

**Amendment No. 2**

to the Bidding Documents No: AQIP/1.1/RFB/INT 1-2026 **Procurement of Improvement of the Air Quality Monitoring System in the Kyrgyz Republics** under the **Air Quality Improvement Project** of the Ministry of Natural Resources, Environment, and Technical Supervision of the Kyrgyz Republic.

This **Amendment** (hereinafter referred to as the “Amendment”) is issued on **April 29, 2026**, to the Bidding Documents AQIP/1.1/RFB/INT 1-2026 **Procurement of Improvement of the Air Quality Monitoring System in the Kyrgyz Republics** under the **Air Quality Improvement Project** of the Ministry of Natural Resources, Environment, and Technical Supervision of the Kyrgyz Republic, originally issued on **March 4, 2026**.

The amendments introduced in this Amendment No.2 are related to the Employer’s Requirements in the Bidding Documents.

The amended requirements are provided in the Attachment No.1 to this amendment.

All other terms and conditions remain unchanged.

Please confirm the receipt of the Amendment.

**Attachment 1 to the Amendment No. 2**

**Air Quality Improvement Project**

**Executive Agency: The Ministry of Natural Resources, Environment, and Technical Supervision of the Kyrgyz Republic.**

**RFP No: AQIP/1.1/RFB/INT 1-2026**

**Bid: Procurement of Improvement of the Air Quality Monitoring System in the Kyrgyz Republics**

<b>No.</b>	<b>BEFORE in the Bidding Documents</b>	<b>Amendment</b>	<b>Remarks</b>
Section 2. List of goods and delivery schedule	3. Mandatory spare parts for the proposed equipment, A. DELIVERY REQUIREMENTS, Scope of equipment delivery and installation work by the contractor (p. 146) 1. Communication/data transmission equipment set; 2. Serial automatic sampler for gravimetric measurement of fine particulate matter PM2.5/PM10; 3. Multi-gas calibrator; 4. Clean air generator; 5. Calibration cylinders for gases; 6. Tool kit	3. Mandatory spare parts for the proposed equipment, A. DELIVERY REQUIREMENTS, Scope of equipment delivery and installation work by the contractor: 1. Communication equipment set/data transmission equipment set/	Items 2, 3, 4, 5, and 6 have been removed from the table (item 1 remains)

No.	BEFORE in the Bidding Documents	Amendment	Remarks
<p>Section 4. List of ancillary services and schedule of performance, A. DELIVERY REQUIREMENTS Scope of equipment supply and installation work by the contractor (p. 146)</p>	<p>Description of Services</p> <ol style="list-style-type: none"> <li>1. Site inspection</li> <li>2. Site preparation, including: Connection to the power grid</li> <li>3. Delivery and installation of equipment, including obtaining type approval certificates for measuring instruments from the Kyrgyz Republic and integration into the designated laboratory of the Kyrgyz Hydrometeorological Service and the Central Hydrometeorological Service of Kyrgyzstan</li> <li>4. Acceptance testing</li> <li>5. User training</li> <li>6. Documentation</li> <li>7. Warranty service and technical support</li> </ol>	<p>Description of Services</p> <ol style="list-style-type: none"> <li>1. Site inspection</li> <li>2. Site preparation, including: Connection to the power grid</li> <li>3. Delivery and installation of equipment, including obtaining type approval certificates for measuring instruments from the Kyrgyz Republic and integration into the designated laboratory of the Kyrgyz Hydrometeorological Service and the Central Hydrometeorological Service of Kyrgyzstan</li> <li>4. Acceptance testing</li> <li>5. User training</li> <li>6. Documentation</li> <li>7. Warranty service and technical support</li> <li>8. Obtaining type approval certificates for measuring instruments in the Kyrgyz Republic</li> <li>9. Integration into the Kyrgyzhydromet calibration laboratory</li> <li>10. Integration into the Kyrgyzhydromet Central Data and Information System</li> </ol>	<p>Added to the table 8,9 and 10</p>

<p>Training No. 1, 12. User Training, A. DELIVERY REQUIREMENTS, Scope of equipment delivery and installation work by the contractor (p. 161)</p>	<p>1. The supplier is required to organize and conduct training at the central level for employees of the Kyrgyz Hydrometeorological Service – 8 people</p> <p>2. The Supplier must provide training materials in Russian prior to the start of training in accordance with the submitted training plan. The working languages of the training are Russian and Kyrgyz. – 8 sets;</p> <p>3. Upon completion of the training, the Supplier is required to issue certificates to the participants confirming their compliance with the required qualifications (e.g., filter replacement, calibration, etc.) – 8 copies</p>	<p>1. The Supplier is required to organize and conduct training at the central level for 15 employees of the Kyrgyz Hydrometeorological Service</p> <p>2. The Supplier must provide training materials in Russian prior to the start of training in accordance with the submitted training plan. The working languages of the training are Russian and Kyrgyz – 15 sets;</p> <p>3. Upon completion of the training, the Supplier is required to issue certificates to participants confirming their compliance with the required qualifications (e.g., filter replacement, calibration, etc.) – 15 copies</p>	<p>Changed the number of participants - No. 1, 2, 3 from 8 to 15</p>
<p>5.9.3. Training No. 3: Organization and conduct of local training sessions for Kyrgyzhydromet employees at each station (2 days) (A06-A011, Osh, Jalal-Abad, Tokmok, Kara-Balta, and Cholpon-Ata), 12. User Training, A. PERFORMANCE REQUIREMENTS Scope of Equipment Supply and Installation Services by the</p>	<p>1. The Supplier is required to organize and conduct training at the local level for Kyrgyzhydromet staff</p> <p>2. The Supplier must provide training materials in Russian prior to the start of training in accordance with the provided training plan. The working language of the training is Kyrgyz/Russian.</p> <p>3. Upon completion of the training, the Supplier shall issue certificates to the trainees confirming their compliance with the required qualifications (e.g., filter replacement, calibration, etc.).</p> <p>4. All expenses related to the organization and conduct of training at the central level shall be covered and paid by the Supplier as follows:</p> <ul style="list-style-type: none"> <li>• airfare</li> <li>• transportation costs</li> <li>• accommodation</li> <li>• office supplies</li> <li>• incidental expenses</li> </ul> <p>Duration: two days of in-person training (at least 12 academic hours); 2 days (at least 12 academic hours);</p>	<p>1. The Supplier is required to organize and conduct training at the local level for Kyrgyzhydromet staff</p> <p>2. The Supplier must provide training materials in Russian prior to the start of training in accordance with the provided training plan. The working language of the training is Kyrgyz/Russian.</p> <p>3. Upon completion of the training, the Supplier shall issue certificates to the trainees confirming their compliance with the required qualifications (e.g., filter replacement, calibration, etc.).</p> <p>4. All expenses related to the organization and conduct of training at the central level shall be covered and paid by the Supplier as follows:</p> <ul style="list-style-type: none"> <li>• airfare</li> <li>• transportation costs</li> <li>• accommodation</li> <li>• office supplies</li> <li>• incidental expenses</li> </ul>	<p>The following was added to the table:</p> <ul style="list-style-type: none"> <li>• Organization and conduct of local-level training for Kyrgyzhydromet staff in each region (1 day each) (Osh, Jalal-Abad, Tokmok, Kara-Balta, and Cholpon-Ata).</li> <li>• changed from 5 days to 1 day.</li> </ul>

<p>Contractor (p. 164-166):</p>	<p>5. The supplier must include in the bid a description of the training approach, including the curriculum, duration, format, and qualifications of the instructors. The training program must cover both theoretical and practical training for Kyrgyzhydromet specialists, ensuring their ability to independently operate, administer, and maintain the supplied equipment and software – 5 days. Training must be conducted both at Kyrgyzhydromet and at the station (at the equipment’s operating site) using the installed hardware and software complex. The training program should cover the following areas:</p> <ul style="list-style-type: none"> <li>- installation, connection, and initial configuration of automatic air pollution monitoring stations;</li> <li>- calibration, maintenance, and operation of gas analyzers, samplers, and auxiliary equipment;</li> <li>- monitoring of parameters and equipment diagnostics;</li> <li>- scheduled and unscheduled maintenance of equipment;</li> <li>- troubleshooting, replacement of consumables and spare parts;</li> <li>- maintaining maintenance logs and recording operational parameters;</li> <li>- Ensuring proper operating conditions for equipment (temperature, ventilation, protection from dust and moisture);</li> <li>- Compliance with safety requirements and operation of measuring instruments;</li> <li>- Calibration and inter-calibration control of data received from various stations;</li> <li>- Data validation and verification: quality control algorithms, identification of anomalous and unreliable values; - Use of specialized software for data processing and archiving;</li> </ul>	<p>Duration: two days of in-person training (at least 12 academic hours); 2 days (at least 12 academic hours);</p> <p>5. The supplier must include in the bid a description of the training approach, including the curriculum, duration, format, and qualifications of the instructors. The training program must cover both theoretical and practical training for Kyrgyzhydromet specialists, ensuring their ability to independently operate, administer, and maintain the supplied equipment and software – 1 days. Training must be conducted both at Kyrgyzhydromet and at the station (at the equipment’s operating site) using the installed hardware and software complex. The training program should cover the following areas:</p> <ul style="list-style-type: none"> <li>- installation, connection, and initial configuration of automatic air pollution monitoring stations;</li> <li>- calibration, maintenance, and operation of gas analyzers, samplers, and auxiliary equipment;</li> <li>- monitoring of parameters and equipment diagnostics;</li> <li>- scheduled and unscheduled maintenance of equipment;</li> <li>- troubleshooting, replacement of consumables and spare parts;</li> <li>- maintaining maintenance logs and recording operational parameters;</li> <li>- Ensuring proper operating conditions for equipment (temperature, ventilation, protection from dust and moisture);</li> <li>- Compliance with safety requirements and operation of measuring instruments;</li> <li>- Calibration and inter-calibration control of data received from various stations;</li> </ul>	
---------------------------------	--	--	--

	<p>- monitoring and documenting data changes, maintaining calibration logs and QC/QA procedures; The training program must include at least 30% theory and 70% practical work, including demonstrations of actual equipment and software modules. Training materials (presentations, instructions, manuals) are provided to each participant in printed and/or electronic form.</p> <p>6. Training is conducted by an authorized specialist/instructor. The authorized instructor must hold a valid certificate issued by the equipment manufacturer, software developer, or an accredited training center, confirming his or her qualification to conduct training. A confidential copy of the certificate must be included in the Supplier's proposal. Training is conducted by an authorized and qualified trainer who meets the following minimum requirements:</p> <ul style="list-style-type: none"> <li>• A bachelor's degree in environmental engineering, instrumentation, electrical engineering, information technology, or a related technical field;</li> <li>• At least 5 years of documented professional experience in the installation, commissioning, operation, maintenance, and calibration of automatic air quality monitoring stations and related software systems;</li> <li>• Practical experience in conducting technical training for both IT specialists and technical/engineering staff;</li> <li>• Proven experience in data validation, quality assurance/quality control procedures, calibration, and inter-calibration checks of monitoring stations;</li> <li>• A valid certificate issued by an equipment manufacturer, software developer, or accredited training center authorizing the instructor to conduct</li> </ul>	<p>- Data validation and verification: quality control algorithms, identification of anomalous and unreliable values; - Use of specialized software for data processing and archiving;</p> <p>- monitoring and documenting data changes, maintaining calibration logs and QC/QA procedures; The training program must include at least 30% theory and 70% practical work, including demonstrations of actual equipment and software modules. Training materials (presentations, instructions, manuals) are provided to each participant in printed and/or electronic form.</p> <p>6. Training is conducted by an authorized specialist/instructor. The authorized instructor must hold a valid certificate issued by the equipment manufacturer, software developer, or an accredited training center, confirming his or her qualification to conduct training. A confidential copy of the certificate must be included in the Supplier's proposal. Training is conducted by an authorized and qualified trainer who meets the following minimum requirements:</p> <ul style="list-style-type: none"> <li>• A bachelor's degree in environmental engineering, instrumentation, electrical engineering, information technology, or a related technical field;</li> <li>• At least 5 years of documented professional experience in the installation, commissioning, operation, maintenance, and calibration of automatic air quality monitoring stations and related software systems;</li> <li>• Practical experience in conducting technical training for both IT specialists and technical/engineering staff;</li> <li>• Proven experience in data validation, quality assurance/quality control procedures, calibration, and inter-calibration checks of monitoring stations;</li> </ul>	
--	--	---	--

	<p>such training (a copy of the certificate must be included in the Supplier’s proposal);</p> <ul style="list-style-type: none"> <li>• Knowledge of relevant international standards for air quality monitoring and safety requirements when working with measuring instruments;</li> <li>• Fluency in Russian (the language of instruction).</li> </ul> <p>If the trainer does not speak Russian, the Supplier is required to provide the services of a qualified interpreter at its own expense. Upon request, the Supplier must provide documentary evidence of the trainer’s qualifications and professional experience.</p>	<ul style="list-style-type: none"> <li>• A valid certificate issued by an equipment manufacturer, software developer, or accredited training center authorizing the instructor to conduct such training (a copy of the certificate must be included in the Supplier’s proposal);</li> <li>• Knowledge of relevant international standards for air quality monitoring and safety requirements when working with measuring instruments;</li> <li>• Fluency in Russian (the language of instruction).</li> </ul> <p>If the trainer does not speak Russian, the Supplier is required to provide the services of a qualified interpreter at its own expense. Upon request, the Supplier must provide documentary evidence of the trainer’s qualifications and professional experience.</p> <p><b><i>The following was added to the table:</i></b>  Description of the Supplier’s relevant services:  Organization and conduct of local-level training sessions for Kyrgyzhydromet staff in each region (1 day each) (Osh, Jalal-Abad, Tokmok, Kara-Balta, and Cholpon-Ata).</p>	
<p>Sections 4, 5.9.3. Training No. 3: Organization and delivery of local training sessions for Kyrgyzhydromet staff at each station (2 days) (A06-A011, Osh, Jalal-Abad, Tokmok, Kara-Balta, and Cholpon-Ata), 12. User Training, A. PERFORMANCE</p>	<p>All expenses related to the organization and conduct of training at the central level shall be covered and paid by the Supplier as follows:</p> <ul style="list-style-type: none"> <li>• airfare</li> <li>• transportation costs</li> <li>• accommodation</li> <li>• office supplies</li> <li>• incidental expenses</li> </ul> <p>Duration: two-day in-person training (at least 12 academic hours)</p>	<p>All expenses related to the organization and conduct of training at the central level shall be provided and paid for by the Supplier, as follows:</p> <ul style="list-style-type: none"> <li>• air travel <ul style="list-style-type: none"> <li>• transportation costs</li> <li>• accommodation</li> <li>• office supplies</li> <li>• contingency expenses</li> <li>• rental and per diem</li> </ul> </li> </ul> <p>Duration: two-day in-person training (at least 12 academic hours).</p>	<p>Includes venue rental and per diem</p>

<p>REQUIREMENTS. Scope of Equipment Supply and Installation Services by the Contractor (p. 164):</p>			
<p>P.5:10 Acceptance tests, organization and conduct of on-site training for Kyrgyzhydromet staff at each station (2 days) (A06-A011, Osh, Jalal-Abad, Tokmok, Kara-Balta, and Cholpon-Ata), 12. User training, A. DELIVERY REQUIREMENTS Scope of equipment and installation services to be provided by the Contractor (p. 166). No. 1 – Activities.</p>	<p>Before the system is put into operation, all necessary tests must be conducted, including interim acceptance tests (IAT) and final project acceptance tests. IATs are conducted after the installation and integration of the automatic station and its components, including all devices, and involve verifying the system’s reliability and trouble-free operation for at least 2 weeks. During this period, the system must operate without interruption or critical failures, demonstrating stability and reliability. Final acceptance tests include verification of the full integration of all system components, assessment of compliance with technical documentation, availability of spare parts, adequacy of personnel training, and completeness of accompanying documentation.</p> <p>The supplier is required to prepare a detailed test plan, including objectives, general requirements, a description of the elements to be tested, participating organizations, test phases and schedules, technical support requirements, safety considerations, test methods and procedures, as well as the procedure for data collection and analysis. All identified defects are classified into categories:</p> <ul style="list-style-type: none"> <li>• Category A — serious defects that prevent the system from functioning normally and require immediate correction, possibly with a suspension of testing;</li> </ul>	<p>Before the system is put into operation, all necessary tests must be conducted, including interim acceptance tests (IAT) and final project acceptance tests. IATs are conducted after the installation and integration of the automatic station and its components, including all devices, and involve verifying the system’s reliability and trouble-free operation for at least 2 weeks. During this period, the system must operate without interruption or critical failures, demonstrating stability and reliability. Final acceptance tests include verification of the full integration of all system components, assessment of compliance with technical documentation, availability of spare parts, adequacy of personnel training, and completeness of accompanying documentation.</p> <p>The supplier is required to prepare a detailed test plan, including objectives, general requirements, a description of the elements to be tested, participating organizations, test phases and schedules, technical support requirements, safety considerations, test methods and procedures, as well as the procedure for data collection and analysis. All identified defects are classified into categories:</p> <ul style="list-style-type: none"> <li>• Category A — serious defects that prevent the system from functioning normally and require immediate correction, possibly with a suspension of testing;</li> </ul>	<p>Added clause:</p>

	<ul style="list-style-type: none"> <li>• Category B — defects of moderate severity that do not significantly affect performance and do not constitute grounds for terminating testing;</li> <li>• Category C — minor defects related to appearance or insignificant errors;</li> <li>• Category D — errors in the testing procedure that do not affect the evaluation of the system;</li> <li>• Category E — disputed defects, on which a decision is made by an independent expert in the event of disagreement between the parties.</li> </ul> <p>Testing continues in the presence of defects in categories B, C, D, and E, and in the event of defects in category A, the parties jointly decide on further actions and possible retesting. All test results are recorded in official documentation and certified.</p>	<ul style="list-style-type: none"> <li>• Category B — defects of moderate severity that do not significantly affect performance and do not constitute grounds for terminating testing;</li> <li>• Category C — minor defects related to appearance or insignificant errors;</li> <li>• Category D — errors in the testing procedure that do not affect the evaluation of the system;</li> <li>• Category E — disputed defects, on which a decision is made by an independent expert in the event of disagreement between the parties.</li> </ul> <p>Testing continues in the presence of defects in categories B, C, D, and E, and in the event of defects in category A, the parties jointly decide on further actions and possible retesting. All test results are recorded in official documentation and certified.</p> <p><b>Added clause:</b>  <b>An acceptance commission (8 people) participates in the acceptance tests. All expenses related to the preparation and conduct of acceptance tests, including the participation of commission representatives, shall be borne by the Supplier.</b></p>	
2.1.1. AAQMS Pavilion, 2.1. Requirements for the Pavilion with Installed Systems, 2. Technical Specifications of the Automatic Atmospheric Air Monitoring Station (p. 171)	Parameters — Technical Requirements Overall dimensions (+/- 10%) Internal length: not less than 4000 mm; Internal width: not less than 2800 mm; Internal height: not less than 2600 mm.	Parameters — Technical Requirements Overall dimensions (+/- 10%) Internal length: not less than 4000 mm; Internal width: not less than 2350 mm; Internal height: not less than 2600 mm.	Changes in internal width
Section 2.1.1. AAQMS Pavilion,		The item “Fencing” has been added to the table:	The item “Fencing” has been added to the table

<p>2.1. Requirements for the pavilion with installed systems, 2. Technical specifications of the automatic atmospheric air monitoring station (page 204)</p>		<p>Fencing — The service provider must provide for the installation of protective fencing around the pavilion and external equipment to restrict unauthorized access and protect against external influences.</p> <p>The fencing of the automatic ambient air quality monitoring station pavilion must meet the following requirements:</p> <p style="padding-left: 40px;">The fencing shall be installed around the perimeter of the 5×5 m pavilion.</p> <p style="padding-left: 40px;">Fence height: 2.0–2.5 m.</p> <p style="padding-left: 40px;">Design: mesh or lattice with a cell size of 50×50 mm, ensuring free circulation of air flows; the use of solid fencing is not permitted.</p> <p style="padding-left: 40px;">A gate with a width of at least 0.8 m, equipped with a reinforced structure featuring anti-burglary hardware and a reliable locking mechanism.</p> <ul style="list-style-type: none"> <li>• The enclosure must provide protection against unauthorized access, not impede air circulation, and not affect measurement results.</li> </ul> <p>The structure must be resistant to weather conditions and ensure safe operation.</p> <p>Install the fencing at the following facility addresses:</p> <ul style="list-style-type: none"> <li>• Tunguch neighborhood, intersection of Ankara St. and Ch. Valikhanov St. 7/1</li> <li>• Ak-Bata residential area, 3 Ak-Bata St.</li> <li>• 12th Microdistrict, Aaly Tokombayev Street, 41</li> <li>• Kara-Balta: intersection of Sverdlova and Kalininsky Streets (near School No. 12)</li> <li>• Cholpon-Ata: junction of Sovetskaya Street and Pravda Street (Zh. Abdrakhmanov Square)</li> </ul>	
--	--	--	--

<p>2.1.1. AAKMS Pavilion, 2.1. Requirements for the Pavilion with Installed Systems, 2. Technical Specifications of the Automatic Atmospheric Air Monitoring Station (p. 171)</p>	<p>Pavilion Design — 1. Structural Elements of the Pavilion</p> <ul style="list-style-type: none"> <li>• Frame: <ul style="list-style-type: none"> <li>- Rigid metal composite bent profile 185x50x3 mm (base and upper framing)</li> <li>- Corner posts — 170x150x3 mm angle profile</li> <li>- All joints between dissimilar metals (steel-steel, aluminum-aluminum) are protected against corrosion using a joint compound.</li> </ul> </li> </ul> <p>Floor:</p> <ul style="list-style-type: none"> <li>o Floor deck – 100 mm steel channel</li> <li>o Base – 20 mm cement-bonded particleboard</li> <li>o Floor covering – vinyl, 2 mm, acid- and alkali-resistant, waterproof, easy to clean</li> <li>o Color – to be approved by Kyrgyzhydromet.</li> </ul>	<ul style="list-style-type: none"> <li>•The pavilion’s metal structures consist of a frame made of rolled steel (channels, pipes, angles, profiles), ensuring strength, durability, reliability, rigidity, and stability. Load-bearing metal surfaces (frame, base, etc.) must be treated with a special anti-corrosion coating.</li> <li>All joints between similar metals (steel-to-steel, aluminum-to-aluminum) are protected from corrosion with a joint compound.</li> </ul> <p>•Floor:</p> <ul style="list-style-type: none"> <li>- Floor joists – 100 mm steel channel</li> <li>- Base – 20 mm cement-bonded particleboard</li> <li>- Covering – vinyl, 2 mm, acid- and alkali-resistant, waterproof, easy to clean</li> <li>- Color – to be approved by Kyrgyzhydrom.</li> <li>- Floor: 100 mm basalt insulation</li> </ul>	<p>Metal structures of the pavilion – description added</p> <p>Removed – rigid, complex-bent metal profile 185x50x3 mm (base and upper framing)</p> <p>Removed – corner posts – 170x150x3 mm corner profile</p> <p>Added – 100 mm basalt floor insulation</p>
<p>2.1.1. AAQMS Pavilion, 2.1. Requirements for the Pavilion with Installed Systems, 2. Technical Specifications of the Automatic Atmospheric Air Monitoring Station, Power Supply System, (p. 171)</p>	<ol style="list-style-type: none"> <li>1. The system must provide power to all consumers of the automatic station.</li> <li>2. Air conditioners, heaters, and exhaust fans are powered from the input network without stabilization.</li> <li>3. Electrical equipment shall be installed in accordance with the safety requirements set forth in the Electrical Installation Code, GOST 23274-84, and other regulatory documents of the Kyrgyz Republic.</li> <li>4. The entire system must be designed in accordance with fire and electrical safety standards.</li> <li>5. Cables (power supply, signaling, etc.) shall be laid in cable ducts or baseboards with the possibility of repair and replacement.</li> </ol>	<ol style="list-style-type: none"> <li>1. The system must provide power to all consumers of the automatic station.</li> <li>2. Air conditioners, heaters, and exhaust fans are powered from the input network without stabilization.</li> <li>3. Electrical equipment shall be installed in accordance with the safety requirements set forth in the Electrical Installation Code, GOST 23274-84, and other regulatory documents of the Kyrgyz Republic.</li> <li>4. The entire system must be designed in accordance with fire and electrical safety standards.</li> <li>5. Cables (power supply, signaling, etc.) shall be laid in cable ducts or baseboards with the possibility of repair and replacement.</li> </ol>	<p>Added - new requirements No. 11, 12</p>

	<p>6. The power supply system includes:</p> <ul style="list-style-type: none"> <li>- An electrical panel with automatic circuit breakers grouped by load type;</li> <li>- A residual current device (RCD);</li> <li>- Voltage control relay;</li> <li>- Class 1 accuracy electricity meter;</li> <li>- Terminal device for connecting cables with a cross-section of up to 16 mm<sup>2</sup>;</li> <li>- Grounding device.</li> </ul> <p>7. Each 19-inch rack must be equipped with a power outlet block with the following characteristics:</p> <ul style="list-style-type: none"> <li>- Purpose: distribution of power supply between active equipment in the rack;</li> <li>- Nominal voltage: 220 V;</li> <li>- Total load current: <math>\geq 16</math> A;</li> <li>- Number of connectable consumers: <math>\geq 8</math>;</li> <li>- Presence of its own switch.</li> </ul> <p>8. The panel must be equipped with separate 16 A automatic circuit breaker for instrument racks.</p> <p>9. The locations of the power outlets for the racks shall be agreed with the Customer.</p> <p>10. The voltage control relay must cut off the power supply when the voltage exceeds the permissible limits and ensure a delay in switching on when the normal level is restored. Operating modes: on, automatic. Adjustment range of upper threshold values: <math>\geq 240 \div 290</math> V. Adjustment range of lower threshold values: <math>\geq 100 \div 210</math> V. Reclosing delay adjustment range: <math>\geq 10 \div 360</math> s.</p>	<p>6. The power supply system includes:</p> <ul style="list-style-type: none"> <li>- An electrical panel with automatic circuit breakers grouped by load type;</li> <li>- A residual current device (RCD);</li> <li>- Voltage control relay;</li> <li>- Class 1 accuracy electricity meter;</li> <li>- Terminal device for connecting cables with a cross-section of up to 16 mm<sup>2</sup>;</li> <li>- Grounding device.</li> </ul> <p>7. Each 19-inch rack must be equipped with a power outlet block with the following characteristics:</p> <ul style="list-style-type: none"> <li>- Purpose: distribution of power supply between active equipment in the rack;</li> <li>- Nominal voltage: 220 V;</li> <li>- Total load current: <math>\geq 16</math> A;</li> <li>- Number of connectable consumers: <math>\geq 8</math>;</li> <li>- Presence of its own switch.</li> </ul> <p>8. The panel must be equipped with separate 16 A automatic circuit breaker for instrument racks.</p> <p>9. The locations of the power outlets for the racks shall be agreed with the Customer.</p> <p>10. The voltage control relay must cut off the power supply when the voltage exceeds the permissible limits and ensure a delay in switching on when the normal level is restored. Operating modes: on, automatic. Adjustment range of upper threshold values: <math>\geq 240 \div 290</math> V. Adjustment range of lower threshold values: <math>\geq 100 \div 210</math> V. Reclosing delay adjustment range: <math>\geq 10 \div 360</math> s. <b>Added:</b> <b>No. 11 The design pavilion must be equipped with grounding. The construction of the</b></p>	
--	--	---	--

		<p><b>pavilion, taking into account electrical safety, shall be carried out in accordance with the requirements of building codes and regulations in force in the Kyrgyz Republic.</b></p> <p><b>12. The design team must carry out calculations for the power supply from the connection point specified in the technical specifications to the ASM pavilion, using electrical cables with a load of up to 5 kW at a voltage of 220 V. The calculations must take into account all associated works, including trench excavation, cable laying and other necessary measures. Compliance with electrical safety requirements must be ensured in accordance with the building codes and regulations applicable in the Kyrgyz Republic for design and construction.</b></p>	
<p>2.1.1. AAQMS Pavilion, 2.1. Requirements for the Pavilion with Installed Systems, 2. Technical Specifications of the Automatic Atmospheric Air Monitoring Station, Requirements for the appearance and design of the automatic monitoring station, (p. 171)</p>	<p>1. Design</p> <ul style="list-style-type: none"> <li>• Supplier: <ul style="list-style-type: none"> <li>o Develops the foundation design</li> <li>o Constructs the foundation in accordance with the building codes and regulations in force in the Kyrgyz Republic</li> <li>o Takes into account the dimensions and configuration of the site provided by Kyrgyzhydromet</li> </ul> </li> </ul> <p>2. Type and Design</p> <ul style="list-style-type: none"> <li>• The foundation must be a monolithic strip foundation</li> </ul> <p>3. Functional requirements</p> <ul style="list-style-type: none"> <li>• Ensures the stability and secure anchoring of the pavilion</li> <li>• Provides protection for the pavilion frame against corrosion and mold</li> <li>• Ensures natural ventilation of the pavilion floor (air circulation)</li> </ul>	<p>1. Develops a design for a precast reinforced concrete foundation slab for the pavilion.</p> <ul style="list-style-type: none"> <li>• Constructs the foundation using precast reinforced concrete slabs in accordance with the building codes and regulations in effect in the Kyrgyz Republic</li> <li>• Takes into account the dimensions and configuration of the site provided by Kyrgyzhydromet</li> <li>• Takes into account the required volume of aggregate materials for the base of the reinforced concrete slab.</li> </ul> <p>2. Type and design: The foundation slab beneath the pavilion must be removable. Dimensions of the reinforced concrete slab: height <math>h = 12</math> to <math>15</math> mm, length <math>L = 3000</math> mm; width <math>B = 2000</math> mm</p> <p>3. Functional requirements</p> <ul style="list-style-type: none"> <li>• Ensures the stability and secure anchoring of the pavilion.</li> <li>• Provides protection for the pavilion frame</li> </ul>	<p>Modified in accordance with foundation requirements</p>

		<p>against corrosion and mold</p> <p>Ensures natural ventilation of the pavilion floor (air circulation)</p>	
<p>2.1.1.1. AAQMS Pavilion, 2.1. Requirements for the Pavilion with Installed Systems, 2. Technical Specifications of the Automatic Atmospheric Air Monitoring Station, Roof, (p. 173)</p>	<p>Roof access: • Staircase — built-in (fixed), providing safe access to the pavilion roof for equipment maintenance.</p>	<p>Roof — Roof access:</p> <ul style="list-style-type: none"> <li>• Ladder — portable, ensuring safe access to the pavilion roof for equipment maintenance</li> </ul>	<p>the ladder type has been changed to portable</p>
<p>2.1.1.1. AAQMS Pavilion, 2.1. Requirements for the Pavilion with Installed Systems, 2. Technical Specifications of the Automatic Atmospheric Air Monitoring Station, Interior and set of auxiliary equipment and accessories (p. 177)</p>	<p>1. Furniture</p> <ul style="list-style-type: none"> <li>• Material: water-resistant laminated board (LDSP or moisture-resistant MDF)</li> <li>• Durability: moisture resistance, ease of cleaning</li> <li>o Cabinet</li> <li>• Dimensions: as per drawing (Appendix 1)</li> <li>• Purpose: storage of documents, tools, spare parts, etc.</li> <li>• Material: same as for furniture (water-resistant board)</li> <li>o Workbench</li> <li>• Dimensions: 1400 (W) x 900 (D) x 750 (H) mm</li> <li>• Frame: metal (MS), with powder-coated anti-corrosion finish</li> <li>• Tabletop: 19 mm thick, with drawers</li> <li>• Load capacity: suitable for analytical equipment</li> <li>o Chair</li> <li>• Quantity: 2</li> <li>• Type: swivel</li> <li>• Features: ergonomic, height-adjustable, on casters</li> </ul> <p>2. Exhaust gas removal</p>	<p>1. Furniture</p> <ul style="list-style-type: none"> <li>• Material: water-resistant laminated board (LDSP or moisture-resistant MDF)</li> <li>• Durability: moisture resistance, ease of cleaning</li> <li>o Cabinet</li> <li>• Dimensions: as per drawing (Appendix 1)</li> <li>• Purpose: storage of documents, tools, spare parts, etc.</li> <li>• Material: same as for furniture (water-resistant board)</li> <li>o Workbench</li> <li>• Dimensions: 1400 (W) x 900 (D) x 750 (H) mm</li> <li>• Frame: metal (MS), with powder-coated anti-corrosion finish</li> <li>• Tabletop: 19 mm thick, with drawers</li> <li>• Load capacity: suitable for analytical equipment</li> <li>o Chair</li> <li>• Quantity: 2</li> <li>• Type: swivel</li> <li>• Features: ergonomic, height-adjustable, on casters</li> </ul> <p>2. Exhaust gas removal</p>	<p>2.1.1. AAQMS Pavilion, 2.1. Requirements for the Pavilion with Installed Systems, 2. Technical Specifications of the Automatic Atmospheric Air Monitoring Station, Interior and Set of Auxiliary Equipment and Accessories (page 172)</p> <p>Interior and set of auxiliary equipment and accessories</p> <p>Items 7, 8, 9, 11, 12, and 13 have been removed from this table: bucket, mop, first aid kit, mats, shovel, coat rack, No. 6 vacuum cleaner — removed brands</p>

<ul style="list-style-type: none"> <li>• System: common exhaust pipe</li> <li>• Ventilation: forced, prevents contaminants from entering the pavilion</li> <li>3. Staircase <ul style="list-style-type: none"> <li>• Type: 3-step with anti-slip rubber-plastic coating on the steps.</li> <li>• Purpose: for performing a wide range of work at height.</li> </ul> </li> <li>4. Thermohygrometer <ul style="list-style-type: none"> <li>• Temperature: -10 to +60 °C, accuracy ±0.4 °C, resolution 0.1 °C. Confidential</li> <li>• Humidity: 0–100% relative humidity (non-condensing); accuracy ±2...±3% relative humidity; resolution 0.1%</li> <li>• Pressure: 300–1200 hPa; accuracy ±3 hPa; resolution 0.1 hPa</li> </ul> </li> <li>5. Stickers <ul style="list-style-type: none"> <li>• Type: No Smoking</li> <li>• Material: vinyl, moisture-resistant</li> <li>• Location: entrance, inside the pavilion</li> </ul> </li> <li>6. Vacuum cleaner <ul style="list-style-type: none"> <li>• Brand: any well-known brand (e.g., Bosch, Karcher, Philips)</li> <li>• Power: at least 100 W</li> <li>• Type: compact, for dry cleaning</li> </ul> </li> <li>7. Bucket <ul style="list-style-type: none"> <li>• Material: plastic</li> <li>• Capacity: at least 10 liters</li> <li>• Features: comfortable handle, resistant to acidic and alkaline environments</li> </ul> </li> <li>8. Mop <ul style="list-style-type: none"> <li>• Type: with wringer</li> <li>• Material: plastic and metal</li> <li>• Purpose: cleaning</li> </ul> </li> <li>9. First aid kit</li> </ul>	<ul style="list-style-type: none"> <li>• System: common exhaust pipe</li> <li>• Ventilation: forced, prevents contaminants from entering the pavilion</li> <li>3. Staircase <ul style="list-style-type: none"> <li>• Type: 3-step with anti-slip rubber-plastic coating on the steps.</li> <li>• Purpose: for performing a wide range of work at height.</li> </ul> </li> <li>4. Thermohygrometer <ul style="list-style-type: none"> <li>• Temperature: -10 to +60 °C, accuracy ±0.4 °C, resolution 0.1 °C. Confidential</li> <li>• Humidity: 0–100% relative humidity (non-condensing); accuracy ±2...±3% relative humidity; resolution 0.1%</li> <li>• Pressure: 300–1200 hPa; accuracy ±3 hPa; resolution 0.1 hPa</li> </ul> </li> <li>5. Stickers <ul style="list-style-type: none"> <li>• Type: No Smoking</li> <li>• Material: vinyl, moisture-resistant</li> <li>• Location: entrance, inside the pavilion</li> </ul> </li> <li>6. Vacuum cleaner <ul style="list-style-type: none"> <li>• Power: at least 100 W</li> <li>• Type: compact, for dry cleaning</li> </ul> </li> <li>7. Dielectric mat <ul style="list-style-type: none"> <li>• Thickness: ≥ 6 mm</li> <li>• Width: ≥ 500 mm</li> <li>• Length: ≥ 3000 mm</li> <li>• Purpose: to protect personnel when working with electrical equipment</li> </ul> </li> </ul>	
---	---	--

	<ul style="list-style-type: none"> <li>• Contents: <ul style="list-style-type: none"> <li>o Antiseptics: iodine, green ointment, hydrogen peroxide</li> <li>o tourniquet, bandages (sterile, elastic)</li> <li>o Band-Aids (antiseptic and adhesive)</li> <li>o gloves and masks</li> </ul> </li> <li>• Purpose: to provide first aid in emergencies</li> </ul> <p>10. Dielectric mat</p> <ul style="list-style-type: none"> <li>• Thickness: <math>\geq 6</math> mm</li> <li>• Width: <math>\geq 500</math> mm</li> <li>• Length: <math>\geq 3000</math> mm</li> <li>• Purpose: to protect personnel when working with electrical equipment</li> </ul> <p>11. Mud mat</p> <ul style="list-style-type: none"> <li>• Thickness: <math>\geq 3</math> mm</li> <li>• Width: <math>\geq 500</math> mm</li> <li>• Length: <math>\geq 1000</math> mm</li> <li>• Purpose: Trapping dirt and moisture at the entrance to the pavilion</li> </ul> <p>12. Snow shovel</p> <ul style="list-style-type: none"> <li>• Bucket material: plastic</li> <li>• Handle: wood</li> <li>• Purpose: cleaning the area around the pavilion in winter</li> </ul> <p>13. Coat rack</p> <ul style="list-style-type: none"> <li>• Type: wall-mounted, metal</li> <li>• Number of hooks: at least 4</li> <li>• Purpose: for employees' outerwear.</li> </ul>		
<p>B. TECHNICAL REQUIREMENTS FOR ATMOSPHERIC AIR QUALITY MONITORING STATIONS.</p>	<p>2.12.1. Analyzer No. 1 — NO / NO<sub>2</sub> / NO<sub>x</sub> in ambient air (p. 39) table  No. 1 Principle, Standard – Cross-modulation, Chemiluminescence (EN 14211, EU, or 40 CFR Part 50, Appendix F, U.S. EPA).</p>	<p>2.12. Technical Specifications for Gaseous Pollutant Analyzers  2.12.1. Analyzer No. 1 — NO / NO<sub>2</sub> / NO<sub>x</sub> in Ambient Air (p. 43) Table  No. 1 Principle, standard – chemiluminescence method using cross-modulation or equivalent technology. The instrument must</p>	<p>Method added</p>

2.12. Technical Specifications for Gaseous Pollutant Analyzers 2.12.1. Analyzer No. 1 — NO/NO <sub>2</sub> /NO <sub>x</sub> in Ambient Air. (p. 188)		comply with EN 14211 or 40 CFR Part 50 (Appendix F, U.S. EPA).	
p. 188	Certification In accordance with EN 15267 or US EPA 40 CFR Part 53 or U.S. EPA (approval RFNA-0809-186)	In accordance with EN 15267-2 or US EPA 40 CFR Part 53 or U.S. EPA (approval RFNA-0809-186)	Revised
p. 188	No. 5 Ranges - Standard: 0–0.1/0.2/0.5/1.0 ppm; Extended: 0 to 10 ppm within a 10-fold range.	No. 5 Range — Standard: 0–0.1/0.2/0.5/1.0 ppm; Optional: 0 to 10 ppm within a 10-fold range. The instrument must ensure accurate measurement of background concentrations.	Revised
p. 188	No. 12 Response Time — Within 70 seconds at the lowest range.	No. 12 Response time — Within 90 seconds at the lowest range.	Changed specifications
p. 188	No. 13 Analyzed gas flow rate — 0.8 L/min.	No. 13 Analyzed gas flow rate — within 0.6–1.0 L/min.	Changed specifications
p. 188	No. 14 Calibration — zero gas: pure synthetic air or a zero air generator.  Calibration gas: certified NO <sub>2</sub> gas mixture (often diluted NO + O <sub>3</sub> → NO <sub>2</sub> or a direct NO <sub>2</sub> cylinder).  Use gas dilution calibration systems (with devices compliant with EN ISO 6145 or 14595) if dynamic dilution is required.	No. 14 Calibration - Zero gas: synthetic air or a zero air generator.  Calibration gas: Calibration must be performed using a certified NO gas mixture.  The use of dynamic dilution systems compliant with EN ISO 6145 is permitted.	Changed the description, added gas mixture
p. 188	No. 15 Output signals or analog output – (p. 40) 2 analog outputs 0–1 V, 0–10 V, 0–20 mA or 4–20 mA.	No. 15 Output signals or analog output – Support for digital interfaces (RS-232/RS-485 and/or TCP/IP/Ethernet). Analog outputs (0–1 V, 0–10 V, 4–20 mA) are permitted.	Added description
p. 188	No. 16 Digital Output — RS-232 / USB / TCP/IP / Ethernet port, status relays (fault, zero, spread),	No. 16 Digital output — transmission of instrument status data (errors, calibration, flow rate, temperature, etc.) via digital interfaces or the built-in diagnostic system	has completely replaced this section

	independent 0–1 V analog outputs for NO, NO <sub>x</sub> , and NO <sub>2</sub> , optional — selectable output voltage, analog voltage output with programmable range, at least one 4–20 mA current output, power indicator.		
p. 189	No. 17 Consumables and spare parts — Recommended requirements: 5 years of continuous operation, along with a list of necessary components (parts). Lithium battery, Deionizer unit, 0.3-micron air filter, Capillary tube, O-ring, UV lamp insert, Material for the catalytic converter tube, Pump diaphragm and valve, Diaphragm filters, Pump, Granular silica gel desiccant, Scrubber, Solenoid valve, Filled catalytic converter tube, Filter gasket, UV lamp for ozone generator.	No. 17 Consumables and Spare Parts — The Supplier must provide a set of consumables and spare parts sufficient to ensure uninterrupted operation of the equipment for at least 3 (three) years. The kit must include all necessary items for maintenance, calibration, and replacement of wear-and-tear components. The Supplier is required to provide a list of the consumables and spare parts to be supplied, specifying their purpose and recommended replacement intervals.	Amended and added
p. 189	No. 18 Complete set — Internal built-in pump.	(p. 44) No. 18 Complete set — Presence of a built-in pump	Changed
p. 189	No. 20 Alarms — Flow rate, calibration, converter temperature, built-in battery.	No. 20 Alarms — Monitoring of key parameters (flow rate, converter temperature, calibration, etc.) with warning/error output	Description added
2.12.2. Analyzer No. 2 — Sulfur Dioxide (SO <sub>2</sub> and H <sub>2</sub> S) in Ambient Air (p. 189)	2.12.2. Analyzer No. 2 — Sulfur dioxide (SO <sub>2</sub> and H <sub>2</sub> S) in ambient air.	2.12.2. Analyzer No. 2 — Sulfur Dioxide (SO <sub>2</sub> and H <sub>2</sub> S) in Ambient Air	
p. 189	Measurement No. 3 — Sulfur dioxide and hydrogen sulfide (using an external furnace to oxidize reduced sulfur compounds to SO <sub>2</sub> ) in ambient air.	Table 9 (p. 44) Measurement No. 3 — Ability to measure H <sub>2</sub> S if an appropriate converter is available	Sentence added
p. 190	No. 11 Zero drift – (p. 41) <threshold sensitivity per day in the lower range <threshold sensitivity per week in the lower range	No. 11 Detection limit /day in the lowest range. Detection limit /week in the lowest range	Revised and added
p. 190	No. 12 Range drift – <sensitivity threshold per day in the lower range.	No. 12 Detection limit /day in the lowest range. Detection limit /week in the lowest range	Revised and added

	<sensitivity threshold per week in the lower range.		
p. 190	No. 13 Analyzed gas flow rate: 0.7 L/min	Analyzed gas flow rate Within 0.7–0.8 L/min	Changed and added
p. 190	No. 16 Output signals or analog output — 3 analog outputs: 0–1 V, 0–10 V, 0–20 mA, or 4–20 mA.	No. 16 Output signals or analog output — Digital interfaces (RS-232/485, TCP/IP/Ethernet); analog — optional	Parameters changed
p. 190	No. 20 Standard equipment — Internal built-in pump.	(p. 45) No. 20 Package Contents — Built-in Pump	Revised
p. 190	No. 23 Data Storage — Data storage capacity of at least three months.	No. 23 Data Storage — At least 3 months (internal or external)	Changed to internal and external
p. 190	No. 24 Functional control — Automatic functional control of 2 points (zero and span) (every 23 or 25 hours), manual and remote control.	No. 24 Functional control — Automatic (zero/range), with remote control capability	changed
p. 190	No. 25 Consumables and spare parts — Recommended requirements: 5 years of continuous operation, along with a list of parts.  Lithium battery, 0.3-micron air filter, O-ring, xenon lamp, pump diaphragm and valve, diaphragm filters, pump, gas scrubber, hydrocarbon filter.	No. 25 Consumables and Spare Parts — The Supplier must provide a set of consumables and spare parts sufficient for the continuous operation of the equipment for at least 3 (three) years. The kit must include all necessary items for maintenance, calibration, and replacement of wear parts. The Supplier is required to provide a list of the consumables and spare parts to be supplied, specifying their purpose and recommended replacement intervals.	Added in full
2.12.3. Analyzer No. 3 — Carbon monoxide (CO) in ambient air (p. 191)	2.12.3. Analyzer No. 3 — Carbon monoxide (CO) in ambient air.	2.12.3. Analyzer No. 3 — Carbon monoxide (CO) in ambient air	
p. 191	No. 6 Ranges — at least four ranges Automatic range 0–100 ppm. Standard: 0–5/10/20/50 ppm; Additional: 0 to 100 ppm within a 10-fold range.	(p. 45) table No. 6 Ranges — Standard ranges: 0–10 / 0–20 / 0–50 / 0–100 ppm; Standard: 0–5/10/20/50 ppm; Optional: 0 to 100 ppm within a 10-fold range.	Updated
p. 191	No. 13 Calibration – (p. 43) Calibration gas cylinder (CO) — 15 L capacity. For calibration, the instrument must be supplied with a	No. 13 Calibration — zero gas: synthetic air or zero air generator. Calibration gas: certified CO gas	Revised and added

	<p>highly polished aluminum cylinder filled with calibration gas conforming to ISO/IEC 17025 and/or GOST ISO/IEC 17025: 40 ppm. It must also have a gas valve for zero and calibration gas. See also sections 3.1.6 and 3.1.10</p> <p>Dilution unit for CO calibration gas, controlled via RS232, MFC-controlled with zero air flow rate 0–5 L/min, MFC-controlled calibration gas flow rate 0–50 mL/min, CO gas cylinder approx. 80 ppm in synthetic air (gauge pressure: 150 bar, stability period: minimum 12 months, accuracy: <math>\pm 2\%</math> maximum), pressure regulator.</p>	<p>mixture. The use of dynamic dilution systems is permitted.</p>	
p. 192	No. 17 Output signals or analog output — 3 analog outputs: 0–1 V, 0–10 V, 0–20 mA, or 4–20 mA.	(p. 46) No. 17 Output signals or analog output — Support for digital interfaces (RS-232/RS-485 and/or TCP/IP/Ethernet); analog outputs are permitted	changed parameter item
p. 192	No. 24 Consumables and spare parts — Recommended requirements: 5 years of continuous operation along with a parts list. Lithium battery, O-ring, pump diaphragm and valve, diaphragm filters, pump, scrubber, solenoid valve, converter catalyst tube (filled), filter seal, filter.	No. 24 Consumables and spare parts — The supplier must provide a set of consumables and spare parts sufficient for continuous operation of the equipment for at least 3 (three) years. The kit must include all necessary items for maintenance, calibration, and replacement of wear parts. The Supplier is required to provide a list of the consumables and spare parts to be supplied, specifying their purpose and recommended replacement intervals.	Updated /new
2.12.4. Analyzer No. 4 — Ground-level Ozone (O <sub>3</sub> ) in Ambient Air (p. 192)	2.12.4. Analyzer No. 4 — Ground-level ozone (O <sub>3</sub> ) in ambient air.	2.12.4. Analyzer No. 4 — Ground-level ozone (O <sub>3</sub> ) in ambient air Table	
p. 193	No. 6 Range — Standard: 0–10/20/50/100 ppm. Additional: 0 to 100 ppm within a 10-fold range.	No. 6 Range — Standard ranges: 0–0.1 / 0–0.2 / 0–0.5 / 0–1.0 ppm. Extended: 0 to 10 ppm within a 10-fold range	Updated

p. 193	No. 10 Zero Drift – <sensitivity threshold per day in the lower range. <sensitivity threshold per week in the lower range.	No. 10 Zero drift — no more than the lower detection limit per day and per week in the minimum measurement range.	Updated
p. 193	No. 11 Range drift — <sensitivity threshold per day in the lower range <sensitivity threshold per week in the lower range.	No. 11 Range drift — no more than the lower detection limit value per day and per week in the minimum measurement range.	Revised
p. 193	No. 15 Calibration — Range: O <sub>3</sub> , Zero: Purified air. A highly polished aluminum cylinder filled with calibration gas traceable to ISO/IEC 17025 and/or GOST ISO/IEC 17025 at 40 ppm must be supplied with the instrument for calibration. It must also have a gas valve for zero and span gas.	No. 15 Calibration — zero gas: purified air or a zero air generator. Range calibration: ozone (O <sub>3</sub> ) generated by a built-in or external calibrator.	Sentence added
p. 193	No. 16 Output signals or analog output – 3 analog outputs 0–1 V, 0–10 V, 0–20 mA, or 4–20 mA	No. 16 Output signals or analog output – Support for digital interfaces (RS-232/RS-485 and/or TCP/IP/Ethernet); analog outputs are permitted	Completely revised
p. 193	No. 17 Digital output — Multiple RS-232 ports / USB port / TCP/IP / Ethernet.	No. 17 Digital output – Transmission of measurement and diagnostic parameters via digital interfaces/RS-232/USB port/TCP/IP/Ethernet.	Completely revised
p. 193	No. 23 Data storage — Data storage capacity of at least three months.	No. 23 Data storage — At least 3 months (internal memory or external system).	Added internal and external
2.13. Technical Specifications for Automatic Particulate Matter Analyzers (PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>1</sub> , TSP) (p. 194)	Section 2.13. Technical Specifications for Automatic Particulate Matter Analyzers (PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>1</sub> , TSP)	Section 2.13. Technical specifications for automatic particulate matter analyzers (PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>1</sub> , TSP)	
2.13.1. Analyzer No. 5 — Automatic Particulate Matter Analyzers (PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>1</sub> , TSP) (p. 194)	Section 2.13.1. Analyzer No. 5 — Automatic Particulate Matter Analyzers (PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>1</sub> , TSP): Changes have been made to the table.	Section 2.13.1. Analyzer No. 5 — Automatic particulate matter analyzers (PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>1</sub> , TSP): changes have been made to the table	
p. 194	No. 1 Standards — EN 16450, US EPA 40 CFR Part 53 (equivalent method), EN 12341 (when using selective heads).	No. 1 standards — Equivalent methods for PM measurement (US EPA 40 CFR Part 50) or	European standards added

		European recommendations for optical instruments (EN)	
p. 194	No. 2 Measurement principle — Continuous automatic monitoring; beta-ray method with humidity compensation, possibly with an optical supplement or optical monitor.	No. 2 Measurement Principle — Continuous automatic monitoring using an optical method (laser light scattering)	The beta-ray method has been replaced by an optical method
p. 194	No. 8 Detector – (p. 45) Beta detector with Geiger-Müller or silicon semiconductor; additionally — optical sensor.	No. 8 Detector — laser optical sensor (light scattering)	Replaced from a beta detector to a laser
p. 194	No. 9 Sampling system — Head with dynamic heating; nozzles for PM <sub>10</sub> , PM <sub>2.5</sub> , PM <sub>1</sub> , TSP.	No. 9 Sampling system — built-in sampling system with flow control and a dehumidification/humidity correction system	
p. 194	No. 10 Airflow — 1–3 m <sup>3</sup> /h, with flow control.	No. 10 Air flow rate — within 2–5 L/min	Name and parameters changed
p. 194	No. 16 Operating conditions — from –20 °C to +50 °C; up to 95% relative humidity without condensation.	No. 14 Operating conditions — Operation as part of a station (container/cabinet) with controlled environmental conditions; external temperature range from –20 °C to +50 °C	Description changed
p. 194	No. 17 Consumables — Kit for 5 years of operation: filter tapes, nozzles, seals, sensors.	No. 15 Consumables — necessary parts included in the kit for 3 years of operation	Description changed
2.13.2. Sequential automatic sampler for gravimetric measurement of fine particulate matter PM <sub>2.5</sub> /PM <sub>10</sub> (p. 195)	2.13.2. Sequential automatic sampler for gravimetric measurement of fine particulate matter PM <sub>2.5</sub> /PM <sub>10</sub>	2.13.2. Sequential automatic sampler for gravimetric measurement of fine particulate matter PM <sub>2.5</sub> /PM <sub>10</sub>	
pp. 194–195		3.4.5. Particulate matter analyzer for PM <sub>10</sub> and PM <sub>2.5</sub> . (p. 48) Change in the table below	
p. 195	No. 1 Standard — EN 12341 (reference method), US EPA 40 CFR Part 50, Annex L (PM <sub>2.5</sub> ) and J (PM <sub>10</sub> )	No. 1 Standard — EN 12341 or US EPA 40 CFR Part 50 (Appendix L (PM <sub>2.5</sub> ) and Appendix J (PM <sub>10</sub> ))	Removed the phrase “reference method”
p. 195	No. 2 Measurement principle — gravimetric; sequential automatic sampling onto filters.	No. 2 Measurement principle — gravimetric method; automatic sequential sampling onto filters	Description changed

p. 195	No. 3 Measured fractions — PM <sub>10</sub> , PM <sub>2.5</sub>	No. 3 Separated fractions	Replaced the word “measured” with “Separated”
p. 195	No. 4 Number of filters — At least 16–20 filters (cartridges), with the ability for sequential replacement.	No. 4 Number of filters — The supplier must ensure the supply of filters sufficient for continuous operation of the equipment for at least 3 (three) years under normal operating conditions.	Amended
p. 195	No. 7 Sample volume — time- or volume-controlled LVS (low-volume sampler): up to 72 m <sup>3</sup> /day (1 to 3 m <sup>3</sup> /h).  No. 8 Air flow rate — approximately 16.7 L/min (1 m <sup>3</sup> /h); stable, with adjustment and automatic compensation for temperature and pressure, 16.7–50 L/min.	No. 7 sample volume and No. 8 air flow rate	Removed No. 7 and No. 8
p. 195	No. 9 Sampling head — for PM <sub>2.5</sub> or PM <sub>10</sub> , with interchangeable nozzles.	No. 7 Sampling head — PM <sub>2.5</sub> or PM <sub>10</sub> selective head, compliant with the selected standard, with interchangeable nozzles	Description added
p. 195	No. 10 Operating temperature range — –30 °C to +50 °C.	No. 8 Ambient temperature range — from –30 °C to +50 °C (when installed in a climate-controlled station)	Added the word "ambient" Conditions added
p. 196	No. 18 Installation – (p. 46) Suitable for outdoor installation (outdoor cabinet included) or indoor installation (19-inch rack). Sampling head at a distance of at least 100 cm from the roof (long pipe).	No. 16 Installation — inside the station; the sampling head is extended to the outside. The sampling head is installed at a height of ≥2 m above ground level.	Amended
2.13.3. Analyzer No. 6 — Black Carbon (Soot) Analyzer (p. 196)	2.13.3. Analyzer No. 6 — Black Carbon (Soot) Analyzer	2.13.3. Analyzer No. 6 — Black Carbon (Black Soot) Analyzer The changes are listed in the table below (p. 49)	
p. 197	No. 11 Operating temperature range – –20 °C to +50 °C.	No. 11 Ambient temperature range — from –20 °C to +50 °C (when installed in a climate-controlled station)	The word "ambient" has been added Descriptions added
2.14. Lightning Protection System	-	Section 2.14. Off-grid power supply system (solar panels with a battery) (p. 50)	New section

(p. 197)			
4. Cabinet — standard 19" (p. 202)	Section 4. Cabinet — 19" standard (p. 49)	Section 4. Cabinet — 19" standard (p. 53) The changes are listed in the table below	
p. 202	No. 1 Form factor — 19" — 19", rack-mount, 42U height (approximately 2 meters of mounting height).	No. 1 Form factor — 19" rack-mounted equipment system.	Changed
page 202	-	No. 3 Number of racks — two 19" racks; the use of multiple racks or a combination of equipment configurations is permitted.	New item
p. 202	No. 5 Construction - Metal enclosure (steel with a thickness of at least 1.2 mm), reinforced doors with locks, removable side panels.	No. 4 Construction - Metal, with the ability to accommodate and mount various types of equipment.	Amended
p. 202	No. 6 Cooling system — Natural ventilation with the option to install fans and filters.	No. 7 Cooling system — passive ventilation; use of the container's general climate control system.	Revised
p. 202	No. 10 Operating temperature range – from –30 °C to +50 °C (for indoor or outdoor use).	No. 11 Operating temperature range — Operation as part of a climate-controlled container.	Amended