



At the Heart of Community

FIRE DEPARTMENT

321 South Buesching Road
Lake Zurich, Illinois 60047

(847) 540-5070
LakeZurich.org

MEMORANDUM

Date: April 13, 2020
To: Ray Keller, Village Manager
From: Mickey Wenzel, Division Chief Training/Safety
CC: John J. Malcolm, Fire Chief
Subject: Self-Contained Breathing Apparatus

Issue: The Fire Department purchased its current self-contained breathing apparatus (SCBA) in August of 2006. In August of 2021, these SCBA will be 15 years old, the useful life span for SCBA. The fire department applied for and was awarded an Assistance to Firefighters Grant (AFG) in the amount of \$312,900.00 to replace our current SCBA's. The FY 2020 village budget has \$417,000.00 allocated toward the replacement of SCBA. The requested purchase is consistent with the following Goals and Objectives of the Strategic Plan.

Goal # 1 Fiscal Sustainability

- F – Continue Organizational Analysis to Increase Efficiencies

Goal # 4 Service Sustainability

- B – Develop a High-Performance Organization

Analysis: The Fire Department SCBA Committee contacted representatives for Honeywell, Draeger, Interspiro, MSA & Scott to evaluate their products and received responses from Interspiro, MSA, and Scott. The units were then evaluated by fire department personnel under simulated working conditions. Draeger and Honeywell did not provide SCBA's for evaluation. The department developed and published a specification that went out to bid. On February 3, 2020, three bids were received from Interspiro's - S9HP SCBA, MSA's - G1 SCBA, and Scott's - Air Pak X3 Pro SCBA.

Conway Shield Inc. submitted the Interspiro S9HP SCBA bid for \$317,785.00. The Interspiro S9HP SCBA is not available in 5,500 PSI, a minimum requirement of the SCBA specification.

Air One Equipment Inc. submitted the MSA G1 SCBA bid for \$324,752.00. The MSA G1 SCBA was compliant with all bid specifications and NFPA Standards.

Municipal Emergency Services (MES) submitted the Scott Air Pak X3 SCBA bid for \$357,679.24. The Scott X3 SCBA was compliant with all bid specifications and NFPA Standards.

	MSA G1	Scott X3
Purchase Cost	\$324,752.00	\$357,679.24
Members Rating of Packs	2 nd	1 st
Members Training Needed	Training required	Similar operation to current SCBA's
Ease of Daily Checks	Yes	Yes
Removable Harness for Laundering	Yes	Yes
Warranty	15 year	Lifetime (As long as you own it)
Warranty covers normal wear items	No	Yes
Electronic Voice Amplification	Yes	Meets NFPA Standard Without
Adjustable Lumbar Support	Yes	No
Batteries	Rechargeable Battery	6 AA Batteries
Make in House Repairs	No	Yes
Cylinder Protection Sleeves	Yes	Yes
Pinched 2 nd stage hose stopped-flow	Yes	No
Redundant 1 st Stage Regulator	No	Yes

The MSA G1 SCBA and Scott X3 SCBA were both found to be solid SCBA's with many good features. We then contacted the Wheeling, Rockford, Grayslake, and Richmond Fire Departments who currently use or recently switched to the MSA G1 SCBA. We also contacted the Arlington Heights and Palatine Rural Fire Departments; both currently use the Scott X3 SCBA. Both departments were happy with the Scott X3 SCBA.

Wheeling Fire Department has used MSA SCBA and did not report any issues with them. Rockford Fire Department did not reply to our request for information. Grayslake and Richmond

Fire Departments stated they were not happy with the MSA G1 SCBA. One issue reported was the poor performance of the rechargeable battery packs, which did not perform as indicated by Air One between charges. Another concern was several SCBA that continually show error messages which require service. Grayslake uses Air One to service their SCBA; they are consistently sending their SCBA for service, leaving them unavailable for use. MSA allows members of the fire department training on completing repairs and annual flow testing. When asked to clarify what the fire department can repair, the answer from the MSA representative was vague, and they did not answer the question. Scott allows training personnel to make all repairs to Scott SCBAs. If MSA does not, this will increase the cost of ownership of the MSA G1 SCBA. Also, we asked both Air One and MES clarification questions on their ability to convert our current fill station to 5,500 PSI. Air One was vague on their ability to do so, while MES stated they could make the conversion. The MSA warranty is for 15 years and covers all defective parts. The Scott warranty is for as long as you own the SCBA and covers defective parts and normal wear and tear. Having normal wear and tear items covered will result in lower maintenance costs over the life of the Scott X3 SCBA.

The overhaul schedule for both the MSA G1 SCBA and Scott X3 SCBA is 15 years. The Scott X3 SCBA has a redundant system built into the 1st stage regulator that the MSA G1 SCBA does not. This redundant system provides air to the user even if the 1st stage primary regulator fails. The 2nd stage regulator hose on the MSA G1 is easy to kink during use, which results in the stopping or restricting of the flow of air to the user. This significant safety issue reduces the confidence the users have in this vital piece of safety equipment. While this is also possible, this could happen with the Scott X3 SCBA; the hose is much stiffer, making it unlikely that the 2nd stage hose is kinking during use. The Scott X3 SCBA has a lower backpack and mask profile than the MSA G1 SCBA, which allows movement through and past obstruction easier and improves our safety, as demonstrated during our evaluations. The Scott SCBA mask offers better peripheral vision than the MSA SCBA mask, also increasing the user's safety. Finally, we've received a report from the Hinsdale Fire Department that outlined their evaluation of the MSA G1 SCBA & Scott X3 SCBA, report attached for review. Excerpt conclusion, page 28.

"Of the 20 operational evaluations conducted as well as the interviews with surrounding departments, the main reasons for choosing the Scott SCBAs can be summarized into 3 critical factors; safety, operability, and maintenance cost."

Recommendation: The FY 2020 budget has \$417,000.00 allocated for the replacement of the Fire Department's SCBA. The Fire Department is requesting a contract be awarded to Municipal Emergency Services for \$357,679.24 for the replacement of 45 SCBA with the Scott Air Pak X3 SCBA, 4 Rapid Intervention Packs, 1 Posi-check test bench, and associated materials. The AFG award of \$312,900.00 will offset the majority of this expense. The total funds used for this purchase after applying the grant is \$44,779.24 split between the Village \$24,628.58 and Fire District \$20,150.66 based on the FY 2018 True-up worksheet.

**SELF-CONTAINED BREATHING APPARATUS (SCBA) BID PACKAGE FORM
LAKE ZURICH FIRE DEPARTMENT**

The undersigned vendor hereby proposes to furnish new, commercially produced Self-Contained Breathing Apparatus (SCBA) in accordance with the Lake Zurich Fire Department's specifications and the vendor/manufacturer's detailed specifications incorporated herein. Any exceptions to the Lake Zurich Fire Department's specifications are listed on the following exception page(s).

The undersigned agrees that the signing and delivery of this bid package represent the bidder's acceptance of the terms and conditions of the attached specifications and provisions and, if awarded this contract, will constitute the agreement between the parties.

SCBA Manufacturer:

Authorized Agent (Vendor):

3M Scott Fire & Safety

Company Name

4320 Goldmine Road

Address

Monroe, NC 28110

City, State, Zip Code

(704) 291-8300

Telephone Number

(MES) Municipal Emergency Services, Inc.

Company Name

124 East First Street

Address

Deer Creek, IL 61733

City, State, Zip Code

(800) 322-8402

Telephone Number

SCBA + Accessories \$341,787.84 QT1338989

Optional Equipment & Services to be included + 15,891.40 QT1339640

Total Project Cost	<u>\$ 357,679.24</u>
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Delivery of the specified equipment is to be made within 45 * calendar days from the acceptance of the bid by the Lake Zurich Fire Department.

** If custom monogrammed cylinders are chosen it could be up to 12 weeks*

Failure to deliver all equipment in the time quoted above, without the expressed permission of the purchaser, will constitute a breach of contract and said agreement might be voided.



DEPARTMENT OF HEALTH & HUMAN SERVICES

Centers for Disease Control
and Prevention (CDC)

NIOSH Reference: TN-22610
Mfr. Reference: STTXP1806CBRN

National Institute for Occupational
Safety and Health (NIOSH)
National Personal Protective
Technology Laboratory (NPPTL)
626 Cochrans Mill Road
Pittsburgh, PA 15236-0070
Phone: 412-386-4000
Fax: 412-386-4051
September 30, 2019

Mr. Klaus Wilkens
3M Scott Fire & Safety
Certification and Regulation Engineer
4320 Goldmine Road
Monroe, NC 28110

Dear Mr. Wilkens:

The National Institute for Occupational Safety and Health (NIOSH) have reviewed your request referenced above and accepted October 31, 2018, seeking 32 new approvals for the model Air Pak X3 Pro, open-circuit, pressure-demand, entry and escape, CBRN, self-contained breathing apparatus (SCBA) for chemical, biological, radiological, and nuclear (CBRN) protection. The respirator configurations are identified on assembly matrix, file name

These respirators have met the NIOSH requirements of Title 42, *Code of Federal Regulations*, Part 84 (42 CFR 84) under TN-22574, identified by approval numbers TC-13F-0972 through TC-13F-1003, listed on assembly matrix, file name

This request is granted. The approval numbers shown in the following table have been assigned for the 32 new respirator configurations for the model Air Pak X3 Pro, open-circuit, pressure-demand, entry and escape, CBRN, self-contained breathing apparatus (SCBA) for CBRN protection, as defined on the assembly matrix, file name

Approvals are granted only for documentation written in the English language. It is the manufacturer's responsibility to correctly translate materials desired to be produced in languages other than English.

Approval Number	Model	Description	Protection ¹
TC-13F-0972CBRN	Air Pak X3 Pro	30 MIN 2216 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0973CBRN	Air Pak X3 Pro	30 MIN 2216 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0974CBRN	Air Pak X3 Pro	30 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0975CBRN	Air Pak X3 Pro	30 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0976CBRN	Air Pak X3 Pro	45 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0977CBRN	Air Pak X3 Pro	45 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0978CBRN	Air Pak X3 Pro	60 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0979CBRN	Air Pak X3 Pro	60 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0980CBRN	Air Pak X3 Pro	30 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33

TC-13F-0981CBRN	Air Pak X3 Pro	30 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0982CBRN	Air Pak X3 Pro	45 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0983CBRN	Air Pak X3 Pro	45 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0984CBRN	Air Pak X3 Pro	60 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0985CBRN	Air Pak X3 Pro	60 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0986CBRN	Air Pak X3 Pro	75 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0987CBRN	Air Pak X3 Pro	75 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0988CBRN	Air Pak X3 Pro	30 MIN 2216 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0989CBRN	Air Pak X3 Pro	30 MIN 2216 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0990CBRN	Air Pak X3 Pro	30 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0991CBRN	Air Pak X3 Pro	30 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0992CBRN	Air Pak X3 Pro	45 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0993CBRN	Air Pak X3 Pro	45 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0994CBRN	Air Pak X3 Pro	60 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0995CBRN	Air Pak X3 Pro	60 MIN 4500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0996CBRN	Air Pak X3 Pro	30 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0997CBRN	Air Pak X3 Pro	30 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0998CBRN	Air Pak X3 Pro	45 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-0999CBRN	Air Pak X3 Pro	45 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-1000CBRN	Air Pak X3 Pro	60 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-1001CBRN	Air Pak X3 Pro	60 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-1002CBRN	Air Pak X3 Pro	75 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33
TC-13F-1003CBRN	Air Pak X3 Pro	75 MIN 5500 PSIG	SC/PD/CBRN/EOSTI-33

¹Protection - Codes are defined on the approval labels.

The configurations identified under TC-13F-0972CBRN through TC-13F-1003CBRN have met the NIOSH requirements for CBRN protection under the provisions of 42 CFR 84, and the NIOSH Letter to All Respirator Manufacturers, dated December 28, 2001.

Additionally, the Air Pak X3 Pro respirator configurations have been evaluated by the Safety Equipment Institute (SEI) as a configuration meeting the requirements of **NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Emergency Services, 2018 Edition** (see attached letter).

The final respirator approval labels are included as attachments to this letter. The cautions and limitations which apply to these approvals are on the approval labels. Only those assemblies affected by this request, or where new approval numbers are assigned, apply to this approval action. Production approval labels cannot include information on unapproved configurations.

The approved assemblies consist of the parts as listed on the approval labels and the assembly matrix. Parts are to be marked with the numbers indicated on the approval label in a legible and permanent manner (marking cannot be removed without evidence of its previous presence).

This certificate of approval is not an endorsement of the respirators by NIOSH, and such endorsement shall not be stated or implied in advertisements or other publicity. However, you may publicize the fact that these respirators have met the requirements of 42 CFR Part 84.

No changes may be made to any respirators and accompanying documentation without prior written approval of NIOSH. Requests for changes must be submitted to NIOSH and a modification of this approval must be granted before changes are made.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jeffrey Peterson', with a long horizontal line extending to the right.

Jeffrey Peterson
Chief, Conformity Verification and
Standards Development Branch

Enclosures



NFPA 1981/1982, 2018 COMPLIANT AIR-PAK™ SCBA LIMITED WARRANTY

3M™ Scott™ Fire & Safety (3M SCOTT) warrants NFPA 1981/1982, 2018 compliant Air-Pak SCBA, including facepiece and cylinder (THE PRODUCTS) to be free from defects in workmanship and materials for as long as THE PRODUCTS are owned by the original end-user purchaser. This warranty applies to all components of THE PRODUCTS including all accessories and optional equipment purchased and supplied at the time of original sale of THE PRODUCTS, except voice communication devices and accessories, in-mask thermal imaging devices, integrated self-rescue belts, consumable supplies, and carrying cases.

3M SCOTT warrants all voice communication devices and in-mask thermal imaging devices to be free from defects in workmanship and materials for a period of five (5) years from the date of original manufacture by 3M SCOTT.

3M SCOTT warrants all integrated self-rescue belts, paddle PTT accessories, ring PTT accessories, throat mic accessories, command communication headset accessories, programmer modules, consumable supplies, and carrying cases to be free from defects in workmanship and materials for a period of one (1) year from the date of original manufacture by 3M SCOTT.

3M SCOTT's obligation under this warranty is limited to replacing or repairing (at 3M SCOTT's option) THE PRODUCTS or components shown to be defective in either workmanship or materials.

Only personnel of 3M SCOTT or, when directed by 3M SCOTT, authorized 3M SCOTT service providers are authorized to perform warranty obligations. This warranty does not apply to defects or damage caused by any repairs of or alterations to THE PRODUCTS made by owner or any third party unless expressly permitted by 3M SCOTT product manuals or by written authorization from 3M SCOTT. To obtain performance under this warranty, and as a condition precedent to any duty of 3M SCOTT, the purchaser must return such products to 3M SCOTT, a 3M SCOTT authorized distributor or a 3M SCOTT authorized service center. Any product returned to 3M SCOTT shall be sent to "3M SCOTT FIRE & SAFETY" (Attn: Warranty Claim Dept.), 4320 Goldmine Road, Monroe, NC 28110.

This warranty does not apply to any malfunction of or damage to THE PRODUCTS resulting from accident, misuse or abuse.

THIS WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN ADDITION, 3M SCOTT EXPRESSLY DISCLAIMS ANY LIABILITY FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES IN ANY WAY CONNECTED WITH THE SALE OR USE OF 3M SCOTT PRODUCTS, AND NO OTHER FIRM OR PERSON IS AUTHORIZED TO ASSUME ANY SUCH LIABILITY. THIS WARRANTY APPLIES ONLY TO THE ORIGINAL END-USER PURCHASER AND IS NON-TRANSFERABLE.



Fire & Safety

FOR IMMEDIATE RELEASE

Media Contact:

Jason Cannon

704.291.8411

jrcannon@mmm.com

3M™ Scott™ Fire & Safety Announces New Warranty for NFPA 2018 Air-Pak™ X3 Pro SCBA

Monroe, NC (September 6, 2019) – 3M™ Scott™ Fire & Safety, a global leader in respiratory protection and imaging solutions, announces a new warranty for its latest Air-Pak X3 Pro SCBA, compliant to the NFPA 1981, 2018 Edition standard (approvals pending).

The Air-Pak X3 Pro is built on a foundation of proven, trusted performance, providing the same reliability and durability that 3M Scott builds into all its NFPA Air-Pak SCBA products. It is this relentless pursuit to deliver high quality products that allows 3M Scott to remain committed to its customers. The latest example of this commitment is the new *As Long As You Own It – Air-Pak SCBA Warranty*. Fire departments purchasing new Air-Pak X3 Pro SCBA, compliant to the NFPA 1981, 2018 Edition standard, will receive a lifetime warranty for as long as they own the product.

"With the 'As Long As You Own It – Air-Pak SCBA Warranty', customers will have peace of mind knowing that their most important investment is backed for their lifetime ownership of the product," said Jason Cannon, U.S. fire marketing manager for 3M Scott.

The new *As Long As You Own It – Air-Pak SCBA Warranty* is effective on all Air-Pak X3 Pro SCBA shipped compliant to the NFPA 1981, 2018 Edition standard. This bumper-to-bumper warranty includes all standard components of the SCBA and is designed to help simplify budget planning for volunteer and municipal fire departments. With no mandatory overhaul schedule and no forced parts replacement, the *As Long As You Own It – Air-Pak SCBA Warranty* will help to minimize annual maintenance costs.

"Fire departments should not have to worry about crunching numbers to help manage maintenance costs towards the end of the SCBA's life cycle," said John Dinning, global business manager, firefighter solutions. "This new warranty reinforces our commitment to the customer and further reduces their lifetime cost of ownership for the Air-Pak X3 Pro SCBA."

See warranty statement included with product for full detail.

About 3M

At 3M, we apply science in collaborative ways to improve lives daily. With \$32 billion in sales, our 91,000 employees connect with customers all around the world. Learn more about 3M's creative solutions to the world's problems at www.3M.com or on Twitter @3M or @3MNews.

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124 East First Street
Deer Creek, IL 61733

Quote

Page 1 of 2

Date

02/21/2020

Quote #

QT1338989

Expires

03/22/2020

Sales Rep

Arendarczyk, Thomas J

PO #

Shipping Method

FedEx Ground

Bill To

LAKE ZURICH FIRE RESCUE
EMAIL INVOICES TO
AP@LAKEZURICH.ORG

Ship To

DC MICHAEL WENZEL
LAKE ZURICH FIRE RESCUE #1
321 S BUESCHING RD
LAKE ZURICH IL 60047-2535
United States

X8915025305304	Air-Pak X3 Pro SCBA (2018 Edition) with Snap-Change Cylinder Connection, 5.5, Standard Harness with Parachute Buckles, Standard Belt with No Escape Rope, E-Z Flo Regulator with Quick Connect Hose (Rectus fittings), Universal EBSS Accessory Hose, No Airline Connection, No Spare Harness Kit, Pak-Tracker, No Case, Packaged 2 SCBA Per Box (Black)	44	5,603.28	248,544.32
X8915025305303	Air-Pak X3 Pro SCBA (2018 Edition) with Snap-Change Cylinder Connection, 5.5, Standard Harness with Parachute Buckles, Standard Belt with No Escape Rope, E-Z Flo Regulator with Quick Connect Hose (Rectus fittings), Universal EBSS Accessory Hose, No Airline Connection, No Spare Harness Kit, Pak-Tracker, No Case, Packaged 1 SCBA Per Box (Black)	1	5,603.28	5,603.28
200967-01	CYL&VALV,QD,CARB,30/5500 ASSY	45	905.06	40,727.70
200967-01	CYL&VALV,QD,CARB,30/5500 ASSY	45	0.00	0.00
201215-22	AV3000 HT with Kevlar lining and 4-strap harness-Red, Medium	60	267.78	15,466.80
940IM-RD	SCBA MASK BAG (IMPORTED) RED R&B FABRICATIONS	60	12.00	720.00
200954-12	RIT-PAK III ASSY, 4500 PSI	4	2,798.61	11,194.44
804722-01	CYL&VLV ASSY,CARB,45MIN,4500 PSI	4	988.78	3,955.12
200973-01	CYL&VALV,QD,CARB,60/5500 ASSY	4	1,191.67	4,766.68
TSI, INC 8025-20	8025-20 Custom TSI, INC FIT TEST ADAPTER KIT-SCOTT AV-3000	1	220.00	220.00
201336-01	KIT, SCOTT POSI3 USB 5500 ASSY	1	10,390.00	10,390.00
200174-01	SERVICE HOSE ASSY *SC ONLY	1	213.00	213.00
201146-02	ACCESSORY HOSE, POSI-CHEK 3,QD	1	50.80	50.80
31002958	HP PLUG, #4 HEX HD WITH O-RING	1	3.00	3.00
31003035	MANIFOLD,HI PRESSURE,4500 PSI	1	992.00	992.00
804335-17	HOSE & SCKT ASSY	1	100.00	100.00
M-36	USB Software Change/Rpl	1	54.10	54.10
804594-01	MASK HOOK ASSEMBLY	45	17.48	786.60



Quote

Page 2 of 2

Date

Quote #

02/21/2020

QT1338989

Subtotal	341,787.84
Shipping Cost (FedEx Ground)	0.00
Total	\$341,787.84

This Quotation is subject to any applicable sales tax and shipping & handling charges that may apply. Tax and shipping charges are considered estimated and will be recalculated at the time of shipment to ensure they take into account the most current local tax information.

All returns must be processed within 30 days of receipt and require a return authorization number and are subject to a restocking fee.

Custom orders are not returnable. Effective tax rate will be applicable at the time of invoice.



QT1338989

Compliances:

All SCBA and accessories shall be approved by the National Institute for Occupational Safety and Health (NIOSH), under 42 CFR, Part 84 for chemical, biological, radiological, and nuclear protection (CBRN) with a 45-minute rated service life and compliant with all requirements of the National Fire Protection Association (NFPA) 1981, Standard on Open-Circuit Self Contained Breathing Apparatus (SCBA) for Emergency Services, 2019 edition and NFPA 1982, Standard on Personal Safety Alert Safety Systems (PASS), 2018 edition.

Detailed Specification:

The following represents the Department's minimum requirements for the purchase of a Self-Contained Breathing Apparatus (SCBA). Any alternative products offered must meet or exceed these requirements. Vendors interested in proposing alternative product(s) shall submit detailed documentation on the proposed alternative product(s) with their bid package submittal. The Fire Department will have the final decision as to whether an alternative product(s) is acceptable.

Delivery and Documentation:

The order is to be shipped to the Lake Zurich Fire Department, 321 S Buesching Rd, Lake Zurich, IL 60047, with the vendor paying all shipping costs. The order is to be delivered in entirety as one package on the same date – the Fire Department will not accept partial shipments. Delivery must be during the Department regular office hours of Monday – Friday between 8:00 am - 4:00 pm

Documentation to be supplied at the time of delivery includes a quality assurance test report for each SCBA delivered and four (4) copies of the following:

- User manual for each component.
- Care and maintenance instructions for each component.
- Warranty for each component.

The Department reserves the right to inspect any and all materials, components, equipment, supplies, services, or completed work specified herein. Any of said items not complying with these specifications are subject to rejection at the option of the Department. Any items rejected shall be removed from the premises of the Department and/or replaced at the expense of the vendor.

Training:

The vendor shall provide training for all members of the Department. The training shall instruct all Fire Department personnel in operation and maintenance of the SCBA and shall occur for each of the three (3) shift battalions on days mutually agreeable to both the bidder and the Fire Department.

The vendor will also supply training for four (4) persons at the Lake Zurich Fire Department Fire Station One (321 S Buesching Rd, Lake Zurich, IL 60047) by a certified technician of the supplied SCBA units and face pieces. The technician will instruct Lake Zurich Fire Department designated employees on how to perform repairs that can be completed in house. The date will be mutually agreeable to both bidder and the Fire Department but must be within 180 days of receipt of equipment unless extended or waived by the Fire Chief.

The Lake Zurich Fire Department intends to purchase the following quantities of SCBA, spare cylinders, facepieces, RIT pack, Cascade Retrofit, and accessories: see Q T/338989

(45) Forty-five Self-Contained Breathing Apparatus (SCBA) sets each consisting of;

(1) One complete and fully operational SCBA unit (including battery or batteries if applicable),

(2) Two 30minute 5500psi carbon fiber cylinders with quick-connect.

(1) One facepiece mounted 2nd stage regulator (MMR) or equivalent with quick-connection to low-pressure section.

(60) Sixty facepieces with cloth/Kevlar style head harness

(60) Sixty heavy-duty mask bags

(4) Four RIT Pack's each consisting of;

(1) One 45minute 4500psi carbon fiber cylinder & valve (90 degree) 4500psi, CGA.

(1) One facepiece with cloth/Kevlar style head harness.

(1) One facepiece mounted 2nd stage regulator (MMR) or equivalent with quick connection to low-pressure section.

(1) One transfill line with the ability to fill packs listed above and neighboring departments.

(1) RIT Pack bag to carry all above listed and deployment of in an easy manner.

(4) Four 1-hour 5500psi carbon fiber cylinder with quick-connect for HAZMAT operation.

N/A (5) Five battery charging stations (If applicable). N/A

N/A (5) Five quick-connect adapters for threaded CGA connection filling stations (if applicable or necessary). N/A

(1) One Fit test adapter for Protacount Pro+ 8030 fit test machine.

(1) One Honeywell Flo-test unit with soft wear and plumbing for bided SCBA .

(1) One Tool kit with an assortment of equipment and product specific tools used to service user-serviceable items on the SCBA's and Facepieces in house by LZFD certified technician.

OPTIONAL EQUIPMENT AND SERVICES TO BE INCLUDED (if applicable or available) see QT 1339640

Custom Lake Zurich Fire Department logos monogrammed into each of the Carbon Fiber bottles. The Lake Zurich Fire Department will provide the artwork in a high-quality, electronic format.

The retrofitting or conversion of the current Scott compressor model # AB106651-07, and Scott RevolveAir model 5016 air station to meet 5500psi carbon fiber cylinder filling. Access to the filling station can be made by appointment via email as stated above.

(8) Eight, facepiece mounted 2nd Stage regulators (MMR) or equivalent with quick connection to low-pressure section.

N/A (16) Sixteen spare battery packs (if applicable). N/A

SPECIFICATION

Must check either "Compliant" or "Exception" for each line item

1. NFPA Standard: COMPLIANT: ✓ EXCEPTION: _____

All requirements of NFPA 1981 Standard on Open-Circuit Self Contained Breathing Apparatus for emergency services 2019 Edition are listed in this document by reference. All SCBA units in their entirety (including face pieces, if applicable) must be made compliant with NFPA 1981 2019 Edition no longer than 120 days after the release of the new 2019 standard. The update will be made by factory authorized service technicians on-site with no additional charges. The price to make these 2019 Edition SCBA systems complete will be included in the bid.

2. SCBA Model: COMPLIANT: ✓ EXCEPTION: _____

The proposed SCBA model and facepiece must be the latest and best model offered by the manufacturer and must still be in production.

3. Facepiece: COMPLIANT: ✓ EXCEPTION: _____

Facepiece will be offered in multiple sizes, according to fit test results done prior to order.

4. 2nd Stage Regulator: COMPLIANT: ✓ EXCEPTION: _____

The second stage mask mounted regulator will be equipped with a "dual action" design and have a quick disconnect hose coupling to separate from the low pressure section.

5. Heads Up Display: COMPLIANT: ✓ EXCEPTION: _____

The heads-up display will consist of a series of different colors and lights easily visible and understandable to the wearer giving a visual indication of available air pressure remaining. The lights should be located on the second stage regulator or facepiece.

6. Mask Bags: COMPLIANT: ✓C EXCEPTION: _____

Mask bags will be provided that securely and adequately hold provided facepieces. These mask bags should have a metal, self-locking clip for attaching to turnout gear or SCBA harness and be fleece lined.

7. Voice Amplification COMPLIANT: ✓C EXCEPTION: _____

While SCBA is worn, every user will have an optional voice amplification capabilities.

C = clarification

J.

8. SCBA Cylinder:**COMPLIANT:** ✓ **EXCEPTION:** _____

All SCBA cylinders in the bid will be 30-minute 5500psi, carbon fiber cylinders. All cylinders will have a quick connect fitting and be adaptable to fit current SCBA fill stations

9. HAZMAT Cylinder:**COMPLIANT:** ✓ **EXCEPTION:** _____

All HAZMAT cylinders in the bid will be 1-hour 5500psi, all other specifications should match SCBA cylinder specifications

10. RIT Pack:**COMPLIANT:** ✓ **EXCEPTION:** _____

All RIT Packs in the bid will include a 45 minute 4500psi carbon fiber cylinder & valve (90 degree) 4500psi, CGA. One facepiece with cloth/Kevlar style head harness. Facepiece mounted 2nd stage regulator (MMR) or equivalent with quick connection to low-pressure section. Transfill line with the ability to fill packs listed above or neighboring departments SCBA to 4500psi. RIT pack apparatus bag to contain all listed items.

11. Back frame:**COMPLIANT:** ✓ **EXCEPTION:** _____

The SCBA back frame will be rigid and made of composite or metal material for strength and durability.

12. Cylinder Retention:**COMPLIANT:** ✓ **EXCEPTION:** _____

All carbon fiber cylinders will be attached to the SCBA back frame with an adjustable metal locking band or webbing style strap and composite constructed lock.

13. Indicator Lights:**COMPLIANT:** ✓ **EXCEPTION:** _____

All operation indicator lights will be visible to the user from all peripheral angles at all sides of the SCBA.

14. Power Supply:**COMPLIANT:** ✓ **EXCEPTION:** _____

For ease of maintenance and troubleshooting, the power supply for ALL electronics will be in a central location integrated into the back frame or mounted on the back frame. The energy cells will be rechargeable or disposable, and all cells will be of the same size and type.

15. Waist Belt/Lumbar:**COMPLIANT:** ✓ **EXCEPTION:** _____

For quick removal, the waist strap must be a seatbelt style, quick release buckle. With consideration of user comfort, the lumbar section will be of a "swivel" type.

16. Shoulder Straps: **COMPLIANT:** alt **EXCEPTION:** _____

Shoulder straps should connect to the back frame, not the waist strap. Low-pressure hoses and any electronic wiring will run through the shoulder straps. A hooking "D" ring should be provided on either the right or left shoulder strap to hook accessory items. Shoulder straps should be field removable to facilitate laundering in the Department's current extractor gear washing machines.

17. Shoulder Gauge: **COMPLIANT:** ✓

The shoulder air pressure gauge/PASS alarm will have an analog pneumatic gauge. In the event of electronics failure, the user will have the ability to check air pressure using the pneumatic gauge. **No exception.**

18. EBSS Buddy Breathing: **COMPLIANT:** ✓ **EXCEPTION:** _____

The SCBA should be equipped with an EBSS buddy breather system that is secured to the back frame or lower harness with a heavy-duty pouch utilizing snaps as a minimum.

19. Warranty: **COMPLIANT:** ✓ **EXCEPTION:** _____

A minimum of a 10-year warranty is required on all components included in the SCBA system (except consumables).

20. Tool Kit: **COMPLIANT:** ✓ c **EXCEPTION:** _____

A Tool kit should be provided that include various equipment and product specific tools for certified in-house LZFD members can utilize to make repairs of the SCBA and listed components.

21. Vendor/Service: **COMPLIANT:** ✓ **EXCEPTION:** _____

For quick service of emergency repairs, the Bidder shall have a service or repair facility within 50 miles of the Lake Zurich Fire Department Station 1, located at 321 S. Buesching Rd, Lake Zurich, Illinois 60047. The bidder shall allow an In-house repair station as an option for a quick turnaround of SCBA removed from service. The bidder shall provide loaner SCBA if SCBA's are removed from service due to manufacturer defects.

22. Fit Test Adapter: **COMPLIANT:** ✓ **EXCEPTION:** _____

Adapter should be provided to connect the face pieces to a Protacount Pro+ 8030

alt. = alternative
c = clarification
P10

23. Cascade Adapter: COMPLIANT: _____ EXCEPTION: _____ N/A: ☒

Quick-connect adapters to connect threaded cascade system fittings to SCBA

24. Cascade Conversion: COMPLIANT: ☒

Current fill station Scott RevolveAir model 5016 and accompanied compressor Scott model AB106651-07 must be converted or retrofit to fill 5500psi carbon fiber cylinders using all four unit stations. **No Exceptions**

OPTIONAL EQUIPMENT (if applicable or available)

A separate itemized list, not included in the cost of the above specification final cost, should be supplied for the following items: see QT 133 9682

- * (1) One radio frequency ID tag/ID card reader
- * (45) Forty-five radio Frequency ID tag/IDcard

Spectacle Kit for Facepiece (price each)

New Cascade system (price) Appointments to view the space for installation can be made via email referenced above

(90) Ninety cylinder protectors for 5500psi 30 minute bottles only (price each)

- * * (4) Four ability to silence PASS device for HAZMAT

(7) Seven facepiece mounted 2nd Stage regulators (MMR) or equivalent with quick connection to low-pressure section (price each)

- *** Amp Bracket for AV-3000 HT (price ea.)
- *** Epic 3 Voice Amp (price ea.)

* need Sems II programmed for each X3 Pro SCBA (per pack)

** must purchase separate X3 Pro SCBA w/SEMS II (Haz Mat) feat.

*** see e-mail response from DC Wenzel on 2/6/20

EXCEPTION PAGE

List all exceptions by specification line number and describe the nature of the exception being taken. Use additional pages if necessary.

See Exceptions / Clarifications

03/02/2020

Exceptions/Clarifications on Lake Zurich Bid

- 6. Mask Bags: Clarification** The mask bags do not come with a self-locking clip. The 940IM-RD comes with a D-ring which will work with the accessory hook that 3M Scott offers.
- 7. Voice Amplification: Clarification** Per e-mail reply from DC Wenzel Epic 3 Voice Amplifier & bracket will be listed with Optional Equipment not included in the cost of the specification on page 12. The voice amplifiers are mask mounted and can be taken on or off, giving the department an option.
- 16. Shoulder Straps:** A D-ring is not available on the X3 Pro SCBA. 3M Scott can offer an accessory hook P/N 804594-01 on either shoulder strap as an alternative which is listed on the bid quote.
- 20. Tool Kit: Clarification** Since Lake Zurich is an in-house service center only basic hand tools are needed for specialist level maintenance. A Specialist Level Tool List will be included with the bid.

BID SPECIFICATION

3M™ Scott™ Air-Pak™ X3 Pro SCBA
NFPA 1981/1982, 2018 Edition (Approvals Pending)

General Self-Contained Breathing Apparatus Requirements

The purpose of this bid specification is to establish the minimum requirements for an open-circuit self-contained breathing apparatus (SCBA). The SCBA shall consist of the following major sub-assemblies: (1) full facepiece assembly; (2) a removable, facepiece-mounted, positive pressure breathing regulator with air-saver switch; (3) an automatic dual path redundant pressure-reducing regulator; (4) end-of-service time indicators; (5) a harness and backframe assembly for supporting the equipment on the body of the wearer; (6) a shoulder strap mounted, remote gauge indicating cylinder pressure; (7) a rapid intervention crew/universal air connection (RIC/UAC); and (8) cylinder and valve assembly for storing breathing air under pressure.

The successful bidder agrees to provide, at their own expense, a factory trained instructor for such time as the respirator user shall require complete instruction in the operation and maintenance of the respirator. Any exceptions to these specifications must be detailed in a separate attachment. Failure to do so will automatically disqualify the bidder.

The successful bidder must be a sales distributor, authorized by the manufacturer, to sell the equipment specified herein. A signed document from the manufacture confirming this must be included with the bid.

The SCBA shall maintain all NIOSH standards with any of the following types of cylinders listed as provided by the SCBA manufacturer.

Regulatory Approvals	Product:		
	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> The SCBA shall be approved to NIOSH 42 CFR, Part 84 for chemical, biological, radiological and nuclear protection (CBRN). 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The SCBA shall be compliant to the NFPA 1981, 2018 Edition, Standard on Open-Circuit Self-Contained Breathing Apparatus for Emergency Services. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The SCBA shall be compliant to the NFPA 1982, 2018 Edition (if including optional PASS Device), Standard on Personal Alert Safety Systems. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> If the SCBA is to include an optional integrated self-rescue device, the device shall be compliant to the NFPA 1983, 2017 Edition, Standard on Life Safety Rope and Equipment for Emergency Services. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> All electronic components shall be approved for Intrinsic Safety under UL 913 Class I, Groups C and D, Class II, Groups E, F and G, Hazardous locations. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Required Components		Product:		
Facepiece		Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> The facepiece shall have a large diameter inlet serving as the female half of a quarter (1/4) turn coupling which mates with the positive pressure breathing regulator. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The facepiece shall be approved for use with multiple respiratory applications to enable the same user to switch from one application to another without the use of tools and without doffing the facepiece. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The full facepiece assembly shall fit persons of varying facial shapes and sizes with minimal visual interference. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The full facepiece assembly shall be available in three sizes marked "S" for small, "M" for Medium and "L" for large. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The facepiece sizes shall be easily identifiable through a color-coding scheme. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The facepiece assembly, including head harness, shall be latex free. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The facepiece series shall have a faceséal that is secured to the lens by a U-shaped channel frame that is retained to the lens using two fasteners. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The faceséal shall be a single design for enhanced fit and comfort. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The facepiece shall contain inhalation valves that are readily visible to enable quick visual inspection. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The lens shall be a single, replaceable, modified cone configuration constructed of a non-shatter type polycarbonate material. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> In accordance with NIOSH 42 CFR part 84, the facepiece shall meet the penetration and impact requirements, including compliance with ANSI Z87.1 – 2010. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The lens shall have a coating to resist abrasion and chemical attack and meet the requirements of NFPA 1981, for lens abrasion. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The lens shall have an internal anti-fog coating to reduce fogging of the lens. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Multi-directional voice mitters shall be mounted on both sides of the facepiece and ducted directly to an integral silicone nose cup to enhance voice transmission. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The facepiece assembly shall be able to incorporate multiple electronic communications options (amplification, radio interface, radio direct interface) without affecting NIOSH approvals or NFPA/CBRN approvals where applicable. 		<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> The facepiece shall enable the installation of communications bracket on either the right or left side. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The head harness shall be available in a five-point suspension made in the fashion of a net hood to minimize interference between securing of the facepiece and the wearing of head protection. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The head harness shall be available in a five-strap and four-strap configuration. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The head harness shall be constructed of a para-aramid material for fire, first responder and CBRN applications. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The head harness shall include either a positioning strap or an integrated handle to assist with donning of the facepiece. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Two flame resistant elastic straps, attached to the faceseal in four locations, shall provide adjustment for proper face sealing. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product:			
Mask-Mounted Regulator	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> The facepiece-mounted positive pressure-breathing regulator shall supply and maintain air to the facepiece to satisfy the needs of the user at a pressure greater than atmospheric by no more than 1.5 inches of water pressure static. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The breathing regulator shall maintain positive pressure during flows of up to 500 standard liters per minute. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The breathing regulator shall also meet or exceed a dynamic flow requirement of remaining positive while supplying a minute volume of 160 liters. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The breathing regulator shall have attached a low-pressure hose which shall be threaded through the left shoulder strap to couple to the pressure-reducing regulator mounted on the backframe. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> An optional breathing regulator with an inline quick connect coupling shall be available for use with the optional outlet manifold and accessory hose to allow the breathing regulator to be disconnected from the unit and reconnected to the auxiliary hose of a second unit in the event rescue is required. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The optional quick connect coupling shall be easily connected and disconnected by trained individuals with a gloved hand and/or in low light conditions. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The optional quick connect coupling shall not allow the air hose to be connected without the HUD Connection. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The optional quick connect coupling shall also be guarded against inadvertent disconnect during use of the equipment. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• The low-pressure hose shall be equipped with a swivel attachment at the facepiece mounted breathing regulator.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The breathing regulator shall connect to the facepiece by way of a quarter (1/4) turn coupling.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The user shall hear an audible sound when the breathing regulator is attached correctly to the facepiece.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The breathing regulator shall be equipped with a doughnut-shaped gasket which provides a seal against the mating surface of the facepiece.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The breathing regulator cover shall be fabricated of a flame resistant, high impact plastic.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The breathing regulator shall have a demand valve to deliver air to the user, activated by a diaphragm responsive to respiration.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The demand valve shall use an extended temperature range dynamic O-ring seal composed of a fluorosilicone elastomer.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The diaphragm shall include the system exhalation valve and shall be constructed from a high strength butyl elastomer.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• A purge valve shall be situated at the inlet of the breathing regulator and shall be capable of delivering airflow of between 125 and 225 standard liters per minute.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The breathing regulator shall be designed to direct the incoming air through a spray bar and over the inner surface of the facepiece lens for defogging purposes.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The components of the breathing regulator shall be constructed of materials that are not vulnerable to corrosion.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The flame-resistant cover shall contain an air saver switch and pressure demand bias mechanism.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The breathing regulator shall reactivate and supply air only in the positive pressure mode when the wearer affects a face seal and inhales.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• This device shall not affect the breathing flow through the system while in operation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Product:		
<i>Pressure Reducer with Snap-Change Cylinder Connection</i>	Meets	Does Not Meet	Exception
• The pressure-reducing regulator shall be mounted at the waist on the backframe and be coupled to the cylinder valve through a patented stainless steel quick connect snout for engagement and sealing within the cylinder valve outlet.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> The cylinder shall be secured to the pressure-reducing regulator with two pull-rings 180° from each other. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> A stainless-steel rod shall secure each of the pull-rings to prevent removal of the cylinder while the SCBA is pressurized. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The stainless-steel rods shall be actuated when the cylinder is opened and when cylinder pressure is above 30 psig. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> In lieu of a manual by-pass, the pressure-reducing regulator shall include a back-up pressure-reducing valve connected in parallel with the primary pressure-reducing valve and an automatic transfer valve for redundant control. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The back-up pressure-reducing valve shall also be the means of activating the low-pressure alarm devices in the facepiece-mounted breathing regulator. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> This warning shall denote a switch from the primary reducing valve to the back-up reducing valve whether from a malfunction of the primary reducing valve or from low cylinder supply pressure. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> A press-to-test valve shall be included to allow functional testing of the back-up reducing valve. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The pressure-reducing regulator shall have extended temperature range dynamic O-ring seals composed of fluorosilicone elastomer. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The pressure-reducing regulator shall have incorporated a reseatable over-pressurization relief valve which shall prevent the attached low-pressure hose and facepiece-mounted breathing regulator from being subjected to high pressure. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product			
End-of-Service Time Indicator (EOSTI)	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> The SCBA shall have two end-of-service time indicators (EOSTI). A tactile alarm and a Heads-Up Display (HUD). 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The primary EOSTI shall be the integral low-pressure alarm device that shall combine an audible alarm with simultaneous vibration of the facepiece. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The primary EOSTI shall be located in the facepiece-mounted positive pressure breathing regulator. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> This alarm device shall indicate either low cylinder pressure (35% +/- 2%) or a malfunction of the primary pressure-reducing valve (first stage regulator). 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The HUD shall serve as the secondary EOSTI. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The HUD shall be powered by the SCBA's single power supply. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> It shall be mounted in the user's field of vision on the facepiece-mounted positive pressure breathing regulator. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> It shall display cylinder pressure in increments of 100%, 75%, 50% and 35%. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The display shall not have a numerical representation of cylinder pressure. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> At full cylinder pressure, two green Light Emitting Diodes (LED) shall be illuminated. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> At three-quarter cylinder pressure, one green LED shall be illuminated. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> At one-half cylinder pressure, one "yellow" LED shall be illuminated and flash at a rate not to exceed one (1x) time per second. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> At one-third cylinder pressure, one "red" LED shall be illuminated and flash at a rate not to exceed ten (10x) times per second. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The HUD shall have a low battery indication that is distinct and distinguishable from the cylinder pressure indications. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Product:			
<i>Harness and Backframe Assembly</i>	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> A lightweight, lumbar support style backframe and harness assembly shall be used to carry the cylinder and valve assembly and the pressure-reducing regulator assembly. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The backframe shall be a solid, one-piece black powder-coated aluminum alloy frame that is contoured to follow the shape of the user's back. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The backframe shall include a shroud to streamline hose and wire management by minimizing exposure of the low-pressure hose and electronics molded cable. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The backframe shall include a mounting for the pressure reducing regulator located at the waist. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The backframe shall include an over-the-center, adjustable tri-slide fixture, a para-aramid strap and a double-locking latch assembly to secure 30, 45, 60, or 75-minute cylinders. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The backframe shall include a mounting area suitable for installation of a distress alarm integrated with the SCBA. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The mounting area shall permit installation of a distress alarm sensor module in an area between the pressure reducer and the backframe. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> The harness assembly shall include a waist pad and shoulder pads constructed of an outer shell material and incorporating a closed-cell foam design to help minimize water absorption. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The harness assembly shall incorporate parachute-type, quick-release buckles with an integrated bail to help secure the webbing. Optional spring (alligator) clips shall also be available. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The harness assembly shall consist of a one size black para-aramid strap with two red stripes along the outer edges and a reflective stripe in the center for enhanced visibility. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The harness assembly shall include a seat-belt type waist belt attachment. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The harness assembly shall include box-stitched construction with no screws or bolts. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The harness assembly shall be removable from the backframe without the use of tools. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The harness assembly shall be machine washable to help with exposure reduction. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The harness assembly shall accommodate a waist belt extension. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The waist pad shall be attached to the backframe such that movement by the wearer provides natural articulation. Articulation shall be accomplished without the use of mechanical devices. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The waist pad and belt shall freely wrap around and conform to the wearers' hips. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The shoulder harness shall be fitted with a Drag Rescue Loop (DRL) capable of being deployed in an emergency situation to drag a downed firefighter to safety. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The Drag Rescue Loop (DRL) shall be sewn into the shoulder harness assembly and shall provide a horizontal pull strength of 1000 lbs. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The Drag Rescue Loop (DRL) shall be stored in a manner to prevent accidental snag but maintain accessibility with gloved hands. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The shoulder harness shall be attached to the backframe such that the harness presents itself for ease of donning. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The shoulder harness shall include reflective material to enhance the visibility of the wearer in low-light conditions. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> The shoulder harness shall accommodate two distinct positions for a chest strap attachment. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The shoulder harness shall accommodate a mounting clip for attachment of a handheld radio remote speaker microphone. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Product:		
<i>Rapid Intervention Crew / Universal Air Connection (RIC/UAC)</i>	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> The SCBA shall incorporate a RIC/UAC fitting to be compliant with the 2018 edition of the NFPA 1981 Self-Contained Breathing Apparatus standard. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The RIC/UAC shall be an integral part of the pressure reducer and protected by the backframe. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The RIC/UAC inlet connection shall be within 4" (4-inches) of the tip of the CGA threads of the cylinder valve. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The RIC/UAC shall consist of a connection for attaching a high-pressure air source and a self-resetting relief valve allowing a higher pressure than that of the SCBA to be attached to the SCBA. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The self-resetting relief valve shall be color-coded to identify pressure rating of the SCBA. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The RIC/UAC shall have a check valve to prevent the loss of air when the high-pressure air source has been disconnected. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Product:		
<i>Cylinder</i>	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> The cylinder threads shall be straight with an O-ring or quad-ring gasket type seal. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The cylinder valve shall be a "fail open" type, constructed of forged aluminum and designed such that no stem packing or packing gland nuts are required. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> It shall contain an upper and lower seat such that the pressure will seal the stem on the upperseat, thus preventing leakage past the stem. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> No adjustment shall be necessary during the life of the valve. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> If the SCBA is equipped with a Snap-Change Cylinder connection, the cylinder valve shall be designed with a patented stainless steel quick connect snout that delivers air directly to the first stage pressure-reducing regulator. The quick connect snout shall be an integral part of the cylinder valve, rather than an adapter that threads onto the CGA fitting. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> If the SCBA is equipped with a Snap-Change Cylinder connection, the cylinder valve shall be offered with a CGA 346 or CGA 347 fitting for the purposes of filling the cylinder only. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> If the SCBA is equipped with a Snap-Change Cylinder connection, the fill fitting shall have a check valve to prevent flow from the cylinder. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> If the SCBA is equipped with a Snap-Change Cylinder connection, the fill fitting shall be provided with a dust cover to protect threads from damage and prevent interior surfaces from being contaminated when not in use. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> If the SCBA is equipped with a Snap-Change Cylinder connection, the dust cover shall be retained to the cylinder valve. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> Each cylinder valve shall consist of the following: 1) a hand activated valve mechanism with a spring-loaded, positive action, ratchet type safety lock and lock-out release for selecting "lock open service" or "non-lock open service"; 2) an upstream connected frangible disc safety relief device; 3) a dual reading pressure gauge indicating cylinder pressure at all times; 4) an elastomeric bumper; 5) an angled outlet. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The cylinder valve shall have an RFID tag molded into the elastomeric bumper with a universal RFID marking embossment. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The RFID tag shall be capable of storing product specific information, including serial number, manufacture date, hydrostatic test date, pressure rating, life expectancy, and fill logs. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The SCBA shall maintain all NIOSH and NFPA standards with any of the following types of cylinders listed as provided by the SCBA manufacturer. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Carbon-Wrapped</i>			
<ul style="list-style-type: none"> The cylinder shall be manufactured in accordance with DOT specifications and meet the Transport Canada requirements with working pressures of 2216, 4500, or 5500 psig. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The cylinder shall be lightweight, composite type cylinder consisting of an aluminum alloy inner shell, with a total overwrap of carbon fiber, fiberglass and an epoxy resin. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The cylinder shall have a 2D barcode located under the protective gel coat programmed with the following information, at a minimum: serial number, manufacture date, and hydrostatic test date. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The cylinder shall be available in a 30-minute, 45-minute, 60-minute or 75-minute duration based on the NIOSH breathing rate of 40 liters per minute (lpm). 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The cylinder shall be available in an approved 30-year life design as defined by the DOT Special Permit 14232. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Product:		
<i>Warranty</i>	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> The unit shall be covered by a warranty providing protection against defects in materials or workmanship. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> This warranty shall not have any exclusions other than consumables and carrying cases. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• This warranty shall not require a registration in order to activate.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• This warranty shall not be contingent upon completing mandatory overhaul or recommended preventative maintenance.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Product		
<i>Personal Alert Safety System with Firefighter Locator</i>	Meets	Does Not Meet	Exception
• The PASS Device shall be compliant to the NFPA 1982, 2018 Edition Standard on Personal Alert Safety Systems.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Operation of this distress alarm shall be initiated with the opening of the valve of an SCBA charged cylinder.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The system shall feature a "hands-free" re-set capability that may be activated by means of a slight movement of the SCBA when the system is in a pre-alarm mode.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The system shall operate from a single power source containing six "AA" batteries.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The battery life of the SCBA with PASS only shall be no less than 200 hours.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The system shall have a battery check function that provides an LED indication of battery status while the SCBA is not pressurized.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• When the PASS is manually activated, the locator system shall immediately emit a 2.4 GHz signal to be received by a separate hand-held receiver.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• When the PASS is activated due to lack of motion, the locator system shall have a ten second delay prior to emitting a 2.4 GHz signal to be received by a separate hand-held receiver.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The system shall utilize a 2.4 GHz signal to provide the best path to a "downed" firefighter.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The locating system shall be programmable with eight alpha-numeric characters to provide identification information.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The PASS device shall contain two components: a Console and a Sensor Module.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• When the PASS device goes into pre-alarm, the user shall be notified through a distinct light pattern in the breathing regulator-mounted HUD display.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Console</i>			

• The console shall be located on the user's right shoulder harness.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The console shall contain an integral edge lit mechanical pressure gauge that is automatically turned on by opening the cylinder valve.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The console shall display to the user the following: Pre-Alarm: alternating red flashing LED's; Full Alarm: dual flashing red LED's and a flashing PASS icon; Low Battery: red flashing LED's; Normal System Operation: flashing green LED.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The console shall contain a photo sensing diode that automatically adjust the brightness of the HUD as the ambient lighting conditions change.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The console shall contain an integrated RFID tag.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The console shall contain push buttons for user interface.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The push buttons shall be designed to minimize accidental activation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• A yellow color-coded push button shall permit system re-set.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• A red color-coded push button shall permit manual activation of the full alarm mode.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The console shall be equipped with a LED "External HUD" allowing others to determine the wearer's cylinder pressure through the same color-code scheme as the breathing regulator-mounted HUD.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• A green LED shall be illuminated across the gauge face to indicate a cylinder with greater than half cylinder pressure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• A yellow LED shall be illuminated across the gauge face to indicate a cylinder with less than half cylinder pressure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• A red LED shall be illuminated across the gauge face to indicate a cylinder with less than 35% cylinder pressure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>Sensor Module</i>			
• The system shall include a sensor module mounted to the SCBA backframe and located in an area between the cylinder and backframe in a manner designed to protect the assembly from damage.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The sensor module shall contain a motion sensor that is sensitive to user hip movement to reduce false activations.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

<ul style="list-style-type: none"> The sensor module shall contain redundant, dual sound emitters for the audible alarm and dual visual "buddy" indicator lights. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The sensor module sound emitters shall be oriented in multi-directions for optimal sound projection. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The sensor module sound emitters shall broadcast a unique alarm tone for the following conditions: Pre-alarm PASS, Full-alarm PASS, EVAC, System Integrity, PAR, and Low-battery. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The visual indicators on the backframe mounted sensor module shall flash green during normal operation. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The visual indicators shall flash red when the device is in pre-alarm and full-alarm. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The visual indicators shall flash orange when the SCBA has reached one-half cylinder pressure. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The visual indicators shall flash a combination of red, green, and white when the SCBA has reached 35% cylinder pressure. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The sensor module shall have a Bluetooth chip set integral to the unit to provide wireless connectivity to external devices. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Optional Components	Product:		
Universal Emergency Breathing Safety System (UEBSS)	Meets	Does Not Meet	Exception
<ul style="list-style-type: none"> The optional Universal Emergency Breathing Safety System (UEBSS) shall be approved to NIOSH 42CFR, Part 84 and NFPA 1981, 2018 Edition. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The UEBSS shall have one of each of the following requirements; (1) a manifold with one each of a Rectus female socket and Rectus male plug, both of which have check valves, (2) 40" minimum low-pressure hose, (3) a pouch for storing the hose, and (4) a dust cap for the female socket and male plug. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The UEBSS shall be positioned on the wearer's right side and shall be capable of allowing for six feet of hose between like systems. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The manifold shall be made of aluminum and be anodized black. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The female socket and male plug shall have spacing, no less than 15° off-center. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The female socket shall have a double action to disengage, noted as a "push-in/pull-back". 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> The female socket shall have an internal check valve. 	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• The male plug shall have an external check valve.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The hose shall be made of high temperature rubber capable of sustaining a maximum 250 psig of pressure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The containment system shall include a pouch and shall be made of para-aramid materials and shall be capable of storing 36" of hose.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The pouch shall be attached to the SCBA by snap fasteners.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The pouch shall have a pull-strap to assist with opening of the flap and gaining access to the hose and manifold assembly.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The pouch shall be marked "UEBSS" and be constructed of reflective material.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The pouch shall be removable from the backframe without the use of tools.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The UEBSS shall have provision for connection of a supplied airline for extended duration use while reserving the cylinder supply for egress.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The UEBSS shall connect to a supplied airline using an extended duration airline adapter.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The extended duration airline adapter shall have a female quick connect fitting on one end to connect to the UEBSS.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The extended duration airline adapter shall have a male quick connect fitting on one end to connect to a supplied airline. The adapter shall be able to accommodate Hansen, Foster, Hansen HK, or Schrader.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• The extended duration airline adapter shall have a check valve to prevent the accidental loss of air when the adapter is disconnected from the supplied airline.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Product:		
	Product:		
<i>Electronic Voice Communications</i>	Meets	Does Not Meet	Exception
• The respirator shall have an optional facepiece-mounted radio direct interface communication system that provides voice amplification and wireless communication with two-way radios.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Refer to EPIC 3 RDI Voice Amplifier Bid Specifications, H/S 7570			
	Product:		

Municipal Emergency Services, Inc.
124 East First Street
Deer Creek, IL 61733
(800) 322-8402 Office
(309) 447-6903 Fax

References-Scott X3 Pro SCBA

March 2, 2020

West Chicago FPD
DC Tim Leidig
200 Fremont Street
West Chicago, IL 60185
(630) 231-2123

Lombard FD
Lt. Mike Ringa
50 East St. Charles Road
Lombard, IL 60148
(630) 620-5737

Arlington Heights FD
BC Curt Hanselman
1150 North Arlington Heights Road
Arlington Heights, IL 60004
(847) 368-5468

Tom Arendarczyk
MES-Illinois
tarendarczyk@mesfire.com
(773) 447-6269

Service & Repair

MES has (3) Scott Service Technicians servicing the Chicago Metro area. We have a service center in our Lombard office and (2) Mobile Service units providing On-Site service. MES can schedule annual function/flow testing and repairs as necessary. The annual function/flow test is **\$50.00** per SCBA.

Training Provided

- Detailed instruction related to user Operations & Use, Care & Basic Maintenance. Includes procedures for pre-use functional check, donning & doffing, user level cleaning and proper storage will be provided by Ray Redell for all (3) shifts on days mutually agreed upon.
- A Scott In-House Repair Center is typically an end-user of Scott products. An IRC is authorized to provide technical service and warranty administration, only for its own Scott products which are specifically indicated in its IRC agreement.
- Since Lake Zurich FD is an in-house repair center with (3) current up to date techs they can add a fourth at no charge. Lake Zurich FD will need to go on line to 3mscott.com and check if there is a service technical training class that they can sign up for. They can contact Tom Raubolt with any questions.
- Tom Raubolt-Field Service Specialist
 - Office: (734) 752-6413
 - Mobile: (734) 309-6220
 - E-mail: traubolt@mmm.com

OPTIONAL EQUIPMENT AND SERVICES TO BE INCLUDED (If applicable or available)

Custom Lake Zurich Fire Department logos monogrammed into each of the Carbon Fiber bottles. The Lake Zurich Fire Department will provide the artwork in a high-quality, electronic format.

The retrofitting or conversion of the current Scott compressor model # AB106651-07, and Scott RevolveAir model 5016 air station to meet 5500psi carbon fiber cylinder filling. Access to the filling station can be made by appointment via email as stated above.

(8) Eight, facepiece mounted 2nd Stage regulators (MMR) or equivalent with quick connection to low-pressure section.

(16) Sixteen spare battery packs (if applicable).



124 East First Street
Deer Creek, IL 61733

Quote

Date 02/21/2020
Quote # QT1339640
Expires 03/22/2020
Sales Rep Arendarczyk, Thomas J
PO #
Shipping Method FedEx Ground

Bill To
LAKE ZURICH FIRE RESCUE
EMAIL INVOICES TO
AP@LAKEZURICH.ORG

Ship To
DC MICHAEL WENZEL
LAKE ZURICH FIRE RESCUE #1
321 S BUESCHING RD
LAKE ZURICH IL 60047-2535
United States

CYL LOGO 1-BW

AB16-0807

Scott Repair

200077-60

CYLINDER LOGO CHARGE - SINGLE COLOR LOGO BLACK & WHITE	98	45.00	4,410.00
5.5 REVOLVEAIR CONVERSION KIT	1	145.00	145.00
Scott Repair INSTALL AB16-0807 CONVERSION KIT ON EXISTING REVOLVEAIR & MAKE ADJUSTMENTS TO SCOTT MODEL AB10-6651-07 COMPRESSOR TO FILL 5500 PSI CYLINDERS	1	180.00	180.00
REG ASY, QD, 2018	8	1,394.55	11,156.40

Subtotal	15,891.40
Shipping Cost (FedEx Ground)	0.00
Total	\$15,891.40

This Quotation is subject to any applicable sales tax and shipping & handling charges that may apply. Tax and shipping charges are considered estimated and will be recalculated at the time of shipment to ensure they take into account the most current local tax information.

All returns must be processed within 30 days of receipt and require a return authorization number and are subject to a restocking fee.

Custom orders are not returnable. Effective tax rate will be applicable at the time of invoice.



QT1339640

OPTIONAL EQUIPMENT (if applicable or available)

A separate itemized list, not included in the cost of the above specification final cost, should be supplied for the following items:

(1) One radio frequency ID tag/ID card reader

(45) Forty-five radio Frequency ID tag/ID card

Spectacle Kit for Facepiece (price each)

New Cascade system (price) Appointments to view the space for installation can be made via email referenced above

(90) Ninety cylinder protectors for 5500psi 30 minute bottles only (price each)

(4) Four ability to silence PASS device for HAZMAT

(7) Seven facepiece mounted 2nd Stage regulators (MMR) or equivalent with quick connection to low-pressure section (price each)



124 East First Street
Deer Creek, IL 61733

Quote

Page 1 of 2

Date

02/21/2020

Quote #

QT1339682

Expires

03/22/2020

Sales Rep

Arendarczyk, Thomas J

PO #

Shipping Method

FedEx Ground

Bill To

LAKE ZURICH FIRE RESCUE
EMAIL INVOICES TO
AP@LAKEZURICH.ORG

Ship To

DC MICHAEL WENZEL
LAKE ZURICH FIRE RESCUE #1
321 S BUESCHING RD
LAKE ZURICH IL 60047-2535
United States

Scott X3		Scott X3 SEMS II PROGRAMMED FOR EACH X3 PRO SCBA	1	100.00	100.00
200773-01		RFID WRITER KIT SEMS II OPTION	1	528.13	528.13
200774-01		R.F.I.D. Tag Kit PACK OF 10 SEMS II OPTION	5	99.72	498.60
8005197		Scott Connect Monitor Software - includes 10 downloads SEMS II OPTION	1	0.00	0.00
8006951		Monitor for X3 PRO SEMS II OPTION	1	0.00	0.00
201088-03		SEMS II, USB GATEWAY SEMS II OPTION	1	1,588.07	1,588.07
805753-01		AV3000 SPECTACLE KIT ASSY	1	44.99	44.99
Scott Compressor	AC0503426110	AC0503426110 Scott Compressor MODEL: HUSH, 6000 PSI, 208 VOLT 3 PHASE, 15 HP, CO MONITOR, HUSH ENCLOSED REMOTE AIR, BLUE/WHITE, ENGLISH, NO OPTIONS	1	37,195.29	37,195.29
Scott Compressor	AF21102210411	AF21102210411 Scott Compressor CHARGE STATION, MODEL: REVOLAIR, BASE, STATIONARY FILL PANEL, DUAL PRESSURE: NO, AUX LOW PRESSURE: NO, AUX HIGH PRESSURE: NO, CUTOUT, 4 BANK CASCADE PANEL, SCUBA ADAPTER REVOLAIR & CGA	1	12,207.06	12,207.06
Scott Compressor	AR420404400	AR420404400 Scott Compressor STORAGE & RACK: CYLINDER: UN 6000, RACK: WALL 4, QTY: FOUR, PLUMBING & QTY: 4 CASCADE, HOSES: 40FT, OPTIONS: NONE	1	7,905.88	7,905.88
Compressor Install		Compressor Install	1	1,500.00	1,500.00
200952-06		Cylinder Sleeve Kit, 30 minute, 5500 PSI	1	102.67	102.67
200077-60		REG ASY, QD, 2018	7	1,394.55	9,761.85
201210-01		ASSY,COM BRKT,AV3 HT,SER KIT,R FOR EPIC 3	1	25.11	25.11
201275-01		EPIC 3 Voice Amplifier (Individually Packaged)	1	494.89	494.89



Quote

Page 2 of 2

Date

02/21/2020

Quote #

QT1339682

	Subtotal	71,952.54
Shipping Cost (FedEx Ground)		0.00
	Total	\$71,952.54

This Quotation is subject to any applicable sales tax and shipping & handling charges that may apply. Tax and shipping charges are considered estimated and will be recalculated at the time of shipment to ensure they take into account the most current local tax information.

All returns must be processed within 30 days of receipt and require a return authorization number and are subject to a restocking fee.

Custom orders are not returnable. Effective tax rate will be applicable at the time of invoice.



QT1339682

Tumpane, Jim

Subject:

FW: SCBA Provider Bid Question

From: Mickey Wenzel [mailto:mickey.wenzel@lakezurich.org]

Sent: Thursday, February 6, 2020 5:06 PM

To: Arendarczyk, Tom <tarendarczyk@mesfire.com>

Subject: RE: SCBA Provider Bid Question

Tom

I spoke to Justin Brooks and you can list the voice amps as optional equipment not included in the cost of the specification final cost. (page 12)

The Cascade compressor information is as follows

Model # AB10-6651-07

Serial # 15T6F1386 09/25/06

The RevolveAir information is as follows

Model # 5016

Serial # CSR096-1721 (found inside the RevolveAir)

Please let me now if you have any other questions.

Division Chief Mickey Wenzel

Lake Zurich Fire Department

321 S. Buesching Road

Lake Zurich, IL 60047

Office: (847)540-5070 ex. 1105

Cell: (847)815-8814

From: Arendarczyk, Tom <tarendarczyk@mesfire.com>

Sent: Thursday, February 6, 2020 3:08 PM

To: Mickey Wenzel <mickey.wenzel@lakezurich.org>

Subject: SCBA Provider Bid Question

Hi Mickey,

I have a couple of questions on the attached bid for 3M Scott Fire & Safety.

Page 8 **7. Voice Amplification** Can the Voice Amp & bracket for the facepiece be listed on page 7 **Optional Equipment and Services to be included (if applicable or available)** or on page 12 **Optional Equipment (if applicable or available) not included in the cost of the above specification final cost?**

Page 12 **24. Cascade Conversion** What year is the Scott compressor and Scott RevolveAir fill station? Can you also provide S/N for each?

Thanks,

Tom Arendarczyk

Outside Sales Representative

Municipal Emergency Services
Office: 800-322-8402
Mobile: 773-447-6269
larendarczyk@mesfire.com
www.mesfire.com



MES Illinois
124 East First Street
Deer Creek, IL 61733

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Specialist Level Tool List – X3 Pro SCBA

Backframe/Harness Assembly:

9 mm Open End Wrench
3/8 in Open End Wrench
5/8 in Open End Wrench
T-25 Torx Driver
7/16 in Deepwell Socket, 3/8-inch Drive
3/8 in Drive Ratchet
Screwdriver, Phillips (No. 1 bit)
Screwdriver, Phillips (No. 2 bit)
Screwdriver, Phillips (No. 3 bit)
Screwdriver, Small Flat Blade
Screwdriver, Large Flat Blade
Screwdriver, Phillips Head Jewelers
Needle Nose Pliers
Torque screwdriver capable of 8-inch pounds
Torque Wrench Capable of 20 in-lbs
3/16 in Hex Wrench
1/4 in Hex Wrench
7/64 in Hex Wrench
9/64 in Hex Wrench
Wire Bristle Brush (Toothbrush Style)
Utility Knife