

**PIEDMONT TRIAD REGIONAL WATER AUTHORITY
JOHN FRANKLIN KIME WATER TREATMENT PLANT
REQUEST FOR PROPOSALS
LAB EQUIPMENT LC/MS AND GC/MS**

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1. PROPOSAL SCOPE

A. INSTRUCTIONS

1. Introduction: Piedmont Triad Regional Water Authority (the “Owner”), by this Request for Proposals (RFP), intends to purchase one Gas Chromatography/Mass Spectrometry (GC/MS) and one Liquid Chromatography/Mass Spectrometry (LC/MS) system, accessories, and other specified services to perform in-house analytical testing for 1,4-dioxane and method-specified per- and poly-fluoroalkyl substances (PFAS). Selected instrumentation will meet the criteria contained in current USEPA Methods 522 and 8270E for the analyte 1,4-dioxane and Methods 533 and 1633 for PFAS.

This RFP is being performed in accordance with Section 143-129 of the General Statutes of North Carolina. The John Franklin Kime Water Treatment Plant (WTP) is located at 7297 Adams Farm Rd, Randleman, NC 27313. The GC/MS and LC/MS equipment, accessories, and other specified services of the successful Proposer shall be available for purchase by the Owner. Any Proposer terms and conditions in conflict with this RFP will not be accepted.

2. Questions: Shall be submitted in writing, addressed to Mrs. Christy Tommerdahl, P.E., and shall be received no later than five (5) calendar days prior to receipt of Proposals. Address questions to:

Mrs. Christy Tommerdahl, P.E.
Hazen and Sawyer
620 Green Valley Rd, Suite 101
Greensboro, NC 27408
E-mail: ctommerdahl@hazenandsawyer.com

3. Submittal Delivery: Proposals shall be submitted electronically by 2:00 PM local prevailing time on **Friday, December 20th, 2024** to:

Mr. Daniel Mackenzie
PTRWA Laboratory Manager
7297 Adams Farm Rd
Randleman, NC 27317
E-mail: dmackenzie@ptrwa.org

4. Proposal Cover Sheet: Shall be provided with the following format:

**Piedmont Triad Regional Water Authority
John Franklin Kime Water Treatment Plant
LC/MS and GC/MS Lab Equipment Proposal
NAME OF ENTITY SUBMITTING PROPOSAL (“PROPOSER”)**

5. Proposer: The Proposer shall be the actual manufacturer of the LC/MS and GC/MS system equipment. Used herein, the term means the corporate entity that provides the response to this RFP.
6. Non-discrimination: The Owner does not discriminate on the basis of race, religion, color, sex, national origin, age or disability, or against faith-based organizations on the basis of such organization's religious or charitable character.
7. Format: Responses to the RFP shall be submitted in electronic format (PDF) either on a flash drive sent via mail to PTRWA or by email to dmackenzie@ptrwa.org. A table of contents shall be provided along with bookmarking each section in the PDF.
8. Late Proposals: It is the responsibility of the Proposer to ensure that the Proposal is received by the due date and time. No Proposals will be accepted after the due date and time. Late proposals will be unopened and returned to the proposer.
9. Cost of Proposal Development: The Owner shall not be responsible for any cost incurred by applicants because of participation in this RFP process. Each applicant shall bear its own expense in connection with the preparation and submission of materials and the provision of any supplemental information requested. The Owner shall have no liability for cost incurred by applicants in connection with the review and evaluation of qualification materials and any findings and determinations made therefrom. This is not a solicitation for bid. All materials and information submitted during the qualification process will become the property of the Owner.
10. Contact Prohibited: Proposer and proposer staff members are prohibited from contacting any member of the Owner's staff regarding this RFP. All questions or requests for clarification of the Project scope shall be submitted per the Instructions.
11. Specifications: The Technical Specifications included as part of this RFP include Section 40 76 83.01 – Gas Chromatograph/Mass Spectrometer and Section 40 76 83.02 – Liquid Chromatograph/Mass Spectrometer. The provided specifications shall be considered binding as of the date of submittal of Proposals.
12. Additional Information During Review: Additional information, test data, or clarification of information presented in the Proposal or obtained from plant references may be requested as part of the evaluation process. The Proposer shall provide the requested information within 10 business days.
13. The Recipient will not disclose to any third party, or make any use of the Discloser's Confidential Information except as required by the North Carolina Public Records Act. The Recipient will use at least the same standard of care to maintain the confidentiality of the Discloser's Confidential Information that it uses to maintain the confidentiality of its own Confidential Information, but in no event less than reasonable care. The obligations hereunder will remain in full force with respect to each item of Confidential Information for a period of ten (10) years after Recipient's receipt of that item. However, The City's obligations to maintain software as confidential will survive in perpetuity. "Discloser" means the party providing Confidential Information to the Recipient. "Recipient" means the party receiving Confidential Information from the Discloser. "Confidential Information" means non-public information of a party to this Agreement that is identified as or would be reasonably understood to be confidential and/or

proprietary and is marked “confidential” and meets the requirements of North Carolina General Statutes 132-1.2. Confidential Information does not include information that: (i) is or becomes known to the public without fault or breach of the Recipient; (ii) the Discloser regularly discloses to third parties without restriction on disclosure; (iii) the Recipient obtains from a third party without restriction on disclosure and without breach of a non-disclosure obligation; or (iv) is independently developed by the Recipient without access to Confidential Information.

Pursuant to the North Carolina Public Records Act, trade secrets or confidential information as defined by the North Carolina Public Records Act that are identified as such prior to disclosure to the Recipient is not public information and will not be released to the public by the Recipient except as set out below. Recipient will notify Discloser of any public records request, and if Discloser objects to Recipient disclosing any of the records responsive to the request, Discloser will notify the Recipient in writing within forty-eight (48) hours. If so notified, Recipient will not disclose the records until ordered to do so by a court of competent jurisdiction, and Discloser will enter an appearance as a party in-interest and defend Recipient in any claim, suit, mediation, litigation, or arbitration proceeding concerning the release of the records to which Discloser objected. Discloser will indemnify, save harmless, and pay any and all attorney’s fees incurred by Recipient, and any attorney’s fees Recipient is ordered to pay to any person(s) or organization(s) as a result of Discloser’s objection to the release of the public records. Discloser will also indemnify, save harmless, and pay any and all claims for damages, court costs, or other fees Recipient incurs as a result of Discloser’s objection to the release of the records requested pursuant to the North Carolina Public Records Act.

B. POST REVIEW PROCEDURES

1. It is the Owner’s intent to complete the Proposal evaluation and selection process, and to notify responders of the results, approximately thirty (30) calendar days after receipt of Proposals.
2. The Owner reserves the right to reject any and all Proposals if it deems such action to be in its best interests. The Owner reserves the right to reject the selected Proposer’s equipment at a later date if it is determined that the Proposer provided false, misleading or inaccurate information in its Proposal. The Owner reserves the right to reject the selected Proposer’s equipment at a later date if it is determined that any of the qualifying criteria that the Proposer presented in its Proposal has materially changed to the extent that the long-term use of the equipment would not be in the Owner’s best interests. The Owner reserves the right to waive any requirement that is determined to be in the Owner’s best interests.
3. The Owner reserves the right (a) to negotiate changes of any nature with any Proposer to perform the work with respect to any term, condition, or provision in this document and/or in any RFP, whether or not something is stated to be mandatory and whether or not it is said that a Proposal will be rejected if certain information or documentation is not submitted with it, and (b) to enter into an agreement for the work with one or more firms that do not submit a Proposal.
4. The decision to select a Proposal shall not constitute a determination that the Proposer is responsible, and such applicant may be subsequently rejected as non-responsible on the basis of subsequently discovered information. The Owner’s action in rejecting an

applicant as non-qualified in this regard is final.

5. All deadlines are for the administrative convenience or needs of the Owner and may be waived by the Owner in its discretion.

C. AGREEMENTS AND CONTRACTUAL CONSIDERATIONS

1. **Purchase Order:** The Proposer shall enter a purchase order with the Owner no later than 30 days after the Owner receives approval for the equipment purchase from the PTRWA Board. The resulting Contract between the Proposer and the Owner shall be consistent with and governed by state and local laws in North Carolina.
2. **Additional Terms and Conditions:** The Proposer shall agree and understand that standard terms and conditions for equipment purchases are included, including but not limited to:
 - a. **Shipping and Travel:** Shipping costs for all equipment as well as travel and subsistence costs for all service personnel for equipment and services specified shall be borne by the Proposer and included in the Total Cost of the Proposal.
 - b. **Equipment Warranty:** Proposer's equipment warranty shall become effective as of the equipment startup date.
3. **Proposer's Acknowledgement and Agreement to Terms and Conditions:** The Proposer shall provide a signed letter by an officer of the corporation acknowledging that (a) the Proposal is in accordance with the requirements of the RFP; (b) the pricing is firm as described in the terms and conditions described herein.

2. EVALUATION METHODOLOGY

Evaluation scoring will be used to evaluate each of the following categories. Responses will be scored via the format shown in Appendix A and as detailed throughout this section. The highest score will represent the highest ranked Proposer.

A. CATEGORY 1: EQUIPMENT FEATURES

1. Points in this category will be provided subjectively based on a demonstration of compliance with the intent of the Project. General viability of equipment and organization of presented material will be used in scoring.
2. Provide the Full Product Name and Model Numbers for the GC/MS and LC/MS instrumentation offered by the Proposer.
3. Provide instrument dimensions and dimensional drawings for the full system, including all supporting components required for installation and operation.
4. Provide statement that proposed equipment complies with the Technical Specifications given in Appendix E.
5. A copy of the Technical Specifications (Appendix E) shall be included in the Proposal with each paragraph marked to show compliance with the specification and to indicate any paragraphs where the Proposer claims an exception to the specification.

6. Provide statement of any deviations or exceptions to specifications and include discussion as to whether such items affect the quality, performance, durability, or longevity of the equipment.
7. Appendix C. For each equipment item listed in Appendix C, provide the following information:
 - a. A description of the Proposer's equipment item, including a statement of how it will be used in 1,4-dioxane or PFAS detections, as applicable.
 - b. All relevant model or item identification numbers.
 - c. A brief summary of any extra features and/or capabilities of the item that yield an added benefit to the proposed scope or the Owner's O&M of the equipment.
8. Instructions for delivery and installation, including estimated timelines. Describe any opportunities for rapid fulfillment.
9. Describe Training Services offered with purchase. Provide a statement indicating whether the offered training does or does not cover all topics necessary to successfully operate and maintain the equipment for the intended use described in this RFP.
10. The Proposer shall explain how the equipment and instrumentation reacts to a power failure event and how the equipment either auto restarts or their recommended restart SOP.
11. Include requirements and recommendations for Uninterrupted Power Supply (UPS) or Backup Power Generation, specifying whether each is for the entire system or specific instrument components only.

B. CATEGORY 2: OPERATION AND MAINTENANCE INFORMATION

1. Points in this category will be provided subjectively based on general demonstration of compliance with the intent of the Project.
2. Provide a description of all equipment warranties and/or guarantees provided with purchase or available for an additional cost. A minimum of three (3) years of full warranty coverage shall be included in the equipment price.
3. Provide a description of the operations and maintenance (O&M) requirements to effectively operate and maintain the equipment for a 10-year period. In addition to the overall discussion, include:
 - a. A tabulation of typical preventative maintenance requirements for each system including: the task description; recommended frequency of performance; estimated staff hours to perform the task; and all equipment, materials, and tools required to perform the task.
 - b. Requirements for routine maintenance, including detailed procedures.
4. Provide details of service readily accessible to the Owner, including the following:
 - a. How many field service/support technicians are currently making service calls on the

proposed equipment within this area/region of the United States. Document what number of technicians are full-time employees of the Proposer as compared to contractors.

- b. For this area, provide the normal response time for on-site services from the time of order to the arrival of a service technician.
- c. For this area, provide the percentage of service requests that are completed same day.
- d. List the locations of the Proposer's service facilities in the United States.
- e. List the parts-stocking warehouse locations in the United States, including documenting if any parts are not readily stocked.
- f. Provide the normal delivery schedule for parts from time of order.
- g. Provide a detailed list of spare parts included in the Proposal, including all spare parts required in the Technical Specifications, and any other parts recommended and included by the Proposer. Include current list price for each spare part sold by the Proposer.

C. CATEGORY 3: INSTALLED EQUIPMENT EXPERIENCE AND REFERENCES

1. Points in this category will be provided subjectively based on general demonstration of compliance with the intent of the Project. Experience of Proposer and organization of presented material will be used in scoring.
2. Provide statement of business and financial stability, including the following. Financial information if received as confidential will not be shared nor disclosed outside of selection team. All financial information submitted is destroyed upon award of the agreement.
 - a. Number of years the Proposer has been in business.
 - b. Number of years the Proposer has been in the business of supplying/manufacturing GC/MS and LC/MS analytical instrumentation.
 - c. Listing of manufacturing facilities for GC/MS and LC/MS system equipment proposed for this project, the location of these manufacturing facilities, and years in operation.
 - d. Sales (\$) of the Proposer for the models of GC/MS and LC/MS system equipment proposed for the past three fiscal years
3. Provide reference information for three (3) US installations of similar equipment to the units proposed for this Project which have been in service over two (2) years with contact information. Maximum points for references will be granted based on demonstrating favorable references at the discretion of the Owner, which may include direct contact with any owners of similar analytical equipment by Proposer. Points will be provided based on discretion of Owner as to quality of references. Information for these installations shall include:
 - a. Business Name/Location/Owner
 - b. Current contact person and phone number
 - c. Number of LC/MS and/or GC/MS system units installed of the type proposed
 - d. Model numbers of equipment installed
 - e. Date installed or commissioned
 - f. Approximate number of samples analyzed per specified unit time (monthly/quarterly/annually)
 - g. Practical Quantitation Limits (PQLs) achieved by the facility using this instrumentation for 1,4-dioxane and PFAS analytes, if available.

- h. Corrective maintenance history (warranty repairs, parts replaced under warranty, parts purchased from Proposer after warranty) for a minimum of two years of service per instrument.

D. CATEGORY 4: EQUIPMENT COST

1. Provide completed “Schedule of Equipment Costs” in the format given in Appendix B of this document.
 - a. Item 1a shall be Base Price of LC/MS equipment.
 - b. Item 1b shall be Base Price of GC/MS equipment.
 - c. Item 1c shall be the Bundled Price for LC/MS and GC/MS.
2. Provide a formal “Quotation” complete with a detailed scope of goods and services suitable to meet all requirements in the technical specifications (Appendix E), and the equipment features listed in Appendix C.
3. Points will be determined as follows:
 - a. Full points will be provided to the Proposer with the lowest Bundled Price (Item 1c).
 - b. Partial points will be provided to other Proposers based on ratio of lowest equipment price to Proposer’s equipment price, times the full point value:

$$\frac{\text{Lowest Equipment Cost of Proposer Meeting All Evaluation Criteria} \times 30}{\text{Proposer's Bundled Equipment Cost (Item 1c)}}$$

4. The Owner reserves the right to purchase the LC/MS and GC/MS systems as separate purchases from different manufacturers. In that situation, the prices provided in 1a and 1b will be used to calculate the cost points using the same formula listed above, and the prices in 1a and 1b will be used in the purchase agreement.

**APPENDIX A
PROPOSAL SCORING SHEET
(DO NOT INCLUDE WITH PROPOSAL)**

Piedmont Triad Regional Water Authority John Franklin Kime Water Treatment Plant LC/MS and GC/MS Lab Equipment Proposal Proposal Scoring		
Evaluation Category	Maximum Points	Proposal Score
1. EQUIPMENT FEATURES	30	
2. OPERATION AND MAINTENANCE INFORMATION	20	
3. INSTALLED EQUIPMENT EXPERIENCE AND REFERENCES	20	
4. EQUIPMENT COST	30	
Total Points	100	

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APPENDIX B
SCHEDULE OF COSTS
(INCLUDE WITH PROPOSAL)

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LC/MS and GC/MS SYSTEM – SCHEDULE OF EQUIPMENT COSTS

Item No.	Item Description	Cost
1a.	Base Price LC/MS	\$
1b.	Base Price GC/MS	\$
1c.	Bundled Price for LC/MS and GC/MS	\$

Proposer Name: _____

Proposer Address: _____

Individual Authorized to Make Proposal (signature): _____

Individual Authorized to Make Proposal (print name and title): _____

Addendum No.	Date	Initial (acknowledging receipt)

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APPENDIX C
LIST OF LC/MS and GC/MS INSTRUMENT
EQUIPMENT FEATURES

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**EQUIPMENT FEATURES TABLE
LC/MS INSTRUMENT**

Item No.	Item Name:
a.	Triple Quadrupole (TQ) Tandem Mass Spectrometer
b.	Liquid Chromatography system (HPLC or UHPLC)
c.	PFC/PFAS free assemblies (included tubing, seals, etc.)
d.	LC Column / Guard Column
e.	Data System/ Data Package Software (PFAS method included)
f.	PFAS Database
g.	Automatic Liquid Handling / Autoinjector
h.	Nitrogen Generator System (MS)
i.	Touchscreen / User Interface
j.	Moveable Instrument Bench

**EQUIPMENT FEATURES TABLE
GC/MS INSTRUMENT**

Item No.	Item Name:
a.	Single Quadrupole (SQ) Mass Spectrometer
b.	Gas Chromatography system with multimode inlet
c.	Vacuum system (Dry Rotary Pump + Turbo Pump)
d.	GC Column
e.	Data System / Data Package Software
f.	Database including 1,4 Dioxane
g.	Automatic Liquid Handling / Autoinjector
h.	Helium Carrier Gas System
i.	Touchscreen / User Interface

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APPENDIX D
PROPOSAL CHECKLIST
(INCLUDE WITH PROPOSAL)

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Check that the final proposal package includes all the requirements in this proposal listed in the following checklist. This checklist must be completed and submitted as part of the proposal package.

- Cover Letter
- Proposal Cover Sheet
- Table of Contents
- Equipment Features
 - Description of Equipment and General Arrangement Drawings (Category 1, Items 2-3)
 - Exceptions and check marked Specifications 40 76 83.01 and 40 76 83.02 (Category 1, Item 5)
 - LC/MS and GC/MS Equipment Design Data Table Information (Appendix C – Category 1, Item 7)
 - Timeline for delivery and installation (Category 1, Item 8)
 - Description of training services provided with purchase (Category 1, Item 9)
 - Power Failure Reaction (Category 1, Item 10)
 - Recommendation for UPS or Backup Power Generation (Category 1, Item 11)
- Operation and Maintenance Information
 - Details on equipment warranties and/or guarantees (Category 2, Item 2)
 - Summary of O&M requirements (Category 2, Item 3)
 - Summary of service information (Category 2, Item 4)
- Installed Equipment Experience and References
 - Business and Financial Stability (Category 3, Item 2)
 - Reference Information (Category 3, Item 3)
- Acknowledgement Letter as required in Section 1, Paragraph C.4
- Signed Schedule of Costs (Appendix B)
- Terms and Conditions
- Proposal Checklist

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APPENDIX E

TECHNICAL SPECIFICATIONS

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SECTION 40 76 83.01
GAS CHROMATOGRAPH/MASS SPECTROMETER

PART 1 – GENERAL

1.01 THE REQUIREMENT

- A. The Proposer shall furnish, test, install and place in satisfactory operation the gas chromatograph/mass spectrometer system, with all spare parts, accessories, and appurtenances as herein specified.

1.02 TOOLS, SUPPLIES, AND SPARE PARTS

- A. One complete calibration kit for initial calibration as well as supplies and tools for initial calibration shall be provided.
- B. One spare gas chromatograph column shall be provided upon installation.

PART 2 – PRODUCTS

2.01 GAS CHROMATOGRAPH/MASS SPECTROMETER (GC/MS)

- A. GC/MS systems shall be capable of employing US EPA-approved Methods 8270E with selective ion monitoring (SIM) or equivalent and 522 for the determination of 1,4-Dioxane.
- B. Features required:
 - 1. Gas Chromatograph
 - a. Auto Liquid Sampler included
 - b. GC Injector and Oven: Suitable for split/splitless and temperature-programmed injection (MMI) with ability to reach a minimum of 300°C
 - c. Capillary Column: Fused-silica 30 m x 0.25 mm i.d. column with a 1.4 um film thickness, or equivalent.
 - d. Carrier Gas: Helium, 99.999% purity or higher.
 - 2. Mass Spectrometer: Single-quadrupole MS
 - a. Electron scan rate: 20,000 u/sec or greater
 - b. Mass/charge range: 1.6-1090 u

- c. Ionization source: Extractor electron ionization or equivalent electron ionization source.
- 3. GC/MS Interface: Fused interface.
- 4. Vacuum Pump: Dry rough pump with turbo molecular vacuum pump with a vacuum ionization gauge.
- 5. GC/MS system specific rollable bench or table
- C. GC/MS system shall be Agilent 8890/5977C, Shimadzu GCMS-QP2020NX or equivalent.

2.02 DATA SYSTEMS

- A. An interfaced data system and computer interface shall be furnished to acquire, store, and output MS data. The computer software shall have the capability of processing stored GC/MS data by recognizing a GC peak within a given retention time window. The software shall be able to integrate the ion abundance of any specific ion between specified times or scan number limits. The software shall be able to construct linear regressions and quadratic calibration curves and calculate analyte concentrations.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. The Proposer shall provide on-site hardware and software training with an application specialist including the load and optimization of 1,4 dioxane analysis methods EPA 522 and 8270E. In addition, the Proposer shall provide consultation and assessment services to the Owner during installation of the equipment to ensure the successful operation and maintenance of the GC/MS system, including consultation on electricity, Uninterrupted Power Supply (UPS) or Backup Power Generation, and HVAC requirements.

END OF SECTION

SECTION 40 76 83.02
LIQUID CHROMATOGRAPH/MASS SPECTROMETER

PART 1 – GENERAL

1.01 THE REQUIREMENT

- A. The Manufacturer shall furnish, test, install and place in satisfactory operation the liquid chromatograph/mass spectrometer system, with all spare parts, accessories, and appurtenances as herein specified.

1.02 TOOLS, SUPPLIES, AND SPARE PARTS

- A. One complete calibration kit for initial calibration as well as supplies and tools for initial calibration shall be provided by the Manufacturer.
- B. One spare liquid chromatograph column and guard column shall be provided upon installation by the Proposer.

PART 2 – PRODUCTS

2.01 LIQUID CHROMATOGRAPH/MASS SPECTROMETER (LC/MS-MS)

- A. LC/MS-MS systems shall be capable of employing US EPA-approved Methods 533 and 1633 for the determination of method-specified per- and poly-fluoroalkyl substances (PFAS) compounds
- B. PTFE or other fluorinated tubing and frits native to the equipment shall be replaced by the Proposer with appropriate non-fluorinated alternatives.
- C. Features required:
 - 1. High or Ultra-High Performance Liquid Chromatograph (HPLC or UHPLC)
 - a. Auto Liquid Sampler shall be included in system package
 - b. Capillary Column: C18 column, 1.7 μ m, 50 x 2.1 mm (Waters Acquity UPLC® BEH or equivalent)
 - c. Guard column: Phenomenex Kinetex Evo C18, or equivalent
 - 2. LC rollable flex bench
 - 3. Mass Spectrometer: Triple-quadrupole MS capable of electrospray ionization (ESI) in Negative Ion mode.

- a. Scan rate: 20,000 u/sec
 - b. Mass range: 5 to 1090 u or greater
 - c. MS shall be able to run in Multiple Reaction Monitoring (MRM) mode.
- 4. MS-specific rollable bench or table
 - 5. Nitrogen Generator:
 - a. Minimum purity: 95%
- D. LC/MS-MS system shall be Agilent 1290/6495, Shimadzu LCMS 8060NX or equivalent.

2.02 DATA SYSTEMS

- A. An interfaced data system and computer interface shall be furnished to acquire, store, and output MS data. The computer software shall have the capability of processing stored LC/MS data by recognizing an LC peak within a given retention time window. The software shall be able to integrate the ion abundance of any specific ion between specified times or scan number limits. The software shall be able to construct linear regressions and quadratic calibration curves and calculate analyte concentrations.

PART 3 – EXECUTION

3.01 INSTALLATION

- A. The Proposer shall provide on-site hardware and software training with an application specialist including the load and optimization of PFAS analysis methods EPA 533 and 1633. In addition, the Proposer shall provide consultation services to the Owner during installation of the equipment to ensure the successful operation and maintenance of the LC/MS-MS system, including consultation on electricity, Uninterrupted Power Supply (UPS) or Backup Power Generation, and HVAC requirements.

END OF SECTION