BID SPECIFICATIONS

AIR-PAK NxG7 SCBA

General Cylinder 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.

	Product:		
Approvals	Meets	Does Not Meet	Exception
• The SCBA shall be approved to NIOSH 42 CFR, Part 84 for chemical, biological, radiological and nuclear protection (CBRN).	☐	☐	☐
• The SCBA shall be compliant to the NFPA 1981, 2007 Edition, Standard on Open-Circuit Self-Contained Breathing Apparatus for Emergency Services.	☐	☐	☐
• The SCBA shall be compliant to the NFPA 1982, 2007 Edition (if including optional PASS Device), Standard on Personal Alert Safety Systems.	☐	☐	☐
• If the SCBA is to include an optional integrated self-rescue device, the device shall be compliant to the NFPA 1983, 2006 Edition, Standard on Life Safety Rope and Equipment for Emergency Services.	☐	☐	☐
• 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.	☐	☐	☐
Required Components	Product:		
Facepiece	Meets	Does Not Meet	Exception

• 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.	☐	☐	☐
• 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.	☐	☐	☐
• The full facepiece assembly shall fit persons of varying facial shapes and sizes with minimal visual interference.	☐	☐	☐
• The full facepiece assembly shall be available in three sizes.	☐	☐	☐
• The facepiece sizes shall be easily identifiable through a color-coding scheme.	☐	☐	☐
• The facepiece shall have a minimum of three sizes of nosecups.	☐	☐	☐
• The face seal shall be constructed of a blend of proprietary material that is free of latex.	☐	☐	☐
• The facepiece series shall have a faceseal that is secured to the lens by a U-shaped channel frame that is retained to the lens using two fasteners.	☐	☐	☐
• The lens shall be a single, replaceable, modified cone configuration constructed of a non-shatter type polycarbonate material and shall meet the impact and penetration requirements of a faceshield as specified in ANSI Z87.1.	☐	☐	☐
• The lens shall have a silicone based coating to resist abrasion and chemical attack and meet the requirements of NFPA-1981, for lens abrasion.	☐	☐	☐
• The lens shall have an internal anti-fog coating to reduce fogging of the lens.	☐	☐	☐
• Multi-directional voicemitters shall be lens mounted on both sides of the facepiece lens and ducted directly to an integral silicone nosecup to enhance voice transmission.	☐	☐	☐
• The voicemitters, ducts and nosecup shall be easily removable without the use of tools.	☐	☐	☐
• The facepiece assembly shall be able to incorporate multiple Scott electronic communications options (amplification, radio interface, wireless, etc) without affecting NIOSH approvals or NFPA/CBRN approvals where applicable.	☐	☐	☐
• The head harness shall be 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, and be constructed of a para-aramid material for fire, first responder and CBRN applications.	☐	☐	☐
	Product:		
Mask-Mounted Regulator	Meets	Does Not Meet	Exception
• 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.	☐	☐	☐

• The breathing regulator shall maintain positive pressure during flows of up to 500 standard liters per minute.	☐	☐	☐
• The regulator shall also meet or exceed a dynamic flow requirement of remaining positive while supplying a minute volume of 160 liters.	☐	☐	☐
• 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.	☐	☐	☐
• An optional regulator shall be available with a quick connect coupling in line 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.	☐	☐	☐
• The quick connect coupling shall be easily connected and disconnected by trained individuals with a gloved hand and/or in low light conditions.	☐	☐	☐
• The coupling shall also be guarded against inadvertent disconnect during use of the equipment.	☐	☐	☐
• The low-pressure hose shall be equipped with a swivel attachment at the facepiece mounted regulator.	☐	☐	☐
• The regulator shall connect to the facepiece by way of a quarter (1/4) turn coupling.	☐	☐	☐
• The user shall hear an audible sound when the regulator is attached correctly to the facepiece.	☐	☐	☐
• The regulator shall be equipped with a doughnut-shaped gasket which provides a seal against the mating surface of the facepiece.	☐	☐	☐
• The regulator cover shall be fabricated of a flame resistant, high impact plastic.	☐	☐	☐
• The breathing regulator shall have a demand valve to deliver air to the user, activated by a diaphragm responsive to respiration.	☐	☐	☐
• The demand valve shall use an extended temperature range dynamic O-ring seal composed of a fluorosilicone elastomer.	☐	☐	☐
• The diaphragm shall include the system exhalation valve and shall be constructed from a high strength butyl elastomer.	☐	☐	☐
• A purge valve shall be situated at the inlet of the breathing regulator and shall be capable of delivering airflow of between 125 and 175 standard liters per minute.	☐	☐	☐

• The breathing regulator shall be arranged to direct the incoming air over the inner surface of the facepiece for defogging purposes.	☐	☐	☐
• The components of the breathing regulator shall be constructed of materials that are not vulnerable to corrosion.	☐	☐	☐
• The flame resistant cover shall contain an air saver switch and pressure demand bias mechanism.	☐	☐	☐
• It shall reactivate and supply air only in the positive pressure mode when the wearer affects a face seal and inhales.	☐	☐	☐
• This device shall not affect the breathing flow through the system while in operation.	☐	☐	☐
	Product:		
Pressure Reducer	Meets	Does Not Meet	Exception
• The pressure-reducing regulator shall be mounted 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.	☐	☐	☐
• The cylinder shall be secured to the pressure-reducing regulator with two pull-rings 180° from each other.	☐	☐	☐
• Two stainless steel rods shall secure the pull-rings.	☐	☐	☐
• The stainless steel rods shall be actuated when the cylinder is opened and when cylinder pressure is above 50 psig.	☐	☐	☐
• 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.	☐	☐	☐
• The back-up pressure reducing valve shall also be the means of activating the low-pressure alarm devices in the facepiece-mounted breathing regulator.	☐	☐	☐
• 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.	☐	☐	☐
• A press-to-test valve shall be included to allow bench testing of the back-up reducing valve.	☐	☐	☐
• The pressure-reducing regulator shall have extended temperature range dynamic O-ring seals composed of fluorosilicone elastomer.	☐	☐	☐
• 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.			
	Product:		
End-of-Service Time Indicator (EOSTI)	Meets	Does Not Meet	Exception
• The SCBA shall have two end-of-service time indicators (EOSTI). A tactile alarm and a Heads-Up Display (HUD).	☐	☐	☐
• The primary EOSTI shall be the integral low-pressure alarm device that shall combine an audible alarm with simultaneous vibration of the facepiece.	☐	☐	☐
• The primary EOSTI shall be located in the Facepiece-Mounted Positive Pressure Regulator.	☐	☐	☐
• This alarm device shall indicate either low cylinder pressure (less than 25%) or primary first stage regulator failure.	☐	☐	☐
• The HUD shall serve as the secondary EOSTI indicator.	☐	☐	☐
• It shall be mounted in the user's field of vision on the second stage regulator.	☐	☐	☐
• It shall display one-quarter bottle increments including full bottle pressure and continuing to 25% of maximum bottle pressure.	☐	☐	☐
• The display shall not have a numerical representation of bottle pressure.	☐	☐	☐
• At full bottle pressure, two green Light Emitting Diodes (LED) shall be illuminated.	☐	☐	☐
• At three-quarter bottle pressure, one green LED shall be illuminated.	☐	☐	☐
• At one-half bottle pressure, one "yellow" LED shall be illuminated and flash at a rate not to exceed one (1x) time per second.	☐	☐	☐
• At one-quarter bottle pressure, one "red" LED shall be illuminated and flash at a rate not to exceed ten (10x) times per second.	☐	☐	☐
• The HUD shall have a low battery indication that is distinct and distinguishable from the bottle pressure indications.	☐	☐	☐
	Product:		
Harness and Backframe Assembly	Meets	Does Not Meet	Exception
• 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.	☐	☐	☐

• The backframe shall be a solid, one-piece black powder-coated aluminum frame that is contoured to follow the shape of the user's back.	☐	☐	☐
• The backframe shall include a mounting for the pressure reducer.	☐	☐	☐
• 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.	☐	☐	☐
• The harness assembly shall consist of a one size black para-aramid strap with a yellow stripe.	☐	☐	☐
• This harness shall include box-stitched construction with no screws or bolts.	☐	☐	☐
• The harness assembly shall incorporate parachute-type, quick-release buckles and shall include shoulder and hip pads.	☐	☐	☐
• The harness shall include a seat-belt type waist attachment.	☐	☐	☐
• The shoulder strap shall be fitted with a Drag Rescue Loop (DRL) capable of being deployed in an emergency situation to drag a downed firefighter to safety.	☐	☐	☐
• The one-piece aluminum backframe should include integrated donning/carry handles.	☐	☐	☐
• The handles shall allow the user to easily don the SCBA in the "over-head" style and also allow the user to carry the SCBA.	☐	☐	☐
• The backframe shall include accommodation and mounting spaces suitable for installation of a distress alarm integrated with the SCBA.	☐	☐	☐
• These mounting spaces shall permit installation of an alarm sensor module in an area between the cylinder hanger locking mechanism and the backframe.	☐	☐	☐
	Product:		
Shoulder-Mounted Pressure Gauge	Meets	Does Not Meet	Exception
• The pressure gauge shall be an integral part of the control console assembly.	☐	☐	☐
• The control console shall come with a mechanical (analog) pressure gauge that is angled at 30°.	☐	☐	☐
• The control console shall contain an edge lit pressure gauge that requires no action by the user to turn on except open the cylinder valve.	☐	☐	☐
• The control console shall contain a photo sensing diode to dim and brighten the HUD as the environment changes.	☐	☐	☐
	Product:		

Rapid Intervention Connection	Meets	Does Not Meet	Exception
• The SCBA shall incorporate a RIC/UAC fitting to be compliant with the 2007 edition of the NFPA 1981 Self-Contained Breathing Apparatus standard.	☐	☐	☐
• The RIC/UAC shall be an integral part of the high-pressure hose that attaches the cylinder valve to the first stage pressure reducer.	☐	☐	☐
• The RIC/UAC inlet connection shall be within 4" (4-inches) of the tip of the CGA threads of the cylinder valve.	☐	☐	☐
• 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.	☐	☐	☐
• The RIC/UAC shall have a check valve to prevent the loss of air when the high-pressure air source has been disconnected.	☐	☐	☐
	Product:		
Cylinder	Meets	Does Not Meet	Exception
• The cylinder threads shall be straight with an O-ring or quad-ring gasket type seal.	☐	☐	☐
• 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.	☐	☐	☐
• 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.	☐	☐	☐
• No adjustment shall be necessary during the life of the valve.	☐	☐	☐
• The cylinder valve shall be designed with a quick connect that delivers air directly to the first stage pressure reducing regulator.	☐	☐	☐
• The cylinder valve shall be offered with a CGA 346 or CGA 347 fitting for the purposes of filling the cylinder only.	☐	☐	☐
• The fill fitting shall have a check valve to prevent flow from the cylinder.	☐	☐	☐
• 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.	☐	☐	☐
• The dust cover shall be retained to the cylinder valve.	☐	☐	☐
• 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.	☐	☐	☐
• Each cylinder and valve assembly shall be equipped with a hanger bracket for positive locking attachment of the assembly to the backframe.	☐	☐	☐

• The SCBA shall maintain all NIOSH and NFPA standards with any of the following types of cylinders listed as provided by the SCBA manufacturer.	☐	☐	☐
Aluminum			
• The cylinder shall be manufactured in accordance with DOT specifications and meet the Transport Canada requirements with a working pressure of 2216 psig.	☐	☐	☐
• The cylinder shall be made of an aluminum alloy.	☐	☐	☐
• The cylinder shall be available in a 30-minute duration based on the NIOSH breathing rate of 40 liters per minute (lpm).	☐	☐	☐
Carbon-Wrapped			
• 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.	☐	☐	☐
• 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.	☐	☐	☐
• 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).	☐	☐	☐
	Product:		
Warranty	Meets	Does Not Meet	Exception
• The unit shall be covered by a warranty providing protection against defects in materials or workmanship.	☐	☐	☐
• This warranty shall be for a period of 10 years on the SCBA, except for the pressure reducer, which shall be covered for 15 years.	☐	☐	☐
• Electronic components shall be warranted for three years.	☐	☐	☐
Optional Components	Product:		
Personal Alert Safety System	Meets	Does Not Meet	Exception
• Operation of this distress alarm shall be initiated with the opening of the valve of an SCBA charged cylinder.	☐	☐	☐
• The system shall incorporate dual visual and audible alarms, which shall be activated in a pre-alarm mode when the system remains motionless for approximately 20 seconds.	☐	☐	☐
• The Pre-alarm signal shall be in a frequency range of 1 kHz to 2 kHz and consist of two primary frequencies, the sound pressure level shall ramp up in two distinct	☐	☐	☐

steps from 60 to >100 dBA.			
• A full alarm shall be activated in the event the system remains motionless for approximately 30 seconds along with a 500 Hz audible signal.	☐	☐	☐
• At full alarm, the sound pressure level shall be >95 dBA.	☐	☐	☐
• The Alarm signal shall be in a frequency range of 1 kHz to 4 kHz and consist of three primary frequencies.	☐	☐	☐
• The system's LED signals shall be located on a control console assembly mounted on the user's right shoulder strap.	☐	☐	☐
• The system shall have a visual LED indicator to check the battery condition while the system is not in use.	☐	☐	☐
• The PASS device shall contain two components: a Control Console and a Sensor Module.	☐	☐	☐
• The control console assembly shall contain push buttons for manual operation of the distress alarm.	☐	☐	☐
• A yellow color-coded push button shall permit system re-set.	☐	☐	☐
• A red color-coded push button shall permit manual activation of the full alarm mode.	☐	☐	☐
• Both push buttons shall be designed to minimize accidental activation.	☐	☐	☐
• 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-alert mode.	☐	☐	☐
• 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.	☐	☐	☐
• The sensor module shall contain dual sound emitters for the audible alarm and dual visual "buddy" indicators.	☐	☐	☐
• The sensor module shall operate on six "AA" batteries.	☐	☐	☐
• The battery life of the SCBA with PASS only shall be no less than 200 hours.	☐	☐	☐

	Product:		
Personal Alert Safety System with Accountability	Meets	Does Not Meet	Exception
• The system shall consist of the following components: Control Console, Sensor Module, Base Station and an optional Scott Pak-Tracker™ Hand-Held Receiver.	☐	☐	☐
Control Console			
• The Control Console shall be located on the user's right shoulder strap.			
• The Control Console shall contain an integral edge lit mechanical pressure gauge that is automatically turned on by opening the cylinder valve.	☐	☐	☐
• The Control Console assembly shall be equipped with three color coded buttons: a yellow color-coded push button for system re-set; a red color-coded push button for manual activation of the full alarm mode; and a blue button for activation of the withdraw mode.	☐	☐	☐
• The push buttons shall be designed to minimize accidental activation.	☐	☐	☐
• The Control 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 and range icon.	☐	☐	☐
• The Control Console shall also include icons to indicate Range Status, Evacuation, Withdraw (self-evacuation) and when the system is ready to receive the user's ID through an RFID card.	☐	☐	☐
• It shall also contain a photo sensing diode to dim and brighten the HUD as the environment changes.	☐	☐	☐
• The console shall transmit user status information at a frequency of 2.4 GhZ on a self-healing mobile mesh network system that when deployed enables each SEMS II console to be a repeater.	☐	☐	☐
• The system will transmit the user's name, pressure; PASS Alarms, PASS acknowledgement, evacuation status, evacuation acknowledgement, Withdraw, Withdraw acknowledgment.	☐	☐	☐
Sensor Module			
• 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.	☐	☐	☐
• The sensor module shall contain dual sound emitters for the audible alarm and dual visual "buddy" indicators.	☐	☐	☐
• The sensor module shall operate on six "AA" batteries that are located in the Sensor Module Assembly.	☐	☐	☐
• The battery life of the SCBA with SEMS II shall be no less than 70 hours.	☐	☐	☐

• The visual indicators on the backframe mounted sensor module shall flash green during normal operation.	☐	☐	☐
• The visual indicators shall flash red 1) when the device is in pre-alert; 2) when the device is in full-alert; and 3) when the SCBA has reached ¼-bottle pressure.	☐	☐	☐
• The system shall feature a "hands-free" pre-alarm re-set capability that may be activated by means of a slight movement of the SCBA when the system is in a pre-alert mode.	☐	☐	☐
• The Pre-alarm signal shall be in a frequency range of 1 kHz to 2 kHz when the user remains motionless for approximately 20 seconds and consist of two primary frequencies at 60 dBA.	☐	☐	☐
• The full PASS alarm signal shall be in a frequency range of 1 kHz to 4 kHz when the user remains motionless for approximately 30 seconds after the pre-alarm and the sound pressure level shall be greater than 95 dBA at full alarm consisting of three primary frequencies.	☐	☐	☐
• The sensor module shall contain a secondary component that will transmit a signal when the unit is in "firefighter down" alarm. This signal shall be capable of being received by a separate hand-held receiver.	☐	☐	☐
	Product:		
Personal Alert Safety System with Location Finder	Meets	Does Not Meet	Exception
• Operation of this distress alarm shall be initiated with the opening of the valve of an SCBA charged cylinder.	☐	☐	☐
• The system shall incorporate dual visual and audible alarms, which shall be activated in a pre-alarm mode when the system remains motionless for approximately 20 seconds.	☐	☐	☐
• The Pre-alarm signal shall be in a frequency range of 1 kHz to 2 kHz and consist of two primary frequencies, the sound pressure level shall ramp up in two distinct steps from 60 to >100 dBA.	☐	☐	☐
• A full alarm shall be activated in the event the system remains motionless for approximately 30 seconds along with a 500 Hz audible signal.	☐	☐	☐
• At full alarm, the sound pressure level shall be >95 dBA.	☐	☐	☐
• At full alarm, the device shall send a low frequency signal that will be received by a separate hand-held receiver.	☐	☐	☐
• The Alarm signal shall be in a frequency range of 1 kHz to 4 kHz and consist of three primary frequencies.	☐	☐	☐
• Visual signals shall consist of a green flashing LED when the system is in operation and red flashing LEDs to indicate pre-alarm mode, full alarm mode and a low	☐	☐	☐

battery condition.			
• The system's LED signals shall be located on a control console assembly mounted on the user's right shoulder strap.	☐	☐	☐
• The system shall have a visual LED indicator to check the battery condition while the system is not in use.	☐	☐	☐
• The PASS device shall contain two components: a Control Console and a Sensor Module.	☐	☐	☐
• The control console assembly shall contain push buttons for manual operation of the distress alarm.	☐	☐	☐
• A yellow color-coded push button shall permit system re-set.	☐	☐	☐
• A red color-coded push button shall permit manual activation of the full alarm mode.	☐	☐	☐
• Both push buttons shall be designed to minimize accidental activation.	☐	☐	☐
• 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-alert mode.	☐	☐	☐
• 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.	☐	☐	☐
• The sensor module shall contain dual sound emitters for the audible alarm and dual visual "buddy" indicators.	☐	☐	☐
• The sensor module shall operate on six "AA" batteries.	☐	☐	☐
• The battery life of the SCBA with PASS only shall be no less than 200 hours.	☐	☐	☐
	Product:		
Emergency Breathing Support System "Buddy Breathing"	Meets	Does Not Meet	Exception
• An optional Dual Emergency Breathing Support System (EBSS) shall have one of each of the following requirements; (1) a manifold with one each of a female socket and 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.			
• The Dual EBSS system shall be on the wearer's left side and shall be capable of allowing for six feet of hose between like systems.	☐	☐	☐
• The manifold shall be made of aluminum and be anodized black.	☐	☐	☐
• The female socket and male plug shall have spacing, no less than 15° off-center.	☐	☐	☐
• The female socket shall have a double action to disengage, noted as a "push-in/pull-back".	☐	☐	☐
• The female socket shall have an internal check valve.	☐	☐	☐
• The male plug shall have an external check valve.	☐	☐	☐
• The hose shall be made of high temperature rubber capable of sustaining a maximum 250 psig of pressure.	☐	☐	☐
• The containment system shall include a pouch and shall be made of para-aramid materials and shall be capable of storing 36" of hose.	☐	☐	☐
• The pouch shall be attached to the SCBA by pull-the-dot fasteners.	☐	☐	☐
	Product:		
Extended Duration Airline System	Meets	Does Not Meet	Exception
• An optional manifold shall also have provision for connection of an airline supply for extended duration use while reserving the cylinder supply for egress.	☐	☐	☐
• The air supply hose length shall be up to 300 feet and require an inlet pressure range of 60 to 115 psig, depending on the length of supply hose used.	☐	☐	☐
• The check valve within the outlet manifold shall prevent the external release of cylinder air in the event the air supply is either not used or disconnected.	☐	☐	☐
• Switching from airline supply to cylinder supply shall be accomplished manually by the user by opening the cylinder valve to prevent inadvertent use of the cylinder supply without the user's knowledge.	☐	☐	☐

	Product:		
Integrated Self Rescue Device I	Meets	Does Not Meet	Exception
• The complete system shall be capable of a 3,034 lb. static load, exceeding the NFPA 300lb requirement.	☐	☐	☐
• The assembly shall consist of the following components: waist belt, life safety rope, fall descent device and anchor connector.	☐	☐	☐
• The belt assembly shall be available as a one length to fit waists 28-58 inches.	☐	☐	☐
• The belt shall be made of Kevlar with yellow center marker with adjustable D-ring.	☐	☐	☐
• The outer sleeve shall be made of FHR Advance material.	☐	☐	☐
• The life safety rope shall be available in two Kevlar webbing lengths, 50 ft. or 75 ft. with an anchor end double sewn for life safety and a 2" steel ring single stitched to tail end for emergency stop.	☐	☐	☐
• The Kevlar webbing shall be rated at a 5,000 lbs static load.	☐	☐	☐
• The system shall incorporate a Fire A/L Auto locking descent device for descending in an emergency egress situation.	☐	☐	☐
• The system shall include a Crosby 360 hook.	☐	☐	☐
	Product:		
Integrated Self Rescue Device II	Meets	Does Not Meet	Exception
• The complete system shall be capable of a 3,034 lb. static load, exceeding the NFPA 300 lb. requirement.	☐	☐	☐
• The assembly shall consist of the following components: waist belt, life safety rope, fall descent device and anchor connector.	☐	☐	☐
• The waist belt shall be available in three waist belt lengths, to fit waist sizes 28-34 inches, 32-42 inches or 42-52 inches.	☐	☐	☐
• The belt shall be made of Kevlar with integrated gear loop and inverted buckle.	☐	☐	☐
• As an option, the belt shall include a positioning ring and axe loop.	☐	☐	☐
• As an option, the belt shall include a multi-use strap and pouch assembly.	☐	☐	☐
• As a safety feature, the belt assembly shall be detachable to enable user to remain on air after descent.	☐	☐	☐
• The life safety rope shall be available in two 7.5mm escape rope lengths, 50 ft. and 75 ft.	☐	☐	☐

• The escape rope shall be rated at a 4,000 lb static load.	☐	☐	☐
• The rope assembly shall be available as a replacement part.	☐	☐	☐
• The system shall incorporate an F4 descender with single brake for descending in an emergency egress situation.	☐	☐	☐
• The system shall include a Crosby 360 hook.	☐	☐	☐
	Product:		
Electronic Voice Amplifier	Meets	Does Not Meet	Exception
• The respirator shall have an optional facepiece-mounted voice amplification device to electronically project the user's voice.	☐	☐	☐
• The device shall weigh no more than 5.6 ounces 161 (grams) and its size shall not exceed the following dimensions: length: 3.50 in.; (8.89 cm); width: 2.0 in. (5.08 cm); depth (extension from voicemitter): 1.75 inches (4.44 cm).	☐	☐	☐
• The voice amplification device shall be mounted to the facepiece by means of a bracket that is secured around the voicemitter of the facepiece.	☐	☐	☐
• The device shall contain a bayonet-style mounting adapter that enables the user to insert the voice amplifier into the bracket and secure it with a quarter-turn counterclockwise when it shall lock into place.	☐	☐	☐
• The device shall contain a thumb latch to permit removal when it is pressed and the device is rotated a quarter-turn clockwise.	☐	☐	☐
• The device shall contain a momentary on/off switch with a tactile indication and audible click when depressed.	☐	☐	☐
• The switch shall be covered with a sheath made of a silicone material. The device shall contain an LED which illuminates green when the device is activated and flashes once per second when a low battery condition (approximately 2 hours of battery life remaining) is present. The lED shall be visible to the user while wearing a facepiece.	☐	☐	☐
• The device shall contain an automatic shut down mechanism that deactivates the voice amplifier approximately 20 minutes after last use.	☐	☐	☐
• Designed to conserve battery life when a user forgets to turn off the voice amplifier, the voice amplifier shall be reactivated after shut down by pressing the on/off	☐	☐	☐

switch.			
• The device shall be powered by three AAA alkaline batteries, which shall permit up to 20 hours of continuous operation (based on 25% transmit; 75% non-transmit) with a fully- charged battery.	☐	☐	☐
• The batteries shall be contained in a gasketed compartment secured in place by means of a fastener. The door of the battery compartment shall be user-replaceable.	☐	☐	☐
• The microphone shall be located on the surface of the bayonet mounting adapter and voice projection shall be facilitated by means of a circular gasket that seals the device to the communications mounting bracket.	☐	☐	☐
	Product:		
Electronic Voice Amplifier with Radio Interface	Meets	Does Not Meet	Exception
• The Electronic Amplifier / Radio Interface communication system shall consist of two components: Voice Amplifier / Radio Interface Unit and Communications Console.	☐	☐	☐
• Both components shall contain Bluetooth® componentry operating at a 2.4 GHz frequency and capable of providing a wireless link to transmit between the voice amplifier/RI and the communications console.	☐	☐	☐
• Both units shall be capable of being used in tandem or independently, depending on the functionality required by the user.	☐	☐	☐
Voice Amplifier / Radio Interface Unit			
• The voice amplifier/RI shall contain a bayonet-style mounting feature for attachment to a communications bracket on the facepiece and a thumb latch that is depressed for detaching the unit.	☐	☐	☐
• The mounting feature shall house an internal microphone for transmitting the user's voice.	☐	☐	☐
• The unit shall contain a 40mm speaker for mechanically amplifying the user's voice for local communications.	☐	☐	☐
• The unit shall also contain a speaker located near the user's ear for receiving incoming remote communications and a battery compartment that is capable of housing three AAA alkaline batteries contained in a battery sled.	☐	☐	☐
• The unit shall contain an on/off switch featuring tactile activation accompanied by an audible click when pressed.	☐	☐	☐
• The unit shall contain a green LED that illuminates when the unit is activated and flashes approximately one time per second when approximately 10% of battery power remains.	☐	☐	☐

• The voice amplifier/RI shall weigh 4.9 ounces and its size shall not exceed the following measurements: Length = 4.9 in. (12.06 cm); Width = 2.25 in. (5.7 cm); Depth (extension from voicemitter) = 1.75 inches (4.44 cm).	☐	☐	☐
• The voice amplifier/RI shall contain a keyed mating terminal for the purpose of easily establishing a wireless link to the separate communications console.	☐	☐	☐
• The voice amplifier/RI shall contain an LED which shall flash when mating is activated.	☐	☐	☐
Communications Console			
• The communications console shall house Bluetooth componentry necessary for easily establishing a wireless link to the voice amplifier/RI and it shall contain the electrical componentry necessary to enable its use as a lapel-style microphone accessory for connection to a two-way radio.	☐	☐	☐
• The lapel microphone functionality shall be supported by a 40 mm speaker to transmit incoming messages and a microphone for outgoing messages.	☐	☐	☐
• The lapel microphone functions shall be powered by drawing power from the battery of the attached two-way radio.	☐	☐	☐
• The communications console shall be connected to the two-way radio by a radio-specific coupling and a coiled cable.	☐	☐	☐
• The unit shall be equipped with an alligator-style fastener for attachment to a garment; an optional clothes-pin-style attachment shall also be available.	☐	☐	☐
• The communications console will incorporate a red emergency button designed to act as an extension of the radios emergency button.	☐	☐	☐
• When attached to a two way radio, the Console shall function as a lapel microphone when no batteries are installed.	☐	☐	☐
• The communications console shall contain two mating terminals for the purpose of establishing a wireless link between it and a voice amplifier/RI unit.	☐	☐	☐
• The unit shall contain an LED that flashes green when a link is established by momentarily touching the mating terminals on the communications console to those on the voice amplifier/RI.	☐	☐	☐
• The Bluetooth component contained in the communications console shall be powered by three AAA alkaline batteries housed in a separate battery compartment on the back of the unit.	☐	☐	☐
• The door to the battery compartment shall be gasketed and shall be user-replaceable.	☐	☐	☐
• The communications console shall be equipped with a port for attaching a paddle-style press-to-talk accessory for use in hazmat operations.	☐	☐	☐

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