Republic of Serbia
MINISTRY OF FINANCE
Department for Contracting and Financing of EU Funded Programmes (CFCU)

08/03/2024, Belgrade

CONTRACTING AUTHORITY'S CLARIFICATIONS No. 3

Construction of municipal wastewater collection and treatment system in Čačak
Publication ref.: NEAR/BEG/2023/EA-OP/0148

No.	Question	Answer
1.	In "Volume 3, Employer's requirements, Section 2 - Particular Design & Process Requirements" for all tanks on the water line, it is stated that it is necessary to provide a by-pass around each tank separately, which is not usual in practice. Please confirm this specific requirement.	Confirmed.
2.	- In Volume 3 / d4u_techspec_en Vol.3.1 Cacak / paragraph 3.1.5.3 General Scope of Works for Prelići WWTP it is noted that the scope of Contractor works includes: Design for construction permit for whole facility at WWTP Prelići. - In the same document (paragraph 3.1.9.1, Table 3.1) is noted in Part 1: Preparation of designs for the construction of the WWTP Prelići (update/adjustments of Employer's designs, obtaining updated Location Conditions and approval on adjusted Preliminary Design, Design for Construction Permit, Design for Construction). Please specify what is the exact scope of supply for the design phase of WWTP Prelići?	Tenderers shall propose their own technical solutions, fully in accordance with requirements from the Tender Dossier. Drafting of all designs for the construction of the WWTP Prelići is included in the scope of work and encompasses update/adjustments/redrafting of the Conceptual Design (for obtaining updated Location Conditions, if needed), update/adjustments/redrafting of the Preliminary Design (including modifications requested by the State Revision Committee, if any), and drafting of the Design for Construction Permit, Design for Construction and As-built Design.
3.	It is not clear which type of alternative fuel for hot water boiler should be used? - At Vol. 3.2, paragraph 3.2.2.27 design criteria for hot water boiler are noted that boiler should have dual fuel: Biogas and LPG. - At Vol. 3.1, paragraph 3.1.5.1 The boundaries of the project including the structure or equipment are as follows: Natural gas meter Please clarify.	Please refer to CONTRACTING AUTHORITY'S CLARIFICATIONS No. 2, Question no. 19.
4.	At Vol.3.4 paragraph 3.4.13.8 Fuel Supply, Maintenance and Parking of Handling Equipment is specified that shall be provided a fuel storage tank with a capacity of 1000 litres. Do we have to foresee a fuel transfer station? Please	Fuel storage tank shall be underground, double mantel, equipped with all necessary safety systems, infrastructure for filling of the tank and pumping station for vehicles. The tank and auxiliary infrastructure shall be designed by the Contractor and shall comply

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	specify: Tank type (above or underground), material type, type of equipment for equipotential bonding ect.?	with relevant Laws and bylaws of the Republic of Serbia, including, but not limited to the Rulebook on technical standards for fire and explosion safety of plants and buildings for flammable and combustible liquids and on storage and transfer of flammable and combustible liquids (Правилник о техничким нормативима за безбедност од пожара и експлозија постројења и објеката за запаљиве и гориве течности и о ускладиштавању и претакању запаљивих и горивих течности) "Official Gazette of RS", no. 114 of 20 December 2017, 85 of 31 August 2021 and Rulebook on technical standards for fire and explosion safety of fueling stations for vehicles in road traffic, small vessels, small commercial and sports aircraft (Правилник о техничким нормативима за безбедност од пожара и експлозија станица за снабдевање горивом превозних средстава у друмском саобраћају, мањих пловила, мањих привредних и спортских ваздухоплова) "Official Gazette of RS", no. 54 of May 31, 2017, 34 of May 17, 2019, 92 of September 22, 2021.
5.	Is it necessary to foreseen Odour extraction system for the following facilities: • primary sludge thickener? • thickener - tank of digested sludge? • building for thickening and dewatering of sludge?	Please refer to Employer's Requirements sections 3.1.16.14, 3.2.2.13.3, 3.2.2.13.4, 3.2.2.13.7, 3.2.2.20, 3.2.2.21, 3.2.2.23.
6.	At Volume 3.2, paragraph 3.2.2.13.14 Coarse screen: is noted that odour control system is specified in Section 3.1.1.1 Odour Control Requirements. This requirement is not part of Tender documents, please provide missing documentation.	Please refer to Employer's Requirements section 3.1.16.14.
7.	VOLUME 3, EMPLOYER`S REQUIREMENTS. Section 1 – General Provisions 3.1.5.9 Electrical Supply It is clearly stated that main MV 10 kV cable from existing transformer station 35/0.4 kV (600m) to new TS Prelici is not in the scope of the Tender and shall be realized by the End User. On the other hand, in other documents VOLUME 3 EMPLOYER`S REQUIREMENTS Section 5 - Electrical Works Requirements- local power station on site is treated as ordinary distribution	10 kV cable from existing transformer station 35/0.4 kV (600m) to new TS Prelici is not in the scope of the Tender. Transformer station shall satisfy requirements set forth in the Employer's Requirements. For further details please refer to design documents and conditions issued by relevant authorities available in Volume 5 of the Tender Dossier.

No.	Question	Answer
	transformer substation in spite of the fact that plant will produce electrical energy using CHP unit. In that case, EPS will ask for different conditions for the connection of WWTP to the electrical distribution network even though energy will not be distributed out of the treatment plant as also stated in Tender documentation. That conditions will results in different equipment in Transformer station and significant difference in price. Please specifically define what exactly shall be the part of the delivery in this regard.	
8.	Only automatic coarse screens (N+1) are required by tender. It is not clear whether the Bidder should also provide a manual coarse screen which is common in such plants. Please clarify.	Coarse screen shall be equipped with automatic screening removal system. Alternative solutions such as manual coarse screens will not be considered. Requirements for coarse screens are defined in Employer's Requirements, section 3.2.2.9 (bullet no. 4) and 3.2.2.13.4.
9.	The tender requires only automatic fine screens (N+1). It is not clear whether the Bidder should also provide a manual fine screen, which is common in plants of this capacity. Please clarify.	Fine screen shall be equipped with automatic screening removal system. Alternative solutions such as manual fine screens will not be considered. Requirements for fine screens are defined in Employer's Requirements, section 3.2.2.9 (bullet no. 5) and 3.2.2.13.7.
10.	The tender does not predict the transfer of separated fats to the digester (quote: "After separation, the liquid phase shall be returned to the wastewater flow and the solids shall be disposed together with the screenings"). Please confirm this request, because it affects the dimensioning of the digester.	Please refer to CONTRACTING AUTHORITY'S CLARIFICATIONS No. 2, Question no. 5.
11.	At the primary sedimentation tank (PST) - one of the tender criteria is that max. surface load is 3 m/h. It is not clear to which flow it refers to (whether to WWF and DWF). Please clarify?	Please refer to CONTRACTING AUTHORITY'S CLARIFICATIONS No. 2, Question no. 35/bullet no. 2.
12.	The tender envisages that the excess sludge will be taken to the sludge buffer tank first, before the belt thickener. Most often, the excess sludge is directly drained to the belt thickener. In the tender it is written that "The buffer tank can be designed as gravity thickener which will partially thicken the excess sludge before mechanical thickening". Please confirm if there is a need for double thickening of excess sludge?	Please refer to the Employer's Requirements, Section 3.2.2.20 Excess Sludge Thickening/Storage where it is also stated that "…if this approach is adopted, the mechanical thickening equipment provided shall be suitable for the partially thickened excess sludge and still achieve the output solids concentration." Thus, there is no need for double thickening of excess sludge.

No.	Question	Answer
13.	Please clarify, is the buffer tank only a buffer tank or also a thickener, because this shell affect its dimensioning?	Please refer to the Question no. 12.
14.	In the tender documentation, there is a non-compliance related to the tender requirements in the dimensioning of the mixer in the digester. In Volume 3 (Section 2 – Particular Design & Process requirements), page 31, Energy efficiency is <10 W/m3 digester, while In Volume 3 (Section 4 – Mechanical Works Requirements), page 117, Energy efficiency is < 2.0W/m3. Please confirm the true value, ie. Criteria for sludge digestion mixing.	Please refer to the Employer's Requirements, Section 3.2.2.23 Anaerobic Mesophilic Digester, table 3.2.2.-23. Energy input for mixing of anaerobic digester shall be < 10 W/m3 of digester.
15.	In the chapter, VOLUME 3, EMPLOYER'S REQUIREMENTS, Section 2 - Specific design and process requirements, Item 3.2.2.4. Flood protection and wastewater discharge, a tabular overview is given on page 7 for the required technical solution regarding the protection of objects from flooding. In rows 1 and 2 of the table it is noted: General embankment protection, for which the technical requirements are different. Please clarify the difference between those two General embankments and which exact requirements are for each.	General embankment is the flood protection embankment around the future WWTP complex. Data from the referenced table is foreseen to be read in conjunction with the text preceding and following the table to determine the relevant values. Please also refer to design documents and conditions issued by relevant authorities available in Volume 5 of the Tender Dossier.
16.	In the chapter, VOLUME 3, EMPLOYER'S REQUIREMENTS, Section 2 - Specific design and process requirements, Item 3.2.2.4. Flood protection and wastewater discharge, a tabular overview is given on page 7 for the required technical solution regarding the protection of objects from flooding. For row 2 (Top of tank walls) we understood the tabular presentation as follows: Top of walls of concrete tanks should not be lower than Water Level average related to Return Period 1:1000 (water levels in the Zapadna Morava river presented table 3.1.5-1 Flood Flows and Water Levels (Cross section 13 from HH Study – location of WWTP)). Is this concerning only the walls of the primary and secondary sedimentation tanks or some other objects are also affected? Please specify.	Requirement applies to all tanks foreseen by the Contractor's Design.
17.	In the chapter, VOLUME 3, EMPLOYER'S REQUIREMENTS, Section 2 - Specific design and process	Requirement applies to the ground floor of all buildings foreseen by the Contractor's Design

	requirements, Item 3.2.2.4. Flood protection and wastewater discharge, a tabular overview is given on page 7 for the required technical solution regarding the protection of objects from flooding. For row 4 (Floors of buildings) we understood the tabular presentation as follows: Floors of buildings level, should not be lower than Water Level average related to Return Period 1:100 + 0,6 m (water levels in the Zapadna Morava river presented table 3.1.5-1 Flood Flows and Water Levels (Cross section 13 from HH Study – location of WWTP)). Does this apply for all floors in all the buildings or only for those which are with the levels lower than 100 years water return period?	excluding tanks and underground chambers which have own requirements.
18.	Please confirm that the Bidder should guarantee for the content of dry matter in the dewatered sludge in the minimum amount of 25% DS for Phase 1?	Please refer to the Employer's Requirements, Section 3.2.2.21 Mechanical dewatering, table 3.2.2.-21. It is stated that dry matter content in dewatered sludge shall be >25% in each construction phase. This requirement is also reflected in Volume 4.2, Schedule 4.2.5.3.
19.	Please clarify if the part of the scope of works is also a construction of the right-bank embankment on Zapadna Morava River, besides all other works? If yes, please provide more details (which exact section of river embankment, length, technical requirements, etc.)	No, right-bank embankment on Zapadna Morava River is not subject of this Contract.
20.	In the chapter, VOLUME 3, EMPLOYER'S REQUIREMENTS, Section 2 - Specific design and process requirements, Item 3.2.2.4. Flood protection and wastewater discharge, a tabular overview is given on page 7 for the required technical solution regarding the protection of objects from flooding. In row 1 of the table it is noted: General embankment protection, for which the technical requirements are: Flood Return Period - 1 : 1000 Freeboard – 0,0 m While in Volume 5_Section 5.2 - Available from CFCU part 2a of 2\Section 5.2 - Available from CFCU part 2 of 2\3.4 Location conditions WWTP Prelići\Uslovi JP\Srbijavode_uslovi.pdf on page 7 it is clearly stated that the requirements for General embankment (,,Kota krune obodnog nasipa'') protection are: Flood Return Period - 1 : 1000 Freeboard – 0,2 m Please clarify which requirements are valid	Please note that conditions issued by authorities are regarded as part of national legislation. In case of any inconsistency in requirements between issued conditions and Employer's Requirements, the stricter or higher quality requirement shall prevail.

	for the design.	
21.	For what capacity are the digesters and accompanying equipment dimensioned, including the biogas line also, in the case that the disintegration of excess sludge is foreseen in phase II and in the case that the disintegration is not mandatory.	Introduction of WAS disintegration is mentioned as a possibility that may be proposed for Phase II in order to optimize size of anaerobic digester, not as a prerequisite. Accordingly, in case of proposed WAS disintegration upstream of anaerobic digester design criteria should be set by the Tenderer based on the proposed sludge disintegration technology.
22.	In Volume 4.2, Schedule 4.2.6.2 Operational Cost Guarantee for Chemicals and Sludge Disposal, it does not make sense to calculating "Phosphorous precipitation agent" in relation to the percentage of input BOD load (because these values do not have to be and are not correlated). Can we consider that the % BOD load represents the percentage of the input TP load. Please confirm.	Confirmed.
23.	Please confirm that only one CHP unit shall purchase and installed for the first phase of construction and will operate in 1+0 mode.	Please refer to CONTRACTING AUTHORITY'S CLARIFICATIONS No. 2, Question no. 21.
24.	In the design criteria for polyelectrolyte and in "Excess Sludge Thickening" (table 3.2.2 -20) and in "Mechanical sludge dewatering" (table 3.2.2.-21) it is required that there be "reserve dosing units" '. Does it refer to the dosing pump (which is usual) or also to the preparation and dosing unit.	Please refer to CONTRACTING AUTHORITY'S CLARIFICATIONS No. 2, Question no. 3.
25.	Please explain the sentence "The anaerobic digestion system shall be designed for Phase II loads and sludge production from Phase I" (found in chapter 3.2.2.23 Anaerobic Mesophilic Digestion), considering that the water pollution load at the entrance to the plant and the amount of sludge that produced in a cause-and-effect relationship.	The anaerobic digesters shall be designed for Phase II loads.
26.	If the disintegration of sludge is considered during the elaboration of the II phase, are the digesters are dimensioned for sludge produced in the I phase and the retention time of more than 20 days?	Please refer to the Question no. 21.
27.	In several places in the tender, the possibility of disintegration of WAS before the digester in the II phase of construction is listed. Is this request mandatory?	Please refer to the Question no. 21.

28.	In table 3.2.2 15: Design Criteria for Activated Sludge Tanks", on page 19 (Volume 3.2) the mixing criteria in AST is given from 8 -13 W/m3, and according to the ATV standard it is much less and amounts to 2 -5 W/m3. Please clarify and confirm.	Please refer to CONTRACTING AUTHORITY'S CLARIFICATIONS No. 2, Question no. 11/a.
29.	Please confirm that the contact time in the anaerobic tank is related to the max. dry weather flow (DWF).	Hydraulic retention time in anaerobic digesters is not related to wastewater flow, but to the sludge volume.
30.	It is not indicated how many days for the storage of ferric chloride should be foreseen. Please indicate the required number of days.	Please refer to CONTRACTING AUTHORITY'S CLARIFICATIONS No. 2, Question no. 18.
31.	Is the storage and dosing of ferric chloride is calculating for the total amount of phosphorus, at the entrance to the AST basins (considering the removal efficiency in the primary treatment and the return of phosphorus with the supernatant water). Does this mean that the amount of phosphorus that is incorporated into the biomass is not considered, regardless of the biological removal of phosphorus?	Please refer to CONTRACTING AUTHORITY'S CLARIFICATIONS No. 2, Question no. 18.
32.	It is stated that the solids from the separated fats are disposed together with the material from the screens. Are special containers purchased for fat disposal or are they disposed of in the same containers. It is unclear whether the final disposal is meant that actually sludge removal?	FOG shall be stored in special closed containers.
33.	On page 16 of the tender (Volume 3.2) in table 3.2.2 12: "Amount of fat, oil and grease removed for Equipment Provision" it is written that "minimum float storage time" is 1.2 days. What exactly does that refer to?	The minimum float storage time refers to the capacity of FOG storage container.
34.	On page 16 of the tender (Volume 3.2) in table 3.2.2 12: "Amount of fat, oil and grease removed for Equipment Provision" there is a design criterion for Minimum specific FOG Quantities of 6l /PE/y. daily, that amount is 2.1 m3, which is a huge amount. Please confirm if we count according to the given criteria.	Confirmed.