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7	N/A		CIS001		ENGINEERING SYSTEM DATABASE(S)	E		C		C	C	C	C	C	C	C	C	C		dB	The Contractor shall submit the actual Engineering System database(s) (including the document management system database) at the stages indicated updated with the relevant technical documentation				
8	PLANT SYSTEM DOCUMENTS		CIS002	FUNCTIONAL UNIT DOCUMENTATION (VGB R170c)	FUNCTIONAL OVERVIEWS		C	C	C	C		C				C		C		WORD	(SINGLE LINE DIAGRAMS, BLOCK DIAGRAMS, CONTROL DIAGRAMS)				
9			CIS003		FUNCTIONAL DESCRIPTIONS / VERBAL DESCRIPTIONS				C	C										CAD					
10			CIS004		FUNCTION DIAGRAMS				C	C		C					C	C		C	YES	SYSTEM			
11			CIS005		SIGNAL LISTS				C	C		C						C		C	YES	EXCEL	(INCLUDING I/O ASSIGNMENT, SIGNAL KKS, SIGNAL DESCRIPTION, STATES, I/O TYPE)		
12			CIS006		ALARM LIST					C	C		C					C		C	YES	EXCEL	(RATIONALISED, INCLUDING PRIORITY AND ALARM RESPONSE PROCEDURES)		
13	GFG01		CIS007	PLANNING & PROGRAMMING	ENGINEERING PROGRAM	C		C		C		C		C		C	C	C	YES	MS PROJECTS	Include details of the change-over strategy per PLC replacement that introduces no risk to production and a clear step by step method statement per PLC replacement as well as the project organogram with CVs of all resources.				
14			CIS008	TECHNICAL DOCUMENTATION INDEX	MASTER REGISTER OF DOCUMENTS	C		C		C		C		C		C		C		EXCEL					
15			CIS009		DOCUMENT SYNOPSIS & HIERARCHY	C		C												WORD	Includes the format and layout of each document in the documentation package.				
16			CIS010		MANUAL SYNOPSIS			C	C											WORD	Identifies the layout and content of all training manuals.				
17			CIS011	C&I SYSTEM DESIGN SPECIFICATION	C&I SYSTEM OVERALL FUNCTIONAL SPECIFICATION	C		C	C											WORD	(INCLUDING PLANT CODING PHILOSOPHY, SIGNAL DESCRIPTION PHILOSOPHY, FUNCTIONAL DISTRIBUTION CONCEPTS)				
18			CIS012		C&I SYTEM EQUIPMENT SCHEDULE			C	C	C	C		C	C						EXCEL	(LISTING ALL NETWORK EQUIPMENT INCLUDING PATCH PANELS, MEDIA CONVERTERS, NETWORK SWITCHES, MANAGEMENT SYSTEM EQUIPMENT, CONTROL SYSTEM, ETC...)				
19			CIS013		C&I SYSTEM SOFTWARE INVENTORY			C	C											YES	EXCEL	LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION, INSTALLED LOCATION, ETC...			
20			CIS014		OEM BEST PRACTICES	C														PDF	(INCLUDING VALID ACCREDITATION				
21			CIS015			TECHNICAL CLARIFICATION MEETING MINUTES			C		C		C		C		C	C	C		WORD				
22			CIS016		LIST OF OPEN POINTS (LOP) & DEVIATION SCHEDULE	C		C	C		C		C		C		C	C	C		EXCEL	Include compliance schedule to the Employers works clearly referencing the sections of the works			
23			CIS017	C&I ROOMS DESIGN SPECIFICATION	EQUIPMENT ENVIRONMENTAL CHARACTERISTICS SCHEDULE			C	C											EXCEL	(INCLUDING HEAT DISSIPATION, EQUIPMENT OPERATING ENVIRONMENTAL REQUIREMENTS FOR ALL EQUIPMENT IN THE ROOM PER C&I ROOM)				
24			CIS018	C&I SYSTEM USER GUIDE	ENGINEERING AND MAINTENANCE PROCEDURES SCHEDULE					C	C									EXCEL					
25			CIS019		ENGINEERING & TECHNICAL DOCUMENTATION CHANGE MANAGEMENT PROCEDURES & WORKFLOWS	C				C	C		C		C		C		C		WORD				
26			CIS020	LICENSES & SOFTWARE	INSTALLATION DISKS OF ALL PROVIDED SOFTWARE															N/A					
27			CIS021		LICENCES FOR ALL PROVIDED SOFTWARE															N/A					
28			CIS022	LIFE CYCLE MANAGEMENT	LIFE CYCLE MANAGEMENT FUNCTIONAL SPECIFICATION	C			C	C	C						C		C		WORD	(INCLUDING STANDARDISATION STRATEGY, LIFE CYCLE MANAGEMENT STRATEGY AND TOTAL COST OF OWNERSHIP CALCULATIONS)			
29			CIS023		RECOMMENDED SPARES HOLDING SCHEDULE				C		C	C						C		C		EXCEL			
30			CIS024	FMECA REPORT	FMECA STRATEGY	C														WORD					
31			CIS025		FMECA STUDIES (Failure Mode Effects and Criticality Analysis) REPORT						C	C								C		WORD			
32			CIS026	RAM REPORT	RAM STUDY APPROACH	C														WORD					
33			CIS027		MTTF, MTTR/MDT, AVAILABILITY & RELIABILITY ESTIMATE SCHEDULE						C	C						C		C		EXCEL			
34			CIS028		RAM REPORT (RELIABILITY, AVAILABILITY, MAINTAINABILITY)						C	C						C		C		WORD			

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35			CIS029	TRAINING	TRAINING REQUIREMENTS		C	C													WORD	(INCLUDING SCHEDULE & TRAINING SKILLS PROFILE)		
36			CIS030		TRAINING MANUALS				C	C											WORD	(INSTRUCTOR'S AND CANDIDATE MANUALS)		
37	GFG02		CIS031	HMI DESIGN SPECIFICATION	HMI PHILOSOPHY	C		C													WORD	Include clear strategy as to how each PLC replacement related HMI changes will be implemented with no risk to production.		
38	CONTROL SYSTEM DOCUMENTS		CIS032		HMI GRAPHICS				C	C			C									SYSTEM		
39			CIS033		OPERATOR INTERFACE FUNCTIONAL SPECIFICATION	C		C	C	C												WORD	(INCLUDING OPERATOR SYSTEM, SUPERVISOR SYSTEM AND EMERGENCY INDICATION & SHUTDOWN PANEL)	
40	GFG03		CIS034	PROCESS AUTOMATION SYSTEM DESIGN SPECIFICATION	PROCESS AUTOMATION SYSTEM FUNCTIONAL SPECIFICATION	C		C	C	C											WORD	(INCLUDING AUTOMATION UNIT CABINET DESIGN CONCEPTS, SIGNAL ACQUISITION CONCEPTS, SWITCHGEAR INTERFACE CONCEPTS, 3RD PARTY INTERFACE CONCEPTS & DETAILS, FUNCTIONAL LOGIC DESIGN)		
41			CIS035		FUNCTIONAL LOGIC TEMPLATES																	SYSTEM		
42			CIS036		EXPANDABILITY REPORT					C	C						C					EXCEL	(RESERVE SPACE,POWER,CPU & MEMORY CAPACITY PER AUTOMATION UNIT)	
43			CIS037		SCAN CYCLE OPTIMISATION REPORT						C	C						C				EXCEL		
44			CIS038	AUTOMATION UNIT EQUIPMENT USER GUIDES	STANDARD EQUIPMENT OPERATING MANUALS			C	C													PDF	Provide evidence that there is capacity/skill and experience to develop operating manuals and procedures. Compliance to GGSS 1423 Design of Operating and Maintenance Manuals is required	
45			CIS039		MAINTENANCE MANUALS & PROCEDURES	C				C	C							C				WORD	Provide evidence that there is capacity/skill and experience to develop maintenance manuals and procedures. Compliance to GGSS 1423 Design of Operating and Maintenance Manuals is required	
46			CIS040		PRODUCT DATASHEETS			C	C													PDF		
47			CIS041	AUTOMATION CABINET DRAWING(S) (1 Drawing set per AU cabinet)	CUBICLE INTERNAL EQUIPMENT SCHEDULE & CONFIGURATION SETTINGS			C	C				C									YES	EXCEL / CAD	
48			CIS042		CUBICLE INTERNAL LAYOUT	C			C				C									YES	CAD	
49			CIS043		CUBICLE INTERNAL EQUIPMENT CONNECTION & WIRING DRAWINGS			C	C	C	C			C								YES	CAD	(INCLUDING POWER DISTRIBUTION, EARTHING, SIGNAL WIRING BETWEEN I/O CARD AND FIELD TERMINALS)
50			CIS044		CABLE/WIRING SCHEDULES					C	C			C							YES	EXCEL		
51			CIS045		TERMINATION SCHEDULES					C	C			C							YES	EXCEL		
52	GFG06		CIS046	POWER DISTRIBUTION DESIGN SPECIFICATION	POWER SUPPLY & DISTRIBUTION PHILOSOPHY	C		C														WORD	(INCLUDING 24V-24V CONVERTER)	
53			CIS047		24V DC LOAD SCHEDULE			C	C													EXCEL	(CONSUMERS PER BATTERY CHARGER)	
54			CIS048		24V DC LOAD CALCULATIONS			C	C													EXCEL		
55			CIS049	EARTHING & LIGHTNING PROTECTION DESIGN SPECIFICATION	EARTHING & LIGHTNING PROTECTION FUNCTIONAL SPECIFICATION	C		C													WORD	(INCLUDING EARTHING & SCREENING PHILOSOPHY, LIGHTNING/EMC PROTECTION PHILOSOPHY)		
56			CIS050		EARTHING DRAWINGS			C	C									C				CAD		
57			CIS051		24V DC POWER DISTRIBUTION DRAWINGS			C	C													CAD		
58		ACCEPTANCE TESTS		CIS052		FAT TEST PROCEDURES					C	C											WORD	
59				CIS053		SIT TEST PROCEDURES						C	C										WORD	(INCLUDING SCHEDULING OF BOP SIT STAGES AND SCOPE OF EACH BOP SIT STAGE)
60				CIS054		CAT TEST PROCEDURES & SCHEDULE						C	C										WORD	
61				CIS055		COLD COMMISSIONING PROCEDURE						C	C										WORD	
62			CIS056	FINAL FAT REPORT										C									WORD	

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63			CIS057	ACCEPTANCE TEST REPORTS	FINAL SIT REPORT										C				C		WORD		
64			CIS058		COLD COMMISSIONING TESTS REPORT												C			C		WORD	(FUNCTIONAL TESTS, VALVE & DAMPER TESTS, ELECTRICAL DRIVE TESTS AND INSTRUMENT CHECKS)
65			CIS059		FINAL CAT REPORT														C	C		WORD	
66			CIS060	COMPLETION CERTIFICATES (PER PLC)															C		PDF		