Standards for Personal Protective Gear for First Responders

Standards for Radiation and Nuclear Detection Equipment

ATTACHMENT 2- sheet 2		Manufacturer	Part number	Brief Description	Meets NIOSH Chemical, Biological, Radiological and Nuclear (CBRN) Standard for Open-Circuit Self-Contained Breathing Apparatus (December 2001)	Meets NIOSH Standard for Chemical, Biological, Radiological, and Nuclear (CBRN) Full Face piece Air Purifying Respirator (APR).	Meets NIOSH Standard for Chemical, Biological, Radiological, and Nuclear (CBRN) Air-Purifying Escape Respirator and CBRN Self-Contained Escape Respirator.	Meets NFPA 1951, Standard on Protective Ensemble for USAR Operations.	Meets NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services.	Meets NFPA 1991, Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies.	Meets NFPA 1994, Standard on Protective Ensembles for Chemical/Biological Terrorism Incidents.	Meets NFPA 1999, Standard on Protective Clothing for Emergency Medical Operations.	Meets ANSI N42.32: Performance Criteria for Alarming Personal Radiation Detectors.	Meets ANSI N42.33: Radiation Detection Instrumentation	Meets ANSI N42.34: Performance Criteria for Hand-Held Instruments for the Detection and Identification of Radionuclides.	Meets ANSI N42.35: Evaluation and Performance of Radiation Detection Portal Monitors	Other Standard/ Certification	Other Standard/ Certification	Other Standard/ Certification
1. Personal Protective Equipment - Equipment worn to protect the individual from hazardous materials and contamination. Levels of protection vary and are divided into categories based on the degree of protection afforded. The following constitutes equipment intended for use in a chemical/biological threat environment:																				
Level A: Fully encapsulated, liquid and vapor protective ensemble selected when the highest level of skin, respiratory, and eye protection is required. The following constitutes Level A equipment for consideration:																				
1.1 Fully Encapsulated Liquid and Vapor Protecion Ensemble, reusable or disposable (tested and certified against CB threats)																				
add additional rows as needed-	1																			
	2																			
	3																			
1.2 Fully Encapsulated Training Suits																				
	1																			
	2																			
	3																			
1.3 Closed-Circuit Rebreather (minimum 2-hour supply, preferred), or open-circuit Self-Contained Breathing Apparatus (SCBA) or, when appropriate, Air-Line System with 15-minute minimum escape SCBA																				
	1	Wilcox Industries Corp.	20000G01	PATRIOT™ Land Based Hybrid Life Support System	TESTED BUT NO ESTABLISHED CRITERIA FOR HYBRID SYSTEMS	N/A	N/A	NOT TESTED	TESTED BUT NO ESTABLISHED CRITERIA FOR HYBRID SYSTEMS	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2	Wilcox Industries Corp.	20001G07	2nd Stage Regulator Diaphragm with HSF Cover	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3	Wilcox Industries Corp.	20001P05	2nd Stage Regulator Cover	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4	Wilcox Industries Corp.	20001P56	Filter Cover Extension Ring (Allows for a Variety of Filter Canisters)	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5	Wilcox Industries Corp.	20001P62	2nd Stage Regulator Retainer Ring	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6	Wilcox Industries Corp.	20003G01	Ditch System (Requires Optional Interface Plate)	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	7	Wilcox Industries Corp.	20003P05	Molle Modular Vest Interface Plate	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8	Wilcox Industries Corp.	20003P08	Universal Interface Plate	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	9	Wilcox Industries Corp.	20003P12	Lower Anchoring Plate Ditch with Two (2) Female Fast-Tac Connectors	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	10	Wilcox Industries Corp.	20004P04	Support Base with Shoulder Screw and Compression Spring Repair Kit	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	11	Wilcox Industries Corp.	20004P16	PATRIOT™ Electronic Pressure Sensor	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	12	Wilcox Industries Corp.	20010P04	Filter Cover	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	13	Wilcox Industries Corp.	20011G05	NATO Mask Adaptor for PATRIOT™ with Foil Cutter	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	14	Wilcox Industries Corp.	20011G06	Breathing Bag Hose Toolless Locking Ring Assembly	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	15	Wilcox Industries Corp.	21200G01	Universal Load Bearing Backpack System	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	16	Wilcox Industries Corp.	21200P06	Fire Retardant PATRIOT™ Protective Cover, Nomex - Black	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	17	Wilcox Industries Corp.	21200P09	PATRIOT™ Protective Cover, Cordura - White, Black, Tan, Cami (Specify Color)	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	18	Wilcox Industries Corp.	21300G01	Buddy System 2nd Stage Regulator with PATRIOT™ Interface	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	19	Wilcox Industries Corp.	22000G01	Mask Exhaust Valve Kit with Drink Tube Storage Port (M40 Mask)	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	20	Wilcox Industries Corp.	22100G01	Universal Decon Fitter System, Vacuum Packaged	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	21	Wilcox Industries Corp.	22101G01	Universal Decon Fitter Interface Only - (For Training Purposes)	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	22	Wilcox Industries Corp.	22102G01	Universal Decon Fitter Replacement Cartridge - (For Training Purposes)	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	23	Wilcox Industries Corp.	22200G01	Snorkel Pre-Filter Kit	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	24	Wilcox Industries Corp.	23100G01	Mask Exhaust Valve Kit with Drink Tube Storage Port (M45 Mask)	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	25	Wilcox Industries Corp.	23501G01	Top Cover Blank Assembly	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	26	Wilcox Industries Corp.	26700G01	Mask Exhaust Valve Kit with Drink Tube Storage Port (Avon Mask)	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	27	Wilcox Industries Corp.	27800G01	MultiRAE Air Sensor Module Wire Harness	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	28	Wilcox Industries Corp.	27900P01	MultiRAE Air Sensor Module Pouch - Black	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	29	Wilcox Industries Corp.	29200G01	Mask Exhaust Valve Kit with Drink Tube Storage Port (Millennium Mask	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1.4 Spare Cylinders/Bottles for rebreathers or SCBA and service/repair kits																				
	1	Wilcox Industries Corp.	20000SP01	Operator Service Pack	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2	Wilcox Industries Corp.	20000SP01	Decon Service Pack	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3	Wilcox Industries Corp.	20000TK01	Operator Tool Kit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4	Wilcox Industries Corp.	20000TK03	Decon Tool Kit	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5	Wilcox Industries Corp.	20006G01	Large Volume Tank Assembly - Right	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6	Wilcox Industries Corp.	20007G01	Large Volume Tank Assembly - Left	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Standards for Personal Protective Gear for First Responders

Standards for Radiation and Nuclear Detection Equipment

ATTACHMENT 2- sheet 2		Manufacturer	Part number	Brief Description	Meets NIOSH Chemical, Biological, Radiological and Nuclear (CBRN) Standard for Open-Circuit Self-Contained Breathing Apparatus (December 2001)	Meets NIOSH Standard for Chemical, Biological, Radiological, and Nuclear (CBRN) Full Face piece Air Purifying Respirator (APR).	Meets NIOSH Standard for Chemical, Biological, Radiological, and Nuclear (CBRN) Air-Purifying Escape Respirator and CBRN Self-Contained Escape Respirator.	Meets NFPA 1951, Standard on Protective Ensemble for USAR Operations.	Meets NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services.	Meets NFPA 1991, Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies.	Meets NFPA 1994, Standard on Protective Ensembles for Chemical/Biological Terrorism Incidents.	Meets NFPA 1999, Standard on Protective Clothing for Emergency Medical Operations.	Meets ANSI N42.32: Performance Criteria for Alarming Personal Radiation Detectors.	Meets ANSI N42.33: Radiation Detection Instrumentation	Meets ANSI N42.34: Performance Criteria for Hand-Held Instruments for the Detection and Identification of Radionuclides.	Meets ANSI N42.35: Evaluation and Performance of Radiation Detection Portal Monitors	Other Standard/ Certification	Other Standard/ Certification	Other Standard/ Certification
	7	Wilcox Industries Corp.	20008G01	Low Profile Tank Assembly - Left	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	8	Wilcox Industries Corp.	20009G01	Low Profile Tank Assembly - Right	COMPONENT OF PATRIOT	N/A	N/A	NOT TESTED	COMPONENT OF PATRIOT	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1.5 Chemical Resistant Gloves, including thermal, as appropriate to hazard																				
	1																			
	2																			
	3																			
1.6 Personal Cooling System; Vest or Full Suit with support equipment needed for maintaining body core temperature within acceptable limits																				
	1	Wilcox Industries Corp.	13300G01	MED-ENG/Wilcox Tube Suit™ with Dripless Penetrator	N/A	N/A	N/A	NOT TESTED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	2	Wilcox Industries Corp.	18007P01	Battery Charger, Cooling Module System	N/A	N/A	N/A	NOT TESTED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	3	Wilcox Industries Corp.	21200P02	Cooling Module Quiver - Black	N/A	N/A	N/A	NOT TESTED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	4	Wilcox Industries Corp.	25800G01	WATERBOY™ Hydration Module (Requires Optional Cooling Module System	NOT TESTED	N/A	N/A	NOT TESTED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	5	Wilcox Industries Corp.	28900G01	Cooling Module System with Dripless Penetrator Breakaway Adaptor (Requires Optional WATERBOY™ Hydration Module	NOT TESTED	N/A	N/A	NOT TESTED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	6	Wilcox Industries Corp.	28911G01	Rechargeable Battery, Cooling Module System	N/A	N/A	N/A	NOT TESTED	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	1																			
	2																			
	3																			
1B.3 Closed Circuit Rebreather (minimum 2-hour supply, preferred), open-circuit SCBA, or when appropriate, Air-Line System with 15-minute minimum escape SCBA																				
	1																			
	2																			
	3																			
1B.4 Spare Cylinders/Bottles for rebreathers or SCBA and service/repair kits																				
	1																			
	2																			
	3																			
1B.5 Chemical Resistant Gloves, including thermal, as appropriate to hazard																				
	1																			
	2																			
	3																			
1B.6 Personal Cooling System; Vest or Full Suit with support equipment needed for maintaining body core temperature within acceptable limits																				
	1																			
	2																			
	3																			
1B.7 Hardhat/helmet																				
	1																			
	2																			
	3																			
1B.8 Chemical/Biological Protective Undergarment																				
	1																			
	2																			
	3																			
1B.9 Inner Gloves																				
	1																			
	2																			
	3																			
1B.10 Approved Chemical Resistant Tape																				
	1																			
	2																			
	3																			
1B.11 Chemical Resistant Boots, Steel or Fiberglass Toe and Shank																				
	1																			
	2																			
	3																			
1B.12 Chemical Resistant Outer Booties																				
	1																			
	2																			
	3																			
Level C: Liquid splash resistant ensemble, with same level of skin protection of Level B, used when the concentration(s) and type(s) of airborne substances(s) are known and the criteria for using air-purifying respirators are met. The following constitute Level C equipment and should be considered for use:																				
1C.1 Liquid Chemical Splash Resistant Clothing (permeable or non-permeable)																				
	1																			
	2																			
	3																			
1C.2 Liquid Chemical Splash Resistant Hood (permeable or non-permeable)																				
	1																			
	2																			
	3																			
1C.3 Tight-fitting, Full Face Piece, Negative Pressure Air Purifying Respirator with the appropriate cartridge(s) or canister(s) and P100 filter(s) for protection against toxic industrial chemicals, particulates, and military specific agents.																				
	1	**Global Secure Safety**	**CF60**	**CAREFLO with Flip Top Health Care hood, HEPA filtration only**															NIOSH Approved TC-21C-402											
	2	**Global Secure Safety**	**FR2**	**Tight-fitting, full facepiece, PAPR with combination multi gas filters**															NIOSH Approved TC-23C-2091											
	3	**Global Secure Safety**	**FR3**	**Butyl or Tychem Hood System PAPR combination multi gas filters**															NIOSH Approved TC-23C-2092											
1C.4 Tight-fitting, Full Facepiece, Powered Air Purifying Respirator (PAPR) with chemically resistant hood with appropriate cartridge(s) or canister(s) and high efficiency filter(s) for protection against toxic industrial chemicals, particulates, and military specific agents.																				
	1																			
	2																			
	3																			

					Standards for Personal Protective Gear for First Responders										Standards for Radiation and Nuclear Detection Equipment						
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1C.5 Closed-Circuit Rebreather (minimum 2-hour supply, preferred), open-circuit SCBA, or when appropriate, Air-Line System with 15-minute minimum escape SCBA																				
	1																			
	2																			
	3																			
1C.6 Spare cylinder/bottles for rebreathers or SCBA																				
	1																			
	2																			
	3																			
1C.7 SCBA Service and repair kits																				
	1																			
	2																			
	3																			
1C.8 Equipment or system batteries will include those that are rechargeable (e.g. NiCad) or non-rechargeable with extended shelf life (e.g. Lithium)																				
	1																			
	2																			
	3																			
1C.9 Chemical Resistant Gloves, including thermal, as appropriate to hazard																				
	1																			
	2																			
	3																			
1C.10 Personal Cooling System; Vest or Full Suit with support equipment																				
	1																			
	2																			
	3																			
1C.11 Hardhat																				
	1																			
	2																			
	3																			
1C.12 Inner Chemical/Biological Resistant Garment																				
	1																			
	2																			
	3																			
1C.13 Inner Gloves																				
	1																			
	2																			
	3																			
1C.14 Chemical Resistant Tape																				
	1																			
	2																			
	3																			
1C.15 Chemical Resistant Boots, Steel or Fiberglass Toe and Shank																				
	1																			
	2																			
	3																			
1C.16 Chemical Resistant Outer Booties																				
Level D: Selected when no respiratory protection and minimal skin protection is required, and the atmosphere contains no known hazard and work functions preclude splashes, immersion, or the potential for unexpected inhalation of, or contact with, hazardous levels of any chemicals.																				
1D.1 Escape mask for self-rescue																				
	1																			
	2																			
	3																			
2. Explosive Device Mitigation and Remediation - Equipment providing for the mitigation and remediation of explosive devices in a CBRNE environment																				
2.1 Bomb Search Protective Ensemble for Chemical/Biological Response																				
	1																			
	2																			
	3																			
2.2 Chemical/Biological Undergarment for Bomb Search Protective Ensemble																				
	1																			
	2																			
	3																			
2.3 Cooling Garments to manage heat stress																				
	1																			
	2																			
	3																			
2.4 Ballistic Threat Body Armor (not for riot suppression)																				
	1																			
	2																			
	3																			
2.5 Ballistic Threat Helmet (not for riot suppression)																				
	1																			
	2																			
	3																			
2.6 Blast and Ballistic Threat Eye Protection (not for riot suppression)																				
	1																			
	2																			
	3																			
2.7 Blast and Overpressure Threat Ear Protection (not for riot suppression)																				
	1																			
	2																			
	3																			
2.8 Fire Resistant Gloves																				
	1																			
	2																			
	3																			
2.9 Bomb blanket, Bomb Suppression Blanket, explosive devices blanket																				
	1																			
	2																			
	3																			
2.10 Dearmer/Disrupter																				
	1																			
	2																			
	3																			
2.11 Real Time X-Ray Unit; Portable X-Ray Unit																				
	1																			
	2																			
	3																			
2.12 CBRNE Compatible Total Containment Vessel (TCV)																				
	1																			
	2																			
	3																			
2.13 CBRNE Upgrades for Existing TCV																				
	1																			
	2																			
	3																			
2.14 Robot; Robot Upgrades																				
	1																			
	2																			

					Standards for Personal Protective Gear for First Responders										Standards for Radiation and Nuclear Detection Equipment						
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	3																				
2.15 Fiber Optic Kit (inspection or viewing)																					
	1																				
	2																				
	3																				
2.16 Tents, standard or air inflatable for chem/bio protection																					
	1																				
	2																				
	3																				
2.17 Inspection mirrors																					
	1																				
	2																				
	3																				
2.18 Ion Track Explosive Detector																					
	1																				
	2																				
	3																				
3. **CBRNE Search and Rescue Equipment** - Equipment providing a technical search and rescue capability for a CBRNE environment:																					
3.1 Hydraulic tools; hydraulic power unit																					
	1																				
	2																				
	3																				
3.2 Listening devices; hearing protection																					
	1																				
	2																				
	3																				
3.3 Search cameras (including thermal and infrared imaging)																					
	1																				
	2																				
	3																				
3.4 Breaking devices (including spreaders, saws, and hammers)																					
	1																				
	2																				
	3																				
3.5 Lifting devices (including air bag systems, hydraulic rams, jacks, ropes, and block and tackle)																					
	1																				
	2																				
	3																				
3.6 Blocking and bracing materials																					
	1																				
	2																				
	3																				
3.7 Evacuation stretchers, baskets, and chairs (for evacuation of disabled personnel)																					
	1																				
	2																				
	3																				
3.8 Ventilation fans																					
	1																				
	2																				
	3																				
3.9 Rescue ropes and ladders (including rescue pulley systems)																					
	1																				
	2																				
	3																				
3.10 Confined Space Kits (such as MSA Watchman)																					
	1																				
	2																				
	3																				
3.11 Underwater equipment including: lights, metal detectors, communication and video units, lift bags, water rescue helmets, ice hooks, buoyancy compensator, and underwater scooter/DPV																					
	1																				
	2																				
	3																				
3.12 SCUBA equipment including: exposure and pressurized suites, face masks, regulators, air tanks, and pony bottles.																					
4. **Interoperable Communications Equipment** - Equipment and systems providing connectivity and electrical interoperability between local and interagency organizations to coordinate CBRNE response operations. When utilizing ODP program funds in the category of Interoperable Communications Equipment to build, upgrade, enhance, or replace communications systems, grantees and sub-grantees should develop a comprehensive interoperable communications plan																					
4.1 Land Mobile, Two-Way In-Suit Communications (secure, hands free, fully duplex, optional), including air-to-ground capability (as required)																					
	1																				
	2																				
	3																				
4.2 Personnel Alert Safety System (PASS) - (location and physiological monitoring systems optional)																					
	1																				
	2																				
	3																				
4.3 Personnel Accountability Systems																					
	1																				
	2																				
	3																				
4.4 Portable Meteorological Station (monitors temperature, wind speed, wind direction and barometric pressure at a minimum)																					
5. **Detection Equipment** - Equipment to sample, detect, identify, quantify, and monitor for chemical, biological, radiological/nuclear, and explosive agents throughout designated areas or at specific points, including equipment necessary to enhance laboratory detection capabilities:																					
Chemical																					
5.1 M-8 Detection Paper for chemical agent identification																					
	1																				
	2																				
	3																				
5.2 M-9 Detection Paper (roll) for chemical agent (military grade) detection																					
	1																				
	2																				
	3																				
5.3 M-256 Detection Kit for Chemical Agent (weapons grade—blister: CX/HD/L; blood: AC/CK; and nerve: GB/VX) detection																					

					Standards for Personal Protective Gear for First Responders								Standards for Radiation and Nuclear Detection Equipment						
ATTACHMENT 2- sheet 2		**Manufacturer**	**Part number**	**Brief Description**	**Meets NIOSH Chemical, Biological, Radiological and Nuclear (CBRN) Standard for Open-Circuit Self-Contained Breathing Apparatus (December 2001)**	**Meets NIOSH Standard for Chemical, Biological, Radiological, and Nuclear (CBRN) Full Face piece Air Purifying Respirator (APR).**	**Meets NIOSH Standard for Chemical, Biological, Radiological, and Nuclear (CBRN) Air-Purifying Escape Respirator and CBRN Self-Contained Escape Respirator.**	**Meets NFPA 1951, Standard on Protective Ensemble for USAR Operations.**	**Meets NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services.**	**Meets NFPA 1991, Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies.**	**Meets NFPA 1994, Standard on Protective Ensembles for Chemical/Biological Terrorism Incidents.**	**Meets NFPA 1999, Standard on Protective Clothing for Emergency Medical Operations.**	**Meets ANSI N42.32: Performance Criteria for Alarming Personal Radiation Detectors.**	**Meets ANSI N42.33: Radiation Detection Instrumentation**	**Meets ANSI N42.34: Performance Criteria for Hand-Held Instruments for the Detection and Identification of Radionuclides.**	**Meets ANSI N42.35: Evaluation and Performance of Radiation Detection Portal Monitors**	Other Standard/ Certification	Other Standard/ Certification	Other Standard/ Certification
	1																		
	2																		
	3																		
5.4 M-256 Training Kit																			
	1																		
	2																		
	3																		
5.5 M-18 Series Chemical Agent Detector Kit for surface/vapor chemical agent analysis																			
	1																		
	2																		
	3																		
5.6 Hazard Categorizing (HAZCAT) Kits																			
	1																		
	2																		
	3																		
5.7 Photo-Ionization Detector (PID)																			
	1																		
	2																		
	3																		
5.8 Flame Ionization Detector (FID)																			
	1																		
	2																		
	3																		
5.9 Surface Acoustic Wave Detector																			
	1																		
	2																		
	3																		
5.10 Gas Chromatograph/Mass Spectrometer (GC/MS)																			
	1																		
	2																		
	3																		
5.11 Ion Mobility Spectrometry																			
	1																		
	2																		
	3																		
5.12 Stand-Off Chemical Detector																			
	1																		
	2																		
	3																		
5.13 M-272 Chemical Agent Water Test Kit																			
M-272 is an older design United States Army Test kit from the 1960's & 1970's. The Eclox quoted is not a direct erplacement for the M-272. The unit is supplied to thethree services within the UK Ministry of Defence.	1	**Severn Trent Water Purification, Inc.**	**90-9004 & 10-9003**	**Eclox Rapid Response Water Test System and Consumables Pack 1, including: Cuvette and 1000µl Pipette Tip Set (50 tests), 100µl Pipette Tip Set (50 tests), Chemiluminescence Reagent Kit (50 tests), Arsenic Test Kit (50 tests), Pesticide Test Kit (50 tests), Chlorine Test Tablets (50 tests), pH 6.9 Standard, Color and TDS Standard, Test Record Sheets (60) and Waste Bag (2) and Bottle.**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**Meets UK Military Standards; Def Stan 08-41 Chemical hardness, Def Stan 07-55 Robustness, Def Stan 00-35 Environmental conditions**
	2																		
	3																		
5.14 Colormetric Tube/Chip Kit specific for TICs and CBRNE applications																			
	1																		
	2																		
	3																		
5.15 Multi gas Meter with minimum of O2 and LEL																			
	1																		
	2																		
	3																		
5.16 Leak Detectors (soap solution, ammonium hydroxide, etc)																			
	1																		
	2																		
	3																		
5.17 pH Paper/pH Meter																			
	1																		
	2																		
	3																		
5.18 Waste Water Classifier Kit																			
	1																		
	2																		
	3																		
5.19 Oxidizing Paper																			
	1																		
	2																		
	3																		
5.20 Protective cases for sensitive detection equipment storage and transport																			
Biological																			
5.21 Point Detection Systems/Kits (immunoassay or other technology)																			
	1																		
	2																		
	3																		
Radiological/Nuclear																			
5.22 Radiation detection equipment (electronic or other technology that detects alpha, beta, gamma, and high intensity gamma)																			
	1																		
	2																		
	3																		
5.23 Personal Dosimeter																			
	1																		
	2																		
	3																		
5.24 Scintillation Fluid (radiological) pre-packaged																			
	1																		
	2																		
	3																		
5.25 Radiation monitors																			
	1																		
	2																		
	3																		
6. <u>Decontamination Equipment</u> - Equipment and material used to clean, remediate, remove or mitigate chemical and biological contamination:																			
Chemical																			
6.1 Decontamination system for individual and mass application with environmental controls, water heating system, showers, lighting, and transportation (trailer)																			
	1																		
	2																		
	3																		
6.2 Decon Litters/roller systems																			
	1																		
	2																		

					Standards for Personal Protective Gear for First Responders										Standards for Radiation and Nuclear Detection Equipment						
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	3																				
6.3 Extraction Litters, rollable																					
	1																				
	2																				
	3																				
6.4 Runoff Containment Bladder(s), decontamination shower waste collection with intrinsically safe evacuation pumps, hoses, connectors, scrub brushes, nozzles																					
	1																				
	2																				
	3																				
6.5 Spill Containment Devices																					
	1																				
	2																				
	3																				
6.6 Overpak Drums																					
	1																				
	2																				
	3																				
6.7 Non-Transparent Cadaver Bags (CDC standard)																					
	1																				
	2																				
	3																				
6.8 Hand Carts																					
	1																				
	2																				
	3																				
6.9 Waste water classification kits/strips																					
	1																				
	2																				
	3																				
Biological																					
6.10 HEPA (High Efficiency Particulate Air) Vacuum for dry decontamination																					
7. **Physical Security Enhancement Equipment** - Equipment to enhance the physical security of critical infrastructure.																					
Surveillance, Warning, Access/Intrusion Control																					
Ground																					
7.1 X-Ray Units																					
	1																				
	2																				
	3																				
7.2 Magnetometers																					
	1																				
	2																				
	3																				
Sensors – Agent/Explosives Detection																					
7.3 Chemical: Active/Passive; Mobile/Fixed; Handheld																					
	1																				
	2																				
	3																				
7.4 Biological: Active/Passive; Mobile/Fixed; Handheld																					
	1																				
	2																				
	3																				
7.5 Radiological																					
	1																				
	2																				
	3																				
7.6 Nuclear																					
	1																				
	2																				
	3																				
7.7 Ground/Wall Penetrating Radar																					
	1																				
	2																				
	3																				
Inspection/Detection Systems																					
7.8 Vehicle and Cargo Inspection System – Gamma-ray																					
	1																				
	2																				
	3																				
7.9 Mobile Search and Inspection System – X-ray																					
	1																				
	2																				
	3																				
7.10 Non-Invasive Radiological/Chem/Bio/Explosives System – Pulsed Neutron Activation																					
	1																				
	2																				
	3																				
Explosion Protection																					
7.11 Blast/Shock/Impact Resistant Systems																					
	1																				
	2																				
	3																				
7.12 Protective Clothing																					
	1																				
	2																				
	3																				
7.13 Column and Surface Wraps; Breakage/Shatter Resistant Glass; Window Wraps																					
	1																				
	2																				
	3																				
7.14 Robotic Disarm/Disable Systems																					
	1																				
	2																				
	3																				
Support Equipment for Continuation of Critical Infrastructure Operations																					
7.15 Self-monitoring sensors and alarms																					
	1																				
	2																				
	3																				

Standards for Personal Protective Gear for First Responders

Standards for Radiation and Nuclear Detection Equipment

ATTACHMENT 2- sheet 2		Manufacturer	Part number	Brief Description	Meets NIOSH Chemical, Biological, Radiological and Nuclear (CBRN) Standard for Open-Circuit Self-Contained Breathing Apparatus (December 2001)	Meets NIOSH Standard for Chemical, Biological, Radiological, and Nuclear (CBRN) Full Face piece Air Purifying Respirator (APR).	Meets NIOSH Standard for Chemical, Biological, Radiological, and Nuclear (CBRN) Air-Purifying Escape Respirator and CBRN Self-Contained Escape Respirator.	Meets NFPA 1951, Standard on Protective Ensemble for USAR Operations.	Meets NFPA 1981, Standard on Open-Circuit Self-Contained Breathing Apparatus for Fire and Emergency Services.	Meets NFPA 1991, Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies.	Meets NFPA 1994, Standard on Protective Ensembles for Chemical/Biological Terrorism Incidents.	Meets NFPA 1999, Standard on Protective Clothing for Emergency Medical Operations.	Meets ANSI N42.32: Performance Criteria for Alarming Personal Radiation Detectors.	Meets ANSI N42.33: Radiation Detection Instrumentation	Meets ANSI N42.34: Performance Criteria for Hand-Held Instruments for the Detection and Identification of Radionuclides.	Meets ANSI N42.35: Evaluation and Performance of Radiation Detection Portal Monitors	Other Standard/ Certification	Other Standard/ Certification	Other Standard/ Certification
8. Terrorism Incident Prevention Equipment (Terrorism Early Warning, Prevention, and Deterrence Equipment and Technologies) - State and local emergency preparedness, prevention and response agencies will increasingly rely on the integration of emerging technologies and equipment to improve jurisdictional capabilities to deter and prevent terrorist incidents. This includes, but is not limited to, equipment and associated components that enhance a jurisdiction's ability to disseminate advanced warning information to prevent a terrorist incident or disrupt a terrorist's ability to carry out the event, including information sharing, threat recognition, and public/private sector collaboration.																		
8.1 Law enforcement surveillance equipment																			
	1																		
	2																		
	3																		
9. CBRNE Logistical Support Equipment - Logistical support gear used to store and transport the equipment to the CBRNE incident site and handle it once onsite. This category also includes small support equipment including intrinsically safe (non-sparking) hand tools required to support a variety of tasks and to maintain equipment purchased under the grant, as well as general support equipment intended to support the CBRNE incident response. The State should also consider procurement of software to assist in tracking and maintaining statewide equipment assets.																			
9.1 Equipment trailers																			
	1																		
	2																		
	3																		
9.2 Staging tents and portable shelter units																			
	1																		
	2																		
	3																		
9.3 Weather-tight containers for equipment storage																			
	1																		
	2																		
	3																		
9.4 Software for equipment tracking and inventory																			
	1																		
	2																		
	3																		
9.5 Handheld computers for Emergency Response applications																			
	1																		
	2																		
	3																		
9.6 Small hand tools																			
	1																		
	2																		
	3																		
9.7 Binoculars, head lamps, range finders and spotting scopes (not for weapons use)																			
	1																		
	2																		
	3																		
9.8 Night vision goggles																			
	1																		
	2																		
	3																		
9.10 Light and heavy duty generators to operate search and rescue equipment, light sets, water pumps for decontamination sets																			
	1																		
	2																		
	3																		
9.11 Light sets for nighttime operations/security (including emergency light poles)																			
	1																		
	2																		
	3																		
9.12 Electrical current detectors and DC to AC inverter equipment																			
	1																		
	2																		
	3																		
9.13 Equipment harnesses, belts, and vests (including incident command vests)																			
	1																		
	2																		
	3																		
9.14 Isolation containers for suspected chemical/biological samples																			
	1																		
	2																		
	3																		
9.15 Bull horns and other PA systems																			
	1																		
	2																		
	3																		
9.16 Traffic and crowd control devices (traffic and reflective cones, arrow and zone signs, portable barriers)																			
	1																		
	2																		
	3																		
9.17 Water pumps for decontamination systems																			
	1																		
	2																		
	3																		
9.18 Bar code scanner/reader for equipment inventory control																			
	1																		
	2																		
	3																		
9.19 Badging system equipment and supplies																			
	1																		
	2																		
	3																		
9.20 Cascade system for refilling SCBA oxygen bottles																			
	1																		
	2																		
	3																		
9.21 SCBA fit test equipment and software to conduct flow testing																			
	1																		
	2																		
	3																		
9.22 Testing equipment for fully encapsulated suits and respirators																			
	1																		
	2																		

					Standards for Personal Protective Gear for First Responders										Standards for Radiation and Nuclear Detection Equipment						
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	3																				
9.23 Cooling/heating/ventilation fans (personnel and decontamination tent use)																					
	1																				
	2																				
	3																				
9.24 HAZMAT gear bag/box																					
10. Medical Supplies - Medical supplies required for response to a CBRNE incident at the advanced life support level. Grantees are responsible for replenishing items after shelf-life expiration date(s).																					
11. CBRNE Reference Materials - Reference materials and software designed to assist emergency preparedness and response personnel in preparing for and responding to a CBRNE incident. This includes but is not limited to the following:																					
11.1 NFPA Guide to hazardous materials																					
	1																				
	2																				
	3																				
11.2 NIOSH Hazardous Materials Pocket Guide																					
	1																				
	2																				
	3																				
11.3 North American Emergency Response Guide																					
	1																				
	2																				
	3																				
11.4 Jane's Chem-Bio Handbook																					
	1																				
	2																				
	3																				
11.5 First Responder Job Aids																					
12. Agriculatural Terrorism Prevention, Response & Mitigation Equipment																					
Diagnostic Equipment																					
Cleaning, Disinfection, and Fumigation																					
Disposal Equipment and Supplies																					
Burning and Incinerating Supplies																					
General																					
13. Intervention Equipment -- this category allows for the purchase of specialized law enforcement equipment that is necessary to further enhance their capabilities to prevent domestic terrorism incidents. Grantees are reminded that they must comply with 28 CFR, Parts 66 and 70. In addition, when procuring any Title III equipment, grantees must strictly adhere to requirements of 18 U.S.C., Part I, Chapter 119, Section 2512, pertaining to the manufacture, distribution, possession, and advertising of wire, oral, or electronic communications interception devices. This category includes but is not limited to the following:																					
13.1 Tactical entry equipment (not including weapons)																					
	1																				
	2																				
	3																				
13.2 Title III Equipment (Pin registers)																					