

NFPA®

1951

Standard on
Protective Ensembles for
Technical Rescue Incidents

2020



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NFPA® 1951

Standard on

Protective Ensembles for Technical Rescue Incidents

2020 Edition

This edition of NFPA 1951, *Standard on Protective Ensembles for Technical Rescue Incidents*, was prepared by the Technical Committee on Special Operations Protective Clothing and Equipment and released by the Correlating Committee on Fire and Emergency Services Protective Clothing and Equipment. It was issued by the Standards Council on November 4, 2019, with an effective date of November 24, 2019, and supersedes all previous editions.

This document has been amended by one or more Tentative Interim Amendments (TIAs) and/or Errata. See “Codes & Standards” at www.nfpa.org for more information.

This edition of NFPA 1951 was approved as an American National Standard on November 24, 2019.

Origin and Development of NFPA 1951

The Technical Committee on Special Operations Protective Clothing and Equipment began work on the first edition of NFPA 1951, *Standard on Protective Ensembles for USAR Operations*, in 1997 to answer the need for personal protective equipment for fire and emergency services personnel operating at technical rescue incidents involving building or structural collapse, vehicle/person extrication, confined space entry, trench/cave-in rescue, rope rescue, and similar incidents. Technical rescue incidents in urban and other nonwilderness locations are complex incidents requiring specially trained personnel and special equipment.

The technical committee developed NFPA 1951 with the goal of establishing personal protection requirements for protective ensembles to reduce the safety risks and health risks associated with exposure of personnel to the hazards of technical rescue during search, rescue, extrication, treatment, recovery, site stabilization, and other mitigation operations at or involving urban search and rescue (USAR) incidents.

The majority of performance criteria in this standard were based on the September 1993 US Fire Administration Study “Protective Clothing and Equipment Needs of Emergency Responders for Urban Search and Rescue Missions” (FA-136, Federal Emergency Management Agency), September 1993. That report documented the protective clothing and equipment needs for emergency responders engaged in technical rescue activities. Input was obtained from an emergency responder user requirements committee and resulted in proposed criteria based on a needs and risk analysis. The US Fire Administration report contains survey results and test data for a number of materials.

The jurisdiction of this technical committee does not include the respiratory protection that is necessary for these operations; the appropriate respiratory protection needs to be addressed by emergency responder organizations.

With the second edition of NFPA 1951, the title was changed to *Standard on Protective Ensembles for Technical Rescue Incidents* to clarify that the standard applies to all emergency services organizations that perform technical rescue incident operations, not just to USAR teams of state or federal governments. The second edition embraced the broader audience of emergency responders for whom these types of protective ensembles are developed to provide protection from the expected hazards common to such operations.

The second edition specified requirements for three different types of technical rescue ensembles:

- (1) A utility ensemble, which provides protection from physical hazards, a basic flame resistance for the ensemble and the elements of the ensemble, and a high level of “breathability” of the ensemble to reduce heat stress for the wearers
- (2) A rescue and recovery ensemble, which provides the physical protection of the utility ensemble and a blood-borne pathogen barrier to protect wearers from body fluid infection from injured or deceased victims
- (3) A CBRN ensemble, which in addition to all the protections of the rescue and recovery ensemble, provides limited protection from chemicals, biological agents, and radiological particulates during incidents involving chemical warfare agents or weapons of mass destruction

It is left to emergency services organizations to select the appropriate ensembles for the protection of their emergency responders based on the expected and anticipated technical rescue incidents to which the organizations will or could respond.

The 2013 (third) edition of NFPA 1951 included a number of editorial changes, new definitions, and updated washing and drying procedures for whole garments, gloves, glove pouches, and CBRN materials. New sections on helmet positioning, glove test areas, and pouch construction were also included. The man-in-simulant test (MIST) in Chapter 8 was completely revised, and a new torque test for protective gloves was added to the end of Chapter 8.

For the 2020 edition, several changes have been made to reflect the performance and safety needs of technical rescue responders and the hazards they face. Based on focused input from 589 survey respondents, as well as task group recommendations and technical committee direction, the technical committee developed a single base garment and ensemble elements and removed the utility, rescue and recovery, and CBRN categories. The flammability and thermal stability requirements remain the same. TPP and conductive heat requirements have been removed and blood-borne pathogen (BBP) protection has been added as an optional requirement specified by the end user. In addition, clarifying language has been added to collars and closure systems so as not to be design restrictive. Several test methods have been removed, others have been brought in line with NFPA 1971, and new tests have been added. Annex material has been added in several places to clarify requirements for end users. Definitions for *manufacturer* and *manufacturing facility* have been added to correlate with other standards in the PPE project.

In Memoriam, 11 September 2001

We pay tribute to the 343 members of FDNY who gave their lives to save civilian victims on 11 September 2001, at the World Trade Center. They are true American heroes in death, but they were also American heroes in life. We will keep them in our memory and in our hearts. They are the embodiment of courage, bravery, and dedication. May they rest in peace.

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Committee Scope: This Committee shall have primary responsibility for documents on the design, performance, testing, and certification of protective clothing and protective equipment manufactured for fire and emergency services organizations and personnel, to protect against exposures encountered during emergency incident operations. This Committee shall also have the primary responsibility for documents on the selection, care, and maintenance of such protective clothing and protective equipment by fire and emergency services organizations and personnel.

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