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Exhibit 4 Supplier Document Requirements List Agreement Number: CD0501-001

**EXHIBIT 4** 

#### SUPPLIER DOCUMENT REQUIREMENTS LIST

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- **1. Supplier Document Requirements List**
- 2. Supplier Document Requirements Descriptions
- 3. Legend / Instructions

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		S	UPPI	LIER DO	CUME	ENTR	EQUIREM	ENTS	LIST				·	
SDRL Code	Туг	e of Document	Provide with Proposal	Submit Prior to Start of Applicable Work Scope	After Shipment	With Shipment	Minimum Documents approved Coded 1 prior to Inspection Release	As Built	Final Documentation Location (R01 / R02 / R06)	Final File Format	Submission Requirements Date Required - Weeks After Receipt of Order (ARO)	Submission Requirements Monthly	Ρ	lotes
A.	GENERAL		22.4											
A01	Supplier Document F	legister (SDR)	x	x				x	R01+		8	ALL ALL	Update and s	ubmit as requested.
A02	Control Schedule		x	x				-	H02		8		Submit up	date post award
A03	Monthly Risk Reports	,				-					4	х		and a second being some
A04	Risk Management Pl	an	x	x							8			
A06	Monthly Progress Re	ports							1			x	Per Coordin	ation Procedures
A07	Project Execution Pla	'n	x	x							8			
A08	Permits			x		x			R02					
A11	Logistics and Transp	ortation Strategy	X								8			
A13	Expediting Release N	lote				х								
A28	Health and Safety Pla	าก	x	x					R02		8			
A35	Contract Specific Env SEPP)	ironmental Protection Plan (C-	x	х							8			
A39	Survey Report			х										
, A40	Monthly Environment	al Performance Report										X	Pertain	s to site works
A41	Health and Safety Tra	aining Records and Certificates												
A42	Schedule Developme	nt and Control Plan	х	x							8			
A44	Control Schedule Bas	seline Document		x							8			
A98	Interface Register		x	x		0			R01			x		
A99	Miscellaneous Gener	al Documents												
A99-01	Design Review Plan			х							12			
A99-02	Design Verification Pl	an		х							12			
A99-03	Equipment Criticality	Ranking Methodology			-	-				-	. 12		LCP	ed in cooperation with
terre (lace)				And the second second			I			J	<u></u>			ille i statione
В.	ARRANGEMENT DRAWI	NGS	E.											
B01	General Arrangement	is and Layouts	x	x				X	R01		8			
B02	Elevation/Profile Drav	vings	X	x				X	R01		8			
B03	Cross Section Drawin	igs	x	X				x	R01		8			
B04	Arrangement and Sub	Assembly Drawings						X	R01				Requirements determined at	for review to be Kick Off
B05	Loading Drawings							X	R01				Requirements determined at	for review to be Kick Off
806	Cable and Tray Routi	ng Drawings, Layout and Design						x	R01				Requirements determined at	for review to be Kick Off
B99	Miscellaneous Arrang	ement Drawings						X	R01					N. D. M. MARKEN
C.	DESIGN & OPERATIONA	L DRAWINGS												
C01	Piping and Instrument	ation (P&ID's)		х				X	R01					

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determined at Kick Off

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		S	UPPL	IER DO	CUME	INTR	EQUIREM	ENTS	LIST					L
SDRL Code	Тур	e of Document	Provide with Proposal	Submit Prior to Start of Applicable Work Scope	After Shipment	With Shipment	Minimum Documents approved Coded 1 prior to Inspection Release	As Built	Final Documentation Location (R01 / R02 / R06)	Final File Format	Submission Requirements Date Required - Weeks After Receipt of Order (ARO)	Submission Requirements Monthly	1	lotes
G06	Instrument Index							Х	R01				Requirements for determined at K	r review to be ick Off
G07	Alarms and Trip Set I	Point List						X	R01				Requirements for determined at K	r review to be ick Off
G08	Computer Systems D	ocumentation						х	R01				Requirements for determined at K	r review to be ick Off
G09	Input/Output List							х	R01				Requirements for determined at K	r review to be ick Off
G99	Miscellaneous Sched	lule/List Documents						x	R01					
Н.	CALCULATIONS													
H01	Architectural Calculat	lons		x					R02					
H02	Foundation Support C	Calculations		х					R02	1				
H03	Structural Calculation	15		х					R02					
H04	Pressure Vessel/Tanl	k Calculations		х					R02					
H05	Pressure Piping/Syste	em		x					R02					
H06	Thrust Bearing Loads	and Capabilies							R02					
H07	Lifting Lug Calculation	ns		х		1			R02					
H09	Instrument Air or Hyd	raulic Requirements Calculations	1	х					R02					
H10	Fire Protection Calcul	lations		х					R02					and the second second second
H12	Mechanical Calculation	on - Misc.		x					R02					
H13	Electrical Calculation	- Misc.		x					R02					
H14	Civil Calculation - Mis	sc.		х					R02					
H23	Compressed Air Calc	ulation		х					R02					
H32	Survey Calculation	Salar and a second second second		х			-		R02					
H33	Reinforced and Prest	ressed Concrete Calculation		х					R02		10.000			
H34	Structure Stability Cal	Iculation		х					R02					
H35	Grouting Calculations	1		x					R02					
H36	Concrete Mix Calcula	tion		х					R02					
H38	Essential Service Loa	d Calculation		х					R02					
H40	AC Station Service Lo	bad Calculation		x				1.12	R02					
H41	DC Station Service Lo	oad Calculation		Х					R02					
H42	Primary Grounding Ca	alculation		х					R02					
H50	Sub-Synchronous Re	sonance Study		х					R02					
H51	Relay Setting Calcula	tion	-	х					R02	1				
H53	Electrical Clearance (	Calculation		x					R02	1			1	
H54 I	Design Load Cases			х					R02			-		Y
H55	Coordination of Strend	gth Calculation		X					R02	-				
H56	Aeolian Vibration Calo	culation		x					R02	-			1	
H65 0	Current Transformers	Design Calculations		x				-	B02				1	

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		5	SUPPL	IER DO	CUME	ENT RI	EQUIREM	ENTS	LIST					
SDRL Code	Тур	e of Document	Provide with Proposal	Submit Prior to Start of Applicable Work Scope	After Shipment	With Shipment	Minimum Documents approved Coded 1 prior to Inspection Release	As Built	Final Documentation Location (R01 / R02 / R06)	Final File Format	Submission Requirements Date Required - Weeks After Receipt of Order (ARO)	Submission Requirements Monthly	P	lotes
H99 (S)	iscellaneous Calcul ystem/Design Stud	lations Documents ies)		x					R02				System Studies per specification DC-0001-01 Per Requirements	and Design Studies ILK-SN-CD-8000-f formance
									-				-	
J. PE	RFORMANCE DATA			¥				-10 to						
J01 Ge	eneral Performance	Data							R01					
J02 Cu	urrent and Potential	(CT/VT) Transformer Curves						Х	R01					
J04 Co	ompressor Perform	ance Curves						х	R01					
J05 Pu	imp Performance C	Curves						х	R01					
J06 Pe	erformance Guaran	tee	x						R01					
J07 Mis	scellaneous Perfor	mance Data						х	R01					
J09 Ge	enerator Performan	ce Curve						Х	R01					
J10 Soi	il Graduation Analy	/ses						Х						
J11 Op	otimization Analyse	s (Civil)						Х						
J12 Lis	st of Environmental	Emission and Effluent										Х		Ponte - 1
J99 Mis	scellaneous Perfor	mance Data Documents	-	1973-0-1-1-100-00	Charge to 6		dimension of the	dia di cina	R01	100000000	and Software and the	PERSONAL MARK		
K. PRO	OCEDURES						T						an a	
K01 We	elding and Weld Re	epair Procedure		x				-	R02	-				
K02 Vib	pration/Noise Level	Test Procedure	-	X					R02					
K03 Nor	n-Destructive Test	Procedure	-	Х					R02		-	-		
K04 Per	rformance / Accept	ance Test Procedure	<u> </u>	х					R02	ļ				
K06 Pre	essure Test Procec	lure		х					R02					
K07 Fac	ctory and Site Test	Procedures (FAT/SAT)		X		_			R02	-				
K08 Loa	ad Test Procedure			X	-				R02			-		
K09 Din	mensional Inspection	on Procedure		Х					R02				1	
K10 Ma	inufacturing/Fabric	ation Procedure		X				-	R02					
K11 Cat	ble Wiring Procedu	Ire		Х					R02	-				
K12 Cor	mmissioning Proce	dures		Х					R02			-		
K15 Sur	rface Preparation a	and Coating Procedure		х					R02					
K16 Inst and	truction for Transpo Long Term Storag	ortation, Storage, Warehousing				x			R02					
K22 Rou	utine Test Procedu	re		x					R02					
K23 San	mple Test Procedu	re		х					R02					
K24 Cor	nstruction Method	Statements and Procedures		х					R02					
K99 Mis	cellaneous Procec	lures Documents					1		R02					
L. MAII	NTENANCE & SPARE	28								1				
LO1 Lub	pricant and Operati	ng Fluids Schedule	and a state of the		1000	X	anii (* 22002)	19134319	R01	- and the second	and the second sec	Sector Contraction		

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	1	S	UPPL	IER DO	CUM	ENTR	EQUIREM	ENTS	LIST					
SDRL Code	Тур	e of Document	Provide with Proposal	Submit Prior to Start of Applicable Work Scope	After Shipment	With Shipment	Minimum Documents approved Coded 1 prior to Inspection Release	As Built	Final Documentation Location (R01 / R02 / R06)	Final File Format	Submission Requirements Date Required - Weeks After Receipt of Order (ARO)	Submission Requirements, Monthly	N	lotes
L02	Recommended Comr	nissioning and Start-up Spares	х						R01					
L03	Recommended 12 an	d 24 Months Operation Spares	x						R01					-
L04	Recommended Critic	al Spares (Insurance)	x						R01					
L05	Special Tools List		x						R01					
L99	Miscellaneous Mainte	nance & Spares Documents				-			R01					
м.	TEST & INSPECTION RE	PORTS												
M01	Material Test Certifica	ates				x			R02					
M02	Instrument/Electrical	Test Report				x			R02					
M04	Hydrostatic/Pneumati	c Test Certificate				x			R02					internet and a second se
M05	NDE Test Reports					х			R02					
M06	Welder Performance	Qualifications and Certifications		x					R02					
M08	Calibration Certificate	S		x					R02			-		
M09	Fire Testing Certificat	es				х			R02					
M10	Inspection Release C	ertificate				x			R02					
M11	Code Compliance Ce	rtificate							R02					
M12	Lifting Equipment Tes	t Certificate		x					R02					
M13	Noise Test Certificate	/Reports				X			R02					
M14	Vibration Test Certific	ate/Reports				х			R02					
M15	Performance Test Ce	rtificate				х			R02					
M16	Painting/Coating Test	Report				х			R02					
M17	Steel Manufacturing F	Reports				x			R02					
M18	Mechanical Run Test	Report				X			R02					
M19	Factory and Site Test	Report (FAT/SAT)				Х			R02					
M20	Commissioning Repo	rt							R02					
M21	Efficiency Test Repor	is				0.1500			R02					
M24	Manufacturer's Type 1	Fest List and Report		х					R02					
M25	Reports and Certificat	es for Routine Tests							R02					
M26	Reports for Sample T	ests	х						R02					
M27	Mechanical Completion	on Report							R02					
M99	Miscellaneous Test &	Inspection Reports							R02					
Q	QUALITY ASSURANCE /	QUALITY CONTROL												
Q01	Quality Assurance Sys	stem Registration Certificate	х											
Q02	Quality Assurance Sys	stem Manual	x											
Q03	Quality Plan		x	x					R02				Submit for Revi	ew and Acceptance

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#### Supplier Document Requirements List Rev. Page Nnalcor **B4 DRAFT** ILK-SN-CD-8000-EL-LS-0001-01 SUPPLIER DOCUMENT REQUIREMENTS LIST Month 0 Minimum Documents approved Coded 1 prior to Inspection Release Final Documentation Location (R01 / R02 / R06) Submit Prior to Start of Applicable Work Scope Submission Requirements Date Required - Weeks After Receipt of Order (ARO) ubmission Requirements Provide with Proposal SDRL Final File Format Notes Type of Document After Shipment With Shipment Code As Built Inspection and Test Plan(s) Submit for Review and Acceptance Q04 Х х R02 (Factory and Site Works) Q05 Certificates of Conformity (Factory and Site Works) R02 Q07 Internal/External Audit Schedule х Q08 Management Review Minutes of Meeting Х Third Party Surveillance Report Q09 Х R02 Q10 NCR Register and associated close out reports R02 Quality Management Certificate for Manufacturer Q11 R02 Q12 Declaration of Installation and Inspection Completion R02 Q13 Authorized Deviations R02 Miscellaneous Quality Documents Q99 R02 MANUALS R. Installation, Commissioning, Operating and R01 Х R01 Maintenance Manual Х R02 Manufacturing Record Book (MRB) Х R02 Х **R99** Miscellaneous Manuals

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Alaska	r	Supplier Document Requirements List	Revision	Page
(C Hailo		ILK-5N-CD-8000-EL-L5-0001-01	84 DRAFT	
	SDRL Definitions			
А	A - General			
A01	Supplier Document Register (SDR)	Supplier Document Register (SDR) – documents list identifying individual document of This register will capture deliverable requirements as agreed by Contractor/Supplier a is responsible to create and approve this document as a revision controlled document	eliverables by pr and Company. Co	urchase order. ontractor/Supplier
A02	Control Schedule	As per Exhibit 3 Coordination Procedure		
A03	Monthly Risk Reports	Provides a summary of activities carried out by a Contractor/Supplier almed at addre Risk Reports, inclusive of the Risk Register, are part of the subject matter of the Mont requirements for the Monthly Risk Report and Risk Register are set forth in sections 2 Management Requirements for Contractors and Suppliers (SLI document # 505573-0	ssing selected R hly Risk Reviews .3 and 2.4 of the 000-39RA-1-000;	isks; The monthly s. The LCP Risk 2).
A04	Risk Management Plan	Provides a description of the Risk Management Process, organizational context and t Contractor/Supplier. The contractor shall prepare the Risk Management Plan using a Risk Management Requirements for Contractors and Suppliers (SLI document # 5058	ools adopted by s guidance sectio 573-0000-39RA-1	a on 2.2 of the <i>LCP</i> -0002).
A05	Unpriced Copies of Major Sub-Supplier Orders	n/a		
A06	Monthly Progress Reports	As per Exhibit 3 Coordination Procedure.		
A07	Project Execution Plan	As per Exhibit 3 Coordination Procedure.		
80A	Permits	Provide copies of all permit documentation, as described in Exhibit 6 (Environmental - Requirements)	and Regulatory (	Compliance
A11	Logistics and Transportation Strategy	Provide a logistics and transportation strategy for the Work which shall include propo preferred carriers or freight forwarders. The following documents shall be taken into c strategy: (SLI document # GP-5600-F-01-E) Documentation, Packaging, Marking, Shi document # 505573-361C-4ZEG-0001) Documentation, Packaging, Marking, Shippin Transmission Line Components.	sed transportatio onsideration whe pping and Instru g and Instruction	n modes and en developing the ctions and /or (SL s Specific to
A13	Expediting Release Note	Prepared by Company, it includes Final Packing list, Quality Surveillance Release or	Waiver, and Cer	tifiate of Origin
A28	Health and Safety Plan	As per Exhibit 5 Health and Safety Requirements.		
A34	List of Existing Transmission Lines under similar loading conditions	Supplier shall submit the list of Transmission Lines equipped with the proposed produ environmental conditions.	ict cable under s	imilar
A35	Contract Specific Environmental Protection Plan (C-SEPP)	The Contractor shall prepare its C-SEPP using as guidance the <i>Contract-Specific Ent</i> template (SLI document # 505573-0000-68RA-I-0011, provided in Exhibit 11). The 0 based on the following: relevant provisions of the <i>Project-Wide Environmental Protect</i> # 505573-0000-68RA-I-0005, provided in Exhibit 11); the <i>General Environmental Re</i> <i>Specifications</i> (included in Exhibit 1); <i>Environmental and Regulatory Compliance Rec</i> (Exhibit 6); the <i>Waste Management Plan</i> (SLI document # 505573-0000-68RA-I-0000 <i>Master Spill Response Plan (Nalcor document # MFA-PT-MD-0000-EV-PL-0001-01,</i> )	vironmental Prote Contractor's C-S tion Plan (P-WE quirements duirements d, included in Exhib	ection Plan EPP shall be PP, SLI Documen shnical nibit 11); and the it 11).
A39	Survey Report	Field Survey Reports. Example: roads, transmission lines, etc.		
A40	Monthly Environmental Performance Report	A Monthly Environmental Performance Report shall be submitted by the Contractor, in Exhibit 6 (Environmental and Regulatory Compliance Requirements). This report sha Consumption Report in the format prescribed in Exhibit 6, Appendix C.	n accordance wil Ill include a Mon	th provisions of thly Fuel
A41	Health and Safety Training Records and Certificates	Training records and certificates for employees including, but not limited, to Confined Competencies, Trade Certifications, etc.	Spaces, Fall Pr	otection, Operato
A42	Schedule Development and Control	As per Exhibit 3 Coordination Procedure.		
A43	Provisional Packing List	A preliminary Packing List listing the items planned to be shipped against the Purcha numbers; tag numbers; planned quantities to be shipped the P/L should also indicate dimensions.	se Order. In add the approximate	dition to the item weights and
A44	Control Schedule Baseline Document	As per Exhibit 3 Coordination Procedure.		
A45	Permitting Schedule	Provide a detail activity schedule for each permit as per Exhibit 6 - Environmental and Requirements	d Regulatory Col	mpliance
A98	Interface Register	List shall indicate all necessary interfaces (inputs, outputs, external requirements, etc of discipline, source, type, and/or timing. Interface agreements and/or processing will Interface Protocols. This document will be accepted by LCP and all additions, deletio handled through Approved Change Management. All required LCP requested actions with required actions highlighted into the official project schedule, as milestone event	) the Bidder re be handled thro ns and/or modifi to be identified s.	equests regardles ugh standard LC cation will be in this document,
A99	Miscellaneous General Documents	As described in the procurement documents and on SDRL or considered necessary t	y Vendor/Suppl	ier.

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В	B - ARRANGEMENT DRAWINGS			
B01	General Arrangements and Layouts	Drawings showing the general arrangement or relative locations of components or cor overall horizontal dimensions and/or scale bars, noted relative elevations and/or topo orientations, flow directions, etc. Drawings are normally in horizontal (planar) view, wi elevation views and/or cross-section views shown.	nstruction eleme graphic contours th the location a	nts, including s, geographic nd orientation of
B02	Elevation/Profile Drawings	Drawings showing views of components or construction elements in a vertical plane, i showing the vertical arrangement of the components or construction elements, usually dimensions and/or scale bars.	.e. in elevation, v with horizontal	for the purpose of and vertical
B03	Cross Section Drawings	Drawings showing views of components or construction elements in horizontal or vert the assembly of components or construction elements.	ical planes which	h are cut through
B04	Arrangement and Sub Assembly Drawings	Plans and Sections with nomenclature.		
B05	Loading Drawings	Foundation drawings, loading requirements and anchor bolts.	and the second second	- Andrewski stari
806	Cable Tray Routing Drawings, Layout	Plans, elevations and sections.	i de sederar e se	
B99	Miscellaneous Arrangement Drawings	As described in the procurement documents and on SDRL or considered necessary b	y Vendor/Suppli	er.
C	C - DESIGN & OPERATIONAL DRAWIN	IGS		
C01	Piping and Instrumentation (P&IDs)	P&IDs are a graphical representation of all the process equipment, all the major secti (including control logic depiction) and their interconnection. Each item shown on the l No. as per the Project approved naming conventions in coordination with the Owner r symbology shall be used.	ons of pipe, mot P&ID shall be giv epresentative. Is	ors, all instruments ven a unique Tag SA Standards
C02	Process Flow Diagrams (PFD)	Diagrams shall be provided for all gas, oil, water, air systems etc. Diagrams shall be tagging systems adopted for the project as advised by the purchaser and shall includ required for safe operation of the equipment, line sizes, line ratings and design press customer connections identified in accordance with "Customer Terminal Point Schedu accordance with "Bill of Materials.	drawn using sta e all indication a ures and temper ule" • plus part n	ndard symbols and nd controls ratures, all umbers in
C03	HVac Schematic and Flow Diagrams	Schematics and flow diagrams shall be provided for all heating, ventilating and air co be drawn using standard symbols and tagging systems adopted for the project as adv include direction of flow and location of system components.	nditioning system rised by the pure	ms. Diagrams shall chaser and shall
C04	Logic Diagrams	Process Logic shall be detailed. A comprehensive set of SAMA logic diagrams must i	produced.	
C05	System Schematic Diagrams	Supplier to provide schematics for any systems not covered by P&ID, e.g. hydraulic,	pneumatic, cool	ing.
C06	Sequential and Control Function Charts	A sequential function chart (SFC) provides an overview of system behavior. IT shall other sequential operations. A Continuous Function Chart (CFC) shall address the fu active sequence. It complements the SFC and both shall be provided.	describe the star inctions that run	t-up, shutdown and regardless of the
C07	Functional Description or Process Control Narratives	This document should include a text-based detailed description of the process contro to: descriptives, flags, requests and commands, permissives, modes of operation, de narratives, start conditions, start actions, run conditions, alarms, interlocks conditions actions, resume conditions and actions.	ol, it shall includ scription of sequences and actions, pa	e but not be limited Jences, loop ause conditions and
C99	Miscellaneous Design & Operational Drawings	As described in the procurement documents and on SDRL or considered necessary	by Vendor/Supp	lier.
D	D - DETAIL DRAWINGS			
D01	Isometrics-Field Erected H/U Spools	Isometric drawings of plant and systems.		
D03	Equipment Details	Details of equipment construction, capacity, etc. to meet the Purchaser's specificatio	n.	
D04	Fabrication, Installation and Shop Drawings	Drawings to show fully dimensioned component parts of items being supplied. To in dimensional drawings for lateral tees.	clude Plating Dr	awings and
D06	Foundation Drawings	Provide all drawings associated with foundation details.		
D07	Equipment Drawings	To include Rigging / Lifting Plans / Details and or Elevations complete with all neces	sary dimension:	s. All relevant notes
D08	Shipping Drawings	Provide all drawings associated with shipping activities.	1644 (Inc. 106 - 108 - 1997)	
D99	Miscellaneous Detail Drawings	As described in the procurement documents and on SDRL or considered necessary	by Vendor/Supp	blier.
E	E - ELECTRICAL/INSTRUMENTATION	& INTERCONNECTIONS		
E01	Interconnection Block Diagrams	An Interconnection Block Diagram shall be provided when Equipment Supplier requi field installation or interconnection of devices or panels. The panels/junction boxes/ identified as well as any cable included by the supplier	res the field con devices Tag nun	itractor to do the ober shall be

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E02	Wiring Diagrams/Schematics	Wiring Diagrams shall be produced for each panel, cabinet, rack, console and item of constructed by the Supplier or Sub-Supplier specifically for this order. Diagrams shall format and shall be of a "Biock" format showing all interconnections within the unit incl and external interfaces. The diagram shall be fully detailed showing the details for eac connections down to the level of interfaces to proprietary items within the unit. All unit uniquely identified. All voltage levels, ratings, sizes, manufacturer, type numbers, cab and ID number shall be included. All internal cables and wires shall be identified at bo agreed between the Purchaser and the Seller. Functional descriptions for each conne included to enable users to fully comprehend the operation and configuration of the un include cable types, cable numbers, tag numbers, termination point (plug/socket etc.), arrangements and location of each item of equipment. The diagram shall also include to enhance the understanding of the system's configuration and operation as well as I connections are subject to emergency shutdown arrangements. Equipment and Cable be clearly identified. Schematic diagrams for instrument relay control and trip systems arrangement of all component parts. Relays shall be shown with contacts in coil de-er	equipment desig indicate in an act luding those to a sh cable core an s and connection is and connection e and wire types th ends to a nun ction or signal p power supply si any notes that in ndicating which is not in the Sup i, etc., shall show nergized position	gned and coeptable "ladder" Il termination's d wire and the is shall be s, sizes, colour nbering schema ath shall be awings shall bources, earthing nay be necessary components and piler's scope shall y the electrical
E03	Single Line Diagrams	An interconnectivity representation of all electrical elements of a system.	1	
E04	Control System Network Diagram	A single line diagram of the data communications system shall be provided. The draw control system components and how they are interconnected. Addressing information	ing(s) shall shov shall be provide	v all the major d at each drop.
E05	Panel and Annunciator Layout Drawings	General arrangement of Panel components complete with Identification tags. Include separate document.	BOM unless beir	ng issued as a
E06	Panel Detail Diagram	Provide details of equipment layout, terminal blocks and wiring schedule,	a saitanaja	
E07	Instrument Hook-up Details	Provide installation detail drawings for any instrument that requires installation by the	field contractor.	
E08	Block Diagram	Provide Control System Block diagram showing major system components (complete their interconnection.	with tag No. and	description) and
E09	Cable Specifications	Provide Technical data and specifications for cables connected to equipment not sup turbine and generator package; cables connecting the line protection panels; control and switchyard used for interlock purposes.	plied as part of t cables between	he scope of the the powerhouse
E99	Miscellaneous Electrical/Instrumentation &	As described in the procurement documents and on SDRL or considered necessary b	y Vendor/Suppli	er.
F	F - DATASHEETS	- 		
F01	Equipment Data Sheet	Equipment data sheets will be issued by the Purchaser as part of enquiry or purchase	e order. Supplie	r to complete.
F02	Motor Data Sheet	Electrical data sheets will be issued as part of the enquiry and purchase requisition, p by the purchaser, the remainder is to be fully completed by the Supplier.	part of the data s	heet is completed
F03	Instrument Data Sheet	An instrument datasheet shall be completed with process information, instrument spe construction, process connections, power requirements, instrument and calibrated ran size, mounting type and any other key information. An instrument supplier datasheet other specific information such as manufacturer and model number (complete), calibr included in the instrument index.	cification informanges, signal outp can be provided ation ranges and	ation, materials of out, cable entry as long as all d setpoints are
F04	WHMIS Material Safety Data Sheet (MSDS)	Supplier must provide suitable and sufficient health and safety information to ensure Products Act of Canada and any other relevant Provincial or Local legislation.	compliance with	the Hazardous
F05	Mechanical Properties of Materials	When requested Supplier to provide the following mechanical properties: Tensile stre Ambient Temperature and any other information as requested.	angth, Yield Stre	ngth, Elongation a
F07	Shipping Bills of Material	Weights and dimensions data for all materials to be shipped.		
F99	Miscellaneous Datasheets	As described in the procurement documents and on SDRL or considered necessary t	by Vendor/Suppl	ier.
G	G - SCHEDULES/LISTS			
G01	Bill of Materials / Equipment List	Supplier/Contractor/Manufacturer shall list, in detail in alphabetical order, all System/ provide information on each component such as Item Description, Tag Number, Rang Instructions for Ordering Replacement Parts, List of Software Used and Versions, ect as possible.	Plant Componen ge, Make and Mo I. This list should	nts and shall odel Number, OEN I be as elaborate
G02	Line Lists	Blank line lists will be supplied by the Purchaser for Supplier to indicate all sallent fee supply.	atures for piping	included in his
G03	Cable Schedule	The following information must be included in the cable schedule as a minimum: Cab of all cables, source, destination. Also a field showing scope of supply (i.e. by supplie installation and termination for each cable (i.e. by supplier or by field contractor). The monthly or when significant changes occur. This document will not be approved to fin equipment to site after which any changes will be made directly onto the purchasers schedule shall be submitted in hard copy and MS Excel format. Samples can be prov	le Tag, a brief te er, or by others) a schedule shali lai status until th Master Cable Sc ided upon reque	echnical descriptio and scope of be updated e dispatch of all chedule. The ast.

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(Budico		iLK-SN-CD-8000-EL-LS-0001-01	B4 DRAFT	
G05	Preventative Maintenance Schedule	Section shall include schedule of preventative maintenance tasks/maintenance frequ procedures and inspection instructions are to be provided.	encies, where rele	evant routine tes
G06	Instrument Index	An instrument list in Excel and hard copy format shall be provided. Each instrument t following fields are to be included and completed: Tag number, instrument type desc equipment, instrument range and calibration range (include calibration range if not pr P&ID or schematic if applicable, manufacturer and complete model number.	ag number must b ription, service, as rovided in datashe	e listed. The sociated ets), reference
G07	Alarms and Trip Set Point List	Provide list in excel format and hard copy. Sample can be provided upon request.		and the second second
G08	Computer Systems Documentation	1. System Description     a. Hardware Components     b. Operating System     c. Driver     d. Utilities     e. Application Software     f. Type of Interface     g. Operator's Manual     2. Hardware     a. Schematic     b. Interconnection diagram, especially special interfaces signal level, type of sign     oscilloscope) and meaning, especially in relation to diagnostic programs     c. Point list, if applicable     d. Equipment drawing as provided by Original Equipment Manufacturer (OEM)     e. Card drawing as provided by OEM     f. Document on any customer modification     g. Maintenance manual, with schedule of preventative maintenance     h. Material list, with identification of original source of supplier, where practical <b>3. Software</b> a. Memory map     b. Disk map     c. Description of all key routines and sub-routines specifically, its function; how pa     returns parameters, how routine is activated, priority level constraints on usage, etc.	al (how one sees i rameters are pass	t on an
G09	Input/Output List	I/O list shall include the corresponding device tag, I/O type and complete hardware a point in the system. Required in Excel format and hard copy. Project sample can be p	and software addre provided upon req	esses of each I/ uest.
G99	Miscellaneous Schedule/List Documents	As described in the procurement documents and on SDRL or considered necessary	by Supplier.	
H	H - CALCULATIONS			
H01	Architectural Calculations	Calculations shall be provided for the following, as a minimum : 1. Noise Design Calculations shall be provided for wall, partition and liner to ensure below purchasers stated requirements. Noise design calculations shall also be prov areas such as Galleys and Laboratories (any equipment with any moving or mechan 2. Thermal Calculations shall determine heat emitted to the atmosphere for project la specified by the purchaser. 3. Calculations shall also be provided for Structural elements such as Mini modules, refer to Structural calculations for requirements.	that noise transfe ided for proprietar ical parts). bading and ambler blast walls, Firew	r between areas ry equipment for nt temperatures ralls etc. Please
Hoz	Foundation Support Calculations	Calculations shall be provided for the following, as a minimum: • Identification of all applicable loading conditions • Bearing capacity requirements • Bearing capacity of the foundation for the applicable loading condition • Anchorage requirements with loads and anchor details.	5	
ноз	Structural Calculations	Calculations shall be provided for the following, as a minimum: • Identification of all applicable loading conditions • Loading, bending moment and shear force diagrams for all members, bracings and • Member selection details • Weld load and size requirements • Bolt load, size and number requirements	i connections	
H04	Pressure Vessel / Tank Calculations	Calculation of wall thickness and volume verification for each vessel/tank in accorda requirements.	ance with applicab	le ASME
H05	Pressure Piping System	Calculation of wall thickness, welds, flanges and instrument connections; dynamic a system of design and extreme operation conditions in accordance with applicable A including permit requirements.	nalysis for each p SME and CSA B5	pressure line and 1 requirements,

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H06	Thrust Bearing Loads and Capabilities	Calculations shall be provided for the following, as a minimum: • Hydraulic thrust loads • Structural support and stiffness requirements • Oil film thickness • Friction coefficients and losses • Cooling oil and water flow requirements • Hydrostatic lift system requirements.		
H07	Lifting Lug Calculations	As a minimum calculation for lifting lug tension, bearing and shear failure loads; weld specified safety factor to be provided.	loads and size re	aquirements; and
H09	Instrument Air or Hydraulic Requirement Calculations	Calculation listing the air or hydraulic consumption requirements for each instrument a hydraulic requirements.	ir or hydraulic u	ser and total air or
H10	Fire Protection System Calculations	Calculations to detail pipe friction losses, nozzle sizes, and discharge rates in accorda sprinklers as primary protection.	ance with NFPA	requirements. le:
H12	Mechanical Calculations - Misc.	All other mechanical calculation requirements specified in the contract documents and already outlined in Attached 5a and 5b of this document, shall be provided.	l technical speci	fications, not
H13	Electrical Calculation - Misc.	Purchaser will detail these as specifics are prepared. Calculation listing of various eq	uipment rating.	
H14	Civil Calculation - Misc.	Civil Calculations shall be provided.		
H15	Transmission Line Calculation - Misc.	Any calculations not covered in H52-H58,		
H23	Compressed Air Calculation	Calculations listing the compressed air consumption requirements for each instrument requirements for both high and low pressure compressed air. In addition to system sol calculations for piping sizes and rating, compressor rating, storage tanks, and expecte air are to be provided for both high and low pressure compressed air systems.	t air user and tot nematics and flo ad volumes comp	al air w diagrams, pensation/leakage
H24	Gate Operating Ring Calculation	Gate operating ring materials and mechanical properties are to be provided. Calculati displacement as well as maximum and allowable stress under applied load conditions	ons for the radia are to be provid	l and axial led.
H25	Turbine Shaft Calculation	As per technical specification		
H26	Runner Calculation	As per technical specification		
H27	Stay Ring Calculation	As per technical specification		
H28	Wicket Gate Calculation	As per technical specification		
H29	Shaft Seal Calculation	As per technical specification		
H30	Head Cover Calculation	As per technical specification		
H31	Penstock Calculation	Not Applicable for Muskrat Falls		4
H32	Survey Calculation	Calculations shall be provided for the following, as a minimum: • Identification and 3D coordinates of the original site survey control points. • Identification and 3D coordinates of all major control points on the site. • Details layout drawings showing all major control points.		
		Calculations shall be provided for the following, as a minimum:		
НЭЗ	Reinforced and Prestressed Concrete Calculation	<ul> <li>Identification of all applicable loading conditions</li> <li>Finite element analyses</li> <li>Loading, bending moment and shear force diagrams for all components</li> <li>Locations and jacking loads for pre-stressing tendons</li> </ul>		
H34	Structure Stability Calculation	Calculations shall be provided for the following, as a minimum: • Identification of all applicable loading conditions • Stability, including overturning and sliding • Location of resultant with respect to mid third of base • Location and size of drainage system components • Stability of excavated surfaces (soil and rock) • Stability of constructed fill slopes • Stability of natural in-situ materials and/or slopes affected by construction or reserve construction or operation.	bir impoundment	í, during
H35	Grouting Calculation	Calculations shall be provided for the following, as a minimum: • Definition of grout curtain (Primary, secondary, tertiary), including hole depths • Volume of grout take per hole.		
H36	Concrete Mix Calculation	Calculations shall be provided for the following, as a minimum: • Mix designs for slush grout and dental concrete for foundation preparation • Mix designs for conventional concrete for each structure, including primary and second • Mix design for roller compacted concrete for each structure	ondary concrete	

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		Calculations shall be provided for the following, as a minimum:		
H37	Blasting Calculation	<ul> <li>Drilling pattern and powder factor for each structure or operation, including:</li> <li>Size and spacing of holes, and Size and placement of charges, for pre-shearing.</li> <li>Size and spacing of holes, and Size and placement of charges, for pre-shearing.</li> <li>Size and spacing of holes, and size and placement of charges, for mass excavation.</li> <li>Vibration limitations for each structure or operation.</li> </ul>		
H38	Essential Service Load Calculation	Full report and calculation	5945 5-959	
H39	Unit Service Load Calculation	Full report and calculation		
H40	AC Station Service Load Calculation	Full report and calculation		
H41	DC Station Service Load Calculation	Full report and calculation		
H42	Primary Grounding Calculation	Full report. Calculations and drawings.		
H43	EMTP Study	Full Report		
H44	Insulation Coordination Study	Full Report		
H45	Exciter Performance & Parameter Study	Full Report		<del>a-11-2001 - g</del> il-14
H46	Governor Performance & Parameter	Full Report		
H47	HVdc Scheme RAM Study	Full Report		- to - the state of the
H48	Reactive Power Study	Full Report	38 - 19 - 19 - 19 - 19 - 19 - 19 - 19 - 1	
H49	Resonance Study	Full Report		
H50	Sub-Synchronous Resonance Study	Full Report		
H51	Relay Setting Calculation	Full Report		
H52	Sag and Tension Calculation	All wires. All load cases. Stringing sag charts. Calculations for all load cases.		
H53	Electrical Clearance Calculation	All codes as per CSA 22.3		- 47 - 17
H54	Design Load Cases	All calculations shall include zoning. Including 3 zones for dc, and 1 zone for ac.		
H55	Coordination of Strength Calculation	Take into account conductor, tower (suspension, angle, deadend) foundation, and ha	rdware/insulators	
H56	Aeolian Vibration Calculation	Done by supplier using proprietary software.		
H57	Insulation Requirement Calculation	As per CSA 22.3		
H58	PLS-CADD Model Input Parameter Calculation	All details including *.bak file,		
H59	Critical Speed of Rotating System	As per technical specification		
H60	Acceptable Stress Calculations - Extreme Loads	As per technical specification		i ton tenio di Co
H61	Extreme Loads - Breaking point of shear pins	As per technical specification		
H62	Natural Frequency Analysis	As per technical specification		
H63	Fatigue Analysis	As per technical specification	anizet de la companya	
H64	Step-up Calculation Prototype	As per technical specification		
H65	Current Transformer Design	As per technical specification including knee point calculations		
H66	Creep Correction Chart	Provide Creep Correction Chart for the material.		
H99	Miscellaneous Calculations Documents	As described in the procurement documents and on SDRL or considered necessary i	by Vendor/Suppli	er.
L	J - PERFORMANCE DATA			
J01	General Performance Data	This heading to cover any Performance Data required, but not previously covered by	Code and Descr	iption.
J02	Current and Potential (CT/VT)	Graph showing current transformer magnetization characteristics.		
J04	Compressor Performance Curves	Curves to indicate the discharge pressure, shaft input power, polytropic head and eff specified inlet pressure, temperature and molecular weight for each section (casing) indicate performance from surge through to 120% rated capacity. Units driven by va provided with curves for 80, 90, 100 and 105% rated speed.	iciency versus in and overall unit. riable speed drive	let capacity for Curves shall ers shall be
J05	Pump Performance Curves	Curves to indicate differential head developed, efficiency, input power required and t impeller. Units driven by variable speed drivers shall indicate four performance curv minimum to maximum operating speeds. Curves shall indicate performance from zer continuous flow clearly indicated.	VPSHR versus flo es to indicate per o to 120% rated	ow for rated formance from flow, with minim

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(Chaico	]	ILK-SN-CD-8000-EL-LS-0001-01	B4 DRAFT	
90L	Performance Guarantee	As per technical specification and as follows: Performance guarantees shall be provided for all supplied equipment, ensuring environ with specified performance requirements. Guarantee information to be provided shall following: • Expected life of equipment/components • Terms of warranty • Rated capacity and efficiency • Minimum hours of operation without failure/defects (e.g. oil leakage, surface cracking etc.) • Acceptable Operation limits (e.g. Operating temperature range, coolant and/or lubric operating voltage, etc.)	onmental sustain include, but is no g, insulation failu eant requirement	ability and safety at limited to, the ure, wear rate, s, vibration limits,
J07	Miscellaneous Performance Data	As per technical specification		
J08	Turbine Efficiency Curves	As per technical specification		
J09	Generator Performance Curves	As per technical specification. Diagram showing generator real and reactive power c	apability.	
J10	Soil Graduation Analyses	Standard particle size distribution in table and graph formats.		
J11	Optimization Analyses (Civil)	Depending on the type of optimization, one or more of the following are to be provided • Comparative layouts with tabulated associated relative benefits and costs. • Tables and/or graphs to illustrate the relative benefits and costs to provide the next is	d: level or size of ir	stallation.
J12	List of Environmental Emission and Effluent	As per Environmental Requirements,		
J99	Miscellaneous Performance Data Documents	As described in the procurement documents and on SDRL or considered necessary b	y Vendor/Suppl	er.
к	K PROCEDURES			
K01	Welding and Weld Repair Procedure	Specification defining all shop and field welding techniques and test results, and in ac the Purchase Order.	cordance with t	ne requirements (
K02	Vibration/Noise Level Test Procedure	Procedures defining extent, method and data to be recorded.		
K03	Non-Destructive Test Procedure	Procedures defining extent, method and acceptance levels of all NDT in compliance we materials and formed or welded fabrications by visual, radiographic, ultrasonic, magnicurrent or other techniques.	with Purchaser's etic particle, dys	requirements, fo penetrant, eddy
K04	Performance/Acceptance Test Procedure	<ul> <li>Suppliers' procedures for testing to demonstrate compliance with Purchaser's require</li> <li>Procedures shall indicate test bed arrangements, procedures to be adopted, reading used, and method of interpreting readings taken to determine basis for acceptance of</li> </ul>	rements and pro gs to be taken, i i results.	cess guarantees. Instruments to be
K05	Heat Treatment Procedure	Suppliers' procedures in accordance with the applicable code/standard and Purchase	er's purchase or	der requirements
K06	Pressure Test Procedure	Procedures shall indicate test bed arrangement, procedures to be adopted, readings used and method of interpreting readings taken to determine basis for acceptance of	to be taken, inst results.	ruments to be
K07	Factory and Site Test Procedures (FAT/SAT)	Description of system test procedures for control systems, safety, trip/shutdown systelecommunication systems with typical test record documents.     Factory test procedures are to be produced for use in tests to be conducted at the S for each system. There shall also be an integrated test procedure to test all interfaces test with all systems fully assembled and interconnected in the factory (including cent number of field equipment's). These tests shall demonstrate complete compliance to Purchase Order or Sub-Contract.	tems, electrical a Supplier's or Sub s and connectivi rral equipment a the Project Spec	and -Supplier's work ty, i.e. an overall nd a representat ification within th
КОВ	Load Test Procedure	Procedure describing the method and extent of testing Cranes, Davits, Lifting Lugs in standards and statutory and mandatory requirements.	accordance wit	h specified code
K09	Dimensional Inspection Procedure	Dimensional Control Procedure, Visual Inspection Procedure.		
K10	Manufacturing/Fabrication Procedure	Procedure explaining methods used to produce the required item(s) stated in the pur specification and/or data sheets.	chase order as o	detailed by the
K11	Cable Wiring Procedure	Supplier to supply his standard for approval.		
K12	Commissioning Procedures	Commissioning Procedures shall comprise a Mechanical Completion Procedure to ve works completed by others and Commissioning Procedures, all conducted by the Su Procedures shall be produced which verify the mechanical completion for cables, cat and systems physically installed by others. The procedure shall also certify the integri termination's prior to the application of power. Commissioning Procedures shall be pr Project Specification within the Purchase Order or Sub-Contract.	arify the integrity pplier. Mechanic le termination's rity of Supplier in roduced in account	of installation cal Completion and equipment installed cables a rdance with the

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(Gridico		ILK-SN-CD-8000-EL-LS-0001-01	B4 DRAFT	
		Painting and/or coating procedures shall be provided for all equipment/components or Procedures shall be in compliance with purchaser specifications and industry standa and site applied paint and coatings.	equiring a protect rds and provided	ive covering. for both factory
	Surface Preparation and Costing	Procedures shall include but not limited to, the following information:		
K15	Procedure	<ul> <li>Description of material/components to be covered.</li> <li>Surface preparation details</li> <li>MSDS information from paint and/or coating manufacturer</li> <li>Primer requirements, if applicable</li> <li>Required number and thickness of painting/coating layers</li> </ul>		
K16	Instructions for Transportation, Storage, Warehousing and Long term Storage	Provide Full Instructions for transportation, storage, presentation, warehousing and	ong term storage.	
K17	Shaft Inspection Procedure	As per Technical Specification.		
K18	Flushing Procedure	As per Technical Specification.		
K21	Certified Fusion Splicing Procedure	Fusion splicing shall be carried out by trained personnel.		
K22	Routine Test Procedure	Provide a full list of routine tests, which will be carried out during manufacture, as well as the actual procedures and the test equipment that will be used.		
K23	Sample Test Procedure	Provide a full list of sample tests, which will be carried out during manufacture, as well as the actual procedures and the test equipment that will be used.		
K24	Construction Method Statements and Procedures	Includes all necessary construction method statements and procedures. Site installa also be included. This also includes Preservation Procedures.	ation and erection	procedures shall
K99	Miscellaneous Procedures Documents	As described in the procurement documents and on SDRL or considered necessary	by Vendor/Suppli	er.
L L	L -MAINTENANCE & SPARES			
L01	Lubricant and Operating Fluids Schedule	Schedule to indicate type and grade of lubricants required for all equipment supplied capacities, rate of consumption plus frequency of change shall be indicated.	i. For each entry,	first-fill
L02	Recommended Commissioning and Start-up Spares	List shall indicate parts recommended by Supplier, and be defined by reference to c relevant parts list. Against each entry, Manufacturer, Manufacturers part no, price a	ross-sectional dra nd delivery shall l	wings and be indicated.
L03	Recommended 12 and 24 Months Operation Spares	List shall indicate parts recommended by Supplier and be defined by reference to cr parts list. Against each entry, Manufacturer, Manufacturers part no, number of parts shall be indicated.	oss-sectional dra in operation, pric	wings and relevar e and delivery
L04	Recommended Critical Spares (Insurance)	Essential Spares that have a long delivery time and/or require testing with the main Manufacturer, Manufacturers part no, number of parts in operation, price and delive	equipment. Again ry shall be indicat	st each entry, ed.
L05	Special Tools List	List shall indicate those tools necessary for removing equipment from transport at site, plus those necessary for installation and maintenance equipment. Against each entry, a brief description shall be indicated plus, where necessary for clarity. a drawing provided.		
L99	Miscellaneous Maintenance & Spares Documents	As described in the procurement documents and on SDRL or considered necessary by Vendor/Supplier.		
M	M - TEST & INSPECTION REPORTS			
M01	Material Test Certificates	Material Test Certification. The level of certification, traceability and marking of malu Purchase order referenced specifications, drawings and data sheets.	erials will be defin	ed within the
M02	Instrument/Electrical Test Report	Heat run, short circuit, etc. test reports		
M03	Component/Assembly Balance	Static and dynamic test results.		
M04	Hydrostatic/Pneumatic Test Certificate	Tested to a recognized code or standard. Including marked-up isometrics for pipework defining extent of test.		
M05	NDE Test Reports	Detailed NDT reports detailing procedure used, acceptance levels, results obtained and action for radiographic, ultrasonic, magnetic particle dye penetrant and eddy current examinations. Reports shall identify code/standard, components tested, location, operator, date, heat treated condition and weld repairs (as applicable).		
M06	Welder Performance Qualifications and Certifications	d Qualification of all welder/welding operators using approved weld procedures and by weld position in compliance with the Purchaser's requirements. Code forms or Supplier standard forms to be used as appropriate.		
M07	Heat Treatment Records	Fully endorsed certificates of any heat treatment conducted during forming or fabrication such as normalizing, quenching, post weld heat treatment etc. Certificates must be fully traceable for each part by means of serial or uniqu numbering systems.		
MO8	Calibration Certificates	Suitably endorsed valid certification to verify that instrumentation has been calibrat required by the equipment specification, suitably endorsed valid certification shall b	ed by a recognize e supplied for ca	ed authority. Whe libration equipme
M09	Fire Testing Certificates	Cartification issued by an approved testing establishment or recognized authority for hydrocarbon fires, jet or pool, for the durations stated in the Purchase Order.		
M10	Inspection Release Certificate	Fully endorsed certificate issued by Purchaser's inspector.		

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M11	Code Compliance Certificate	The Certificate should be issued by the IIA, and document that all Pressure Vessels with the nominated code or standard, and that the review considered the specified d environmental loadings.	have been desigr esign conditions, r	ned in accordanc nozzle and
M12	Lifting Equipment Test Certificate	Required for all items, hoists, cranes wire ropes/shackles, padeyes, etc.		
M13	Noise Test Certificate/Reports	In compliance with the Project Specification within the Purchase Order.		
M14	Vibration Test Certificate/Reports	In compliance with the Project Specification within the Purchase Order.		
M15	Performance Test Certificate	Suppliers report on performance testing of equipment, including overspeed tests with the copies of data, indicating that equipment complies with Purchaser's specification.		
M16	Painting/Coating Test Report	As required by the Project Painting and Coating Standards.		
M17	Steel Manufacturing Reports	Residual magnetism report, heat treatment report, mechanical test reports, full traceability cross-reference control sheet.		
M18	Mechanical Run Test Report	The mechanical run test report shall include details and result of the successfully completed FAT of equipment and systems as well as the details and results of the successfully completed commissioning static checks and dynamic commissioning/system commissioning tests completed after equipment and systems are assembled and installed at site		
M19	Factory and Site Test Report (FAT/SAT)	Full test report for each test as per K07.		
M20	Commissioning Report	Full test report for each test as per K12.		
		Full test report and calculations.		
M21	Efficiency Test Reports	<ul> <li>Full test report shall be provided detailing the measured actual efficiency of equipment and systems including turbine, generator, governor, auxiliary equipment, etc., after assembly, installation and commissioning at site and Turnover to Operations.</li> </ul>		
M24	Manufacturer's Type Test List and Report	Proof of design and type tests previously performed on the material shall be submitt	ed for approval.	
M25	Reports and Certificates for Routine Tests	Provide Routine test reports with certificates before and after stranding.		
M26	Reports for Sample Tests	Provide sample test reports		
M27	Mechanical Completion Report	Provide as per K12.		
M28	Certificate of Origin	A document required from the Exporter (or its agent) and certified by an issuing body, that the good wholly produced, manufactured or processed in a particular country. The Certificate of Origin must countries, validated by a Chamber of Commerce.	s in a particular expor be signed by the Expo	t shipment have be rter and, in many
M29	Preservation Records	Preservation records that shows compliance to storage requirements		
M99	Miscellaneous Test & Inspection Reports	As described in the procurement documents and on SDRL or considered necessary	by Vendor/Suppli	er.
Q	Q – QUALITY	the second description of the second		
Q01	Quality Assurance System Registration Certificate	Certificate provided by an authorized registrar confirming conformance to a quality r	nanagement syste	m.
Q02	Quality Assurance System Manual	Document specifying the quality management system of an organization.		
Q03	Quality Plan	Document specifying which procedures and associated resources shall be applied t project, product, process or contract.	by whom and when	n to a specific
Q04	Inspection and Test Plan(s) (Factory and Site works)	Document defining the inspection and test activities to be carried out during the real	lization of a produ	ct.
Q05	Certificates of Conformity (Factory and Site Works)	Certificates authorized by the supplied or third party verification body attesting that	the product meets	requirements.
Q06	List of Generator Tests	Provide list of all generator tests to be performed during manufacturing, installation and commissioning.		
Q07	Internal/External Audit Schedule	Documented audit schedule for both internal and external (supplier and third party)	audits.	
Q08	Management Review of Meeting Minutes	Minutes of meeting of the most recent management review of the quality management	ent system.	
Q09	Third Party Surveillance Report	Report by an authorized third party on the audit of the ISO 9001:2008 quality managed	gement system.	
Q10	NCR Register and associated close out reports	Register of Nonconformities reported and associated close out reports.		
Q11	Quality Management Certificate for Manufacturer	Supplier shall submit their manufacturer's ISO 9001:2008 or internationally recognized Quality Management Certificate or quality manual.		
Q12	Declaration of Installation and Inspection Completion	As per Quality requirements.		
Q13	Authorized Deviations	Site queries, concession requests etc. as approved by Purchaser.		
Q99	Miscellaneous Quality Documents	As described in the procurement documents and on SDRL or considered necessary by Vendor/Supplier.		

<b>N</b> nalcor		Supplier Document Requirements List	Revision	Page
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R	R - MANUALS			
R01	Installation, Commissioning, Operating and Maintenance Manual	<ol> <li>Installation Section shall include all erection/assembly drawings, instructions as to the use of special tools provided, tolerances allowed on setting dimensions, handling and unpacking instructions. Also includes quantities of preservatives and fluid required for shipment.</li> <li>Commissioning Sectional shall include list of spare parts, special tools and utilities required, pre-commissioning checks to be performed, sequenced procedure for dynamic commissioning and start-up and fault finding guidelines. Copies of all relevant drawings shall be included.</li> <li>Operating Section shall include description of equipment, operating procedures for start-up, steady state, shutdown, emergency and fault conditions, operating parameters, function of protective devices and controls, copies of all relevant cause an effect charts and block diagrams, and fault finding guidelines.</li> <li>Maintenance Section shall include instructions for maintenance disassembly, repair/overhaul and reassemble, schedule of preventative maintenance/maintenance frequencies.</li> </ol>		
R02	Manufacturing Records Book (MRB)	Construction, manufacturing, installation, testing, reporting and certification documentation required to demonstrate that construction, equipment, materials and fabricated systems and units are in compliance with the statutory regulations and specified requirements.		
R03	Installation, Commissioning, Operating and Maintenance Manual Table of Contents (TOC)	Table of Contents template for the installation, Commissioning and Operation Manual	S	
R04	Manufacturing Records Book (MRB) Table of Contents (TOC)	Table of Contents template for the Manufacturing Record Book		
R05	Dispatch Dossier	Dispatch Dossier shall mean all those documents required, as a minimum to accompa Contractors/Suppliers and Fabricators. Procured goods shall not be dispatched witho	iny goods releas ut Dispatch Dos	sed to site from sier.
R99	Miscellaneous Manuals	As described in the procurement documents and on SDRL or considered necessary b	y Vendor/Suppl	ier.

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# Legend

#### **DEFINITIONS / LEGEND**

Column 1 SDRL Code

Column 2 Type of Document / SDRL Title

#### Column 3

Provide with proposal (X)= Populated with "X" indicating if the document is required for the initial bidding process.

1E = One Electronic Copy (\*) 1P = One Print Copy (\*)

Column 4 / 5 / 6 / 7 Submitt Prior to start of fabrication / Construction : After Shipment ; With Shipment : and or Minimum documents approved code 1 prior to Inspection release

Column 8 As built populated with "X" where required.

Colum 9 Final Document location code (R01 / R02 / R05 / R99) = Populated with R01, R02, R05 or R99 as required indicating if the document is required in a manual (s).

Column 10 Final file format = Editable native files as required : SLI to define file format : Example DWG, PDF, Word, Excel...

PE = .pdf format NE= Native Electronic Format

#### Column 11 / 12

Submission Requirements Include: a number refers to the number of weeks the Supplier / Contractor has to submit the document after receipt of order

ARO = After Receipt of Order Monthly = Submissions required on a monthly basis