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**Bid Form 7A**

**Method Statement**

1. **General**
   1. The present Method Statement is based on the FEED data, provided by the Customer.
   2. The geographic coordinates of the construction site are as follows: 69/09/51N//35/08/26E
   3. Pursuant to the Russian Construction and Design Codes, the Method Statement shall build on the detailed design documentation. Since the present Method Statement is developed on the basis of FEED, it shall be regarded as preliminary and indicative.
2. **Site environment**
   1. The site relief is smooth: 25m above the sea level.
   2. Pursuant to SNiP 2.01.07-85\*.23-01-99\* the site climate data is as follows: the coldest day temperature is -26оС, the coldest 5-day temperature is -24 оС, relative humidity is 79%.
   3. Pursuant to Construction Code OSR-97 SNiP P-7-81\*, the area seismicity is 6 points.
   4. The site component soils are specified in the FEED package and will be updated by the site geological and engineering survey.
   5. The ground water level, nature and degree of the water aggressiveness shall be determined by the site geological and engineering survey.
3. **Proposed structures, materials, articles** 
   1. The buildings shall rest on pile foundations.
   2. The foundations:
4. for steel columns of the framework shall be solid-cast, columnar, made of reinforced concrete;
5. for outer walls shall include the following options (Customer’s choice):

* solid-cast, reinforced concrete foundation beams;
* precast reinforced concrete foundation beams, series 1.015.1-1.95 resting on the framework foundation.

1. for inner walls and partitions shall be made of solid-cast reinforced concrete foundation beams, resting on the framework foundation.
2. for equipment shall be made of solid-cast concrete and reinforced concrete.
   1. The framework columns shall be made of rolled I-type and H-type structural steel sections, pursuant to classification STO ASChM 20-93.
   2. The roof and floor beams shall be made of rolled steel beam profiles and wide-flanged structural steel sections, pursuant to classification STO ASChM 20-93.
   3. Vertical and horizontal bracing and strutting for the framework columns and beams shall be made of rolled steel and tubular sections.
   4. Covering shall include shaped steel decking, grade N75-750-0,9 pursuant to GOST 24045-94, resting on rolled steel sections, or roof sandwich panels, made by «Electroshchit» LLC, «Thermoland» LLC, etc.
   5. The flooring options shall include:

* Solid-cast reinforced concrete slabs 6,0m long, resting on steel framework beams 150-200mm thick (depending on the load), cast against prefabricated steel forms;
* Solid-cast reinforced concrete slabs 100-120mm thick, cast in permanent forms, made of secondary beams and shaped decking (a quick but expensive option);
* Shaped steel decking or metal plates over steel joists.
  1. Crane beams shall be made of steel, series 1.426.2.-7.
  2. Stairs shall be made of:
* built-up reinforced concrete steps over steel strings, pursuant to GOST 8717.1-84 with additional embedded items;
* solid-cast reinforced concrete flights of steps;

The outer wall cladding shall be made of hinged steel three-layer sandwich panels with fire resistant insulation and chemically resistant coating.

* 1. Work and maintenance platforms shall be made of rolled steel sections and checker plates.
  2. Ducts and sumps shall be made of solid-cast concrete and reinforced concrete.
  3. The wall between the pavilion part of the building and the longitudinal addition to the building shall be made of light concrete blocks with the volume weight of 600-800kg/m2.
  4. Partitions are made of gas-concrete blocks in a steel framed structure with reinforced horizontal joints; in some areas gypsum board partitions in a metal frame are acceptable.
  5. Breast beams shall be made of:
* solid-cast reinforced concrete;
* rolled steel sections.
  1. Materials for concrete and reinforced concrete structures shall include:
* high strength, waterproof and frost resistant concrete;
* principal reinforcement, made of ribbed steel bars, classes АI, AII, АШ.
  1. Roofing shall be flat with internal water drains.
  2. The roof insulation shall be made of rigid mineral-cotton fire boards.
  3. The roof waterproofing shall include two layers of heat-fused bitumen-polymer water- proofing materials.
  4. Windows shall be made of steel (aluminum) panels with a chemically resistant coating of window frames and double panes, or window units with a chemically resistant coating and triple-pane glass.
  5. Doors shall include wooden doors, pursuant to GOST 14624-69, steel fire-proof doors, as well as special doors.
  6. Gates shall include insulated hinged gates with sandwich panels and non-insulated shaped steel gates for transformer substations.

**4. Finishing materials**

* 1. Chemically resistant coating shall be provided for wall sandwich panels, steel gates, door and window units, structural steelwork.
  2. Color scheme of the building facades shall comply with the project solutions.
  3. Flooring shall include epoxy-based poured floors, ceramic tiles, acid-resistant tiles, ground concrete tiles, linoleum and laminated floors.

1. **Special activities**

* 1. Fire resistance of the structural steelwork, required by the relevant regulations, can be ensured by coatings of special fireproof materials, plaster on metal lath, tiling, brickwork, etc.
  2. Equipment and materials shall be delivered by rail to the railway station of Murmansk or by truck transport with the load-carrying capacity limitation to 30 tons. Shipment by sea is an option.