

NỘI DUNG ĐÍNH KÈM

Thư mời chào giá cung cấp dịch vụ và thu gom cáp điện hư hỏng thuộc Dự án thay thế STG#3
tại Công ty TNHH Lọc Hóa Dầu Nghi Sơn

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Phụ lục 3 – Phân công trách nhiệm công việc

Phụ lục 4 – Khối lượng công việc

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This Technical requirement shall include but not be limited to the philosophies, specifications, procedures, design data, standards and reference documents in relation to the Works that the Subcontractor shall perform.

The Subcontractor shall review, check and verify this Appendix 1. In case that the Subcontractor finds any discrepancy, error or conflict between the documents comprising this Appendix 1, the Subcontractor shall notify and seek PTSC Thanh Hoa's written clarification.

In case of any deviation from the requirements that the Subcontractor must comply with in accordance with this Appendix 1, the Subcontractor shall notify and seek PTSC Thanh Hoa's written approval promptly prior to making any modification.

The documents comprising this Appendix 1 may contain various terminologies to refer to the parties that will carry out particular activities and fulfil particular responsibilities described in the documents. Example of such terminology includes "Employer", "Company", "Contractor", "Subcontractor", "Vendor", "Supplier", "Manufacturer" and others. However, regardless of the terms used in each document, the Subcontractor is responsible to PTSC Thanh Hoa and NSRP for the proper performance of all elements of the Works in accordance with all mandatory requirements set out in the documents comprising this Appendix 1 unless otherwise approved by PTSC Thanh Hoa in advance. In case of any doubt, the Subcontractor may request PTSC Thanh Hoa's clarification and instruction.

The document contains the following details for each item of data or information:

- Document number.
- Title.
- Revision number; and
- Functional Work Breakdown Structure – FWBS (if any)

This Appendix 1 consists of (03) sections as follows:

- All Design Concept documents specified in Section 1 contain the preliminary design of the Works for Subcontractor to comply with.
- All NSRP's Requirements documents specified in Section 2 contain the requirements for the Subcontractor to comply with; and
- All documents specified in Section 3 – Reference Documents are for the Subcontractor's information only.

The Subcontractor shall give due regard to all the documents which are provided for information only to ensure that the Works be conducted properly.

NSRP Procedure

Document Number	Document Title	Rev.
MD-04-HSE-HS-PD-015	HSSE&S Instructions for Contractors	1
MD-04-HSE-HS-PD-048	Hot Work Safety Procedure	2
MD-04-HSE-FF-PD-002	Fire Prevention Procedure	2
MD-04-HSE-HS-PD-044	Traffic Safety Rules in the Refinery Site	5
MD-04-HSE-HS-PD-001	PPE Management Procedure	5
MD-04-HSE-HS-PD-003	Permit to Work Procedure	9
MD-04-HSE-HS-PD-004	Job Safety Analysis (JSA) & Safe Work Method Statement (SWMS) Procedure	3
MD-04-HSE-HS-PD-005	HSSES Training Procedure	4
MD-04-HSE-HS-PD-007	Incident Reporting and Investigation Procedure	5
MD-04-HSE-HS-PD-009	START Procedure	1
MD-04-HSE-HS-PD-012	Lock Out & Tag Out Procedure	2
MD-04-HSE-HS-PD-014	HSE Non-compliance control procedure	4
MD-04-HSE-HS-PD-015	HSSES Instructions for Contractors	0
MD-04-HSE-HS-PD-018	Hazardous gas safety management procedure	1
MD-04-HSE-HS-PD-019	Safety Signs barricade and label management procedure	0
MD-04-HSE-HS-PD-020	Radiation Safety Management Procedure	2
MD-04-HSE-HS-PD-021	Safe Behavior Observation Procedure	1
MD-04-HSE-HS-PD-023	Evacuation and Emergency Alarm Procedure	4
MD-04-HSE-HS-PD-025	Crisis Management Procedure	0
MD-04-HSE-HS-PD-026	HSE Audit and Inspection Plan procedure	1
MD-04-HSE-HS-PD-029	Confined Space Entry Procedure	1
MD-04-HSE-HS-PD-030	Smoking Drugs and Alcohol Procedure	1
MD-04-HSE-HS-PD-032	Gate Control Procedure	9
MD-04-HSE-HS-PD-036	ID Card Issuing and Management Procedure	3
MD-04-HSE-HS-PD-041	Working at Height Procedure	0
MD-04-HSE-HS-PD-043	Electrical Safety Procedure	2
MD-04-HSE-HS-PD-044	Traffic Safety Rules in the Refinery Site	5
MD-04-HSE-HS-PD-047	Nitrogen Safety Procedure	0
MD-04-HSE-HS-PD-048	Hot Work Safety Procedure	2
MD-04-HSE-HS-PD-056	Heat Stress Prevention Program	0
MD-04-HSE-HS-PD-059	Manual Handling Procedure	0
MD-04-MT-MS-PD-024	Two Year OM Spare Parts Selection Strategy	1
MD-04-MT-PD-100	Scaffolding HSE Procedure	1
MD-04-MT-PD-101	Mobile Equipment and Heavy Equipment Safety Management Procedure	0
MD-04-MT-PD-104	Lifting & Rigging Operation HSE Procedure	3
MD-04-MT-PD-106	Excavation Procedure	1
MD-04-MT-PD-107	Grating Remove Procedure	0
MD-04-MT-PD-108	SIMOPS Coordination Procedure	0

Document Number	Document Title	Rev.
MD-04-MT-RSSTA-PD-014	Maintenance Procedure for Piping General Work	0
MD-04-MT-RSSTA-PD-016	Maintenance procedure for Leak Test, Hydro Test	0
MD-04-MT-RSSTA-PD-017	Maintenance procedure for Painting work	0
MD-04-MT-RSSTA-PD-018	Maintenance procedure for Welding and Cutting Work	1
MD-04-HSE-HS-PD-002	Tools & portable equipment procedure	0
MD-04-HSE-HS-PD-022	Hazard Identification, Risk Management and Controls procedure	0
MD-04-HSE-HS-PD-027	Golden Safety Rules	0
MD-04-HSE-HS-PD-006	H2S Safety Procedure	1
MD-04-HSE-HS-PD-038	Typhoon Response Procedure	5
MD-04-HSE-HS-PD-50	SDS Management Procedure	0
MD-04-HSE-HS-PD-056	Heat Stress Prevention	0
MD-04-HSE-HS-PD-060	Compressed Gas Cylinder Management Procedure	0
MD-04-HSE-HS-PD-061	Security Start Up Procedure	1
MD-04-HSE-ES-PL-007	Waste Management Plan	2

NSRP As built Document

Project Management

Document Number	Document Title	Rev.
S-000-1132-0001V	Work Breakdown Structure (WBS)	2
S-000-1133-0004V	Progress Review And Certification Procedure	2
S-000-1136-0001V	Document Control Procedure	1
S-000-1139-0003V	Project Quality Audit Procedure	2
S-000-1140-0006V	Mandatory Vietnamese Codes And Standards List	3
S-000-1140-0007V	International Codes & Standards List	0
S-000-1140-0014V	Equipment And Line Numbering Procedure	1
S-000-1140-0021V	Document Numbering Procedure	4
S-000-1140-0023V	Document Classification And File Format	5
S-000-1140-0024V	Title Block Requirements For Technical Documents And Drawings	0
S-000-1140-0025V	Requirements For Document And Data Handover	2
S-000-1140-0026V	Instruction For Vendor Documentation (General)	3
S-000-1140-0030V	As Built Document Procedure	4
S-000-1140-0031V	Preparation Of Vendor Data Books	4
S-000-1140-0032V	Preparation Procedure For Design Books	1
S-000-1140-0034V	Guideline For P&ID Development (Phase Control)	0
S-000-1140-0042V	Procedure For Notices Of P&I Diagram Change (NPIC) And Notices Of Plot Plan Change (NPPC)	0
S-000-1140-0051V	Template For Requisition Preparation	2
S-000-1140-0052V	Spare Parts Philosophy	1
S-000-1140-0053V	Spare Parts Handling Procedure	1

Document Number	Document Title	Rev.
S-000-1140-0055V	Project Specification For Spare Parts List Preparation By Vendors	1
S-000-1140-0057V	Vendor Source Inspection Criticality Rating List (Common)	A
S-000-1140-0062V	Procedure For Field Work Request (FWR)	3
S-000-1140-0063V	Procedure For Early Warning Notice (EWN)	0
S-000-1140-0064V	Field Change Sheet Procedure	3
S-000-1140-0086V	Handover Procedure For Spare Parts & Special Tools	0
S-000-1140-0087V	Preparation Procedure For Construction Records	3
S-000-1140-0090V	Handover Procedure For Local Authority / 3Rd Party Certificates	0
S-000-1140-0091V	Defect Notification And Handling Procedure	4
S-000-1140-0092V	Handover Procedure For Documents, Data And Materials	3
S-000-1140-0093V	Preparation Procedure For Commissioning Records	0
S-000-1140-0094V	Initial Spare Parts Handling After Mechanical Completion	0
S-000-1148-0002V	Government Application Procedure For Equipment Requiring Statutory Approval	0
S-000-11F0-0002V	2D CAD Regulation	0

Plot Plan

Document Number	Document Title	Rev.
D-000-1225-0001V	P&ID Symbology General Notes & Abbreviations	1
D-000-1225-0002V	P&ID PIPING SYMBOLOGY	2
D-B40-1225-0001S	UNIT OVERALL PLOT PLAN STEAM & POWER AREA UNIT 110/111/112/113	6
D-B40-1225-0010S	KEY PLAN FOR UNIT PLOT PLAN STEAM & POWER AREA UNIT 110/111/112/113	6
D-B40-1225-0011S	UNIT PLOT PLAN STEAM & POWER AREA UNIT 110/111/112/113 (1/4)	5
D-B40-1362-0001S	KEY PLAN OF A/G GENERAL ARRANGEMENT DWG FOR STEAM & POWER AREA UNIT110/111/112/113	2
D-B40-1225-0012S	UNIT PLOT PLAN STEAM & POWER AREA UNIT 110/111/112/113 (2/4)	5
D-B40-1225-0013S	UNIT PLOT PLAN STEAM & POWER AREA UNIT 110/111/112/113 (3/4)	5
D-B40-1225-0014S	UNIT PLOT PLAN STEAM & POWER AREA UNIT 110/111/112/113(4/4)	6
D-113-1223-0401S	PFD - Unit 113 - Steam Turbine Generators	2
D-113-1223-0402S	PFD - Unit 113 - Steam Turbine Generators	2
D-113-1223-0403S	PFD - Unit 113 - H & MB	2
D-113-1223-0901S	MSD - Unit 113 - Steam Turbine Generators	1
D-113-1223-0902S	MSD - Unit 113 - Steam Turbine Generators	1

Process

Doc. No.	Document Title	Rev.
S-110-1222-0001S	Steam and Power System Design Basis	1

S-000-1220-0001V	BASIC ENGINEERING DESIGN DATA	2
S-000-1252-0001V	QRA Study Procedure	0
S-000-1252-0101V	Detailed QRA Report	1
S-000-1256-0001G	HAZOP STUDY REPORT (FOR VENDOR PACKAGES)	0
S-000-1256-0001V	HAZOP PROCEDURE	0
S-000-1256-1001G	HAZOP ACTION CLOSE-OUT REPORT (FOR VENDOR PACKAGES)	0
S-000-1256-1001V	General Report for HAZOP Review and Actions Closeout	0
S-000-1256-1002V	HAZID Status Report	0
S-000-1257-0001G	SIL CLASSIFICATION REPORT (FOR VENDOR PACKAGES)	0
S-000-1257-0001V	SIL Classification Procedure	1
S-000-1260-0001V	RAM Study Procedure	0
S-000-1260-0005V	TML Setting Procedure	3
S-000-1271-0001S	STEAM SYSTEM DYNAMIC SIMULATION REPORT	1
S-000-1274-0001G	Materials Selection and Corrosion Control Guide	0
S-000-1274-0001J	Material Selection and Corrosion Control Guide	0
S-000-1274-0001V	Materials Selection and Corrosion Control Guide	0
S-000-1274-0002V	Materials Requirements for Pressurised Equipment and Piping	1
S-000-1274-0003V	Specification for Internal Corrosion Resistant Coating	1
S-000-1274-0004V	Specification for Thermally Sprayed Aluminium	0
S-000-1274-0005V	Specification for Coating and Wrapping of Buried Pipework	1
S-113-1223-0501S	UTILITY SUMMARY FOR STEAM TURBINE GENERATORS	3
S-113-1223-0502S	RELIEF AND BLOWDOWN SUMMARY (UNIT 113)	0
S-113-1223-0504S	PRESSURE RELIEF VALVE CALCULATION SHEET (UNIT 113)	0
S-113-1223-0801S	CAUSE AND EFFECT DIAGRAM (UNIT 113)	0
S-113-1223-0803S	STATIC ALARM SUPPRESSION FOR UNIT 113	0
S-113-1223-0804S	DYNAMIC ALARM SUPPRESSION FOR UNIT 113	0
S-113-1223-0804S	DYNAMIC ALARM SUPPRESSION FOR UNIT 113	1
S-113-1223-0804S	DYNAMIC ALARM SUPPRESSION FOR UNIT 113	2
S-113-1224-0401S	Equipment Data Sheet for STG CONDENSATE PUMPS	1
S-113-1224-0402S	Equipment Data Sheet for STG CONDENSATE PUMPS	1
S-113-1224-0403S	Equipment Data Sheet for STG CONDENSATE PUMPS	1
S-113-1224-0404S	Equipment Data Sheet for STG CONDENSATE PUMPS	1
S-113-1224-0405S	Equipment Data Sheet for STG CONDENSATE PUMPS	1
S-113-1224-0501S	PROCESS DATA SHEET FOR STEAM TURBINE GENERATOR PACKAGE (113-A-003/113-A-004)	1
S-113-1224-0901S	EQUIPMENT LIST FOR STEAM TURBINE GENERATORS	2
S-113-1224-4501S	Equipment Data Sheet for SEAL STEAM DESUPERHEATER	1
S-113-1224-4502S	Equipment Data Sheet for SEAL STEAM DESUPERHEATER	1
S-113-1224-4503S	Equipment Data Sheet for SEAL STEAM DESUPERHEATER	1
S-113-1224-4504S	Equipment Data Sheet for SEAL STEAM DESUPERHEATER	1
S-113-1224-4505S	Equipment Data Sheet for SEAL STEAM DESUPERHEATER	1

S-113-1224-4506S	Equipment Data Sheet for MP Extraction steam Desuperheater	1
S-113-1224-4507S	Equipment Data Sheet for MP Extraction steam Desuperheater	1
S-113-1224-4508S	Equipment Data Sheet for HP Extraction steam Desuperheater	1
S-113-1224-4509S	Equipment Data Sheet for HP Extraction steam Desuperheater	1
S-113-1224-4513S	PROCESS DATA SHEET FOR 113-A-003 VENT SILENCER (113-SP-9301)	1
S-113-1228-0001S	LINE LIST FOR STEAM TURBINE GENERATORS (UNIT 113)	3
S-113-1241-7901S	Fire Hazardous Equipment List for Steam Turbine Generators	0
S-113-1256-0002S	Vendor Package HAZOP Study Report for Utility- STG	0
S-113-1256-1002S	HAZOP ACTION CLOSEOUT REPORT - STG PACKAGE (FOR UNIT 113)	0
S-113-1257-0002S	VENDOR PACKAGE SIL CLASSIFICATION REPORT FOR UTILITY - STG	0
S-113-1283-0001S	OPERATING MANUAL FOR UNIT 113 STEAM TURBINE GENERATORS	1
S-000-1225-0001V	PREPARATION OF P&IDS	0
S-000-1244-0002V	SPECIFICATION FOR EQUIPMENT NOISE CONTROL	0
S-000-1244-0920V	Acceptance Test Procedure for Environmental Noise	1

Piping and Instrument Diagram

Doc. No.	Document Title	Rev.
D-113-1225-0001S	P&ID - Unit 113 - Steam Turbine Generator Package (113-A-003)	3
D-000-1225-0003V	P&ID EQUIPMENT SYMBOLOGY - 1	1
D-000-1225-0004V	P&ID EQUIPMENT SYMBOLOGY - 2	1
D-000-1225-0005V	P&ID EQUIPMENT SYMBOLOGY - 3	1
D-000-1225-0006V	P&ID EQUIPMENT SYMBOLOGY - 4	1
D-000-1225-0007V	P&ID EQUIPMENT SYMBOLOGY - 5	1
D-000-1225-0008V	P&ID SAMPLING SYMBOLOGY - 1	2
D-000-1225-0009V	P&ID SAMPLING SYMBOLOGY - 2	2
D-000-1225-0014V	P&ID TYPICAL PIPING ARRANGEMENT	2
D-000-1225-0020V	P&ID INSTRUMENT SYMBOLOGY AND LEGEND	2
D-000-1225-0021V	P&ID INSTRUMENT TYPICALS SYMBOLOGY - 1	2
D-000-1225-0022V	P&ID INSTRUMENT TYPICALS SYMBOLOGY - 2	2
D-000-1225-0023V	P&ID INSTRUMENT TYPICALS SYMBOLOGY - 3	2
D-000-1225-0024V	P&ID INSTRUMENT TYPICALS SYMBOLOGY - 4	2
D-000-1225-0025V	P&ID INSTRUMENT TYPICALS SYMBOLOGY - 5	3
D-000-1225-0026V	P&ID INSTRUMENT TYPICALS SYMBOLOGY - 6	5
D-000-1225-0027V	P&ID INSTRUMENT TYPICALS SYMBOLOGY - 7	4
S-112-1360-0001X	Piping Material Classification Summary	A

Piping

Doc. No.	Document Title	Rev.
S-000-1360-0001V	General Specification for Piping	1
S-000-1360-0002V	PIPING MATERIAL SPECIFICATION	5
S-000-1360-0003V	Specification for Equipment Spacing	0
S-000-1360-0004V	SPECIFICATION FOR IDENTIFICATION OF PIPING MATERIALS	4
S-000-1360-0005V	SPECIFICATION FOR STRESS ANALYSIS	0
S-000-1360-0006V	GUIDELINE FOR STRESS CRITICAL LINE LIST PREPARATION	0
S-000-1360-0008V	TECHNICAL SPECIFICATION FOR PIPES, FITTINGS, FLANGES, BOLTS & NUTS, GASKETS AND SPECTACLE BLINDS	4
S-000-1360-0009V	TECHNICAL SPECIFICATION FOR MANUAL VALVES	4
S-000-1360-0011V	Valve Data Sheet for Piping Manual Valves	0
S-000-1360-0012V	Technical Specification for GRP Pipes and Piping Components (Incl. CIVIL)	0
S-000-1360-0014V	Specification for Piping Material Substitution at Site	0
S-000-1360-0015V	Material and Technical Specification for PE Lined Piping for Foam Line	0
S-000-1360-0016V	Line List for Foam Concentrate Line (Polyethylene Lined)	0
S-000-1360-0016V	Line List for Foam Concentrate Line (Polyethylene Lined)	1
S-000-1360-0301J	Data Sheets for Motor Operated Valves (Gate)	1
S-000-1360-0301V	TECHNICAL SPECIFICATION FOR MOTOR OPERATED VALVES	1
S-000-1360-0312J	Technical Specification for Valves with Position Indicator	1
S-000-1360-0315G	Technical Specification for Blowdown Valves	0
S-000-1360-0315J	Technical Specification for Blowdown Valves	1
S-000-1360-0327J	Technical Specification for Special Check Valves	0
S-000-1360-0351J	Technical Specification for ROV Gate Valves	0
S-000-1360-0401J	Data Sheets for Special Paddle Blank and Spacer	1
S-000-1360-0501V	TECHNICAL SPECIFICATION FOR PRESSURE RELIEF VALVES	1
S-000-1360-0502J	Data Sheets for Rupture Disc	0
S-000-1360-0503J	Data Sheets for Multi-Tap Orifice Flanges	1
S-000-1360-0504J	Technical Specification for Restriction Orifices	8
S-000-1360-0504J	Technical Specification for Restriction Orifices	9
S-000-1360-0505J	Data Sheets for Level Gauges	5
S-000-1360-0506J	Technical Specification for Sight Glasses	1
S-000-1360-0601G	Technical Specification for Sample Coolers	0
S-000-1360-0608G	Technical Specification for Valve Interlocking Devices	0
S-000-1360-0616G	Data Sheet for Tubes and Tube Fittings	0
S-000-1360-0616J	Data Sheets for Tubes and Tube Fittings	5
S-000-1360-0616V	TECHNICAL SPECIFICATION FOR TUBES AND TUBE FITTINGS	5
S-000-1360-0620G	Data Sheet for Pre-Insulated Tubes for Heat Tracing	0
S-000-1360-0628J	Technical Specification for Air Motor Operated Valves	1
S-000-1360-0704J	Technical Specification for Spring Supports, Struts, and Snubbers	9
S-000-1360-0705J	Technical Specification for Vibration Isolation Pad	3

S-000-1360-0706J	Technical Specification for Spring Supports, Struts, and Snubbers (for RX/RG)	6
S-000-1360-0901G	Technical Specification for 3LPE Coating Line Pipe	0
S-112-1360-0001X	Piping Material Classification Summary	A
D-000-1360-0110V	TYPICAL PIPING ASSEMBLY PLANT LAYOUT GUIDELINES	1
D-000-1360-0111V	PLANT ROAD SPACING REQUIREMENT	1
D-000-1360-0112V	VALVE INSTALLATION GUIDE	2
D-000-1360-0114V	STANDARD DRAWING PIPE SPACE (1/3) ASME CL.150, CL.300 & CL.600	1
D-000-1360-0115V	STANDARD DRAWING PIPE SPACE (2/3) ASME CL.900 & CL.1500	1
D-000-1360-0116V	STANDARD DRAWING PIPE SPACE (3/3)	1
D-000-1360-0117V	TYPICAL DETAIL STRUCTURE	1
D-000-1360-0118V	TYPICAL DETAIL TOWER & VERTICAL DRUM	2
D-000-1360-0119V	TYPICAL DETAIL PLATFORM ARRANGEMENT OF HORIZONTAL VESSEL	1
D-000-1360-0120V	TYPICAL DETAIL SPECTACLE BLIND/SPADE/SPACER HANDLING	1
D-000-1360-0123V	TYPICAL DETAIL AROUND PUMPS END-TOP	0
D-000-1360-0124V	TYPICAL DETAIL AROUND PUMPS TOP-TOP (ALTERNATIVE)	0
D-000-1360-0125V	TYPICAL DETAIL AROUND PUMPS TOP-TOP (PREFERENCE)	0
D-000-1360-0126V	TYPICAL PIPING ASSEMBLY BASE DRAIN AROUND PUMPS	0
D-000-1360-0127V	TYPICAL DETAIL AROUND SAFETY VALVE	0
D-000-1360-0128V	TYPICAL DETAIL AT CONTROL VALVE (1/2)	0
D-000-1360-0129V	TYPICAL DETAIL AT CONTROL VALVE (2/2)	0
D-000-1360-0130V	DESIGN GUIDELINE FOR DEAD LEG	1
D-000-1360-0132V	TYPICAL PIPING DETAIL VALVE HANDLE EXTENSION	0
D-000-1360-0360V	Typical Piping Assembly Temperature Instrument (1/3)	1
D-000-1360-0361V	Typical Piping Assembly Temperature Instrument (2/3)	2
D-000-1360-0362V	Typical Piping Assembly Temperature Instrument (3/3)	1
D-000-1360-0400V	Typical Piping Assembly Pressure Gauge and Transmitter (1/11)	1
D-000-1360-0401V	Typical Piping Assembly Pressure Gauge and Transmitter (2/11)	0
D-000-1360-0402V	Typical Piping Assembly Pressure Gauge and Transmitter (3/11)	1
D-000-1360-0403V	Typical Piping Assembly Pressure Gauge and Transmitter (4/11)	0
D-000-1360-0404V	Typical Piping Assembly Pressure Gauge and Transmitter (5/11)	0
D-000-1360-0405V	Typical Piping Assembly Pressure Gauge and Transmitter (6/11)	0
D-000-1360-0406V	Typical Piping Assembly Pressure Gauge and Transmitter (7/11)	0
D-000-1360-0407V	Typical Piping Assembly Pressure Gauge and Transmitter (8/11)	0
D-000-1360-0408V	Typical Piping Assembly Pressure Gauge and Transmitter (9/11)	0
D-000-1360-0409V	Typical Piping Assembly Pressure Gauge and Transmitter (10/11)	0
D-000-1360-0410V	Typical Piping Assembly Pressure Gauge and Transmitter (11/11)	0
D-000-1360-0420V	Typical Piping Assembly Pressure Gauge and Transmitter Diaphragm Type (1/4)	1
D-000-1360-0421V	Typical Piping Assembly Pressure Gauge and Transmitter Diaphragm Type (2/4)	1

D-000-1360-0422V	Typical Piping Assembly Pressure Gauge and Transmitter Diaphragm Type (3/4)	0
D-000-1360-0423V	Typical Piping Assembly Pressure Gauge and Transmitter Diaphragm Type (4/4)	0
D-000-1360-0801V	TYPICAL DETAIL FOR FIREPROOFING ON PIPE SUPPORT (1/3)	0
D-000-1360-0802V	TYPICAL DETAIL FOR FIREPROOFING ON PIPE SUPPORT (2/3)	0
D-000-1360-0803V	TYPICAL DETAIL FOR FIREPROOFING ON PIPE SUPPORT (3/3)	0

Equipment

Document Number	Document Title	Rev.
S-113-1355-0501S	MECHANICAL DATA SHEET FOR OVERHEAD CRANE (113-CR-001/002/003/004/005)	0
S-000-1355-0501V	General Specification for Overhead Travelling Cranes	0
S-000-1355-0504J	Data Sheet for Overhead Cranes	0
S-000-135A-0001V	General Requirements for Packaged Equipment	1
D-000-1351-0002V	STANDARD DRAWING FOR FIREPROOFING FOR EQUIPMENT SUPPORT	2
D-000-1352-0001V	STANDARD DRAWING FOR EQUIPMENT PLATFORM & LADDER	7
D-000-1352-1001V	STANDARD DRAWING FOR HANDRAIL MODIFICATION	1
D-000-1354-0001V	Standard Drawings for Storage Tanks	3
S-000-1351-0001V	GENERAL REQUIREMENTS FOR WELDED UNFIRED PRESSURE VESSELS	1
S-000-1351-0004V	SUBMISSION OF WELDING AND MANUFACTURING PROCEDURES	0
S-000-1351-0005V	DESIGN GUIDELINES ON SHIPPING SADDLES FOR VESSELS	0
S-000-1351-0006V	GUIDELINES ON DESIGN OF ANCHOR BOLT TEMPLATES	1
S-000-1351-0007V	DESIGN & FABRICATION REQUIREMENTS FOR LIFTING & TAILING LUGS	0
S-000-1352-0002V	GENERAL SPECIFICATION FOR EQUIPMENT PLATFORM AND LADDER	0
S-000-1355-0501V	General Specification for Overhead Travelling Cranes	0
S-000-1355-0504J	Data Sheet for Overhead Cranes	0
S-000-135A-0001V	General Requirements for Packaged Equipment	1
S-000-135B-0001V	Water Tube Boilers	0
S-000-135B-0002V	Heat Recovery Steam Generators	1

Civil/ Steel structure

Document Number	Document Title	Rev.
S-000-1310-0001V	Detailed Engineering Design Data for Civil and Structure	7
S-000-1310-0002V	Interpretative and Engineering Report for Detailed Soil Investigation	0
S-000-1310-0003V	Wind Load Calculation Procedure	0
S-000-1310-0004V	Seismic Load Calculation Procedure	1
S-000-1310-9001V	Civil Interface Coordination Procedure	A
S-000-1311-0001V	Specification for Detailed Soil Investigation Works	3

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S-000-1311-0002V	Factual Report for Detailed Soil Investigation	A
S-000-1311-0004V	Topographical and Land Survey Data	A
S-000-1311-0005V	SETTLEMENT MONITORING REPORT	C
S-000-1311-1001V	SPECIFICATION FOR SETTLEMENT MONITORING FOR FOUNDATIONS, STRUCTURES AND EQUIPMENT	1
S-000-1311-1002V	Settlement Monitoring Report for Foundations, Structures and Equipment	X
S-000-1311-1003V	SETTLEMENT MONITORING REPORT FOR DEFECT ITEMS	D
S-000-1311-1003V	SETTLEMENT MONITORING REPORT FOR DEFECT ITEMS	E
S-000-1311-1003V	SETTLEMENT MONITORING REPORT FOR DEFECT ITEMS	G
S-000-1311-1003V	SETTLEMENT MONITORING REPORT FOR DEFECT ITEMS	H
S-000-1311-1003V	SETTLEMENT MONITORING REPORT FOR DEFECT ITEMS	J
S-000-1311-1003V	SETTLEMENT MONITORING REPORT FOR DEFECT ITEMS	K
S-000-1311-1003V	SETTLEMENT MONITORING REPORT FOR DEFECT ITEMS	L
S-000-1312-1001V	Construction Specification for Site Preparation and Earthwork	3
S-000-1314-1001V	Construction Specification for Piling Work	5
S-000-1314-1002V	Construction Specification for Pile Load Test	1
S-000-1316-0001J	TECHNICAL SPECIFICATION FOR MANUAL VALVES FOR NON-PRESSURIZED LINE	0
S-000-1316-0001M	Technical Specification for Manual Valves for Non-Pressurized Line	0
S-000-1316-0001S	Technical Specification for Manual Valves for Non-Pressurized Line	0
S-AC0-1316-0001C	TECHNICAL SPECIFICATION FOR MANUAL VALVES FOR NON-PRESSURIZED LINE	0
S-000-1314-1001V	Construction Specification for Piling Work	5
D-000-1330-3001J	STRUCTURAL STEEL WORKS GENERAL NOTES (JIS)	2
D-000-1330-3002J	STANDARD STEEL MEMBER PROFILES (JIS)	3
D-000-1330-3005J	STANDARD DETAILS FOR EM CONNECTION (JIS) (1/4)	1
D-000-1330-3006J	STANDARD DETAILS FOR EM CONNECTION (JIS) (2/4)	1
D-000-1330-3007J	STANDARD DETAILS FOR EM CONNECTION (JIS) (3/4)	1
D-000-1330-3008J	STANDARD DETAILS FOR EM CONNECTION (JIS) (4/4)	1
D-000-1330-3009J	STANDARD DETAILS FOR EMH CONNECTIONS (JIS) (1/4)	1
D-000-1330-3010J	STANDARD DETAILS FOR EMH CONNECTIONS (JIS) (2/4)	1
D-000-1330-3011J	STANDARD DETAILS FOR EMH CONNECTIONS (JIS) (3/4)	1
D-000-1330-3012J	STANDARD DETAILS FOR EMH CONNECTIONS (JIS) (4/4)	1
D-000-1330-3013J	STANDARD DETAILS FOR EMT CONNECTIONS (JIS) (1/4)	1
D-000-1330-3014J	STANDARD DETAILS FOR EMT CONNECTIONS (JIS) (2/4)	1
D-000-1330-3015J	STANDARD DETAILS FOR EMT CONNECTIONS (JIS) (3/4)	1
D-000-1330-3016J	STANDARD DETAILS FOR EMT CONNECTIONS (JIS) (4/4)	1
D-000-1330-3018J	STANDARD DETAILS FOR SL CONNECTION (JIS) (1)	1
D-000-1330-3019J	STANDARD DETAILS FOR SL CONNECTION (JIS) (2)	1
D-000-1330-3021J	STANDARD DETAILS FOR SS CONNECTION (JIS) (1)	1
D-000-1330-3022J	STANDARD DETAILS FOR SS CONNECTION (JIS) (2)	1
D-000-1330-3024J	STANDARD DETAILS FOR SSP COMBINATION (JIS)	2

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D-000-1330-3025J	STANDARD DETAILS FOR DS CONNECTION (JIS)	1
D-000-1330-3026J	STANDARD DETAILS FOR DSP CONNECTION COMBINATION (JIS)	1
D-000-1330-3031J	STANDARD DETAILS FOR PST & PW CONNECTION (JIS)	1
D-000-1330-3032J	STANDARD DETAILS FOR PS CONNECTION (JIS)	1
D-000-1330-3036J	STANDARD DETAILS FOR SR & SRL CONNECTION (JIS)	1
D-000-1330-3041J	STANDARD DETAILS FOR LT & HY CONNECTION (JIS)	1
D-000-1330-3042J	STANDARD DETAILS FOR HY CONNECTION (H-SHAPE) (JIS)	1
D-000-1330-3043J	STANDARD DETAILS FOR HORIZONTAL BRACING & KNEE BRACING (JIS)	1
D-000-1330-3044J	STANDARD DETAILS FOR VERTICAL BRACING (JIS)	1
D-000-1330-3051J	STANDARD DETAILS FOR CS CONNECTION (JIS)	1
D-000-1330-3056J	STANDARD DETAILS FOR BP CONNECTION (JIS)	1
D-000-1330-3057J	STANDARD DETAILS FOR BPS CONNECTION (JIS)	1
D-000-1330-3058J	STANDARD DETAILS FOR BPC CONNECTION (JIS)	1
D-000-1330-3059J	STANDARD DETAILS FOR BPF CONNECTION (JIS)	1
D-000-1330-3060J	STANDARD DETAILS FOR BPK CONNECTION (JIS)	2
D-000-1330-3061J	STANDARD DETAILS FOR EJ& EJC CONNECTION (JIS) (1)	1
D-000-1330-3062J	STANDARD DETAILS FOR EJ& EJC CONNECTION (JIS) (2)	2
D-000-1330-3067J	STANDARD DETAILS FOR SSC CONNECTION (JIS) (1)	3
D-000-1330-3068J	STANDARD DETAILS FOR SSC CONNECTION (JIS) (2)	1
D-000-1330-3069J	STANDARD DETAILS FOR SSB CONNECTION (JIS)	1
D-000-1330-3070J	STANDARD DETAILS FOR KRC CONNECTION (JIS)	1
D-000-1330-3071J	STANDARD DETAILS FOR WMC CONNECTION (JIS)	1
D-000-1330-3081J	STANDARD HANDRAILING (JIS) (1/2)	8
D-000-1330-3082J	STANDARD HANDRAILING (JIS)(2/2)	3
D-000-1330-3086J	STANDARD LADDER (JIS) (1/2)	4
D-000-1330-3087J	STANDARD LADDER (JIS) (2/2)	4
D-000-1330-3091J	STANDARD STAIR (JIS) (1/2)	4
D-000-1330-3092J	STANDARD STAIR (JIS) (2/2)	6
D-000-1330-3101J	STANDARD FLOOR (JIS)	4
D-000-1330-3102J	STANDARD DETAILS FOR PIPE SUPPORT BASE (JIS)	2
D-000-1330-3111J	STANDARD DETAILS FOR SSD CONNECTION (JIS)	1
D-000-1330-3112J	STANDARD DETAILS FOR SSD COMBINATION (JIS)	1
D-000-1330-3114J	STANDARD DETAILS FOR CSU CONNECTION (JIS)	1
D-000-1330-3106J	STANDARD DETAILS FOR DENSE CONCRETE FIREPROOFING (JIS) (1)	2
D-000-1330-3107J	STANDARD DETAILS FOR DENSE CONCRETE FIREPROOFING (JIS) (2)	1
D-000-1330-3108J	STANDARD DETAILS FOR DENSE CONCRETE FIREPROOFING (JIS) (3)	3
D-000-1330-3109J	STANDARD DETAILS FOR SPRAY APPLIED VERMICULITE CONCRETE FIREPROOFING (JIS)	2

Instrument

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D-000-1370-0701V	TYPICAL INSTRUMENT WIRING CONNECTION LIST	0
D-000-1370-0801V	Typical Instrument Loop Drawing	1
D-000-1370-0901V	INSTRUMENTATION INTERFACE POINT (IPC) MAP PROCESS AREA	0
D-000-1371-0001V	Overall Control System Block Diagram	2
D-000-1371-0201V	Typical Architecture Diagram for DCS	1
D-000-1371-0301V	Typical Architecture Diagram for SIS	1
D-000-1371-0401V	Typical Architecture Diagram for FGS	1
D-000-1371-0501V	Typical Architecture Diagram for IAMS	2
D-000-1371-0902C	INSTRUMENT FIBER OPTICAL CABLE SCHEDULE	2
D-000-1371-0902G	Instrument Fiber Optical Cable Schedule	2
D-000-1371-0902J	INSTRUMENT FIBER OPTICAL CABLE SCHEDULE	1
D-000-1371-0902M	Instrument Fiber Optical Cable Schedule	2
D-000-1371-0902S	Instrument Fiber Optical Cable Schedule	1
D-000-1371-0902V	INSTRUMENT FIBER OPTICAL CABLE SCHEDULE	8
D-000-1371-0903V	ICP MAP FOR INSTRUMENT FIBER OPTIC CABLE	3
D-000-1375-0101V	TYPICAL ARCHITECTURE DIAGRAM FOR ADMS	2
D-000-1375-0102V	TYPICAL ARCHITECTURE DIAGRAM FOR CEMS-DAS	2
D-000-1375-0103V	TYPICAL ARCHITECTURE DIAGRAM FOR AAQMS	0
D-000-1377-0101V	Typical Architecture Diagram for MMS	0
D-000-1377-0102V	Typical Architecture Diagram for CCS	0
D-000-1378-0001V	Typical Instrument Installation Drawing	6
D-000-1378-0011V	Instrument Earthing Philosophy Diagram	2
D-000-1378-0101V	Typical Instrument Location Plan	1
D-000-1378-0201V	TYPICAL INSTRUMENT CABLE TRENCH LAYOUT	0
D-000-1378-0202V	OVERALL INSTRUMENT CABLE TRENCH LAYOUT KEYPLAN	1
D-000-1378-0211V	Overall Fiber Optic Cable Routing Diagram Site Plan	5
D-000-1378-0301V	Typical Instrument Cable Schedule	0
D-000-1378-0311V	TYPICAL INSTRUMENT CABLE TRAY LAYOUT	0
D-000-1378-0401G	Instrument Impulse line Hook-up Drawing	2
D-000-1378-0401J	Typical Instrument Impulse Line Hook-up Drawing	1
D-000-1378-0401J	Typical Instrument Impulse Line Hook-up Drawing	2
D-000-1378-0401M	Instrument Impulse Line Hook-up Drawing	1
D-000-1378-0401S	Typical Instrument Impulse Line Hook-up Drawing	1
D-000-1378-0401V	Typical Instrument Impulse Line Hook-Up Drawing	2
D-000-1378-0501G	Instrument Air Line Hook-Up Drawing	1
D-000-1378-0501J	INSTRUMENT AIR LINE HOOK-UP DRAWING	1
D-000-1378-0501J	INSTRUMENT AIR LINE HOOK-UP DRAWING	2

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D-000-1378-0501M	Instrument air Line Hook-Up Drawing	1
D-000-1378-0501S	Instrument Air Line Hook-up Drawing	1
D-000-1378-0501V	Typical Instrument Air Line Hook-Up Drawing	4
S-000-1370-0001V	Instrument General Specification	3
S-000-1370-0002V	Package Instrument Specification	4
S-000-1370-0005V	Package Unit List	0
S-000-1370-0010V	Supplement Specifications for Instrument Lightning Protection	2
S-000-1370-0011J	Loop Template Specification (For JGC)	0
S-000-1370-0011V	Loop Template Specification	2
S-000-1370-0021V	SIL VERIFICATION PROCEDURE	1
S-000-1370-0041V	Instrument/Piping Interface Specification	1
S-000-1370-0042V	INSTRUMENT/ELECTRICAL INTERFACE SPECIFICATION	2
S-000-1370-0102V	INSTRUMENT TAG No. & JB/LP/CAB/CABLE IDENTIFICATION	1
S-000-1370-0103V	Naming Convention for Service Description	1
S-000-1370-0104V	Supplement Specifications for Instrument Key List Preparation	0
S-000-1370-0401V	PROCEDURE FOR INSTRUMENT LOOP TEST	4
S-000-1370-0402C	INSTRUMENT FUNCTION TEST LIST	3
S-000-1370-0402G	INSTRUMENT FUNCTION TEST LIST	0
S-000-1370-0402J	Instrument Function Test List	3
S-000-1370-0402M	Instrument Function Test List	2
S-000-1370-0402S	INSTRUMENT FUNCTION TEST LIST	1
S-000-1370-0402V	PROCEDURE FOR INSTRUMENT FUNCTION TEST AT SITE	2
S-000-1370-0410V	Procedure for Instrument Verification and Calibration at Site	0
S-000-1370-0901V	INSTRUMENTATION INTERFACE COORDINATION PROCEDURE	A
S-000-1370-1000C	ELECTRICAL POWER CONSUMPTION FOR INSTRUMENT	0
S-000-1370-1000G	Electrical Power Consumption for Instrument	2
S-000-1370-1000J	ELECTRICAL POWER CONSUMPTION FOR INSTRUMENT	0
S-000-1370-1000M	Electrical Power Consumption for Instrument	1
S-000-1370-1000S	ELECTRICAL POWER CONSUMPTION FOR INSTRUMENT(COMMON)	2
S-000-1370-1000V	ELECTRICAL POWER CONSUMPTION FOR INSTRUMENT	0
S-000-1370-1004C	CABLE BLOCK DIAGRAMS FOR PACKAGE EQUIPMENT	2
S-000-1370-1004G	Cable Block Diagrams for Package Equipment	0
S-000-1370-1004M	CABLE BLOCK DIAGRAMS FOR PACKAGE EQUIPMENT	1
S-000-1370-5001G	SIL VERIFICATION REPORT (FOR VENDOR PACKAGES)	0
S-000-1371-0101V	INSTRUMENT CABINETS SPECIFICATION	1
S-000-1371-0201V	Distributed Control System (DCS) Specification	1
S-000-1371-0301V	Safety Instrumented System (SIS) Specification	1
S-000-1371-0401V	Fire & Gas System (FGS) Specification	1
S-000-1378-0001V	Specification For Instrument Cables	4
S-000-1378-0002V	Specification For Instrument Junction Boxes	4

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S-000-1378-0003V	Specification For Instrument Bulk Materials	2
S-000-1378-0004V	Instrument Design and Installation Specification	2
S-000-1378-0005V	Instrument Piping Specification	1

Electrical

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C-000-1380-0107S	Electrical System Study Report (Transient Stability)	1
C-000-1380-0120S	ELECTRICAL SYSTEM STUDY REPORT (PROTECTION SETTING PHILOSOPHY)	3
D-000-1380-0001V	Symbol & Legend for SLD	1
D-000-1380-0002V	Legend For Electrical Layout	1
D-000-1380-0200V	Overall Key SLD	1
D-000-1380-0981V	TYPICAL INSTALLATION DETAILS FOR SUBSTATION WORK	2
D-000-1380-0982V	TYPICAL INSTALLATION DETAILS FOR POWER WORK	5
D-000-1380-0983V	TYPICAL INSTALLATION DETAILS FOR LIGHTING WORK	5
D-000-1380-0984V	TYPICAL INSTALLATION DETAILS FOR EARTHING WORK	2
D-000-1380-0986V	TYPICAL INSTALLATION DETAILS FOR TELECOMS WORK	5
D-000-1381-0003V	SINGLE LINE DIAGRAM TYPICAL DUAL REDUNDANT AC UPS	2
D-000-1381-0004V	SINGLE LINE DIAGRAM TYPICAL DC UPS	2
D-000-1381-0200V	OVERALL PMS BLOCK DIAGRAM	1
D-000-1381-0201V	PMS BLOCK DIAGRAM FOR SS-M01	1
D-000-1381-0202V	PMS BLOCK DIAGRAM FOR SS-M02	1
D-000-1381-0203V	PMS BLOCK DIAGRAM FOR UNIT S/S	1
D-000-1382-0002G	OVERALL TRENCH AND CONDUIT LAYOUT KEY PLAN FOR JETTY	2
D-000-1382-0002V	OVERALL ELECTRICAL CABLE ROUTING LAYOUT	4
D-000-1382-0002V	OVERALL ELECTRICAL CABLE ROUTING LAYOUT	5
D-000-1382-0003V	OVERALL ELECTRICAL CABLE ROUTING LAYOUT (INDEX)	3
D-000-1382-0004V ~0021V	ELECTRICAL CABLE ROUTING SECTIONS MAIN CABLES	3
D-000-1382-0022V ~0035V	ELECTRICAL CABLE ROUTING SECTIONS MAIN CABLES	3
D-000-1382-0050J	Overall Breakdown Trench and Conduit Layout - RFCC/SRU/TGTU/SRU/INALK AREA	1
D-000-1382-0101V	ELECTRICAL CABLE SCHEDULE (MAIN ROUTES)	2
D-000-1382-0111V	TRENCH LAYOUT FOR TRENCH TIE IN AREA	2
D-000-1383-0010V	LIGHTING AND SMALL POWER PHILOSOPHY	1
D-000-1383-0011V	LIGHTING AND SMALL POWER LAYOUT PHILOSOPHY DRAWING	1
D-000-1384-0001J	Overall Breakdown Earthing Layout	1

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D-000-1384-0001M	Overall Breakdown Earthing and Lightning Layout NHDS/CCR/PENEX Area	1
D-000-1384-0001V	EARTHING & LIGHTNING PROTECTION PHILOSOPHY (1 OF 3)	2
D-000-1384-0002V	EARTHING & LIGHTNING PROTECTION PHILOSOPHY (2 OF 3)	2
D-000-1384-0003V	EARTHING AND LIGHTNING PROTECTION PHILOSOPHY (3 OF 3)	2
D-000-1384-0101V	Overall Earthing Layout Keyplan	1
D-000-1386-0011V	LEGENDS AND SYMBOLS FOR TELECOM DRAWING	1
D-000-1386-0101V	Telecommunications Cable Schedule (Fiber Optic Backbone)	2
S-000-1380-0002V	Protection Philosophy	3
S-000-1380-0003V	ELECTRICAL AND TELECOMMUNICATION NUMBERING PROCEDURE	2
S-000-1380-0004V	Electrical Interface Coordination Procedure	B
S-000-1381-0009V	Power Distribution Control & Monitoring	1
S-000-1381-0901V	Electrical Equipment List	1
S-000-1382-0001V	Specification for Power and Control Cables	0
S-000-1382-0002V	Low Voltage Induction Motors	0
S-000-1382-0003V	High Voltage Induction Motors	1
S-000-1382-0004V	SYNCHRONOUS MACHINES	0
S-000-1382-0005V	600/1000V, 3.6/6kV AND 6/10kV CABLE SIZING AND INSTALLATION PHILOSOPHY	1
S-000-1382-0901V	PROJECT PRODUCT CATALOGUE - LV MOTOR AND VSD	A
S-000-1382-0902V	PROJECT PRODUCT CATALOGUE - HV MOTOR	A

Procurement

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S-000-1450-0001V	Project Shipping and Packing Instructions to Vendor	0
S-000-1450-0002V	Customs Clearance Procedure	0
S-000-1410-0002V	Vendor List for Long Lead Items (LLI) & Critical Items	0
S-000-1410-0003V	Vendor List 2	0
3550-8610-SL-0001	Vendor List 1	D2
S-000-1410-0004V	Overall Procurement Plan & Procedures	0

Quality Control

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S-000-1520-0001V	Project Quality Control Plan for Purchased Equipment and Materials	1
S-000-1520-0002V	Project Quality Control Procedure for Purchased Equipment and Materials	4
S-000-1520-0101V	Quality Control Requirements to Vendor	4
S-000-1520-0102V	Nonconformity Control Procedure for Purchased Equipment and Materials	1

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S-000-1520-0103V	Material Certification and Traceability Requirements	1
S-000-1520-0104V	Specification for Manufacturing Data Report (MDR)	7
S-000-1520-0106V	Control of Monitoring and Measuring Devices	0
S-000-1520-0107V	Supplementary Welding Requirements to API RP 582	0
S-000-1520-0108V	Positive Materials Identification (PMI) of Alloy Bulk Materials	0
S-000-1520-0109V	Positive Material Identification (PMI) at Vendor's Works	0

Inspection Test Plan

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S-000-1670-0001V	Field Quality Control Procedure	2
S-000-1670-0002V	QUALITY CONTROL REQUIREMENTS TO SUBCONTRACTOR	4
S-000-1670-0003V	NONCONFORMITY CONTROL PROCEDURE FOR CONSTRUCTION WORK	5
S-000-1670-0004V	Material Traceability Control Procedure for Piping Construction Work	1
S-000-1670-0005V	WELDING CONTROL PROCEDURE AT CONSTRUCTION SITE	2
S-000-1670-0006V	GENERAL REQUIREMENTS FOR FIELD AND SHOP FABRICATION OF PIPING	4
S-000-1670-0007V	POSITIVE MATERIALS IDENTIFICATION (PMI) OF ALLOY MATERIALS DURING SITE FABRICATION AND ERECTION	1
S-000-1670-0008V	Procedure for KIZUKI System for Construction Work (Quality Observation System)	2
S-000-1670-0009V	PROCEDURE FOR CLOSURE WELDS (GOLDEN JOINTS) (AFTER MECHANICAL COMPLETION)	4
S-000-1670-0010V	QUALITY DEFICIENCY NOTICE (QDN) HANDLING PROCEDURE	0
S-000-1671-0002V	INSPECTION AND TEST PLAN FOR CONCRETE WORK	4
S-000-1671-0003V	INSPECTION AND TEST PLAN FOR PILING WORK	2
S-000-1671-0004V	INSPECTION AND TEST PLAN FOR ROAD AND PAVING WORK	5
S-000-1671-0005V	INSPECTION AND TEST PLAN FOR SEWER AND DRAINAGES	2
S-000-1671-0007V	INSPECTION AND TEST PLAN FOR SEA WATER LINES, INCLUDING THE GRP PORTION OF FIRE WATER SERVICE	6
S-000-1671-0008V	INSPECTION AND TEST PLAN FOR COOLING WATER LINES INCLUDING THE TAPE WRAPPING WORK OF FIRE WATER SERVICE	5
S-000-1673-0001V	INSPECTION AND TEST PLAN FOR STEEL STRUCTURE ERECTION	3
S-000-1675-0001V	INSPECTION AND TEST PLAN FOR FABRICATION AND ERECTION OF STORAGE TANK	7
S-000-1675-0002V	INSPECTION AND TEST PLAN FOR STATIC EQUIPMENT INSTALLATION	3
S-000-1675-0003V	INSPECTION AND TEST PLAN FOR INSTALLATION OF ROTARY MACHINERY	7
S-000-1675-0007V	INSPECTION AND TEST PLAN FOR MECHANICAL SEAL REPAIR	0
S-000-1676-0001V	INSPECTION AND TEST PLAN FOR PIPING WORK	12
S-000-1676-0003V	Inspection and Test Plan For Pipe Welding Repairing Work	1
S-000-1677-0001V	INSPECTION AND TEST PLAN FOR INSTRUMENT CALIBRATION	7

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S-000-1677-0002V	INSPECTION AND TEST PLAN FOR INSTALLATION OF INSTRUMENT CONSOLE, CABINET, PANEL & JUNCTION BOX	3
S-000-1677-0003V	INSPECTION AND TEST PLAN FOR INSTALLATION OF INSTRUMENT CABLE	9
S-000-1677-0004V	INSPECTION AND TEST PLAN FOR INSTALLATION OF INSTRUMENT CABLE TRAYS/ CONDUIT/ WAY	3
S-000-1677-0005V	INSPECTION AND TEST PLAN FOR INSTRUMENT FIBER OPTIC CABLE TEST	5
S-000-1677-0006V	INSPECTION AND TEST PLAN FOR INSTRUMENT INSTALLATION	2
S-000-1677-0007C	INSPECTION AND TEST PLAN FOR INSTRUMENT PRESSURE LEAD PIPING WORK (SUPPLEMENT TO S-000-1677-0007V)	1
S-000-1677-0007V	INSPECTION AND TEST PLAN FOR INSTRUMENT PRESSURE LEAK TEST FOR PRESSURE LEAD LINE, INSTRUMENT AIR LINE AND SAMPLING SYSTEM LINE	4
S-000-1677-0008V	INSPECTION AND TEST PLAN FOR INSTRUMENT LOOP TEST	4
S-000-1677-0009V	INSPECTION AND TEST PLAN FOR INSTRUMENT SYSTEM SITE ACCEPTANCE TEST (SAT)	1
S-000-1677-0010V	INSPECTION AND TEST PLAN FOR INSTRUMENT FUNCTION TEST	1
S-000-1677-0013V	INSPECTION AND TEST PLAN FOR MOTOR OPERATED VALVE STROKE TEST	1
S-000-1678-0002V	INSPECTION AND TEST PLAN FOR INSTALLATION, JOINTING, TERMINATION AND TESTING OF ELECTRICAL CABLES	5
S-000-1678-0003V	INSPECTION AND TEST PLAN FOR INSTALLATION OF CABLE TRAYS	3
S-000-1678-0004V	INSPECTION AND TEST PLAN FOR GROUNDING AND LIGHTNING PROTECTION SYSTEM	3
S-000-1678-0006V	INSPECTION AND TEST PLAN FOR LIGHTING AND SMALL POWER SYSTEM	6
S-000-1678-0007V	INSPECTION AND TEST PLAN FOR ELECTRICAL MISCELLANEOUS PANEL (NER, PMS PANEL, INDOOR/OUTDOOR MISCELLANEOUS PANEL)	3
S-000-1678-0008V	INSPECTION AND TEST PLAN FOR TESTING OF ELECTRIC MOTORS	8
S-000-1678-0016V	INSPECTION AND TEST PLAN FOR FIELD ELECTRICAL EQUIPMENT (LCS, POWER JB AND ELECTRICAL HEATER)	1
S-000-1678-0017V	INSPECTION AND TEST PLAN FOR ELECTRICAL / INSTRUMENTATION MATERIAL	3
S-000-1679-0001V	INSPECTION AND TEST PLAN FOR INSULATION WORK	9
S-000-167A-0001V	INSPECTION AND TEST PLAN FOR PAINTING WORK	1
S-000-167B-0001V	INSPECTION AND TEST PLAN FOR FIRE PROOFING	8

Pre-Commissioning and Commissioning

Document Number	Document Title	Rev.
S-000-1710-0002V	SYSTEM COMPLETION & HANDOVER PROCEDURE	6
S-000-1710-0003V	PUNCH LIST HANDLING PROCEDURE	2
S-000-1710-0011V	TEST PLAN FOR PRE-COMMISSIONING	3
S-000-1710-0012V	Test Plan for Commissioning	3
S-000-1710-0100V	PIPE CLEANING GUIDE	2

Document Number	Document Title	Rev.
S-000-1710-0101V	Clean Build Implementation Plan	0
S-000-1710-0110V	General Pre-commissioning Procedure for Water Flushing	2
S-000-1710-0120V	General Pre-commissioning Procedure for Air Blowing	1
S-000-1710-0130V	GENERAL PRE-COMMISSIONING PROCEDURE FOR STEAM BLOWING	1
S-000-1710-0140V	General Pre-commissioning & Commissioning Procedure for Chemical Cleaning	0
S-000-1710-0160V	General Pre-commissioning procedure for Lube Oil Flushing	0
S-000-1710-0210V	GENERAL COMMISSIONING PROCEDURE FOR STEAM TURBINE SOLO RUN	1
S-000-1710-0310V	GENERAL PRE-COMMISSIONING & COMMISSIONING PROCEDURE FOR TIGHTNESS TEST	2
S-000-1710-0510V	General Commissioning Procedure for Mechanical run-in Pump	0
S-000-1710-0540V	General Commissioning Procedure for Mechanical run-in Miscellaneous Rotary Equipment	1
S-000-1710-0550V	General Commissioning Procedure for Mechanical run-in Generator	0
S-000-1710-0720V	GENERAL COMMISSIONING PROCEDURE FOR SYSTEM DRYING	1
S-000-1710-0850V	GENERAL COMMISSIONING PROCEDURE FOR NITROGEN INERTING	1
S-000-1710-0901V	RISK ASSESSMENT FOR COMMISSIONING ACTIVITIES (SIMOPS)	0
S-000-1710-9006V	PRE-STARTUP SAFETY REVIEW (PSSR) PROCEDURE	4
S-000-1710-9009V	PRE-COMMISSIONING SAFETY REVIEW (PCSR) PROCEDURE	0
S-000-1710-9110V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR WATER FLUSHING	0
S-000-1710-9120V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR AIR BLOWING	1
S-000-1710-9130V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR STEAM BLOWING	0
S-000-1710-9131V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR PSV POPPING TEST	0
S-000-1710-9132V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR STEAM GENERATION	0
S-000-1710-9160V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR LUBE OIL FLUSHING	0
S-000-1710-9170V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR WATER JET CLEANING	2
S-000-1710-9310V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR TIGHTNESS TEST	0
S-000-1710-9510V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR PUMP MECHANICAL RUN-IN	0
S-000-1710-9520V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR COMPRESSOR & BLOWER MECHANICAL RUN-IN	0
S-000-1710-9701V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR MAINTENANCE WORK OF ROTATING EQUIPMENT	0
S-000-1710-9850V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR PURGING, DRYING AND COOLDOWN OF N2 STORAGE	0
S-000-1710-9910V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR CHEMICAL HANDLING AND CHEMICAL LOADING	2
S-000-1710-9911V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR FILTER ELEMENT REMOVAL AND INSTALLATION	1

Document Number	Document Title	Rev.
S-000-1710-9914V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR SERVICE IN WASTE WATER TO PERMANENT FACILITIES	0
S-000-1710-9915V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR STEAM TURBINE GENERATOR MECHANICAL RUN-IN	0
S-000-1710-9916V	SAFE WORK METHOD STATEMENT AND JOB SAFETY ANALYSIS FOR STEAM TURBINE SOLO RUN	0
S-000-1730-8001V	Overall Performance Test Procedure	2
S-000-1730-8101V	OVERALL PERFORMANCE TEST REPORT	0
S-000-1732-0001V	Initial start up material list	A

Other Requirements

Document Number	Document Title	Rev.
3550-8820-TN-0004	Local Requirements	
3550-8820-PR-0020	Change Control Procedure	
3550-8840-PR-0005	Planning & Scheduling Procedure	
3550-8840-PR-0006	Progress Reporting Procedure	
3550-8840-PR-0007	Progress Review & Certification Procedure	
3550-8840-PR-0008	Progress Measurement Procedure	
3550-8840-PR-0010	Asset Register Procedure	
3550-8840-PR-0011	Distribution And Timing Of Documents	
3550-8130-PR-0002	Preparation Of System Mechanical Completion Manual	
3550-8130-PR-0003	Flushing And Blowing Of Lines And Equipment	
3550-8130-PR-0005	Pre-commissioning Commissioning & Acceptance	
3550-8130-PR-0008	Guidelines for Operating Manual Preparation	
3550-8820-TN-0009	Guidelines on Application Mandatory Vietnamese STD/REGS	
3550-8150-SP-0001	Environmental Design Basis	
3550-8440-SP-0025	General Requirements for Pipework Fabrication	

PHỤ LỤC 2- PHẠM VI CÔNG VIỆC
APPENDIX 2- SCOPE OF WORK

ATM	Atmosphere
BOM	Bill of material
HSSE&S	Health, safety, security, environment and social
IA	Initial Acceptance
ITB	Invitation to Bid
LOI	Letter of Intent
MC	Mechanical completion
MES	The existing Vendor (Manufacturer of STG3 –MITSUI E&S Co. Ltd
MSD	Material selection diagram
MTO	Material take-off
OEM	Original Equipment Manufacturer
NSRP	Nghi Son Refinery and Petrochemical LLC
P&ID	Piping and instrument diagram
PFD	Process flow diagram
PPE	Personal protective equipment
QA&QC	Quality assurance and quality control
RFQ	Request for Quotation
STG	Steam Turbine Generator
LLI	Long Lead Item
PTSC Thanh Hoa	PTSC Thanh Hoa Technical Services Company
Subcontractor	

MỤC LỤC

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1. Objective

Nghi Son Refinery and Petrochemical LLC (NSRP) is planning to replace 01 new set of Steam Turbine Generator Package 113-A-003 by new Steam Turbine Generator 113-A-006 on “like-for-like” basis.

Project information:

- Equipment No.: 113-A-003, exiting Steam Turbine Generator
- Existing Vendor: MITSUI E&S Co., Ltd
- New equipment No.: 113-STG-006
- Manufacturer: MES; MODEL: CD30.31;
- Design: 41.4 MW, speed 3000 rpm,
- Inlet: Flow 349,100 kg/h, pressure 126,90 kPaG, Temperature 520 deg. C
- Extraction: Flow 251,700 kg/h; pressure 5,175 kPaG, Temperature 403.2 deg. C
- Exhaust: Pressure 9.3 kPaA, temperature 44.5 deg. C, enthalpy: 2,314 kJ/kg

2. Scope of Works and responsibility

- The Subcontractor shall undertake and provide all required and necessary resources to remove the damaged cable as listed out in Attachment 1 of this document.
- The Subcontractor shall prepare all necessary resources including but limited to the cutting concrete, excavation soil and sand, pull out the cable, remove the debris/ waste, supervision, inspection, and documentation required to complete the Work in compliance with NSRP's requirements and accordance with the Approved schedule.
- The Subcontractor shall be fully responsible for the collection and transportation of waste, debris, and hazardous materials to the designated locations within the Refinery premises.
- The Subcontractor shall review all information provided in this document including the Approved engineering design & drawings and read it in conjunction with all relevant NSRP standard drawings and NSRP Specifications. It is the Subcontractor responsibility to highlight any missing/ conflict information critical to commence the activities.
- Before commencement of work, the Subcontractor shall carry out a thorough site survey to ascertain the nature, condition, and location of all existing above-ground and underground services, utilities, and facilities within the site and adjacent areas. This survey shall include, but not be limited to, the inspection of available plans and records, consultation with relevant authorities, on-site verification using adequate electronic detection devices, and trial hand excavations where required. The Subcontractor shall also identify potential hazards, access routes, ground conditions, and any restrictions that may affect the safe and proper execution of the works.

3. QA & QC

- The Subcontractor shall comply with the QA&QC requirements as specified in the Appendix 1 – Project Requirement.

- All the Works performed by the Subcontractor or any of its subcontractors and any material or construction equipment supplied by the Subcontractor or any of its subcontractors shall be subjected to inspection and acceptance by PTSC Thanh Hoa and NSRP at any time.
- All inspection, tests (if any) shall be properly and accurately recorded, documented, maintained and updated. These documents shall be approved by PTSC Thanh Hoa and shall be eventually included in the Final Documentation.
- The Subcontractor shall notify PTSC Thanh Hoa at least three (03) working days for the inspections inside NSRP's refinery and five (05) working days for the inspections outside NSRP's refinery in advance of being called upon to witness any inspection, calibration, and /or commissioning activity.
- PTSC Thanh Hoa may conduct audits during the Subcontractor implementing the Works including procurement, construction phase if necessary. NSRP shall inform the schedule of audit at least 03 working days before conducting audit.
- PTSC Thanh Hoa reserves the right to do Quality Audits at any time and inform the Quality Audits plan to Subcontractor 3 working days in advance. The Subcontractor shall ensure the availability of the required personnel, facilities, and assistance with respect to the execution of such audits.

4. HSSE

- The Subcontractor shall strictly comply at all times with all HSSE requirements of NSRP and PTSC Thanh Hoa, including management plans, procedures, and regulations.
- The Subcontractor shall strictly conform to NSRP's HSSE requirements. The Subcontractor is fully responsible for any violation of the Subcontractor.
- Attend and comply with mandatory training courses by NSRP HSSE for Subcontractor's personnel.
- The Subcontractor shall follow the HSE plan of the project.
- The Subcontractor's Personnel shall be fully equipped with personnel safety protections in accordance with NSRP's Personal Protective Equipment Management Procedure as specified in the Appendix 1 – Project Requirement, at all times.
- The Subcontractor shall also ensure that adequate first aiders, first aid facilities, drinking water, toilet facilities are always available for Subcontractor's personnel.
- The Subcontractor shall strictly comply with all local, municipal, territorial, and provincial laws, orders, and regulations pertaining to HSSE which are applicable to the location where the Works is being performed.
- Prepare SWMS, JSA, PTW for PTSC Thanh Hoa and/or NSRP approval in accordance with the PTW procedure.
- Preparing materials and equipment gate pass in/out, request for entry and ID card for Subcontractor's personnel.

5. Pre-Commissioning, Commissioning and start up

N/A

6. Acceptance of the Works, 02 years warranty and defect

N/A

7. The Subcontractor's Personnel

- The Subcontractor shall provide sufficient numbers of suitably qualified personnel, experienced in their respective workfield, generally in accordance with the organization chart, but without limiting the Subcontractor's obligation to assign more personnel required for the proper performance of the Works.
- All management, supervisory/lead and technical personnel proposed by the Subcontractor for assignment to the Works shall be subject to acceptance by PTSC Thanh Hoa. The Subcontractor shall provide a copy of the candidate's up-to-date CV to PTSC Thanh Hoa and obtain PTSC Thanh Hoa's acceptance before engaging the respective personnel.
- The Subcontractor shall ensure that back-up personnel are made available in the event that personnel, for whatever reason, become temporarily unavailable for any period in excess of one (01) working day.
- During contract execution, PTSC Thanh Hoa reserves right to remove Subcontractor's personnel from execution team if they are not performing. Subcontractor shall submit improvement plan within two (02) working days for PTSC Thanh Hoa approval.

8. Reports

14.1. Reporting Incidents

- The Subcontractor shall immediately report all lost-time accidents or incidents, and all "near-miss" incidents with the potential to cause injury or loss of property. Each such incident shall be reported in a written form acceptable to PTSC Thanh Hoa no later than twenty-four (24) hours of occurrence.
- In the event of any safety incident or any other incident that may have significant effect on environmental impact, schedule, quality, and the like, the Subcontractor shall brief PTSC Thanh Hoa fully on the implications of the incident within twenty-four (24) hours of its occurrence. If an incident involves serious injury, loss of life, or substantial damage to property, the Subcontractor shall immediately notify PTSC Thanh Hoa's representative at the particular site irrespective of the time of day.

14.2. Weekly Progress Report

- The Subcontractor shall issue PTSC Thanh Hoa on every Friday by 17:00hrs its report of activities and progress for the week counting from last Saturday up to and including the Friday (the Weekly Progress Report).
- The Subcontractor shall incorporate PTSC Thanh Hoa's comments and start using the format from its first Weekly Progress Report. PTSC Thanh Hoa reserves the right to require the Subcontractor to revise the format or content anytime thereafter.
- The Subcontractor must hold a meeting with PTSC Thanh Hoa every week and/ or everyday at a timing as agreed between PTSC Thanh Hoa and the Subcontractor.

14.3. Monthly Progress Report

- Every month the Subcontractor shall submit to PTSC Thanh Hoa a monthly progress report relating to the Works performed during the
- The Subcontractor shall incorporate PTSC Thanh Hoa's comments and start using the format from its first Monthly Progress Report. PTSC Thanh Hoa reserves the right to require the Subcontractor to revise the format or content anytime thereafter.
- The Subcontractor shall issue its draft Monthly Progress Report to PTSC Thanh Hoa no later than two (02) working days from the end of each reporting period for PTSC Thanh Hoa's review and comment. The Subcontractor shall edit or incorporate comments as may be required by PTSC Thanh Hoa and issue each Monthly Progress Report promptly thereafter.

9. Meetings

All routine meetings shall have a standard agenda. In the case of progress meetings, the agenda shall reflect the structure of the progress reports to be issued by the Subcontractor to PTSC Thanh Hoa. The Subcontractor shall:

- Invite PTSC Thanh Hoa to attend all meetings and PTSC Thanh Hoa, at its sole discretion, may attend.
- Ensure that its senior personnel at each Site attend the meetings, fully briefed in respect of their particular disciplines; and
- Set agendas for non-routine meetings.
- The Subcontractor shall prepare and issue minutes of all meetings between PTSC Thanh Hoa and the Subcontractor.
- All minutes shall be issued to PTSC Thanh Hoa by the Subcontractor in draft form, within one (01) working days after the meeting; and in final form, within one (1) working day after receipt of PTSC Thanh Hoa's comments on the draft.
- Action items in the minutes of the last meeting shall be addressed at the next meeting(s). Such action items shall remain in subsequent minutes until confirmed as closed out.

ATTACHMENT 1 - DEMOLITION CABLE LIST

No.	Tag name No.	Materials Description	Drawing	Location	Unit	Quantity (m)	Remark
1	113-ST-301-GM02-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 25SQMM	D-U01-1382-0101S_5	Unit 113	m	422	LV
2	113-ST-301-GM02-C	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	419	LV
3	113-ST-301-PM21A-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 10SQMM	D-U01-1382-0101S_5	Unit 113	m	359	LV
4	113-ST-301-KM21A-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	363	LV
5	113-ST-301-KM21A-C	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	365	LV
6	113-ST-301-KM21B-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	372	LV
7	113-ST-301-KM21B-C	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	374	LV
8	113-ST-301-PM31A-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 6SQMM	D-U01-1382-0101S_5	Unit 113	m	355	LV
9	113-ST-301-PM31A-C	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	352	LV
10	113-ST-301-PM31B-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 6SQMM	D-U01-1382-0101S_5	Unit 113	m	363	LV
11	113-ST-301-PM31B-C	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	361	LV
12	113-ST-301-KM31-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	353	LV
13	113-ST-301-KM31-C	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	348	LV

No.	Tag name No.	Materials Description	Drawing	Location	Unit	Quantity (m)	Remark
14	113-ST-301-KM01A-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	406	LV
15	113-ST-301-KM01A-C	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	401	LV
16	113-ST-301-KM01B-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	399	LV
17	113-ST-301-KM01B-C	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	397	LV
18	113-A-003-LP-01-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-2CORE x 6SQMM	D-U01-1382-0101S_5	Unit 113	m	408	LV
19	113-ST-301-TE-L-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-2CORE x 6SQMM	D-U01-1382-0101S_5	Unit 113	m	404	LV
20	113-ST-301-H01-P1	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	51	LV
21	113-ST-301-H01-P2	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-2CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	51	LV
22	113-A-003-SG213-P1L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 240SQMM	D-M02-1382-0101S_3	Unit 113	m	50	MV
23	113-A-003-SG213-P1L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 240SQMM	D-M02-1382-0101S_3	Unit 113	m	50	MV
24	113-A-003-SG213-P1L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 240SQMM	D-M02-1382-0101S_3	Unit 113	m	50	MV
25	113-A-003-RR213-E	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 240SQMM	D-M02-1382-0101S_3	Unit 113	m	38	MV
26	113-ST-301-C1	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
27	113-ST-301-C2	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-2CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV

No.	Tag name No.	Materials Description	Drawing	Location	Unit	Quantity (m)	Remark
28	113-ST-301-C3	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
29	113-ST-301-C4	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
30	113-ST-301-C5	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
31	113-ST-301-C6	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
32	113-ST-301-C7	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
33	113-ST-301-C8	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
34	113-ST-301-C9	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
35	113-ST-301-C10	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
36	113-ST-301-C11	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	D-U01-1382-0101S_5	Unit 113	m	435	LV
37	113-ST-301-C12	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-2CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	436	LV
38	113-HV-7341B-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM	D-U01-1382-0101S_5	Unit 113	m	94	LV
39	113-CR-003-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 16SQMM	D-U01-1382-0101S_5	Unit 113	m	376	LV
40	SSM02-TR-103C-P1L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV
41	SSM02-TR-103C-P1L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV

No.	Tag name No.	Materials Description	Drawing	Location	Unit	Quantity (m)	Remark
42	SSM02-TR-103C-P1L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV
43	SSM02-TR-103C-P2L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV
44	SSM02-TR-103C-P2L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV
45	SSM02-TR-103C-P2L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV
46	SSM02-TR-103C-P3L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV
47	SSM02-TR-103C-P3L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV
48	SSM02-TR-103C-P3L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	37	MV
49	SSM02-TR-103C-P4L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
50	SSM02-TR-103C-P4L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
51	SSM02-TR-103C-P4L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
52	SSM02-TR-103C-P5L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
53	SSM02-TR-103C-P5L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
54	SSM02-TR-103C-P5L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
55	SSM02-TR-103C-P6L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV

No.	Tag name No.	Materials Description	Drawing	Location	Unit	Quantity (m)	Remark
56	SSM02-TR-103C-P6L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
57	SSM02-TR-103C-P6L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
58	SSM02-TR-103C-P7L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
59	SSM02-TR-103C-P7L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
60	SSM02-TR-103C-P7L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	D-M02-1382-0101S_3	Unit 113	m	36	MV
61	113-A-003-SW213-P1L1	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 240SQMM		Unit 113	m	33	MV
62	113-A-003-SW213-P1L2	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 240SQMM		Unit 113	m	33	MV
63	113-A-003-SW213-P1L3	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 240SQMM		Unit 113	m	33	MV
64	113-ST-301-PM21B-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 10SQMM		Unit 113	m	368	LV
65	113-ST-301-PM22-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 25SQMM		Unit 113	m	15	LV
66	113-HV-7341A-P	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM		Unit 113	m	93	LV

PHỤ LỤC 3- PHÂN CÔNG TRÁCH NHIỆM
APPENDIX 3- SCOPE OF RESPONSIBILITY

No.	DESCRIPTION	BIDDER	PTSC Thanh Hoa	Remark
1	DIRECT LABOR			
1.1	Wages	X		
1.2	Overtime Premiums	X		
1.3	Camp	X		
1.4	Catering	X		
1.5	Workman Compensation Insurance	X		
1.6	Taxes	X		
1.7	Transportation to Refinery	X		
1.8	Transportation from Refinery Gate to site		X	
1.9	Recruitment	X		
1.10	Others	X		
2	CONSTRUCTION EQUIPMENT	X		
2.1	Construction equipment / operator	X		
2.2	Mob. & Demob. charge of construction equipment	X		
2.3	Valid construction equipment test certificate	X		
2.4	Maintenance / Repair Work / Spare Parts for Construction Equipment	X		
2.5	Fueling for construction equipment	X		
2.6	Insurance	X		
2.7	Others	X		
3	UTILITIES			
3.1	Water (for construction)	X		
3.2	Drinking water	X		
3.3	Electric power and Fuel	X		
3.4	Others, if any	X		
4	TOOL AND CONSUMMABLE			
4.1	Construction machinery and hand tool	X		
4.2	Consummable	X		
5	SCAFFOLDINGS			
5.1	Scaffolding Materials (BS 1139)		X	
5.2	Erection / Removal	X		
5.3	Maintenance & Repair	X		
5.4	Others	X		
6	GENERAL WORK ITEM			
6.1	Site cleaning(Housekeeping) including disposal of waste	X		
6.2	Preparation of Permit to work	X	(X)	PTSC-TH support to get approval from NSRP
6.3	Storage and preservation of cable after removed	X		
6.4	Disposal of excavated to designed area	X		
6.5	Survey and marking before commencement	X		
6.6	Dewatering work including pumps, hose and necessary shoring	X		

No.	DESCRIPTION	BIDDER	PTSC Thanh Hoa	Remark
6.7	Other required works for the completion of work	X		
6.8	Remove the cables from the trench, coil them into rolls, and place them on pallets	X		

PHỤ LỤC 4 – KHỐI LƯỢNG CÔNG VIỆC

No	Descriptions	Unit	Quantity	Remarks
I	Electrical Cable Under Concrete Paving			
1	Cutting existing concrete paving	m	300.0	
2	Demolition concrete paving	m3	126.0	
3	Excavation existing layer by manual (sand)	m3	336.0	
4	Remove concrete	m3	126.0	
5	Baricade	m	600.0	
II	Electrical Cable Underground			
1	Excavation Crushed stone	m3	56.0	
2	Excavation soil	m3	168.0	
3	Excavation sand	m3	56.0	
4	Baricade	m	200.0	
III	Cable Remove			
1	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 25SQMM	m	437.0	
2	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 16SQMM	m	376.0	
3	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 10SQMM	m	727.0	
4	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 6SQMM	m	718.0	
5	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-8CORE x 2.5SQMM	m	3,017.0	
6	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 2.5SQMM	m	2,131.0	
7	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-2CORE x 6SQMM	m	812.0	
8	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-4CORE x 4SQMM	m	3,915.0	
9	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-3CORE x 4SQMM	m	435.0	
10	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-2CORE x 4SQMM	m	435.0	
11	0.6/1kV_Cu/XLPE/PVC/SWA/Fr-PVC-2CORE x 2.5SQMM	m	487.0	
12	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 630SQMM	m	765.00	

No	Descriptions	Unit	Quantity	Remarks
13	6/10(12)kV_Cu/XLPE/MS/PVC/AWA/Fr-PVC-1CORE x 240SQMM	m	287.00	

Ghi chú: Thông tin trên để tham khảo, nhà thầu có trách nhiệm kiểm tra, khảo sát, bóc tách đảm bảo đầy đủ và chính xác khối lượng công việc

PHỤ LỤC 5
BẢN VẼ KỸ THUẬT