



500 West Big Beaver  
Troy, MI 48084  
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J-05

## CITY COUNCIL AGENDA ITEM

Date: June 3, 2019

To: Mark F. Miller, City Manager

From: Robert J. Bruner, Assistant City Manager  
MaryBeth Murz, Purchasing Manager  
Tom Darling, Director of Financial Services  
David Roberts, Fire Chief  
Peter Hullinger, Staff Lieutenant

Subject: Bid Waiver – Self-Contained Breathing Apparatus (SCBA) - Fire Department

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### **History**

Part of a firefighter's personal protective equipment (PPE) ensemble is the self-contained breathing apparatus, commonly referred to as SCBA. The SCBA allows firefighters to operate in an immediately dangerous to life and health (IDLH) atmosphere such as a fire or hazardous material release.

The current SCBA units were either purchased new in 2005 or refurbished from 1994 and have reached their end of life. The National Fire Protection Association (NFPA) Standard 1852 – SCBA Care, Maintenance and Replacement, along with Department of Transportation (DOT) Code of Federal Regulations (CFR) 180.205 stipulates that SCBA are subject to 5-year hydrostatic testing, not to exceed 15 years.

The majority of the Fire Department's SCBA will expire this coming fiscal year, with remaining SCBA set to expire over the next two fiscal years. As these units age, the cost of repairs are increasing as well as time that the SCBA are out of service for maintenance which, therefore, reduces the number of available SCBA for firefighters to use at an incident. The NFPA, however, does not allow for fire departments to use different SCBA manufactures. The entire SCBA – harness and air cylinder – has to be provided by the same manufacturer, which does not allow for phasing in of new SCBA over time or mixing of equipment.

### **Evaluation**

Over the last year, the Fire Department's safety committee, comprised of two firefighters from each station and select staff members, met with various SCBA manufacturers. Through discussions and evaluations based on fit, form, function, and cost of ownership; narrowed their selection and field tested two manufacturers' product – the MSA G-1 and the Drager PSS 5000. The safety committee chose to use the Combined Regional Emergency Services Training facility (CREST) SCBA confidence course at Oakland Community College. This course allowed firefighters to evaluate these units while crawling and climbing in darkness and around obstacles. After each firefighter wore one of the SCBA, they completed an evaluation developed by the committee to capture the data. Next in the evaluation, three SCBA models from the two manufacturers were rotated among the six fire stations. Firefighters were encouraged to train with and then evaluate the SCBA, and record their



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evaluation results. During this evaluation period, many stations simulated real life firefighting scenarios with the SCBA.

Over the entire evaluation period, approximately 170 evaluations on both SCBA products were completed by firefighters. Other factors being evaluated were comfort, visibility, communications, and the ease of donning/doffing the units with the face mask. Additionally, regulator connection; air cylinder change; buddy breathing/RIC use; heads-up display; low air alarm; and overall use were evaluated.

Upon conclusion of the evaluation process, the MSA G-1 was clearly the highest rated SCBA. The evaluation data showed that this particular unit outperformed the Drager in every measureable field that was recorded. The Safety Committee then met to review and discuss all of the recorded data, and unanimously decided on the MSA G-1 SCBA as the replacement SCBA for the Fire Department.

### **Purchasing**

*Apollo Fire Equipment Company of Romeo, MI*, is the sole authorized distributor for the MSA G-1 and appurtenances for the Municipal Fire Service market in Oakland County, MI.

The MSA G-1 offers the following benefits of purchase:

- 2018 NFPA Compliant
- 15 year full warranty
  - 15 years is the expected life of the SCBA and cylinders
  - Lower cost of overall ownership
- Field Upgradable
  - To maintain standards and safety over time

The total purchase price for the MSA G-1 is \$899,289.10 and includes the following appurtenances as detailed below and in the attached quotation:

- 128) SCBA for all front line apparatus and training apparatus.
- 4) SCBA with Thermal Imaging for Rescue 4 whose firefighters serve as the Rapid Intervention Crew (RIC) at structure fires.
- 264) Spare 45 Minute air cylinders for each SCBA as required by NFPA.
- 9) 60 Minute air cylinders for RIC packs and air cart.
- 220) Face masks issued to each firefighter, and spares for apparatus and inventory.
- 220) Mask bags
- 2) Inventory software readers.
- 12) Software tags.
- 24) Eyeglass kits.
- 12) Quick fill adapters for the station air compressors.
- 7) RIC bags.
- 7) RIC Systems.



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- 1) MSA testing software.
- 5) Field training classes for firefighters.
- 1) Flow test machine for testing.

### **Financial**

Funds to purchase Self Contained Breathing Apparatus are budgeted in the Fire Department Capital Fund General Equipment Account #401.336.338.7978.010 for fiscal year 2020. The Project# is 2020C0014.

### **Recommendation**

In the best interest of the City, City management recommends waiving the bid process and awarding a contract to the sole authorized distributor of SCBA accessories in Oakland County, MI; *Apollo Fire Equipment Company of Romeo, MI*, to purchase the necessary quantity of MSA G-1 SCBA and appurtenances for the Fire Department as specified in the attached detailed quotation for an estimated total cost of \$899,289.10.

