Belgrade, 8th November 2023

CONTRACTING AUTHORITY'S CLARIFICATIONS No.1

Strengthen capacities in air quality monitoring

Publication ref: NEAR/BEG/2023/EA-OP/0121

No.	Question	Answer
1	Dear Madam/Sir, Regarding to annex 2+3, clause 3.3 "Filter holder accessible from front side of the analyzer" the specification directs only 1 brand which is not in accordance with the rule of origin. we kindly request to add "or filter holder is on the back of the analyzer" since does not affect the function of the equipment.	Technical specification foresees that the filter holder should be located on the front side of the analyzer because of easier manipulation and regular 15-day replacement, which is recommended by almost every manufacturer of this type of equipment. Market research has shown that there is more than one equipment manufacturer meeting this requirement. Therefore, we do not accept your request regarding point 3.3
2	We believe NEAR/BEG/2023/EA-OP/0121 is receiving funding from one of EU funding programs, and so it should respect EU legislation as much as possible in order to achieve entire compliance with the requirements of the EU Directives. We have noticed a full compliance with valid EN regulations is required by technical specification in case of all gas pollutants specified under items 3, 4, and 5, where a compliance and type approval (certification) in accordance with valid EN14212, EN14211, and EN14625 is required. But, contrary, the full compliance and type approval in accordance with valid EN 16450 related to suspended particulate matter measurement is not fully required and alternative approval is also acceptable. We would like to highlight this is not in compliance with valid EN legislation and requirements, even it is related to the most important dominant pollutants, where the compliance to valid EN regulations should be mandatory, as only fully type approved solutions could provide reliable and stable measurements. We do not understand why the corresponding requirements for item 3+4+5 should be different than item 2 requirements from this perspective. We fully respect the rights of local beneficiaries to select the measurement technology, but it should respect valid EN legislation and requirements especially in case of 100% funded European projects like NEAR/BEG/2023/EA-OP/0121.	The EU legislation in force is based on the "Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe" and the amendments in "Commission Directive (EU) 2015/1480 of 28 August 2015 amending several annexes to Directives 2004/107/EC and 2008/50/EC of the European Parliament" In those documents the reference methods and the applicable EN standards are listed. These are: • EN 14212:2012 for SO2 • EN 14211:2012 for NO and NO2 • EN 14626:2012 for CO • EN 14625:2012 for O3 • EN 12341:2014 for PM10 and PM2,5 The EN 16450:2017 is not listed. Therefore, we requested the conformity with the GDE or with the field test procedures of the EN 16450 or equivalent. This will also include all analysers with a valid EN 16450:2017 certificate.

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3	We can clearly see the technical specification of item 2 related to Automatic analyzer for measuring of suspended particulate matter PM10, PM2.5 and PM1 is going much further in such incompliance to valid EN 16450 standard requirements. It is even going much further with respect to the sampling system, as specified under item 2.11 of technical specification, where "No sample heating" is required. Please, be aware there is no EN 16450 type approved solution, which would be based on such sampling system, what do have clear technical and performance reasons behind. In case the air sampling will not be complying with the valid EN 16450, the complete measurement will not be complying with the valid EN 16450 standard. We would like to kindly highlight one more time there are strong regulatory compliance requirements related to other pollutants, which are ignored in case of particulate matter analyzer specification. We have investigated the situation, and it seems such contrary specification of particulate matter analyzer is related to the common past solution used in the local existing air quality monitoring network, but which is not type approved to valid EN 16450, and which should not be used to limit other properly EN 16450 type approved solutions. We even believe such non-type-approved solution should not even be acceptable in the case of fully EN funded project, where EN directives compliance should be mandatory. We would like to also clearly indicate such solution required, which fulfilling those contrary specifications, is only single available solution on the market, what is also against the basic policies of the European funded projects as we believe, as it is against the fair competition. We consider that the excessive requirement applies only for the purpose of favoring a particular producer.	If the test results are confirming that there is no loss of semi-volatile particles, we will accept also other methods to remove the humidity from the particles. (e.g. softly heating) **Corrigendum for Item 2, requirement 2.11 will be published.** Regarding EN 16450: Please see our answer for question 2.
4	Item 2.1 of technical specification requires simultaneous measurement of PM10, PM2.5, and PM1. Item 2.4 requires a measurement cycle lower than 60 seconds (1 min). So, we presume the meaning of "simultaneous measurement" in item 2.1 is related to the measurement cycle specified under item 2.4. Please, could you kindly confirm switching between PM10 and PM2.5 measurement within the measurement cycle is still acceptable and to be considered as simultaneous measurement as required?	Switching between PM10 and PM2.5 measurement within the measurement cycle is not acceptable and it is not considered as simultaneous measurement as required under requirement 2.1. The request from technical specifications will remain the same

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5	Item 2.3 of technical specification requires measurement range from 0 to 5000 µg/m3. The range seems to be very limited with respect to common short-term events at final destinations, where measured concentration peak values could reach higher values. It is probably related to a limitation of the specific solution, probably used at existing stations in the network, which could lead to misinterpretation of real conditions at the measurement sites in the past. All fully type approved (EN 16450) solutions are providing at least double measurement range from 0 to 10.000 µg/m3 for both PM10 and PM2.5 measurement, what should be respected.	According to our experience we consider the requested measuring minimum range to be sufficient even in episodes with high dust pollution in Republic of Serbia. Range of 0-10,000 µg/m3 is acceptable considering that the requirements in these Technical Specifications are presented as a minimum standard which the offered goods must meet
6	Item 2.4 of technical specification requires measurement cycle less than 1 minute. We would like to highlight the short-term events that could be missed in case of such longer measurement cycle, and we would like to kindly recommend shorten the time resolution down to 1 second to be able to detect any possible dynamic processes.	There is no EU-requirement for the datalogger to measure in 1 second intervals. However, the requirement in technical specification for 2.4. stated as follows: ,,Measurement cycle: < 1 min", so analysers with measurement cycle less than 1 minute are acceptable.
7	Item 2.10 of technical specification requires "Standard 19" rack mountable, including mounting material for fixing to a 19" rack". Please, could you kindly clarify the solution which fit standard 19" rack, including mounting material for fixing to a 19" rack, but which is not typical 19" rack enclosure is acceptable?	The use of a different type of 19" enclosure is accepted as long the accessibility from the front and rear side to the connectors are easily possible.
8	Item 2.11 of technical specification requires "No sample heating, so that no semi-volatile fraction is heated out (loss of semi-volatile compounds) use of dryer system without heating." We would like to highlight that such requirements are not in compliance with valid EN 16450 regulation. We would like to highlight that no affection of semi-volatile fraction is reachable by other solutions available, which are fully type approved in accordance with EN 16450. So, the Beneficiary is not forced to use non-type-approved solution in case loss of semi-volatile fraction is the key point. We consider that the excessive requirement applies only for the purpose of favoring a particular producer.	Please see our answer for question 3.
9	Item 2.11 of technical specification requires "Real calibration possibility of all optical channels and the mass concentration in Serbia." We would like to kindly ask for a clarification of the requirement on real calibration of the mass concentration, if possible. We would like to understand better what is required by such a specification.	A real calibration of an optical analyser must include the calibration of all optical channels in size, counted particle numbers and finally the measured mass concentrations. This calibration procedure must be available in Serbia to minimize the calibration time and time without measurements.
10	Item 2.11 of technical specification requires "Real calibration possibility of all optical channels and the mass concentration in Serbia." We would like to kindly ask for a clarification there is any	The ongoing quality control (including calibration) is a very important and serious issue. As we are requesting a real calibration (see answer to question 9) we are fully aware that this

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	additional request related to data availability and data validity, which can be affected by such calibration process even provided locally in Serbia. Any longer absence of the measurement unit due to external calibration process will immediately lead to invalid data for whole measurement period (month or even year) based on valid requirements of EU directives. We believe the request should clearly define those requirements in detail, or even be more oriented to onsite calibration processes, which are eliminating such issues completely, as it is common in these days at more than 50% of official measurement sites in European Union. In such case, a calibration will not disrupt the continuity of measurement (hourly averages will not be disturbed) and at the same time the requirement to comply with the prescribed measurement time in the year will be met. The Beneficiary should not request equipment that must be regularly sent to the manufacturer or other calibration institution to perform calibration in order to make the measurement in accordance with the operation according to the test report or according to the manufacturer's specifications. The reason is the subsequent high operating costs and the need to own backup equipment to perform replacement monitoring at the time the device is sent for calibration.	will need the use of spare analysers. At the same time the end user will perform the maintenance of the analysers (according to the advice of the manufacturer). As the request contains the availability of the real calibration in Serbia there is no need to send the analyser to the manufacturer.
11	We would like to highlight that there is only one solution available on the market which could fulfill the overall requirements of Item 2. Of technical specification, what is EDM 180 series analyzer manufactured by GRIMM company (DURAG Group). This solution has been used in the local AQM network for the past years, and so we fully understand the reasons for such requirements. But, if it is really needed this way, then it should be excluded from the open tender procedure as it is against the PRAG regulation applicable in European Commission tenders. We would also like to highlight one more time EDM 180 series analyzer is not compliant to valid EN 16450 regulation. With this specific information, the Authority made it impossible for all potential bidders to participate, which is inadmissible. We consider that the excessive requirements apply only for the purpose of favoring a particular producer.	Please note that the technical specifications are based on extensive market analysis, conducted in both local and EU marketplaces. Market analysis conducted prior to tender launch confirmed that market for requested goods is indeed open and competitive. Also, please see the answer no.2 linked with EN 16450 regulation.
12	We would like to highlight intended EDM 180 series solution, which is solely required by this technical specification, is to be discontinued on the manufacturer side, substituted by new model EDM 280, which is not in compliance with the required technical specification (as it is respecting EN 16450 requirements, which are not	Please refer to the answer to the question no.11.

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	in compliance with this project technical specification). This situation could also be critical regarding the sustainability of such solution, if accepted, with respect to availability of the spare parts in upcoming years.	
13	In section 3.3 for the SO2 analyzer, the Purchaser requires: "Sample cleaning: 5 µm PTFE filter 47-54 mm", but already in sections 4.3 and 5.3 for NOx and O3 analyzers, the Ordering Party requires: "Sample cleaning: 5 µm PTFE filter 47 mm". We assume to best economic offer all filters 47 and 54 mm for all gas analyzers, should be acceptable. Does The Ordering Party accept 47 and 54mm pre-filters for all types of gas analyzers?	All filters for all gas analysers in the range 47 – 54 mm will be accepted. **Corrigendum for Item 4, requirement 4.3 and Item 5, requirement 5.3 will be published.**
14	In items 3.10, 4.10, 5.10 the Employer requires LCD color display with touch screen. What is the reason for such a requirement? There are no operation or technical figures that LCD should be in color. Especially since there is no similar requirement for the other analyzers (including the Automatic analyzer for the measurement of PM10, PM2.5 and PM1)? In addition, we draw attention to the fact that the analyzers are mainly controlled and operated remotely. Therefore, a color display does not add anything, but increases the cost of purchase. We also note that existing analyzers do not use color on the LCD display to more clearly indicate exceedances or errors, which could be useful for operation, but only add color to the display. Will The Ordering Party accept a black and white LCD display?	The intention is to upgrade the existing network in Serbia with new/modern/up to the time analyzers. The request from technical specifications will remain the same.
15	In 3.4, 4.4, 5.4, the Ordering Party requires measurement ranges: - for SO2: Programmable 0 - - 50, 100, 200, 500, 1.000, 10.000 ppb - for NOx: Programmable 0 -- 50, 100, 200, 500, 1.000, 10.000 and 20.000 ppb. – for O3: Programmable from 0 to 10 ppm What is the reason for choosing such high ranges, not found in ambient air? There are no UU legislation and standards which require such high ranges. European standards (which the Ordering Party refers to and which the analyzers must meet, according to the Ordering Party's requirements) require the following ranges: - NOx norm EN 14211: NO 1200 µg/m3 or ~962ppb, NO2 500 µg/m3 ~261ppb - SO2 norm EN 14212: SO2 1000 µg/m3 or ~376ppb - O3 norm EN 14625: O3 500 µg/m3 or ~251ppb In addition, usually the concentrations of nitrogen oxides and sulfur dioxide do not exceed several tens of µg/m3, while ozone in extreme situations does not exceed 150 µg/m3. We also point out that emission concentrations are in concentrations of hundreds of g/m3, so the required ranges are too low to be used additionally for emission measurements. In addition, a high range is always	The requested ranges are in order to measure the ambient concentrations even in case of a (fire-) accident. Therefore the analyser should switch automatically into a range where the actual concentration will be measured with the best sensitivity. After the episode with the high concentration the analyser must automatically switch back to the range according to the EN standards fulfilling all the requests given in the relevant EN standards. Therefore we stick to requested technical requirements under points 3.4, 4.4, 5.4 and don't accept your request.

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	associated with poorer measurement precision. The precision of the instrument is usually 1% of the range, so the precision for 10,000 ppb will be 100 ppb, and this value is much higher than expected in ambient air (both for SO2, NOx and O3). Will the Contracting Authority accept the following ranges: NOx: 1000 ppb SO2: 500 ppb O3: 1000 ppb	
16	In section 5.12, the Contracting Authority requires the following "Calibration system: The device must be supplied with a zero scrubber and an O3 – generator, requested O3 level must be programmable in ppb from 50 ppb to 1000 ppb" What is the reason for requiring a generator operating range of 50 ppb to 1000ppb? Especially since this is not in accordance with EN 14625. By convention, ozone analyzers are tested at concentrations of about 200/250 ppb (Not more than 80% of the certified range according to the EN 14625), so generating ozone at 1000ppb is not necessary, much less switching between ranges. In addition, I would like to point out that the vast majority of laboratories with a higher-order standard for ozone in the European Union (e.g., Czech Republic, Germany, Austria) have such a standard accredited at a maximum of 400 ppb. Therefore, it will not even be possible to validate the generators in the upper range. Such requirements make sense only for transfer standards analyzers or laboratory units, in no case for analyzers used to measure ozone in the field. In addition, the stipulation that the range must be switched between 50ppb and 1000 ppb is inconsistent with the requirements for other gas analyzers (SO2, and NOx) working in parallel with O3 analyzers. According to the provisions of sections 3.11 and 4.12 for these instruments, the Contracting Authority requires the following: "The device must be supplied with a zero scrubber, shut off valve for an external gas cylinder and critical orifice to control the flow from the gas cylinder." In addition, calibration gases of one preset concentration are part of the supply, so the solution does not allow the use of different concentrations for range calibration for SO2 and NOx measurement analyzers. Why, then, does the Ordering Party make such a requirement for Ozone (and only one manufacturer meets such requirements)?	According to end user experience (and also stated in the EN 14625 for O3) a new sample filter in the O3 analyser will need some time to get saturated with O3. Until this time the filter will adsorb partly the O3 concentration. Therefore it is common practice to switch the internal O3 -generator to a high level of O3 in order to saturate the filter much faster. The higher the ozone concentration, the faster saturation occurs. This will save time and will avoid to mark O3 – values as invalid until the saturation is reached. However we allow analyzers with solution which enables switching between two levels of ozone. **Corrigendum for Item 5, requirement 5.12: Calibration system will be published.**
17	In paragraphs 3.13, 3.14, 3.15, the Contracting Authority requires the following "Analogue: 0.1÷10 V – measurement values" Analog outputs are an old technology, no longer used in automatic air pollution monitoring. All available data loggers on the market are	The question was stated wrongly since the points 3.13, 3.14, 3.15 are not referring to analogue inputs/outputs. Assuming this was typing error and you were thinking of points 3.12, 4.13, 5.13 please find our answer below:

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	connected to analyzers digitally. Therefore, usually analog inputs/outputs are an optional feature, at additional cost. Is the Ordering Party aware that the requirement to have inputs/outputs that will not be used in the operation of the instruments will result in a higher cost of purchasing the instruments. In such a situation, won't the Ordering Party drop the requirement for analog inputs/outputs?	**The requirement for analogue inputs/outputs will not be requested.** **Corrigendum for Item 3, requirement 3.12, Item 4, requirement 4.13 and Item 5, requirement 5.13 will be published.**
18	Item In 3.12, 4.13, 5.13, the Ordering Party requires: Ethernet using TCP/IP protocol. Will the Ordering Party accept the UDP/IP protocol? The two protocols are different from each other. TCP is a connection-oriented protocol and requires data integrity at the destination, while UDP is a connectionless protocol and does not require data integrity or does not require a connection to the host to ensure data integrity.	As some of the requested analysers will be renewed analysers at existing stations where there are already data loggers installed and working, we are requesting the same protocols, for connectivity between analysers and data loggers, to be used as they are at the moment. The request regarding the digital signal inputs/outputs from technical specifications will remain the same.
19	In 3.17, 4.18, 5.18, the Ordering Party requires: Standard 19" rack mountable, max. 4 height units including mounting material for fixing to a 19" rack including telescopic slides. Will the Purchaser accept Standard 19" rack mountable, max. 4 height units including mounting material for fixing to a 19" rack including telescopic slides? There is no substantive justification for the requirement of max. 4 height units for gas analyzers. This restriction will limit competition and eliminate the world's leading manufacture.	The question is not clear due to the fact that the requirement in the tenderer' question is the same as in the Technical Specification.
20	In 4.11, the Ordering Party requires: Molybdenum converter, converter efficiency >95% Heated to > 300°C. The molybdenum converter is designed to reduce NO2 to NO. The main quality parameter of the converter is its efficiency. An efficiency of >95% is assumed to be high quality. We don't understand the requirement to heat the converter to >300°C (this is an indication of one manufacturer, which heats its solution to such temperatures), and thus eliminates manufacturers who offer converters that achieve >95% efficiency at lower temperature. It can be argued that the above provision eliminates better solutions, since achieving >95% efficiency at lower temperatures is a more modern, more economical, more ecological (less power consumption required for heating) and safer solution for operators. Will the Purchaser accept a solution, technologically better (and above all safer for the operator) in which the molybdenum converter used, heated only to 200, achieves an efficiency of >95%?	According to end user experience the Molybdenum converters heated to > 300°C are very reliable and keep the efficiency for the life time of the analyzer. Please note that the technical specifications are based on extensive and expansive market analysis, conducted in both local and EU marketplaces. Market analysis conducted prior to tender launch confirmed that there is more than one manufacturer that meets this criterion. The request from technical specifications will remain the same.

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21	In 4.3, the Ordering Party requires: NH3 removing unit to avoid interferences with NH3. Dryer for stable and continuous ozone production. What does the ordering party mean by applying these requirements? The above provisions prevent competition and limit it to one product available on the market. Shouldn't the Ordering Party simply require non-interference of NO and NO2 measurements with NH3 and stable and continuous ozone production? Please note that individual manufacturers have their own individual solutions to achieve the above requirements (no interference with NH3 and stable and continuous ozone production). The ordering party requires an analyzer compliant with EN 14211. The ordering party also requires a certificate of compliance with EN 14211 from an accredited laboratory. Part of the certification testing is also testing the effect of NH3 on NO and NO2 measurement. Since the analyzer in question has been certified to EN 14211, it means that the effect of NO2 on NO and NO2 measurements is within the limits prescribed by the standard. The solution for removing NH3, additionally required by the customer, is used only by one of the manufacturers. Others use other solutions, the results of which are identical (NH3 response at the level of the limits prescribed by EN 14211) to those required by the customer. Will the Purchaser accept an analyzer that is certified to EN 14211, confirming that NH3 interference is below the required standard?	Yes it is acceptable to offer analyzer that is certified to EN 14211, confirming that NH3 interference is below the required standard. **Corrigendum for Item 4, requirement 4.3, will be published.**
22	The ordering party in Annex II and in sections 2.14, 3.18, 4.19, 5.19 wrote down the requirements for communication with KOŠAVA Software. Requiring analyzers to communicate with KOŠAVA Software using the API protocol is a significant competitive constraint. We note that the API protocol is the property of the US analyzer manufacturer TAPI, therefore other manufacturers do not have the rights to use it in their analyzers, which is a significant competitive constraint. There are many open communication protocols commonly used in air pollution monitoring networks (e.g. Bayern-Hessen), on the market. Will the ordering party accept communication between the analyzers and the datalogger installed at the station by a protocol other than API?	API is worldwide used open protocol for data communication and doesn't belong to any manufacturer. Under points 3.18, 4.19, 5.19 it is stated the following: "After installing the equipment and instruments, it is necessary to perform a test that shows that the data from all the instruments are received and that they can be processed and displayed using the KOŠAVA software. Please see Annex 2: Compliance with existing 'Košava' system. "and additionally explained more in detailed (Annex 2) how the existing CAS Košava is working so that the potential bidder understands the complicity of the system. Moreover, there is no request for certain protocol (API protocol) to be used for the analysers.
23	The ordering party in section 7.2 requires: "Vacuum pump with maximum flow rate of 6 m3/h (no blower type)." What is the reason for requiring a pump with such a high flow rate, especially since the EN 12341 standard specifies an intake flow rate of 2.3 m3/h, and the Ordering	To ensure an ample reserve, a robust vacuum pump with a flow rate of 6 m3/h is necessary in the event of increased filter resistance, such as from high humidity or a high dust layer.

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	Party itself requires a control „Flow rate Variable from 1.0 m³/h up to 2.3 m³/h".	
24	Regarding the requirement to transfer data from the station to the KOŠAVA software using the JASON format. We request that the full specification of the JASON format be made available. We note that the JASON format is not an open format, which clearly limits competition. If the Ordering Party does not provide the JASON protocol format, only the bidder submitting a joint bid with the KOŠAVA software developer will be able to submit a bid, no other potential bidder will be able to meet the above-described requirement.	There is typo in the technical specification. Please read JSON instead JASON. JSON is an open standard file format. Moreover, it is a common data format with diverse uses in electronic data interchange. Therefore, there is no need to provide the JASON protocol format to bidders for preparation of offer. However, example of JSON format file will be provided to the Contractor.
25	The ordering party in section 7.1 requires: "Flow rate Variable from 1.0 m³/h up to 2.3 m³/h". This is inconsistent with EN12341, which requires a flow rate of 2.3 m³/h for LVS. If this is the case, will the Purchaser not accept a flow rate of 2.3 m³/h.	Variable from 1.0 m³/h up to 2.3 m³/h includes the flow rate of 2.3 m³/h.
26	The ordering party in section 7.5 requires: "The filter holders must be able to take in filters of 47 mm and also 50 mm diameter. The height of the filter holders must be 12 mm and the outer diameter 71.5 mm." What is the reason for the requirement of 50mm filters? The EN 12341 standard applies only to 47mm filters. 50mm filters are not used in the European Union in LVS. Specifying the dimensions of the filter holder in this way clearly indicates a potential supplier, since only one manufacturer on the market uses filter holders that meet the Ordering Party's requirements. Will the Ordering Party accept pick-ups for 47mm filters?	The filter holders must be able to take in filters of 47 mm or 50 mm diameter. **Corrigendum for Item 7, requirement 7.5 will be published.**
27	Shouldn't the Ordering Party specify twice the number of holders, i.e. 32pcs per instrument? So that the quantity would be enough for a cycle of work during which one set (16pcs) works in the sampler, the other (16pcs) is prepared in the laboratory.	Under point 7.5 we clearly stated the requirements regarding number of filter holders that need to be delivered.
28	Shouldn't the sample filters stored in the sampler be cooled to 23oC (according to EN12341 required for PM2.5) for the time of collection by the service?	It is not necessary to store the sampled filters at 23°C. Tests of the European Reference Laboratory have shown that cooled filters (23°C) and non-cooled filters of the samplers give identical results.
29	Should the samplers fully comply with EN12341 standards and should not have a certificate and a Type Approval report for compliance with E12341 standard as required by the Purchaser for the other analyzers (automatic PM10, PM2.5, SO2, O3, NOx analyzer)?	The samplers should fully comply with EN12341. As for analyzers, (automatic PM10, PM2.5, SO2, O3, NOx analyzer) the requirements are as stated in Technical Specification.

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30	The contracting authority in section 7.11 requires: "The housing must be made of stainless steel sheet metal of 1.5 mm thickness. Stainless steel have to be for outdoor use." " The sampling tube must be made of stainless steel." Only one manufacturer on the market uses 1.5 mm thickness stainless steel. Other manufacturers use anodized aluminum or stainless steel with less thickness (for example 1.2 -1.3 mm), which is also suitable for outdoor use. In addition, we note that according to the above logic, the Ordering Party should also require stainless steel for the measuring containers, which is not the case. The housing made of anodized aluminum or stainless steel sheet metal of 1.2 or 1,3 mm thickness will be accepted? Will the Ordering Party accept sampling tube made of other material than stainless steel (for example aluminum) especially that the Ordering Party does not require measurement heads mounted on the sampling tube PM10 and PM2.5 built of stainless steel)?	According to end user experience the life time of stainless steel housings and tubes is higher than housings and tubes made of other materials. Therefore, concerning materials, the request from technical specifications will remain the same. Concerning the thickness, we accept stainless steel minimum 1.2 mm. **Corrigendum for Item 7, requirement 7.11 will be published.**
31	In summary we would like to emphasize that there is only one supplier on the market who can meet the general requirements of items 1-9. This specification will prevent any competition and only one company could provide a compliant offer. This is contrary to the PRAG regulation applicable to European Commission tenders.	Please note that the technical specifications are based on extensive market analysis, conducted in both local and EU marketplaces. Market analysis conducted prior to tender launch confirmed that market for requested goods is indeed open and competitive. Furthermore, technical specifications are drafted in line with the provisions of Article 2.5.1 of PRAG - General principles applying to procurements.
32	In 3.17, 4.18, 5.18, the Ordering Party requires: Standard 19" rack mountable, max. 4 height units including mounting material for fixing to a 19" rack including telescopic slides. Will the Purchaser accept Standard 19" rack mountable, max. 5 height units including mounting material for fixing to a 19" rack including telescopic slides? There is no substantive justification for the requirement of max. 4 height units for gas analyzers. This restriction will limit competition and eliminate the world's leading manufacture.	The request from technical specifications under 3.17, 4.18, 5.18 will remain the same due to the fact that majority of analyzers have to be placed into existing stations where there is space limitation within existing racks. This is the main reason we are requiring gas analyzers to the dimensions of the max 4HU in technical description.
33	Dear Madam/Sir, Since the Customer is requesting the complex, specific and sophisticated equipment (items 2 - 8) for which the requested warranty terms are only and exclusively valid and not rejected, if the authorized service provider is delivering, performing installation (officially authorized by the manufacturer/general distributor of the goods for delivering, installation of the equipment) , please clarify on how the Customer and/or end-user plans to ensure that warranty terms for the equipment are not voided in case the Bidder is not authorized to deliver, install the equipment	Bidder have to ensure inspection and testing as per Article 25 of the Special Conditions, as stated "The supplies and the whole system shall be inspected and tested at the place of acceptance in accordance with the contract, including Annex II+III: Technical Specifications + Technical Offer. The Contractor shall deliver, install, and commission all equipment, fittings and fixings, including final installation, configuration and connection and all miscellaneous items of equipment, fixings and fittings in order that the supplies are left in place fully operational and

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	while at the same time requesting the equipment is installed and configured properly?	ready for use. The cost of consumables used during installation and commissioning and for running time, before provisional acceptance, shall be borne totally by the Contractor." Therefore, the Bidder needs to be fully authorized by the manufacturer/general distributor of the equipment for the installation and configuration of the items no. 2-8. The letter of manufacturer's/general distributor authorization needs to be provided within the offer, issued to the subject procurement with all the models of the offered equipment stated within the letter.
34	Dear Madam/Sir, Since the Customer is requesting the complex, specific and sophisticated equipment (items 2 – 8) for which the requested support & maintenance requirements are only and exclusively valid and not rejected if the certified personnel is performing it (training certificates from the manufacturer/general distributor for maintenance for the employees of the bidder (5 personnel of the bidder in the field of tender subject)), and repair and response time are short, please clarify on how the Customer and/or end-user plans to ensure that warranty terms for the equipment are not voided in case the Bidder doesn't have trained personnel in the field of the tender's subject?	The bidder must have at least 1 employee fully trained for installation, training and *to perform additional services before the provisional acceptance as requested by Technical specification to ensure that warranty terms for the equipment are in accordance with the Contract* for each item listed under items 2-8. Training certificates for bidder's personnel issued by the manufacturer of the equipment or general distributor needs to be provided.
35	Dear Madam/Sir, Given that the Customer is seeking to ensure that the complex and highly specialized equipment is in compliance with the existing CAS - KOŠAVA software, it's essential to note that this compliance is valid only when carried out by certified CAS – KOŠAVA software personnel (training certificates from the manufacturer/general distributor for installation for the employees of the bidder (5 personnel of the bidder in the field of tender subject)), we kindly request clarification on how the Customer or end-user intends to guarantee that the provided equipment will indeed be compliant and properly interfaced with the KOŠAVA software?	Detailed description of the requested Compliance with existing 'KOŠAVA' system is presented in Annex 2 of Annex II+III. The bidder must provide detailed description of the proposed methodology for the integration of the offered equipment with the existing system.
36	Shouldn't the Ordering Party require for PM2.5 a system storing filters with collected dust cooled to 23 o C, as is common and required by the EN12341 standard?	Please see answer to question number 28.
37	The ordering party in section 7.11 requires: "The enclosure must be made of 1.5 mm thick stainless steel. The stainless steel must be for outdoor use"…" The sampling tube must be made of stainless steel". Requiring The enclosure made of 1.5 mm stainless steel and stainless steel sampling tube is a significant restriction of competition, because only one manufacturer on the market, company Leckel GmbH, uses it. Will The ordering	Please see answer to question number 30.

No.	Question	Answer
	party accept a housing made of anodized aluminum or stainless steel with a thickness of 1.2 or 1.3 mm?	
38	The Ordering Party in sections 7.5, requires: "The filter holders must be able to accept filters with a diameter of 47 mm and 50 mm. The height of the filter holders must be 12 mm and the outer diameter must be 71.5 mm." What is the reason for requiring 50mm filters? We would like to point out that 50 mm filters are not commonly used in the European Union, they are used only by one manufacturer, Leckel GmbH. We would like to point out that the vast majority of European air pollution monitoring networks do not use 50mm filters. The EN 12341 standard also does not refer to 50 mm filters. According to the standard: "The filter holder shall be suitable for insertion of circular filters, such that the diameter of the exposed area through which the sampler air passes in between 34mm and 44mm." Therefore, we kindly point out that 47mm filters are completely sufficient to fulfill this requirement. Will The Ordering Party accept an instrument equipped with filter holders which are be able to take in filters of 47 mm diameter?	Please see answer to question number 26
39	We request that the full specification of the JASON format be made available. Kindly be advised that the JASON format is not an open format, which clearly limits competition by making it impossible to bid.	Please see answer to question number 24
40	The Ordering Party in sections 2.14, 3.18, 4.19, 5.19 specified requirements for communication with KOŠAVA Software. Requiring analyzers to communicate with KOŠAVA Software using the API protocol is a significant restriction of competition, since the API protocol is the dedicated communication protocol of Teledyne API's analyzers. Therefore, other gas analyzer manufacturers do not have the rights to use this protocol in their solutions. Will the Ordering Party accept communication between analyzers and the data logger installed at the station using a protocol other than API?	Please see answer to question number 22
41	The Ordering Party in section 4.11 require: Converter: Molybdenum converter, converter efficiency >95% Heated to > 300°C". Will the Purchaser accept converter efficiency >95% Heated to 200°C, which is better than the required?	Unless otherwise specified, the requirements in these Technical Specifications are presented as a minimum standard which the offered goods must meet. Also, please see our answer to question number 20.
42	The Ordering Party in section 4.3 requires: "NH3 removal unit to avoid interference with NH3. A dryer to ensure stable and continuous ozone production." At the same time, the Ordering Party requires an analyzer that complies with EN 14211.	Please see answer to question number 21

No.	Question	Answer
	Part of the type-approval testing for compliance with the standard also includes testing the effect of NH3 on NO and NO2 measurement. Therefore, will the Ordering Party allow an analyzer that has a type approval report for compliance with EN 14211, confirming that NH3 interference is below the required standard?	
43	The Ordering Party in section 3.17, 4.18, 5.18 requires: "The ability to mount in a standard 19" rack, max. 4 height units including mounting material for 19" rack mounting including telescopic slides". We see no substantive justification for the requirement of max. 4 height for gas analyzers. At the same time, it restricts competition, since the available gas analyzers on the market at the height of 5U. Will the ordering party allow devices to be mounted in a 19" rack, max. 5U?	Please see answer to question number 32
44	The Ordering Party in section 5.12 requires: "Calibration system: The device must be supplied with zero scrubber and O3 generator, the desired O3 level must be programmable in ppb from 50 ppb to 1000 ppb." Why does the Purchaser require such a large range, which is not applicable to the measurement of nitrogen oxides in ambient air? What is the reason for this requirement? We would like to point out that it is not in accordance with EN 14625. Will The Ordering Party allow an analyzer equipped with a generator with a range of up to 200ppb, which is in the range corresponding to the calibration of analyzers for the measurement of NOx in ambient air?	Please see answer to question number 16
45	The Ordering Party in section 3.10, 4.10, 5.10 requires a color LCD display with a touch screen. What is the purpose of this requirement? We note that there is no identical requirement for other analyzers such as PM10, PM2.5 and PM1 analyzer. It should be mentioned that the color display does not affect the operation or technical figures in any way. Will the Purchaser allow analyzers equipped with a two-color display?	lease see answer to question number 14
46	The Ordering Party in section 3.3 requires: "Sample cleaning: PTFE 5 µm 47-54 mm filter", The Ordering Party in sections 4.3 and 5.3 requires: "Sample cleaning: PTFE 5 µm 47 mm filter". Will the Purchaser allow the same provision for pre-filters for SO2, NOx and O3 analyzers and allow both 47 and 54 mm for them?	lease see answer to question number 13
47	We would like to point out that in order to fulfill in full the requirements of The Ordering Party written in the technical specification in section 2, only one solution available on the market can be offered, manufactured by GRIMM. Therefore, we believe that the excessive requirements are only intended to favor a particular manufacturer. We request that	Please see answer no. 11.

No.	Question	Answer
	our comments be favorably considered, which will ensure that more manufacturers can offer their products.	
48	The Ordering Party in section 2.11 of the technical specification requires "The ability to actually calibrate all optical channels and mass concentration in Serbia." Please advise for how long for calibration purposes, the instrument can be dismantled and not monitor air quality?	According to end user experience it shouldn't take longer than 3-5 days for calibration.
49	The Ordering Party in section 2.11 of the technical specification requires "No sample heating, so that no semi-volatile fraction is heated out (loss of semi-volatile compounds) use of dryer system without heating". I would like to point out that this requirement contradicts the applicable standard EN 16450, which is simultaneously referred to by the Ordering Party in section 2.9. We request that this provision be removed from the technical specification.	Please see answer to question number 3 and number 8.
50	The Ordering Party in section 2.3 of the technical specification requires Range: User selectable in the range from 0 to 5000 µg/m3. In our opinion, this range is very much too low especially for typical short-term events, where measured peak concentrations often reach higher values (as proven by multiple studies across Europe). All fully approved automatic analyzers for the measurement of PM10 and PM2.5 (EN 16450) provide at least a measurement range of 0 to 10,000 µg/m3 for both PM10 and PM2.5 measurements. Shouldn't the ordering party in a case require a measurement range of 0 to 10,000 µg/m3?	Please see answer to question number 5
51	The Ordering Party in section 2.1 of the technical specification requires: "Measuring Principle: Optical system for simultaneous measurements of PM10, PM2.5 and PM1". In addition, the Ordering Party in section 2.4 requires for the analyzer: "Measurement cycle: < 1 min". Please advise if the required simultaneous measurements according to section 2.1 is to be related to the measurement cycle specified in section 2.4? Is it permissible to switch between PM10, PM2.5 and PM1 measurements within the measurement cycle?	Please see answer to question number 4
52	The Ordering Party in section 2.4 of the technical specification requires - Measurement cycle: < 1 min. Due to the fact that short-term events, are very often much shorter than 1min, they will not be recorded by the instrument, and thus the measurement results will be subject to a very large error. Shouldn't the Contracting Authority require a temporal timeframe of up to 1 max. 5 seconds?	Please see answer to question number 6