Questions and answers

No:	Question:	Answer:
1.	We have read the tender dossier carefully, and we also attended the clarification meeting in Drniš where it was emphasized that Tender dossier rules in creation of our bid proposal, but we have noticed certain illogicalities for which we kindly ask you to provide us the explanation. First of all, Volume 1, clause 16 at page 18 says: „Variant solutions will not be taken into consideration“. But then, Volume 1, clause 12.1.12. at page 13 says „modifications(if any)“ , and also Table No 1 Aministrative Compliance at page 123,asks are there any modifications. In the end, the question is: are the modificiations and alternative solutions allowed?	Variant solutions are those solutions which are not in compliance with the Employer’s requirements. The clause “Modifications (if any)”, as in Volume 1, 12.1.12, is a standard clause that does not refer to clause 16. Variant solutions, but to clause 20.2.
2.	Furthermore, Volume 1 says that technical proposal must be in accordance with clauses from Volume 3. Volume 3 defines relevant data at the entrance of the WWTP, among other quantity of water in terms of 98 m3/h, i.e. 27 l/s. In respect to that, tenderer should propose List of materials and supplies as defined in Volume 1, pages 77-116. But, Volume 5 suggests that additional data may be obtained from the Main Design done by Hidroprojekt-Ing Zagreb and held in Hrvatske Vode, Ulica grada Vukovara 220, Zagreb. After the insight into that document, we concluded that the main design defines different entrance data for the WWTP than Volume 3. For example, it asks for the equipment that meets 50 l/s of entering water. Since this is a significant discrepancy, we	The tenderer shall base his design on the data as provided in the tender documentation. Volume 5, Section 5.1, page 2 states that the documents, numbered 1 to 4 are available to the tenderers as background information. These documents are indicative and for information only and do not form part of the tender documentation.

Questions and answers

	kindly ask you to advise us on what rules for the tender bid creation: the tender dossier or the main design for the WWTP Drniš?	
3.	And in addition, if tender dossier rules, what document could provide more details about needed equipment and which design will provide functional guarantee for the whole WWTP?	The tender document rules. The tender is based on FIDIC Yellow Book and thus a Design and Build contract. The Contractor's design shall provide the guarantees as in accordance with the FIDIC contract.
4.	INFLUENT DATA (Volume 3 , Page 13) Please, clarify the meaning of Hourly maximum load in terms of daily water quantity and the nature of sewer system.	Data as stated in Volume 3, 2.2.3 Influent data, are: Average hydraulic load: 900 m3/day Maximum hourly (hydraulic) load is 98 m3/hour The nature of the sewer system is explained under Volume 3, 1.5.4 Waste water collection and 1.2.
5.	EFFLUENT REQUIREMENTS (Volume 3 , Page 14) The effluent requirements are given in the table, acc. to Urban Waste Water Directive 91/271/EEC. Please clarify, if not these, what effluent quality requirements apply for the commissioning which is in turn ruled i Section 5.3.6.	The requirements of the Urban Waste Water Directive as in Volume 3, 2.2.4 include (a) the maximum values for the given components and (b) the sampling and analysis frequency. The sentence: "These requirements do not apply for the commissioning which is in turn ruled in section 5.3.6." must be read together with the directly following and explanatory sentence which reads: "The requirements in section 5.3.6 are stricter as to the frequency of sampling and analysis and the number of samples that fail to conform". This means that for commissioning the limit values of all parameters are the same as the table. Merely the requirements for compliance with regard to the frequency of sampling and analysis and the number of samples that shall pass or may fail are stricter and in accordance with Clause 5.3.6.
6.	LOCATION AND BUILDING PERMIT & NONCONSTRUCTION ACTIVITIES(Volume 3 , Page 6 ,7)	The charges for communal fees in relation to changes/adjustments to existing permits shall be borne by the Employer.

Questions and answers

	On page 6 it is stated that both location and buildig permit has been issued for the plant as well as the positive decision upon the Enviromental impact assesment. This means that all municipal and other legal charges has been borned allready by the Employer? On page 7 it is demanded that the Contractor will deliver at least PRELIMINARY, MAIN and DETAILED DESIGN, as well as all needed permits. The municipal and other legal charges will be borne by the Employer. This means that in case of mayor changes of the plant layout and construction, the complete procedure on delivery of new design documentation and a.m. permits will be necessary to be obtained again. In this case, who will pay additional charges, allready borned by the Employer?	
7.	SLUDGE REQUIREMENTS (Volume 3 , Page 15,24,25,26) (a) What is the meaning of the statement that „the excess sludge will be extracted directly form the aeration tank in the aeration zone“? On page 25. It is also stated that thickening in gravity thickener is not accepted and it is also stated that sludge treatment should consist of „mechanical pre-dewatering /thickening, to be performed by gravity means of a mechanical thickener, to ±5% dry solid content“.	(a) and (b) Volume 3, Clause 2.5.13 stating: “Excess sludge shall be extracted directly from the aeration tank in the aeration zone.” Is sufficiently self explanatory and in line with indicative principle flow chart in Volume 5. Gravity thickening in a thickening tank is not accepted. „±5%“means plus-minus 5%. In mathematical terms this means: in the range between 4.5% and 5.5%.

Questions and answers

	(b) What kind of prethickening will be acceptable : gravity thickener or mechanical thickener (for example drumm thickener or other)? What is the meaning of „±5%“ (c) It is also stated that „sludge dewaterig to be performed by a dewatering unit to ≥22% dry solid content in the sludge“ which is efficiency of centrifugal decanters. On Page 128 as a dewatering unit it is described a BELT PRESS. Belt press can achieve max. 15-17% dry solid content with reasonable chemical consumption but are significantly cheaper. Please clarify what dewatering unit will be obloigatory for all paticipants: Belt press with 15-17% DS content or centrifugal decanter vith ≥22% DS content? (d) What kind of containers will be obligatory in dewatering building (volume 5 m3 or 1 m3), material, on trolley or on the ground. (e) What is the reason to make deposit room in containers for two weeks in the dewatering building if we have a sludge storage platou near the dewatering building? (f) Does the sludge platou need to be roofed and covered from all sides and as such ventilated too? Or it will be only roofed or even without roof? What will be the demant for all tenderers?	(c) The requirements state (Volume 3, 2.5.13 Excess sludge pumping and sludge treatment): “Sludge dewatering, be performed by a dewatering unit to ≥ 22% dry solid content in the sludge” (d) The requirements describe (Volume 3, 2.5.13 Excess sludge pumping and sludge treatment) be “stored in standard containers for disposal at a controlled waste disposal site.” Containers shall be standard containers that are loaded on standard container trucks for transport to and emptying on the disposal site. The tenderer shall make the arrangements for the sludge storage area for easy handling. (e) because of handling (f) Any sludge, either in containers or in the sludge storage area shall be protected from rain and shall be in a covered area. (g) Lime storage capacity shall be for ≥ 2 weeks (h) The tenderer shall select a mix design that meets the performance criteria for the sludge after stabilization.

Questions and answers

	(g) What will be the reqiured volume for lime silo in operational time period? (h) What kind of lime/sludge mixig will be obligatory for all? -doubble shaft mixer, which is more expensive but more efficient in lime consumption and mixing -single shaft screw conveyor, which is cheaper but less efficient in lime consumption and mixing	
8.	INFLUENT PUMPING STATION, RETURNED SLUDGE PUMPING, EXCESS SLUDGE PUMPING (Volume 3 ,Page 19) In the drawings provided with tender dossier there is an Inlet pump station for submersed pumps described. On the page 19, there is a demand for Inlet screw pump station. (a) Are the screw pumps for INFLUENT PUMPING STATION, RETURNED SLUDGE PUMPING, EXCESS SLUDGE PUMPING obligatory or it can be submersed centrifigal pumps, or dry installed centrifugal pumps? (b) It is stated that valves and penstocks must be manual and remote controlled. What is the drive demand? Only manual or motorized with remote controll and hand wheel for manual opening?	Volume 5, Drawing no 2 is for illustration purposes only. In accordance with the FIDIC Yellow Book the contractor shall design the plant in accordance with the employer's requirements which are described in Volume 3. (a) Volume 3, Clause 2.1 Process design requirements, reads: "Influent pumps and sludge return pumps shall be screw pumps" (b) Volume 3, 2.5.2 Influent pumping station, paragraph: "Valves and penstocks shall be manual and remote controlled"; should be understood as follows: "Valves and penstocks shall be equipped with actuators for motorized operation connected to the plant control system, and be equipped with a handwheel for manual operation."
9.	COARSE SCREEN Coarse screens are described on drawings but not in the	The layout drawing in Volume 5, drawing 2 and 3 are illustrative for illustration purposes only. The employer's requirements do not prescribe the use of a coarse screen. The

Questions and answers

	Emlloyer's requirements. Are the coarse screes obligatory, what kind (automated/manual), what number (operational +stand-by), what incliation, what bar spacig, etc…	tenderer shall evaluate whether he regards the use of a coarse screen necessary in order to fulfil the process requirements and process guarantees.
10.	SEPTIC SLUDGE RECEPTION UNIT (Volume 3 , Page 19) (a) Does the equipment for septic sludge reception need to be in closed room and as such ventilated and designed in EX protection? (b) What kind of stone trap is obligatory, manual or automated? (c) Is it necessary to construct the sufficient concrete basin for sludge storage and dosing to the plant to avoid the shocks on the downstream process, with mixing and pumping equipment? (d) Is it necessary to implement users evidention system and for how many users?	(a) The requirements as under Volume 3, 2.5.3 Septic sludge reception unit, do not require a closed facility however covered from atmospheric influences. (b) Stone trap shall be automatic. (c) This is not required (d) A user identification system is not required.
11.	FINE SCREENS (Volume 3, Page 20) Are the continuos belt fine screens obligatory or it can be other type (drumm screens, step screens..) with equal efficiency?	Fine screens shall be continuous belt screens.
12.	MINIMUN DEMAND FOR MATERIAL QUALITY FOR HYDROMECHANICAL EQUIMPENT	Material specifications are provided in Volume 3 for the various types of equipment.

Questions and answers

	What is the minimum demand for material quality for hydromechanical equipment?	
13.	GRIT & GREASE TRAP (Volume 3, Page 21) In how many lines does it need to be constructed, one or two ? It is stated that it will be constructed for 1st phase only, but the design drawings need to show the future extensions. Does it include the civil works too? It is reasonable to execute the SAND & GREASE TRAP for final development phase.	At final capacity the plant requires two parallel lines for the grit and grease trap. The table in Volume 3, Clause 2.4 Phasing of design and construction, requires: "Design and construction of civil works for the plant inlet and pre-treatment including: • inlet pipe connecting to the WWTP starting from the manhole at the plant border (location see Drawings) • pump sump, pump station and pump house • fine screen channels and fine screen house • measuring channels • grit and grease chambers • flow distribution chamber", for the capacity of Phase 1 and Phase 2 (10.000 PE).
14.	AERATION/NITRIFICATION AND DE-NITRIFICATION (Volume 3 , Page 22, 120) In the drawings provided with tender dossier, there is submersed fine bubble aeration system indicated with necessary compressor station. In the Employer's Requirements there is a demand for slow speed surface aerators. Are the surface aerators obligatory or fine bubble aeration system with better specific efficiency and more convenient for oxidation ditch aeration tank?	The layout drawing is indicative only. The decisive and prevailing Employer's requirements in Volume 3, Clause 2.1 Process design requirements, read: "Aeration shall be performed with slow speed vertical shaft surface aerators;".
15.	RETURNED SLUDGE PUMPING STATION (Volume 3 , Page 24) Are the Archiedian screw pumps obligatory?	Please see Answer No 8 (a).
16.	EXCESS SLUDGE PUMPING STATION (Volume 3 , Page 24) What type of pumps for excess sludge puping to prethickener	The tenderer shall make his own proposal for the type of pump.

Questions and answers

	are obligatory? What is the minimum number of pumps installed?	Minimum number of pumps is 1 in operation and 1 standby.
17.	SECONDARY SEDIMENTATION CLARIFIERS (Volume 3 , Page 23, 24, 123) On page 23-24 there is no shape of secondary sedimentation described. However, on the page 123 the bridge scraper is described as rotating. On the drawings the secondary sedimentation tank is defined as rectangular with translating bridge. What kind of secondary sedientation tank is obligatory?	The layout drawing is indicative only. The bridge shall be as defined in the Employer's requirements, which have been formulated aiming at a circular structure. However the tenderer may submit any other suitable shape and shall apply the requirements by analogy.
18.	POWER SUPPLY AND ELECTRICAL PLANT (Volume 3 , Page 27,28) It is stated that the Contractor will be responsible for design and construction of medium voltage connection line, medium voltage shwitch gear and transformer station. (a) What is the length of the connection from nearest power substation? (b) The connection fees are borne by the Employer. Please, confirm this statement. (c) The local distributor will insist to construct the power supply and electrical plant, and to collect the connection fees within the same contract. (d) Could you provide us with a lump sum for above mentioned works which in such case will be obligatory for all participants and will consist of all costs necessary for power supply and electrical plant?	(a) The tenderer shall assess this according to local conditions. (b) Volume 3, Clause 2.6.1, last paragraph reads: "The connection fees are borne by the Employer". However, all costs in relation to the design and construction of the power supply to the Site are borne by the Contractor. (c) The wording "The contractor shall be responsible for design and construction." does not necessarily mean that it will be his task to execute the work by himself. Important is that all actions have to completed in "close cooperation". (d) Such lump sum cannot be provided, the Tenderer shall request respective information from authorities mentioned under Volume 3, clause 1.5.3.

Questions and answers

19.	Particular requirements 2.5.2. Influent pumping station Is it mandatory to use Archimedean screw pumps or centrifugal pumps can be used instead?	Please see Answer No 8 (a).
20.	Is it mandatory to use "continuous belt fine screens" or is it possible to use different type of screens with 6 mm bar spacing?	Please see Answer No 11.
21.	It is mentioned that screen building has curtain walls and ventilation system, while in 2.2.8. defines that waste air is treated on biofilter. What specifications is true?	Volume 3, Clause 2.5.4 Screen Building, reads: "Entrance shall be equipped with curtain walls....." and further: "The screen house shall be equipped with ventilation fans....." Volume 3, Clause 2.2.8 reads: Foul air shall be collected from the pump pit, inlet pumping station, screening house....." These specifications are not conflicting.
22.	2.5.6. Grit and grease removal Due to very low throughput for concrete sand and grease traps is it possible to offer pre-fabricated st. steel aerated sand and grease removal unit?	There is no requirement that the grit and grease removal unit shall be constructed in concrete. A prefabricated solution is acceptable. The proposed solution shall be in conformity with the employers requirements.
23.	2.5.9. Aeration/nitrification and de-nitrification Is "oxidation ditch" mandatory technology or some similar technology can be used, for example SBR system?	The requirement in Volume 3, Clause 2.1 reads: "The process shall be based on the oxidation ditch with integrated zones for aeration/nitrification and de-nitrification;". Thus „Oxidation ditch" technology is mandatory.
24.	2.5.13. Excess sludge pumping and sludge treatment Is it acceptable to offer solution without mechanical sludge dewatering unit if the outlet parameters > 22%DS and polymer consumption <7 kg/tDA is achieved with this unit only?	The requirements in 2.5.13 read: "Mechanical sludge dewatering system consisting of mechanical thickening and dewatering unit, including all associated structures, piping, cabling and equipment and specific local process control;"

Questions and answers

		If the proposed solution integrates the required functions it is acceptable.
25.	Form 2.2. Appendix to tender - it says that we have to fill in the blank spaces in this Appendix but there is no blank spaces for Contractor?	Volume 1, Section 2, Form 2.2: It is confirmed that there are no blank spaces to be filled by the tenderer in the Appendix to Tender. Tenderer shall sign the Appendix to Tender.
26.	What is mean by Litigation History - which document we have to give in tender?	Volume 1, Section 2, „Litigation“ “A dispute is in 'litigation' (or being 'litigated') when it has become the subject of a formal court action or law suit or arbitration.“
27.	CASH FLOW SCHEDULE is thought for money for this project or general?	Volume 1, Section 2, Form 4.6.9.5: The Cash Flow Schedule refers to the works covered by this tender only.
28.	Guarantee forms from Contract (Volume 2) need to be given with tender or after award?	Reference is made to Volume 1, Section 1, Instructions to tenderers for the information to be submitted by the tenderer. No forms that are part of Volume 2 are required as part of the tender. In order to be clear: Tender Guarantee according to form 3.1 from Volume 1 has to be submitted with the tender.
29.	This Contract (Volume 2) we get after Award, we don't have to send it with tender?	Reference is made to Volume 1, Section 1, Instructions to tenderers for the information to be submitted by the tenderer. It is not required to submit Volume 2 with the tender.
30.	Could you tell us the total length of LONGITUDINAL PROFILE OF FAECAL CANAL?	Reference is made to Volume 3, Clause 1.1, which reads” This Contract and the contract №. 2 for the Construction of Water Supply and Sewerage System are being implemented in parallel ….” In addition please refer to Volume 3, Clause 2.2.2 where it states: “The influent to the plant is delivered at the site border.” and “The discharge pipeline and discharge structure are constructed in the parallel contract until the border of the site.” And in addition, please refer to Volume 5 Drawing 4 for the location of the connection points.
31.	In the drawings (Volume 5) we have just sheet 2, could you	Assuming that question refers to Drawing 4 – Situation – Technical solution,

Questions and answers

	send us sheet 1 (Technical solutions)?	faecal collector and outlet collector – 1.1, 1.0, 1.0IS; sheet 1 is not relevant for this Contract. Also, Volume 5, Drawing 1 provides the "Layout overview on topographical map"
32.	Could you tell us the length of acces road to the location of the plant (490 m?) or it is there some crossroad?	The length of the access road is approx 490 m, width 5.5 m; see Volume 3, Clause 2.10.
33.	What is the minimum number of required lines for biological treatment (aeration/nitrificationdenitrification) for the phase 1.? According to the size of WWTP Drniš for the phase 1, will be one biological line for phase 1 accepted?	No requirement for the number of treatment lines is defined in the Employers requirements. The tenderer shall provide his design in line with the framework requirements, i.e. one biological line will be accepted
34.	What is the minimum number of required Secondary Sedimentation tanks for the phase 1.? According to the size of WWTP Drniš for the phase 1, will be one Secondary Sedimentation tank line for phase 1 accepted?	Please, see Answer No 33.
35.	In the table on the page 18, volume 3, there is written that design and construction of civil works for grit and grease chamber is required also for the phase 2. But on the page 21, volume 3, Grit and grease removal, it is written that grit and grease removal system shall be designed for the phase 1 and only extension for phase 2 must be included. Please specify if the construction of civil works for phase 2 for grit chamber must be included in the scope of supply or only the extension for phase 2 has to be foreseen. Considering that phase 2 is for the target year 2031, it means that constructed civil works for phase 2 will not be used and in operation for the next 20 years.	The civil works for the grease and grit removal system shall be designed and constructed for phase I and phase II in accordance with Volume 3, page 18. The mechanical works shall be designed and constructed for phase I only. For phase II detailed drawings for the mechanical works shall be supplied.
36.	On the page 16, volume 3, Odour and aerosols, there is demand that foul air must be treated with bio filter/peat filter.	Foul air must be treated with a bio/peat filter.

Questions and answers

	But on the page 6 general scope of work, there is no biofilter and elsewhere in the volume 3 and also in the volume 4 there is no reference for the biofilter. Please, clarify if the bio filter/peat filter is required and must be delivered.	
37.	Is it acceptable to use compact unit for thickening and dewatering of sludge, which consists of gravity thickening on the belt and then thickened sludge is dewatered with belt dewatering press?	Please, see Answer No 24.
38.	Is it acceptable to drain all supernatant waste water directly to the inlet pumping station or must be supernatant tank and pumping station delivered and constructed?	A supernatant tank is not required. Supernatant water may be fed directly to the inlet pumping station.
39.	On the page 31 volume 3, it is written BOD, TOC, COD for inline quality measurement. Does it mean that BOD, TOC, COD must be measured with on-line instruments or the samples will be taken and waste water will be analyzed in the laboratory?	Volume 3, Clause 2.7.3 Control Specifics, states that COD, BOD, TOC, Temperature, pH and EC shall be measured inline, with on-line instruments.
40.	What is 100 year flood level of the Čikola river at position of outlet of planned WWTP Drniš.	Please refer to Answer 9, Minutes of Site Visit and Clarification Meeting, D Discussion.
41.	Are Influent and effluent collectors subject to this tender? If not, which will be the connection points of WWTP infrastructure collectors to influent and effluent sewers?	Please refer to Volume 3, Clause 2.2.2 where it states: “The influent to the plant is delivered at the site border.” and “The discharge pipeline and discharge structure are constructed in the parallel contract until the border of the site.” and to Volume 5 Drawing 4 for the location of the connection points.
42.	Should WWTP objects be connected to local gas network (heating purposes), or is another heating source predicted? If so what is the length to the nearest point where connection to local gas network can be made?	No local gas network exists in Drniš. The heating of the WWTP objects shall be designed by the contractor. The source of heating energy is to the choice of the Contractor.

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43.	Should WWTP be connected to local phone network? If so what is the length to the nearest point where connection to local phone network can be made?	The WWTP shall be connected to the local phone network. The tenderer shall assess the nearest connection point.
44.	Should WWTP be connected to local water supply network? If so what is the length to the nearest point where connection to local water supply network can be made?	The WWTP shall be connected to the communal water supply network. The tenderer shall define the nearest connection point in coordination with the water company of Drniš (Rad d.o.o.).