KUWAIT OIL COMPANY (K.S.C.)

A subsidiary of Kuwait Petroleum Corporation

إحـدى شركـات مؤسسـة البتـرول الكـويتيـة
A Subsidiary of Kuwait Petroleum Corporation

PRODUCTION & PROJECTS (GAS) GROUP

GAS PROJECTS TEAM-II

Mutriba Remote Boosting Facility (MRBF) at North Kuwait

Appendix 10

List of Deliverables

0	05-Aug-2024	ISSUED FOR TENDER	All Discipline	GMK	Md Al-Saleh
Rev	**Date**	**Description**	**Prepared By**	**Reviewed By**	**Approved By**

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

All documents and drawings submittals or deliverables by Contractor shall be in English language.

The Contractor shall submit the following drawings and documents, as a minimum:

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
A.	**DISCIPLINE – GENERAL**				
A1	Detailed Vendor Data List	**2 + 2**	-	✓	
A2	Detailed programme of work- Design, procurement & Construction baseline schedule	**2 + 2**	-	✓	
A3	Purchase Requisition complete with Make/Model Number, Vendor's detailed technical information/model decoding procedures, etc.	**2 + 2**	✓	-	
A4	Weekly & Monthly Progress Reports	**2 + 2**	✓	-	
A5	Detailed Project Execution Plan	**2 + 2**	-	✓	
A6	MRs for Packages	**2 + 2**	✓	-	
A7	Recommended Spare parts list for Two (2) years operation	**2 + 2**	✓	-	
A8	Recommended Spare parts list for Commissioning & Start-up	**2 + 2**	✓	-	
A9	List /Details of Special Tools	**2 + 2**	✓	-	
A10	Installation Instruction, Operations and Maintenance Manual for Facility & Packages	**2 + 2**	✓	-	
A11	Shipping Equipment Bill of Materials	**2 + 2**	✓	-	
A12	Manufacturer Record Book	**2 + 2**	✓	-	
A13	Technical Data Book	**2 + 2**	✓	-	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
A14	Instruction for Transportation, storage, warehousing and long-term storage.	**2 + 2**	✓	-	
A15	Material Safety Data Sheets	**2 + 2**	✓	-	
A16	Existing Services Identification Survey Plan and Report	**2 + 2**	-	✓	
A17	Major equipment Vendors Progress reports	**2 + 2**	✓	-	
A18	Engineering/Procurement progress status	**2+2**	✓	-	
A19	Construction Progress Measurement System baseline for progress invoice	**2+2**	-	✓	
PR.	**DISCIPLINE – PROCESS**				
PR1	Process Design Basis & Description	**2 + 2**	-	✓	
PR2	Utility Design Basis	**2 + 2**	-	✓	
PR3	Block Flow Diagram	**2 + 2**	-	✓	Also required As-Built and native files
PR4	Process Flow Diagrams	**2 + 2**	-	✓	Also required As-Built and native files
PR5	Relief, Depressurizations & Blow Down philosophy	**2 + 2**	-	✓	
PR6	Drain, vent & isolation philosophy	**2 + 2**	-	✓	
PR7	Process Simulation reports with H&MB	**2 + 2**	-	✓	Also Native files
PR8	Utility Flow Diagrams	**2 + 2**	-	✓	
PR9	Utility Balance & Summary	**2 + 2**	-	✓	
PR10	Chemical injection summary	**2 + 2**	✓	-	
PR11	Process Safeguarding Diagrams	**2 + 2**	-	✓	Also required As-Built and native files

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
PR12	Editable simulation model of UNISM/Flare net files for process simulation and depressurization	**2 + 2**	✓	-	Also required native files
PR13	Piping & Instrumentation Diagrams (Issued for Approval with vendor details & Issued for Construction) for the following: a)Inlet & heating section b) boosting and separation section c) transfer section e) Utility and Supporting Systems f) Distribution Networks	**2 + 2**	-	✓	Also required As-Built and native files
PR14	Hydraulic Study Reports	**2 + 2**	✓	-	
PR15	Relief, Depressurizations & Blow Down study report along with calculations	**2 + 2**	-	✓	
PR16	PSV sizing calculations & PSV vendor data sheets		✓	-	
PR17	Facility Startup & Shut down procedures	**2 + 2**	✓	-	
PR18	Integrated Pre-Commissioning and Commissioning Procedures of Facility and Tie ins along with system mark ups	**2 + 2**	✓	-	
PR19	Integrated Facility Operation & Maintenance (O&M) manuals	**2 + 2**	✓	-	
C.	**DISCIPLINE – CIVIL, STRUCTURAL & ARCHITECTURAL**				
C1	Topographical Survey Report with Contour Drawings	**2 + 2**	✓	-	
C2	Slit Trenching Drawings with existing Services Identification Survey details	**2 + 2**	✓	-	
C3	Geotechnical Survey Report	**2 + 2**	✓	-	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
C4	Civil, Structural & Architectural Design Basis	**2 + 2**	-	✓	
C5	General Layout & Location Plans including grading & paving layouts	**2 + 2**	-	✓	
C6	Fence Layout	**2 + 2**	-	✓	
C7	Design and detailed drawings for storm water, sanitary, sewage drainage systems	**2 + 2**	✓	-	
C8	Vendor Drawings of Equipment indicating GA and Loading Calculations	**2 + 2**	✓	-	
C9	Equipment Foundations Design Calculations and Drawings	**2 + 2**	✓	-	
C10	Tank Foundations Design Calculations and Drawings	**2 + 2**	✓	-	
C11	Pipe Supports, Pipe Rack Structural & Foundation Design Calculations and Drawings	**2 + 2**	✓	-	
C12	Blast Resistant Control Building Risk Analysis Report	**2 + 2**	✓	-	
C13	Architectural layout and floor plans for Buildings	**2 + 2**	-	✓	
C14	Civil and Structural design calculations and drawings for Buildings and foundations	**2 + 2**	✓	-	
C15	Civil, Structural and Architectural Floor Plans, Elevations, Sections & Details for Shelters	**2 + 2**	✓	-	
C16	Layout & detailed drawings for RCC underground pits	**2 + 2**	✓	-	
C17	Fire proofing detailed drawing and specification for pipe racks / pipe supports/Equipment	**2 + 2**	✓	-	
C18	Civil, Structural & Architectural As-Built Drawings	**2 + 2**	✓	-	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
ME.	**DISCIPLINE – MECHANICAL**				
ME1	Mechanical Packages and Equipment Design Basis	**2 + 2**	-	✓	
ME2	Vendor/packager Equipment Data Sheets	**2 + 2**	-	✓	Also required As-Built
ME3	Design Calculations for Packages and Equipment as per International Codes and Standards	**2 + 2**	✓	-	
ME4	Vendor General Arrangement Drawings & cross section with Bill of Material, weight, boundary limits, piping connections, instrumentations, electrical, Allowable Nozzle Loads etc	**2 + 2**	✓	-	Also required As-Built
ME5	Equipment Fabrication and Internal Drawings	**2 + 2**	✓	-	Also required As-Built
ME6	Skid Fabrication Drawing with Anchor Bolt Location and Details	**2 + 2**	✓	-	Also required As-Built
ME7	Equipment Name Plate Tracing	**2 + 2**	✓	-	
ME8	Mechanical Equipment List	**2 + 2**	✓	-	Also required As-Built
ME9	Material Selection Basis	**2 + 2**	-	✓	
ME10	Corrosion Study Report	**2 + 2**	-	✓	
ME11	Material Selection Drawings	**2 + 2**	-	✓	Also required As-Built
ME12	Weld Procedures	**2 + 2**	✓	-	
ME13	Hydro Test Procedure	**2 + 2**	✓	-	
ME14	Non Destructive Testing Reports	**2 + 2**	✓	-	
ME15	PSV Test and Calibration certificates	**2 + 2**	✓		
ME16	Vendor Catalogs, Standard information etc.	**2 + 2**	✓	-	Along with MRB

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
ME17	Shipping Equipment Bill of Materials	2 + 2	✓	-	
ME18	Manufacturers Record Book (MRB)	2 + 2	✓	-	
MP.	**DISCIPLINE – PIPING**				
MP1	Piping Design Basis / Criteria	2 + 2	-	✓	
MP2	Piping Material Specification	2 + 2	-	✓	
MP3	Stress Critical Line List	2 + 2	✓	-	
MP4	Piping Stress Analysis Reports (Caesar – II)	2 + 2	✓	-	
MP5	Area Equipment Layout Plans	2 + 2	✓	-	Also required As-Built and native files
MP6	Overall Plot Plan	2 + 2	-	✓	Also required As-Built and native files
MP7	Piping General Arrangement Drawings	2 + 2	✓	-	Also required As-Built and
MP8	Piping isometric Drawings (AG/UG)	2 + 2	✓	-	Also required As-Built and native files
MP9	Pipe Support Standard Drawings	2 + 2	✓	-	
MP10	3D Model data base Files (30%, 60%, 90%)	2 + 2	-	✓	Also required As-Built and native files
MP11	3D Model Review Reports (30%, 60%, 90%)	2+ 2	-	✓	
MP12	Piping & Valve Material Requisitions	2 + 2	✓	-	
MP13	Line List (skid and interconnecting Piping)	2 + 2	✓	-	
MP14	Piping Special Items List	2 + 2	✓	-	
MP15	Pipe Wall Thickness Calculation Report	2 + 2	-	✓	
MP16	Tie-in List	2 + 2	✓	-	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
MP17	Piping Fabrication and Welding Procedure	**2+ 2**	✓	-	
MP18	Piping Pressure Test Procedure	**2 + 2**	✓	-	
MP19	Corrosion Study Report/ Scale Assessment Study	**2 + 2**	-	✓	
MP20	Valve datasheets (Ball, Gate, Globe, Check, Plug, PRV, Control Valve, MOV's, SDV, ESDV, EDBV…etc)	**2 + 2**	✓	-	
T.	**STORAGE TANKS**				
T1	Procedure for Fabrication, Erection and Testing	**2 + 2**	-	✓	
T2	Data sheet for storage tanks	**2 + 2**	-	✓	
T3	GAD for storage tanks	**2+ 2**	✓	-	
T4	Fabrication & Detailed drawings	**2 + 2**	✓	-	
EQ	**EQUIPMENTS (STATIC & ROTARY)**				
EQ1	Erection/Rigging Procedure	**2 + 2**	✓	-	
EQ2	Vessel Internals drawings	**2 + 2**	✓	-	
E.	**DISCIPLINE – ELECTRICAL**				
E1	Electrical Design Basis / Criteria	**2 + 2**	-	✓	
E2	Electrical Operating Philosophy	**2 + 2**	✓	-	
E3	Electrical Load List	**2 + 2**	-	✓	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
E4	Power System Studies – Load Flow, Short Circuit, Motor Starting, Harmonic Analysis, Relay Coordination, Earthing	2 + 2	-	✓	
E5	Lightning Protection System Study	2 + 2	-	✓	
E6	Illumination Calculation	2 + 2	-	✓	
E7	Electrical Equipment Sizing (Switchgears/MCC, Transformers, Generator, etc.)	2 + 2	-	✓	
E8	Cable Sizing & Voltage Drop Calculation	2 + 2	✓	-	
E9	Cathodic Protection System Calculation	2 + 2	✓	-	
E10	Cable Trays/Ladder Sizing Calculation	2 + 2	✓	-	
E11	AC/DC UPS Sizing Calculation	2 + 2	-	✓	
E12	Specifications and Data Sheets – (All Electrical Equipment & Cathodic Protection System)	2 + 2	-	✓	
E13	Document Index, General Notes & Legend/Symbols	2 + 2	✓	-	
E14	Single Line Diagram – Overall or Key SLD	2 + 2	-	✓	
E15	Single Line Diagram – HV/MV Switchgear PC&M	2 + 2	-	✓	
E16	Single Line Diagram – LV Switchgear/MCC PC&M	2 + 2	-	✓	
E17	Single Line Diagrams – Distribution Board / Panel board	2 + 2	-	✓	
E18	Single Line Diagrams – UPS (AC & DC)	2 + 2	-	✓	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
E19	Motor Control Schematics	2 + 2	✓	-	
E20	Interconnection & Wiring Diagram	2 + 2	✓	-	
E21	Hazardous Area Classification Drawings	2 + 2	-	✓	
E22	Lighting Layout Drawings – Indoor &	2 + 2	-	✓	
E23	Power Layout drawings – Indoor &	2 + 2	✓	-	
E24	Bus duct Layout, Sections and Details	2 + 2	✓	-	
E25	Electrical Equipment Layout (All	2 + 2	-	✓	
E26	Electrical Equipment General	2 + 2	✓	-	
E27	Cathodic Protection System Layout/Schematic Drawings and Pre-design survey report.	2 + 2	✓	-	
E28	Heat Tracing System	2 + 2	✓	-	
E29	Earthing and Bonding Layout Drawings/Sections/Details	2 + 2	-	✓	
E30	Lightning Protection System Layout Drawings/Sections/Details	2 + 2	-	✓	
E31	Cables & Cable Trays / Ladder / Cable Trench Routing Layout and Details	2 + 2	✓	-	
E32	Distribution Board Schedules	2 + 2	✓	-	
E33	Miscellaneous Installation Detail	2 + 2	✓	-	
E34	Power and Control Cable Schedule	2 + 2	✓	-	
E35	Electrical Material Take-off	2 + 2	✓	-	
E36	Material Requisition / Purchase Order	2 + 2	✓	-	
E37	Inspection & Test Plans, Work Method	2 + 2	✓	-	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
E38	Type test certificates of the equipment	**2 + 2**	✓	-	
E39	Operation and Maintenance instruction for all equipment and accessories	**2 + 2**	✓	-	
E40	As-Built Documents/Drawings	**2 + 2**	✓	-	
HS.	**DISCIPLINE – HSE & FIRE PROTECTION**				
HS1	Fire Fighting Design basis	**2 + 2**	-	✓	
HS2	Fire water demand calculation	**2 + 2**	-	✓	
HS3	Project HSE Plan	**2 + 2**	-	✓	
HS4	HSE Risk Registers	**2 + 2**	-	✓	
HS5	Loss Prevention & HSE Philosophy	**2 + 2**	✓	-	
HS6	Active Fire Protection Design Guidelines	**2 + 2**	-	✓	
HS7	Technical Specifications for Fire water	**2 + 2**	-	✓	
HS8	Technical Specifications for Fire Water Main Pump	**2+2**	-	✓	
HS9	Technical Specifications for Deluge	**2+2**	-	✓	
HS10	Technical Specifications for Fire Water Jockey pump	**2+2**	✓	-	
HS11	Specification for Clean Agent Fire Extinguishing Systems	**2+2**	✓	-	
HS12	Spec for Firefighting	**2+2**	✓	-	
HS13	Mechanical Datasheet for Fire water Tank	**2+2**	✓	-	
HS14	Datasheet for Fire Water Main Pump	**2+2**	✓	-	
HS15	Datasheet for Fire Water Jockey Pump	**2+2**	✓	-	
HS16	Datasheet for deluge system	**2+2**	✓	-	
HS17	Fire Water Piping Layout (Underground)	**2+2**	✓	-	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
HS18	Fire Water network hydraulics	2+2	✓	-	
HS19	Fire water P&ID	2+2	-	✓	
HS20	Firefighting Layouts & Firefighting	2+2	-	✓	
HS21	Safety Equipment & Escape Route Layout	2+2	-	✓	
HS22	Safety Signs Layout	2+2	-	✓	
HS23	Fire Zone Identification & F&G Detection philosophy	2+2	-	✓	
HS24	MTO - Fire Fighting System (Above Ground)	2+2	✓	-	
HS25	MTO - Fire Water Piping (Underground)	2+2	✓	-	
HS26	MTO - Fire Water Piping (Aboveground)	2+2	✓	-	
HS27	HAZID Report	2+2	-	✓	
HS28	QRA, FERA, BRA, EERA Assumption	2+2	-	✓	
HS29	QRA & Zoning Report	2+2	-	✓	
HS30	FERA Report	2+2	-	✓	
HS31	BRA Report		-	✓	
HS32	HAZOP Report	2+2	-	✓	
HS33	Radiation & Gas Dispersion Study Report	2+2	-	✓	
HS34	ESIA Report	2+2	-	✓	
HS35	EERA Report	2+2	-	✓	
HS36	SIMOP Study Report	2+2	-	✓	
HS37	Effluent Summary, quality & quantity	2+2	✓	-	
HS38	SIL Study, SRS, SIL Verification & SIL Validation reports	2+2	-	✓	
HS39	F&G Mapping Study Report	2+2	-	✓	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
HS40	Hazardous Area Classification Drawings	2+2	-	✓	
HS41	HSE study Recommendations close out	2+2	✓	-	
HS42	Safety Critical Equipment List	2+2	✓	-	
HS43	Chemicals safety Data Sheets	2+2	✓	-	
HS44	PHSER 3/4/5/6 reports	2+2	-	✓	
HS45	C- HAZOP Report	2+2	-	✓	
HS46	MR for Fire Fighting, Safety Equipment	-	✓	-	
I.	**DISCIPLINE – INSTRUMENTATION**				
I1	Instrumentation & Control System Design Basis	2 + 2	-	✓	
I2	Telecom System Design Basis	2 + 2	✓	-	
I3	Emergency Shutdown Philosophy	2 + 2	-	✓	
I4	Emergency Shutdown Hierarchy Diagram	2 + 2	-	✓	
I5	MOS &POS philosophy	2 + 2	-	✓	
I6	Typical scheme of BDVs & ESDVs, control valves	2 + 2	-	✓	
I7	Fire & Gas detection & protection Philosophy	2 + 2	-	✓	
I8	Architecture Drawing for ICSS	2 + 2	-	✓	
I9					
I10	General Specification for Instruments	2 + 2	✓	-	
I11	Specification for Package Instruments	2 + 2	✓	-	
I12	Specification for metering, MPFM & quality measurements	2 + 2	✓	-	
I13	Deleted				

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
I14	Deleted				
I15	Specification for Telecom System	**2 + 2**	✓	-	
I16	Specification for Building FACP	**2 + 2**	✓	-	
I17	Specification for cables including Fiber Optic cables	**2 + 2**	✓	-	
I18	Instrument Index (Process, Package and Fire & Gas)	**2 + 2**	✓	-	
I19	Data sheet for Instruments in ISA format Index	**2 + 2**	✓	-	
I20	Data sheet for On-off & Control valves Index	**2 + 2**	✓	-	
I21	Data sheet for Analyzers	**2 + 2**	-	✓	
I22	Data sheet for Fire & Gas devices	**2 + 2**	✓	-	
I23	Data sheet for MPFM	**2 + 2**	-	✓	
I24	Data sheet for Export Flow meter skid	**2 + 2**	-	✓	
I25	Control and safety narratives (Process and Package)	**2 + 2**	✓	-	
I26	Cause & Effect Diagrams (Process & Packages)	**2 + 2**	-	✓	
I27	Cause & Effect Diagrams (Fire &Gas)	**2 + 2**	-	✓	
I28	Input/ Output list (Process, Package and Fire & Gas)	**2 + 2**	-	✓	
I29	Instrument Alarm & trip set point list Index (Process, Package and Fire & Gas)	**2 + 2**	✓	-	
I30	FDS for ICSS including vendor Architecture	**2 + 2**	-	✓	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
I31	Detail design documents for ICSS	**2 + 2**	✓	-	
I32	DCS operator graphic pages	**2 + 2**	✓	-	
I33	FDS for CCTV System	**2 + 2**	✓	-	
I34	CCTV coverage study report	**2 + 2**	✓	-	
I35	CCTV detail design documents	**2 + 2**	✓	-	
I36	FDS for PAGA System	**2 + 2**	✓	-	
I37	PAGA devices Sound & Pressure Level (dB A) study report	**2 + 2**	✓	-	
I38	PAGA detail design document	**2 + 2**	✓	-	
I39	Main control building equipment layout drawing	**2 + 2**	-	✓	
I40	Main control building cable entry Details	**2 + 2**	-	✓	
I41	Substation Instrument room equipment layout drawing	**2 + 2**	-	✓	
I42	MCC interface drawing and IRP Drawing	**2 + 2**	-	✓	
I43	Instrument calculation sheet for control valves, on/off valves, flow elements, thermowells, etc.	**2 + 2**	✓	-	
I44	Instrument GA drawings for Instruments Valves.	**2 + 2**	-	✓	
I45	Cable voltage drop calculations	**2 + 2**	✓	-	
I46	Level Sketches	**2 + 2**	✓	-	
I47	Instrument loop diagrams	**2 + 2**	✓	-	
I48	Instrument wiring/termination diagrams	**2 + 2**	✓	-	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
I49	Instrument Process & Pneumatic hook-up diagrams	2 + 2	✓	-	
I50	Typical instrument installation drawings	2 + 2	✓	-	
I51	Instrument location layouts	2 + 2	✓	-	
I52	Package PLC Wiring Diagrams	2 + 2	✓	-	
I53	Package Control & Safety Systems Architecture	2 + 2	✓	-	
I54	Earthing Layout Drawings	2 + 2	✓	-	
I55	Cable Schedule	2 + 2	✓	-	
I56	Communication Signal List (Mod-bus List)	2 + 2	✓	-	
I57	Logic Diagrams	2 + 2	✓	-	
I58	Equipment Layout Drawings, sections and details, fully dimensioned	2 + 2	✓	-	
I59	Instruments, Valves, Analyzers General Arrangement Drawings	2 + 2	✓	-	
I60	Power Consumption Calculations	2 + 2	✓	-	
I61	Instrument Air Consumption Calculations	2 + 2	✓	-	
I62	Inspection Test Plan Instrumentation works	2 + 2	-	✓	
I63	Inspection & Test Procedures and Quality Control document for Instrumentation works	2 + 2	✓	-	
I64	Instrument Calibration Procedures	2 + 2	✓		
I65	Factory Acceptance Test Procedures	2 + 2	-	✓	
I66	Site Acceptance Test procedure	2 + 2		✓	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
I67	Manufacturer's record book (MRB) for Instruments E.g On-Off valves, Control valves, Flow meter, ICSS, Analyzer, CCTV, PAGA, Instruments, etc.	**2 + 2**	✓	-	
I68	As-built Documentation / Drawings of all the above	**2 + 2**	✓	-	
I69	Spare Parts List as per KOC-G-009 for Instrumentation systems, e.g ICSS, Analyzer, UCP, metering system, etc.	**2 + 2**	✓	-	
Q.	**DISCIPLINE – QUALITY ASSURANCE / QUALITY CONTROL**				
Q1	Quality Assurance System Registration	**2 + 2**	✓	-	
Q2	Quality Assurance System Manual	**2 + 2**	-	✓	
Q3	Quality Assurance Plan	**2 + 2**	-	✓	
Q4	Inspection and Test Plans (Factory & Site	**2 + 2**	-	✓	
Q5	Inspection and Test Procedure	**2 + 2**	✓	-	
Q6	Baseline Data Preparation Procedure	**2 + 2**	✓	-	
Q7	Procurement Data for equipment consisting of Data sheet, MR, TBE & Purchase requisition	**1+1**	✓	-	
Q8	Vendor Data for equipment viz., vendor data sheet, ITP, GA Drawings, Manufacturing procedure, Test procedure, FAT/SAT procedure, sub vendor list and MRB	**1+1**	✓	-	

KUWAIT OIL COMPANY (K.S.C.)
(Register of Commerce No. 21835)

Mutriba Remote Boosting Facility (MRBF), at North Kuwait

Appendix – 10
List of Deliverables

No.	Documents & Drawings	No. of copies Hard + Soft	After Contract Signing (Note-1)		Remarks
			For Information	For Approval	
Q9	Cathodic Protection System date viz., Installation drawings, Cathodic Protections System Installation procedures, Cathodic Protections System Inspection and Test Plan and checklist for installation and commissioning Cathodic Protections System Inspection and Test Plan and checklist for materials, Cathodic Protections System Cable Schedule Cathodic Protections System material data sheet Cathodic Protections System schematic drawings Cathodic Protections System predesign survey report Cathodic Protections System Pre-commissioning and Final Commissioning procedures	**1+1**	✓	-	

NOTES:

1. Review and approval given by the Company to drawings / specifications shall not relieve the Contractor from any of his responsibilities under the Contract.
2. All submittals shall be submitted in Two (2) sets of Hard Copies and two (2) sets of electronic copies.
3. MRB shall contain the following as a minimum
    a. Material summary with test reports of all pressure containing parts.
    b. Weld map with WPS / Welder identification
    c. WPS / PQR details
    d. Summary of welder qualifications
    e. NDT Map with NDT summary
    f. NDT procedures
    g. PWHT and other test Procedures like Hydro test, PMI, Hardness etc.
    h. Inspection and test reports
    i. Signed copy Inspection & Test Plan
    j. Inspection Release notes
    k. As-Built documents
4. Contractor shall develop and maintain the following QA Records.
    a. Quality Control Plan

Appendix – 10
List of Deliverables

b. Design, GA and Detailed drawings
c. Inspection & Test Plan
d. WPS/PQR
e. Welder Qualification reports
f. NDE Procedures
g. Other Test Procedures like PWHT, Hydrostatic, PMI, Hardness etc.
h. Surface preparation / Painting Procedures
i. As built drawings

The documents shall be submitted in soft copy. One set of soft copy and as well in Hardcopy to be handed over at the time of commissioning and another set at the time of handing over of the facility to company.

5. Project Record Book shall consist of:-
   a. Engineering record book
   b. Procurement Record book
   c. Construction Record Book
   d. Manufacturers Record Book
   e. Operating Manuals