

Duvha Power Station						OSP HMI UPGRADE METHODOLOGY											TECHNICAL DOCUMENTATION REQUIREMENTS					
C	II	The Contractor submits the documents to the Employer as a deliverable for either, Completion or starting, of the applicable Activity				ENQUIRY/TENDER	UP-FRONT TRAINING	BASIC ENGINEERING	DETAILED ENGINEERING	MANUFACTURING	PROCUREMENT AND INSTALLATION	COMMISSIONING	Change over to new HMI	OSP HMI Upgrade	COMPLETION	M	II	The Employer submits the document to the Contractor as a deliverable				
O	II	The OEM approves the document & Contractor submits the OEM approved documents to the Employer as a deliverable for Completion of the applicable Activity															II	The document is maintained by the Employer and available to the Contractor on request				
	II	The document is maintained by the Contractor and available to the Employer on request				T	U	B	D	M	E	C	O	A		← (First Character of Revision No. in Document No.)						
FUNCTION GROUP		Doc No. / Rev	DOCUMENT NO.	DOCUMENT DESCRIPTION		Tender	Up-Front Engineering Training Completion	High Level Eng Philosophies & Pre-requisite	Technical Clarification Pre-requisite	Basic Eng Design Freeze Documents Pre-requisite	Technical Clarification Pre-requisite	Detailed Eng Design Freeze Documents Pre-requisite	Freeze Documents Pre-requisite	Erection & Installation Pre-requisite	SIT Completion Documents	Cold Commissioning Documents	Commissioning (OAT) Completion Documents	Change Over to new HMI Risk Assessment	"AS BUILT" Document Package	Generated by the Engineering Tools	Software Format	REMARKS
PER UFG	0*	UFG**	**	DCQ	OPERATING TRAINING MANUALS																WORD	
	0*	UFG**	**	DCQ	LIMITS OF SUPPLY AND SERVICES	M			C	C									C		EXCEL	
OPERATOR SYSTEM	0*	UFG**	**	DCQ	PROCUREMENT PLAN FOR ALL EQUIPMENT				C	C									C	YES	EXCEL	
	0*	FG01	**	DCQ	HMI PHILOSOPHY			C		C	C								C	YES	WORD	
	0*	FG01	**	DCQ	HMI GRAPHIC TEMPLATES				C	C									C	YES	JPG	
	0*	FG01	**	DCQ	OPERATOR SYSTEM FUNCTIONAL SPECIFICATION				C	C									C	YES	WORD	
ENG SYSTEM	0*	FG01	**	DCQ	SOFTWARE INVENTORY (LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION, ETC...)				C	C									C	YES	EXCEL	
	0*	FG02	**	DCQ	ENGINEERING SYSTEM FUNCTIONAL SPECIFICATION				C	C							C		C	YES	WORD	
	0*	FG02	**	DCQ	ENG SYSTEM GUI						C	C							C		JPG	
	0*	FG02	**	DCQ	SOFTWARE INVENTORY (LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION, ETC...)				C	C									C	YES	EXCEL	

Duvha Power Station					OSP HMI UPGRADE METHODOLOGY												TECHNICAL DOCUMENTATION REQUIREMENTS			
C	II	The Contractor submits the documents to the Employer as a deliverable for either, Completion or starting, of the applicable Activity			ENQUIRY/TENDER	UP-FRONT TRAINING	BASIC ENGINEERING	DETAILED ENGINEERING	MANUFACTURING	PROCUREMENT AND INSTALLATION	COMMISSIONING	Change over to new HMI	OSP HMI Upgrade COMPLETION	E	II	The Employer submits the document to the Contractor as a deliverable				
O	II	The OEM approves the document & Contractor submits the OEM approved documents to the Employer as a deliverable for Completion of the applicable Activity													II	The document is maintained by the Employer and available to the Contractor on request				
	II	The document is maintained by the Contractor and available to the Employer on request			T	U	B	D	M	E	C	O	A	← (First Character of Revision No. in Document No.)						
FUNCTION GROUP		DOCUMENT NO.	DOCUMENT DESCRIPTION		Tender	Up-Front Engineering Training Completion	High Level Eng. Philosophies & Technical Clarification Pre-requisite	Basic Eng Design Freeze Documents	Technical Clarification Pre-requisite	Detailed Eng Design Freeze Documents	FAT Pre-requisite Documents	Erection & Installation Pre-requisite Documents	SIT Completion Documents	Cold Commissioning Output Documents	Commissioning (OAT) Completion Documents	Change Over to new HMI Documents	AS BUILT Document Package	Generated by the Engineering Tools	Software Format	REMARKS
GFG03	0"	FG03	** DCC NETWORK STRUCTURE FUNCTIONAL SPECIFICATION					C	C								C	YES	WORD	
	0"	FG03	** DCC NETWORK CABINET FUNCTIONAL SPECIFICATION					C	C								C	YES	WORD	
	0"	FG03	** DCC NETWORK INSTALLATION PHILOSOPHY				C	C	C								C	YES	WORD	
	0"	FG03	** DCC SYSTEM ARCHITECTURE DRAWING		C		C	C	C	C			C				C	YES	CAD	
	0"	FG03	** DCC PHYSICAL NETWORK CONFIGURATION DRAWINGS											C			C	YES	CAD	
	0"	FG03	** DCC LOGICAL NETWORK CONFIGURATION DRAWINGS								C	C		C			C	YES	CAD	
	0"	FG03	** DCC NETWORK EQUIPMENT SCHEDULE (LISTING ALL NETWORK EQUIPMENT INCLUDING PATCH PANELS, MEDIA CONVERTERS, NETWORK SWITCHES,ETC...)					C	C							C	C	YES	EXCEL	
	0"	FG03	** DCC SOFTWARE INVENTORY (LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION,ETC...)														C	YES	EXCEL	
	0"	FG03	** DCC NETWORK CABINET INTERNAL LAYOUT					C	C								C	YES	CAD	
	0"	FG03	** DCC NETWORK CABINET INTERNAL EQUIPMENT CONFIGURATION SETTINGS (IP ADDRESSES, CONFIGURATION SETTINGS, ETC...)					C	C								C	YES	EXCEL	
	0"	FG03	** DCC NETWORK CABINET INTERNAL POWER DISTRIBUTION					C	C								C	YES	CAD	
	FG 04 CABLEING & ASSOCIATED INFRASTRUCTURE	0"	FG04	** DCC CABLE BLOCK DIAGRAM (SHOWING ALL MAIN RACKING AND NETWORK CABLEING ROUTES)					C	C								C	YES	CAD
0"		FG04	** DCC DESIGN AND ROUTING REPORT (NARRATIVE ACCOMPANYING CABLE BLOCK DIAGRAM)					C	C								C	YES	WORD	
0"		FG04	** DCC CABLE SCHEDULES							C	C			C			C	YES	EXCEL	
0"		FG04	** DCC TERMINATION SCHEDULES														C	YES	EXCEL	
0"		FG04	** DCC CERTIFICATES OF COMPLIANCE											C			C		PDF	

Duvha Power Station						OSP HMI UPGRADE METHODOLOGY											TECHNICAL DOCUMENTATION REQUIREMENTS						
C	II	The Contractor submits the documents to the Employer as a deliverable for either, Completion or starting, of the applicable Activity				ENQUIRY/TENDER	UP-FRONT TRAINING	BASIC ENGINEERING	DETAILED ENGINEERING	MANUFACTURING	PROCUREMENT AND INSTALLATION	COMMISSIONING	Change over to new HMI	OSP HMI Upgrade Completion	M	II	The Employer submits the document to the Contractor as a deliverable						
O	II	The OEM approves the document & Contractor submits the OEM approved documents to the Employer as a deliverable for Completion of the applicable Activity														II	The document is maintained by the Employer and available to the Contractor on request						
	II	The document is maintained by the Contractor and available to the Employer on request				T	U	B	D	M	E	C	O	A	← (First Character of Revision No. in Document No.)								
FUNCTION GROUP						Tender	Up-Front Engineering Training Completion	High Level Eng Philosophies & Pre-require	Technical Clarification Pre-require	Basic Eng Design Freeze Documents Pre-require	Technical Clarification Pre-require	Detailed Eng Design Freeze Documents	FAT Pre-require Documents	Erection & Installation Pre-require	SIT Completion Documents	Cold Commissioning Output Documents	Commissioning (OAT) Completion Documents	Change Over to new HMI Risk Assessment	"AS BUILT" Document Package	Generated by the Engineering Tools	Software Format	REMARKS	
POWER DISTRIBUTION SYSTEMS	FG05	0*	FG05	**	DCO POWER DISTRIBUTION PHILOSOPHY			C	C								C	C	YES	WORD			
		0*	FG05	**	DCO EARTHING AND SCREENING FUNCTIONAL SPECIFICATION				C	C								C	C	YES	WORD		
		0*	FG05	**	DCO EARTHING DRAWINGS				C	C							C	C	YES	CAD			
		0*	FG05	**	DCO LIGHTNING/EMC PROTECTION PHILOSOPHY			C	C	C								C	C	YES	WORD		
		0*	FG05	**	DCO 220v POWER DISTRIBUTION DRAWINGS				C	C								C	C	YES	CAD		
NETWORK MANAGEMENT SYSTEMS		0*	FG05	**	DCO DB BOX LOCATION DETAILS				C	C					C			C	C	YES	CAD		
		0*	FG06	**	DCO NETWORK MANAGEMENT SYSTEM FUNCTIONAL SPECIFICATION				C	C								C	C	YES	WORD		
		0*	FG06	**	DCO SOFTWARE INVENTORY (LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION, ETC..)				C	C								C	C	YES	EXCEL		
		0*	FG06	**	DCO NETWORK MANAGEMENT SYSTEM GUI						C	C						C	C		JPG		
USER MANAGEMENT SYSTEMS		0*	FG07	**	DCO USER MANAGEMENT SYSTEM FUNCTIONAL SPECIFICATION				C	C								C	C	YES	WORD		
		0*	FG07	**	DCO SOFTWARE INVENTORY (LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION, ETC..)				C	C								C	C	YES	EXCEL		
		0*	FG07	**	DCO AUTHENTICATION & ACCOUNT SCHEDULE FOR GROUPS & USERS						C	C			C			C	C	YES	EXCEL		
		0*	FG07	**	DCO USER MANAGEMENT SYSTEM GUI						C	C						C	C		JPG		
ACCEPTANCE TESTS		0*	FG08	**	DCO PRE-FAT TEST REPORTS								C					C	C	YES	WORD		
		0*	FG08	**	DCO FAT TEST PROCEDURES						C	C							C	C	YES	WORD	
		0*	FG08	**	DCO SIT TEST PROCEDURES							C	C						C	C	YES	WORD	
		0*	FG08	**	DCO OAT TEST PROCEDURES							C	C						C	C	YES	WORD	
		0*	FG08	**	DCO CAT TEST PROCEDURES							C	C						C	C	YES	WORD	
		0*	FG08	**	DCO COLD COMMISSIONING PROCEDURE							C	C						C	C	YES	WORD	
		0*	FG08	**	DCO IT PENetration TEST PROCEDURES							C	C						C	C	YES	WORD	
		0*	FG08	**	DCO FINAL FAT REPORT														C	C	YES	WORD	
		0*	FG08	**	DCO FINAL LOGICAL FAT REPORT														C	C	YES	WORD	
		0*	FG08	**	DCO FINAL SIT REPORT										C				C	C	YES	WORD	
		0*	FG08	**	COLD COMMISSIONING TESTS REPORT (FUNCTIONAL TESTS, VALVE & DAMPER TESTS, ELECTRICAL DRIVE TESTS AND INSTRUMENT CHECKS)											C			C	C	YES	WORD	
		0*	FG08	**	DCO FINAL OAT REPORT												C		C	C	YES	WORD	
		0*	FG08	**	DCO FINAL CAT REPORT													C	C	C	YES	WORD	
		0*	FG08	**	DCO FINAL EMULATOR TEST REPORT							C							C	C	YES	WORD	
		0*	FG08	**	DCO FINAL IT PENetration TEST REPORT														C	C	YES	WORD	
		0*	FG08	**	DCO COMPLETION CERTIFICATES														C	C	YES	PDF	
GPS TIME SYNC		0*	FG09	**	DCO GPS TIME SYNC SYSTEM FUNCTIONAL SPECIFICATION				C	C								C	C	YES	WORD		
		0*	FG09	**	DCO GPS EQUIPMENT SCHEDULE				C	C									C	C	YES	EXCEL	
		0*	FG09	**	DCO GPS EQUIPMENT CONFIGURATION AND WIRING DRAWING				C	C									C	C	YES	CAD	
		0*	FG09	**	DCO GPS USER SCHEDULE				C	C									C	C	YES	EXCEL	
CENTRAL UPDATE SYSTEM		0*	FG10	**	DCO CENTRAL UPDATE SYSTEM FUNCTIONAL SPECIFICATION				C	C								C	C	YES	WORD		
		0*	FG10	**	DCO SOFTWARE INVENTORY (LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION, ETC..)				C	C								C	C	YES	EXCEL		
		0*	FG10	**	DCO CENTRAL UPDATE SYSTEM GUI						C	C							C	C		JPG	
BACKUP SYSTEM		0*	FG11	**	DCO BACKUP SYSTEM FUNCTIONAL SPECIFICATION				C	C								C	C	YES	WORD		
		0*	FG11	**	DCO SOFTWARE INVENTORY (LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION, ETC..)				C	C								C	C	YES	EXCEL		
		0*	FG11	**	DCO BACKUP SYSTEM GUI						C	C							C	C		JPG	
PLANT INFORMATION SYSTEM		0*	FG12	**	DCO PIS SYSTEM FUNCTIONAL SPECIFICATION				C	C								C	C	YES	WORD		
		0*	FG12	**	DCO SOFTWARE INVENTORY (LISTING ALL SOFTWARE PACKAGES, VERSION NUMBER, LICENSE INFORMATION, ETC..)				C	C								C	C	YES	EXCEL		
		0*	FG12	**	DCO PROCESS GRAPHICS						C	C							C	C	YES	JPG	
		0*	FG12	**	DCO REPORT TEMPLATES							C	C						C	C	YES	EXCEL	
		0*	FG12	**	DCO TAG DATABASE							C	C						C	C	YES	EXCEL	

Duvha Power Station						OSP HMI UPGRADE METHODOLOGY										TECHNICAL DOCUMENTATION REQUIREMENTS				
C	II	The Contractor submits the documents to the Employer as a deliverable for either, Completion or starting, of the applicable Activity				ENQUIRY/TENDER	UP-FRONT TRAINING	BASIC ENGINEERING	DETAILED ENGINEERING	MANUFACTURING	PROCUREMENT AND INSTALLATION	COMMISSIONING	Change over to new HMI	OSP HMI Upgrade COMPLETION	E	II	The Employer submits the document to the Contractor as a deliverable			
O	II	The OEM approves the document & Contractor submits the OEM approved documents to the Employer as a deliverable for Completion of the applicable Activity														II	The document is maintained by the Employer and available to the Contractor on request			
	II	The document is maintained by the Contractor and available to the Employer on request				T	U	B	D	M	E	C	O	A	← (First Character of Revision No. in Document No.)					
FUNCTION GROUP		DOCUMENT NO.	DOCUMENT DESCRIPTION		Tender	Up-Front Engineering Training Completion	High Level Eng Philosophies & Technical Clarification Pre-requisite	Basic Eng Design Freeze Documents	Technical Clarification Freeze Documents	Detailed Eng Design Freeze Documents	FAT Pre-requisite Documents	Erection & Installation Pre-requisite Documents	SIT Completion Documents	Old Commissioning Documents	Commissioning (OAT) Completion Documents	Change Over to new HMI Risk Assessment	7AS BUILT Document Package	Generated by the Engineering Tools	Software Format	REMARKS
CYBER SECURITY & ESP	FG13	0*	FG13	""	""	""		C	C								C	YES	WORD	
	0*	FG13	""	""	""	""		C	C									YES	WORD	
	0*	FG13	""	""	""	""		C	C									YES	EXCEL	
	0*	FG13	""	""	""	""		C	C									YES	EXCEL	
	0*	FG13	""	""	""	""		C	C									YES	EXCEL	
CONTROL ROOMS	FG14	0*	FG14	""	""	""		C	C									YES	EXCEL	
	0*	FG14	""	""	""	""		C	C									YES	EXCEL	
	0*	FG14	""	""	""	""		C	C									YES	CAD	
	0*	FG14	""	""	""	""		C	C									YES	CAD	
	0*	FG14	""	""	""	""		C	C									YES	CAD	
ENGINEERING ROOM	FG15	0*	FG15	""	""	""		C	C									YES	EXCEL	
	0*	FG15	""	""	""	""		C	C									YES	EXCEL	
	0*	FG15	""	""	""	""		C	C									YES	CAD	
	0*	FG15	""	""	""	""		C	C									YES	CAD	
	0*	FG15	""	""	""	""		C	C									YES	CAD	
MANUALS, LICENSING & DATASHEETS	FG16	0*	FG16	""	""	""	C	C						C		C	C	YES	WORD	
	0*	FG16	""	""	""	C	C									C	C	YES	WORD	
	0*	FG16	""	""	""					C	C				C		C	YES	WORD	
	0*	FG16	""	""	""		C												PDF	
	0*	FG16	""	""	""					C	C							YES	WORD	
	0*	FG16	""	""	""					C	C			C			C	YES	WORD	
	0*	FG16	""	""	""	C	C								C		C		PDF	
	0*	FG16	""	""	""					C	C							YES	WORD	
	0*	FG16	""	""	""														N/A	
	0*	FG16	""	""	""														N/A	
MISCELLANEOUS	FG17	0*	FG17	""	""	""	C			C	C				C		C	YES	EXCEL	
	0*	FG17	""	""	""					C	C			C		C	C	YES	WORD	
	0*	FG17	""	""	""	C			C		C				C		C	YES	PRIMA VERA	
	0*	FG17	""	""	""				C	C								YES	WORD	
	0*	FG17	""	""	""				C	C								YES	WORD	
	0*	FG17	""	""	""				C	C								YES	WORD	
	0*	FG17	""	""	""	C			C	C								YES	PDF	
	0*	FG17	""	""	""				C										PDF	
	0*	FG17	""	""	""				C	C									WORD	
	0*	FG17	""	""	""				C	C									EXCEL	
	0*	FG17	""	""	""	C			C		C			C		C		YES	EXCEL	
	0*	FG17	""	""	""				C										WORD	
	0*	FG17	""	""	""				C	C									EXCEL	
	0*	FG17	""	""	""				C										PDF	
	0*	FG17	""	""	""				C										WORD	
	0*	FG17	""	""	""				C	C				C				YES	EXCEL	
	0*	FG17	""	""	""				C	C									EXCEL	