



Engineering, Procurement & Construction Contract Technical Annex No 1

SCOPE OF WORKS

Complex:	OS-3 Flare Farm
Project No.	OLP02729
Title:	Flare Farm reconstruction
Part:	Mechanical / Civil / Instrument / Electrical
Type of Contract:	EPC
Revision:	0

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1. GENERAL

1.1. SUBJECT MATTER

Currently, Operations Subdivision No 3 (OS-3) Flare Section has flares D-2, D-3, D-4, D-5 in operation. This Scope of Work is intended for engineering, fabrication and installation of new flares to replace existing D-2, D-4. Existing flare D-2 with the height of 35 m is intended for open and safe firing of flare gas and has maximum throughput of 30 t/h. Existing flare D-4 with the height of 80 m is intended for open, safe and smokeless firing of flare gas and has maximum throughput of 76 t/h.

It is planned, according to Fluor study, to design new flares D-2 and D-4 with the throughput of up to 635 t/h each, to install new DN1000 line from liquid seal HU-6 to flare D-2 and from liquid seal HU-8 to flare D-4. In case of operational need or emergency, flare D-4 stream can be redirected to flare D-2 or flare D-2 stream to flare D-4.

During shutdown of refinery for turnaround and startup after turnaround, both flares (D-2 and D-4) must operate.

During operation of refinery, it is impossible to disconnect both flares D-2 and D-4 at the same time, therefore work is planned as follows:

- To design new flares D-2 and D-4, select location for installation taking into account flame/radiation and pollution dispersion zones;
- To design new foundations, lines from new flares D-2, D-4 to liquid barriers HU-6, HU-8;
- Until Turnaround 2027 (scheduled for spring of 2027), to construct new foundation for flare D-2, install new flare D-2 and **during shutdown** disconnect existing flare D-2, install lines and other equipment related to flares and connect new flare D-2 to existing flare system;
- Until Turnaround 2027 or during shutdown, to construct new foundation for flare D-4, install new flare D-4 and **after shutdown** disconnect existing flare D-4, install lines and other equipment related to flares and connect new flare D-4 to existing flare system;
- As flare installation works are going to be performed in the vicinity of live process facilities, special attention must be paid to safety at work.

1.2. INTRODUCTION

This ANNEX defines the scope of work, supply and services CONTRACTOR shall undertake to detailed design, procure, construct, erect, commission and start-up of Flare Farm modernization project in AB ORLEN Lietuva (hereinafter OL or OWNER) in Mažeikiai, Lithuania.

CONTRACTOR shall, in accordance with the requirements of this CONTRACT, the ANNEXES and the latest editions of all current Lithuanian and European regulations, design, engineer, procure and supply all necessary equipment and materials, perform all shop and field inspection and testing, erect, install, commission, test, start-up, run performance tests and otherwise perform all activities required for reconstruction of the Flare Farm, hereinafter called "WORKS"

This Scope of Work may not be complete in every detail but, when taken in conjunction with the Technical Annexes, Engineering Design Data, other OL standards and other regulations, is deemed to be sufficient to allow the CONTRACTOR to prepare his detailed design and to construct and complete the WORKS.

CONTRACTOR guarantees the fulfilment of guarantee figures laid down by in Contract Technical Annexes. CONTRACTOR guarantees the designed new flares as well as all supplied equipment to be operated in accordance with the TECHNICAL DOCUMENTATION

and OPERATING MANUAL to meet Key Product Quality of processes as specified in Technical Annexes of the CONTRACT.

In the event of contradictions between different documents or in case technical information is not fully presented in the CONTRACT and ANNEXES, CONTRACTOR shall be obliged to draw the attention of OWNER'S Project Manager to these inaccuracies and follow his instructions.

1.3. DEFINITIONS

PLANT shall mean new flares D-2 and D-4, piping, valves, other related equipment and territory around said equipment at Flare Farm within BATTERY LIMITS and present Scope of Works to be designed, built and located at OWNER'S territory and to be owned and operated by the OWNER, as defined in the CONTRACT.

WORKS shall mean all works, services and supplies required to be performed by CONTRACTOR in order to design, engineer, procure and supply all necessary equipment and materials, perform all dismantling activities, perform all shop and field inspection and testing, erect, install, commission, test, start-up, run performance tests and otherwise perform all activities required for the reconstruction of Flare Farm within BATTERY LIMITS and present scope of work.

CONTRACT EFFECTIVE DATE means the day CONTRACT is signed by both PARTIES.

1.4. GENERAL WORKS DESCRIPTION

CONTRACTOR shall, in accordance with the requirements of this CONTRACT, the ANNEXES and the latest editions of all current Lithuanian and European regulations, design, engineer, procure and supply all necessary equipment and materials, to perform all shop and field inspection and testing, erect, install, and commission and test, and otherwise perform all activities required for the reconstruction works. The WORKS generally consists of new two flares, piping from HU-6 and HU-8 diameter increase, existing equipment dismantle and other related equipment/piping installation. **Includes:**

1. CONTRACTOR shall obtain all planning, building, construction or other permits, licenses or approvals as required by applicable law in relation to the design, execution, construction, certification and operation of the PLANT, including the remedying of any defects therein. CONTRACTOR shall give all notices, pay all taxes, duties and fees that may be necessary to obtain such permits, licenses and approvals and CONTRACTOR shall indemnify and hold OWNER harmless against and from the consequences of any failure to do so. The TECHNICAL DOCUMENTATION and information necessary to obtain these permits shall be prepared and provided by CONTRACTOR in accordance with the CONTRACT, applicable laws and regulations. CONTRACTOR shall obtain all necessary permits and approvals in a timely manner in accordance with the TIME SCHEDULE and the TIME FOR COMPLETION;
2. Preparation of detailed design, which should include an explanatory note, PFD and P&ID, cause and effect diagram, equipment and instrument data sheets, instrument list, start-up, operation and stop instruction, Unit Emergency shutdown / trip instruction and other documentation necessary for project implementation;
3. Implementation of HAZOP and SIL determination/verification;
4. Modification of P&ID based on HAZOP and SIL recommendations;
5. Arrangement of hazardous areas for the new equipment and instruments;

6. Implementation of Detail Design including process, mechanical, civil, instrument/control and electrical parts;
7. Procurement, fabrication and delivery at site of two flares, piping as well as all other related equipment;
8. Design and installation of new flares D-2 and D-4;
9. Design of new foundations for flares D-2 and D-4;
10. Design and installation of a new piping, as well as supporting structures;
11. Implementation of the civil part of the project, including the installation of new pipe racks, installation of supporting structures, installation of service areas, stairs and ladders according to the new detailed project OLP02729;
12. If the implementation of the project is obstructed by the existing pipelines or structures, they will have to be dismantled and re-installed after the completion of the project, expertise of the piperack/structures;
13. Disassembly of no longer usable structures, old flares and piping according to detail project OLP02729;
14. Issue of demolition plan (detailed enough to allow starting of dismantling activities on field) for dismantling of existing facilities;
15. Installation of new Instrumentation and Electrical equipment according to the new Detail Design OLP02729;
16. Provide all other necessary works and services to reach the targets set above;
17. All necessary documentation preparation activities.

The contract shall include all works that are described or specified in the drawings, specifications or other documents indicated in the present Scope of WORKS. Any minor works not specified in drawings or other documents but are required in order to ensure work functionality and completeness shall be considered as included into the Contract price. The Contractor shall analyse the provided documentation and all arisen issues shall solve with the Owner. The Contractor shall comply with all work-related requirements as provided by the Owner.

1.5. BATTERY LIMITS

Battery limits of the Scope of WORKS are determined in attached technological design proposal "OLPP225" and described in present SoW. Some Battery Limits shown only preliminary and shall be clarified during Detail Design:

#	Description	Battery Limit	Battery Limit	Reference
Engineering				

TECHNICAL ANNEX No1 – SCOPE OF WORKS

1	Detail Design	<p>Within CONTRACTOR's scope of WORKS including:</p> <ul style="list-style-type: none"> - Explanatory note (process description) preparation; - PFD and P&ID preparation; - Cause and effect diagram preparation; - Equipment and instrument datasheets preparation; - Instrument list preparation; - Start-up, operation, stop and Emergency shutdown / trip manuals preparation; - HAZOP and SIL determination/ verification; - Modification of P&ID and other documentation based on HAZOP recommendations. 	CONTRACTOR's Scope of WORKS	
		<ul style="list-style-type: none"> - Process, Mechanical, Civil, Instrument, Electrical and Fireproofing parts preparation as per contract requirements; - 3D model of Flare Farm with new flares including new piperacks and pipelines preparation and submission; - Environmental part of the project with heat and radiation zones calculation. - Demolition plan preparation <p>Note: CONTRACTOR'S Detail Design will be deemed as prepared only when will be approved by OWNER and issued as "ISSUE FOR CONSTRUCTION" version.</p>		
Technological / Mechanical part (for details see attachment No.1)				
2	New flares	<p>New flares D-2 and D-4 are within CONTRACTOR's Scope of Works fully equipped as per worldwide best practice including engineering, design, manufacturing, delivery, installation, safety and relief valves, instrumentation & electrical equipment, lifting lugs, service platforms, access routes, manholes, piping, painting, thermal insulation and related equipment.</p>	CONTRACTOR's Scope of WORKS	
3	Pipelines	<p>Within CONTRACTOR's Scope of WORKS including engineering, design, manufacturing, delivery, installation, reconfiguration of existing pipelines.</p>	CONTRACTOR's Scope of WORKS	
4	Water seal drum	<p>Recalculate parameters of existing Water seal drums HU-6 and HU-8 and check their suitability to new flares and increased diameter piping. Drain and perform all necessary mechanical works.</p>	CONTRACTOR's Scope of WORKS	

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5	Low pressure nitrogen connections	Low pressure nitrogen is available and all necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design. CONTRACTOR should provide required amount of low pressure nitrogen.	CONTRACTOR's Scope of WORKS	
6	Plant air	Plant air is available and all necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design. CONTRACTOR should provide required amount of plant air.	CONTRACTOR's Scope of WORKS	
7	Instrument air	Instrument air is available and all necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design. CONTRACTOR should provide required amount of instrument air.	CONTRACTOR's Scope of WORKS	
8	Steam	Steam is available and all necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design. CONTRACTOR should provide required amount of steam	CONTRACTOR's Scope of WORKS	
9	Fuel gas	Fuel gas is available and all necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design. CONTRACTOR should provide required amount of fuel gas.	CONTRACTOR's Scope of WORKS	
10	Flare gas	All necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design.	CONTRACTOR's Scope of WORKS	
11	Hydrocarbon and gas condensate	All necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design.	CONTRACTOR's Scope of WORKS	
12	Hydrogen sulphide	All necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design.	CONTRACTOR's Scope of WORKS	
13	Fire water	All necessary connections is within CONTRACTORS Scope of Works. Tie-in points will be specified during detail design.	CONTRACTOR's Scope of WORKS	
Civil part				
14	Foundation / Paving	Within CONTRACTOR's Scope of WORKS including update of topographical map, geological survey	CONTRACTOR's Scope of	

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		(under pipe racks, flares foundations), evaluate and work accordingly on foundations for flares D-2, D-4, steel support structures, service areas, stairs, ladders and racks foundations as well as related anchor bolts. The Contractor must independently foresee all the necessary work, if they are not foreseen in the Customer's task, but are necessary for the installed devices to function properly and safely in the existing environment.	WORKS	
15	K3 (Industrial gravity flow sewerage)	Within CONTRACTOR's Scope of WORKS including design and execution of required changes of the underground networks (water supply, sewers) considering the selected installation location.	CONTRACTOR's Scope of WORKS	
16	Pipe/Cable racks	Within CONTRACTOR's Scope of WORKS including engineering, design, manufacturing, delivery, installation.	CONTRACTOR's Scope of WORKS	
17	Painting / Coating	Within CONTRACTOR's Scope of WORKS including flares, piping, steel structures, platforms, stairs and ladders.	CONTRACTOR's Scope of WORKS	
18	Marking / Labelling / Signing	Within CONTRACTOR's Scope of WORKS including pipelines marking according to OL BDS-41 requirements, labels and signs (plastic or aluminium) of all Project equipment.	CONTRACTOR's Scope of WORKS	
19	Hot deep galvanizing	Within CONTRACTOR's Scope of WORKS including platforms and ladders and stairs grids and hand rails.	CONTRACTOR's Scope of WORKS	
20	Fireproofing	Within CONTRACTOR's scope of WORKS including all support steel structures which shall be fireproofed as per API and ORLEN Lietuva Technical Specification requirements.	CONTRACTOR's Scope of WORKS	
Instrumentation part (for details see attachment No.2)				
21	Instrumentation	All devices, including field devices, temperature measurement instruments, pressure measurement devices, differential pressure measuring devices, flow measurement devices, mass flow rate meters, analyzers, level transmitters, level switches, control valves, shut-off valves, instrumentation, instrument cabinets, electrical heating, conduits, junction boxes, TOP-BOX panel, cables, cable trays / routes, Ignition panel with all	CONTRACTOR's Scope of WORKS	

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		instrumentation connected to AVS system and other related new equipment are included in CONTRACTOR's Scope of Works.		
22	Control system (DCS, ESD)	New signals for readings, alarms and controls shall be that connected to the DCS (Foxboro) system. Tripping signals to be connected to the ESD (Triconex) system. Instrument readings, alarms and control shall be connected DCS SCADA system and PI server. Installation of new DCS I/O cabinets with redundant power supply and connection cables, installation of new ESD modules and Triconex chassis for I/O modules, redundant power supply and connection cables. All cabinets shall be closed-cooled, supplied with instrumentation air to maintain positive pressure and connected to the existing aspirating smoke detection system in the DCS/ESD cabinets. All that is included in CONTRACTOR's Scope of Works.	CONTRACTOR's Scope of WORKS	
23	Control system documentation	Below listed documents shall be prepared by CONTRACTOR and submitted to OWNER: <ul style="list-style-type: none"> - TAG list - equipment layout plans - installation/functional diagrams - basic wiring diagrams - installation diagrams - basic measuring diagrams (loop drawings) - new equipment selection and intrinsically safe circuit testing calculations - instrument and equipment hookup diagrams - 24 V DC power supply diagrams - cable routes and cable tag drawings - explanatory note, etc. 	CONTRACTOR's Scope of WORKS	
Electrical works (for details see attachment No.3)				
24	Electrical equipment	All electrical equipment including illumination, electrical heating and heat tracing (if any), grounding, lightning protection, cable routes and cabling up to power cabinets in MCC, power cabinets and secondary equipment (power switches, circuit-breakers, relays, valves and etc.) are included in CONTRACTOR's scope of WORKS.	CONTRACTOR's Scope of WORKS	
25	Illumination	Illumination must be installed on flare	CONTRACTOR's Scope of WORKS	

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		platforms and other necessary locations. In new or renewed equipment service points illumination shall be installed if necessary.	CTOR's Scope of WORKS	
26	Heat tracing	Electric heat tracing installation shall be implement according process, instrumentation or others design part requests.	CONTRACTOR's Scope of WORKS	
27	Grounding	Grounding shall be implement according local requirements, civil, mechanical and others design part requests.	CONTRACTOR's Scope of WORKS	
28	Lightning protection	Install new lightning protection if needed.	CONTRACTOR's Scope of WORKS	
Miscellaneous				
29	Dismantling. General	Dismantling works of existing equipment are included in CONTRACTOR's scope of WORKS based on this SOW and demolition plan prepared by CONTRACTOR and approved by OWNER.	CONTRACTOR's Scope of WORKS	
30	Dismantling. Instrumentation	Dismantling of existing instruments including cabinets, sample lines up to root valve, conduits up to cable route, el. tracing up to power panel, isolation valve, cables up to nearest JB or multicore cables rack, cable routes up to nearest multicore cables rack, grounding up to grounding loop, instrument air up to nearest header including isolation valve.	CONTRACTOR's Scope of WORKS within indicated B.L.	
31	Dismantling. Electrical	Dismantling of existing electrical equipment including supports, power panels, conduits up to cable route, cables up to nearest JB or multicore cables rack, cable routes up to nearest multicore cables rack, grounding up to grounding loop, el. tracing up to power panel.	CONTRACTOR's Scope of WORKS within indicated B.L.	
32	Dismantling. Steel structure	Dismantling of old platforms, stairs, ladders, handrails, existing steel structures used for equipment lifting and existing Instrument and Electrical equipment.	CONTRACTOR's Scope of WORKS within indicated B.L.	
33	Inspection and testing	CONTRACTOR shall perform all the WORKS specified in the present SOW including all the required on-site testing of all pipelines, pressure equipment. Testing shall be based on applicable design	CONTRACTOR's Scope of WORKS	

		norms and / or relevant local regulations. The CONTRACTOR's SOW shall also include coordination of the on-site inspections and other works that require permits to be issued by the local authorities. As well CONTRACTOR is responsible for antifreeze media for hydro tests (if applicable). NOTE: Expenses arising from inspections and testing of CONTRACTOR performed work by the local authorities are deemed to be included in CONTRACTOR's Scope of WORKS.		
34	Blinding	CONTRACTOR shall supply material for blinding, and perform all blinding installation and blinding removal activities required for pipelines and pressure equipment installation.	CONTRACTOR's Scope of WORKS	
35	Commissioning & Start-Up	Assistance as well as defects elimination during Commissioning & Start-Up period is included in CONTRACTOR's Scope of WORKS	CONTRACTOR's Scope of WORKS	
36	Performance Test	Assistance as well as defects elimination during Performance Test period is included in CONTRACTOR's scope of WORKS	CONTRACTOR's Scope of WORKS	

1.6. BASIC INFORMATION

1.6.1 SITE INFORMATION. All site information data defined in documents listed in paragraph No.1.7;

1.6.2 BASIC INFORMATION PROVIDED BY OWNER. All basic information provided by OWNER data defined in documents listed in paragraph No.1.7;

1.6.3 CODES AND STANDARDS. The codes and standards applicable for WORKS are defined in documents listed in paragraph No.1.7. The EQUIPMENT and MATERIAL shall be strictly in accordance with the requirements imposed by this document and the other documents attached to the Scope of WORKS. In case of conflicting requirements between the different applicable documents, the precedence shall be as follows:

- ⇒ Code/authority regulations;
- ⇒ Industrial standards referred to in above-mentioned documents;
- ⇒ Material requisition, including data sheets.

When performing designing and all installation/dismantling works, the contractor must comply with all requirements set out in this SOW, its appendices and <http://www.orlenlietuva.lt/EN/ForBusiness/DocumentsForContractors/Pages/default.aspx>;

CONTRACTOR shall report in writing any conflicting requirements to OWNER. It shall be CONTRACTOR's responsibility to acquire possession of all required regulations, codes and standards.

The CONTRACTOR is aware of any legal regulation applicable to the subject EQUIPMENT and is solely responsible for full compliance with such rules, including approvals, tests, certificates and services of a legal inspection body.

1.7. LIST OF ATTACHMENTS

Attachment No	Description
1	Technological design proposal OLPP225
2	OLP02729 Instrument Design SOW
3	OLP02729 Electrical Design SOW
4	Hazardous area classification
5	Preliminary Blinding schemes
6	Vendor list
7	Builders requirements for engineering works
8	Battery limits
9	Genplan
10	Pictures
11	OLP02729 ACS SoW

2. PARTICULAR REQUIREMENTS

2.1. QUALIFICATION REQUIREMENTS FOR CONTRACTOR

- 2.1.1 CONTRACTOR shall hold required licenses, certificates as well as other if necessary for execution of design and installation works which in full compliance with Lithuanian requirements;
- 2.1.2 All standards and regulations mentioned in this specification shall be used of newest revision or edition if revision or edition is not specified otherwise;
- 2.1.3 CONTRACTOR shall appoint SPSC (Statybos produkcijos sertifikavimo centras) certified specialists or acknowledged by SPSC foreign (EU Countries) specialists:
- Design Manager
 - Design Parts (Sections) Managers (i.e. Civil, Electrical, Instrumentation and etc.)
 - Design and Design Parts (Sections) Supervision Managers
 - Construction Works Manager
 - Construction Works Managers for special parts of construction works (i.e. Civil, Electrical, Instrumentation and etc.)
- 2.1.4 CONTRACTOR shall possess certified personnel (welders, installation specialists, supervisors and etc.) to ensure work execution quality. Qualification Requirements for Contractor evidencing your qualification (certificates, licenses, etc.) that are effective as of the date of your proposal. If any of the documents are not available as of the date of your proposal but you can obtain it, you are required to submit a binding letter stating that in case of award of contract you will present the copy of such document no later than 2 weeks prior to the commencement of works;
- 2.1.5 The Contractor must confirm that he is adequately prepared to carry out all the works specified in the scope of the works. In the proposal, the Contractor must certify that, as Gen. the Contractor, he has his own sufficient number of suitably qualified managers, engineering technicians, workers to properly coordinate all works, subcontractors and carry out his (non-subcontracted) installation works and confirm in the proposal that he will have his own staff to carry out these works, at least: 1 project manager, 2 site managers, 2 site managers at workshop, two

procurement specialists, two quality control and technical documentation engineers, one safety engineer, 10 welders, 40 fitters.

- 2.1.6 CONTRACTOR shall confirm their experience in EPC projects implemented in Crude refining and/or Energy sectors and submit a list of similar works performed over the past 5 years. Please submit an official reference list in a written form (through the CONNECT platform) confirming the customer's name, scope of works, period, contract value and positive quality together with the specified contact persons. Also please attach the confirmation documents signed by end users (customers), i.e. it can be in a form of reference, work completion/acceptance protocol or any other equivalent document.
- 2.1.7 CONTRACTOR shall have an appropriate, possess necessary resources (materials, technical, production, equipment and labor);
- 2.1.8 Certificates/permits required for Instrumentation installation works. To have necessary permits, certificates granting the right to perform works of such scope according to the requirements of normative acts of the Republic of Lithuania:
- Operation of special power installations;
 - Operation of electric installations of up to 1000V;
 - Operation of power network and units of up to 1000V;
 - Testing of power network and units of up to 1000V;
 - Installation of process control and automation systems;
 - Operation of automation and control systems of crude oil and/or petroleum product processing (except for liquefied petroleum gas) as well as other liquid fuel refining Units;
- 2.1.9 Certificates/permits required for Electrical installation works. A certificate issued by the National Energy Regulatory Council of the Republic of Lithuania entitling to operate electrical units and to perform the following activities:
- Operation of special power installations;
 - Electrical engineering works up to 10kV;
 - Works related to operation of electrical network, units under voltage up to 10kV;
 - Testing works of electrical network and units, voltage up to 10kV;
 - Operation works of electrical network relay protection, voltage up to 10 kV;
 - Pre-Commissioning of engineering systems of a structure;
- 2.1.10 Certificate issued by Ministry of Environment of the Republic of Lithuania, entitling to hold a position of Special Construction Special Civil Work Manager and Special Construction Special Civil Work Technical Supervision Manager (field of activity – electrical units up to 10 kV);
- 2.1.11 Qualification requirements for Mechanical/Civil Installation works:
- Certificate issued by the National Energy Regulatory Council (NERC) to operate crude oil processing and petroleum products producing units - a right to do business related to operation of crude oil and petroleum product units. Repair of crude oil processing units irrespective of their parameters;
 - Information about company welders' qualification, documents confirming welding qualification in accordance with EN287 or EN287+PED welding process 141 and 111, for steel group 1, piping diameter from 20 mm and \geq 25mm, wall thickness from 3mm to 12 mm;
 - Company fusion welding quality certificate according to ISO 3834-2 or ISO 3834-3;

- Company employees that have employment contracts and are certified European Welding Engineer or European Welding Technologist (IWE, EWE or IWT, EWT);

2.1.13 CONTRACTOR must be insured as stipulated in legislation applied in the Republic of Lithuania;

2.1.14 CONTRACTOR shall provide a list of SUBCONTRACTORS (if any) and their certificates granting the right to perform such works according to the requirements of the normative acts of the Republic of Lithuania. CONTRACTOR shall refer to draft contracts with subcontractors in case WORKS will be executed with involvement of other companies. All subcontractors shall be approved by OWNER;

2.1.15 CONTRACTOR shall provide any other certificates/licenses/permits if applicable.

2.2. DOCUMENTATION

2.2.1 CONTRACTOR shall execute the following works, including but not limited to:

- All CONTRACTOR documents shall be in English and Lithuanian languages except to the extent expressly stated otherwise elsewhere in CONTRACT;
- The CONTRACTOR shall prepare / translate/ provide:
 - (i) Operation and Maintenance Manual manuals for all newly provided equipment (in English and / or Lithuanian (certified translation));
 - (ii) Operation Manual for operators (in Lithuanian (certified translation));
 - (iii) In addition to Operation and Maintenance Manuals for all newly provided equipment, CONTRACTOR shall prepare / translate / provide a special summary Operation and Maintenance Manuals for all newly installed complicated electrical equipment (in Lithuanian);

NOTE: An example of above said special summary OMM could be provided by OWNER.

- After WORKS completion, Contractor shall submit respective maintenance documentation, and develop technical certificates (passports). While drafting new piping and flares installation documents, technical passports, diagrams and specifications must be issued following the requirements of Company procedure BM-4 “*Safe Operation of Pressure Piping*” and BM-2 “*Safe operation of Pressure Vessels*” (Flares belong to the group of pressure vessels), available on ORLEN Lietuva website <http://www.orldenlietuva.lt/EN/ForBusiness>. The electronic version of piping and vessels technical certificates (passports), diagrams and specifications shall also be submitted to OWNER’s Technical Supervision Shop;

NOTE: New pipeline installation documentation should be issued for all pipelines within the Scope of WORKS;

- If required, CONTRACTOR shall coordinate and combine works with those performed by third parties;
- CONTRACTOR shall perform all the WORKS specified in the present SOW including all the required on-site testing of all pipelines. Testing shall be based on applicable design norms and/or relevant local regulations. The CONTRACTOR SOW shall also include coordination of the on-site inspections and other works that require permits to be issued by the local authorities;

NOTE: Expenses arising from inspections and testing of CONTRACTOR performed work by the local authorities are deemed to be included in CONTRACTOR’s SOW.

- All drawings’ and documents’ shall be printed on ISO paper formats.

- After construction works will be finished CONTRACTOR shall issue "As Built" Detail Design revision with all design changes included in this revision.
- CONTRACTOR shall submit duly signed, design documentation in PDF files (MTOs and scope sheets shall also be presented in MS Excel files).
- CONTRACTOR shall present drawings in dwg/dxf file format.
- Each drawing shall be presented in a separate PDF file. The name of file shall consist of identification code (number) of drawing and number of revision.
- Text documents shall be presented in PDF and DOCX file. The name of file shall consist of the name of document or acronym.

2.3. MANUFACTURING REQUIREMENTS

All manufacturing requirements are defined in the documents listed in paragraph No. 1.7;

2.4. PAINTING

All painting requirements are defined in the documents listed in paragraph No. 1.7. Marking of Pipelines, vessels, steel structures and etc., shall be implemented according to OL BDS-41 instruction requirements.

2.5. WELDING

The CONTRACTOR shall develop and prepare Welding Procedure Specification (WPS), Welding Procedure Approval Record (WPAR) and Welders Qualification Record (WQR) for all welds. These procedures shall be submitted to the OWNER for review, prior to fabrication. All welders shall be qualified and certified in line with EN 287. All welds on pressure parts (inside as well as outside) shall be fully penetrated. Only material of the same chemical composition, as the base material, can be welded to the pressure retaining parts.

2.6. NOZZLE CONNECTION

All nozzle flanges shall be according to ASME B16.5. Bore of WN flanges shall correspond with the inside diameter of the nozzle necks. All blinded nozzles shall be delivered with blind flange, gasket (spiral wound, inner and outer ring) and bolting. The smallest outside nozzle diameter on shell is 50mm. For smaller nozzles shall be used only LWN flanges.

2.7. MATERIALS AND EQUIPMENT

- All materials and equipment shall comply with ORLEN Lietuva Technical specification, Design data sheets and other documents attached to the requisition. All pressure retaining parts shall be made from material, which shall have material certificate 3.1 according to EN10204. The certificates 3.1 shall be supplied also for welding consumables. Other parts can have material certificates 2.2 as per EN10204.
- All provided equipment and materials shall have necessary certificates and quality control documents (specified in technical requirements);
- Prior to procurement of all materials and/or equipment necessary for the project execution CONTRACTOR shall submit to the OWNER technical data of these materials and/or equipment for inspection and determination of suitability. All materials and/or equipment shall be procured only after OWNER's approval and

after OWNER's confirmation that the materials and/or equipment are suitable for use and can be installed;

NOTE: Notwithstanding OWNER's confirmation on suitability of above mentioned goods (based on approved data sheets and/or characteristics), all materials / equipment / service shall be deemed as accepted by OWNER only after successfully performed Start-Up of the Unit;

- CONTRACTOR shall provide all the equipment, installation parts, elements and materials regardless whether they are specified or not in material list, but necessary for the execution of the project, for example, fastening straps, screws, nuts, nozzles, cable seals, markings, paint, etc.;
- CONTRACTOR shall deliver all materials and / or equipment necessary for project execution by its own transport to installation or temporary storage area and ensure material protection against damage, theft or other events;
- The supplied production / equipment / materials shall not be used previously (brand new), shall be produced not earlier than in 2024 and proposal shall contain quality confirming documents (equipment passports, certificates of materials and etc.);
- All materials and equipment shall be manufactured only by vendors listed in ORLEN Lietuva Vendor List except as otherwise expressly provided elsewhere in this CONTRACT.

2.8. NAMEPLATE

The PED / CE marking nameplate shall be made from stainless steel and shall be permanently attached to the nameplate brackets. The nameplate shall be in Lithuanian/English language. The nameplate shall display all data as per PED directive and moreover equipment number and name.

2.9. INSPECTION AND TESTING

Inspection and testing shall be in accordance with the requirements of this requisition and the codes and standards named herein. The minimum inspection and testing requirements in the manufacturer's workshop as well as at site will be summarized in the Inspection Specification sheet (shall be agreed during Kick-Off meeting). Notified Body approval as per PED 2014/68/EU is required for the equipment and the Seller is responsible to fulfil requirements and actions necessary to obtain the approval. CONTRACTOR shall notify OWNER not less than 10 working days prior to any inspection, witnessed test or hold point. Acceptance of shop test shall not constitute any waiver of field test requirements in order to meet the specified operating conditions, nor does inspection relieve the Seller of his responsibilities in anyway. Duration of hydro test shall not be less than 1 hour. Manufacturer shall indicate on assembly drawing places, where periodical thickness measurement will be performed. The first thickness measurement shall be performed by the manufacturer and shall be included into NDE report.

2.10. TRAINING

The Contractor shall conduct training courses as follows:

- 2.10.1 On-site operators training. The training shall be organized for 4 different operators groups, which are working based on different shifts;

2.10.2 The contractor will be responsible for providing an interpreter who will translate into Lithuanian during the training.

2.10.3 Training for service / maintenance personnel in the certificate training centre. Exact training model will be identified during Kick-Off meeting;

2.11. ESTIMATION AND SCHEDULE

2.11.1 CONTRACTOR shall perform the WORKS according to the Time Schedule approved by the OWNER;

2.11.2 CONTRACTOR shall be responsible for development of Project schedule, reporting on WORKS, forecasting and supervision thereof. CONTRACTOR shall plan and provide adequate personnel to ensure completion of WORKS in accordance with the approved Time Schedule.

2.11.3 The connection to existing equipment and pipelines, as well as the installation of new flare D-2, will only be possible in the spring of 2027, during the overhaul of the oil refinery.

2.11.4 The exact date will be confirmed later, 2 month before shutdown.

2.11.5 Commencement of works – immediately after contract signature;

2.11.6 The OWNER reserves the right to modify the WORKS execution terms in accordance with the Time Schedule.

2.11.7 WORKS shall be executed by the companies able to work under the flexible work schedule and perform work past working hours, on weekends and public holidays

3. SCOPE OF WORKS

3.1. PROJECT MANAGEMENT AND SITE SUPERVISION

CONTRACTOR shall provide the following services:

3.1.1 Overall project management including planning, procurement, expediting, cost control, QA/QC and alike activities;

3.1.2 Sufficient personnel for the supervision of the execution of the WORKS including construction management, field supervision, safety management, QA/QC (at site) and the like;

3.1.3 Approvals of Notified Bodies governing the fabrication for the CE Mark;

3.1.4 Fabrication supervisor and/or technical specialist witnessing the fabrication process;

3.1.5 Quality control program and documentary support of manufacturing of goods;

3.1.6 QA/QC over all welding activities;

3.1.7 QA/QC over the applied application of insulation, paint and coatings;

3.1.8 Site technical services for supervision and quality control over the erection of all disciplines (Civil, Mechanical, Instrument and Electrical);

3.1.9 Site technical services for Pre-Commissioning, Commissioning and Start-Up;

3.1.10 Site technical services for other required operational support to assure safe and effective start-up.

3.2. ENGINEERING

CONTRACTOR shall perform all design and detailed engineering required for the WORKS as defined in the CONTRACT. CONTRACTOR'S scope of WORKS for detailed engineering is further defined in present Scope of WORKS and in documents listed in paragraph No. 1.7. CONTRACTOR shall provide the following services, as a minimum, in respect of all engineering disciplines during engineering of the facilities. CONTRACTOR's engineering scope of WORK shall include but not be limited to:

3.2.1 P&ID:

- 3.2.1.1. P&ID preparation and issue to OWNER for approval;
- 3.2.1.2. P&ID modification based on HAZOP Study and SIL determination recommendation;
- 3.2.1.3. HAZOP. HAZOP study and SIL classifications shall be conducted by CONTRACTOR in accordance with procedures proposed by CONTRACTOR, for approval by OWNER, covering at least the following stages:
- 3.2.1.4. HAZOP Review. Prior to final release of P&ID's, Plot Plans and related documents for Detailed Design, carry out a detailed HAZOP Review; carry out safety reviews of any and all subsequent proposed changes to P&ID's;
- 3.2.1.5. Follow-up HAZOP - Conduct HAZOP of Vendor Package P&ID's, once these are approved;
- 3.2.1.6. Perform a SIL determination / classification / verification, SRS, Risk Assessment (Layer of Protection Analysis) for determining the characteristics of a Safety Instrumented System (SIS);
- 3.2.1.7. CONTRACTOR shall fully support the OWNER during HAZOP study to improve the safety, quality and conformity of the WORKS;
- 3.2.1.8. In case additional equipment (pipes, fittings, isolation valves, instruments, cables, control and/or On/Off valves and etc.) after HAZOP study will be determined, CONTRACTOR shall update P&ID and Detail Design and implement WORKS accordingly;

3.2.2 Geodetic surveys and development of topographic plans;

3.2.3 3D model of new flares D-2 and D-4, maintenance platforms, pipelines and pipe racks.

3.2.4 Process and mechanical design of the new flares D-2 and D-4 fully equipped as per worldwide best practice based on present Scope of WORKS, data defined in the documents listed in paragraph No.1.7 and Battery Limits listed in paragraph No.1.5 including pipelines, stairs, ladders and handrails, control valves, isolation and on/off valves, safety and relief valves.

3.2.5 Civil design based on present Scope of WORKS, data defined in the documents listed in paragraph No.1.7 and Battery Limits listed in paragraph No.1.5

3.2.6 Instrument design based on present Scope of WORKS, data defined in the documents listed in paragraph No.1.7 and Battery Limits listed in paragraph No.1.5

3.2.7 Electrical design based on present Scope of WORKS, data defined in the documents listed in paragraph No.1.7 and Battery Limits listed in paragraph No.1.5

3.2.8 Dry-out procedure;

3.2.9 Designs, Specifications and Procedures required for installation purposes;

3.2.10 Issue of demolition plan (detailed enough to allow starting of dismantling activities) identifying all the existing facilities to be dismantled.

3.2.11 Fireproofing design of the new flares based on present Scope of WORKS, data defined in the documents listed in paragraph No.1.7 and Battery Limits listed in paragraph No.1.5;

3.2.12 Qualification requirements for designing works:

CONTRACTOR (or Subcontractor) shall have all required certificates and licenses for Designing / Installation activities in the Republic of Lithuania. Designing shall be performed according to normative documents, standards valid in the Republic of Lithuania and OWNER's local regulations and technical requirements. Designer shall comply with the following minimum qualification requirements:

- Designer shall have ISO9001 or equivalent quality system;
- Designer shall bear all required certificates and licenses for designing activities in the Republic of Lithuania;
- Designer shall have all required valid certificates and permits to perform designing of all parts of exceptional significance facilities, relevant to the execution of works provisioned in this Scope of WORKS;
- Designer specialists, performing designing activities, shall be certified according to the procedure established in the Republic of Lithuania;
- Designer shall be insured in compliance with the legislation applied in the Republic of Lithuania;

3.2.13 All Detail Design documents shall be submitted to third, certified Experts Company for examination and only after Experts positive conclusion to the OWNER for approval. Only approved by OWNER documents can be issued as "ISSUE FOR CONSTRUCTION" and / or "AS BUILT". Any construction activities without OWNER's approval of above said documents are strictly forbidden.

NOTE: Despite OWNER's confirmation and / or approval of any Detail Design document, all WORKS shall be deemed as accepted by OWNER only after PROVISIONAL ACCEPTANCE CERTIFICATE will be approved by OWNER. Review and approval by OWNER of any CONTRACTOR's Detail Design documents shall not constitute, or be construed as, an assumption of CONTRACTOR's responsibility or liability for Detail Design under the Contract or at law and does not relieve CONTRACTOR from full compliance with its legal and contractual obligations.

3.2.14 Detail Design Identification:

Detail Design number	OLP02729
Detail Design title	Flare Farm reconstruction

3.3. CONSTRUCTION PERMIT

3.3.1. Procedure of request of permit for construction described in Technical Regulations for Construction STR 1.05.01

3.3.2. Contractor shall prepare or obtain from other subjects all documents required to obtain permit for construction.

3.3.3. OWNER will issue Power of Attorneys to CONTRACTOR to authorize CONTRACTOR obtain all required documents for permit for construction from other subjects and provide all documents for permit for construction over Government Information management system "Infostatyba" on behalf of OWNER.

3.3.4. To obtain permit for construction CONTRACTOR shall provide documents specified in paragraph 5 of Article 27 of REPUBLIC OF LITHUANIA LAW ON CONSTRUCTION:

- 3.3.4.1. An application,
- 3.3.4.2. Design documentation, signed by SPSC certified designers,
- 3.3.4.3. Design examination report with positive conclusion done by SPSC certified experts,
- 3.3.4.4. Power of Attorney provide documents on behalf of OWNER
- 3.3.4.5. Land owning documents (OWNER will provide to CONTRACTOR copies of such documents)
- 3.3.4.6. Environmental Impact Assessment documents approval,
- 3.3.4.7. Sanitary protection zones plan (drawing),
- 3.3.4.8. Designer's mandatory insurance document copy,
- 3.3.4.9. A decision of a competent institution on admissibility of planned economic activities in a chosen locality from the point of view of an impact on the environment (when this is obligatory) in accordance with the Law on the Assessment of an Impact of Planned Economic Activities on the Environment
- 3.3.4.10. Design documentation handover to OWNER act.
- 3.3.4.11. Overall process of obtaining permit for construction typically can take about from 25 to 45 working days after all documents will be submitted over "Infostatyba".

3.4. MATERIAL PROCUREMENT AND SUBCONTRACTING

The CONTRACTOR's scope of WORKS includes the purchasing, supply, manufacturing, assembling and transportation at site of main Project equipment as:

- 3.4.1 New flares D-2 and D-2 suitable for technology applications, fully equipped as per worldwide best practice junction boxes, cables and cable trays / routes, conduits, instrumentation & electrical equipment, stairs, ladders and handrails, transfer and utility pipelines, different types of valves, all utility piping, lifting lugs, service platforms, access routes, manholes, painting / coating, thermal insulation, illumination, grounding, anchor bolts and nuts;
- 3.4.2 The scope of WORKS includes the purchasing, supply and transportation at site of all Mechanical, Civil, Instrument and Electrical equipment and materials as per scope of WORKS and newly prepared and issued Detail Design OLP02729 approved by OWNER and which are necessary for Project execution;
- 3.4.3 The scope of WORKS includes the purchasing, supply and transportation at site of all equipment and materials required for temporary use as temporary supports, material for blinding, gaskets, bolts, nuts end etc.;
- 3.4.4 The scope of WORKS includes the purchasing, supply and transportation at site of all Pre – Commissioning, Commissioning and Start-Up spare parts as gaskets, bolts, lubricates and etc.;
- 3.4.5 The scope of WORKS includes scaffolds, cranes, insulation, any transport, forklifts, special tools or equipment, equipment for cold tie-ins, steam / water / electrical tracing materials, painting materials, labelling materials;
- 3.4.6 The scope of WORKS includes any additional materials and equipment specified after HAZOP study and SIL verification;
- 3.4.7 CONTRACTOR shall prepare a Procurement Plan for equipment and materials for OWNER'S review and approval. This Plan shall include a detailed schedule of procurement activities with respect to organizing the project procurement functions and their respective duration for all project materials requirements. This plan shall

also be developed in conjunction with CONTRACTOR'S scheduling group for timely and efficient procurement of the equipment and materials. The plan shall define all procurement activities necessary to ensure that all package units, equipment and materials are delivered to the Site by their "Required at Site" dates and that the construction requirements for materials are addressed in the proper sequence to complement planned field construction activities.

- 3.4.8 CONTRACTOR shall submit project specific Procurement Procedures in accordance with OWNER requirements as outlined in the CONTRACT, for OWNER'S approval. CONTRACTOR'S final project-specific Procurement Procedures shall be submitted for review and agreement with OWNER within 4 weeks from the CONTRACT EFFECTIVE DATE. These Procedures shall set out all interfaces with OWNER and the actions of each Party accordingly;
- 3.4.9 Plan for sub-contracting shall be prepared by CONTRACTOR for agreement with OWNER, to define the sub-contracting approach to be adopted for the project, including a definition of equipment and materials to be supplied by sub-contractor. OWNER shall only consider requests from CONTRACTOR for approval of additional sub-contractor or in exceptional circumstances;
- 3.4.10 CONTRACTOR shall perform all expediting of equipment and material, Vendor data, personnel and documentation, from inquiry through to delivery at Site. CONTRACTOR shall submit status reports on all procurement activities. The extent of expediting by CONTRACTOR shall include:
- Physical expediting at vendor / sub-contractors point of manufacture;
 - Monitoring and reporting progress on all purchase orders and preparing and issuing a listing of critical items at weekly intervals. This listing shall identify those equipment and materials which are critical or are potentially critical to the TIME SCHEDULE and as such require special attention to ensure timely site delivery, along with an action plan to achieve it;
 - CONTRACTOR shall report any unreasonable delay to Procurement Plan that may affect the TIME SCHEDULE, stating the reasons for the delay.
 - CONTRACTOR shall be responsible for ensuring all inspection and for witnessing tests of equipment and materials, at vendor / sub-contractors facilities, in accordance with the requirements of the CONTRACT. Third Party / Authority Inspection (where applicable) shall not relieve the CONTRACTOR of his obligations under the CONTRACT. CONTRACTOR shall prepare an inspection plan for equipment and materials, identifying scope, class and stages of inspection / testing as well as manpower resources from the relevant areas, for carrying out timely stage inspection, final inspection and testing at Vendor/ Sub-contractor's facilities as required. This plan shall be submitted to OWNER for review. OWNER shall have the right to attend any inspection visits, periodic or final, with a detailed plan and proper notification of all inspections. CONTRACTOR shall be responsible for providing OWNER with a detailed plan and proper notification in this regard;
- 3.4.11 Prior to procurement of all materials and / or equipment necessary for the project execution CONTRACTOR shall submit to the OWNER technical data of these materials and / or equipment for inspection and determination of suitability. All materials and / or equipment shall be procured only after OWNER's approval and after OWNER's confirmation that the materials and / or equipment are suitable for use and can be installed;
- NOTE: Despite OWNER's confirmation on suitability of above mentioned goods (based on approved Data Sheets and / or characteristics), all materials / equipment / service shall be deemed as accepted by OWNER only after PROVISIONAL

ACCEPTANCE CERTIFICATE will be approved by OWNER. Review and approval by OWNER of CONTRACTOR's any materials / equipment / service procurement documents shall not constitute, or be construed as, an assumption of CONTRACTOR's responsibility or liability for materials / equipment / service under the Contract or at law and does not relieve CONTRACTOR from full compliance with its legal and contractual obligations;

- 3.4.12 All materials and equipment shall be manufactured by vendors listed in ORLEN Lietuva Vendors list. CONTRACTOR must obtain approval from OWNER for non-listed vendors.

3.5. ERECTION / INSTALLATION

3.5.1 Field Services. CONTRACTOR shall provide qualified labour, tools, construction equipment, facilities, direct materials, indirect materials, consumables, supervision, management, technical and professional services and each and every other item necessary for the completion of the WORKS to achieve issuance of the Final Acceptance Certificate. This section covers the minimum requirements for field services to be executed by CONTRACTOR in accordance with the CONTRACT requirements. The CONTRACTOR'S scope of field services shall include, but not be limited to the following:

- Construction;
- Construction Management;
- Health, Safety and Environmental;
- Field Engineering and Design Supervision;
- Materials Management and Control;
- Planning and Scheduling;
- Project Control / Cost Control;
- Sub-contracts administration;
- Quality Assurance / Control and Management;
- PRE-COMMISSIONING and COMMISSIONING activities;
- START-UP, Initial Operation and PERFORMANCE TEST;
- Reporting;
- Document and Drawing Control;
- Security;
- Training of OWNER'S personnel. All necessary instructions, maintenance manuals and other documentation must be prepared and approved by OWNER before training. Operation Manual shall be presented minimum one month prior to its Mechanical Completion ;

3.5.2 Civil works. The CONTRACTOR shall provide the necessary activities (pre-assembling and assembling, pre-fabrication and fabrication and installation works), facilities and tools for the erection of all civil works listed in this scope of WORKS, documents listed in paragraph No. 1.7 and newly prepared and issued Detail Design OLP02729 approved by OWNER and which are necessary for Project execution within the Battery Limits determined in article 1.5. CONTRACTOR'S scope of WORKS shall include the excavations, foundations, dewatering, paving, etc. demolition of the pit, removal of all debris to an area designated by OWNER, backfilling and reinstatement of the ground, removal of surplus soil to a construction soil landfill;

3.5.3 Mechanical works. The CONTRACTOR's shall provide the necessary activities (pre-assembling and assembling, pre-fabrication and fabrication, blinding and installation works), facilities and tools for the erection of all mechanical works listed in this scope of WORKS, documents listed in paragraph No. 1.7 and newly prepared and

issued Detail Design OLP02729 approved by OWNER and which are necessary for Project execution within the Battery Limits determined in article 1.5. CONTRACTOR'S scope of WORKS shall prepare and submit to OWNER technical certificates (passports) of all Project pressurized equipment and piping based on requirements listed in OL Technical specification;

- 3.5.4 Instrumentation works. The CONTRACTOR's shall provide the necessary activities (pre-assembling and assembling, pre-fabrication and fabrication and installation works), facilities and tools for the erection of all instrumentation works listed in this scope of WORKS, documents listed in paragraph No. 1.7 and newly prepared and issued Detail Design OLP02729 approved by OWNER and which are necessary for Project execution within the Battery Limits determined in article 1.5;
- 3.5.5 Electrical works. The CONTRACTOR's shall provide the necessary activities (pre-assembling and assembling, pre-fabrication and fabrication and installation works), facilities and tools for the erection of all electrical works listed in this scope of WORKS, documents listed in paragraph No. 1.7 and newly prepared and issued Detail Design OLP02729 approved by OWNER and which are necessary for Project execution within the Battery Limits determined in article 1.5;
- 3.5.6 Fireproofing works. The CONTRACTOR's shall provide the necessary activities (pre-assembling and assembling, pre-fabrication and fabrication and installation works), facilities and tools for the erection of all fireproofing works listed in this scope of WORKS, documents listed in paragraph No. 1.7 and newly prepared and issued Detail Design OLP02729 approved by OWNER and which are necessary for Project execution;
- 3.5.7 Dismantling works. The CONTRACTOR's shall provide the necessary activities, facilities and tools for the erection of all dismantling works listed in this scope of WORKS, documents listed in paragraph No. 1.7, newly prepared and issued Detail Design OLP02729 approved by OWNER, Dismantling plan prepared by CONTRACTOR and approved by OWNER and which are necessary for Project execution. Dismantling scope of works includes dismantling, cleaning and utilization of old equipment and all related pipelines, instrumentation and electrical equipment, cables, cable routes, conduits, platforms, ladders, stairs, steel structures, old foundation and etc.;
- Note: Before and during demolition activities CONTRACTOR shall evaluate all risk for existing equipment, pipelines and if necessary shall reinforce existing supports or to install temporary supports.
- 3.5.8 CONTRACTOR shall perform all the WORKS specified in the present scope of WORKS including all the required on-site testing of all pipelines, pressurized equipment. Testing shall be based on applicable design norms and / or relevant local regulations. The CONTRACTOR's scope of WORKS shall also include coordination of the on-site inspections and other works that require permits to be issued by the local authorities;
- NOTE: Expenses arising from inspections and testing of CONTRACTOR performed work by the local authorities are deemed to be included in CONTRACTOR's SOW;
- 3.5.9 CONTRACTOR shall perform all blinding installation and dismantling works as specified in the present scope of WORKS. Preliminary and indicative blinding schemes are provided in attachment 5. Blinds type, number and location might change depending on piping configuration and new D-2 and D-4 flares location ;
- 3.5.10 Backfilling and reinstatement of the landscape, grass planting and other miscellaneous work shall be a part of CONTRACTOR'S scope of WORKS;
- 3.5.11 Provide all other necessary works to reach the targets set above;

NOTE: CONTRACTOR'S scope of WORKS may not be complete in every detail. The omission of any item shall not relieve the CONTRACTOR of his responsibility to include whatever is necessary to provide a complete and functioning facility.

4. TEMPORARY CONSTRUCTION FACILITIES AND UTILITIES

4.1. PROVIDED BY OWNER

OWNER shall furnish, or cause to be furnished, free of charge to CONTRACTOR the following items and / or services for or in connection with performance of the WORKS:

- 4.1.1 Work permits and authority applications (where necessary);
- 4.1.2 Utilities for CONTRACTOR's temporary facility area and for the execution of the WORKS;
- 4.1.3 Space for CONTRACTOR's supplied temporary facilities. Any upgrading / paving required for CONTRACTOR's temporary facilities and working area are for CONTRACTOR's account;
- 4.1.4 Supply of electrical power for temporary facility needs within approximately 200 meters of CONTRACTOR's temporary facility area. Any works and materials required for electrical power connection from OWNER'S power distribution panels to CONTRACTOR'S facility area are for CONTRACTOR's account;
- 4.1.5 Construction and untreated hydrostatic test water, plant air and nitrogen from sources located within approximately 200 meters of the PLANT Battery Limits. Any works and materials required for connection from OWNER'S distribution piping to the PLANT are for CONTRACTOR's account;
- 4.1.6 Trash containers for solid waste only, and removal of containers from PLANT;
- 4.1.7 Employee identification (I.D.) badges, site access control and vehicles permit. Vehicles permit will be limited to those required for construction activities;
- 4.1.8 Off-site parking facilities;
- 4.1.9 The power supply can be started only after the CONTRACTOR will accomplish the local safety regulation and the deed of responsibility will be signed between OWNER and CONTRACTOR.

4.2. PROVIDED BY CONTRACTOR

All construction temporary facilities, utilities, construction equipment and tools, temporary construction materials, consumables, expendables, supplies, fuels, lubricants and any other items, necessary for the complete performance of the WORKS and not listed in Article 3.3 of this scope of WORKS shall be supplied, installed and properly maintained by CONTRACTOR as part of its scope of WORKS;

The type of facilities, move-in and move-out dates and locations on the WORKS site shall be subject to and in accordance with the review and approval of OWNER. Further they shall be in a condition safe and suitable for the intended purpose and in compliance with OWNER'S requirements, the applicable rules and regulations for the WORKS site. OWNER shall have the right to inspect, test and reject any or all temporary facilities and utilities. Rejected temporary facilities and / or utilities shall promptly be removed by CONTRACTOR and replaced with temporary facilities and utilities acceptable to OWNER at CONTRACTOR'S cost, and at no cost to OWNER, and without causing delay to the WORKS.

5. SCHEDULING AND REPORTING

CONTRACTOR is responsible for scheduling, reporting, forecasting and controlling its own activities and shall plan and adequately staff the Project to ensure that the WORKS is completed in accordance with the specific milestones and scheduling requirements listed below:

- Engineering deliverables by discipline;
- Mobilization time for manpower and equipment;
- Start and completion dates of different segments of WORKS;
- Any qualifying conditions of OWNER;
- Other as necessary.

OWNER'S normal working hours are forty (40) hours per week, eight (8) hours per day, five (5) days per week (Monday through Friday), between the hours of 8:00 a.m. and 5:00 p.m. CONTRACTOR shall submit its schedule of working hours and manpower loading for review and approval by OWNER.

CONTRACTOR has to foresee that during demolition and erection of flare D-2 must be done during refinery shutdown, to complete all works in time working in day/night shift regime is required.

5.1. REPORTING

CONTRACTOR shall promptly submit the schedules and reports set forth below and, in addition, those schedules and reports that are requested by OWNER.

- 5.1.1. A Master bar chart schedule based on the critical path as specified by OWNER;
- 5.1.2. The activity listing shall show the following information for the main activities shown on the Schedule:
 - i) Identification by code numbers and description;
 - ii) Duration;
 - iii) Discipline and / or craft;
 - iv) Early start and finish dates;
 - v) Latest start and finish dates;
 - vi) Total float time and free float time;
- 5.1.3 A detailed WORKS schedule, updated weekly of day-to-day operations showing planned manpower loadings for major activities at site;
- 5.1.4 Major construction equipment correlated to the above detailed work schedule;
- 5.1.5 Safety status report with statistics issued monthly by the 5th day of each month;
- 5.1.6 Procurement schedule for the procurement and receipt of materials, equipment and sub-contract services by CONTRACTOR and a monthly status report of all such procurement, materials and equipment;
- 5.1.7 During the latter stages of accomplishing WORKS, and prior to delivering notice of completion of the WORKS, CONTRACTOR shall submit its plans for demobilization at the WORK SITE to OWNER for approval and shall comply with such demobilization plan as approved by OWNER.

5.2. WEEKLY COORDINATION MEETINGS – CONSTRUCTION PHASE

- 5.2.1. A weekly written report showing actual activities completed versus planned, and scheduled progress versus actual progress. In addition to giving details of WORKS completed in relation to the approved schedule, a one week “look ahead” showing details of how the WORKS will be accomplished in the coming period. Report shall

also identify remaining WORKS and estimated hours required to complete such WORKS;

- 5.2.2. CONTRACTOR shall attend a weekly safety coordination meeting together with various contractors at the WORK SITE;
- 5.2.3. The person or persons designated by CONTRACTOR to attend the meetings shall have all the required authority to make decisions and commit CONTRACTOR to solutions agreed upon during any coordination meetings;
- 5.2.4. Starting from construction phase CONTRACTOR'S designated Project Manager as well as Project Engineer shall present on SITE on constant basis.

5.3. OTHER MEETINGS

CONTRACTOR participation in certain other activities will be required – they will be coordinated on demand. These activities will include, but not be limited to:

- Project coordination and design review meetings;
- Weekly tool-box safety meetings (during construction phase at site) organized and conducted by CONTRACTOR and attended by all of CONTRACTOR's craft employees. CONTRACTOR shall be responsible for arranging and conducting these meetings with its craft employees.

6. DATA REQUIREMENTS

6.1 OWNER's Data

- 6.1.1 OWNER will issue one copy of OWNER drawings and other technical data for CONTRACTOR's use. For all other OWNER - supplied documentation, OWNER will provide only one copy of such documentation to CONTRACTOR;

6.2 CONTRACTOR's Data. CONTRACTOR shall submit the following data to OWNER as part of the Scope of WORKS:

- 6.2.1 Two (1) copies of Detail Design version "ISSUE FOR CONSTRUCTION" for all disciplines (print + memory stick (hereinafter stick));
- 6.2.2 Two (1) final copies of Detail Design version "AS BUILD" after execution of the WORKS (print + stick);
NOTE: After completion of the design works as per contract requirements, the CONTRACTOR shall submit design documents, signed and approved, to OWNER's Project Manager (1 original hard copies and 1 soft copy on a print + stick – drawings in *.pdf, *.dwg, *.doc, *.xls and other original formats); In case of any modifications made to the design during construction (reconstruction, installation), documents must be revised and marked-up. After construction all drawings (with modification or without) marked 'AS BUILD' and signed must be issued by CONTRACTOR and handed over to the OWNER.
- 6.2.3 Two (2) final copies of all quality control turnover packages (print + stick);
- 6.2.4 Two (2) final copies of all test reports and test certificates (print + stick);
- 6.2.5 Two (2) final copies of mill certificates for all supplied materials (e.g. rebar, plate steel, nozzles and the like) (print + stick);
- 6.2.6 Two (2) final copies of all piping NDE tests (print + stick);
- 6.2.7 Two (2) final copies of all welding folders (print + stick);
- 6.2.8 Two (2) final copies of all welding X-ray reports (print + stick);

- 6.2.9 Two (2) final copies of all stress relieving reports (print + stick);
- 6.2.10 Two (2) final copies of all pressure testing documentation (print + stick);
- 6.2.11 Welding procedures for OWNER's approval, submitted fifteen (15) working days prior to commencing welding. Alternatively, CONTRACTOR may submit its pre-approved welding procedures for project record purposes to OWNER prior to commencing welding;
- 6.2.12 Quality Control Program for review and approval prior to commencement of WORKS;
- 6.2.13 All necessary QA/QC turnover documentation as WORKS or portion thereof is completed;
- 6.2.14 At completion of WORKS, a complete report of all tests and all reports required by standards and specifications (print + stick);
- 6.2.15 All lifting and rigging procedures for review and approval prior to lifting or erecting equipment;
- 6.2.16 Any and all other data requirements to comply with Lithuanian regulatory agencies, inspections and etc.;
- 6.2.17 CONTRACTOR shall submit all engineering data, (herein called "data") to OWNER and OWNER designated representatives for review. OWNER shall return data submitted by CONTRACTOR within five (5) working days from transmittal date. No data shall be issued without a transmittal signed by CONTRACTOR or its representative. Data may be issued under one of six (6) separate designations.
 - i. Preliminary
 - ii. Issued for information
 - iii. Issued for Permit Application
 - iv. Issued for approval
 - v. Issued for construction
 - vi. As-built
- 6.2.18 Revisions made to previously issued drawings (either preliminary or issued for approval) shall be identified using alpha (a, b, c) designations. When revising existing drawings the next sequence revision number for that drawing shall be used no matter what the drawing is revised for. Revisions made to "Issued for Construction" will be identified using numeric (0, 1, 2) designations starting with zero (0). Revised areas of submitted drawings and / or text documents are to be clearly identified by clouding (underlining in text documents) with the revision designation shown within a small triangle in that area;
- 6.2.19 CONTRACTOR shall furnish to OWNER reproducible drawings revised by CONTRACTOR to show "as built" information. CONTRACTOR's revisions will show details of those locations where the WORKS performed by CONTRACTOR was at variance with the details shown on the drawings (either furnished by OWNER, or furnished by CONTRACTOR and reviewed by OWNER). CONTRACTOR's submittal to OWNER of such "as built" drawings shall be made on a continuous basis as the WORKS proceeds but in all cases prior to the date of Notice of Acceptance;
- 6.2.20 OWNER reserves the right to review certified material test reports for all materials of construction at any time during field erection. CONTRACTOR shall maintain

these documents readily available for such review and shall submit all documents to OWNER upon completion of the WORKS;

- 6.2.21 CONTRACTOR shall maintain at the WORK SITE up-to-date copies of all drawings, specifications, and other documents and supplementary data, complete with latest revisions thereto. In addition, CONTRACTOR shall maintain a continuous record of all field changes on the “as built” drawings and other engineering data and shall submit the required number of copies thereof to OWNER;

7. CLEANUP, SAFETY, WORK RULES AND REGULATIONS

7.1 CLEAN-UP

- 7.1.1 CONTRACTOR shall at all times keep its work area in a neat, clean and safe condition and remove from the OWNER's premises and the vicinity thereof and properly dispose of all debris and rubbish caused by CONTRACTOR's operations. Upon completion of the WORKS, CONTRACTOR shall promptly return unused materials furnished by OWNER and remove from OWNER's premise all of CONTRACTOR's equipment, material, scaffolding and like items, leaving OWNER's premises and the vicinity clean, reinstated, safe and ready for use;
- 7.1.2 In the event CONTRACTOR shall fail to maintain its WORKS area as described above and in a manner satisfactory to OWNER, or to effect such clean-up or removal immediately after receipt of written notice to do so, OWNER shall have the right without further notice to CONTRACTOR to perform such clean-up and remove such items on behalf of, at the risk of and at the expense of CONTRACTOR. OWNER may store items removed at a place of its choosing on behalf of CONTRACTOR and at CONTRACTOR's risk and expense. OWNER will promptly notify CONTRACTOR of such place of storage. CONTRACTOR shall promptly reimburse OWNER for the costs of such clean-up, removal and storage.

7.2. SAFETY

- 7.2.1 Safety is of prime importance. All contractors and sub-contractors working on the Project shall have in effect a Safety Plan and shall designate a Safety Representative. CONTRACTOR will not receive additional compensation for compliance with safety rules and regulations;
- 7.2.2 CONTRACTOR's Safety Representative shall be responsible for implementing the CONTRACTOR's Safety Plan as reviewed by OWNER's Safety, Health and Environmental (SHE) Manager. CONTRACTOR's Safety Representative shall ensure that WORKS SITE safety requirements and procedures are being adhered to, conduct safety inspections of work being performed, conduct weekly safety meetings with craft employees and submit a weekly report to OWNER documenting safety activities. The Safety Representative shall also be responsible for a continuing survey of CONTRACTOR's operations, to ensure that the probable causes of injury or accident are controlled and corrected and that operating equipment, tools and facilities are used, inspected and maintained as required by applicable safety and health regulations;
- 7.2.3 Technical Product Data Sheets or Material Safety Data Sheets which include health, environmental and safety data or alternatively separate product safety data sheets as issued by the applicable Manufacturer for each product, are to be in the possession of CONTRACTOR and to be kept available at all times during the execution of the WORKS at the WORKS SITE;

- 7.2.4 SHE Managers, their designated representatives and OWNER shall have the right to stop WORKS whenever safety violations are observed which could jeopardize the well-being of personnel and equipment. The expense of any such WORKS stoppage and resultant standby time shall be to CONTRACTOR's account. The failure or refusal of CONTRACTOR to correct the observed violation may result in the termination of the Contract, and / or the dismissal from the WORKS SITE of those responsible for such failure or refusal;
- 7.2.5 CONTRACTOR shall provide to OWNER's SHE Manager a copy of all reports made to government agencies or insurance companies relating to any WORK SITE accident or injury during CONTRACTOR's performance of the WORKS;

7.3. WORK RULES AND REGULATIONS

- 7.3.1 CONTRACTOR shall comply with all WORKS rules and regulations set forth in *Requirements for Contractors Performing Maintenance-Installation of Process Units at Public Company ORLEN Lietuva*. The attachment provided on the website <http://www.orlenlietuva.lt/EN/ForBusiness/DocumentsForContractors/Pages/default.aspx>;
Prior to work commencement, CONTRACTOR shall develop its Waste Management Plan and get it approved by Project Manager, head of the (sub)division / department / unit where the works are to be performed, and Environmental Department. CONTRACTOR shall clean the work site at the end of each shift, sort the waste generated during the works and remove it to the location indicated by OWNER. In doing this, it shall observe Public Company ORLEN Lietuva Rules on Waste Management.

7.4. HAZARDOUS SUBSTANCES

CONTRACTOR shall comply with applicable hazardous substance disclosure requirements set forth in ORLEN Lietuva website <http://www.orlenlietuva.lt/EN/ForBusiness/DocumentsForContractors/Pages/default.aspx>;

8. QUALITY PROGRAM REQUIREMENTS

8.1. CONTRACTOR'S QUALITY PLAN

CONTRACTOR shall be responsible for the performance of all activities affecting quality including those of its Subcontractors and Vendors. CONTRACTOR's Quality Plan and Inspection and Test Procedures shall be submitted for review and authorization to proceed within forty five (45) days of CONTRACT EFFECTIVE DATE, but not later than fourteen (14) days prior to placement of each main sub-order. The Plan shall specify the controls and documentation procedures that will be employed to assure and document that the CONTRACT requirements are being achieved. Minimum requirements for the quality control effort shall be:

- 8.1.1 The performance of all procedures, checks, inspections, tests, reviews, certifications and other requirements called for in the scope of WORKS, including Specifications, Drawings, Attachments, pertinent codes and other CONTRACT Documents;
- 8.1.2 The preparation of documentation that provides objective evidence of compliance to requirements and the actual performance, in a timely manner, of tests, reviews, certifications, checks, inspections and other verification activities. CONTRACTOR's standard forms may be used in lieu of the documentation forms provided, if agreed by OWNER.

8.2. DRAWING AND SPECIFICATION CONTROL

CONTRACTOR shall establish a system for the control of design and construction drawings, installation instructions, specifications and other documents used to perform the WORKS. CONTRACTOR shall assign responsibility to guarantee current drawings and documents and changes thereto are available to user(s) and that obsolete documents are retrieved and controlled.

8.3. INSPECTION AND TEST STATUS CONTROL

CONTRACTOR shall establish and maintain a system to identify inspection and test status to ensure all inspections, tests and other requirements are accomplished.

8.4. DOCUMENTS & RECORD CONTROL

CONTRACTOR shall provide and maintain a Document Control System for records of quality control actions of both CONTRACTOR and its subcontractors and vendors. Ensure timely publication and retrieval of all quality records including, but not limited to:

- 8.4.1 Evidence of inspection to assure adherence to applicable drawings, specifications and changes thereto;
- 8.4.2 Test data records of all tests performed. Test data records shall be traceable to acceptably tested material;
- 8.4.3 Non-conformance and corrective action records;
- 8.4.4 Material testing and equipment calibration records and logs;
- 8.4.5 Maintain quality control records ready for OWNER's inspection;
- 8.4.6 Submit originals of all quality inspection and test documentation as WORKS progresses;
- 8.4.7 All construction quality related activities and procedures.

9. CONSTRUCTION

CONTRACTOR shall provide, institute, and / or implement the following:

9.1. SECURITY PROGRAM

CONTRACTOR shall be responsible for the security of its workers, tools, materials and equipment on (and in transit to and from) the WORKS site. All small tools and construction equipment belonging to CONTRACTOR shall be clearly identified as such. Tools including personal tools are subject to inspection at the security gate on arrival and departure;

9.2. JOINT OCCUPANCY

The roads to the WORKS SITE on the refinery will be used jointly by OWNER and other contractors;

9.3. CONSTRUCTION AREA LIMITS

OWNER will designate the boundary limits of access roads, parking areas, storage areas, and construction areas. CONTRACTOR shall not trespass in or on areas not so designated. CONTRACTOR shall be responsible for keeping all of its personnel out of areas not designated for CONTRACTOR's use. In the case of isolated WORKS located within such areas, OWNER will issue permits to specific CONTRACTOR's personnel to enter and perform the WORKS;

9.4. TEMPORARY PLANT ROADS WITHIN CONTRACTOR'S AREA

The construction area will be constructed and maintained by CONTRACTOR. All roads constructed by CONTRACTOR shall be adequate for applied traffic loads and

to prevent damage to underground facilities. All temporary roads are to be removed prior to completion, unless OWNER directs them to be retained;

9.5. RESTRICTED ROADS ADJACENT TO CONTRACTOR'S AREA

Roads other than those mentioned above are restricted for reasons of safety. CONTRACTOR shall not be permitted access or use of these roads. Restricted roads will be defined when construction arrangements are finalized;

9.6. FENCE

CONTRACTOR shall install temporary fence 15 meters from the operating zone around CONTRACTOR's construction area;

9.7. CONTRACTOR'S OFFICE AT SITE OF WORK

During the performance of this CONTRACT, CONTRACTOR shall maintain a suitable office at or near the site of the WORKS which shall be the headquarters of a representative authorized to receive drawings, instructions, or other communication or articles. Any communication given to the said representative, or delivered at CONTRACTOR's office at the site of the WORKS in his absence, shall be deemed to have been delivered to CONTRACTOR;

9.8. CONTRACTOR'S TEMPORARY BUILDINGS

All temporary construction buildings provided by CONTRACTOR shall be fire retardant. The location size(s), quantity and types(s) of temporary buildings shall be subject to OWNER's review and approval;

9.9. CLEAN UP

CONTRACTOR shall at all times keep its WORKS area and plant roads in a neat, clean, open and safe condition and remove from the OWNER's premises and the vicinity thereof and properly dispose of all debris and rubbish caused by CONTRACTOR's operations;

9.10. RADIOS ON SITE

9.10.1 Hand held radios sufficient for communications and emergency response may be permitted. Approval for use of radio shall be obtained through OWNER;

9.10.2 CONTRACTOR shall obtain any necessary licenses to operate radios on the WORK SITE. Any such radios shall operate on frequencies authorized by OWNER;

9.11. PERSONNEL IDENTIFICATION

OWNER will provide ID badges to all CONTRACTOR's employees working either directly or indirectly under its supervision. Badges must be worn conspicuously by these employees at all times;

9.12. NO SMOKING

No smoking will be allowed in the work area(s) or outside of the designated smoking areas;

9.13. PERSONNEL CLOTHING AND EQUIPMENT

CONTRACTOR's personnel must wear hard hats clearly marked with employee name, and Company logo. CONTRACTOR shall equip its employees with safety boots, safety glasses and all other safety equipment as required under Lithuanian law and / or by OWNER and such clothing including long sleeved shirts, coveralls, long pants, etc.;

9.14. DUST CONTROL

CONTRACTOR shall, for the duration of the Contract, maintain all excavation, embankments, haul roads, plant sites, waste disposal areas, borrow areas, and all other WORKS areas free from dust, as determined by OWNER. Industry-accepted methods of dust control suitable for the area involved, such as sprinkling, chemical treatment, light bituminous treatment or similar methods, will be permitted. No separate payment will be made for dust control;

9.15. WATER POLLUTION

CONTRACTOR shall, at its expense, provide suitable facilities to prevent the introduction of any substances or materials into any sewer, stream, lake or other body of water which may pollute the water or constitute substances or materials deleterious to fish and wildlife;

9.16. AIR POLLUTION

CONTRACTOR shall so perform the WORKS as not to discharge into the atmosphere from any source whatsoever smoke, dust, or other air contaminants in violation of the laws, rules and regulations of the governmental entities having jurisdiction;

9.17. VENTILATION

- 9.17.1 CONTRACTOR shall prevent hazardous accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction;
- 9.17.2 CONTRACTOR shall provide local ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas;
- 9.17.3 CONTRACTOR shall dispose of materials in a manner that will not result in harmful exposure to persons or disrupt or otherwise effect operation of existing facilities;
- 9.17.4 CONTRACTOR shall ventilate storage spaces containing hazardous, volatile or high temperature sensitive materials;

9.18. SITE SIGNS

Identification signboards and notices for safety or instruction are permitted on site only after approval of OWNER for format, location and quantity;

9.19. DRAINAGE

CONTRACTOR shall provide proper and adequate drainage for its construction, storage, parking and fabrication areas including the necessary piping for disposal to OWNER ditches, or sewers. Temporary drainage facilities shall be removed upon completion of WORKS unless OWNER directs to have the facilities left in place. CONTRACTOR shall be responsible for providing and operating any temporary pumps for keeping its area drained. CONTRACTOR shall furnish and place any necessary surfacing material to avoid loss of time due to muddy conditions;

9.20. LUNCH FACILITIES

CONTRACTOR shall provide any necessary lunch facilities for their forces;

9.21. REMOVAL OF EQUIPMENT MATERIALS FROM WORK SITE

All equipment, materials, supplies and tools leaving the premises are to be accompanied by a gate pass issued by OWNER;

9.22. REVIEW BY OWNER

Review and approval by OWNER of CONTRACTOR's rigging, scaffolding and other construction plans shall not constitute, or be construed as, an assumption of

TECHNICAL ANNEX No1 – SCOPE OF WORKS

CONTRACTOR's responsibility or liability for scaffolding or safety under the Contract or at law and does not relieve CONTRACTOR from full compliance with its legal and contractual obligations.