T100 Continuous SO2 Analyzer Offer
CEMS BID DOCUMENT

Submitted To: State of West Virginia
Department of Administration Purchasing Division

Project RFQ No.: DEP16574
Due Date: 06/26/14 at 1:30PM

Our Offer No.: PM14-9510

Offer Submitted on: 20 June 2014

Offer Submitted by: Ronald Monte
Specifications & Details for RFQ DEP16574

State of WY Ref No: DEP16574
Cemtrex Ref: PM14-9510
Date: 20 June 2014

Frank Whittaker
Buyer Supervisor
304-558-2316
Frank.M.Whittaker@wv.gov

In response to the State of West Virginia Department of Administration Purchasing Division Solicitation Number “DEP16574”, Cemtrex is proposing the following:

Qty 3 Teledyne Model T100 UV Fluorescence SO2 Analyzer
- Ranges: 0-50 ppb to 0-20 ppm (user selectable)
- Includes: Internal Pump, Particulate Filter
- 120VAC, 60 Hz, Single Phase
- Analog Outputs: 10V, 5V, 1V, 0.1V DC, selectable
- Product manuals on CD
- Two Year Standard Warranty

Qty 3 Expendables Kit for Analyzer, One year operation

Qty 3 USB Com Port

Qty 6 Kit, UV Lamp, w/Adapter (BIR)

Qty 12 Akit, Replacement (3187)214NM Filter (BF)

The above complies with the “Specifications” section of DEP16574. Along with our proposal, please find enclosed the T100 datasheet for your viewing and reference. Cemtrex is pleased to submit our proposal and please do contact us if you have any questions or to discuss this opportunity further.

Assuring our best services as always,

Yours truly,

Ronald Monte, Marketing & Sales Assistant
Cemtrex Inc (www.cemtrex.com) (OTC: CTEI.OB) is a Ducon Group Company (www.ducon.com) serving the air pollution control and monitoring market since 1938. Cemtrex through various M&A from the 1990s, have grown to provide state-of-the art process and emissions monitoring systems, Instrumentation & Control services and EPA Emissions Reporting systems apart from our offerings in other countries like the Middle East, India, South America and China.

Cemtrex acquired KVB Enertec a subsidiary of General Electric in 1990 to expand the Laser opacity / dust monitoring product line for EPA COMS Reporting. Our partnership with Mercury Instruments in Germany has enabled us to offer the Mercury CEMS for the CAMR and various other Mercury control applications in the US and worldwide. Our CEMS line provides complete system integration and services for 40CR60 and 75 based regulations for Acid Rain program and Nox Budget facilities. We have installed our COMS and CEMS in over 500 facilities in the US and word wide and most of our US clients are reporting EPA emissions and complying with the regulations.

Cemtrex CDM [Clean Development Mechanism] Division provides Carbon Credit Management services for UNFCCC type of projects worldwide and we are an active member of Chicago Climate Exchange [CCX]. We have installed few MDCR [Methane Destruction and Capture Reactor] for coal bed methane applications.

Our Parent company Ducon Technologies has been in this business for the last several decades and our dry scrubbers can be found in college textbook illustrations. Ducon has over 10,000 installations since 1938 with a wide range of APC systems from scrubbers, FGD, SCR, Bag House, ESP and Acid gas removal systems.

Cemtrex Inc. is a worldwide market leader in manufacturing and selling the most advanced instruments, equipment and systems for emissions monitoring and control for the industry. The Company's products are sold to power plants, refineries, chemical plants, cement plants and other industries, including federal and state governmental agencies.
**THE WEST VIRGINIA PURCHASING DIVISION IS SOLICITING BIDS ON BEHALF OF THE WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION, DIVISION OF AIR QUALITY (AG) TO PURCHASE (3) CONTINUOUS SULFUR DIOXIDE (SO2) ANALYZERS, TELEDYNE ADVANCED POLLUTION INSTRUMENTATION MODEL T100 OR EQUIVALENT.**

<table>
<thead>
<tr>
<th>LINE</th>
<th>QUANTITY</th>
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<th>ITEM NUMBER</th>
<th>UNIT PRICE</th>
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<td>FREIGHT/SHIPPING</td>
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***** THIS IS THE END OF RFQ DEP16574 ***** TOTAL: $46,424.15
DEP16574
Bid Schedule

The WVDEP reserves the right to request additional information and supporting documentation regarding unit prices when the unit price appears to be unreasonable.

<table>
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<tr>
<th>Item No.</th>
<th>Quantity</th>
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<td>1</td>
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<td>EA</td>
<td>Continuous Sulfur Dioxide (SO2) Analyzers, Teledyne Advanced Pollution Instrumentation model T100 or equivalent</td>
<td>$15,408.05</td>
<td>$46,224.15</td>
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<td>LS</td>
<td>Freight/Shipping</td>
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<td><strong>Total</strong></td>
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<td><strong>$46,424.15</strong></td>
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Company
Name: Cemtrex, Inc.

Signature: [Signature]  Date: 06/19/14
CERTIFICATION AND SIGNATURE PAGE

By signing below, I certify that I have reviewed this Solicitation in its entirety; understand the requirements, terms and conditions, and other information contained herein; that I am submitting this bid or proposal for review and consideration; that I am authorized by the bidder to execute this bid or any documents related thereto on bidder’s behalf; that I am authorized to bind the bidder in a contractual relationship; and that to the best of my knowledge, the bidder has properly registered with any State agency that may require registration.

Cemtrex, Inc.

(Company)

\[Signature\]

(Authorized Signature)

Ronald Monte, Marketing & Sales Assistant

(Representative Name, Title)

631-756-9116 631-420-4985

(Phone Number) (Fax Number)

06/19/14

(Date)
ADDENDUM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: DEP16574

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:
(Check the box next to each addendum received)

☐ Addendum No. 1  ☐ Addendum No. 6
☐ Addendum No. 2  ☐ Addendum No. 7
☐ Addendum No. 3  ☐ Addendum No. 8
☐ Addendum No. 4  ☐ Addendum No. 9
☐ Addendum No. 5  ☐ Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Cemtrex, Inc.
Company

Ronald Monti
Authorized Signature

06/19/14
Date

NOTE: This addendum acknowledgement should be submitted with the bid to expedite document processing.
COMPANY PROFILE

Centrex, Inc. (OTC: CTEI) is a leading environmental engineering company in Farmingdale, New York. Established in 2000, Centrex has emerged as a worldwide market leader in developing the most advanced instruments for emission monitoring for manufacturing and utility industries.

Centrex provides complete emission monitoring instruments, equipment, software & systems for a wide variety of industries such as power, steel, ferrous & non-ferrous metals, mining, cement, fertilizer, chemicals and refining. Centrex MIP division has hundreds of installations at power plants and industrial facilities for measuring sulfur dioxide, carbon dioxide, oxygen, mercury, opacity, particulate, nitrogen oxides, hydrocarbons, etc.

Apart from our CEMS & Opacity offerings, Centrex also offers a wide range of process gas and liquid analyzers for petroleum refineries, petrochemicals, natural gas processing, steel, wastewater treatment plants and other key industrial applications. Our systems monitor various properties like sulfur, salt, water, olefins, aromatics, BTX, calorific value, VOCs, etc. in both fuel and gas streams.

In accordance to the Kyoto Protocol, Centrex provides turnkey services for carbon creation projects and assistance to project owners in carbon credit selling. Centrex’s state-of-the-art products are distributed globally to power plants, refineries, chemical plants, cement facilities and federal and state agencies.

Centrex offers energy efficiency solutions for commercial buildings to reduce energy consumption and improve Indoor Air Quality. Centrex has also developed high efficiency PV Technology to meet the growing demand for renewable energy.

At Centrex, we believe that investing in the future of renewable technologies will impact a sustainable and safe environment for the next generation and our planet. We are committed to providing reliable, clean, safe and secure energy for tomorrow.

“Technologies for Safeguarding Our Planet”

AREAS OF EXPERTISE

Our activities are divided into 3 segments:
- Monitoring Instruments & Products (MIP)
  - Continuous Emissions Monitoring Systems (CEMS)
  - Ambient Air Quality Systems (AAQS)
  - Mercury Monitoring
  - Laser Opacity Monitors
  - Gas Analyzers & Sensors

- On-Line Process Analyzers
  - Process Gas Analyzers
  - Process Liquid Analyzers
  - Process Dust Analyzers
  - Natural Gas Quality Analysis Systems

- Energy Efficiency & Renewable Technology
  - Green Demand Control Ventilation (GDCV)
  - PV Solar Technology
  - Energy Efficiency Auditing

HISTORY

<table>
<thead>
<tr>
<th>Year</th>
<th>Events</th>
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<tbody>
<tr>
<td>2000</td>
<td>Established/Incorporated</td>
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<tr>
<td>2005</td>
<td>Purchase of Griffin Environmental</td>
</tr>
<tr>
<td>2006</td>
<td>Established Carbon Credit Division</td>
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<tr>
<td>2007</td>
<td>Listed for Public Offering</td>
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<tr>
<td>2008</td>
<td>Breakthrough Greenhouse Gas Remediation Technology</td>
</tr>
<tr>
<td>2008</td>
<td>Expands into Renewable Energy Efficiency Market</td>
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<tr>
<td>2009</td>
<td>Centrex Stock Converts to OTC: CTEI</td>
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<tr>
<td>2012</td>
<td>Signs Representative Agreement with Micon Systems Ltd.</td>
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<tr>
<td>2013</td>
<td>Signs Distribution Agreement with SensEvolution</td>
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CAPABILITIES

- Air Pollution Monitoring
- Process Analysis & Optimization
- Environmental Engineering & Consulting
- Turnkey CDM Solutions
- Energy Reduction & Efficiency Technology
- Control Systems & Instruments

19 Engineers Ln. Farmingdale NY 11735 USA
Tel: +631.756.9116  Fax: +631.420.4985
www.centrex.com
IntelliCEMS™ Emissions & Process Monitoring

Make an Intelligent Choice – When it comes to CEMS go IntelliCEMS™

APPLICATIONS:
- Coal and Other Fossil Fuel Power Stations
- Cement & Lime Kilns and Generation Facilities
- Bio-Mass Fuelled Power Plants
- Steel Mills & Metal Industries
- Cogeneration Facilities
- Paper & Pulp Industries
- Gas Fired Turbines and Boilers
- Chemical & Pharmaceutical Industries
- Refuse and Waste Incinerators
- Refineries and Oil Processing Plants

FEATURES:
- Quality and consistency of measurements in demanding sample matrix environments at the maximum achievable monitoring limits
- Durable, reliable low maintenance equipment performing with minimum downtime, demanding less of your attention so you can concentrate on your primary business
- Professional CEMS support beginning from application design and lasting throughout the entire lifecycle of your equipment
- A spectrum of products capable of optimising and balancing your technological, compliance and budgetary concerns

PRODUCT DESCRIPTION:

The Cemtrex, Inc. IntelliCEMS™ IC Series offers a comprehensive, efficient and well-engineered package of Continuous Emissions Monitoring Solutions. Coupled with our Freedom Services Package™ it allows you to relax with confidence, while entrusting your CEMS challenges in our competent hands.

With a variety of technologies out there and constant innovations, revolutionizing the monitoring field it takes a dedicated professional team of CEMS experts to design the optimal solutions for your monitoring needs. Benefiting from long-term experience both in the monitoring and pollution control equipment our CEMS Professional Engineers are capable of designing, integrating and applying turnkey solutions, using the right blend of proven technology and innovation.

We offer our expertise in designing and supporting customized systems for virtually any application, whether it is simple or challenging. We use state of the art measurement and sampling equipment, applying proven performance technologies. The result is a turnkey Continuous Monitoring Solution. Whether your application is in Stack Gas Monitoring or Process Monitoring choosing the right technology will result in efficiency and long-term satisfaction.

<table>
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<th>Sampling Modules:</th>
<th>Analyser Modules:</th>
<th>CEMS components and accessories:</th>
<th>Types of Gases &amp; Parameters Monitored:</th>
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<tbody>
<tr>
<td>Full Extractive - Hot Wet</td>
<td>Non-Dispersive Infrared (NDIR)</td>
<td>Control Systems and Software</td>
<td>Hg(0), Hg(2)</td>
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<td>Full Extractive - Cold Dry</td>
<td>Ultraviolet (UV)</td>
<td>DAHS and AB</td>
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<td>Dilution Extractive</td>
<td>Chemiluminescent (ChL)</td>
<td>LaserSOFT™</td>
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<td>Heated Total Hydrocarbon (THC)</td>
<td>Calibration Systems</td>
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<td>Paramagnetic</td>
<td>Shelters and Enclosures</td>
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<td>Cold Vapour Atomic</td>
<td>Parts &amp; Accessories</td>
<td>Opacity, Dust, PM</td>
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<td>Absorption Spectroscopy</td>
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<td>Acid Dew Point</td>
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<td>(CVAAS)</td>
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<td>Flow, Temperature &amp; Pressure</td>
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<tr>
<td></td>
<td>Laser</td>
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<td>Custom Applications</td>
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</tbody>
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19 Engineers Lane • Farmingdale • NY 11735 • USA
TEL: 631-756-9116 • FAX: 631-420-8052 • E-mail: sales@cemtrex.com
www.cemtrex.com
Freedom Services™

Cemtrex Freedom Services™ Package

- Professional Engineering resulting in Proprietary Monitoring Solutions with Proven Performance and Minimal Support Requirements
- Extensive Engineering Experience, providing Environmental Technology Solutions to Fortune 500 Industries and Companies
- Individualized Custom Design, addressing Monitoring and Reporting Requirements & Challenges in Specific Industrial Environments
- Reduced Acquisition and Ownership Cost as a result of Optimisation and Innovation
- Uncompromised Durability, Quality and Reliability of Measurements
- Highly skilled CEMS Professionals performing Fast, Responsive Installation, Maintenance and Emergency Services and Certification Support
- On-site and Factory Training for your Operations, Service and Maintenance Personnel
- A Comprehensive Inventory of Spare Parts and Accessories to support our Equipment
- Personalized Phone and E-mail Support, 24 hour Emergency Line
- A Network of Representatives covering most of the United States Territory and offering Local Sales and Service Support. International Representatives in Canada, Mexico, The Middle East, India and China

Applications Engineering
Cemtrex’s expert engineers use decades of industry experience to provide the perfect solution for each customer. We understand that each application is unique and take a customized personal approach to designing the right CEMS for the application. With this in mind, all the systems we provide are extremely durable and engineered to last.

Turnkey CEMS systems Integration
Cemtrex provides turnkey Continuous Emissions Monitoring Systems solutions. With every CEMS we engineer, Cemtrex will also offer installation, start-up support, on-site training, and initial calibration. In addition, Cemtrex provides complete project management to keep you up to speed throughout the entire start up process. With this kind of support Cemtrex ensures that with the purchase of any CEMS you will be up and running in no time.

System Installation and Start-up
Cemtrex believes in providing its customers complete solutions with all our products. This means that Cemtrex will have your system working effectively with full installation and start up services.

Preventive Maintenance
Cemtrex provides maintenance programs that work for our customers on a monthly, quarterly, semi-annual, or annual basis. Our nationwide team of service technicians is always available at your convenience, should you need an emergency site visit. Our service technicians are trained and certified in accordance with applicable industry safety requirements (OSHA), EPA reporting and certification, and have experience with analysers and CEM systems, whether its our own Cemtrex models, or third party equipment.

CEMS Training
Cemtrex knowledgeable engineers will provide your staff with comprehensive on-site training to make them experts in the operation and routine maintenance of your system. Whether it’s a calibration or creating a compliance report, after our extensive training sessions your staff will have no problem keeping your monitoring system working effectively on a daily basis.

Emergency "Rapid Response" Support
With the Freedom Services™ Program, Cemtrex provides immediate and efficient service and support to help solve whatever dilemma your CEMS may be experiencing. We have 24/7 technical support, a large inventory of spare parts, and most importantly on-hand service technicians ready to assist at a moment’s notice should you require an on-site visit.

Quarterly & RATA Certifications
Every Cemtrex engineered system is designed to meet your compliance needs. Throughout the design and installation process Cemtrex will ensure that your system meets EPA compliance regulations such as 40CFR80, 40CFR75, among others. Cemtrex has been providing compliance reporting for decades and is a recognized leader in the industry. Speak to our representatives today to find our why.
The Model T100 uses the proven UV fluorescence principle, coupled with a state-of-the-art user interface to provide easy, accurate, and dependable measurements of low level SO₂.

Exceptional stability is achieved with the use of an optical shutter to compensate for PMT drift and a reference detector to correct for changes in UV lamp intensity. A hydrocarbon ‘kicker’ and advanced optical design combine to prevent inaccuracies due to interferents.

All T Series instruments offer an advanced color display, capacitive touch screen, intuitive user interface, flexible I/O, and built-in data acquisition capability. All instrument setup, control and access to stored data and diagnostic information is available through the front panel, or via RS232, Ethernet, or USB com ports either locally or by remote connection using the included APIcom™ software.

- Ranges: 0-50 ppb to 0-20 ppm, user selectable
- Dual ranges and auto ranging
- Large, vivid, and durable color graphics display with touch screen interface
- Ethernet, RS-232, and (optional) USB com ports
- Front panel USB connections for peripheral devices and firmware upgrades
- 8 analog inputs (optional)
- Adaptive signal filtering optimizes response time
- Temperature & pressure compensation
- Internal zero & span check (optional)
- Comprehensive internal data logging with programmable averaging periods
- Ability to log virtually any operating parameter
- Two-year warranty

Free Customer Support by telephone and email for the life of the instrument
Specifications

General
Ranges: Min: 0-50 ppb Full scale
Max: 0-20,000 ppb Full scale (selectable, dual ranges and auto ranging supported)
Measurement Units: ppb, ppm, μg/m³, mg/m³ (selectable)
Zero Noise: < 0.2 ppb (RMS)
Span Noise: < 0.5% of reading (RMS) above 50 ppb
Lower Detectable Limit: 0.4 ppb
Zero Drift: < 0.5 ppb/24 hours
Span Drift: < 0.5% of full scale/24 hours
Lag Time: 20 seconds
Rise and Fall Time: < 100 seconds to 95%
Linearity: 1% of full scale
Precision: 0.5% of reading above 50 ppb
Sample Flow Rate: 650 cm³/min ±10%

Electrical Specifications
Power Requirements: 100V-120V, 220V-240V, 50/60 Hz
Analog Output Ranges: 10V, 5V, 1V, 0.1V (selectable)
Recorder Offset: ±10%

Communication Specifications
Included I/O: 1 x Ethernet: 10/100Base-T
2 x RS232 (300-115,200 baud)
2 x USB device ports
8 x opto-isolated digital outputs
6 x opto-isolated digital inputs
4 x analog outputs
Optional I/O: 1 x USB com port
1 x RS485
8 x analog inputs (0-10V, 12-bit)
4 x digital alarm outputs
Multidrop RS232
3 x 4-20mA current outputs

Physical Specifications
Operating Temperature Range: 5 - 40°C (with EPA Equivalency)
Dimensions (HxWxD): 7" x 17" x 23.5" (178 x 432 x 597 mm)
Weight: 35.7 lbs (16.2 kg)

Certifications
US EPA: EQSA-0495-100
MCERTS: Sra MC 050067/04
EN 14212: TÜV Rheinland

How to Order

Model T100 includes:
- Two year warranty
- Internal pump or external pump (optional)
- Dual ranges and auto ranging
- 47mm diameter particulate filter
- 8 isolated digital outputs
- 6 isolated digital inputs
- RS-232 ports
- Ethernet port
- USB ports for peripheral devices
- AIPcom+™ remote control software
- Select AC input voltage
  - 100V - 120V
  - 220V - 240V
- Select DC output voltage
  - 10V
  - 5V
  - 1V
  - 0.1V

Calibration Options:
- Ambient zero and ambient span
- Zero scrubber and pressurized span
- Zero scrubber and internal span source (2S)

Mounting Options:
- Rack mount brackets with chassis slides
- Rack mount brackets only
- Handle

I/O Options:
- 4-20mA outputs (up to three channels)
- USB com port
- 8 Analog Inputs
- Multi-drop RS232
- RS485

Other Options:
- NO optical filter (Recommended for high NOx applications, Required for EN14212 approved configuration.)
- Concentration alarm relays
- Expendables kit

The values expressed above are in accordance with EPA definitions. All error specifications are based on constant conditions. Specifications exceed US EPA and Egzünsprueft requirements. Specifications subject to change without notice. Printed documents are uncontrolled. SAL002039C (DNV-GL) 1100/01.02 23 13

TELEDYNE ADVANCED POLLUTION INSTRUMENTATION

For more information about the Teledyne API family of monitoring instrumentation products, call us or visit our website at www.teledyne-api.com

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