



**COUNTY OF ERIE  
DIVISION OF PURCHASE  
MEMORANDUM**

**To:** Division of Sewerage Management

**From:** Jamie Kucewicz, Buyer

**Date:** April 7, 2021

**Subject:** EMISSIONS TESTING

**Bid No.:** 220272-002

**Effective Dates:** January 1, 2021 through December 31, 2023

**Vendor:** ELEMENTAL AIR  
830 Tower Drive, Suite 100  
Medina, MN 55340

**Telephone:** (952) 303-1969

**Contacts:** Brian Durkop

**Pricing:** per attached document



COUNTY OF ERIE  
 MARK C. POLONCARZ  
 COUNTY EXECUTIVE  
 DIVISION OF PURCHASE  
INVITATION TO BID

Bids, as stated below, will be received and publicly opened by the Division of Purchase in accordance with the attached specifications. FAX bids are unacceptable. Bids must be submitted in a sealed envelope to:

County of Erie  
 Division of Purchase  
 Attention: JAMES KUCEWICZ, BUYER (716) 858-6336  
 95 Franklin Street, Room 1254  
 Buffalo, New York 14202-3967

NOTE: Lower left-hand corner of envelope MUST indicate the following:

BID NUMBER: 220272-002

OPENING DATE: NOVEMBER 4, 2020 TIME: 11:00 AM

FOR: EMISSIONS TESTING

NAME OF BIDDER: Elemental Air, LLC

If you are submitting other Invitations to Bid, each bid must be enclosed in a separate envelope.

Following EXHIBITS are attached to and made a part of the bid specifications, and part of any agreement entered into pursuant to this Invitation to Bid:

- EXHIBIT "A" - Assignment of Public Contracts
- EXHIBIT "B" - Purchases by Other Local Governments or Special Districts
- EXHIBIT "C" - Construction/Reconstruction Contracts
- EXHIBIT "D" - Bid Bond (Formal Bid)
- EXHIBIT "E" - Bid Bond (Informal Bid)
- EXHIBIT "EP" - Equal Pay Certification
- EXHIBIT "F" - Standard Agreement
- EXHIBIT "G" - Non-Collusive Bidding Certification
- EXHIBIT "H" - MBE/ WBE Commitment
- EXHIBIT "IC" - Insurance CLASSIFICATION "A"
- EXHIBIT "P" & EXHIBIT "PBI" - Performance Bond
- EXHIBIT "PW" - NYS Prevailing Wage
- EXHIBIT "Q" - Confined Space Program Certification
- EXHIBIT "V" - Vendor Federal Compliance Certification

County of Erie  
DIVISION OF PURCHASE  
NON-COLLUSIVE BIDDING CERTIFICATION

By submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of his knowledge and belief:

- (1) the prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or any competitor;
- (2) unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and
- (3) no attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

NOTICE

(Penal Law, Section 210.45)

IT IS A CRIME, PUNISHABLE AS A CLASS A MISDEMEANOR UNDER THE LAWS OF THE STATE OF NEW YORK, FOR A PERSON, IN AND BY A WRITTEN INSTRUMENT, TO KNOWINGLY MAKE A FALSE STATEMENT, OR TO MAKE A FALSE STATEMENT, OR TO MAKE A STATEMENT WHICH SUCH PERSON DOES NOT BELIEVE TO BE TRUE.

BID NOT ACCEPTABLE WITHOUT FOLLOWING CERTIFICATION:

Affirmed under penalty of perjury this 2 day of November, 2020

TERMS 30 DELIVERY DATE AT DESTINATION March to April

FIRM NAME Brian Durkop

ADDRESS 830 Tower Dr. Ste. 100

Medina, MN ZIP 55340

AUTHORIZED SIGNATURE Brian Durkop

Digitally signed by Brian Durkop  
DN: CN = Brian Durkop, C = US, O = Elemental AI  
Reason: I am the author of this document  
Date: 2020.11.02 14:51:19 -0600

TYPED NAME OF AUTHORIZED SIGNATURE 952-303-1969

TITLE President TELEPHONE NO. 952-905-9613

**County of Erie**  
**DIVISION OF PURCHASE**  
**BID SPECIFICATIONS**

BID NO 220272-002

Ship to: County of Erie  
 Attention:  
 Address:

Ship Via: Cheapest Way  
 Date Required at Destination: As Required

ITEM NO.	QUAN -TITY	UM	CATALOG NO./DESCRIPTION	UNIT PRICE	TOTAL PRICE
			Vendor to provide emissions testing services		
			for the Erie County Southtowns WRRF,		
			S-3690 Lake Shore Road, Buffalo, NY 14219,		
			per the attached specifications.		
			Term of the contract is January 1, 2021 through December 31, 2023		
			<b>SEE PRICING SHEET</b>		

**NOTE:** Bid results cannot be given over the phone. All requests for bid results should be submitted in writing or faxed to:

**ERIE COUNTY DIVISION OF PURCHASE**  
 Freedom of Information Officer  
 95 Franklin Street, Rm. 1254  
 Buffalo, NY 14202  
 FAX #: 716/858-6465

**NAME OF BIDDER** Elemental Air, LLC

(Rev. 9/95)

ERIE COUNTY OFFICE BUILDING, 95 FRANKLIN STREET, BUFFALO, NEW YORK 14202 (716) 858-6395

## **SPECIFICATIONS**

### **Compliance Emissions Testing Services**

Vendor to provide emissions testing services for the Erie County Southtowns WRRF for a period of three years. If retained for the services, vendor would perform annual compliance emissions testing of the following emission units at the Erie County Southtowns WRRF.

#### **Process Description**

South Towns Sewage Treatment plant has operated two fluidized bed sludge incinerators since 1980. The sewage sludge incineration system consists of two identical fluidized bed incinerators, each with a 1400 CF fluidizing zone. The fluidized bed incinerator construction consists of a steel shell lined with firebrick and castable insulation for high temperature operation. The fluid bed is supported by a constriction plate that permits the fluidizing gas to pass upward. The constriction plate is a refractory arch with metal tuyeres through which the uprising air flows. The pressure drop through the tuyeres is just high enough to provide an even gas flow distribution throughout the fluidized bed. The inside of the incinerator has three distinct sections. The bottom most section is the Windbox. It consists of the entire chamber beneath the constriction plate. The Windbox serves as a manifold to distribute the air to the tuyeres. The fluidizing air is provided by an 18.4 SCFM centrifugal blower. The next area within the incinerator is the bed. It is the area immediately above the refracted arch and serves as the container for the sand bed. This is where the dewatered sludge is incinerated. The third area is the freeboard. It consists of the entire volume above the bed. It performs the function of a disengaging chamber, separating from the uprising gas stream the bed sand and sludge particles that have not been completely burned. These particles fall back into the fluidized bed. The incineration systems are equipped with a computerized control system for the operation and monitoring of the equipment performance. The furnace temperatures, sludge feed rate, auxiliary fuel usage, venturi pressure drop, water flow to the scrubbers, flue gas temperature to the venturi scrubber, and the stack temperature are monitored at the control room. The incinerators are also equipped with continuous emission monitoring systems (CEMS) for the measurements of oxygen (O<sub>2</sub>) and total hydrocarbons (THC) in stack gases.

#### **Exhaust System Description**

The air pollution control (APC) system consists of a venturi scrubber that effectively removes the ash residue from the incineration process. The ash-laden gases and water are forced through the narrow venturi throat where intimate contact between the ash and water is achieved. Eventually all of the ash is transferred to the water that is pumped from the bottom of the scrubber by means of a scrubber ash pump. The exhaust gasses then pass through two sets of impingement baffle plates, which create turbulent interaction between the gas stream and the water supplied to each plate. This turbulent action provides for thorough cooling and cleaning of the gases. Excess water from each plate overflows a weir and is discharged from the side of the scrubber. The gas then passes through an entrainment separator to remove water droplets and prevent them from being discharged to the atmosphere. Before entering the stack, the gas passes through a mercury removal module.

## Plant data

Testing of each incinerator will be attempted at the incinerator system design capacity of 861 dry lbs. / hour dry solids. The charging rate must be above 85% of rated capacity (732 dry lbs. / hour). The plant's SCADA system continuously records the operating data to be included in the test report. In accordance with 40 CFR Part 60.154, samples of the sludge charged to the incinerator will be collected in nonporous jars at the beginning of each run and at approximately 1-hour intervals thereafter until the test ends, "209 F. Method for Solid and Semisolid Samples" will be used to determine dry sludge content of each sample (total solids residue), except that:

- Evaporating dishes will be ignited to at least 1030C rather than 550oC
  - The quantity of dry sludge per unit sludge charged will be determined in terms of ton/ton
  - The average dry sludge content will be the arithmetic average of all the samples taken during the run
- These process operating loads/parameters and control device parameters will be recorded to verify the operating conditions at the time of testing and are included in the final test report. These data included (at a minimum):

- Sludge Feed Rate and Total (Wet & Dry)
- Scrubber Differential Pressure
- Mercury Module Pressure Drop
- Mercury Module Temperature
- Venturi Water Flow Rate
- Venturi Water PH
- Tray Water Flow Rate
- Tray Water PH
- Combustion Temperatures (Bed & Freeboard)
- Incinerator Temperature
- Fuel Oil Rate and Total Used
- Stack Temp
- Air Flowrate to Venturi Scrubber
- Air Flowrate from Air Skid
- Caustic Concentration

## COMPLIANCE EMISSIONS TESTING

### a. Target Pollutants and Testing Methodology

Emissions testing data for the nineteen pollutants indicated below, based on three sampling runs to be conducted at the end of, or upon completion of, the optimization activities.

#### CAA Criteria Pollutants

- 1) Particulate Matter (PM)
- 2) CO\*
- 3) SO<sub>2</sub>\*
- 4) NO<sub>x</sub>
- 5) THC
- 6) Opacity (Stacks, Method 9) and Fugitive Ash (Method 21, operations)

#### 40 CFR Part 60 Subpart M Pollutants

- 7) Hydrogen Chloride (HCl)
- 8) Dioxins/furans (PCDD/PCDF)\*
- 9) Arsenic
- 10) Beryllium
- 11) Cadmium
- 12) Chromium
- 13) Lead
- 14) Mercury
- 15) Nickel
- 16) Selenium
- 17) Tin
- 18) Zinc

#### NYSDEC requested pollutants

- 19) Hexavalent Chromium\*

\* This testing may not be necessary. It should be included as an option in the proposal pending final determination from NYSDEC if necessary.

#### Additional Parameter Monitoring

- 1) Gas Flow Rate
- 2) Gas Molecular Weight CO<sub>2</sub> and O<sub>2</sub>
- 3) Moisture
- 4) Oxygen (wet and dry)

All emissions testing shall comply with the applicable requirements (i.e., minimum volumes or test methods) in:

- Table 2 to Subpart Mmmm for CO, NO<sub>x</sub>, SO<sub>2</sub>, filterable PM, dioxins/furans, HCl, Hg, Cd and Pb.
- 6 NYCRR Part 212, arsenic, beryllium, chromium, hexavalent chromium, nickel

However, due to additional NYSDEC requirements, all applicable durations shall be a minimum of 2 hours.

#### b. Pre-Test Protocol

The stack testing firm shall prepare a draft Pre-Test Protocol incorporating all the applicable sampling requirements indicated in this RFQ's. Deviations, if any, shall be explicitly indicated in your quotation. Pretest protocols shall provide detailed testing method explanations.

The final Pre-Test Protocol, revised to incorporate comments, if any, from the County, shall be submitted to NYSDEC not less than 60 days prior to stack testing. Not less than 21 days prior to submitting the Pre-Test Protocol to NYSDEC, the stack testing firm shall submit a draft of the protocol to Erie County Southtowns WRRF for review.

#### c. Test Notifications

Not less than 15 days prior to commencing the compliance emissions testing program, the stack testing firm shall submit notification of the date and time of the testing to the appropriate regional office of NYSDEC, and the County.

This can also be accomplished with providing an exact test date in the protocol when submitting the protocol to NYSDEC

#### d. Quality Assurance Procedures

All quality assurance (QA) procedures and results conducted during the compliance testing shall be documented by the stack testing firm and included in the final compliance testing report to be furnished by the stack testing firm. QA procedures include, but are not limited to, the calibration of all equipment including pitot tubes, sampling trains, and analyzers, in accordance with United States Environmental Protection Agency (USEPA) methods.

During the compliance testing, NYSDEC personnel may be onsite in accordance with their prerogative to observe all calibrations and the actual stack testing.

#### e. Compliance Testing Report

The County is required to submit the compliance report to NYSDEC within 90 days after completion of the compliance testing. Currently, the draft Title V permit has 90-days for submission of the stack test report rather than the typical 60-days but it is preferable to get the submittal in within 60 days because the permit hasn't been issued yet and the more lenient 90 days is subject to be changed to the standard 60 days. To provide sufficient time for the County to review the compliance report prior to its submittal to NYSDEC, the stack testing firm shall submit to the County two copies of the draft report within 35 days of completion of the compliance testing. Instead of hardcopies, the stack testing firm may elect to submit an electronic copy of the draft report via e-mail or internet file delivery service. Upon receipt and incorporation of comments by the County, the stack testing firm shall submit five (5) copies of the final report within 14 days of receiving the comments.

The compliance report shall include all raw data, including process data compiled by the County furnished to the stack testing firm by the County, results of audit samples, all laboratory analyses, all calibration data, and all formulas used in calculating emission rates including sample calculations, and explanations of all disruptions encountered during compliance testing.

To ensure compliance with applicable limits and standards specified under 40 CFR Part 60 Subpart Mmmm, the stack testing firm will establish operating limits for the following year utilizing the data collected during the performance test. This information will then be included in the report submitted by the County to the NYSDEC. See previous reports for procedures in how operating limits are calculated for each relevant parameter.



f. Schedule

Emission testing is to be scheduled between March 1<sup>st</sup> and April 1<sup>st</sup> for the duration of the contract. Because the WWTP has two incinerators, it is possible that the compliance testing will require two separate mobilizations to the WWTP, with approximately one week between mobilizations to allow the County to switch over the operating incinerator. It can be assumed that testing both units will be done in one mobilization and an adder cost can be provided for testing in two mobilizations, but historically, testing has been completed in one week.

Your quotation shall include separate pricing for the compliance testing indicated in this RFQ. Please provide quotes for 3 consecutive years of testing (2021, 2022, and 2023). The quotation shall include separate costs for both a single mobilization and two separate mobilizations for each year. Because it is unknown if testing will be required for Hexavalent Chromium, Dioxins/Furans, and SO<sub>2</sub>/CO/NO<sub>x</sub>, please list the pricing for these items separately. All vendors must perform a site visit prior to bidding.

Please direct all questions to:

Kevin Kaminski

Erie County Southtowns Wastewater Treatment Facility

Southtowns Sewer District #3

3690 Lakeshore Road

Buffalo, New York 14219

Telephone: 716-823-8188; Ext: 225

E-mail: [Kevin.Kaminski@erie.gov](mailto:Kevin.Kaminski@erie.gov)

**Pricing**

Year	stack testing per incinerator (one mobilization)	stack testing per incinerator (two mobilizations)	hexavalent chromium testing	dioxins/furans testing	SO <sub>2</sub> , CO and NO <sub>x</sub> monitoring
2021	<u>\$12,770</u>	<u>\$15,929</u>	<u>\$1,811</u>	<u>\$5,396</u>	<u>\$627</u>
2022	<u>\$12,770</u>	<u>\$15,929</u>	<u>\$1,811</u>	<u>\$5,396</u>	<u>\$627</u>
2023	<u>\$13,163</u>	<u>\$16,407</u>	<u>\$1,865</u>	<u>\$5,558</u>	<u>\$645</u>

\*Bid award will be based on three-year cost of:

- stack testing on two incinerators (one mobilization)
- + hexavalent chromium testing
- + dioxins/furans testing
- + SO<sub>2</sub>, CO, NO<sub>x</sub> monitoring

November 2, 2020

Mr. James Kucewicz  
County of Erie  
Division of Purchase  
95 Franklin Street, Room 1254  
Buffalo, NY 14202



**PROPOSAL # E20071**

Dear Mr. Kucewicz,

Elemental Air is pleased to submit the following proposal to provide air emission testing services located at the County of Erie facilities. Elemental Air will conduct Environmental Protection Agency (EPA) approved testing methodologies. This proposal defines the tasks to be performed and the procedures to be utilized for this project.

## 1.0 Testing Methodology

The methods are incorporated by reference in the Code of Federal Regulations, Title 40, Part 60 and NYDEC testing methodologies. The test methods to be utilized during this project are defined as follows:

Method #	Method Description	Abbreviation
1	Determination of Sample Points	Points
2	Determination of Velocity and Volumetric Flow	Flow
3	Determination of Molecular Weight	MW
4	Determination of Moisture Content	H2O
5	Determination of Total Particulate Matter	PM
6C	Determination of Sulfur Dioxide	SO2
7E	Determination of Nitrogen Oxides	NOx
9	Determination of Visible Emissions	Opacity
10	Determination of Carbon Monoxide	CO
21	Determination of Fugitive Ash	Fugitive
23	Determination of Dioxin/Furans	Dioxin
25A	Determination of Total Hydrocarbons	THC
26	Determination of Hydrogen Chloride	HCl
29	Determination of Multiple Metals (Plus Hex Chromium)	Metals

## 2.0 Scope of Work

The goal of this project is to conduct compliance testing at two separate incinerators. Testing will consist of multiple tests listed above depending on the year. Gaseous Emissions testing will also be performed at the incinerators, constituents to be tested are NOx, SO2, CO and Hydrocarbons.

Elemental Air will provide all the necessary equipment and personnel to conduct the proposed testing. The following items are included in the proposed costs.

- Field data reduction and preparation of the compliance test report.
- All necessary equipment, chemicals, gases, etc to complete this project.

Safety equipment (hard hats, safety glasses, steel toed boots).  
 Electronic Copy of the test report.  
 Printed Copy of the test report upon request.

Elemental Air requests the following be provided during each mobilization in order to complete this project.

Safe access to the sample location.  
 Operation records during each test run.  
 2- 120V power at the sample location for the test trailer  
 2-120V power outlets at the sample location.  
 Coordination between test crew and operations to achieve the correct test parameters

### 3.0 Bid Basis and Assumptions

- Each bid provided is based on a proposed test schedule outlined in the following section. There may be on-site facility caused factors that require longer test schedules, changes to the test schedule, or delays and additional mobilizations which may incur additional charges upon approval of the client.

#### Compliance Testing 2 Incinerators

See Pricing Sheet

Test Parameters:  
 PM, Metals, Dioxin  
 Flow  
 CO, NOx, SO2, THC, HCl  
 H2O, O2, CO2

Reporting Parameters:  
 gr/dscf, lbs/hr  
 wacfm, wscfm, dscfm  
 ppm  
 %

Length of Runs:	PM	60 minutes
	Dioxin	120 minutes
	CO, NOx, SO2, THC	60 minutes
	HCL, Metals	90 minutes
	Opacity, Fugitive	60 minutes

Number of Runs: 3

Proposal Schedule:	Day 1	Setup
	Day 2	Test
	Day 3	Test

NOTE: Schedule May Vary Depending on year

#### 4.0 General

We appreciate the opportunity to present the County of Erie with this bid. If you have any questions, please feel free to call me at (763) 477-4462 Ext 151 or 952-303-1969 Cell. Elemental Air thanks you for your consideration and we look forward to working with you.

Sincerely,



Brian Durkop, QSTI  
President

#### Fixed Quote Delay/Additional Testing Charges

In the event of plant related delays or additions to the scope of work the following rates will be used:

##### Hourly Delays

Number of Personnel at the site x \$85/Hour

##### Daily Delays

Number of Personnel at the site x \$85 x Eight (8) Hours

+

Number of Personnel at the site x \$170 (Living Expenses)

+

\$1,000 Equipment Fees

##### Additional Test Days

Additional test days will be calculated the same as a delay day plus the cost of analysis and supplies

## Time and Materials Rates/Additional Testing Charges

Parameter and Rate	
Principle	\$100/hr
Project Manager	\$90/hr
Testing Supervisor	\$85/hr
Engineering	\$75/hr
Technician III	\$75/hr
Technician II	\$60/hr
Technician I	\$55/hr
Information Systems	\$60/hr
Administration	\$65/hr
Printed Copy of Report	\$100/report
Per Diem (Hotel, Car, Food)	Cost + 10%
Supplies or Equipments Supplied by Elemental Air	Cost + 15%
Mileage*	\$0.85/Mile for cars and light trucks \$1.65/Mile for service and test trucks

### Terms and Conditions:

A minimum of eight (8) hours will be billed for any on-site work required during the project. Payments are due net 15 days after the date on the invoice. Elemental Air will bill 100% of the project costs upon completion of the on-site portion of the project. All fixed cost (Labor, Living Expenses) for delays incurred due to severe weather will be shared by the buyer and Elemental Air equally. Delays solely the cause of Elemental Air shall not incur additional costs to the buyer. Operational delays cause by the plant will be billed at the above delay rates. Hourly rates are based on a standard eight (8) hour workday between 8:00 AM to 5:00 PM, Monday through Friday, local time. All hours in excess or outside of the eight (8) hour period and those worked on Saturday, including travel, are charges at 1.5 times the above listed rates. Holiday rates shall be two (2) times the above listed rates.

No services shall be rendered until a signed Purchase Order is received by Elemental Air.

#### Report Delivery Schedule:

Normal turnaround time for test reports is 35 days upon completion of the testing portion of the project. Faster turnaround times may be available upon request. If an expedited report is requested, all necessary expedited charges to include lab rush fee will be agreed upon in the project cost. Process data for inclusion in the report is required within 25 days of the testing portion of the project. Failure to provide the required process data may delay the report beyond the 35 days and void any obligation to meet state required deadlines. All efforts will be made to meet all applicable deadlines in any event and may require additional fees if incomplete submissions of the report are made to meet the required deadlines.