EUROPEAN UNION
DELEGATION TO THE REPUBLIC OF SERBIA

CONTRACTING AUTHORITY'S CLARIFICATIONS No. 1

Project title:
Mobile drinking water treatment plants

Publication reference: EuropeAid/137423/DH/SUP/RS

No.	Question	Answer
1.	Please specify the quality of the raw water.	The predictable parameters based on registered pick values during the period 2014-2017 (including the last floods) for the raw water quality are given below in Appendix 1, as well as the parameters of the Serbian Drinking water standards. (Answers to questions 1-7) Those parameters can vary up to 20%, which the WTP must hold out in normal working conditions. The delivery of the raw waster to the WTP shall be done via submersible raw water intake pump 200l/min, 40m head (see Annex II+III 1.1.3 WTP filter station). (Answer to question 3) The disposal of the waste/backwash water shall be realized via 30m flexible tube (see Annex II+III 1.1.6 - WTP filter station). External connector and other accessories incorporated as part of fully functional technical solution. (Answer to question 3)
2.	Can you provide any water analysis for the feed waters we need to treat under normal conditions? We know that when they are required the water will be different because of the emergency situation in different locations, but it gives us useful information about possible contamination in the water that we need to remove. If you do not have anything we will specify the maximum levels the plant will be able to treat.	
3.	Data about the quality of the raw water and the methods how to transfer the raw water to the WTP, as they are not defined; • Similarly the disposal of the drain water as it is not defined; • For the product water TDS and conductivity as it is not mentioned;	
4.	Regarding point 1.1. WTP - filter station water source: rivers and lakes, please provide us with additional information /values/ about following water parameters and characteristics: • Conductivity of your rivers and lakes; • Water hardness; de and mg of entrance water.	
5.	We would appreciate to receive further specifications regarding the type of water to be treated.	
6.	Would it be possible to have the analysis of the raw water?	
7.	Since it is defined in tender documentation that the source of raw water are rivers and lakes, could You please announce the maximum limits for raw water input parameters, so Bidders can determine water treatment technology in Mobile drinking water treatment plants?	

No.	Question	Answer
8.	In the annex II and III: "Technical specifications + technical offer" on page 11 of 21, the specifications for the packaging machine are given. It is stated that production shall be 2, 5-10 l water bags/bottles. Is it required to have both, bags and bottles, or is it possible to offer only bottle packaging in the tender?	Packaging in bags or in bottles is acceptable.
9.	We understand that information in Annex II+III should be supplemented by further information in additional sheets. Can we provide these information in free form, for example providing company brochures etc. or should we follow a format?	As it is stated in the Annex II+III TS (Technical specifications)", Section 0.6 – Descriptions of items and supporting documentation", additional supporting documentation, which would facilitate assessment of the technical offer's compliance can be attached.
10.	Can you confirm that it is allowed to submit tenders for only one of the lots?	Yes, the tenderer may submit a tender for one lot.
11.	Is it possible to submit the tender by e-mail or through an online system?	Electronic submission of the tender under this particular procedure is not acceptable. Please follow instructions outlined in published Instructions to tenderers, Article 10 – "Submission of tenders".
12.	We would appreciate to receive 06. B. Annex II+III TS (Technical specifications) for the above mentioned tender dossier in word format, if available.	As a general rule we publish our documents only in PDF
13.	Would it be possible to have Annex II+III in doc format in order to facilitate drafting of the offer?	
14.	You state that the packaging machine should come in a 20ft container, but can I clarify that this is in its' own container, and not in the same one as item 1.1 (the main WTP). The same goes for item 1.3, as based on the technical specs it seems that this should be in the same container as item 1.2.	It is envisaged that the packaging machine and mobile water reservoir can be transported in the same 20ft container.
15.	The packaging machine will probably occupy all the 20' container. Can we position the mobile water reservoir out of the container (described in item I.2)?	The mobile reservoir (plastic or rubber) can be placed outside the container during field operations on site but must be transported together with the other components in any of the containers.
16.	Due to the dimensions and amount of the necessary equipment for processing raw water (1.1 WTP-filter station, 1.2 Packaging machine and 1.3 Mobile water reservoir), is the installation limited to only 1 (one) 20' container or is it possible to use more containers?	Two containers are planned. One contains 1.1 WTP-filter station, the other one contains 1.2 Packaging machine and 1.3 Mobile reservoir.
17.	The accumulation tank to feed the plant with a regular flow of 4.5 - 5.5 mc/h is existing or must be provided? If existing, what type (buried or above ground) and which size?	An accumulation tank is not foreseen in the scope of supply. The WTP is fed with raw water from a river or a lake using a submersible raw water intake pump 200l/min, head 40m. Net

<table>
<tr><th>No.</th><th>Question</th><th>Answer</th></tr>
<tr><td></td><td></td><td>capacity of the WTP filter station shall be 4.5-5.5m3/h.
(see Annex II+III 1.1.1 WTP filter station)</td></tr>
<tr><td>18.</td><td>Is the project expecting to have the generator inside one of the containers as well?</td><td>The diesel generator is also mobile and has its own trailer (or integrated on the trailer). The off-road vehicle should tow the generator and transport the crew. (See Annex II+III 0.3 Organization and additional requirements).</td></tr>
<tr><td>19.</td><td>Must the diesel generator feed only the WTP (as indicated in paragraph 1.4) or both WTP and packaging machine?</td><td>The diesel generator shall feed all energy consumers ensuring operation of the entire plant. (See Annex II+III 0.3 Organization and additional requirements).</td></tr>
<tr><td>20.</td><td>Item 1.5 Generator: There are some specifications missing for the generator (points 6 to 8):
<table>
<tr><td>1.4.</td><td>Generator</td><td>Quantity: 1</td></tr>
<tr><td></td><td colspan="2">Manufacturer's name:</td></tr>
<tr><td></td><td colspan="2">Product/type, model:</td></tr>
<tr><td></td><td colspan="2">1. Diesel Powered Electric Generator
2. Dimensions +/- 20%: 170x100x100 cm
3. Power: at least 12kW (prime or other rating/output depending on the WTP capac
4. Weight: 600 kg
Autonomy time: 10 hours
5. Voltage: 2x230V / 2x400V</td></tr>
</table>
<table>
<tr><th>1.
Item Number</th><th>2.
Specifications Required</th></tr>
<tr><td></td><td>8. Sound proof enclosure
9. Voltmeter: 0-400 V
10. Electrical starter facility</td></tr>
</table>
</td><td>The missing points are related to the trailer transporting the diesel generator:
6. The generator should be integrated on the trailer or installed on the trailer.
7. The trailer's specifications have to relate to actual capacity and associated parameters of the diesel generator.</td></tr>
<tr><td>21.</td><td>Lot 2, Item 2.1 vehicle Compact Off- Road. Please provide more details about the requirement as regards the Power Transmission, point 7: "Reduction: two degree reduction without differential lock".

Additionally, please clarify do you envisage standard model vehicle or not a vehicle that has undergone a modification on the gearbox?</td><td>The required vehicle shall be a standard model.
There is typing error which to be corrected and shall read as follows:
2.1.7 Reduction Two-degree reduction with differential lock</td></tr>
<tr><td>22.</td><td>Will you pack in water bags or in bottle? There are different machines so we need to choose one or the other.
How many ml of water will be packed in each</td><td>Bottles or bags could be offered with a volume of 2l or 5l, or 10l in economic and standard occupancy and dimension.</td></tr>
</table>

No.	Question	Answer
	bag? 2.5l or 10L for each bag? For bags, can you provide us the dimensions (length, width, height)? How many ml of water will be packed in each bottle? 2.5l or 10L for each bottle? For bottles, can you provide us the required capacity and dimensions? The date printer on bags must be made through a printer or can it be embossed?	Direct print dating as well as embossing is allowed
23.	Will there be only a submersible pump with the flow of 12m3/h or a pumping station (1 active +1 reserve)?	One submersible pump with a capacity of 200l / min, 40m is foreseen.
24.	We assume the project refers to hydraulic legs that will extend when the container is on the trailer, and then retract when free to set the container on the ground. Would the project accept any other form of unloading mechanism such as hook lift or hiab crane? This is because generally these sorts of containers do not come with retractable legs. If the legs are required, how will they be powered? By the same generator that is powering the rest of the WTP? Do the legs have to be an integral part of the container or would the project accept 4 removable legs? As there are a few systems like this available.	4 removable legs are acceptable.

Appendix 1

Results of field trials - the Sava River	**Serbian Drinking Water Standards SDWS- (up to- allowed values)**	**Max measure values of raw water**
Physical-chemical parameters		**2014-2017 (including floods in 2014)**
Smell, cold/hot (40°C)	without	/
Turbidity, NTU	1	630,0
Color, Pt-Co scale	5	>150
pH value	6,8 - 8,5	8,2
Electrolytic conductivity at 20°C, µS/cm	1000	470
Dry content at 105°C, mg/l	-	706
Suspended material, mg/l	-	480
Consumption of $KMnO_4$, mg/l	8	40,0
Ammonium, NH_4^+, mg/l	0,10	0,23
Nitrites, NO_2^-, mg/l	0,030	0,048
Nitrates, NO_3^-, mg/l	50	7,0
Free chlorine, mg/l	0,50	/
Total chlorine, mg/l	-	/
Chlorides, Cl^-, mg/l	200	36,0
Fluorides, F^-, mg/l	1,2	0,22
Total iron, Fe, mg/l	0,30	6,25
Manganese, Mn^{2+}, mg/l	0,05	<0,05
m-alkalinity, mE/l	-	3,8
Total hardness, °dH	-	14,5
Carbonate hardness, °dH	-	10,6
Calcium, Ca^{2+}, mg/l	200	/
Calcium, Ca^{2+}, mg/l - IC	200	71,7
Magnesium, Mg^{2+}, mg/l - IC	50	10,9
Bicarbonates, HCO_3^- mg/l	-	231,8
Carbon dioxide, CO_2, mg/l		/
Total sulfides, S^{2-}, mg/l	without	/
Sulphates, SO_4^{2-}, mg/l	250	30,0
Phosphates P_2O_5(P), mg/l	0,15	0,128
Total phosphates P_2O_5(P), mg/l		0,665
Aluminium, Al, mg/l	0,20	0,04
Silicon dioxide SiO_2, mg/l		/
Oxygen, mg/l		11,0
BOD_5		1,3

Oxygen saturation,%		115,3
Oxide-reduction potential, mV		199,6
Detergents (ABS), mg/l	0,10	<0,010
Phenol, mg/l	0,001	<0,001
Total trihalomethane, on field, μg/l	100	<0,1
TOS, mg/l	-	6,71
Mineral oils, mg/l	0,01	/
UV extinction at 254 nm, 1/m	-	50,0
UV extinction of the filtrated sample at 254 nm, 1/m	-	12,0
Sodium, Na^+, mg/l - IC	150	11,1
Potassium, K^+, mg/l - IC	12	1,4
Metals, GFA-technique		
Aluminium Al, mg/l	0,2	/
Arsenic As, mg/l	0,01	0,004
Antimony Sb, mg/l	0,003	<0,002
Copper Cu, mg/l	2	/
Barium Ba, mg/l	0,7	0,060
Cadmium Cd, μg/l	3	1,1
Manganese Mn, mg/l	0,05	/
Molybdenum Mo, mg/l	0,07	<0,005
Nickel Ni, mg/l	0,02	0,007
Lead Pb, mg/l	0,01	0,035
Selenium Se, mg/l	0,01	<0,002
Chrome Cr, mg/l	0,05	0,005
Trihalomethanes GC/ECD		
Total trihalomethanes on field, μg/l	100	0,3
Chloroform, μg/l	40*	0,3
Dichlorinebromomethane, μg/l	15*	<0,1
Dibromochloromethane, μg/l	-	<0,1
Bromoform, μg/l	-	<0,1
Chlorinated alkanes GC/ECD		
1,1,1-trichloroethane, μg/l	2000	<0,1
1,2-dichloroethane, μg/l	3	/
Carbon tetrachloride, μg/l	5	<0,1
1,2-dibromomethane, μg/l		<0,1
Chlorinated alkenes GC/ECD		
Trichloroethane, μg/l	70	<0,1
Tetrachloroethane, μg/l	40	<0,1
Pesticides, GC/ECD и GC/MSD		
Pesticides, μg/l	0,5	
α-HCH		<0,02
β-HCH		<0,02
γ-HCH (Lindan)	0,2	<0,02

δ-HCH		<0,02
Heptachlorine	0,03	<0,02
Aldrin	0,03	<0,02
Heptachlorine epoxide	0,03	<0,02
α-Endosulfan		<0,02
Dieldrin	0,03	<0,02
4,4 DDE		<0,02
Endrin		<0,02
β-Endosulfan		<0,02
4,4 DDD		<0,02
Endrin aldehyde		<0,02
Endosulfan sulfate		<0,02
4,4 DDT	0,1	<0,02
Metoxychlor		<0,02
Hexachlorbenzen	0,01	<0,02
Atrazine	0,1	<0,05
γ-Chlordane		<0,02
α-Chlordane		<0,02
Simazine	0,1	<0,05
Alachlor	0,1	<0,05
Trans-Nonachlor		<0,02
Cis-Nonachlor		<0,02
Bacteriological tests		
Total number of mesophilic aerobe bacteria in 1ml (22°C/37°C)	10	5700
Total colimorph bacteria in 100 ml (MPN or TCC)	0	>24000
Faecal colimorph bactreia in 100 ml (MPN or TCC)	0	24000
E.Coli in 100ml, MPN	0	3800
Faecal streptococcus in 100ml, MPN	0	920,8
Pseudomonas aeruginosa/100ml	0	/
Proteusspecies	0	/
Clostridium sulphito-reductores in 100ml	0	/
Identification of bacteria	without	/
Colilert	0	
Enterolert	0	