



*Etelä-Karjalan
Jätehuolto Oy*

12.06.2018

**ETELÄ-KARJALAN JÄTEHUOLTO OY DRY DIGESTION FACILITY
AND BIOGAS UPGRADING AND FILLING STATION DESIGN AND
TURN KEY CONTRACT**

CONTRACTING PROGRAMME

12.6.2018



CONSTRUCTION CONTRACT CONTACT INFORMATION

Purchaser/Client

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1 CONSTRUCTION SUBJECT

1.1 Construction subject

Contract name: "Dry Digestion Facility And Biogas Upgrading And Filling Station Design And Turn Key Contract".

1.2 Familiarization of the construction site

The contractor warrants to have inspected and familiarized himself with the construction subject and the area around it.

2 CONTRACT FORM

2.1 Scope of work

The contract is fulfilled as a total price, so-called full liability contract (Turnkey contract) against the agreed fixed contract price. The contractor shall calculate prices based on own designs, the purchaser shall not conduct any calculations. From legal point of view; the contractor is the project supervisor and principal designer.

2.2 Basis of payment

The contract is concluded as a total price contract. The total price includes all design and construction work including procurement and commissioning of materials and equipment.



The contractor shall conduct needed measurements to verify the supplied quantity of work and material.

2.3 Contractual relations

The contractor may use subcontractors that are approved by the purchaser. The contractor shall establish contractual limits for subcontractors and is liable for any work performed by subcontractors. All subcontractors shall be approved by the purchaser, before starting work. A statement shall provide information on the scope of subcontracted deliveries.

The purchaser has the right to approve or justifiably reject the contractor's proposed subcontractors.

Subcontractors may use their own subcontractors. A longer chain of contract is not possible without specific reasons and requires the client's permission. The contractor shall maintain a full subcontractors list, including information about contractual relations and the client's approvals.

3 CONTRACT AND SCOPE

3.1 Main contract

In addition to the construction site's management obligations, the turnkey contract includes all works to provide full readiness; according to this contracting programme and other documents annexed to the contract.

The contractor will be the main contractor with project supervisor's obligations. The contractor is responsible for the construction site management and construction site services regarding the contractor's own contract, subcontractors, and the purchaser's procurements.

The contractor is responsible for the processing plants implementation plan and implementation within the scope specified in the contract (including the annexes thereof). The contract also includes the plant testing, process start-up, and a testing trial as specified in the contract (including the annexes thereof).

Specific content of the contract is specified in the basis of design document.

3.2 Options

The contract does not include options.

3.3 Purchaser's obligations, separate procurements and separate contracts

The contractor acts as the contract's project supervisor (main contractor) and is responsible for construction related notifications to the tax authorities in Finland.



Etelä-Karjalan Jätehuolto Oy as the purchaser, is responsible for notifications about contract information (contract amounts and purchase invoices). Amendment to the Act on Tax Assessment Procedure (363/2013).

Purchaser's procurements are:

- Transformer station in the proximity of the contract area.
- Supply the wastes, water, chemicals and electricity for test runs and guarantee tests.

The purchaser shall not procure or finance any other material, services or work, except for the above. Without limiting the generality of the foregoing, the seed sludge, needed for starting the digestion process, shall be procured by the contractor.

4 WORK IMPLEMENTATION AND COLLABORATION

4.1 Collaboration guidelines

The project language is Finnish. Finnish is used for meetings, documentation, training etc.

The main contractor is responsible for organising collaboration between different contractors work and work stages to the specifications provided in the contract (including the annexes thereof). Work organisation and work stage timings must consider the waste management centre and composting facilities that are operating normally during the time of project implementation and the occupational safety requirements. The main contractor shall deliver a construction site plan for the purchaser's approval within two (2) weeks after the contract is signed.

The construction site plan shall include the following:

- Construction time for civil works
- Construction time for mechanical and electrical installations
- Construction site maintenance
- Construction time roads, movement at the construction area

The purchaser is responsible communicating with the media of matters related to this project. The contractor is responsible for any notifications required for own procedures and shall collaborate with the purchaser in issuing these notifications.

Before starting work, the contractor shall provide plans concerning occupational safety at the construction site, as specified in § 10 of government decree 205/2009 and plans concerning the use of the construction site area as specified in § 11 and obtain the purchaser's approval.

4.2 Work schedule

Within two (2) weeks of signing the contract and before starting work, the contractor shall compile and agree with the purchaser a work schedule as specified in § 5 of YSE 1998 (General conditions



for building contracts used in Finland). Work schedule completion is followed in site and project meetings.

4.3 Construction site arrangements

The purchaser shall, without charge, provide the construction area to be used by the contractor and specifies a location, where the contractor shall reserve space for construction site facilities, storage and work areas.

The contractor shall, without separate compensation, arrange necessary temporary traffic arrangements in the area; including protective equipment. The contractor is also responsible for maintenance and cleanliness of the construction site from the moment work starts until the contract's object is delivered to the purchaser.

The contractor shall ensure that the contract works will not interfere with or disturb other use of the area outside the construction site or traffic connections thereto. Additionally, the contractor is responsible for maintaining and cleaning the area outside the construction site, if this requires maintenance or cleaning due to the construction works.

The contractor is liable for any damages caused by the contractor's traffic arrangements and other work. Should the contractor neglect his traffic arrangement and maintenance obligations, the purchaser may perform these or have them done at the contractor's expense.

The contractor shall organise all necessary lighting, first aid equipment, and firefighting equipment.

The contractor shall procure and erect all necessary traffic and guidance signs.

The contractor shall fence the construction site in use and mark the area with signs. The contractor shall ensure that unauthorised persons are not allowed to access the contractor's construction site at any time.

4.4 Water, sewage, electricity, data, and heating during construction period.

The purchaser points the locations for water, sewage and electricity. Contractor is charged from consumables against the costs of purchaser. Data communication during the construction period is on the responsibility of contractor. Heating during the construction period is under contractor's responsibility.

4.5 Rain water and drainage

Necessary rain water and drainage are part of the contractor's delivery.

4.6 Groundings, underground cables, and cable pipes

The contractor is responsible for required groundings, cables and cable pipes.

4.7 Social, office and storage areas

The contractor shall organise all necessary facilities personnel, storage areas and ensure their maintenance and security.

4.8 Special inspections and measurements

An initial inspection is arranged at the construction site, during which the construction site is handed over to the contractor's use for agreed work. A closing inspection is arranged once the work is complete.



Other inspections are agreed separately.

4.9 Construction site sign

The construction site shall be marked with a construction site sign. The contractor can place own construction site guidance as needed. The contractor is also responsible for traffic guidance for suppliers etc.

4.10 Licences

Construction permit costs remain with the purchaser. The contractor shall, at own cost, deliver the necessary drawings and documents and act as the principal designer for the construction permit.

Approvals from the local City Construction Authorities for the contractor's Responsible site manager, Site manager of ventilation works and Site manager of water supply and sewage works are obtained by the contractor. The contractor handles and is responsible for all public authorities' inspections and notifications required. Inspections shall be announced to the purchaser's site supervisor at least one week in advance.

Special attention shall be paid to occupational safety conformance at all devices and installations.

4.11 CE-marking and optional products

The purchaser requires, that all construction products used by the contractor correspond either to the European Parliament and Council Regulation (EU) No. 305/2011 (construction products regulation) and have the corresponding CE-markings or where CE-markings are not required, correspond to the Act on Product Approvals for Certain Construction Products 2012/954 (product approval act) and are specified according to the relevant regulation. The contractor is responsible for ensuring construction product's suitability, the CE-marking and national approval before ordering/using/installing them at the construction site. The contractor is liable for any costs due to replacing non-conforming products.

Should the contractor wish to use construction products not specified in the contract (including the annexes thereof), the contractor shall obtain the purchaser's approval before the replacement. Purchaser shall be given one (1) week for inspection and decision making time.

The contractor is liable for any costs related to changes, e.g. design changes, documentation, certificates and other procurements.

The contractor has product liability for optional products as specified in § 10 and § 28 in YSE 1998 (General conditions for building contracts used in Finland).

4.12 Contact with authorities and notices

The purchaser is responsible for contact with authorities and notifications regarding the construction contract and progress of work.



4.13 Design and delivery

The contractor is responsible for updating designs and binding drawings shall be delivered to the purchaser in 2 hard copies and in electronic form.

5 QUALITY

5.1 Contractor's quality assurance

The contractor is responsible for monitoring own and subcontractor's management and employee's knowledges and work to ensure required quality. Special attention shall be paid to the correct timing of work stages and quality assurance. The contractor shall also monitor procurement and subcontractor work stage appropriateness and work results, so contract mandated quality is ensured in all aspects.

All deviations from quality requirements shall be reported in incident reports within a week. Incident reports are submitted to the purchaser.

Within two (2) weeks after signing the contract, the contractor shall compile a construction site specific quality assurance plan for the purchaser's approval. The quality assurance plan shall specify the contract's individual work and quality plans. Additionally, the contractor shall deliver any information required by authorities for quality assurance inspections.

6 ENVIRONMENT

6.1 Environmental protection

The contractor shall minimise negative environmental impact during the construction. Environmental issues are discussed between the contractor and purchaser before construction.

6.2 Removed substances and demolition waste

6.2.1 Soil, stone and wood

Soil, rocks, and blasted stone will be transported and levelled by the contractor to the area designated by the purchaser, which is located approximately 300 meters from the construction site.

6.2.2 Existing structures

Locations of cables, pipes, wires and other structures shall be determined before construction is initiated. Introductions of them is requested by contractor from each structure's owners.

6.2.3 Clearing and demolition waste

Clearing waste, demolished structures, ground and soil masses including transportation, waste taxes, landfill fees and other fees remain with the contractor.

7 DOCUMENTS

7.1 Contract documents and order of validity of contract documents

The contract is drafted on general construction contract terms form RT 80260.



The contract follows general construction contract terms YSE 1998 RT 16-10660 (YSE), accounting for exceptions specified in this contracting programme and contract.

The order of validity of contract documents is as follows (different from YSE § 13):

A. Commercial documents

- 1 Contract;
- 2 Minutes of the meetings;
- 3 Invitation to tender and the additional letters before the submission of the tender;
- 4 Contracting programme;
- 5 YSE 1998;
- 6 ESPD form;

B. Technical documents

1. Specification for design and engineering
2. General requirements for machinery and installations
3. Preliminary layout plan
4. Constructability review
5. Health and safety document

C. Tender

Additionally, the following requirements are applied (not annexed to the contract documentation):

- 1 Construction legislation, regulations and decrees in force as well as any equivalent public specifications.
- 2 Applicable general construction, machinery, HVAC, electrical etc. work quality requirements. (incl. RYL (General Quality Requirements in Finland), PSK Standards Association)
- 3 National Building Code of Finland
- 4 Construction-related country/local stipulations and guidelines.
- 5 Stipulations and guidelines issued by supervising authorities during construction works.

7.2 Approval procedure for engineering documents

Before starting the work, the contractor shall compile a project schedule for the whole project that also includes the compilation of designs, in co-operation with the purchaser. Based on the full project schedule, the purchaser and contractor shall agree on design inspection and approval procedure.

All design shall be delivered to the purchaser for approval. The purchaser shall have two weeks to inspect documents. The contractor's liability is not limited by the purchaser's approval of a design, work methods or material. While planning work and project schedule, the contractor should recognize that the supplied documents are not always approved as they are. Construction is only approved using design document approved by purchaser. This means, that the contractor must pay special attention to scheduling critical designs sufficiently early.

7.3 As-built drawings

Latest at the handover inspection, the contractor shall deliver all design and technical specification of the plant, as-built drawings and other schematics and instructions in three (3) hard copy binders. Design drawings and drawing lists shall be marked with 'LOPPUPIIRUSTUS' (FINAL DRAWING), dated and confirmed with the contractor's signature.

Machinery, electrical, instrumentation and automation final drawings shall also correspond with the general technical requirements for final drawings.

Drawings must include all deviation and modifications so that the drawings correspond to reality. Any possible modifications during the guarantee period shall be amended to the drawings and amended drawings are delivered to the purchaser not later than at the guarantee inspection.

All designs shall also be delivered to the purchaser in digital form. Drawings shall be delivered in a printable format (.pdf) and design software formats (.dwg, .dxf).

7.4 Publication of documents

Documents are not public and shall not be made available to any persons who are not part of the contract, unless the purchaser has given permission for this.

8 PERIOD OF CONTRACT

8.1 Starting work

Work shall be started once:

- The contract has been signed and
- construction time guarantee payment has been delivered to the purchaser and
- contractor's all risks insurance has been taken out and entered into force and
- construction site safety plan has been approved by the purchaser and
- quality assurance plan has been approved by the purchaser and
- construction work notice has been left at the local municipal government and
- the construction site's start inspection has been conducted and the site has been approved for commencement of the construction works in such inspection.

8.2 Milestones

Milestones of the Turn Key-contract shall be as follows:

1. Principal designs ready and delivered for purchaser's approval – 1.11.2018
2. Construction work started on site – 1.12.2018
3. Operational employees trained by – 1.11.2019
4. Mechanical completion, ready for commissioning by – 1.11.2019



5. Municipal Building control's final inspection by – 1.12.2019

A penalty for delay will be applied for points 2 and 5. A more detailed timetable shall be annexed to the contract.

8.3 Working time

The purchaser's representative is available during official working hours. Working outside of official working times shall be agreed beforehand with the purchaser.

9 GUARANTEES AND INSURANCE

9.1 Guarantee period

The work and material warranty shall be two (2) years from the accepted handover inspection. The contractor's work covered by the guarantee also includes additional and modification work.

Half-way through the guarantee period a mid-term inspection is conducted. Any defects covered under the guarantee shall be repaired by a separately agreed deadline but no later than within one (1) month from the purchaser's notice of the defect to the contractor.

As a deviation from above, the roof's waterproof and material guarantee shall be covered by a ten-year (according to the roofing association's guarantee terms) guarantee where the purchaser is the beneficiary. Guarantee certificates shall be delivered to the purchaser at the handover inspection.

9.2 Deviated (longer) guarantees

Should the contractor's subcontractor or supplier provide a longer guarantee than described above to work or deliveries, the contractor shall to the relevant extent be liable for the period exceeding the general guarantee period.

9.3 Guarantee of repairs during the guarantee period

A two (2) year guarantee is issued for any components repaired or renewed during the guarantee period, at the same terms as the initial work and material.

The maximum guarantee period is, however 48 months from the commencement of the initial guarantee period. During this period (48 months), the purchaser can demand that any work or device not meeting the contract's requirements be renewed/replaced at the contractor's cost.

9.4 Liability after the guarantee period

The contractor is also liable after the guarantee period for its own and subcontractor's defects caused by the contractor's gross negligence, work left uncompleted or resulting from a serious neglect of agreed quality assurance as specified in YSE 1998 § 30

9.5 Financial guarantees

According to § 36 of the general contract terms, the contractor shall provide the following guarantees:



- a) the guarantee for the construction period shall be 10 % of the contract price before VAT;
- b) the guarantee for the guarantee period is 2 % of the contract price before VAT.

The guarantee for the construction period shall be valid for three (3) months after the contract period. Guarantee for the construction period shall however be maintained in force if the work is delayed and until the contract object is delivered and accepted, final settlement of accounts has been concluded and the guarantee for the guarantee period has been delivered (different from point 8 of § 36, YSE 1998). The guarantee for the construction period shall, if given in cash, be returned (deducted with possible amounts paid under the guarantee, if any) to the contractor after the guarantee period guarantee is delivered and the abovementioned terms are completed.

The guarantee for the guarantee period shall be 2 % of the contract's final sum before VAT, including possible additional and modification works. The guarantee for the guarantee period shall be valid until three months have lapsed from the end of the guarantee period (24 + 3 months).

For covering claims based on this or other agreements between the purchaser and contractor, the purchaser may use the guarantee without consulting the contractor.

The purchaser does not give guarantees.

9.6 Insurances

The contractor shall take construction work insurance for the whole construction period as specified in YSE § 38. The insurance coverage shall correspond to the whole value of the construction object, before VAT.

The contractor shall take insurance for employees and their property as stipulated in Finnish law or employment contracts. The contractor is liable for taking out insurance for any property of the contractor at the construction site that is not part of the construction object.

The deductible amount of insurance can't exceed 0.5% of the contractor's contract value. Each contractor shall insure own employees according to applicable legislation in Finland.

Each contractor operating at the construction site shall hold valid civil liability insurance that covers construction and installation work as well as damages to third parties.

Insurance policies shall be submitted to the client for approval no later than four (4) weeks after the contract is signed.

10 CONTRACT PRICE

10.1 Payment of contract price

Contract price shall be paid pursuant to the construction contract.



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Ownership of contracted structural material and work products is transferred to the client for each instalment once the relevant payment has been made.

Payments for accepted work are paid against invoices according to agreed instalments.

10.1.1 Payments for side-contracts

There are no side-contracts.

10.1.2 Deadline for payment and post-maturity interest

Contractual invoices are delivered to the purchaser once the purchaser's designated supervisor has determined that the required work is completed, and the invoice is payable.

Deadline for payment is 21 days net after the invoice is received. Post-maturity interest is calculated according to the Interest Rate Act in Finland.

The contractor is responsible for delays caused by errors on the invoice.

10.2 Binding prices

The contract price is fixed and not indexed.

10.3 Additional and modification works

The contractor is liable for modifications as stipulated in §§ 43, 44 of YSE 1998. Additional work is performed as stipulated in § 46 of YSE 1998.

10.3.1 Additional and modification work proposal and prices

Any modifications to building plans, additional work and the effect on contract price are agreed in writing. Modifications and amendments shall be clearly pointed out to the purchaser and the contractor shall compile a proposal, which the purchaser shall process without delay. Modifications or additions are not implemented before the content and contract price/time impact has been agreed in writing. Should the contractor have performed or commenced performing an additional work or modification work in the absence of a written agreement thereof, the contractor shall not be entitled to an extension of time or increase of contract price on the basis of such work.

The contractor shall provide a detailed proposal or calculation regarding the contract price changes caused by modifications or additional work. The unit prices specified in contract documentation or agreed on other basis are applied to modifications and additional work. In case a suitable price is not determined based on contract document or the basis for determining the price can't be otherwise agreed on, the work shall be conducted at cost price, unless the purchaser opts to undertake the work himself. § 47 of YSE 1998 is applied to cost price practise.

The client can unilaterally opt to apply § 47 of YSE 1998 cost price to any work, that has been priced as the contractor's modification or additional work in the unit price list. This right can be used, if the unit price is clearly over- or under-priced when considering the scope of the work.

Modifications or additional work does not shorten the contractor's delivery time, unless specified in the additional work or modification proposal. Additional time is granted only, if the modifications or additional work has significant impact on the total work time and completion.



11 GUARANTEE VALUES AND PENALTIES

11.1 General

The contractor is obliged to build the facility and all related individual processes within the guarantee values specified in the contract. To confirm the achievement of the guaranteed values, the contractor and the purchaser shall compile a specified guarantee run programme together. If the guaranteed values are not achieved during the guarantee run or inspections, the contractor shall at own cost implement the required modifications or equipment changes to achieve the agreed values.

Penalties are applied if despite corrective measures the facility does not achieve the guaranteed values. Penalties can't exceed 15 % of the contract value before VAT. Once the total penalties exceed this value, the purchaser may terminate the contract.

11.2 Delay penalty

The purchaser can collect delay penalty if the contract work is delayed from the contracted deadlines or milestones. The delay penalty is counted for every working day, but for no more than 50 working days with respect to the completion of the contract work and 75 working days with respect to the milestones. Derogating from YSE terms, the delay penalty per day is 0.1 % of the contract price before VAT. In the event that the delay of the completion of the contract works has exceeded 50 working days, the purchaser shall be entitled to claim damages for any loss, damage, cost or expense incurred by the purchaser on the basis of the delay to the extent that they exceed the amount of the delay penalties payable for the delay of the completion of the works.

11.3 Operational cost penalty

If the operational cost (OPEX) that is stated in the contract is exceeded during the guarantee trial; a penalty of 1 % per every 5 % increment is accounted. Maximum amount of OPEX penalty is 5 % after which the purchaser may terminate the contract.

11.4 Guarantee values and guarantee value penalties

The following criterion is used for guarantee values.

Operational guarantee values:

1. Utilisation rate.

- **Guarantee value:** The utilisation rate of the facility shall remain at a level of at least 95%. The utilisation rate is calculated by taking the annual hour count (8,760 h) and deducting the planned maintenance stoppages as well as any unplanned stoppages times six from any unplanned stoppages during a two-month guarantee run episode. The result is divided with the annual hour count, which gives the facility's utilisation



rate. Facility means the biogas plant and its performance to operate as a waste-receiving and waste treating unit as well as a unit that produces biogas and soil improver materials. Individual machines are not considered for this calculation.

- **Fine:** Each percentage started below the guaranteed (95%) value, leads to a reduction of 5% from the last payment installation (=0.5% of the contract price). The purchaser may terminate the contract, if the utilisation rate drops below 90 %.

2. Gas production.

- **Guarantee value:** 90 % of the value based on VDI4630 (Fermentation of organic materials - Characterization of the substrate, sampling, collection of material data, fermentation tests). Test is done under mesophilic or thermophilic conditions; depending on the full-scale process and the duration of the test is 60 days.
- **Fine:** Gas production below the guaranteed value leads to a 1 % penalty fine per each 5 % reduction as recorded production against the standard value. Gas production values are weekly averages: Produced methane gas (Nm³ CH₄) during one week/weighted specimens and accounting tonnes of weekly received waste.

3. Processing capacity

- **Guarantee values:** The facility must have the capacity to process wastes calculated together with the capacity of 25,000 tn/a. Guarantee value is specified per each individual process, in other words, the facility's receiving capacity must meet the defined volumes and the processing capacity throughout the process.
- **Fine:** 2.5 % loss in reception and processing capacity means a 2 % fine, 5 % loss means a 5 % fine, 5-10 % loss means a 10 % fine and the purchaser can terminate the contract if losses exceed 10 %.

Guaranteed values for quality

1. Quality of end product (digestate)

- **Guarantee value:** The digestate shall have no Salmonella (25 g sample size) and E.Coli concentration shall be below 1000 cfu/g of fresh sample weight.
- **Fine:** Each non-conforming analysis (max 4) leads to a fine of 1 %. The purchaser can terminate the contract if a fifth analysis fails.

2. Quality of final product (bio-methane)

- **Guarantee value:** bio-methane must fulfil the requirements of traffic fuel and as specified below:

Compound	Limit value
Methane (CH ₄)	≥ 97 % conc
Carbon dioxide (CO ₂)	≤ 3 % conc
Oxygen (O ₂)	≤ 0.5 % conc
Sulphur (S)	≤ 23 mg/Nm ³
Hydrogen sulphide (H ₂ S) + carbon-based sulphides (COS)	≤ 5 mg/Nm ³
Particles	≤ 1 µm



Water (H ₂ O)	≤ 32 mg/Nm ³
Ammonia (NH ₃)	≤ 20 mg/Nm ³

- **Fine:** Each non-conforming analysis (max 5) leads to a fine of 1 %.

3. Odorous gases purification efficiency

- **Guarantee value:** odour content in processed odorous gases can't exceed 2000 OU/m³ and ammonia concentration of 5 ppm. The availability of the system (operating hours per year) must be at least 98 %.
- **Fine:** Each non-conforming analysis (max 4) leads to a fine of 1%. The purchaser can terminate the contract if a fifth analysis fails.

Determination of guaranteed values

Guarantee runs shall be started after the biogas facility has been used continuously (without disturbances) for 4 weeks. The continuous operation means that the plant can receive wastes, can process the waste and produces its products without interruptions. The guarantee runs last for two months. The contractor is responsible for operations during the guarantee runs and will be present at the facility during each working day and will instruct the purchaser's operators. Guarantee values are determined together with the purchaser's representative based on guarantee run measurements and recordings.

11.5 Quality assurance sanctions

Should the contractor neglect agreed obligations and responsibilities, the contractor is liable for a monetary penalty or fine according to the following table:

Neglect categories serve as a basis for written reminders or fines.	Contract based, same neglect category notifications and relevant fines:		
	1 st time	2 nd time	Following times
1. Operations contrary to the quality assurance plan and environmental neglect	Written reminder	EUR 2,500	EUR 5,000 and the contractor's representative is changed
2. A significant quality deficiency noticed by purchasers on a spot check that is not reported in the contractor's quality deviation report	EUR 2,500	EUR 5,000	EUR 5,000 and the contractor's representative is changed
3. A document based on the contractor's quality assurance plan (e.g. quality report or log) contains verified false facts (serious breach).	EUR 5,000	EUR 10,000 and the contractor's representative is changed	EUR 10,000 and the contractor's representative is changed



4. Occupational safety documentation breach or occupational safety procedure's breach that compromises the purchaser's VNA 205/2009 duty-of-care responsibilities	EUR 2,500	EUR 5,000	EUR 5,000 and the contractor's representative is changed
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12 SUPERVISION

12.1 The purchaser's organization and authority

The purchaser shall designate an organization for supervising the construction site. The composition and authority of which is announced in the contract and first construction site meeting.

Purchaser's supervision

Purchaser's quality assurance is implemented according to § 60-62 of YSE. The purchaser presumes that the contractor performs work during agreed working hours and organizes its supervision accordingly.

The purchaser will appoint construction site supervisors later. Supervision does not limit or exclude the contractor's liability.

13 CONSTRUCTION SITE ADMINISTRATION AND DELIVERIES

13.1 The contractor's organization and authority

The contractor shall designate a responsible Manager of Construction site in point 1 of § 56 of YSE 1998 and subcontractors shall designate responsible persons as specified in the same section's point 2. The purchaser may approve or reject the contractor's proposed responsible foreman and may request foreman changes during work if sufficient cause for this is noticed.

The contractor's responsible person for the construction site shall be present throughout the working days until the contract period is over.

The contractor shall inform the purchaser and other contractors of the construction sites occupational safety organisation and person responsible for occupational safety.

13.2 Record keeping

The contractor shall keep appropriately numbered diary of the construction site that will be regularly delivered to the supervisor and acknowledged. The construction site diary is drafted in two copies, one for the contractor and the other for the purchaser. The records shall indicate the daily construction site situation for all contractors. An electronic construction site diary may be adopted. An electronic construction site diary must be approved by the purchaser in writing.



The contractor shall compile the construction site diary and inspection minutes so that these are accepted by authorities as Building Act specified inspection documents, unless a separate inspection log is maintained.

13.3 Labour force

The contractor shall have a sufficient number of skilled employees (§ 58 YSE). The contractor shall maintain an updated list with the contractor's own and subcontractor's employees' names and birth dates. This list shall be available at the construction site for the supervisor and any relevant authorities.

The purchaser may reject employees proposed by the contractor.

13.4 Foreign labour

Foreign labour may be used according to Finnish legislation.

13.5 Physical condition requirement

If so requested, the contractor shall show, that the employees engaged in the construction site have passed the required health controls. Health control costs remain with the contractor.

13.6 Passage permits

All persons present at the construction site must wear a valid picture-ID badge that shows the employees personal data, the employer and tax ID. The contractor shall maintain an updated passage permit list.

13.7 Occupational safety

The contractor act as a project supervisor specified in the government decree (construction work safety, 205/2009).

The contractors shall apply all applicable occupational safety regulations as well as purchaser's construction site instructions and guidance.

The contractor shall compile any safety, work and land use plans required by the government regulation.

13.8 Construction site meetings

Construction site meetings are arranged one every month. Meetings take place in the purchaser's meeting space.

The contractor is obliged to deliver a monthly report to the purchaser about issues determined at the construction site no later than three (3) working days before the meeting time.

The monthly report shall include at least:

- Updated general overview of the project schedule
- Work stage notifications
- Invoicing/additional work status
- Quality deviations

- Safety: incidents, near-misses, safety measurements and their average value
- Construction site resources
- Work situation
- Reclamations

The purchaser's representative shall chair the meeting and take minutes.

14 INSPECTIONS, TEST RUN AND HANDOVER

Contractor shall organize any inspections required by the building permit and shall order and finance any other inspections or tests required by the building permit and regulations. Purchaser shall be informed one week before any procedures, so that a representative can be present.

Inspections must be approved, and any deficiencies determined, before the handover inspection.

The contractor is responsible for a facility wide test run and commissioning. Contractor shall prepare the plan of commissioning and start-up and obtain the purchaser's approval for plans.

Commissioning, test run and handover include the following stages:

1. Dry test run of the equipment
2. Inspection of any areas immersed under water, sludge or bio-waste
3. Wet test run of the equipment
4. Process start-up and test run
5. Handover inspection

A dry test run of one (1) day is conducted after the equipment has been installed. The purpose is to test the equipment's mechanical operations.

Inspection of mechanical operations ends with an inspection of components under water level, during which the equipment's mechanical operations must be impeccable and corresponding to the contract.

A wet test run of the facility is initiated once the dry test run inspection has been passed. The purpose is to observe the equipment in work and conduct adjustments. The wet test run is passed once the equipment has worked without disturbances and continuously for one (1) day.

Process start-up and test run continues after the wet test run. At process start-up, equipment is adjusted and configured so, that the process functions as designed in real circumstances.

A two-month guarantee run precedes the handover. During this period the facility is configured and tested to functional production condition.

Proceeding to the handover inspection requires a previously approved process start-up and test run as specified in the Turn Key-contract.

Other contract site inspections and test runs are conducted as specified in this contracting programme and technical documentation.



14.1 Handover inspection

Handover inspection is conducted as specified in § 71 of YSE. In addition the following matters shall be recorded in the minutes of the handover inspection:

- Whether the works have been completed within deadline
- Possible defects and shortcomings in the works and a schedule for corrections
- Whether the client accepted the works for being handed over
- Delay interest to be paid by the contractor
- Damages payable by the contractor for exceeding tolerance values
- Any other claims between the purchaser and contractor

If needed, a separate final settlement of accounts is held after the handover inspection to close any remaining accounts between the purchaser and contractor.

14.2 Inspection costs

Each party shall be liable for the costs of own inspections as specified in the contract. However, in the case repeated inspections are needed due to the contractor's defects, shortcomings or other failure in the contractor's performance, the purchaser shall charge the repeat inspection costs to the contractor. Inspection prices are as follows:

First repeat inspections are not charged

Second repeat inspections are charged at EUR 2,000 per inspection

From the third repeat inspection the charge is EUR 5,000 per inspection

14.3 Handover documents

The construction works inspection documents for authorities and all required inspection markings shall be available for handover during the handover inspection. The contractor shall deliver each device's user, maintenance and repair manuals in their original form and in Finnish. This includes any required schematics.

The contractor shall deliver verified and amended handover design drawings in an editable electronic format (e.g. DWG) and as a hard copy.

14.4 Use guidance

The contractor shall deliver an employee training plan, including significant instructions for operations, use and maintenance, and safety related special instructions, to be approved by the purchaser. Contractor shall compile required explosion protection documents that are discussed with the purchaser and operational employees.

14.5 Guarantee inspection

According to § 74 of YSE.



15 CONSEQUENCES OF TERMINATION OF CONTRACT

Should the contract be terminated by the purchaser for any reason, whatsoever, full ownership and title, as well as risk of loss and damage to the works shall automatically transfer to the purchaser and the purchaser shall be released from any future payment obligations towards the contractor pertaining to time after the termination of the contract. The contractor shall not be obligated to compensate any damage incurred by the purchaser on the basis of such termination. For the avoidance of doubt, the termination of the contract shall not, however, release the contractor from its obligation to pay any penalties under this contract in accordance with and subject to the terms and conditions thereof (see section 11 of this document).

16 DISAGREEMENTS

16.1 Resolution of disagreements

Any and all disputes arising out of or in connection with the construction contract shall be settled by arbitration in accordance with the Arbitration Rules of the Finland Chamber of Commerce. The number of arbitrators shall be three, the place of arbitration shall be Lappeenranta, Finland and the language of arbitration shall be Finnish.