-18	
Architectural	C5506		Cabinets	1-Dec-17	15-Dec-17	15-Dec-17		15-Jan-18	15-Jan-18		2-Mar-18	14-May-18	
Architectural	C5507		Fire Stop Materials	23-Aug-17	6-Sep-17	22-Sep-17	20-Sep-17	24-Nov-17	24-Nov-17		13-Dec-17	26-Jan-18	
Architectural	C5508		Doors and Windows	7-Sep-17	9-Oct-17	18-Sep-17	28-Sep-17	9-Oct-17	3-Nov-17		22-Jan-18	26-Jan-18	
Architectural	C5509		Bathroom Accessories and Toilet Partitions	4-Oct-17	30-Oct-17	12-Jan-18		9-Feb-18	2-Feb-18		9-Apr-18	22-Jun-18	
Architectural	C5510		Wall and Corner Guards	1-Dec-17	30-Oct-17	12-Jan-18		2-Feb-18	2-Feb-18		9-Apr-18	22-Jun-18	
Architectural	SC013		Specialty Floor Coatings (Epoxy / Urethane)	23-Aug-17	30-Oct-17	19-Jan-18		13-Dec-17	9-Feb-18		9-Apr-18	29-Jun-18	
Coatings	R5800		Paint	Direct Purchase	30-Oct-17	24-Nov-17		15-Dec-17	15-Dec-17		9-Apr-18	9-Apr-18	
Coatings	SC012		Cementitious Fireproofing Subcontract	22-Aug-17	12-Sep-17	15-Sep-17	22-Sep-17	6-Oct-17	10-Nov-17		12-Dec-17	26-Jan-18	
Electrical	E5200		Electrical / Instrumentation / Telecom Cables	16-Aug-17	30-Oct-17	20-Oct-17	19-Oct-17	10-Nov-17	10-Nov-17		13-Dec-17	29-Dec-17	
Electrical	E5200		POWER CABLE – 25 KV	16-Aug-17	30-Aug-17	20-Oct-17	19-Oct-17	10-Nov-17	10-Nov-17		13-Dec-17	12-Jan-18	
Electrical	E5200		Category 6 Data Tuff ACIC	16-Aug-17	30-Aug-17	20-Oct-17	19-Oct-17	10-Nov-17	10-Nov-17		13-Dec-17	12-Jan-18	
Electrical	E5201		Grounding	26-Jul-17	9-Aug-17	21-Aug-17	21-Aug-17	11-Sep-17	6-Oct-17	13-Oct-17	22-Nov-17	29-Dec-17	
Electrical	E5202		Cable Trays, Unistruts	21-Jul-17	4-Aug-17	11-Aug-17	11-Aug-17	8-Sep-17	8-Sep-17	15-Sep-17	6-Oct-17	5-Oct-17	5-Oct-17
Electrical	E5203		Interior Lighting	26-Jul-17	9-Aug-17	15-Sep-17	14-Sep-17	3-Nov-17	3-Nov-17		15-Nov-17	19-Jan-18	
Electrical	E5203		Exterior Lighting	26-Jul-17	9-Aug-17	15-Sep-17	14-Sep-17	3-Nov-17	3-Nov-17		15-Nov-17	19-Jan-18	
Electrical	E5203		Exit Signs	26-Jul-17	9-Aug-17	15-Sep-17	14-Sep-17	3-Nov-17	3-Nov-17		15-Nov-17	19-Jan-18	
Electrical	E5204	x	Station Service Transformers	1-Aug-17	15-Aug-17	22-Aug-17	23-Aug-17	12-Oct-17	3-Nov-17		24-Jul-18	14-Sep-18	
Electrical	E5204	x	Medium Voltage Transformers	1-Aug-17	15-Aug-17	22-Aug-17	23-Aug-17	12-Oct-17	3-Nov-17		24-Jul-18	14-Sep-18	
Electrical	E5204	x	Dry bType Transformers up to 600V Primary	1-Aug-17	15-Aug-17	22-Aug-17	23-Aug-17	12-Oct-17	3-Nov-17		12-Dec-17	2-Feb-18	
Electrical	E5205	x	Panel Boards	21-Jul-17	4-Aug-17	25-Aug-17	29-Aug-17	4-Nov-17	24-Nov-17		15-Dec-17	9-Mar-18	
Electrical	E5205	x	Disconnect Switches	21-Jul-17	4-Aug-17	25-Aug-17	29-Aug-17	25-Nov-17	24-Nov-17		17-Nov-17	9-Feb-18	
Electrical	E5205	x	LowVoltage Switchgear	21-Jul-17	4-Aug-17	25-Aug-17	29-Aug-17	25-Nov-17	24-Nov-17		21-Sep-18	14-Dec-18	
Electrical	E5205	x	Motor Starters	21-Jul-17	4-Aug-17	25-Aug-17	29-Aug-17	25-Nov-17	24-Nov-17		15-Dec-17	9-Mar-18	
Electrical	E5205	x	600 V MOTOR CONTROL CENTRES	21-Jul-17	4-Aug-17	25-Aug-17	29-Aug-17	25-Nov-17	24-Nov-17		6-Apr-18	29-Jun-18	
Electrical	E5205	x	Enclosed Bus Assemblies	21-Jul-17	4-Aug-17	25-Aug-17	29-Aug-17	2-Dec-17	24-Nov-17		9-Feb-18	4-May-18	
Electrical	E5206	x	UPS Systems	16-Aug-17	10-Oct-17	27-Oct-17		3-Nov-17	24-Nov-17		1-May-18	18-May-18	
Electrical	E5206	x	125VDC Batteries, Battery Racks and Chargers	16-Aug-17	10-Oct-17	27-Oct-17		3-Nov-17	24-Nov-17		1-May-18	18-May-18	
Electrical	E5206	x	48VDC Batteries, Battery Racks and Chargers	16-Aug-17	10-Oct-17	27-Oct-17		3-Nov-17	24-Nov-17		1-May-18	18-May-18	
Electrical	E5206	x	UPS Bypass Static Switch	16-Aug-17	10-Oct-17	27-Oct-17		3-Nov-17	24-Nov-17		1-May-18	18-May-18	
Electrical	E5207		Cable Connectors (Glands)	23-Aug-17	6-Sep-17	24-Oct-17	24-Oct-17	14-Nov-17	14-Nov-17		22-Nov-17	9-Jan-18	
Electrical	E5208		Electrical Junction Boxes and Splitters	24-Aug-17	7-Sep-17	13-Oct-17	12-Oct-17	3-Nov-17	3-Nov-17		23-Nov-17	29-Dec-17	
Electrical	E5208		Electrical Termination Devices	24-Aug-17	7-Sep-17	13-Oct-17	12-Oct-17	3-Nov-17	3-Nov-17		23-Nov-17	29-Dec-17	
Electrical	E5210		Electric Heat	16-Aug-17	1-Jan-18	12-Jan-18		29-Jan-18	9-Feb-18		14-May-18	25-May-18	
Electrical	SC009	x	Lighting Control Panel	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Electrical	SC009	x	Temporary Ground Cables (Operations)	Direct Purchase	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Electrical	SC009		Temporary construction power design	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17	6-Oct-17	6-Oct-17	22-Sep-17
Electrical	SC009	x	ATS & Load Management System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Electrical	SC009	x	Custom Built Control Panels (Mech Systems)	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
HVAC	H5300	x	FILTER HOUSING	16-Aug-17	30-Aug-17	22-Sep-17	27-Sep-17	8-Nov-17	10-Nov-17		30-May-18	13-Jun-18	
HVAC	H5300	x	AIR CONDITIONING UNIT	16-Aug-17	30-Aug-17	22-Sep-17	27-Sep-17	8-Nov-17	10-Nov-17		30-May-18	13-Jun-18	
HVAC	H5300	x	AIR COOLING UNIT	16-Aug-17	30-Aug-17	22-Sep-17	27-Sep-17	8-Nov-17	10-Nov-17		30-May-18	13-Jun-18	
HVAC	H5300	x	Heating & Ventilation Units	16-Aug-17	30-Aug-17	22-Sep-17	27-Sep-17	8-Nov-17	10-Nov-17		30-May-18	13-Jun-18	
HVAC	H5301	x	HVAC Fans	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	2-Nov-17	24-Nov-17		28-Feb-18	18-May-18	
HVAC	H5301		CENTRIFUGAL FANS	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	2-Dec-17	24-Nov-17		28-Feb-18	18-May-18	
HVAC	H5301		HIGH PRESSURE BLOWER FANS	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	2-Dec-17	24-Nov-17		28-Feb-18	18-May-18	
HVAC	H5301		ELECTROSTATIC MIST COLLECTOR FANS	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	2-Nov-17	24-Nov-17		28-Feb-18	18-May-18	
HVAC	H5301		MIXED FLOW INLINE FANS	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	2-Nov-17	24-Nov-17		28-Feb-18	18-May-18	
HVAC	H5301		INLINE BIFURCATED FIBREGLASS CENTRIFUGAL BLOWERS	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	2-Dec-17	24-Nov-17		28-Feb-18	18-May-18	
HVAC	H5301		CENTRIFUGAL INLINE FANS	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	2-Nov-17	24-Nov-17		28-Feb-18	18-May-18	
HVAC	H5301		CENTRIFUGAL EXHAUST FANS	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	24-Nov-17	24-Nov-17		28-Feb-18	18-May-18	



Discipline	POP No.	Long Lead	Description	EOI Posted Date Forecast (Green = Actual)	RFP Release Date Original Forecast	RFP Release Date Current Forecast	RFP Release Date Actual	Purchase Order Issue Date Planned	Purchase Order Issue Date Forecast	Purchase Order Issue Date Actual	Date of 1st Material Received Planned	Date of 1st Material Received Forecast	Date of 1st Material Received Actual
HVAC	H5301		EMERGENCY GENERATOR ENGINE EXHAUST SYSTEM FANS	26-Jul-17	9-Aug-17	25-Aug-17	29-Aug-17	2-Dec-17	24-Nov-17		28-Feb-18	18-May-18	
HVAC	H5302	x	Dampers	26-Jul-17	9-Aug-17	25-Aug-17	1-Sep-17	20-Oct-17	10-Nov-17		22-Nov-17	26-Jan-18	
HVAC	H5302		OPERATING DAMPERS	26-Jul-17	9-Aug-17	25-Aug-17	1-Sep-17	20-Oct-17	10-Nov-17		22-Nov-17	5-Jan-18	
HVAC	H5302		HEAVY DUTY BI-DIRECTIONAL DAMPERS	26-Jul-17	9-Aug-17	25-Aug-17	1-Sep-17	20-Oct-17	10-Nov-17		22-Nov-17	5-Jan-18	
HVAC	H5302		FIRE DAMPERS	26-Jul-17	9-Aug-17	25-Aug-17	1-Sep-17	20-Oct-17	10-Nov-17		22-Nov-17	5-Jan-18	
HVAC	H5304	x	HVAC Terminal Units	23-Aug-17	6-Sep-17	23-Sep-17	26-Sep-17	18-Dec-17	18-Dec-17		3-Jan-18	19-Mar-18	
HVAC	H5304	x	Duct Heaters	23-Aug-17	6-Sep-17	23-Sep-17	26-Sep-17	30-Oct-17	10-Nov-17		3-Jan-18	29-Jan-18	
HVAC	H5305	x	HVAC Condensers	23-Aug-17	6-Sep-17	15-Sep-17	20-Sep-17	8-Dec-17	8-Dec-17		21-Feb-18	27-Apr-18	
HVAC	H5307	x	Humidifiers	23-Aug-17	6-Sep-17	15-Sep-17	20-Sep-17	9-Dec-17	9-Dec-17		21-Feb-18	28-Apr-18	
HVAC	H5310		Grilles, Registers and Diffusers	1-Dec-17	15-Dec-17	5-Jan-18		26-Jan-18	26-Jan-18		12-Jan-18	6-Apr-18	
HVAC	SC009		EMCS HVAC CONTROL SYSTEM	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17	#VALUE!		
HVAC	SC010		Silencers	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17	#VALUE!		
HVAC	SC010		ROOF MOUNTED EXHAUST HOOD	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17	#VALUE!		
HVAC	SC010		REMOVABLE INSECT SCREEN	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17	#VALUE!		
HVAC	SC010		Ducting	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17	#VALUE!		
Instrumentation	J5600		Tubing, Fittings and Manifolds	25-Oct-17	8-Nov-17	3-Nov-17		24-Nov-17	24-Nov-17		29-Dec-17	19-Jan-18	
Instrumentation	J5601		Tagged Field Instruments	11-Oct-17	1-Dec-17	1-Dec-17		5-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		TEMPERATURE TRANSMITTER	11-Oct-17	1-Dec-17	1-Dec-17		5-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		DIFFERENTIAL PRESSURE SWITCH	11-Oct-17	1-Dec-17	1-Dec-17		12-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		LEVEL SWITCH	11-Oct-17	1-Dec-17	1-Dec-17		12-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		PRESSURE SWITCH	11-Oct-17	1-Dec-17	1-Dec-17		12-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		CURRENT TRANSMITTER	11-Oct-17	1-Dec-17	1-Dec-17		5-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		LEVEL TRANSMITTER	11-Oct-17	1-Dec-17	1-Dec-17		5-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		LEVEL Switch	11-Oct-17	1-Dec-17	1-Dec-17		12-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		SWITCH	11-Oct-17	1-Dec-17	1-Dec-17		12-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		PRESSURE TRANSMITTER	11-Oct-17	1-Dec-17	1-Dec-17		5-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5601		OVERFILL ALARM ACKNOWLEDGEMENT SWITCH	11-Oct-17	1-Dec-17	1-Dec-17		12-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5602		PRESSURE GAUGES	11-Oct-17	1-Dec-17	1-Dec-17		25-Jan-18	12-Jan-18		18-May-18	1-Jun-18	
Instrumentation	J5605	x	Generator Room Leak Detection System	26-Sep-17	10-Oct-17	27-Oct-17		2-Dec-17	25-Nov-17		3-Jun-18	16-Jun-18	
Instrumentation	J5606	x	Fuel Storage Tank Electrical Monitoring System	26-Sep-17	10-Oct-17	27-Oct-17		29-Nov-17	29-Nov-17		28-May-18	20-Jun-18	
Instrumentation	SC009		Instrumentation Junction Boxes	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17	18-May-18	18-May-18	
Mechanical	M5600	x	DOUBLE WALL DAY TANK	26-Sep-17	10-Oct-17	27-Oct-17		22-Nov-17	24-Nov-17		2-Jul-18	20-Jul-18	
Mechanical	M5600	x	CONCRETE ENCASED STEEL ABOVE GROUND TANK	26-Sep-17	10-Oct-17	25-Nov-17		23-Dec-17	23-Dec-17		2-Jul-18	18-Aug-18	
Mechanical	M5600	x	Diesel Electric Generating Unit	26-Sep-17	10-Oct-17	18-Nov-17		16-Dec-17	16-Dec-17		12-Mar-18	21-Apr-18	
Mechanical	M5601		DEWATERING PUMP	31-Jul-17	14-Aug-17	23-Aug-17	24-Aug-17	27-Oct-17	3-Nov-17		16-Apr-18	8-Jun-18	
Mechanical	M5601		SERVICE WATER PUMP	31-Jul-17	14-Aug-17	23-Aug-17	24-Aug-17	27-Oct-17	3-Nov-17		16-Apr-18	8-Jun-18	
Mechanical	M5601		LUBRICATION Water Pump	31-Jul-17	14-Aug-17	23-Aug-17	24-Aug-17	27-Oct-17	3-Nov-17		16-Apr-18	8-Jun-18	
Mechanical	M5601		SUBMERSIBLE PUMP	31-Jul-17	14-Aug-17	23-Aug-17	24-Aug-17	9-Dec-17	3-Nov-17		30-Oct-17	22-Dec-17	
Mechanical	M5601		PUMP (3352-P- 6000/6001)	31-Jul-17	14-Aug-17	23-Aug-17	24-Aug-17	27-Oct-17	3-Nov-17		16-Apr-18	8-Jun-18	
Mechanical	M5601		PUMP (3353-P- 5000/5001)	31-Jul-17	14-Aug-17	23-Aug-17	24-Aug-17	27-Oct-17	3-Nov-17		16-Apr-18	8-Jun-18	
Mechanical	M5602		SELF CLEANING STRAINER	11-Oct-17	25-Oct-17	27-Oct-17		13-Nov-17	25-Nov-17		3-Jun-18	16-Jun-18	
Mechanical	M5602		STRAINER	11-Oct-17	25-Oct-17	27-Oct-17		13-Nov-17	25-Nov-17		3-Jun-18	16-Jun-18	
Mechanical	M5602		Y-STRAINER	11-Oct-17	25-Oct-17	27-Oct-17		13-Nov-17	25-Nov-17		3-Jun-18	16-Jun-18	
Mechanical	M5602		Filters	11-Oct-17	25-Oct-17	27-Oct-17		13-Nov-17	25-Nov-17		3-Jun-18	16-Jun-18	
Mechanical	M5602		SAND FILTER	11-Oct-17	25-Oct-17	27-Oct-17		13-Nov-17	25-Nov-17		3-Jun-18	16-Jun-18	
Mechanical	M5602		FUEL OIL STRAINER	11-Oct-17	25-Oct-17	27-Oct-17		13-Nov-17	25-Nov-17		3-Jun-18	16-Jun-18	
Mechanical	M5603		CONTROL ROOM WATER HEATER	25-Oct-17	8-Nov-17	10-Nov-17		20-Nov-17	10-Dec-17		20-May-18	16-Jun-18	
Mechanical	M5603		MAIN WATER HEATER	25-Oct-17	8-Nov-17	10-Nov-17		20-Nov-17	9-Dec-17		20-May-18	16-Jun-18	
Mechanical	M5604		EYEWASH SYSTEM and HEATERS	27-Oct-17	10-Nov-17	10-Nov-17		9-Dec-17	9-Dec-17		6-May-18	2-Jun-18	
Mechanical	M5605	x	LOWPRESSURE COMPRESSOR	31-Jul-17	14-Aug-17	25-Aug-17	5-Sep-17	10-Oct-17	3-Nov-17		14-May-18	6-Jul-18	
Mechanical	M5605	x	HIGH PRESSURE COMPRESS OR	31-Jul-17	14-Aug-17	25-Aug-17	5-Sep-17	10-Oct-17	3-Nov-17		14-May-18	6-Jul-18	
Mechanical	M5606	x	DOMESTIC WATER TREATMENT PLANT	26-Sep-17	10-Oct-17	25-Oct-17	25-Oct-17	7-Jan-18	7-Jan-18		16-Sep-18	18-Nov-18	
Mechanical	M5607		Waste Water Treatment	25-Oct-17	8-Nov-17	18-Nov-17		16-Dec-17	16-Dec-17		27-May-18	26-May-18	
Mechanical	M5608		Diesel Fuel Oil System	27-Oct-17	10-Nov-17	10-Nov-17		19-Nov-17	8-Dec-17		27-May-18	15-Jun-18	
Mechanical	M5609		Hoist in Dewatering Gallery	4-Oct-17	18-Oct-17	10-Nov-17		8-Dec-17	8-Dec-17		13-May-18	1-Jun-18	
Mechanical	M5610		MOBILE PUMP-FILTERING UNIT	11-Oct-17	25-Oct-17	3-Nov-17		9-Dec-17	1-Dec-17		6-May-18	25-May-18	
Piping	L5100		Piping and Fittings	N/A	N/A	N/A		#VALUE!			28-Jan-00		



Discipline	POP No.	Long Lead	Description	EOI Posted Date Forecast (Green = Actual)	RFP Release Date Original Forecast	RFP Release Date Current Forecast	RFP Release Date Actual	Purchase Order Issue Date Planned	Purchase Order Issue Date Forecast	Purchase Order Issue Date Actual	Date of 1st Material Received Planned	Date of 1st Material Received Forecast	Date of 1st Material Received Actual
Piping	L5101		BALL VALVES	31-Aug-17	14-Sep-17	20-Oct-17	13-Oct-17	14-Nov-17	17-Nov-17		30-Jan-18	2-Mar-18	
Piping	L5101		AUTOMATIC CLOSING BALL VALVE	31-Aug-17	14-Sep-17	20-Oct-17	13-Oct-17	14-Nov-17	17-Nov-17		30-Jan-18	2-Mar-18	
Piping	L5101		FOOT VALVES	31-Aug-17	14-Sep-17	20-Oct-17	13-Oct-17	14-Nov-17	17-Nov-17		30-Jan-18	2-Mar-18	
Piping	L5101		SOLENOID VALVES	31-Aug-17	14-Sep-17	20-Oct-17	13-Oct-17	14-Nov-17	17-Nov-17		30-Jan-18	2-Mar-18	
Piping	L5101		CHECK VALVES	31-Aug-17	14-Sep-17	20-Oct-17	13-Oct-17	14-Nov-17	17-Nov-17		30-Jan-18	2-Mar-18	
Piping	L5101		ANTI-SYPHON VALVES	31-Aug-17	14-Sep-17	20-Oct-17	13-Oct-17	14-Nov-17	17-Nov-17		30-Jan-18	2-Mar-18	
Piping	L5101		BACKFLOW PREVENTER	31-Aug-17	14-Sep-17	20-Oct-17	13-Oct-17	14-Nov-17	17-Nov-17		30-Jan-18	2-Mar-18	
Piping	L5103		Oil Storage Tanks	31-Jul-17	1-Dec-17	25-Nov-17		19-Jan-18	23-Dec-17		3-Aug-18	28-Jul-18	
Piping	L5110		FLEXIBLE BRAIDED HOSES	11-Oct-17	25-Oct-17	17-Nov-17		8-Dec-17	8-Dec-17		9-Feb-18	16-Mar-18	
Piping	L5110		Misc Piping Materials And Accessories	11-Oct-17	25-Oct-17	17-Nov-17		8-Dec-17	8-Dec-17		9-Feb-18	16-Mar-18	
Piping	SC006	x	Service Water System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Shaft Seal Water System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Dewatering System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Drainage System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Oil Water Drainage	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Domestic Water System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Wastewater System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Lubricating/Hydraulic Oil System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Low Pressure Compressed Air System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Hi Pressure Compressed Air System	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Piping	SC006	x	Raw and Cooling Water Systems	Internal	N/A	N/A		#VALUE!	#VALUE!	5-Oct-17			
Risk and Loss	SC004	x	Powerhouse Fire Detection System –including the design, fabrication, supply, installation (where specialists are required), programming, testing, warranty and performance guarantee of the fire detection system.	11-Aug-17	25-Aug-17	24-Oct-17	24-Oct-17	3-Nov-17	21-Nov-17		13-Apr-18	29-May-18	
Risk and Loss	SC005	x	FLOW METER	11-Aug-17	25-Aug-17	15-Sep-17	15-Sep-17	27-Oct-17	3-Nov-17		16-Feb-18	30-Mar-18	
Risk and Loss	SC005	x	FIRE PUMP	11-Aug-17	25-Aug-17	15-Sep-17	15-Sep-17	27-Oct-17	3-Nov-17		27-Apr-18	8-Jun-18	
Risk and Loss	SC005	x	JOCKEY PUMP	11-Aug-17	25-Aug-17	15-Sep-17	15-Sep-17	27-Oct-17	3-Nov-17		16-Feb-18	30-Mar-18	
Risk and Loss	SC005	x	JOCKEY PUMP CONTROLLER	11-Aug-17	25-Aug-17	15-Sep-17	15-Sep-17	27-Oct-17	3-Nov-17		16-Feb-18	30-Mar-18	
Risk and Loss	SC005	x	Hydropneumatic Tank	11-Aug-17	25-Aug-17	15-Sep-17	15-Sep-17	27-Oct-17	3-Nov-17		16-Feb-18	30-Mar-18	
Risk and Loss	SC005	x	Powerhouse Fire Protection System – The work of this contract includes the design, fabrication, supply, installation (where specialists are required), programming, testing, warranty and performance guarantee of the fire protection system.	11-Aug-17	25-Aug-17	15-Sep-17	15-Sep-17	19-Oct-17	3-Nov-17		16-Feb-18	30-Mar-18	
Risk and Loss	SC005	x	INERGEN SYSTEM	11-Aug-17	25-Aug-17	15-Sep-17	15-Sep-17	27-Oct-17	3-Nov-17		16-Feb-18	30-Mar-18	
Risk and Loss	SC005	x	DELUGE VALVE CABINET	11-Aug-17	25-Aug-17	15-Sep-17	15-Sep-17	27-Oct-17	3-Nov-17		16-Feb-18	30-Mar-18	
Structural	SC011		Vibration and Seismic Control	26-Jul-17	9-Aug-17	11-Aug-17	11-Aug-17	31-Aug-17	31-Aug-17	1-Sep-17	5-Oct-17	13-Oct-17	22-Sep-17
Structural	SC011		Cable Tray Structural supports	26-Jul-17	9-Aug-17	11-Aug-17	11-Aug-17	31-Aug-17	31-Aug-17	1-Sep-17	26-Oct-17	27-Oct-17	22-Sep-17
Structural	SC011		Maintenance Access Electrical Shaft Platforms	26-Jul-17	9-Aug-17	11-Aug-17	11-Aug-17	8-Sep-17	8-Sep-17	1-Sep-17			
Structural	SC011		Maintenance Access Mechanical Shaft Platforms	26-Jul-17	9-Aug-17	11-Aug-17	11-Aug-17	8-Sep-17	8-Sep-17	1-Sep-17			
Telecoms	SC009	x	Telecoms Panels	Internal	N/A	N/A				5-Oct-17			



Monthly Risk Report (October 2017)

MFA-CG-SD-3440-RI-A03-0001-01

A03

Client Reference:

CH0031-001

Supply and Install Mechanical & Electrical Auxiliaries MF

Project Reference:

TC006

A2	01-Nov-17	Review	Elizabeth Percy, P. Eng Project Engineer	Laurie Hildebrand Risk Manager / Contract Administrator	Tim Harrington, P.Eng Project Manager
Rev.	Date	Issued for	Revised by	Checked by	Approval by



Doc. Name:	MONTHLY RISK REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-RI-A03-0001-01
Rev:	A2

Revision History

Rev.	Location of Change	Date of Rev.	Brief Description of Change
A2	N/A	01-Nov-17	Issued for Review
A1	N/A	25-Aug-17	Issued for Review



Doc. Name:	MONTHLY RISK REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-RI-A03-0001-01
Rev:	A2

TABLE OF CONTENTS

1. SUMMARY NARRATIVE.....4



Doc. Name:	MONTHLY RISK REPORT (OCTOBER 2017)
Doc. No.:	MFA-CG-SD-3440-RI-A03-0001-01
Rev:	A2

1. Summary Narrative

The first areas were turned over to Contractor, although after the Exhibit 9 dates in the Agreement, and Contractor commenced the permanent Work. The Risk Register has been updated based on the monthly risk review and the start of the permanent Work, including risks and related mitigation strategies to address the delayed start of the permanent Work. Contractor is working with Company to mitigate delays where possible. Contractor is continuing to focus on management of procurement of long lead items and materials for earlier work fronts. Company and Contractor are working to streamline Approvals of documents, drawings etc. where needed to facilitate procurement and upcoming and on-going Work.

Going forward as Work progresses, Contractor wishes to highlight the following risks:

- The location of Contractor's lunch trailer is still not finalized. The permit is with Company for Approval.
- Clash checking
- Quantity tracking and reporting
- Timely turnover of areas to minimize schedule impacts
- Off-Site QA inspection
- Night Shift
- Maintaining anticipated productivity levels

Additional details on the above risks are provided in the risk register.

Please find populated Risk Register attached based on approved template in document MFA-CG-SD-3440-RI-A04-0002-01.



Project Risk Management Register	
Risk Register	MFA-CG-SD-3440-RI-A04-0002-01
Date:	03-Oct-2017
Client:	Muskkrat Falls Corporation ("Company")
Project Name:	Supply and Install Mechanical & Electrical Auxiliaries MF
Contract Number / Project Ref	CH0031-001 / TC0006
Project Manager / Deputy:	Tim Harrington, P.Eng / Charles Lavigne
Project Sponsors:	Cahill - John J Henley, Ganotec - Mike Buckle
Risk Management Team:	Laurie Hildebrand

Category Legend	
ENG	Engineering
PRO	Procurement
HSE	Health, Safety & Environment
QUA	Quality
SCH	Schedule
CON	Construction
MC&C	Mechanical Completion & Commissioning
COM	Commercial

Likelihood	Consequences				
		Very Low	Low	Moderate	High
	Highly Unlikely	Level 1	Level 2	Level 3	Level 4
	Unlikely	Level 2	Level 3	Level 4	Level 5
	Likely	Level 3	Level 4	Level 5	Level 6
Highly Likely	Level 4	Level 5	Level 6	Level 7	

Legend	
Requires Input Information	
Automatically Formulated	

#	Cat.	Risk Definition	Description of Consequences	Initial Assessment				Mitigation/Safeguard	Comments	Status	Date Resolved	Revised Assessment				Residual Action		
				Likelihood	Consequence	Risk Level	Response					Likelihood	Consequence	Risk Level	Response	Risk Owner	Action Plan	Date Action Req'd
1	COM	Neutral Funding - Forecast Accuracy	Contractor would be Cash Negative.	Unlikely	Low	Level 3	Monitor	Progress will be managed on a weekly basis with input from ops. Schedule accuracy, manage actual percentage progress to get an accurate forecast for the upcoming month. Regularly reassess area accessibility and upcoming work fronts.	Monitoring effort continues. Workforce forecast for 2017 has changed and neutral funding requests will need to be adjusted.	Open		Unlikely	Moderate	Level 4	Plan for action	Tim Harrington	Project Controls and Finance team have been advised. Upcoming neutral funding invoices to be adjusted to account for new labour forecasts	
2	COM	Quantity variation tracking	Not being paid for the quantity installed.	Unlikely	Moderate	Level 4	Plan for action	Proper quantity tracking, train staff and craft on systems at time of mobilization and regularly through the project. Contractor will perform a full take off and track revised take off quantities in ops. Quantities will be tracked at time of material purchase. Full time quantity surveyor will be at Site.	Ongoing.	Open						Julie Canuel	> Quantity Surveyor mobilized. > Tracking of quantities during procurement ongoing.	
3	COM	Protest Delay - Site Shutdown	Productivity loss and schedule delay.	Likely	Low	Level 4	Plan for action	Notify the Company of delays. Work with Company and follow security plans in the event of an incident.	Ongoing. No issue this period.	Open						Tim Harrington		
4	CON	Lift plans	Unable to install equipment. Delay in schedule	Likely	Low	Level 4	Plan for action	Ensure all lift plans are in place before equipment arrives. Ensure all gear and certifications are in place prior to lift.	Ongoing. No issue this period.	Open						Robert Mercer		
5	CON	Routing of small bore and PVC piping	Not all small bore piping have isometrics may lead to clashes in the field. PVC is also field run.	Likely	Low	Level 4	Plan for action	Validate isometrics that are developed. Utilize 3D model for reference purposes.	Ongoing. No issue this period.	Open						Justin Curlew		
6	CON	Labour shortage	Cost, schedule and productivity impacts.	Unlikely	Moderate	Level 4	Plan for action	Follow labour collective agreement and explore outside labour if required. Measure the impact on the project and notify Company to minimize potential impacts.	Ongoing. No issue this period.	Open						Robert Mercer	Labour Relations Manager is in place.	
7	CON	Coordination of the Overhead Crane for Critical lifts	Delays.	Unlikely	High	Level 5	Plan for action	Contractor will define critical lifts in execution plan. Company to coordinate with other contractors to ensure crane availability when needed.	No OH crane lifts needed to date.	Open						Robert Mercer		
8	CON	Congested Area - Interface with other Company contractors	Delays, reduced productivity.	Likely	High	Level 6	Immediate action	Company to coordinate between Contractor and other Company contractors to ensure maximum efficiency. Contractor to attend coordination meetings.	Issues encountered when trying to move first material deliveries into the Powerhouse due to congestion in SSB. This issue remains a risk.	Open						Robert Mercer	Contractor is regularly attending SIMOPS meetings and construction interface meetings.	
9	CON	Installation of HVAC unit via south service bay.	Increased installation costs. Potential interruption for other contractors.	Unlikely	High	Level 5	Plan for action	Contractor requested Company to provide another solution as access through the roof was denied.	Discussions ongoing. No solution confirmed.	Open						Robert Mercer	> Contractor met with Company to discuss execution. > Roof access and temporary cladding opening do not appear to be an option. > Needs further review and attention.	



Project Risk Management Register	
Risk Register	MFA-CG-SD-3440-RI-A04-0002-01
Date:	03-Oct-2017
Client:	Muskkrat Falls Corporation ("Company")
Project Name:	Supply and Install Mechanical & Electrical Auxiliaries MF
Contract Number / Project Ref	CH0031-001 / TC0006
Project Manager / Deputy:	Tim Harrington, P.Eng / Charles Lavigne
Project Sponsors:	Cahill - John J Henley, Ganotec - Mike Buckle
Risk Management Team:	Laurie Hildebrand

Category Legend	
ENG	Engineering
PRO	Procurement
HSE	Health, Safety & Environment
QUA	Quality
SCH	Schedule
CON	Construction
MC&C	Mechanical Completion & Commissioning
COM	Commercial

Likelihood	Consequences				
		Very Low	Low	Moderate	High
	Highly Unlikely	Level 1	Level 2	Level 3	Level 4
	Unlikely	Level 2	Level 3	Level 4	Level 5
	Likely	Level 3	Level 4	Level 5	Level 6
Highly Likely	Level 4	Level 5	Level 6	Level 7	

Legend	
Requires Input Information	
Automatically Formulated	

#	Cat.	Risk Definition	Description of Consequences	Initial Assessment				Mitigation/Safeguard	Comments	Status	Date Resolved	Revised Assessment				Residual Action	
				Likelihood	Consequence	Risk Level	Response					Likelihood	Consequence	Risk Level	Response	Risk Owner	Action Plan
10	CON	Masonry wall early installation	Safety risk for performing wall erection due to interface with live cables. Increase installation costs. Potential damage to cables. Safety risk for workers as working around live cables. Productivity impacts.	Unlikely	Moderate	Level 4	Plan for action	Contractor requested Company allow for early erection of masonry wall. If early erection refused, Contractor to install mechanical protection around cable trays and wire.	Discussions ongoing. No solution confirmed.	Open						Robert Mercer	> Contractor met with Company to discuss execution. > Early wall erection likely not possible due to walkway interference. > Needs further review and attention.
11	CON	Oil tanks late placement	Increased installation costs. Potential interruption for other contractors.	Unlikely	Low	Level 3	Monitor	Contractor requested Company allow for early installation. Company stated tanks are not required for commissioning of Unit 1.	Discussions ongoing. No solution confirmed.	Open						Robert Mercer	> Contractor met with Company to discuss execution. > Company will need to defer erection of oil rooms (by others) until movement strategy for tanks is confirmed. > Needs further review and attention.
12	CON	Staging materials near the power house and lack of lay down space near the power house.	Additional transportation from Company lay down to the power house.	Likely	Low	Level 4	Plan for action	Contractor to plan delivery of materials when required for installation to minimize lay down space required and use available space in the warehouse. Store at vendor locations where possible.	Ongoing	Open		Unlikely	Low	Level 3	Monitor	Tim Harrington	> Secured warehouse closer to the building from Astaldi with additional laydown space.
13	CON	Limited lay down for Contractor storage.	Insufficient space to store material.	Likely	Low	Level 4	Plan for action	Contractor to plan delivery of materials when required for installation to minimize lay down space required. Contractor is investigating other space available with other contractors.		Open		Unlikely	Low	Level 3	Monitor	Tim Harrington	> Secured warehouse closer to the building from Astaldi with additional laydown space.
14	CON	Lunch facility not in place in close proximity to the Power House	Reduced productivity, increase infrastructure cost.	Highly Likely	Low	Level 5	Plan for action	Contractor to provide temporary lunch facility at Contractor Administration Complex. Teamster to drive craft labour between work area and lunch trailer. Contractor exploring other options with Company Other Contractors for temporary lunch room facilities closer to the Power House.	Final area for contractor trailers near PH not finalized yet. Land use permit with Company for approval. New area will be spread out over three locations.	Open							Contractor and Company working collectively to find space in closer proximity to the building.
15	CON	Delayed construction start date due to late turnover of areas.	Schedule impact, cost impacts, reduced productivity	Highly Likely	Moderate	Level 6	Immediate action	Contractor to Notify Company. Contractor to work with Company on Control Schedule and revise Milestones. Contractor to propose options to allow start of Work on early scope with minimal risk where possible.	Ongoing - Contractor requesting work areas through Company's new Interface process.	Open						Robert Mercer	Contractor working to gain early access to areas through SIMOPS.



Project Risk Management Register	
Risk Register	MFA-CG-SD-3440-RI-A04-0002-01
	Date: 03-Oct-2017
Client:	Muskrat Falls Corporation ("Company")
Project Name:	Supply and Install Mechanical & Electrical Auxiliaries MF
Contract Number / Project Ref	CH0031-001 / TC006
Project Manager / Deputy:	Tim Harrington, P.Eng / Charles Lavigne
Project Sponsors:	Cahill - John J Henley, Ganotec - Mike Buckle
Risk Management Team:	Laurie Hildebrand

Category Legend	
ENG	Engineering
PRO	Procurement
HSE	Health, Safety & Environment
QUA	Quality
SCH	Schedule
CON	Construction
MC&C	Mechanical Completion & Commissioning
COM	Commercial

Likelihood	Consequences				
		Very Low	Low	Moderate	High
	Highly Unlikely	Level 1	Level 2	Level 3	Level 4
	Unlikely	Level 2	Level 3	Level 4	Level 5
	Likely	Level 3	Level 4	Level 5	Level 6
Highly Likely	Level 4	Level 5	Level 6	Level 7	

Legend	
Requires Input Information	
Automatically Formulated	

#	Cat.	Risk Definition	Description of Consequences	Initial Assessment				Mitigation/Safeguard	Comments	Status	Date Resolved	Revised Assessment				Residual Action		
				Likelihood	Consequence	Risk Level	Response					Likelihood	Consequence	Risk Level	Response	Risk Owner	Action Plan	Date Action Req'd
16	CON	Interface procedure/process & interface date	Schedule impact, cost impacts, reduced productivity	Highly Likely	Moderate	Level 6	Immediate action	Contractor to Notify Company. Contractor to work with Company to submit the required documentation in advance. Contractor to work with Company and Company Other Contractors to firm up the interface date and reduce the needs of having multiple Contractors working in the same area.	Ongoing	Open						Robert Mercer	Contractor working to gain early access to areas through SIMOPS and participate at the weekly Interface Management Meeting	
17	ENG	Document Review cycle from Company	Unable to deliver docs in time to ensure equipment delivery and schedule is met.	Likely	Moderate	Level 5	Plan for action	Where necessary to progress work, try to lower 3 week review cycle. Work with Company to meet reduced requested timeline. Contractor will review documents to ensure quality and compliance with Contract requirements.	Ongoing	Open						Justin Curlew	Working with Company to expedite document reviews. All agree that 21 day timelines can be improved for most situations.	
18	ENG	Design interface with different packages, especially controls, load transfer pkg and fire protection/detection	Unable to complete packages and deliver on time.	Likely	Moderate	Level 5	Plan for action	Engage suppliers early to ensure they have all of the proper information for timely completion of packages. Ensure documents/drawings are transmitted in line with schedule requirements. Vendor's with design scope will be required to perform clash analysis. Contractor to provide drawings and all required information.	Ongoing	Open						Justin Curlew	Information being provided to design vendors.	
19	ENG	Redline Procedure	Changes missed or not documented in a timely fashion.	Likely	Low	Level 4	Plan for action	Contractor to implement its redline procedures, to be updated as needed, which will be applied throughout the project. All personnel involved in developing redline drawings will be trained on Contractor's procedure.	Ongoing. No issue this period.	Open						Justin Curlew		
20	ENG	Seismic Design	Without design complete will be difficult to install and complete services.	Unlikely	Moderate	Level 4	Plan for action	Contractor started Seismic design early. Seismic design includes where and how to install seismic supports.	Ongoing	Open	Unlikely	Low	Level 3	Monitor		Justin Curlew	Design vendors have been engaged. Tray support design in process, HVAC support design starting next period.	
21	ENG	Clash checking (all disciplines)	Potential of clash between services. Re-Design & Re-installation would be required.	Likely	Moderate	Level 5	Plan for action	Ensure vendors have all required information and provide appropriate documentation ie to be included in RFP. packages. Revision control of documents and supply to vendors. Vendor's with design scope will be required to perform clash analysis. Fire protection piping will be monitored by procurement and engineering, with regular follow up to ensure the vendor has all layouts for the plant to ensure proper routing.	Ongoing.	Open						Justin Curlew	Fire protection vendor has been engaged but design has not started at this time.	



Project Risk Management Register	
Risk Register	MFA-CG-SD-3440-RI-A04-0002-01
Date:	03-Oct-2017
Client:	Muskrat Falls Corporation ("Company")
Project Name:	Supply and Install Mechanical & Electrical Auxiliaries MF
Contract Number / Project Ref	CH0031-001 / TC0006
Project Manager / Deputy:	Tim Harrington, P.Eng / Charles Lavigne
Project Sponsors:	Cahill - John J Henley, Ganotec - Mike Buckle
Risk Management Team:	Laurie Hildebrand

Category Legend	
ENG	Engineering
PRO	Procurement
HSE	Health, Safety & Environment
QUA	Quality
SCH	Schedule
CON	Construction
MC&C	Mechanical Completion & Commissioning
COM	Commercial

Likelihood	Consequences				
		Very Low	Low	Moderate	High
	Highly Unlikely	Level 1	Level 2	Level 3	Level 4
	Unlikely	Level 2	Level 3	Level 4	Level 5
	Likely	Level 3	Level 4	Level 5	Level 6
Highly Likely	Level 4	Level 5	Level 6	Level 7	

Legend	
Requires Input Information	
Automatically Formulated	

#	Cat.	Risk Definition	Description of Consequences	Initial Assessment				Mitigation/Safeguard	Comments	Status	Date Resolved	Revised Assessment				Residual Action		
				Likelihood	Consequence	Risk Level	Response					Likelihood	Consequence	Risk Level	Response	Risk Owner	Action Plan	Date Action Req'd
22	ENG	Unapproved vendor data sheet by Company for early works.	Contractor procuring and installing material at risk without Company approved vendor documents. Potential rework.	Highly Likely	Low	Level 5	Plan for action	Contractor to assume risk for off the shelf bulk items to prevent schedule delay.	Contractor requests Company to expedite review of documents.	Open					Justin Curlew	Process is ongoing. Have engaged Company for expedited reviews on early bulk materials.		
23	HSE	Emergency Rescue Plan and Team to be developed	Workers at risk.	Likely	High	Level 6	Immediate action	Emergency response plan developed and communicated to all Site Personnel. Develop and train emergency response team. Hire people with previous experience and training. Separate job specific emergency response plans will be developed for the following: Fall Protection Plan, Working at heights, Confined Space. Site has ERT for fire response/medical.		Open					Chris Kieleley	Emergency response plan going through review approvals. Site safety reviewing project needs and protocols.		
24	HSE	Confined space work	Workers at risk.	Likely	Moderate	Level 5	Plan for action	Emergency response plan developed and communicated. JHA will be completed and entry permits obtained. Develop and train team so that all employees at Site have been trained on the safety procedure. Hiring people with previous experience and training. Contractor has access to confined space equipment on Site for use if /where required.	No update this period. No planned confined space work in the short term.	Open					Chris Kieleley			
25	ENG	Permits	Timeline for approval of permit, delays.	Unlikely	Moderate	Level 4	Plan for action	Early establishment of permit projections (A08 document in SDR) to be submitted September 29, 2017. Permit requirements included in the schedule which is reviewed and updated weekly. Assign permit responsibility and communication with regulatory representatives in the specific discipline and Company. Critical permits will be submitted to Company for urgent approval. Permit responsibility assigned to Justin Curlew. Other internal permits will be relayed through HSE for the project including internal isolation permit, confined space permit, and hot work.	Ongoing.	Open					Justin Curlew	Permit submissions are being regularly issued in a timely matter. Need Company's continued support to expedite permit approvals / processing for land use.		
26	HSE	Winter Temperature	Site shutdown, low productivity, material preservation	Likely	Low	Level 4	Plan for action	Reassign external work inside when necessary. Ensure workers are equipped with warm weather PPE. Follow SWI for work in inclement weather, cold stress and work execution SWI. Ensure areas provided which required Company heat and light as suitable prior to commencing work.	Ongoing	Open					Chris Kieleley	PPE for winter weather work is being procured along with snow removal equipment.		



Project Risk Management Register	
Risk Register	MFA-CG-SD-3440-RI-A04-0002-01
	Date: 03-Oct-2017
Client:	Muskrat Falls Corporation ("Company")
Project Name:	Supply and Install Mechanical & Electrical Auxiliaries MF
Contract Number / Project Ref	CH0031-001 / TC0006
Project Manager / Deputy:	Tim Harrington, P.Eng / Charles Lavigne
Project Sponsors:	Cahill - John J Henley, Ganotec - Mike Buckle
Risk Management Team:	Laurie Hildebrand

Category Legend	
ENG	Engineering
PRO	Procurement
HSE	Health, Safety & Environment
QUA	Quality
SCH	Schedule
CON	Construction
MC&C	Mechanical Completion & Commissioning
COM	Commercial

		Consequences				
		Very Low	Low	Moderate	High	
Likelihood	Highly Unlikely	Level 1	Level 2	Level 3	Level 4	
	Unlikely	Level 2	Level 3	Level 4	Level 5	
	Likely	Level 3	Level 4	Level 5	Level 6	
	Highly Likely	Level 4	Level 5	Level 6	Level 7	

Legend	
Requires Input Information	
Automatically Formulated	

#	Cat.	Risk Definition	Description of Consequences	Initial Assessment				Mitigation/Safeguard	Comments	Status	Date Resolved	Revised Assessment				Residual Action		
				Likelihood	Consequence	Risk Level	Response					Likelihood	Consequence	Risk Level	Response	Risk Owner	Action Plan	Date Action Req'd
27	HSE	Spill & Waste Management	Environmental risk. Workers at risk.	Unlikely	Moderate	Level 4	Plan for action	Clearly defined waste management and spill response. Hazardous material storage and training. All employees will receive Environmental Awareness training at orientation session. Equipment for spill and waste management to be available on site. Confirm hazardous waste removal vendor is properly certified.	Ongoing.	Open		Unlikely	Low	Level 3	Monitor	Chris Kieley	Waste management agreement is in place with vendor. Spill response equipment has been procured.	
28	MC&C	Excessive paperwork and requirements	Delays in schedule, reduced productivity.	Likely	Low	Level 4	Plan for action	Proper planning and scheduling. Coordinate with Company to gain alignment, ensure plan is communicated early and effectively, avoid duplicate reporting and redundant data. Utilization of electronic check sheets in PCS system if practical.	No update this period.	Open						Jeremie Bertin		
29	MC&C	Using Company completion platform (PCS)	Inefficiency, learning curve	Likely	Low	Level 4	Plan for action	Proper training of staff and setting an agreement with Company early to create efficient structure. Company to provide training to Contractor.	Ongoing	Open		Unlikely	Low	Level 3	Monitor	Jeremie Bertin	First training sessions have been completed.	
30	MC&C	Third party experts required for specialized equipment	Third party not available when required resulting in delays.	Likely	Moderate	Level 5	Plan for action	Proper planning and scheduling. Include notification requirements in subcontract related to delay.	No update this period.	Open						Jeremie Bertin		
31	MC&C	Using temporary supply (electrical or water) during commissioning activities.	Temporary supply to be installed, tests to be redone on permanent supply.	Highly Likely	Low	Level 4	Plan for action	Proper training of staff and development of equipment specific energization procedures.	No update this period.	Open						Jeremie Bertin		
32	MC&C	Delay in reception of regulatory approvals (pressure piping, fire protection, diesel tank and piping).	Delays in schedule, impact on major milestones.	Unlikely	High	Level 5	Plan for action	Proper planning, training, and scheduling to ensure documentation and authorization are requested on time. Tracking authorization response time and any delays after submittal.	No update this period.	Open						Jeremie Bertin		
33	PRO	Product Loss / Damage in Transit	Project Delay / Additional Cost	Likely	Moderate	Level 5	Plan for action	OSD reports. Inspections will be performed on all materials at delivery to Site. Purchase agreement to include provisions to address shipping risk, including insurance, packaging requirements and timely replacement in the event of damage.	Ongoing. Purchase agreements are being issued with necessary protection.	Open						Frank Collins		
34	PRO	Equipment not properly preserved	Potential damage / Additional Cost	Unlikely	Moderate	Level 4	Plan for action	Develop preventative maintenance plan and communicate to responsible personnel. Ensure preservation requirements provided by vendors. Coordinate delivery schedule with Site installation to minimize preservation required at Site. Contractor to use preservation module within Company provided PCS system (ex. notices will be set up in the system for maintenance/preservation inspections).	No update this period.	Open						Frank Collins		



Project Risk Management Register	
Risk Register	MFA-CG-SD-3440-RI-A04-0002-01
Date:	03-Oct-2017
Client:	Muskkrat Falls Corporation ("Company")
Project Name:	Supply and Install Mechanical & Electrical Auxiliaries MF
Contract Number / Project Ref	CH0031-001 / TC0006
Project Manager / Deputy:	Tim Harrington, P.Eng / Charles Lavigne
Project Sponsors:	Cahill - John J Henley, Ganotec - Mike Buckle
Risk Management Team:	Laurie Hildebrand

Category Legend	
ENG	Engineering
PRO	Procurement
HSE	Health, Safety & Environment
QUA	Quality
SCH	Schedule
CON	Construction
MC&C	Mechanical Completion & Commissioning
COM	Commercial

Likelihood	Consequences				
		Very Low	Low	Moderate	High
	Highly Unlikely	Level 1	Level 2	Level 3	Level 4
	Unlikely	Level 2	Level 3	Level 4	Level 5
	Likely	Level 3	Level 4	Level 5	Level 6
Highly Likely	Level 4	Level 5	Level 6	Level 7	

Legend	
Requires Input Information	
Automatically Formulated	

#	Cat.	Risk Definition	Description of Consequences	Initial Assessment				Mitigation/Safeguard	Comments	Status	Date Resolved	Revised Assessment				Residual Action	
				Likelihood	Consequence	Risk Level	Response					Likelihood	Consequence	Risk Level	Response	Risk Owner	Action Plan
35	PRO	Late Delivery of Critical Equipment	Project Delay / Additional Cost	Likely	Moderate	Level 5	Plan for action	Ensure delivery dates are tied to critical defined milestones and monitored in the control schedule with milestones and need dates. Early procurement of critical items.	Long lead packages have been identified, and RFPs issued. Package awards ongoing. ECN-0004 has delayed package award for distribution package. Working with vendor to confirm if delivery date will impact the schedule.	Open						Frank Collins	
36	PRO	Bulks/Consumables	Off the shelf bulk items not readily available. Will stall work fronts without having proper quantities on-site.	Likely	Low	Level 4	Plan for action	During planning phase form a complete list of all mechanical, electrical and mounting items required. Engage vendors to have items readily available at nearest facility. Set up secure stations for PPE distribution. Inventory management at Site. Leverage existing corporate supplies and asset inventory. Obtain pricing for all potential bulks and consumables which may be needed over the course of the job to ensure quick turnaround for purchasing additional items.	Efforts ongoing. Bulk material orders in process and deliveries being received on site.	Open						Frank Collins	
37	PRO	Material Delivery and Storage Control	Limitation for on-site storage	Likely	Low	Level 4	Plan for action	Timing material delivery close to installation to minimize Site storage. Negotiate off-site storage with vendors where possible.	Ongoing	Open						Frank Collins	
38	PRO	Innu Business Group first option for package.	Capability of interested Innu Businesses to perform scope of Work in accordance with Project specifications.	Unlikely	Low	Level 3	Monitor	Meet with Innu business group up front and outline available packages. Issue EOI early to identify potential Innu businesses that can meet supply requirements.	No update this period.	Open						Frank Collins	
39	QUA	Welding of the IPB & potential rework	Re-work, schedule impact	Unlikely	Moderate	Level 4	Plan for action	Owner to ensure manufacturer representative to be onsite for erection of IPB. IPB manufacturer to provide welding procedures well in advance of work start. Training on IPB prior to installation. Leverage existing qualified welders.	No update this period.	Open						Perry Snook	
40	QUA	Welding inspection & rework	Re-work, schedule impact	Unlikely	Moderate	Level 4	Plan for action	Ensure qualified workers perform the tasks. Regular monitoring of ongoing work by supervisor and quality group. Prepare documentation, plan, weld map etc. in advance of inspection.	No update this period.	Open						Perry Snook	
41	QUA	Off-site QA inspection	Not performing the inspection. Receiving non-compliant product.	Unlikely	Moderate	Level 4	Plan for action	Leveraging internal affiliates for fabrication of pipe, HVAC, controls and structural fabrication. Establishing vendor inspection/audit and FAT where appropriate.	Ongoing.	Open						Perry Snook	Offsite fabricaiton ITPs being developed. Mugafab and Atlantica have been meeting with project quality to set expectations.



Project Risk Management Register	
Risk Register	MFA-CG-SD-3440-RI-A04-0002-01
	Date: 03-Oct-2017
Client:	Muskrat Falls Corporation ("Company")
Project Name:	Supply and Install Mechanical & Electrical Auxiliaries MF
Contract Number / Project Ref	CH0031-001 / TC006
Project Manager / Deputy:	Tim Harrington, P.Eng / Charles Lavigne
Project Sponsors:	Cahill - John J Henley, Ganotec - Mike Buckle
Risk Management Team:	Laurie Hildebrand

Category Legend	
ENG	Engineering
PRO	Procurement
HSE	Health, Safety & Environment
QUA	Quality
SCH	Schedule
CON	Construction
MC&C	Mechanical Completion & Commissioning
COM	Commercial

Likelihood	Consequences				
	Very Low	Low	Moderate	High	
Highly Unlikely	Level 1	Level 2	Level 3	Level 4	Level 5
Unlikely	Level 2	Level 3	Level 4	Level 5	Level 6
Likely	Level 3	Level 4	Level 5	Level 6	Level 7
Highly Likely	Level 4	Level 5	Level 6	Level 7	

Legend	
Requires Input Information	
Automatically Formulated	

#	Cat.	Risk Definition	Description of Consequences	Initial Assessment				Mitigation/Safeguard	Comments	Status	Date Resolved	Revised Assessment				Residual Action	
				Likelihood	Consequence	Risk Level	Response					Likelihood	Consequence	Risk Level	Response	Risk Owner	Action Plan
42	SCH	Night Shift work	Loss of productivity, safety	Unlikely	Moderate	Level 4	Plan for action	Proper supervision and turnover from day shift to night shift. Concentrate critical activities during day shift (where possible) where there is additional supervision available. Night shift safety coverage will be required. Appropriate temporary lighting will be provided.	No update this period. Night shift planned for the New Year.	Open						Stefan Lacasse	
43	SCH	Areas not turned over exactly when and where they are supposed to be, or in the condition stated.	Change of plan/sequence, reduced productivity	Likely	High	Level 6	Immediate action	Company to give notice in advance of any change to dates or potential delay. Contractor to notify Company in advance on critical dates and take action accordingly if there is a change.	Ongoing	Open						Stefan Lacasse	New interface process between site contractors to coordinate work areas. Contractor being integrated into the process.
44	SCH	Transfer of area to Contractor	Multiple contractors working in the same area, reduced productivity, potential damage, safety	Likely	Moderate	Level 5	Plan for action	Establish proper transfer of area procedure with Company and other contractors. Attend regular coordination meetings. Company to establish a formal documented handover process for work areas, including walk down of areas.	In process	Open						Stefan Lacasse	New interface process between site contractors to coordinate work areas. Contractor being integrated into the process.
45	SCH	Approval of labour productivity management plan, health and safety plan and C-SEPP prior to start of permanent work.	Delayed start date for permanent work.	Unlikely	High	Level 5	Plan for action	Prioritize these documents for submission to Company. Informal submissions recommended by Company for streamlined approvals.	Complete. All three documents approved Code 1/2 in time for construction start.	Closed	01-Oct-2017					Tim Harrington	
46	SCH	A-Series documents not Approved Code 02 or better prior to start of the Work	Company has instructed Contractor to delay start of Work until all A-Series documents are Approved. Schedule delay and cost impacts.	Highly Likely	Moderate	Level 6	Immediate action	Contractor has submitted all documents. All A-Series documents required to start construction are currently Approved Code 02 or better. Any documents received with comments are being reviewed and updated as required. Contractor discussing streamlined Approval with Company.	Contractor approved to start construction.	Closed	20-Oct-2017					Tim Harrington	Finalize and revise remaining documents to achieve Code 1 where remaining.

Cahill-Ganotec Weekly Reporting: G - CH0031 - Muskrat - S&I Mech & Elec B									
	CURRENT BUDGET	PERIOD [10/21]				JOB TO DATE			
Project Name	CB MH	MH	CE MH Var	CE PF	%	MH	CE MH Var	CE PF	%
[-] G - CH0031 - Muskrat - S&I Mech & Elec B	707,041	577	350	1.61	0.1%	3,077	1,035	1.34	0.6%
[-] Financial Results Analysis	707,041	577	350	1.61	0.1%	3,077	1,035	1.34	0.6%
[-] PLA Labour - Support Crew	176,787	577	(190)	0.67	0.2%	1,268	7	1.01	0.7%
⊕ Labour Training	3,380		0		0.0%	101	7	1.07	3.2%
⊕ Labour Support Crew	173,407	577	(190)	0.67	0.2%	1,167	0	1.00	0.7%
[-] PLA Labour - Direct Work	530,255	0	540		0.1%	1,804	1,033	1.57	0.5%
⊕ G002 - Mobilization - LABOUR	6,117	(160)	385	(1.40)	3.7%	1,587	907	1.57	40.8%
⊕ G003 - Demobilization - LABOR	3,709		0		0.0%		0		0.0%
⊕ G010 - PIPING/MECHANICAL - LABOUR	132,958		0		0.0%		0		0.0%
⊕ G012 - HVAC SYSTEM - LABOUR	68,535		0		0.0%		0		0.0%
⊕ G014 - ELECTRICAL - LABOUR	202,675	60	(32)	0.47	0.0%	60	(32)	0.47	0.0%
⊕ G016 - ARCHITECTURAL - LABOUR	114,505	100	187	2.87	0.2%	157	158	2.01	0.3%
⊕ G018 - DIESEL GENERATOR SYSTEM - LABOUR	1,755		0		0.0%		0		0.0%
Grand Total	707,041	577	350	↑ 1.61	0.1%	3,077	1,035	↑ 1.34	0.6%