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TENDER BOOK

Equipment and services acquisitions for the HCl gas synthesis plant

integrated part of

Project "THE ESTABLISHMENT OF A NEW POLYEPOXIDE PRODUCTION UNIT IN CHIMCOMPLEX SA COMPANY "

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1. GENERAL CONSIDERATIONS

This tender book contains the minimum requirements that a company must meet specialty for to provide:

- ✓ Technology know-how transfer through the development of basic and detailed engineering;
- ✓ all equipments related to the HCl gas synthesis plant;
- ✓ technical assistance.

The tender book contains technical specifications that must be taken into account by the tenderer when make the technical offer. These define, as appropriate and without limitation to the following, characteristics relating to the qualitative, technical and performance level, operational safety, dimensions, as well as quality assurance systems, terminology, symbols, tests and test methods, the conditions for certifying compliance with relevant standards.

The technical and functional characteristics presented below for the products and services that are the subject of the procurement are mandatory and minimal, they can be offered at a higher level (with the punctual highlighting of all these deviations). If all the minimum requirements imposed cannot be met, the offer will be declared non-compliant. Alternative offers are not allowed.

The contract subject to the contracting procedure includes the engineering services, equipment and assistance for the commissioning of the HCl gassynthesis plant.

The bidder is responsible for preparing the basic engineering, detailed engineering for all specialties (except civil works), manufacturing and purchasing all equipments that makes up the production unit.

The bidder will submit with the offer all the technical details it takes into account for carrying out the design, ensuring technical assistance for the implementation of the project.

The bidder will submit the Gantt chart for the requested services and will strictly comply with it.

If one or more bidders submit bids only for certain units, and one or more bidders submit bids for all units, priority will be given in awarding the contract to the bidder/bidders who have submitted a compliant bid for all units, thus ensuring the performance of the whole process.

In the event of a conflict or inconsistency between the terms of this tender book and the specifications provided by the bidder, the specifications of this specification shall prevail, unless both parties agree to the modification.

Regardless of the information obtained by the bidders themselves during the preparation of the bid, only the information presented in:

a. tender book;

b. the Beneficiary's response to a request for clarification during the preparation of the offers,

will be used for the offer preparation, thus ensuring that the offers received can be compared by the evaluation committee during the evaluation process.

The Bidder has overall responsibility for the correct delivery of all deliverables described in these tender book.

By submitting its offer, the bidder agrees that it has understood and considers the requirements of these tender book sufficient, so that its proposal meets the requirements of the Beneficiary.

If no compliant offer provides all the requested activities (i.e. all the requirements of Chapter 1 and Chapter 3), the Beneficiary may decide to cancel the procedure.

2. TENDER BOOK OBJECTIVES

The following activities will be the responsibility of the Bidder:

2.1. Provision of engineering services (basic and detailed engineering)

Te bidder will have in view inclusion in the technical and commercial offer the following activities:

- Gantt chart of the requested activities;
- Basic and detailed engineering;
- Preparation of technical specifications for equipments purchase and DDE projects for equipment manufacturing;
- Preparation of detailed and design engineering for all specialties: technology, equipment and pipeline assembly, electrical equipment assembly, automation equipment assembly, Ex zoning documentation in accordance with relevant EU norms;
- loads/tasks necessary to carry out DDE for civil construction works, metal structures, pipe racks;
- Preparation of the installation operation and maintenance manual;
- Preparation of analytical documentation presenting the interphase and final control of the product (analysis methods, necessary equipment)
- As-built documentation after successful completion of the performance test.
- Performance guarantees of the project, equipment and installation offered.

The bidder will perform the basic engineering and detailed engineering in accordance with the provisions of the good engineering practices and technical standards in force in Romania and the EU.

The Bidder shall also be responsible for any discrepancies, errors or omissions in the specifications, drawings and other technical documents it prepares.

Deliverable list:

Head.	Document
A	**Technical and design documentation for the project implementation**
A1	**Basic engineering documentation**

A1.1	Main document
A1.1.1	List of main documents
A1.1.2	Work execution chart/Gantt chart
A1.1.3	Monthly progress report
A1.2.	Design basis
A1.2.1	Project overview
A1.2.2	Fluid index
A1.3	Defining the technological process
A1.3.1	Description and definition of the technological process
A1.3.2	Process Flow Diagram and Utilities (PFD)
A1.3.3	Material balance
A1.3.4	Heat balance
A1.3.5	Philosophy of technological process control
A1.4	Utilities, raw materials, chemicals, additives, catalysts
A1.4.1	Specific consumption and specifications of raw materials, utilities, chemicals, additives and catalysts
A1.4.2	Battery Limit Conditions / Interface and Connection Possibilities
A1.5	Technological equipment
A1.5.1	List of technological equipment
A1.5.2	Equipment data sheets
A1.5.3	DDE drawings of equipment
A1.6	Health and environment
A1.6.1	Hazardous chemicals/MSDS (material safety data sheets)
A1.6.2	Effluents resulting from installations
A1.6.3	Description of the main safety systems
A1.6.4	Hazardous area plan/ATEX zoning (if applicable)
A1.7	Process control
A1.7.1	Process Cause and Effect Diagram (PC&E)
A1.7.2	Functional Design Specifications and Logic Diagrams (FDS)
A1.7.3	Description of the process control and safety control system
A1.7.4	Process inputs/outputs in DCS
A1.8	Plant and pipeline design
A1.8.1	Master plan of the unit
A1.8.2	Philosophy of construction and commissioning
A1.8.3	Equipment Arrangement Plan/Equipment Task
A1.8.4	Master equipment arrangement plan
A1.8.5	Pipeline list
A1.8.6	Pipeline Design Guide
A1.8.7	Pipe specification classes
A1.8.8	Valve specifications
A1.8.9	Data sheet of special pipe fittings and special valves
A1.8.10	Safety valves, rupture discs data sheet
A1.8.11	Specifications (Insulation, painting, etc.)
A1.9	Electrical and instrumentation
A1.9.1	Presentation of the list of electricity consumers
A1.9.2	Instrumentation Design Guide/Instrumentation Principle
A1.9.3	Instrumentation index table
A1.9.4	Process instrumentation data sheets
A1.9.5	Specifications for critical and special instrumentation
A1.9.6	Data sheets for control valves and ON/OFF valves

A1.9.8	Electrical diagram
A1.10	Pipelines and instrumentation
A1.10.1	Piping and Instrumentation Diagram (P&ID)
A2	**Documentation for detailed engineering**
A2.1	Main document
A2.1.1	List of main documents
A2.1.2	Monthly progress report
A2.2	Process engineering
A2.2.1	Detailed P&ID diagrams
A2.2.2	Detailed equipment list
A2.2.3	Equipment data sheets
A2.2.4	Data sheets of valves, safety valves, etc.
A2.2.5	Detailed pipeline plan
A2.3	Mechanical engineering
A2.3.1	3-D layout of the plant
A2.3.2	Foundation layout and loading plan
A2.3.3	Structural steelwork concept – drawings, including preliminary static calculations
A2.3.4	Pipe drawings (isometric drawings with bill of materials)
A2.3.5	Interface program (definition of interfaces for utilities and the work environment)
A2.3.6	Stress calculation for pipes
A2.3.7	Detailed plan of the metal structure
A2.3.8	BOM for insulation and painting material
A2.4	Electrical Engineering
A2.4.1	Cable sizing and calculation
A2.4.2	Circuit diagrams
A2.4.3	Cable plan
A2.4.4	Local control panel (PLC) layout
A2.4.5	Detailed summary of electrical charge
A2.4.6	Typical electrical equipment for motors, circuit diagrams and junction boxes
A2.4.7	Lighting concept
A2.4.8	Electrical infrastructure (socket distributor)
A2.5	Instrumentation engineering
A2.5.1	Instrumentation list with I/O data
A2.5.2	Instrumentation connections
A2.5.3	Instrumentation Specifications
A2.5.4	General plan of instrumentation positioning
A2.5.5	Positioning of junction boxes
A2.5.6	Assignment field devices - junction boxes
A2.6	Process Control and Safety Systems Engineering
A2.6.1	Description of the process control system (SDS)
A2.6.2	Local control system specifications
A2.6.3	Operating system specification
A2.6.4	Cause and Effect Diagrams
A3	**Documentation for installation, operation, maintenance**
A3.1	Equipment assembly instructions Equipment documentation according to PED requirements as appropriate and equipment documentation according to the requirements of the legislation in force in the EU

	Operating manuals at the installation level provided and usage and maintenance instructions at the level of each equipment delivered.
A3.2	Construction philosophy
A3.3	Test program: pre-commissioning and commissioning
A3.4	List of operational spare parts during the warranty period of each equipment and installation

The scope of these works is not limited to the activities specified above, but will also include any other activities necessary to carry out the works described in these requirements and to put the installation into operation.

2.2. Manufacturing and delivery of the HCl gas synthesis plant

The supplier is responsible for the manufacture, acquisition and supply of the HCl gas synthesis plant (technological equipment, pipelines, manual and ON/OFF valves, instrumentation and control equipment, PLC, all equipment necessary for its uniform operation), so as to ensure the production capacity, parameters and product quality presented in chapter 3.

The supplier will be responsible for the correct configuration of the HCl gas synthesis unit.

The HCl gas synthesis unit is considered delivered when all activities under the contract have been carried out and the equipment installed, under the coordination of the supplier through on-site technical assistance so that the facility operates at the parameters guaranteed by the Supplier and the performance test is accepted by the Beneficiary.

The HCl gas synthesis unit is delivered quantitatively and qualitatively to the location indicated by the Beneficiary, at CHIMCOMPLEX SA Borzesti, Onesti, BACAU county, 3 Industriilor Street.

This unit will consist in the subassemblies/components necessary for commissioning and function in good conditions

The packaging in which the delivery is made must be resistant, without limitation, to any accidental handling, exposure to extreme temperatures during transport and storage in open places.

Transportation is the sole responsibility of the Supplier in compliance with INCOTERMS 2022.

The Supplier is responsible for delivering the products within the agreed period and it is considered that all difficulties that may be encountered in this regard have been taken into account and will not invoke any reason for delay or additional costs.

2.3. Technical assistance

The Supplier's responsibility includes the following technical support activities:

- Technical assistance in the installation of the supplied equipment;

- Participates in tests and trials for commissioning, normal and stable operation of the facility, performance test;
- Develop and participate in the Training Program for the production unit's operating personnel;
- Develops solutions for defect repairs during the warranty period.

3. TECHNICAL DESCRIPTION OF THE INVESTMENT OBJECTIVE

3.1. Project context and objectives

CHIMCOMPLEX S.A BORZEȘTI obtained as BENEFICIARY, the financing agreement no. 40 of 04.12.2024 based on H.G. no. 300/2024 within the framework of the "State aid scheme with the objective of regional development by stimulating the investments realization" for the implementation of the project "THE ESTABLISHMENT OF A NEW POLYEPOXIDE PRODUCTION UNIT IN CHIMCOMPLEX SA COMPANY "**.** All items will be purchased in accordance with the provisions **of the approved Payment Guide of the state aid based on HG no. 300/2024.**

Equipment and services acquisitions for the HCl gas synthesis plant is part of the project **"** "THE ESTABLISHMENT OF A NEW POLYEPOXIDE PRODUCTION UNIT IN CHIMCOMPLEX SA COMPANY ".

3.2. Investment location

The investment location is located outside the perimeter of protection of historical and architectural-urban values. The space intended for the future investment is owned by Chimcomplex SA Borzești according to Annex no.1.

Site Information:

- Site altitude: 208.5 m (above sea level);
- Climatic data:
  - barometric pressure: approx. 1013 mbar (760 mmHg);
  - environmental temperature (min/max): -29.6°C (winter)/+39.8°C (summer);
  - average annual temperature: + 8°C to + 9°C;
  - relative humidity: min 60% / max 90%;
  - multiannual average precipitation: 50.9 l/m^2;
  - snow load: 2.5 KN/m^2;
  - wind: pressure = 0.5 KPa (at 10 m height above the ground), speed = 35 m/s (at 10 heights above the ground), predominant direction NNW;
- Seismic data:

- peak horizontal ground acceleration (a): 0.28g;
- corner period (Tc): 0.7 sec;
- average recurrence interval: 100 years;
- MSK/Mercalli scale: grade VIII;

a) Relations with neighboring areas, existing access roads and/or possible access roads

CHIMCOMPLEX S.A Borzesti is located about 8 km southeast of the Oneşti town, in the southern sector of the Tazlău-Caşin depression. The company is located on the Borzeşti Industrial Platform, in its eastern part, with the following objectives nearby:

North-West: Termoelectrica - Borzeşti Electrocentrale Branch CET 1

South-East: agricultural land, Ştefan cel Mare village

East: Trotuş river, about 800 - 1000 m

North – East: agricultural land Gura – Văii village

b) pollution sources existing in the area;

Manufacturing facilities are in operation on the site producing chlorosodium, inorganic chlorides and alkylamines, regulated by integrated environmental authorization. The installation is IPPC and complies with the legal provisions applicable at the European level. Technologies used are BAT.

c) the existence of some:

- building networks in the location that would require relocation/protection, to the extent that they can be identified;

There are no networks that would require relocation/protection.

- possible interference with historical/architectural monuments or archaeological sites on the site or in the immediately adjacent area; the existence of specific conditions in the case of the existence of protected or protection areas;

It's not necessary.

The project will be carried out on the industrial platform, on a land belonging to Chimcomplex SA Borzesti, being outside the areas with historical monuments/architecture and at a distance from protected natural areas.

- lands belonging to institutions that are part of the defense system, public order and national security;

It is not necessary.

d. geophysical characteristics of the land intended for the location of the unit

It will be carried out before construction work begins for the entire project.

3.3. Technical description of the HCl gas synthesis plant

Design data of the 100% gas hydrochloric acid production unit

Design data	Technical parameters
HCl gas production plant capacity	25,500 t/year HCl 100%
Operating time	8300 hours/year
Flexibility unit	50-100% of nominal capacity

The designed unit must produce 25,500 t/year (operating time 8300 h/year) of 100% hydrochloric acid gas at a pressure of ≥ 2.5 barg and a temperature of min.20 ^{0}C and maximun 140 ^{0} C according to the technical specification:

Parameter	U.M	Value*
HCl	% by volume	>94.6
H_2	% by volume	<5
Water content	% by volume	<2.5
Cl_2	ppm	<5
CO2	% by volume	< 0.39
N_2	% by volume	< 0.1
Organic content	ppm	<2
Pressure	bar(g)	≥ 2.5 (absolute minimum)
Temperature	^{0}°C	Min. 20 – max. 140

Note:* the values are recommended by the licensor of the epichlorohydrin technology

Hydrochloric acid gas is obtained by burning hydrogen and chlorine gases. The hydrogen and chlorine gases are fed into a burner and react exothermically to form HCl gas. The hydrogen flow rate must be maintained in a constant excess over the stoichiometric equilibrium (automatic control of the Cl2/H2 ratio).

The designed unit must at least consist of:

- HCl gas synthesis unit;
- the absorption part of HCl gas in demineralized water, thus resulting in a 33% HCl solution (in case of a failure in the epichlorohydrin production stream) which can be stored.
- Absorption of hydrochloric acid, chlorine gases in a scrubbing system. The purpose of this scrubbing system is to neutralize the remaining unreacted gases and to meet the emission limits for both HCl and Cl_2 in the exhaust gas according to the legislation in force.

- An emergency tank capable of taking the acid in the event of a rupture of the safety valve/disc. The liquid from the synthesis unit is safely collected in this tank and the waste gases are redirected to neutralization.

The contractor will be responsible for the correct configuration and operation of the HCl gas synthesis unit.

3.3.1. Raw material used in the installation will be in accordance with the technical specification:

Chlorine gas

Component	U.M	value
Cl_2	% v/v	Min. 96
O_2	% v/v	0.7
H_2	% v/v	0.2
CO_2	% v/v	0.8
H_2O	Ppm w/w	12.5

Temperature: ambient

Pressure: 3 bar

Hydrogen gas

Component	MU	value
H_2	% v/v	Min. 99.3
N_2	% v/v	0.08
O_2	% v/v	0.2
H_2O	% v/v	0.6

Temperature: ambient

Pressure: 3 bar

3.3.2 Available utilities and which will be used within the installation:

- **cooling water** :

temperature (flow/return): flow:17°C(winter) and 28°C (summer);

return: -20°C (winter) and 33°C (summer);

pressure: tour 2.5 - 4.5 bar g;

return: free fall

Parameter	**MU**	**VALUE**
Chloride content	mg/l	180-300
Chlorine content	mg/l	0.1-0.5
Content in suspensions	mg/l	Max.25
Total hardness ($CaCO_3$)	mg/l	190
pH	pH unit	7-8.9

- **Instrumental air:**
  - pressure: 4-5.5 bar(g);
  - temperature: Ambiente
  - without oil: Yes;
  - dust-free: yes;
  - dew point: -30°C
- **Electricity:**
  - supply with 6.3 KVAC (if necessary);
  - 380VAC power supply +/- 15% /50Hz/3 phases;
  - 220VAC power supply +/- 15% /50Hz/1 phase;

Chimcomplex SA Borzești can provide other necessary materials (demineralized water, NaOH 32%, NaOH 50%) at the battery limit.

- **NaOH solution 50%**

Parameter	MU	Value
appearance	-	Clear, colorless
NaOH content	%	min.48%
NaCl content	mg/kg	max. 170
Chlorate content ($NaClO_3$)	mg/kg	exceeding 50
Fe content	mg/kg	max.5
Ni content	mg/kg	max 1

- **Demineralized water**

Parameter	MU	Value
appearance	-	Clear colorless liquid
Conductivity	µS/cm	Max.5
SiO_2 content	ppm	max. 0.05
pH	pH unit	7 ± 1.5
Fe content	ppm	max.0.2
Total hardness (as CaO)	mg/l	max.0.1
Pressure	bar	6
Temperature	^{0}°C	>18 ^{0}C

If other utilities are required, they will be defined by the designer, being included in the scope of the technology provider.

3.3.3. Process control system of the technological process

The bidder will provide all the necessary data for process control in the distributed control system, interlock logic, control loops, process control philosophy, cause-effect diagram, interlock diagram.

The control and monitoring of all process parameters will be done implicitly from the Local Control Panel, through the operating panel (e.g. Touch panel, 12" minimum). This will be the LOCAL operating mode, in which the HCl synthesis unit will be started each time.

For operation, monitoring and control from the customer's DCS, the supplier of the HCl synthesis unit will need to provide the following in the Local Control Panel:

1. A serial communication card, for example RS-485 / Modbus RTU or ProfibusDP protocol, or another equivalent technical solution, for transmitting all analog quantities of flow, temperature, pressure, level, concentration, discrete alarm values, interlocks and control signal values to the control valves. There may be other parameters of interest indicated by the technology supplier.
2. A number of 4-20mA analog inputs equal to the number of control loops provided by the supplier of the HCl synthesis unit. A cable with the required number of pairs will be connected to these inputs and Remote Setpoint values will be transmitted from the DCS to each control loop.
3. A Discrete Input to which a potential-free contact output from the DCS will be connected, indicating the operating mode of the control loops.
   - Contact Closed = Remote Mode, for all control loops, the software program in the LCP will not take into account setpoint adjustments from the Touch panel, only from the DCS.
   - Contact Open = Local Mode, the HCl synthesis unit can only be operated locally, from the PLC
4. The corresponding software program changes will be provided from the beginning in the (PLC) Local Control Panel. At the same time, for safety reasons, the software program in the PLC must also meet the following requirements:
   - not to accept the switch to Remote mode unless all PID loops are in AUTO operating mode and to send the value of a discrete parameter on the digital communication, such as: 0 = all PID loops are in AUTO, ready to switch to Remote mode, 1 = cannot operate in Remote, at least one PID is not in AUTO (of course, this type of alarm will also be configured in DCS)
   - when switching from Remote to Local mode, all PID loops should make the setpoint change without jumps, for example they should have an SP-PV tracking function (of course the same algorithm will also be programmed in the DCS, for switching from Local to Remote)
   - modification of certain operating parameters from the Touch panel (such as PID tuning parameters, PID working mode) should be possible only by password, the supplier of the HCl synthesis unit may establish other operating rules, according to its own standards and experience; parameter modifications should be recorded in a log.

All cables between all technology and instrumentation supplier cabinets are the responsibility of the supplier. All cables between the customer's DCS and PLC are the responsibility of the Beneficiary.

Commissioning is considered complete only after testing the "Remote" mode of operation of the HCl unit from the DCS.

All field devices shall be electronic, powered and grounded by the system to which they are connected. Analog measurements are preferred and shall use 4 - 20 mA signals with a nominal 24 V dc power supply.

All field-mounted instruments must be certified, suitable for use, according to European standards (ATEX: 2014/34/EU, depending on the zoning of the facility).

3.3.4. Environmental aspects

Wastewater discharged from the HCl gas plant will be treated in compliance with *Implementing Decision (EU) No. 902/2016 establishing best available techniques (BAT) conclusions for joint waste water and waste gas treatment/management systems in the chemical sector, pursuant to Directive 2010/75/EU of the European Parliament and of the Council.*

Emissions to air generated from the installation will comply with the provisions *of Commission Implementing Decision (EU) No. 2427/2022 establishing best available techniques (BAT) conclusions, under Directive 2010/75/EU of the European Parliament and of the Council on industrial emissions, for joint waste gas management and treatment systems in the chemical sector.*

For waste of any type resulting from the technological process (in liquid or solid form), the tenderer will have to provide as much as possible integrated solutions for their recycling, reuse, treatment and management within the baterry limit, and if this is not possible to indicate potential solutions for the management of these wastes outside the baterry limit before their disposal in authorized landfills.

4. Implementation of the contract objective

4.1 General requirements

The objective of this procedure is the transfer of know-how (through the development of basic engineering and detailed engineering), the manufacturing and procurement of equipments of the HCl gas unit, and the provision of technical assistance services, as detailed in CHAPTERS 2, 3, and 4 from this tender book.

The bidder shall attach to the technical offer a contract execution schedule, including the activities and sub-activities of the objectives.

The deadline for the commissioning of the unit is 01.11.2027, as imposed by the HG 300 financing program.

To meet this deadline, the Supplier is required to comply with the following intermediate deadlines:

- No more than 3 months from the contract signing date for the delivery of documents related to basic engineering.
- No more than 6 months from the contract signing date for the delivery of documents related to detailed engineering.
- 01.07.2027 as the final deadline for the delivery of equipment on-site.

The execution schedule shall be updated and submitted periodically, on a monthly basis, along with a descriptive report on the progress status.

4.2 Reception stages

The reception of services and products shall be carried out in compliance with the applicable regulations in force, as follows:

a) Reception of engineering services shall be performed based on a handover report signed by both parties: the Supplier and the Beneficiary. Upon completion of the deliverables related to engineering services, the Supplier is required to submit the technical documentation at the Supplier's premises in three hard copies and in electronic format (via email, in both an editable format and PDF).

The Beneficiary shall issue an approval response or a request for additions/clarifications within a maximum of 15 days from the submission of the documentation by the Supplier.

The Supplier shall complete the necessary additions or modifications within a maximum of 15 days, in order to obtain the Beneficiary's positive approval. Based on this approval, the Beneficiary shall sign the Reception Report for the Documentation.

b) Reception of Equipment Deliveries and Commissioning shall be carried out in accordance with the reception procedures established by Government Decision (HG) No. 273/1994 regarding construction works and related installations, upon completion of execution, and by Government Decision (HG) No. 51/1996 regarding assembly works and the commissioning of the investment objective.

The performance test to demonstrate the guaranteed parameters of the new installation shall be conducted over a period of 72 hours after commissioning and stable operation of the new installation for a minimum of 2 weeks.

The final reception shall take place at the end of the warranty period for the equipment and works, in accordance with the provisions set out in section 4.3 of this specification document.

4.3. Technical and Performance Guarantees

Technical Guarantee

The Bidder commits to providing a technical guarantee for the installation covered by the contract for a minimum period of 24 months, starting from the commissioning date.

During the technical guarantee period, the Supplier shall provide the necessary spare parts for the correction of manufacturing defects belonging to the manufacturer and shall act to remedy these defects through the respective manufacturer. The costs of these spare parts, as well as the repair services, shall be borne by the Supplier.

If any of the delivered equipment is found to be defective, unsatisfactory, or later discovered to have a manufacturing or material defect, or if it fails to function properly during commissioning tests, it shall be replaced by the Supplier with a compliant unit at no additional cost, within a reasonable period to be specified in the contract.

The Bidder shall include in the technical offer a declaration regarding the warranty period.

During the product warranty period, the Bidder, once becoming the Supplier, is required to remedy any defects found in operation within a maximum period of 15 calendar days from the notification by the Beneficiary.

The correction of all defects shall be carried out entirely at the Supplier's expense and in full compliance with all Beneficiary requirements. Failure to comply or improper remediation entitles the Beneficiary to carry out the repairs at its own expense and deduct the costs from the Performance Guarantee.

Performance Guarantees

The Bidder must demonstrate the guaranteed parameters (plant capacity, specific consumption, and final product quality) of the new unit through a performance test conducted over a period of 72 hours, following the commissioning and stable operation of the unit for a period of two weeks.

Thus, the HCl gas production unit is subject to a specific performance test to demonstrate compliance with the performance guarantees stipulated in the contract. As a result, the warranty period shall commence only once the guaranteed performance parameters have been effectively achieved.

The performance test program, which will include, but is not limited to, parameters and quality of raw materials, utilities, and final products, shall be established by mutual agreement and will be attached as an annex to the contract.

4.4. Delivered Technical Documentation

The awarded Bidder shall deliver the following documents:

- Execution schedule for the contracted activity.
- Basic and detailed engineering, in accordance with the list of deliverables specified in Chapter 2.1.
- Technical assistance, structured into the necessary project phases:
    - Technical assistance for the installation of the synthesis unit.

- Participation in tests and trials for commissioning, normal operation, and stable functioning of the plant, including the performance test.
- Development and participation in the Training Program for the production unit's operating personnel.
- Development of solutions for defect remediation during the warranty period.

All deliverable documents must comply with the requirements specified in Chapters 2 - 4 and the applicable standards, including SR EN ISO, current EU laws and technical regulations, as well as EU ATEX and environmental directives.

➢ As-built Documentation

The As-built documentation (reflecting the actual execution) shall include, but is not limited to:

- General assembly and detailed drawings of the metal structure supporting the equipment.
- Detailed drawings related to the installation of equipment, cables, and pipelines, based on measurements reflecting the actual execution, including the installation of electrical and automation equipment.
- Electrical and operational diagrams, as required.
- Cable lists and diagrams.

All drawings shall be provided on a memory stick or digital link, in DWG (AutoCAD) format and PDF format, and shall be delivered to the Beneficiary.

The As-built documentation shall be submitted within three months from the successful completion of the performance test.

➢ Warranty period declaration.

The list of documents is not exhaustive, and the Supplier is required to prepare all necessary documentation in compliance with the provisions of applicable technical and legislative regulations, in order to implement the project within the deadlines specified in the Execution Schedule and to successfully complete the contract.

The language of all documentation will be English and/or Romanian. Documents will be submitted electronically, and the final approved documents will also be submitted in printed format in 3 copies.

All projects, materials, and works shall be based on the national and European standards applicable at the date of contract signing.

At the start of the design phase, the Supplier will propose a document numbering/identification system for the components of the technical design documentation, allowing traceability from the date of the first edition/revision submitted until the date of the last edition/revision.

The proposed system will enable the management of approval phases and the tracking of the status for each document component and any package/documentation submitted by the Supplier.

The last edition/revision date will be the date of the As-built documentation submission (reflecting actual execution) after implementing any observations from the Beneficiary. This edition/revision will be included in the Technical Book of the Installation and will be labeled as FINAL.

In case the documents are not approved by the Beneficiary, a copy will be returned to the Supplier along with a list of objections and marked with the required changes. Upon final approval, a copy will be marked with the inscription "APPROVED" and returned to the Supplier.

4.5. Delivery of the HCl gas synthesis unit

The Supplier must ensure the manufacturing and delivery of all equipments (technological equipment, pipes, valves, instrumentation and control devices, PLCs) in order to ensure the production capacity and product quality outlined in Chapter 3.

The delivered equipment will be new and not prototypes. The Supplier will provide a list of references for similar projects that have been completed and are operational, using the equipment proposed for the offered installation.

The pre-assembly of equipment in the Supplier's workshop should be maximized as much as possible, in order to minimize the installation work on-site required for the equipment setup. In cases where pre-assembly of components is not possible, the design of the components should be such that easy installation on-site is ensured.

The Supplier will assemble/pre-assemble the products before delivery to the site and perform any other necessary configuration to ensure the proper functioning of the products.

The materials must be suitable for their intended purpose, in full compliance with material codes and specifications. All materials must be new and meet the performance criteria requested by the process, considering the local climate conditions in the area.

The HCl gas production unit will be considered delivered when all activities in the contract have been carried out, and the equipment has been installed under the Supplier's coordination, with technical assistance on-site to ensure the installation operates within the performance parameters guaranteed by the Supplier, and the performance test has been accepted by the Beneficiary.

All equipment will be delivered with a quantity of spare parts and consumables, defined by the Supplier as necessary and sufficient to ensure proper functioning during the warranty period, and accepted by the Beneficiary, in accordance with the manufacturer's recommendations.

For each piece of equipment, the Supplier will provide the necessary spare parts and catalogs containing all specific spare parts. During the commissioning period, all spare parts proposed by the

Supplier in the Offer will be verified based on the catalog and the recommended maintenance schedule. Any discrepancies in meeting this requirement will be corrected by the Supplier.

All spare parts delivered will be new and strictly interchangeable with the parts they are intended to replace, and will be appropriately packaged for long-term storage, considering the climatic conditions of transport and the site location. Each spare part will be properly marked or labeled on the outside of the packaging, indicating its name and purpose. When multiple spare parts are packaged in a single box or container, a general contents list will be attached to the exterior, along with a detailed list.

4.6 Testing of the plant for commissioning

Throughout the entire duration of the tests required for commissioning, the Supplier will be fully responsible for maintaining, repairing, and addressing any defects of the equipment. The Supplier must ensure the provision of all necessary specialized labor, supervision, equipment, materials, and tools for these operations.

The Supplier must provide all necessary tools, measuring instruments, and qualified personnel for performing the tests, and the cost for these should be included in the offered prices.

If any part of the equipment or process does not meet the guaranteed performance or does not function correctly, the Contractor must modify or replace them, at their own expense, within a reasonable time frame, ensuring that the equipment meets the guaranteed performance for acceptance by the Beneficiary.

Two copies of all verifications, test certificates, and registered documents must be provided to the Beneficiary after each verification or test.

Factory Acceptance Tests (FAT) for Equipment

After their manufacturing, the equipment will be tested at the manufacturer's premises in accordance with the applicable standards.

The Supplier must notify the Beneficiary in writing at least 30 days in advance about the date, location, and duration of the FAT tests. The Beneficiary will then decide whether to attend the tests. The responsibility for the FAT tests lies entirely with the equipment manufacturer.

All costs associated with performing the mandatory FAT tests will be borne by the Supplier. The costs for the Beneficiary's representatives to attend the tests will not be included in the offer.

The Supplier must provide the Beneficiary with two copies of the FAT test reports, along with conformity declarations and equipment warranty certificates that confirm the equipment meets the applicable standards.

Startup Tests

Given that the HCl Gas Synthesis Plant is part of the polyepoxy unit, its commissioning will take place during the same period as the commissioning of the entire polyepoxy production unit.

The Supplier will carry out the pre-commissioning tests before the startup of the plant, based on the programs prepared by the Supplier and approved by the Beneficiary.

Pre-startup tests will be executed once all components and functions (constructive, mechanical, electrical, and control) are fully installed.

Defects will be remedied in such a way as to allow the startup, stable, and continuous operation of the plant and to achieve the performance test.

Tests will be performed in accordance with the provisions of the relevant national standards and regulations in force or, in their absence, according to relevant international standards.

Upon startup, the Supplier must demonstrate that:

- The equipment operates properly, ensuring the plant meets the performance guarantees.
- The plant operates as a cohesive unit.
- The plant operates safely under all operating conditions.
- The plant operates within the designed and guaranteed parameters as specified in the winning offer.

4.7 Staff Training

The training of the Beneficiary's staff for managing, operating, and maintaining the equipment comprising the HCl Gas Synthesis Plant will be included in the offer.

The objective of the training is to provide the Beneficiary's personnel, the necessary technological knowledge for the operation and maintenance of all equipment, installations, and systems included in the project to ensures a proper and stable operation and maintenance of the project components.

The training provided by the Supplier will cover:

- Correct operation and understanding of the system as a whole, control systems, and the applied technology;
- Operating the plant to function within the designed parameters and under safe conditions;
- Quality control;
- Periodic and long-term maintenance of the equipment;
- Applicable safety procedures.

Before starting the training, the following documents will be submitted to the Beneficiary for approval:

- Proposed training program;
- Proposed training materials.

4.8 Preventive Maintenance

Preventive maintenance refers to all the works indicated by the bidder/equipment manufacturer for the periodic maintenance of each equipment, depending on the operational lifespan, in order to ensure operation at the performance parameters guaranteed in the offer.

The supplier will provide the instructions for preventive maintenance on a monthly and annual basis. The supplier/manufacturer will provide the maintenance instructions for the annual, two-year, five-year, and ten-year revisions during the installation's operational lifespan, outlining the frequency, operations performed, parts to be replaced preventively, consumables, labor times, etc.

For delivered equipment that requires specialized predictive/planned maintenance activities that the Beneficiary cannot carry out within its routine maintenance (for which they will be trained), the bidder will provide in the technical proposal the list of suppliers, equipment manufacturer or their authorized representative, quantities, costs, estimated delivery and/or supply times.

5. Submission of the Offer

5.1. Delivery of Offers

The offer can be submitted in English or Romanian, electronically and in printed form, in a sealed envelope to the Chimcomplex S.A. Borzești registry, Str. Industriilor no. 3, Onești Bacău, attention: Anamaria Mardaru –Chief Engineering Office.

On the envelopewill be mentioned:

1. The name and address of the bidder
2. Project name: THE ESTABLISHMENT OF A NEW POLYEPOXIDE PRODUCTION UNIT IN CHIMCOMPLEX S.A COMPANY.
3. DO NOT OPEN UNTIL **24.03.2025, 13:00.**

The deadline for submitting the offer is **24.03.2025, 12:00**.

All offers will be opened on **24.03.2025, 13:00.**

The paper offer will be accompanied by a memory stick that will include the entire offer in pdf format.

The envelope will contain 3 distinct envelopes:

- The envelope with the qualification documents of the company according to chapter 5.2
- The envelope with the technical offer and the proposed schedule;
- The envelope with the commercial offer that will include the total and detailed price per component according to chapter 2.

The tenderer can visit the site within a maximum of 10 calendar days from from the date of receiving the invitation and the announcement on the Chimcomplex S.A. Borzești website.

The tenderer can send requests for clarifications no later than 4 calendar days before the deadline for submitting the offer. The beneficiary will respond to requests for clarifications received from tenderer in maximum 3 calendar day from received the requests for clarifications.

Offer will be signed by the REPRESENTATIVE legal of the tenderer.

Offer must arrive before or on the date of deadline.

The offer for which it finds non-compliance with the provisions describe above will be rejected.

5.2 Demonstration of the tenderer technical capability

The bidder will present a reference list of similar projects completed in the last 10 years, showing the completion of at least 2 similar projects. The reference list will include the following information: project title, beneficiary, annual capacity of the installation, project value, project start and completion years, the current status of the project (under construction, operational), contact person from the beneficiary side, and the role of the bidder in the project.

The bidder guarantees the quality of design and the equipment supplied in accordance with national and international engineering best practices and technical standards in force in Romania and the European Union, from both a technical and environmental regulation perspective, and in compliance with BAT (Best Available Technologies).

The bidder must take into account that, after the award, the contract concluded between the parties will require the provision of a bank guarantee letter for proper execution of 10% of the contract value excluding VAT or an insurance instrument for the contract's proper execution guarantee, with a validity of at least 25 months (covering 30 days beyond the minimum 24-month warranty period). The warranty period will be extended for the duration of defect remediation identified during the minimum 24-month warranty period.

Minimum eliminatory requirements (mandatory to be demonstrated by each tenderer):

- The financial exercises for the years 2021-2023 must be positive.
- Completing the statement on avoiding conflict of interest - Annex 2

The maximum value of the offer according to the requirements of chapter 2 - 4 will not exceed 4.200.000 EURO (excluding VAT).

The offer that does not comply the minimum requirement will be rejected. If all the offers received do not comply with the requirement regarding the maximum value of the offer, the procedure will be cancelled.

5.3 Technical Offer

The bidder must submit the technical offer in Romanian or English, signed on each page by the authorized representative, in one original copy and a memory stick and/or digital link that will contain the offer in pdf format. The digital link will have a secure password. The secure password wil be send in sealed envelope.

The validity period of the offer must be at least 60 days. The technical offer must include:

- The proposed technical solution considering the described project and the requirements in the specifications.
- The proposed timeline.
- The list of technological equipment.
- The list of services and tests.
- The technological flow diagram.
- The preliminary plan of the proposed installation.

5.4 Financial Offer

The financial offer must include:

- The total and detailed price for the offered components, expressed in EURO or LEI, in accordance with the requirements described in Chapter 2.
- The price for technical assistance, detailed as follows:
    - Technical assistance for the installation of the unit
    - Participation in tests and trials for commissioning, normal and stable operation of the installation, performance tests.
    - Preparation and participation in the training program for the operation staff of the production unit.
    - Preparation of solutions for defect remediation during the warranty period.

The technical assistance will be quoted in terms of the number of specialists, number of days per specialist, and the total price, detailed as mentioned above, for the stages listed. The technical assistance will be paid separately, based on the activity report on a daily basis, and at the end of the completion period.

- Proposed payment methods:

Full 100% advance payments are not accepted. Any advance payment, up to a maximum of 30%, will be made based on a Bank Guarantee Letter for the return of the advance, valid for 30 days after the equipment is delivered to the site.

The advance will not include the value of technical assistance, which will be paid subsequently based on the services performed and the daily activity report and report at the conclusion of each technical assistance type.

The duration for completing the basic and detailed engineering shall not exceed 6 months from the date of signing and entering into force of the contract – the date the Bank Guarantee Letter for the return of the advance is received.

The performance bond for the project is 10% of the proposed contract value, excluding the value of technical assistance.

6. Document Analysis

The tenderer has the obligation to analyze all received documents and elaborated documents (clarifications).

The tenderer must have in the possession or to get the access to the international and local standards, norms, regulations.

The tenderer will immediately inform the beneficiary of any existing contradiction, ambiguity and/or omission in the tender book.

The tenderer will assume the risk in the event non-compliance with the requirements of this specification.

Beneficiary it has the right to request in writing, clarifications of the offer, after receiving offers, in during the process of offers assessment.

The beneficiary will not be held liable for the costs or expenses incurred by the tenderer regarding the execution of the bid, the analysis of the contract, whether the offer is awarded or not.

The beneficiary will not be made responsible and in the consequence tenderer will not claim compensations if the beneficiary awards the contract according to the award criteria of chapter 10, cancels this procedure before the deadline or decides not to award the execution of the project any of the tenderers.

7. The questions of tenderer

All questions/clarifications from tenderer, inclusive the contradictions found in the tender book will be transmit on beneficiary email (contact addresses: catalina.ionescu@chimcomplex.com ; anamaria.mardaru@chimcomplex.com) .

The text of the questions and answers will be distributed as an auxiliary document of the offer.

The tenderer can send requests for clarifications only later than 4 days before the deadline for submitting the offer.

The beneficiary will respond to requests for clarifications received from tenderer in maximum 3

calendaristic days after receiving the request for clarifications.

8. Site visit

In the period of development of the offers, it is recommending that the tenderer to make a visit in the site to know the magnitude and nature of the project, its location and access, the conditions under which it will be executed the works and other aspects that can influence the offer. The beneficiary will not consider any complaints based on insufficient knowledge of the aspects described above. The tenderer can visit the site within a maximum of 10 calendar days from the date of publishing and sending the invitation to participate in the selection procedure.

9. Confidentiality of the documents

The tenderer will consider as confidential, permanently, the documents received, as well as their content. These documents can be used by the tenderer only for the purpose of drawing up the offer for the works and will not be transmitted to third parties unless this becomes necessary in order to draw up the offer. The third-party consultants for this purpose will be informed by the tenderer regarding the confidentiality of the documents related to the bid request and will be obliged to respect the confidentiality of the content of these documents.

The tenderer will not make any public statement regarding the documents related to the bid request without the written approval of the Beneficiary.

10. Contract award criteria

Will be applied the criterion of the most efficient offer from a economical and technical point of view/ the best quality-price ratio.

Evaluation factors		Weight
1	Financial offer	60%
2	Technical offer	40%
TOTAL		100

Details regarding the application of the calculation formula for the total score:

P=(60% xF)+(40%xT) points

where:

P- total score

F- score obtained as a result of the evaluation of the financial offer

T-score obtained as a result of the evaluation of the technical offer

F	**SCORE THE FINANCIAL OFFER**	**Max. 100 points**
F1	The price compared for the allocation of points is the total price, in EURO or LEI, excluding VAT. The maximum score of 90 points is awarded to the offer with the lowest price, Fmin (the score for the minimum price). For an offer with a price (n) different from the minimum price, the allocated score will be determined as follows: Fn = [(minimum offer price / price of offer (n))] * 90	90
F2	The maximum score of 10 points is awarded to the tenderer who requests the smallest advanced payment. For the offer with advance(n), other than the minimum, the assigned score will be determined as follows: Fn=minimum offer advance/offer advance(n)*10	10
F = F1+ F2		
T	**SCORE TECHNICAL OFFER are made taking in consideration:**	**Max. 100 points**
T1	Maximum points are awarded to the offer that includes the proposed technical solution considering the project described in the tender book	15
T2	Technical warranty of the unit 40 points are awarded for the offer that presents a warranty of at least 24 months for the unit after commissioning and performance testing. For the offer that presents a warranty shorter than the minimum specified intender book, the score will be calculated as follows: Tn = [warranty in months / 24 months] * 40	45
T3	Specific consumptions of raw materials, utilities The offer will lower specific consumptions will receive 30 points For the offer with specific consumption (n), other than the minimum, the assigned score will be determined as follows: Tn=[(minimum consumption / consumption offer price(n)]*30 To evaluate the specific consumption, the following will be taken into account: Cl2 consumption/t HCl gas; H2 consumption/t HCl gas and cooling water consumption/t HCl gas	30
T4	Similar projects 10 points will be awarded to the bidder who presents the highest number of similar projects.	10

	For the offer with n number of similar projects, the assigned score will be determined as follows: Tn= [number of the project of the offer (n)/higher number of the project received from the offer]*10	
T= T1+T2+T3+T4		

11. Annexes provided

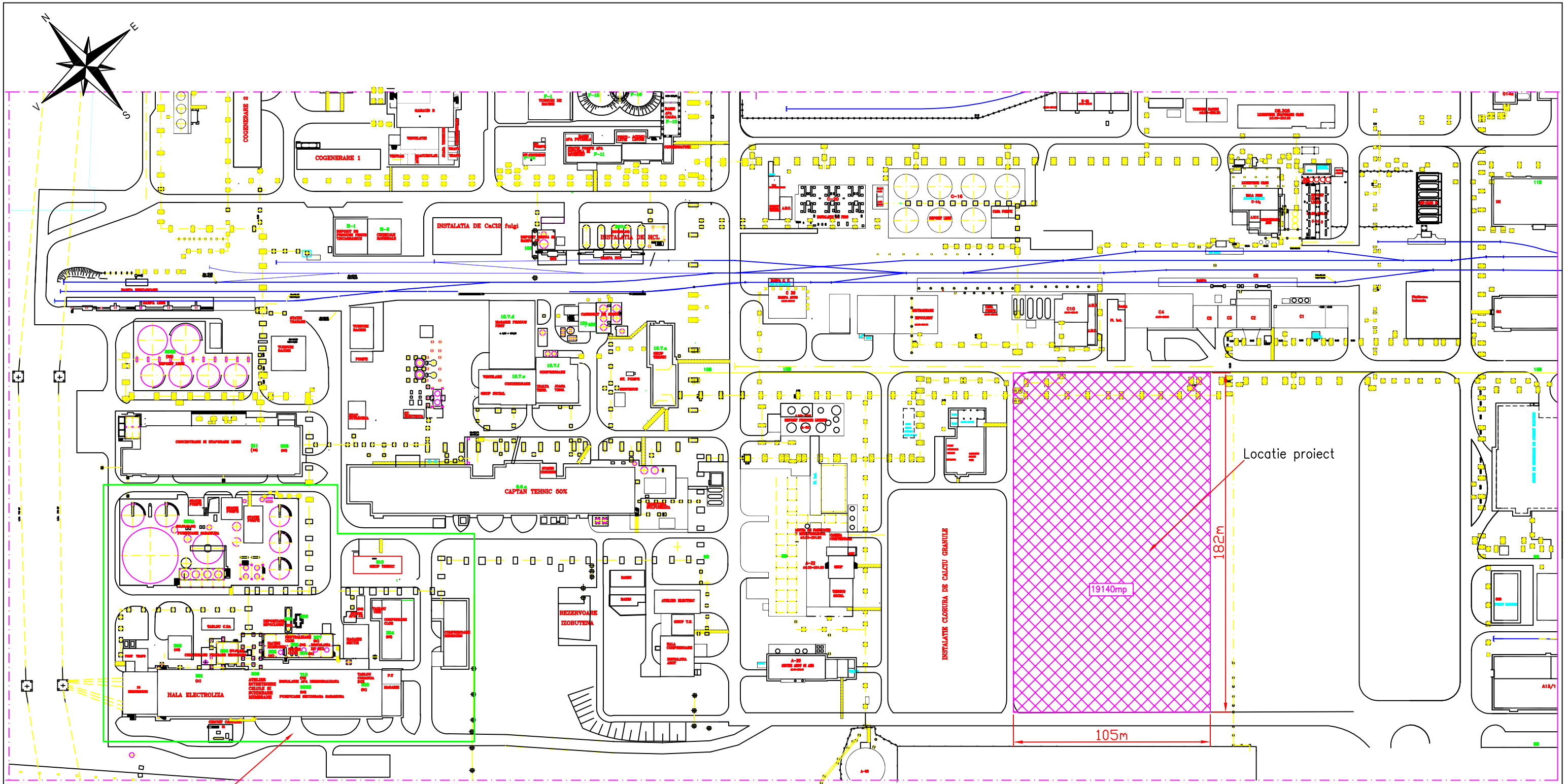
Annex 1. Location plan for HCl gas synthesis unit

Annex 2. Statement on avoiding conflicts of interest

Elaborated by:

Chief of Investments Dept.
eng. Maria Ilie

Project Manager
eng. Anamaria Mardaru



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			Data: 12.08.2024	

CHIMCOMPLEX S.A. BORZEȘTI
Str. Industriilor, nr.3, Loc. Onești, Jud. Bacău, România
Tel.: 0234-302250, Fax:0234/302102
E-mail: office@chimcomplex.com
Web: www.chimcomplex.com

Annex 2

Economic Operator
.....
(name, tax registration code, address)

STATEMENT
On avoiding conflict of interest

I, the undersigned ……., as the legal representative of ....., with the registered office located at ……, registered at the Trade Registry under no. ……, Tax Identification Code (CUI) ……, fiscal attribute ……, according to the certificate attached to the offer, regarding the procurement procedure _____, organized by the beneficiary _____, financed through _____ under the project _____, hereby declare, on my own responsibility, under the sanction of false declarations as stipulated in Article 326 of Law No. 286/2009 on the Criminal Code and Article 18¹ of Law No. 78/2000 on the prevention, detection, and sanctioning of corruption offenses, with subsequent amendments and completions, the following:

- I undertake that during the implementation period and the sustainability period associated with the contract/decision/order/financing agreement for the above-mentioned project, I will not hire individuals who are spouses, relatives, or in-laws up to and including the second degree, nor will I contract legal entities that were involved in the verification/evaluation process of the financing applications within the selection procedure and/or in the process of monitoring/verifying/approving/payment/ reimbursement related to the contract/decision/order/financing agreement for the above-mentioned project. In this regard, I commit to requesting a declaration on their own responsibility from each individual I intend to hire and to verifying the list of legal entities that were involved in the verification/evaluation process of the financing applications within the selection procedure and/or in the process of monitoring/verifying/approving/payment/reimbursement related to the contract/ decision/order/financing agreement for the above-mentioned project.
- I commit to taking all necessary measures to avoid situations that could lead to a conflict of interest and confirm that neither as of the date of this statement nor within the 12 calendar months prior to this date do I know of any situations in which:

- there are/were any spouse relationships, family ties, or in-laws up to and including the second degree between the shareholders/administrators of the organization acting as the beneficiary and the shareholders/administrators of the economic operators acting as the bidder/ subcontractor/associate/third-party supporter,
- there are/were any spouse relationships, family ties, or in-laws up to and including the second degree between members of various committees or other responsible persons of the private beneficiary and the bidders/subcontractors/associates/third-party supporters,
- there are/were situations in which, at the level of the bidder/subcontractors/associates/third-party supporters or their administrators, there are natural or legal persons, autonomous or related, who individually or jointly

hold more than 25% of the shares or social parts in two or more economic operators that have submitted separate bids in the current procurement procedure as bidders/subcontractors/associates/third-party supporters,

- there are/were situations in which the private beneficiary and one of the bidders/subcontractors/associates/third-party supporters have common beneficial owners, including spouses or beneficial owners with family ties or in-laws up to and including the second degree,
- gifts have been given/received or other forms of hospitality have been offered/accepted that exceed what would be considered customary/modest and, as a result, could be deemed an incentive.

I, the undersigned ....., declare that I will immediately notify the beneficiary if any changes occur in this statement and will take measures to resolve the conflict of interest as soon as possible.

I also declare that the information provided is complete and correct in every detail, and I understand that the beneficiary and public authorities have the right to request any additional information for the purpose of verifying and confirming this statement.
I understand that, if this declaration is not accurate, I may be liable for violating the provisions of the criminal legislation regarding false statements.

Date of completion:
.....
(name and position of the authorized person)
.....
(signature of the authorized person)
.....