NOTICE TO BIDDERS

John P. Farrell, Director of Greene County Department of Emergency Services, pursuant to Section 103 of the General Municipal Law will receive sealed bids on behalf of the Greene County Department of Emergency Services for the following:

Breathing Air Compressor System and Fill Station

Specifications may be obtained by contacting the Greene County Department of Emergency Services at 518.622.3643 extension 101 or by email at Emergency@greene911ny.gov or available to download at greenegovernment.com.

Sealed bids should be clearly marked with the item bid. Bids will be received at the office of Greene County Emergency Services, 25 Volunteer Drive, Cairo, NY 12413 until 1:00 p.m. on Friday, January 24, 2025 at which time they will be opened and publicly read.

Greene County reserves the right to reject any and all bids.

Overview: Greene County seeks to replace its current Hypress Air Compressor system. This RFP seeks proposals from responsible companies to furnish and install a new Breathing Air Compressor and Fill Station system as identified in the specifications below. The winning bidder will also be responsible for removal of the existing system and moving it to another part of the building. The county will dispose of it through its normal means. All electrical connections will be performed by a licensed electrician. The total footprint available to install this system is 80 inches long x 48 inches deep x 72 inches tall. Bidders are encouraged to schedule a site visit by calling 518-622-3643 x 101

Module I

Breathing Air Module

The entire breathing air module shall be integrated into a single, free-standing unit, third party certified, by a Nationally Recognized Testing Laboratory. The outer frame shall be of heavy-duty construction consisting minimally of welded two-inch square tube. To minimize radiant sound level the enclosure shall contain sound absorbing material.

The unit shall be designed to allow installation flush against a wall without inhibiting cooling air flow or maintenance access.

The breathing air module shall be factory assembled and tested to assure quality and reliability. The system scope of supply shall be housed within the confines of the sheet metal enclosure; to include UL listed electrical panel, purification system, muffler reservoir and pressure bearing components as follows:

Compressor: The compressor block shall be four stage, air cooled, pressure oil and rated for continuous duty at 6000 psi with a minimum charging rate of 14.0 CFM. Compressor systems requiring auxiliary cooling fans or cool down cycles shall not be acceptable. Suction and delivery valves shall be designed in such a manner that they can be replaced without replacing the entire assembly. Valve inspection covers are to be provided on the first and second stage cylinders. Relief valves shall be utilized after each stage of compression. The pressure lubrication system shall include an oil pump to supply metered quantities of lubricant directly to the fourth stage piston through a regulator and replaceable filter.

An oil level sight glass shall be provided for checking the crankcase oil level. An automatic drain system shall be supplied to periodically discharge accumulated condensation during operation and whenever the unit shuts down. The compressor manufacturer shall have an ISO 9001 quality management system standard approval on the design and manufacture process.

Compressor enclosure: The breathing air module shall be fully enclosed with solid steel panels, minimum thickness 14 gauge. All sections of the compressor enclosure shall be lined with sound absorbing material.

An air ducting system that allows against-the-wall installation by drawing cooling air from below the unit and directing it upwards and away from the operator and control panel shall be provided.

Insulated and gasketed maintenance access doors equipped shall be located on both sides and in front of the compressor system.

The underside of the cabinet shall be grated to prevent debris from entering the compressor compartment.

Auto drain muffler/reservoir: An automatic drain muffler/reservoir system, manufactured of minimally 14-gauge steel, shall be incorporated into the package. The reservoir shall be designed to capture discharged condensation without the need for piping to the outside and to reduce the discharge noise level. A conveniently located valve shall be supplied on the outside of the cabinet to periodically drain the condensate accumulated in the muffler/reservoir at atmospheric pressure.

Electric motor: A sixty-amp, 230 Volts circuit is available adjacent to the installation location. The motor shall be suspended underneath the compressor baseplate. This motor shall incorporate rubber shock mounts, which isolates vibration from the rest of the cabinet. All belts shall be guarded to meet OSHA requirements.

Purification system: The purification system and replacement filter cartridges shall be manufactured by the same company as the compressor package. The system shall be a multi-chamber arrangement and designed for 6000 psi working pressure. The first chamber shall be a mechanical separator to eliminate oil and water. Subsequent chambers shall utilize replaceable filter cartridges constructed of high strength, non-corrosive FDA grade material.

The cartridges shall be designed to remove water vapor, hydrocarbons, carbon monoxide, noxious gases, taste and odors.

Systems requiring depressurization to check filter condition shall not be acceptable. The air delivered shall meet CGA grade D & E and NFPA air quality standards.

Control system: The unit shall include all necessary controls to assure efficient operation and monitor compressor performance. All necessary electric motor controls shall also be included and rated for NEMA class 12. As a minimum, the control system shall include the following:

- Air pressure switch to automatically start and stop the unit to maintain system pressure.
- High air temperature shutdown.

- Illuminated power “on” switch.
- Independent “start” and “stop” push button switches.
- Emergency stop button.
- Low oil pressure switch.

Instrumentation: The unit shall include all necessary gauges and lights necessary to indicate all normal and shutdown conditions. All gauges, lights and indicators shall be mounted on a steel control panel centrally located on the front of the unit and also within the cabinet.

As a minimum, the instrumentation panels shall include the following:

- Compressor interstage and final air pressure gauges.
- Hour meter.
- High air pressure shutdown light.
- High air temperature shutdown light.
- Low oil pressure light

Accessories

Shutdown audible alarm

An audible alarm shall be panel mounted and indicate abnormal operating conditions.

Carbon monoxide and moisture monitoring system:

The CO monitor shall be mounted on the compressor operations panel.

- Shall be piped into the air flow downstream of the purification system
- Shall be tamper-resistant
- Must have a warning light, audible alarm & shutdown for high concentrations of CO.
- Shall reliably detect CO concentrations from 0 to 10 ppm. A digital readout shall continuously indicate the amount of CO in the compressed breathing air.
- Must be capable of adjustment at any point on the monitor between 5 to 10 ppm for shutdown.
- Shall include a Moisture Monitor to continuously evaluates the moisture content of the purified air and confirm the presence of the filter in the purification chamber and will include status lights in respect to the moisture level.

Module II

Air Storage System

The breathing air storage system shall consist of four (4) ASME storage cylinders each with a minimum capacity of 481 cubic feet of air at 6000 psi mounted on a self-standing vertical inline rack. The system shall include all fittings, interconnecting piping, valves and hardware necessary to operate as a cascade system and meet all current ASME code requirements.

Module III

Enclosed Containment Fill Station

The fill station shall be designed for stationary applications. The unit shall be totally enclosed, constructed minimally of 3/16-inch plate steel and designed to contain an SCBA cylinder and metal fragments in the event of rupture during the filling process. The fill station shall be designed to vent rapidly expanding air away from the operator.

The fill station shall be designed to allow the filling of minimally two (2)* SCBA bottles either separately or simultaneously. The maximum length of the SCBA bottle with the valve and fill adapter shall be 29 inches. Access to the enclosure for loading the SCBA cylinder shall be via a manually operated, tilt-out door. The fill station door shall be provided with assisting devices to assure smooth operation and reduce operator fatigue. The fill station door shall be constructed minimally of 3/16-inch plate steel. The SCBA cradle shall contain minimally two (2)* fill positions. Each fill position shall be lined with material to protect each SCBA cylinder from abrasion. The carriage shall be mounted on a pivoting system that will lower the cylinders to a near horizontal position and allow full access to all SCBA bottles, fill hoses and valve assemblies with minimal operator fatigue.

To ensure operator protection, a fully automatic safety interlock that prevents SCBA cylinder filling until the door is completely closed shall be provided. Two (2)* or more fill hoses with SCBA adapters, matching the above design parameters, shall be provided and located within the enclosure. The fill hoses shall be protected by a safety relief valve set at 5700 psi.

The fill station shall be designed to fill the SCBA cylinders within the fill station boundary. The control panel shall include a 0 to 6000 psi adjustable regulator, regulated outlet pressure gauge, one (1) SCBA fill valve and bottle pressure gauge.

A painted steel fill panel affixed with a printed overlay shall be mounted on the front of the unit. The overlay shall contain an embedded airflow schematic. The fill station shall be designed to cascade the air storage system. The control panel shall include pressure gauges and flow control valves for four (4) storage banks. Piping shall be arranged to permit each bank to be filled or drawn down independently of other banks which will allow the operator to draw air from one bank to fill SCBA's, while simultaneously refilling another bank from the compressor. A bypass valve shall be supplied to permit direct use of the compressor, bypassing the storage system. A regulated auxiliary fill outlet, complete with a valve and high-pressure coupler with mate shall be standard.

The fill station shall be built and tested to conform to NFPA 1901 and the recommendations in NFPA 1500.

*The enclosed containment fill station only needs to be sized for two SCBA bottles, however Greene County is aware that many manufacturers' systems are designed to hold three tanks. Nothing in this RFP should be construed as limiting the number of tanks the fill station holds.

Accessories

Regulated / un-regulated auxiliary outlet:

Unit shall have regulated and un-regulated auxiliary outlets to permit the operator to safely fill high- and low-pressure cascade systems by using a panel mounted 3-way valve (regulated / off / un-regulated). The "regulated" position will regulate the air using the panel mounted regulator. The "un-regulated" position will bypass the regulator and gives a true 6000 psi outlet pressure.

Hose and Reel

Unit must have a cabinet protected auxiliary fill hose 75 feet long, mounted to a locking/ spring rewind hose reel to accommodate filling truck mounted cascade systems to 6000 psi.