



# National Fire Incident Reporting System

Complete Reference Guide

January 2012



**FEMA**

U.S. Fire Administration  
National Fire Data Center



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# FOREWORD

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In 1972, the President’s Commission on Fire Prevention and Control published *America Burning*. This document was the first in-depth discussion of this country’s fire problem. An outgrowth of *America Burning* was the National Fire Prevention and Control Act, Public Law 93–498, which established the National Fire Prevention and Control Administration.

One of the results of the P.L. 93–498 mandate to collect national data on fires was the establishment of the National Fire Incident Reporting System (NFIRS). In 1976, six States piloted what eventually evolved into NFIRS. The U.S. Fire Administration (USFA), a component of the Department of Homeland Security (DHS), developed NFIRS as a means of assessing the nature and scope of the fire problem in the United States.

NFIRS has grown in both participation and use. Over the life of the system, all 50 States, more than 40 major metropolitan areas, and more than 15,000 fire departments have participated in NFIRS. On a yearly basis, approximately 600,000 fire incidents and more than 5 million non-fire incidents are added to the database. NFIRS is the world’s largest collection of incidents to which fire departments respond.

NFIRS data are used at all levels of government. At the local level, incident and casualty information is used for setting priorities and targeting resources. The data now being collected are particularly useful for designing fire prevention and educational programs and emergency medical service (EMS)-related activities specifically suited to the real emergency problems the local community faces.

On the State level, NFIRS is used in many capacities. One valuable contribution is that NFIRS data are used by State legislatures to justify budgets and to pass important bills on fire-related issues such as sprinklers, fireworks, and arson.

Many Federal agencies, in addition to USFA, make use of NFIRS data—the Consumer Product Safety Commission (CPSC), the National Highway Traffic Safety Administration (NHTSA), the National Institute of Standards and Technology (NIST), to name a few. The CPSC has found NFIRS very useful in identifying potentially hazardous products.

Nationally, NFIRS is used by various private industries, including national associations for home appliance product manufacturers, the hotel and motel industry, insurance companies, and attorneys.

Because NFIRS is a voluntary system, not all States or fire departments within States participate. In 1977, only 6 States regularly reported data to the National Fire Data Center (NFDC), and 19 others had data systems in some stage of development. Since then, participation has increased significantly so that an estimated 44 percent of all U.S. fires to which fire departments respond are captured in NFIRS.

States have the flexibility to adapt their state reporting systems to their specific needs, and reporting by localities is voluntary. Therefore, the design of a state’s data collection system varies from state to state. However, NFIRS was designed so that data from state systems can be converted to a single format that is used at the national level to aggregate and store NFIRS data.

## FOREWORD

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As participation in NFIRS increased, the system itself has undergone revisions and updates. The latest update of the system is Version 5.0, which provides many improvements both from the standpoint of those who submit the data and for those who use it. This reference guide provides step-by-step instructions for submitting fire incident information to NFIRS 5.0.

Comments and suggestions on further improvements to this guide are solicited and should be submitted to National Fire Data Center, U.S. Fire Administration, Department of Homeland Security, 16825 South Seton Avenue, Emmitsburg, Maryland 21727. Comments can also be made on line on the USFA Web form at <http://www.usfa.fema.gov/>

## **Chapter 1**

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# **INTRODUCTION**

# Chapter 1 • Introduction

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This reference guide is a component of the National Fire Incident Reporting System (NFIRS) Version 5.0. It provides both instructions for reporting data to NFIRS Version 5.0 and an understanding of the data elements collected by the system. It also serves as a reference for the coding of the data. NFIRS (pronounced “en-furs”) is a tool that fire departments use both to report fires and other incidents to which fire departments respond and to maintain records of these incidents in a uniform manner.

NFIRS 5.0 is a modular, all-incident reporting system designed by the U.S. Fire Administration (USFA), a part of the Department of Homeland Security (DHS), with input from the fire service and other users of the data.

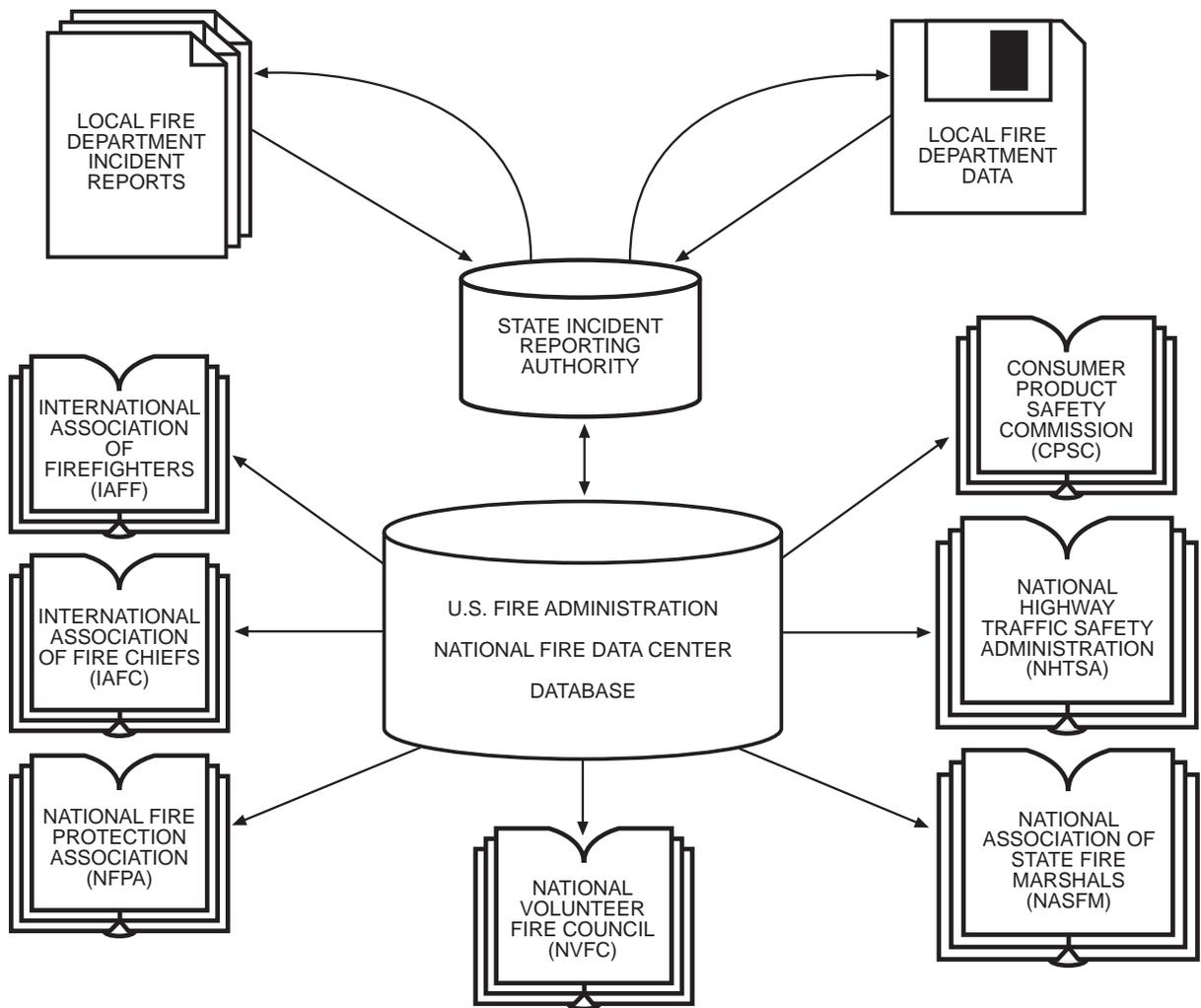
## How NFIRS Works

In 2001, more than 12,000 fire departments participated in NFIRS. After responding to an incident, fire department personnel complete one or more of the NFIRS “modules.” The information in these modules describes the kind of incident responded to, where it occurred, the resources used to mitigate it, and how losses and other information designed specifically to understand the nature and causes of fire, hazardous material (HazMat), and emergency medical service (EMS) incidents. Information is also collected on the number of civilian or firefighter casualties and an estimate of property loss. The uniformity of definitions used in coding NFIRS fields makes aggregation of national data possible.

Information is entered about an emergency response either manually on a form or directly through a computer. Local agencies forward the completed NFIRS modules to the State agency responsible for NFIRS data. The State agency combines the information with data from other fire departments into a statewide database and then transmits the data to the National Fire Data Center (NFDC) at the USFA. The NFDC can then compare and contrast statistics from States and large metropolitan departments to develop national public education campaigns, make recommendations for national codes and standards, guide allocation of Federal funds, determine consumer product failures, identify the focus for research efforts, and support Federal legislation. NFIRS is the primary source of data for a wide range of analyses and reports, including USFA’s publication *Fire in the United States*, which is the single most comprehensive reference on the nature and scope of the fire problem in the United States.

At the national level, data combined from participating States are also used by information partners, as shown in the following graphic.

## INCIDENT REPORTING PROCESS



## NFIRS Version 5.0 Enhancements

NFIRS 5.0 is an information-based system with data entry, data storage, and data retrieval, whether for a single incident or in aggregate, aggregated via a computer that interacts with the database. Because not all fire departments use computers for their recordkeeping, paper forms are available. Paper forms are forwarded to a central point where the data are entered to a database. This guide provides detailed instructions for completing paper forms. Automated reporting systems, however, should be designed to capture the data in the same order as these paper forms, so this guide is relevant to anyone who must collect and report incident data.

In Version 5.0, a series of descriptions with assigned code numbers is used to describe incidents. Many of these descriptive phrases were created by the National Fire Protection Association (NFPA) and published in NFPA 901, *Standard Classifications for Incident Reporting and Fire Protection Data*, 1995 edition. Appropriate codes are included in this user guide. Many improvements that have been incorporated into Version 5.0 are the result of suggestions made by participating fire departments, State agencies, and the National Fire Information Council (NFIC).

## INTRODUCTION

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The type and content of data collected by NFIRS 5.0 have evolved over more than 25 years and are based on the participation of all 50 States and more than 40 metropolitan fire departments. NFIRS 5.0 captures information on all incidents to which a fire department responds. In addition to many data coding improvements, Version 5.0 provides five new modules that recognize the increasingly diverse activities of fire departments today: an EMS Module, a Wildland Fire Module, an Apparatus Module, a Personnel Module, and an Arson Module. Other modules have been extensively revised.

The modular design of NFIRS 5.0 makes the system easier to use than previous NFIRS versions because it captures only the data required to profile the extent of the incident. Some fires, for example, require just basic information, whereas others require considerably more detail. The accuracy and reliability of the collected data are improved because of the way questions are asked and data are coded.

The selection of data elements and the coding selections for the data have been revised to reduce confusion or improve data quality. For example, codes using 9 to indicate “not otherwise classified” have been changed to the value of 0 (zero) where it may be necessary to code something as “other.” The internal codes for “insufficient information to classify further” have been eliminated. A single code of “U” (or “UU” or “UUU” depending on field size) is available to designate “unknown” or “undetermined.” Although NFIRS Version 4.1 allowed a distinction between the 9 code (“not otherwise classified”) and the 0 code (“insufficient information to classify further”), the distinction between these codes was often unclear to the respondent.

Other improvements incorporated in NFIRS 5.0 include:

- Compound data elements have been eliminated. Some of the previous data elements asked for multiple pieces of information. NFIRS 5.0 splits these data elements into single-issue questions to eliminate often confusing and ambiguous or incorrect answers. Although this increased the number of fields or questions being asked, the choices are clearer and the number of codes has decreased. For example, “Equipment Involved in Ignition” in Version 4.1 is a complex list of equipment that not only identifies the equipment, but also includes data on its power source and portability. Version 5.0 has three categories (Equipment, Equipment Portability, and Equipment Power Source) that makes coding easier, more accurate, and more specific.
- Contained, no-loss fires are simply reported using only the Basic Module, with as few as three codes having to be looked up and entered when using the paper forms.
- Small spills of common hazardous materials are documented only in the Basic Module instead of requiring the fire department to complete all the details that are necessary for spills that are more significant. Detailed information is completed on the HazMat Module (NFIRS-7) if a serious release of hazardous materials occurs.
- Reporting the failures of protective clothing and equipment worn or used by firefighters has been simplified to focus only on items whose failure contributed to a casualty (i.e., injury or fatality).

For convenience to users familiar with the codes of NFIRS 4.1, references are provided in this guide to the titles of the NFIRS 4.1 code lists that have changed in NFIRS 5.0.

## Benefits of NFIRS to Firefighters

Firefighters will find that NFIRS 5.0 is easier to use than previous versions. Also, two of the new modules, Apparatus and Personnel, will assist fire departments in managing apparatus, personnel, and resources.

Each fire department is responsible for planning and managing its operations so that firefighters can perform their roles of fire control and fire prevention most effectively and efficiently. The availability of accurate information about fires and other incidents is vital in achieving maximum performance. Patterns that emerge from the analysis of incident data can help departments focus on current problems, predict future problems in their communities, and measure their programs' performance.

## Coding

In 1963, NFPA formed a technical committee to devise a uniform system of fire reporting to encourage fire departments to use a common set of definitions. NFPA 901, *Standard Classifications for Incident Reporting and Fire Protection Data*, was developed as a dictionary of fire terminology and associated numerical codes. As the fire service gained experience with this fire data “language,” continuous improvements have been possible. The set of codes used in NFIRS 5.0 represents the merging of the ideas from NFPA 901 with the many suggested improvements from users of the NFIRS 4.1 coding system.

## Structure of the User Guide

Chapter 2 briefly describes the 11 NFIRS modules, provides general guidance on when each module should be used, and details standard conventions that are to be used when completing these modules. Chapters 3 through 13 cover NFIRS modules 1 through 11, respectively, in detail. Guidance is provided on how each field of the module form should be completed and defines the codes that are used in the system. Chapter 14 addresses information that might be submitted on a supplemental form (NFIRS–1S). Full-size replicas of all NFIRS forms are found in Appendix A.

Appendix B is an index of NFIRS 5.0 synonyms of selected code lists that have been alphabetized. Appendix C is a glossary of terms and abbreviations. Appendix D is an alphabetized listing of chemicals and hazardous materials.



## **Chapter 2**

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# **NFIRS 5.0 MODULES**



## Chapter 2 • NFIRS 5.0 Modules

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NFIRS Version 5.0 consists of 11 modules. The Basic Module is to be completed for every incident, with additional modules used as appropriate to describe the incident.

### Description of Modules

The **Basic Module** (NFIRS-1) captures general information on every incident (or emergency call) to which the department responds.

**THE FOLLOWING MODULES ARE USED IN CONJUNCTION WITH THE BASIC MODULE, WHICH MUST BE COMPLETED FOR EVERY INCIDENT TO WHICH YOUR DEPARTMENT RESPONDS**

The **Fire Module** (NFIRS-2) is used to describe each fire incident to which the department responds. For wildland fire incidents, the Wildland Module can be used instead of the Fire Module if that option is available by your State reporting authority.

The **Structure Fire Module** (NFIRS-3) is used to describe each structure fire to which the department responds. This module is used in conjunction with the Fire Module.

The **Civilian Fire Casualty Module** (NFIRS-4) is used to report injuries or deaths to civilians or other emergency personnel (e.g., police officers, non-fire department/EMS personnel) that are related to a fire incident. This module is used in conjunction with the Fire Module and, if applicable, the Structure Fire Module. Non-fire-related injuries or deaths to civilians can be reported on the EMS Module.

The **Fire Service Casualty Module** (NFIRS-5) is used to report injuries and deaths of firefighters. The module can also be used to report the exposure of a firefighter to chemicals or biological agents at an incident where that exposure does not result in any symptoms at that time but that manifest themselves at a later date. This module may be used with any of the other modules.

**THE FOLLOWING MODULES (NFIRS-6 THROUGH -11) ARE OPTIONAL MODULES THAT ARE USED ONLY WHEN THAT OPTION(S) IS SELECTED BY YOUR STATE REPORTING AUTHORITY**

The **EMS Module** (NFIRS-6) is completed by fire departments that provide emergency medical services. The module is used to report all medical incidents where the department provided the primary patient care. This includes incidents where there were civilian fire-related casualties and a Civilian Fire Casualty Module was completed and where there were firefighter fire-related casualties and a Fire Service Casualty Module was completed. (This module does not serve as a patient care record, but it can be used in conjunction with the local requirements for patient care.)

The **Hazardous Materials Module** (NFIRS-7) is completed to report spills or releases of 55 gallons or more of hazardous materials or when special HazMat actions were taken. As appropriate, the module is used in conjunction with the Fire Module or other modules to provide detailed information about incidents involving hazardous materials.

The **Wildland Fire Module** (NFIRS-8) is completed to report incidents that involve wildland or vegetation fires. The module is used in lieu of the Fire Module for wildland fire incidents.

The **Apparatus or Resources Module** (NFIRS-9), a department-use module, is completed to report data specific to each piece of apparatus that responds to an incident. It includes information that can be used to calculate response time and time out of service. This module is not used if the Personnel Module is used.

The **Personnel Module** (NFIRS-10), a department-use module, is completed to report the same information as on the Apparatus or Resources Module, but it also provides for tracking the personnel associated with that apparatus.

The **Arson Module** (NFIRS-11) is completed to report additional information on fires that have been coded by the department as “intentionally set.”

In addition to the 11 modules, a **Supplemental Form** (NFIRS-1S) can be used to report information on additional persons and entities involved in the incident and to collect additional special studies fields. This paper-only form extends the amount of information collected in the Basic Module.

## Preparation of Modules

Both local and State agencies should establish standard procedures on how to complete the NFIRS reporting modules and how to submit the modules to the State reporting activity. These procedures will help ensure consistency in the data received and provide guidance to those filling out the modules. Each coded field in the on-line NFIRS systems has the capability to be expanded by another alpha-numeric character so that information more specific than the national standard addresses can be collected.

The majority of the information on the modules is obtained at the scene by emergency responder personnel. An emergency responder at the scene should be assigned the responsibility of recording the required information concerning each incident. To gather additional information or to confirm one’s own impressions, the individual completing the module should contact others involved with the incident. Contacts may include on-scene fire service personnel, police and civilians at the scene, the dispatcher, EMS personnel, hospital staff, fire and building inspectors, the arson investigator, the local fire module coordinator, and State-level officials responsible for coordinating the reporting system. Most importantly, the module should reflect exactly what happened.

Once the module has been completed, the information should be reviewed at the local level before it is signed by the officer in charge at the incident and by the individual completing the module. Originals of the modules should be kept for departmental use and files, and copies forwarded to the State that will transmit them to the NFDC.

Modifications to original incident reports can be submitted later when additional information becomes available or if any of the original information changes or is found to be incorrect. A person injured in a fire who dies within 1 year as a result of the injuries is an example of the type of new information that could be cause for submitting a “change report.”

Once computerized, the data can be presented in a variety of ways, such as summaries, comparisons, and reports. The web-based reporting tool made available to NFIRS users by the NFDC is able to produce a variety of reports. Many localities and departments develop data analysis and display programs to meet their own requirements. For more information concerning the new NFIRS 5.0, contact the USFA or visit its Web site at <http://www.usfa.fema.gov/fireservice/nfirs/>

## Conventions Used in Completing Modules

Each time a fire service unit moves in response to an alarm, the Basic Module (NFIRS-1) must be completed. One report is completed for each incident. Other modules are completed as appropriate.

A form depicting the data for each module is shown at the beginning of that module’s chapter. The entire set of forms (full-size) is included in Appendix A. The forms are divided into lettered sections, and blocks divide sections. Blocks are formed by the section letter and the number of the block within the section (e.g., Section A, Block A1). The different blocks within a section contain related information. The modules are designed to help emergency personnel report incident information in a straightforward and orderly manner. Many of the codes are printed on the paper modules to expedite the report process. For many situations, however, the correct codes will need to be looked up.

Modules should be completed according to the type of incident being reported. Instruction is given on the module when necessary. *All sections that have a star (☆) by the title are required fields.* Throughout this guide, notes or important considerations are indicated with a pointed finger (☞).

Each module is discussed one section at a time in the chapters that follow. Each item or block in each section is described by its definition, purpose, entry, and example. In addition, for those items requiring a numerical code, the codes and a coded example are shown.

- The *definition* provides a common meaning for all, which ensures consistency in understanding and application.
- The *purpose* gives a brief explanation as to why the information has been requested; it may also indicate how the information could be of additional use.
- The *entry* provides guidance on the type of information to place in the entry block.
- The *example* shows how the entry might look for a particular situation.

Within the data coding used in this system, a few conventions assist in reporting. The letters “N,” “NN,” or “NNN” are used to indicate “none” in a field that is normally coded. The letters “U,” “UU,” or “UUU” are used to indicate “unknown” or “undetermined” in a field that is normally coded. If the field is a numeric field such as dollar loss, 0 (zero) is used to indicate none. Numeric fields such as dollar loss can be left blank if a value is unknown or if the incident is not a fire.

- ☛ The coded field should not be left blank as that is an indication that the person completing the report missed it or forgot to fill it out.

Please note that the numbers “0,” “00,” or “000” are valid codes for many coded fields. These have the value for “other” and are intended to be used where the item or issue being coded is identifiable but the code selection list does not contain the description of what has been identified for that data element. In some data elements, codes ending in “0” allow for further identification of the item or issue, as in the case where part of the answer is known but not enough to code it at the specific level required by the options in the list.

The entry of data into fields should follow the following conventions:

- *Text fields* should be left justified.
- *Numeric fields* should be right justified.
- *Coded fields* do not need to be justified since they should fit the entry space exactly.

## Fire Department Header

Before data may be entered into NFIRS 5.0, each fire department must have established a header record. This record is established only once in the system and then updated whenever there is a change in the department’s information.

- ☛ Creation of or changes to the header record must be reviewed or approved by each department’s State NFIRS program manager.

As a rule of thumb, if a department has a Fire Department Identification (FDID) number, a header has already been established. Most of the existing records were created from the conversion of NFIRS 4.1 header records at the State level; however, many of the fields may be blank because they are new to NFIRS 5.0. It is recommended that each department review their header record to ensure completeness.

The table on the following page shows the fire department header fields:

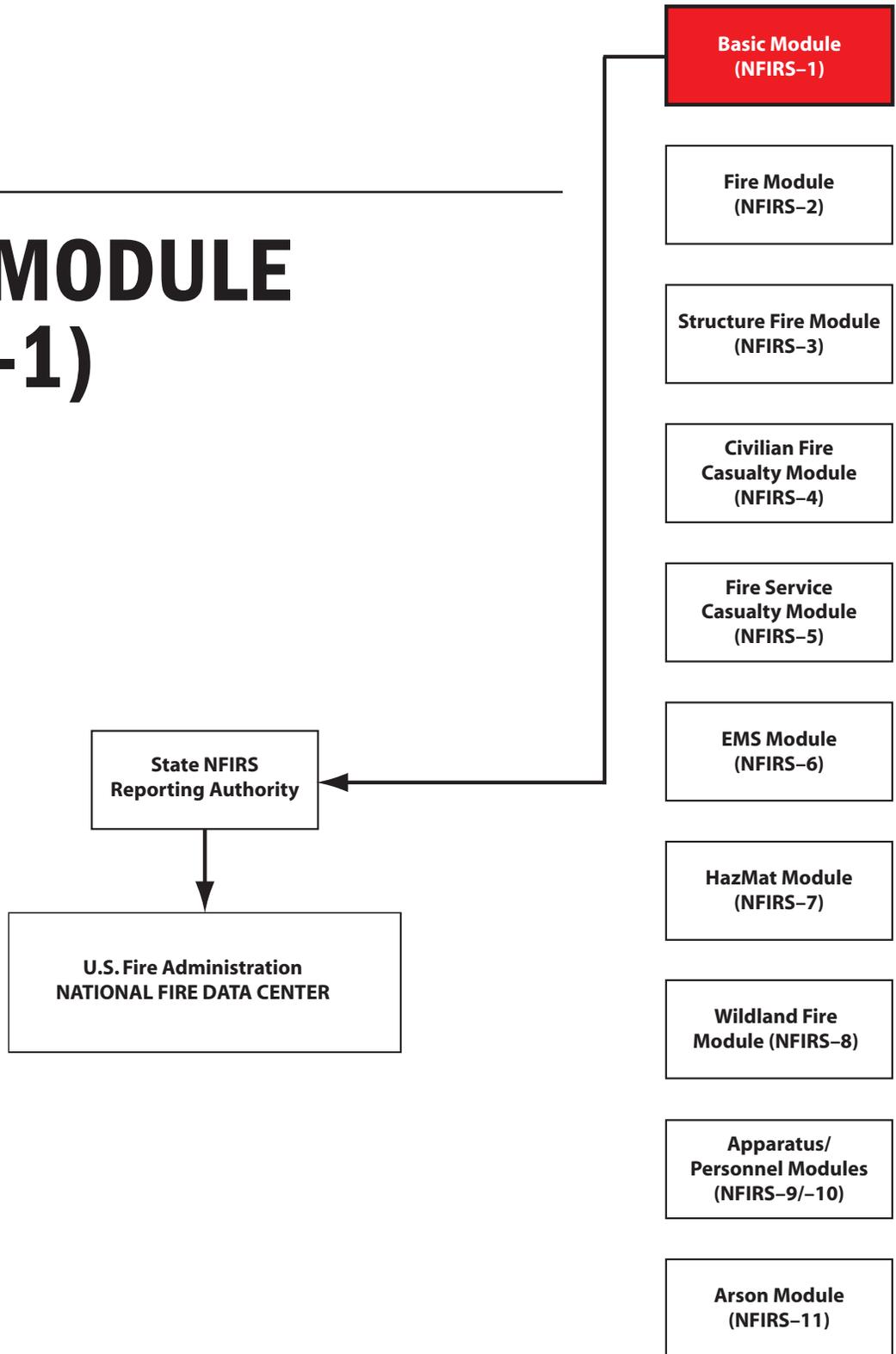
FIELD NAME	FIELD TYPE	FIELD LENGTH
Fire Department Identification*	Text	5
Fire Department State*	Coded	2
Record Type	Numeric	5
Transaction Type	Coded	1
Fire Department Name	Text	30
Fire Department Street Number or Milepost*	Text	8
Fire Department Street Prefix*	Coded	2
Fire Department Street or Highway Name*	Text	30
Fire Department Street Type*	Coded	4
Fire Department Street Suffix*	Coded	2
Fire Department City*	Text	20
Fire Department ZIP*	Numeric	9
Fire Department Phone	Numeric	10
Fire Department Fax	Numeric	10
Fire Department E-Mail	Text	45
Fire Department FIPS County Code	Text	3
Number of Stations	Numeric	3
Number of Paid Firefighters	Numeric	4
Number of Volunteer Firefighters	Numeric	4
Number of Volunteer Paid Per Call	Numeric	4

\*Definitions and abbreviations for these fields are presented in Chapter 3, Sections A and B.



## Chapter 3

# BASIC MODULE (NFIRS-1)



**A** FDID  Star State  Star Incident Date  Star MM DD YYYY Station Incident Number  Star Exposure  Star

Delete  Change  No Activity **NFIRS-1 Basic**

**B Location Type**  Star  Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires. Census Tract \_\_\_\_\_

Street address  
 Intersection  
 In front of Number/Milepost Prefix Street or Highway Street Type Suffix  
 Rear of  
 Adjacent to Apt./Suite/Room City State ZIP Code  
 Directions  
 U.S. National Grid Cross Street, Directions or National Grid, as applicable

**C Incident Type**  Star Incident Type \_\_\_\_\_

**D Aid Given or Received**  Star  None

1  Mutual aid received  
 2  Auto. aid received  
 3  Mutual aid given Their FDID Their State  
 4  Auto. aid given  
 5  Other aid given Their Incident Number

**E1 Dates and Times** Midnight is 0000  
 Check boxes if dates are the same as Alarm Date.  
 Alarm  Star Month Day Year Hour Min  
 ARRIVAL required, unless canceled or did not arrive  
 Arrival  Star  
 CONTROLLED optional, except for wildland fires  
 Controlled   
 Last Unit Cleared  Star LAST UNIT CLEARED, required except for wildland fires

**E2 Shifts and Alarms** Local Option  
 Shift or Platoon Alarms District

**E3 Special Studies** Local Option  
 Special Study ID# Special Study Value

**F Actions Taken**  Star  
 Primary Action Taken (1)  
 Additional Action Taken (2)  
 Additional Action Taken (3)

**G1 Resources**  Star  
 Check this box and skip this block if an Apparatus or Personnel Module is used.  
 Apparatus Personnel  
 Suppression  
 EMS  
 Other  
 Check box if resource counts include aid received resources.

**G2 Estimated Dollar Losses and Values**  
 Required for all fires if known. Optional for non-fires. None  
 LOSSES: Property \$ Contents \$  
 PRE-INCIDENT VALUE: Optional  
 Property \$ Contents \$

**Completed Modules**  
 Fire-2  
 Structure Fire-3  
 Civilian Fire Cas.-4  
 Fire Service Cas.-5  
 EMS-6  
 HazMat-7  
 Wildland Fire-8  
 Apparatus-9  
 Personnel-10  
 Arson-11

**H1 Casualties**  None  
 Deaths Injuries  
 Fire Service Civilian  
**H2 Detector** Required for confined fires.  
 1  Detector alerted occupants  
 2  Detector did not alert them  
 U  Unknown

**H3 Hazardous Materials Release**  None  
 1  Natural gas: slow leak, no evacuation or HazMat actions  
 2  Propane gas: <21-lb tank (as in home BBQ grill)  
 3  Gasoline: vehicle fuel tank or portable container  
 4  Kerosene: fuel burning equipment or portable storage  
 5  Diesel fuel/fuel oil: vehicle fuel tank or portable storage  
 6  Household solvents: home/office spill, cleanup only  
 7  Motor oil: from engine or portable container  
 8  Paint: from paint cans totaling <55 gallons  
 0  Other: special HazMat actions required or spill > 55 gal (Please complete the HazMat form.)

**I Mixed Use Property**  Not mixed  
 10  Assembly use  
 20  Education use  
 33  Medical use  
 40  Residential use  
 51  Row of stores  
 53  Enclosed mall  
 58  Business & residential  
 59  Office use  
 60  Industrial use  
 63  Military use  
 65  Farm use  
 00  Other mixed use

**J Property Use**  Star  None

**Structures**  
 131  Church, place of worship  
 161  Restaurant or cafeteria  
 162  Bar/Tavern or nightclub  
 213  Elementary school, kindergarten  
 215  High school, junior high  
 241  College, adult education  
 311  Nursing home  
 331  Hospital

**Outside**  
 124  Playground or park  
 655  Crops or orchard  
 669  Forest (timberland)  
 807  Outdoor storage area  
 919  Dump or sanitary landfill  
 931  Open land or field

341  Clinic, clinic-type infirmary  
 342  Doctor/Dentist office  
 361  Prison or jail, not juvenile  
 419  1- or 2-family dwelling  
 429  Multifamily dwelling  
 439  Rooming/Boarding house  
 449  Commercial hotel or motel  
 459  Residential, board and care  
 464  Dormitory/Barracks  
 519  Food and beverage sales

936  Vacant lot  
 938  Graded/Cared for plot of land  
 946  Lake, river, stream  
 951  Railroad right-of-way  
 960  Other street  
 961  Highway/Divided highway  
 962  Residential street/driveway

539  Household goods, sales, repairs  
 571  Gas or service station  
 579  Motor vehicle/boat sales/repairs  
 599  Business office  
 615  Electric-generating plant  
 629  Laboratory/Science laboratory  
 700  Manufacturing plant  
 819  Livestock/Poultry storage (barn)  
 882  Non-residential parking garage  
 891  Warehouse

981  Construction site  
 984  Industrial plant yard

Look up and enter a Property Use code and description only if you have NOT checked a Property Use box.  
 Property Use Description Code

NFIRS-1 Revision 01/01/05

### K1 Person/Entity Involved

Local Option

Business Name (if applicable) \_\_\_\_\_ Area Code \_\_\_\_\_ Phone Number \_\_\_\_\_

Check this box if same address as incident location (Section B). Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name \_\_\_\_\_ MI \_\_\_\_\_ Last Name \_\_\_\_\_ Suffix \_\_\_\_\_

Number \_\_\_\_\_ Prefix \_\_\_\_\_ Street or Highway \_\_\_\_\_ Street Type \_\_\_\_\_ Suffix \_\_\_\_\_



Post Office Box \_\_\_\_\_ Apt./Suite/Room \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ ZIP Code \_\_\_\_\_ - \_\_\_\_\_

More people involved? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary.

### K2 Owner

Local Option

Same as person involved? Then check this box and skip the rest of this block.

Business Name (if applicable) \_\_\_\_\_ Area Code \_\_\_\_\_ Phone Number \_\_\_\_\_

Check this box if same address as incident location (Section B). Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name \_\_\_\_\_ MI \_\_\_\_\_ Last Name \_\_\_\_\_ Suffix \_\_\_\_\_

Number \_\_\_\_\_ Prefix \_\_\_\_\_ Street or Highway \_\_\_\_\_ Street Type \_\_\_\_\_ Suffix \_\_\_\_\_



Post Office Box \_\_\_\_\_ Apt./Suite/Room \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ ZIP Code \_\_\_\_\_ - \_\_\_\_\_



Remarks:

Local Option

#### Fire Module Required?

Check the box that applies and then complete the Fire Module based on Incident Type, as follows:

- |   |  |
|---|--|
| <input type="checkbox"/> Buildings 111                | Complete Fire & Structure Modules                  |
| <input type="checkbox"/> Special structure 112        | Complete Fire Module & Section I, Structure Module |
| <input type="checkbox"/> Confined 113-118             | Basic Module Only                                  |
| <input type="checkbox"/> Mobile property 120-123      | Complete Fire & Structure Modules                  |
| <input type="checkbox"/> Vehicle 130-138              | Complete Fire Module                               |
| <input type="checkbox"/> Vegetation 140-143           | Complete Fire or Wildland Module                   |
| <input type="checkbox"/> Outside rubbish fire 150-155 | Basic Module Only                                  |
| <input type="checkbox"/> Special outside fire 160     | Complete Fire or Wildland Module                   |
| <input type="checkbox"/> Special outside fire 161-164 | Complete Fire Module                               |
| <input type="checkbox"/> Crop fire 170-173            | Complete Fire or Wildland Module                   |



ITEMS WITH A ☆ MUST ALWAYS BE COMPLETED!

More remarks? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary.

### M Authorization

Check box if same as Officer in charge.

Officer in charge ID \_\_\_\_\_ Signature \_\_\_\_\_ Position or rank \_\_\_\_\_ Assignment \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

Member making report ID \_\_\_\_\_ Signature \_\_\_\_\_ Position or rank \_\_\_\_\_ Assignment \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

## Chapter 3 • Basic Module (NFIRS-1)

The purpose of the Basic Module is to collect information common to all incidents. **The Basic Module is required for every type of incident to which a department responds.**

Entries in the Basic Module determine what other modules need to be completed based on the type of incident involved. For example, fire incidents are also reported on the Fire Module (NFIRS-2). Additionally, the Structure Fire Module (NFIRS-3) is required if the fire reported in the Fire Module occurs in a structure.

A separate Civilian Fire Casualty Module (NFIRS-4) is required for each civilian who is injured as a direct result of a fire incident. A separate Fire Service Casualty Module (NFIRS-5) is required for each firefighter who is injured in response to an alarm whether or not a fire was involved.

Optional modules include the EMS, HazMat, Wildland Fire, Apparatus and Personnel, and Arson Modules. The type of incident reported or the nature of a particular incident, such as the release of hazardous materials at a fire after the arrival of the fire department, may trigger one or more of these additional modules. The amount of information needed in each module varies based on the type of incident, associated casualties, and property losses.

### SECTION A

The field elements in Section A that are marked with a star (☆) are required to be completed. Combined, these fields (FDIC, State, Incident Date, Incident Number, and Exposure) uniquely identify each incident.

## A Fire Department Identification (FDID) ☆

### Definition

A unique five-character identifier assigned by the State to identify a particular fire department within the State. This identifier may also identify the county, fire district, or other jurisdiction in which the fire department is located. Many States use the two left-most digits to identify the particular department within a jurisdiction. All five spaces in this field must be occupied by numerals or alphanumeric characters. If the FDID is less than five characters, use leading zeros.

### Purpose

The FDID number is used to identify incident data that have been collected and reported by individual departments. Feedback on local or regional incident experience can then be prepared and sent to individual agencies or specific fire departments.

### Entry

Enter the State-assigned FDID.

### Example

An FDID of 07434 is entered as:

<b>A</b>	<input type="text" value="0"/> <input type="text" value="7"/> <input type="text" value="4"/> <input type="text" value="3"/> <input type="text" value="4"/>	<input type="text"/>	<input type="checkbox"/> Delete								
	FDID ☆	State ☆	MM	DD	YYYY	Incident Date ☆	Station	Incident Number ☆	Exposure	☆	<input type="checkbox"/> Change
											<input type="checkbox"/> No Activity

## State ☆

### Definition

The State (or U.S. territory) where the fire department is located.

### Purpose

This field provides an additional means of identifying a fire department, and in conjunction with other required Section A fields, uniquely identifies each incident.

### Entry

Enter the two-digit alphabetic abbreviation from the following list for the State where the fire department is located:

STATE/U.S. TERRITORY CODES					
AL	Alabama	KY	Kentucky	ND	North Dakota
AK	Alaska	LA	Louisiana	OH	Ohio
AZ	Arizona	ME	Maine	OK	Oklahoma
AR	Arkansas	MD	Maryland	OR	Oregon
CA	California	MA	Massachusetts	PA	Pennsylvania
CO	Colorado	MI	Michigan	RI	Rhode Island
CT	Connecticut	MN	Minnesota	SC	South Carolina
DE	Delaware	MS	Mississippi	SD	South Dakota
DC	District of Columbia	MO	Missouri	TN	Tennessee
FL	Florida	MT	Montana	TX	Texas
GA	Georgia	NE	Nebraska	UT	Utah
HI	Hawaii	NV	Nevada	VT	Vermont
ID	Idaho	NH	New Hampshire	VA	Virginia
IL	Illinois	NJ	New Jersey	WA	Washington
IN	Indiana	NM	New Mexico	WV	West Virginia
IA	Iowa	NY	New York	WI	Wisconsin
KS	Kansas	NC	North Carolina	WY	Wyoming
U.S. TERRITORIES/POSSESSIONS					
AS	American Samoa	GU	Guam	PR	Puerto Rico
CZ	Canal Zone	MH	Marshall Islands	UM	U.S. Minor Outlying Islands
DD	Department of Defense	MP	Northern Mariana Islands	VI	Virgin Islands
FM	Federated States of Micronesia	PW	Palau	OO	Other

The ☆ denotes a required field.

### Example

Virginia is entered as VA:

<b>A</b>	0   7   4   3   4 FDID ☆	V   A   State ☆	MM     Incident Date ☆	DD     Incident Date ☆	YYYY         Incident Date ☆	 Station	 Incident Number ☆	 Exposure ☆	<input type="checkbox"/> Delete <input type="checkbox"/> Change <input type="checkbox"/> No Activity
----------	-----------------------------	--------------------	------------------------------	------------------------------	------------------------------------	-------------	-----------------------	----------------	--

## Incident Date ☆

### Definition

The month, day, and year of the incident. This date is when the alarm was received by the fire department and must be the same as the date for the alarm time.

### Purpose

In conjunction with other required Section A fields, this element uniquely identifies each incident.

### Entry

Enter the month, day, and year (mm/dd/yyyy) that the initial incident alarm was received by the department. It must be entered for each incident.

- ☛ The Incident Date is the same as the Alarm date (Block E1), except if the incident is an exposure and the exposure occurs on a subsequent day.

### Example

An incident occurs and is reported on December 12, 2001:

<b>A</b>	0   7   4   3   4 FDID ☆	V   A   State ☆	1   2   Incident Date ☆	1   2   Incident Date ☆	2   0   0   1   Incident Date ☆	 Station	 Incident Number ☆	 Exposure ☆	<input type="checkbox"/> Delete <input type="checkbox"/> Change <input type="checkbox"/> No Activity
----------	-----------------------------	--------------------	----------------------------	----------------------------	------------------------------------	-------------	-----------------------	----------------	--

## Station

### Definition

The number or identifier of a particular fire station within a fire department. This is a local option.

### Purpose

The station number provides a means of tracking incident data that have been collected and reported by individual stations. Specific feedback on incident experience can then be prepared and sent to individual stations. The station number is also useful for analyzing different levels of activity within a fire department.

### Entry

Enter the station number in the space provided. The fire department should determine which station number should be entered (e.g., first arriving unit, station's area). The station number is left justified. Leave blank if there is only one station in the department.

### Example

Station 13 is entered as:

<b>A</b>	0   7   4   3   4 FDID ☆	V   A   State ☆	MM 1   2	DD 1   2	YYYY 2   0   0   1	A   3   Station	Incident Number ☆	Exposure ☆	<input type="checkbox"/> Delete <input type="checkbox"/> Change <input type="checkbox"/> No Activity
----------	-----------------------------	--------------------	-------------	-------------	-----------------------	--------------------	-------------------	------------	--

## Incident Number ☆

### Definition

A unique number assigned to an incident.

- ☛ The Incident Number is a sequential number and is numeric only; it is not an incident identification number.

### Purpose

In conjunction with other required Section A fields, this element uniquely identifies each incident.

### Entry

Enter the number assigned to the incident. The number may be assigned at the local, county, or district level, depending on policies. It may be necessary to obtain this number from an alarm or dispatch center. It must be unique for each incident on a given day.

### Example

A call with an incident number of 72672 is entered as:

<b>A</b>	0   7   4   3   4 FDID ☆	V   A   State ☆	MM 1   2	DD 1   2	YYYY 2   0   0   1	A   3   Station	7   2   6   7   2   Incident Number ☆	Exposure ☆	<input type="checkbox"/> Delete <input type="checkbox"/> Change <input type="checkbox"/> No Activity
----------	-----------------------------	--------------------	-------------	-------------	-----------------------	--------------------	--	------------	--

## Exposure Number ☆

### Definition

Exposure is defined as a fire resulting from another fire outside that building, structure, or vehicle, or a fire that extends to an outside property from a building, structure, or vehicle. For example, if the building fire ignites a truck parked outside, the truck fire is an exposure fire.

- ☛ In the case of buildings with internal fire separations, treat the fire spread from one separation to another as an exposure. Treating multiple ownership of property within a building (e.g., condominiums) as exposures, unless separated by fire-rated compartments, is discouraged.

### Purpose

Although the Incident Number permits all properties involved in a fire incident to be related together, the Exposure Number identifies each separate property type involved in the fire. This makes it possible to capture the specific details of the fire in each exposure and to relate all the exposures to the basic incident, if necessary. The Exposure Number, in conjunction with other required Section A fields, uniquely identifies each incident itemized in Section C.

When a fire involves more than one building, each building fire should be considered a separate fire, with the ignition for all but the original building fire classified as exposure fires.

### Entry

In a fire involving exposures, an additional Basic Module should be completed for each exposure. Each module completed for an exposure should contain the same Incident Number assigned to the original property involved. A separate sequential Exposure Number is assigned to each exposure. The original incident is always coded “000,” and exposures are numbered sequentially and incremented by 1 beginning with “001.” The three-character numeric field is zero filled, not right justified.

- ☛ The Incident Date for each exposure remains the same as that of the basic incident; however, the Alarm Time in Block E1 should reflect the time of each new exposure.

The relevant data for each exposure should then be recorded using the appropriate modules.

- ☛ Treat similar items in a group as a single exposure (such as a fleet of cars).
- ☛ Be sure to check or mark the exposure fire check box Cause of Ignition (Block E1) on the Fire Module for each exposure fire, and then skip to Section G on the Fire Module.

### Example

The first exposure fire is entered as 001:

A	0	7	4	3	4	V	A	1	2	1	2	2	0	0	1	A	3			7	2	6	7	2	0	0	1	<input type="checkbox"/> Delete <input type="checkbox"/> Change <input type="checkbox"/> No Activity
	FDID ☆	State ☆	Incident Date ☆		MM	DD	YYYY	Station	Incident Number ☆					Exposure ☆														

## Delete/Change/No Activity

When filling out the Basic Module for a new incident, leave the Delete/Change/No Activity boxes blank.

### Definition

Indicates a change to information submitted on a previous Basic Module, signifies the deletion of incorrect information, or reports no activity. The officer who signed the original Basic Module report should authorize changes or deletions.

### Purpose

These boxes indicate whether previously provided information is to be changed or deleted or to report that no activity occurred during a reporting period.

The ☆ denotes a required field.

### Entry

**Delete:** Check or mark this box when you have previously submitted data on this incident and now want to have the data on this incident deleted from the database. If this box is marked, complete Section A and leave the rest of the report blank. This will delete all data regarding the incident. Forward the report according to your normally established procedures.

**Change:** Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

**No Activity:** If the fire department has had no incidents during the month, a no activity report should be submitted. Unless otherwise specified by the State, this report should be submitted monthly according to your normally established procedures.

### Examples

*Deleting a previously submitted incident:*

Check or mark the Delete box and complete all other fields in Section A exactly as they were entered in the original report.

*Changing a previously submitted incident:*

It was incorrectly reported that six firefighters responded to a fire incident. Later, the officer in charge corrected the information and sent in a Change report with four fire service personnel responding:

<b>A</b>	0 7 4 3 4  FDID ☆	V A  State ☆	MM DD YYYY  1 2   1 2   2 0 0 1  Incident Date ☆	A 3  Station	7 2 6 7 2  Incident Number ☆	0 0 1  Exposure ☆	<input type="checkbox"/> Delete <input checked="" type="checkbox"/> Change <input type="checkbox"/> No Activity
----------	----------------------	-----------------	--	-----------------	---------------------------------	----------------------	---

The Change box is checked or marked and Block G1 would look like the following example:

**G1 Resources** ☆

Check this box and skip this block if an Apparatus or Personnel Module is used.

	Apparatus	Personnel
<b>Suppression</b>	_ _ _ _ _ _ _	_ _ _ _ 4
<b>EMS</b>	_ _ _ _ _ _ _	_ _ _ _ _ _ _
<b>Other</b>	_ _ _ _ _ _ _	_ _ _ _ _ _ _

Check box if resource counts include aid received resources.

*Submitting a report of No Activity:*

Check or mark the No Activity box and fill both the Incident Number and the Exposure fields with zeros. The Incident Date fields correspond to the last day of the month of no activity:

A	0   7   4   3   4	V   A	MM	DD	YYYY	A   3	0   0   0   0   0   0	0   0   0	<input type="checkbox"/> Delete
	FDID ☆	State ☆	0   6	3   0	2   0   0   3	Station	Incident Number ☆	Exposure ☆	<input type="checkbox"/> Change
									<input checked="" type="checkbox"/> No Activity

## SECTION B

Section B collects information on the specific incident location.

- ☛ The check box at the top of the section should be checked or marked only if the incident address is provided on the Wildland Fire Module (NFIRS-8). The Wildland Fire Module provides an alternative method of recording the incident location.

### **B** Location Type ☆

The location of the incident, which may be a street address, directions from a recognized landmark, or an intersection of two roadways.

#### *Purpose*

The exact location of the incident is used for spatial analyses and response planning that can be linked to demographic data. Incident address information is required at the local government level to establish an official document of record.

#### *Entry*

Check or mark the single box that best indicates the address type that will be entered. If the incident is a wildland fire, the alternate address box at the top of Section B may be checked or marked to indicate that the wildland location scheme is provided in the Wildland Fire module.

*Street address:* A normal street address. Check or mark this box and complete the address fields.

*Intersection:* There is no street address. The incident location is at the intersection of two or more streets, roads, etc. Check or mark this box and enter the first street in the Street or Highway field. The intersecting street(s) is entered in the Cross Street or Directions field.

*Intersection:* There is no street address. The incident location is at the intersection of two or more streets, roads, etc. Check or mark this box and enter the first street in the Street or Highway field. The intersecting street(s) is entered in the Cross Street or Directions field.

*In front of:* No street address is available. However, the incident location is in front of an area with a street address. Check or mark this box and complete the address fields. An example of this might be a park, plaza, or common area in front of a building with a street address.

*Rear of:* No street address is available. However, the incident location is in the rear of an area with a street address. Check or mark this box and complete the address fields. An example of this might be an alley that runs behind a building with a street address.



## Census Tract

### Definition

The census tract number is a six-digit number assigned by the U.S. Census Bureau that identifies an area of land within the United States. Not all jurisdictions have census tract numbers.

### Purpose

This element provides a means to cross-reference geographic and population information that is available from the U.S. Census Bureau to incident data for comparative analysis.

### Entry

Enter the census tract number for the property involved in the incident. The right two spaces are always assumed to follow a decimal point. If the incident occurs in an area where a census tract number has not been assigned, leave blank.

- Local planning commissions or zoning commissions may be able to provide census tract numbers or maps for your response area.

### Example

A location having a census tract number of 1066.01 is entered as:

<b>B</b>	<b>Location Type</b> ☆	<input type="checkbox"/> Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires.		Census Tract		1   0   6   6   -   0   1		
	<input type="checkbox"/> Street address			Gallows		R   D		
	<input checked="" type="checkbox"/> Intersection	Number/Milepost	Prefix	Street or Highway		Street Type		Suffix
	<input type="checkbox"/> In front of							
	<input type="checkbox"/> Rear of							
	<input type="checkbox"/> Adjacent to	Apt./Suite/Room	City			State	ZIP Code	
<input type="checkbox"/> Directions	Lee Highway							
<input type="checkbox"/> U.S. National Grid	Cross Street, Directions or National Grid, as applicable							

## Number/Milepost

### Definition

The number or milepost of the specific location where the incident occurred.

### Purpose

This field further refines the incident address.

### Entry

For structures and lots, enter the street number. For highways, railroads, etc., enter the milepost number. For intersections, leave blank. For block addresses, enter the block number. The maximum number of characters available in the Number/Milepost field is 8.



*Purpose*

This field further refines the incident address. This information can also be useful for identifying local problems, such as checking for multiple incidents at the same address and checking ZIP codes or Census Tract entries.

*Entry*

Enter the name of the street or highway name in the space provided. The maximum number of characters available in the Street or Highway field is 30.

- ☛ If the involved property is a motor vehicle, boat, or other property in transit, list the nearest address or describe the location where the incident occurred. If necessary, include a sketch in the Remarks section (L). It is important that a person viewing the report know where the incident occurred.
- ☛ If a street type is not listed on the code list on the following page (see “Street Type” below), enter the street type as part of the Street or Highway name.

*Example*

A grass fire on Wolfrap Road about 1/2 mile east of I-66:

<b>B</b>	<input type="checkbox"/> <b>Location Type</b> ☆ <input type="checkbox"/> <b>Street address</b> <input type="checkbox"/> <b>Intersection</b> <input type="checkbox"/> <b>In front of</b> <input type="checkbox"/> <b>Rear of</b> <input type="checkbox"/> <b>Adjacent to</b> <input checked="" type="checkbox"/> <b>Directions</b> <input type="checkbox"/> <b>U.S. National Grid</b>	<input type="checkbox"/> Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires. Number/Milepost: [ ] [ ] Prefix: [ ] Street or Highway: Wolfrap Apt./Suite/Room: [ ] [ ] [ ] City: [ ] [ ] [ ] [ ] [ ] [ ] State: [ ] [ ] ZIP Code: [ ] [ ] [ ] [ ] [ ] [ ] Cross Street, Directions or National Grid, as applicable: 1/2 mile east of I-66	Census Tract: [ ] [ ] [ ] [ ] - [ ] [ ] Street Type: R, D, [ ] [ ] Suffix: [ ] [ ]
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## Street Type

*Definition*

The street type descriptor appearing after a street or highway name.

*Purpose*

This field further refines the incident address.

*Entry*

Enter the appropriate Street Type code (established by the U.S. Postal Service) from the list on the following page. If the street type is not listed, enter the street type as part of the Street or Highway name. (See Street or Highway Name above.)



STREET PREFIX CODES (CONT'D)					
HLS	Hills	OVAL	Oval	SPGS	Springs
HOLW	Hollow	PARK	Park	SPUR	Spur
INLT	Inlet	PKY	Parkway	SPRS	Spurs
IS	Island	PKYS	Parkways	SQ	Square
ISS	Islands	PASS	Pass	SQS	Squares
ISLE	Isle	PSGE	Passage	STA	Station
JCT	Junction	PATH	Path	STRA	Stravenue
JCTS	Junctions	PIKE	Pike	STRM	Stream
KY	Key	PNE	Pine	ST	Street
KYS	Keys	PNES	Pines	STS	Streets
KNL	Knoll	PL	Place	SMT	Summit
KNLS	Knolls	PLZ	Plaza	TER	Terrace
LK	Lake	PT	Point	TRWY	Throughway
LKS	Lakes	PTS	Points	TRCE	Trace
LNDG	Landing	PRT	Port	TRAK	Track
LN	Lane	PRTS	Ports	TRFY	Trafficway
LGT	Light	PR	Prairie	TRL	Trail
LGTS	Lights	RADL	Radial	TRLR	Trailer
LF	Loaf	RAMP	Ramp	TUNL	Tunnel
LCK	Lock	RNCH	Ranch	TPKE	Turnpike
LCKS	Locks	RPD	Rapid	UPAS	Underpass
LDG	Lodge	RPDS	Rapids	UN	Union
LOOP	Loop	RST	Rest	UNS	Unions
MALL	Mall	RDG	Ridge	VLY	Valley
MNR	Manor	RDGS	Ridges	VLYS	Valleys
MNRS	Manors	RIV	River	VIA	Viaduct
MDW	Meadow	RD	Road	VW	View
MDWS	Meadows	RDS	Roads	VWS	Views
MEWS	Mews	RT	Route	VLG	Village
ML	Mill	ROW	Row	VLGS	Villages
MLS	Mills	RUE	Rue	VL	Ville
MSN	Mission	RUN	Run	VIS	Vista
MTWY	Motorway	SHL	Shoal	WALK	Walk
MT	Mount	SHLS	Shoals	WALK	Walks
MTN	Mountain	SHR	Shore	WALL	Wall
MTNS	Mountains	SHRS	Shores	WAY	Way
NCK	Neck	SKWY	Skyway	WL	Well
ORCH	Orchard	SPG	Spring	WLS	Wells



*Example*

The incident occurred in apartment 8-C:

<b>B Location Type</b> ☆	<input type="checkbox"/>	Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires.		Census Tract		_ _ _ _  -  _ _		
	<input checked="" type="checkbox"/>	<b>Street address</b>	_ _ _	_	_ _ _ _	_ _ _ _	_ _	
	<input type="checkbox"/>	<b>Intersection</b>	3827	_	Georgia	A V E	E	
	<input type="checkbox"/>	<b>In front of</b>	Number/Milepost	Prefix	Street or Highway	Street Type		Suffix
	<input type="checkbox"/>	<b>Rear of</b>	_ _	_	_ _ _ _	_	_ _ _	
	<input type="checkbox"/>	<b>Adjacent to</b>	8-C	_	_ _ _ _	_	_ _ _	
	<input type="checkbox"/>	<b>Directions</b>	Apt./Suite/Room	City	State	ZIP Code		
<input type="checkbox"/>	<b>U.S. National Grid</b>	Cross Street, Directions or National Grid, as applicable						

## City

*Definition*

The city where the incident occurred. If the incident occurred in an unincorporated area, use the city found in the mailing address for the incident location.

*Purpose*

This field further refines the incident address.

*Entry*

Enter the city where the incident occurred, or the city used in the mailing address for the incident location. The maximum number of characters available in the City field is 20.

*Example*

The incident occurred in the city of Hickory:

<b>B Location Type</b> ☆	<input type="checkbox"/>	Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires.		Census Tract		_ _ _ _  -  _ _		
	<input checked="" type="checkbox"/>	<b>Street address</b>	_ _ _	_	_ _ _ _	_ _ _ _	_ _	
	<input type="checkbox"/>	<b>Intersection</b>	1482	_	Center	D R	_	
	<input type="checkbox"/>	<b>In front of</b>	Number/Milepost	Prefix	Street or Highway	Street Type		Suffix
	<input type="checkbox"/>	<b>Rear of</b>	_ _	_	_ _ _ _	_	_ _ _	
	<input type="checkbox"/>	<b>Adjacent to</b>	_ _	Hickory	_	_ _ _	_ _ _	
	<input type="checkbox"/>	<b>Directions</b>	Apt./Suite/Room	City	State	ZIP Code		
<input type="checkbox"/>	<b>U.S. National Grid</b>	Cross Street, Directions or National Grid, as applicable						

## State

*Definition*

The State where the incident occurred.

*Purpose*

This field further refines the incident address, and it provides a means of linking incident data to other geographic and population factors for comparative analysis at the State level.

*Entry*

Enter the alphabetic abbreviation for the State (see page 3-5) where the incident occurred.

*Example*

North Carolina is entered as NC:

<b>B Location Type</b> ☆	<input type="checkbox"/>	Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires.		Census Tract		_ _ _ _ _ _ _ _ _ _ _ _			
	<input checked="" type="checkbox"/>	<b>Street address</b>	1482	_	Center	D   R	_		
	<input type="checkbox"/>	<b>Intersection</b>	Number/Milepost	Prefix	Street or Highway	Street Type	Suffix		
	<input type="checkbox"/>	<b>In front of</b>							
	<input type="checkbox"/>	<b>Rear of</b>							
	<input type="checkbox"/>	<b>Adjacent to</b>	_ _ _ _	Hickory	N   C	_ _ _ _	_ _ _ _		
<input type="checkbox"/>	<b>Directions</b>	Apt./Suite/Room	City	State	ZIP Code				
<input type="checkbox"/>	<b>U.S. National Grid</b>	Cross Street, Directions or National Grid, as applicable							

**ZIP Code**

*Definition*

The numerical code assigned by the U.S. Postal Service to all U.S. jurisdictions.

*Purpose*

This field completes the information for identifying the exact incident address, and it provides a means of linking fire incident data to other geographic and population factors for comparative analysis at the local and regional levels.

*Entry*

Enter the postal ZIP code number for the address of the property involved in the incident. If the last four digits are unknown, leave that field blank.

*Example*

A house fire occurs in an area with the ZIP code 28602-1109:

<b>B Location Type</b> ☆	<input type="checkbox"/>	Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires.		Census Tract		_ _ _ _ _ _ _ _ _ _ _ _			
	<input checked="" type="checkbox"/>	<b>Street address</b>	1482	_	Center	D   R	_		
	<input type="checkbox"/>	<b>Intersection</b>	Number/Milepost	Prefix	Street or Highway	Street Type	Suffix		
	<input type="checkbox"/>	<b>In front of</b>							
	<input type="checkbox"/>	<b>Rear of</b>							
	<input type="checkbox"/>	<b>Adjacent to</b>	_ _ _ _	Hickory	N   C	2   8   6   0   2	1   1   0   9		
<input type="checkbox"/>	<b>Directions</b>	Apt./Suite/Room	City	State	ZIP Code				
<input type="checkbox"/>	<b>U.S. National Grid</b>	Cross Street, Directions or National Grid, as applicable							

## Cross Street, Directions or U.S. National Grid

Use directions only if the location cannot otherwise be identified. Enter USNG coordinates if U.S. National Grid is selected for Location Type.

### Definition

The nearest cross street to the incident address or directions from a recognized landmark or the second street name of an intersection if Directions is selected as the Location Type. If U.S. National Grid is selected as the Location Type, enter the USNG address (a geospatial address based on universally defined coordinate and grid systems and a common frame of reference across multiple jurisdictions easily extended world-wide). Using an alpha-numeric reference that overlays the UTM (q.v.) coordinate system, USNG spatial addresses break down into three parts: Grid Zone Designation, for a world-wide unique address; 100,000-meter Square Identification, for regional areas; Grid Coordinates, for local areas.

### Purpose

This element helps determine the exact location of the incident. This information may also be useful for identifying local problems, such as checking for multiple incidents at the same location.

### Entry

In the space provided, describe the nearest cross street or provide directions from a recognized landmark. The maximum number of characters available in the Cross Street or Directions field is 30. If U. S. National Grid is selected as the Location type, the USNG coordinates of the incident location is entered using 10 digit precision at a minimum. The maximum entry is 15 characters. Note: USNG may also be used to precisely describe the location of a Wildland Fire incident instead of Longitude/Latitude coordinates or Township Ranges

### Example

The incident occurred on 10th Street with N Street being the nearest cross street:

<b>B</b>	<b>Location Type</b> ☆	<input type="checkbox"/>	Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires.	Census Tract	_____ - _____	
	<input type="checkbox"/> Street address	_____	_____	10th	_____	
	<input type="checkbox"/> Intersection	_____	_____	_____	_____	
	<input type="checkbox"/> In front of	Number/Milepost	Prefix	Street or Highway	Street Type	Suffix
	<input type="checkbox"/> Rear of	_____	_____	_____	_____	_____
<input type="checkbox"/> Adjacent to	Apt./Suite/Room	City	_____	State	ZIP Code	
<input checked="" type="checkbox"/> Directions	N Street					
<input type="checkbox"/> U.S. National Grid	Cross Street, Directions or National Grid, as applicable					

## SECTION C

**C Incident Type** ☆

☛ Incident Type was known as *Type of Situation Found* in NFIRS 4.1.

**Definition**

This is the actual situation that emergency personnel found on the scene when they arrived. These codes include the entire spectrum of fire department activities from fires to EMS to public service.

☛ The type of incident reported here is not always the same as the incident type initially dispatched.

**Purpose**

This critical information identifies the various types of incidents to which the fire department responds and allows the fire department to document the full range of incidents it handles.

This information can be used to analyze the frequency of different types of incidents, provide insight on fire and other incident problems, and identify training needs.

☛ This element determines which modules will subsequently be completed.

**Entry**

Enter the three-digit code and a written description that best describes the type of incident. This entry is generally the type of incident found when emergency personnel arrived at the scene, but if a more serious condition developed after the fire department arrival on the scene, then that incident type should be reported. The codes are organized in a series:

SERIES	HEADING
100	Fire
200	Overpressure Rupture, Explosion, Overheat (No Fire)
300	Rescue and Emergency Medical Service (EMS) Incidents
400	Hazardous Condition (No Fire)
500	Service Call
600	Good Intent Call
700	False Alarm and False Call
800	Severe Weather and Natural Disaster
900	Special Incident Type

☛ For incidents involving fire and hazardous materials or fire and EMS, use the fire codes. Always use the lowest numbered series that applies to the incident. You will have an opportunity to describe multiple actions taken later in the report.

☛ For vehicle fires on a structure, use the mobile property fire codes (130–138) unless the structure became involved.

- For fires in buildings that are confined to noncombustible containers, use codes 113–118 of the structure fire codes when there is no flame damage beyond the noncombustible container.

### Example

Fire in food on the stove that was confined to the pot (113).

C	Incident Type ☆
	113   Food on the stove
Incident Type	

## INCIDENT TYPE CODES

**Fire. Includes fires out on arrival and gas vapor explosions (with extremely rapid combustion).**

### Structure fire

- 111 Building fire. Excludes confined fires (113–118).
- 112 Fire in structure, other than in a building. Included are fires on or in piers, quays, or pilings; tunnels or underground connecting structures; bridges, trestles, or overhead elevated structures; transformers, power or utility vaults or equipment; fences; and tents.
- 113 Cooking fire involving the contents of a cooking vessel without fire extension beyond the vessel.
- 114 Chimney or flue fire originating in and confined to a chimney or flue. Excludes fires that extend beyond the chimney (111 or 112).
- 115 Incinerator overload or malfunction, but flames cause no damage outside the incinerator.
- 116 Fuel burner/boiler, delayed ignition or malfunction, where flames cause no damage outside the fire box.
- 117 Commercial compactor fire, confined to contents of compactor. Excluded are home trash compactors.
- 118 Trash or rubbish fire in a structure, with no flame damage to structure or its contents.

**Fire in mobile property used as a fixed structure.** Includes mobile homes, motor homes, camping trailers.

- 121 Fire in mobile home used as a fixed residence. Includes mobile homes when not in transit and used as a structure for residential purposes; and manufactured homes built on a permanent chassis.
- 122 Fire in a motor home, camper, or recreational vehicle when used as a structure. Includes motor homes when not in transit and used as a structure for residential purposes.
- 123 Fire in a portable building, when used at a fixed location. Includes portable buildings used for commerce, industry, or education and trailers used for commercial purposes.
- 120 Fire in mobile property used as a fixed structure, other.

**Mobile property (vehicle) fire.** Excludes mobile properties used as a structure (120 series). If a vehicle fire occurs on a bridge and does not damage the bridge, it should be classified as a vehicle fire.

- 131 Passenger vehicle fire. Includes any motorized passenger vehicle, other than a motor home (136) (e.g., pickup trucks, sport utility vehicles, buses).
- 132 Road freight or transport vehicle fire. Includes commercial freight hauling vehicles and contractor vans or trucks. Examples are moving trucks, plumber vans, and delivery trucks.
- 133 Rail vehicle fire. Includes all rail cars, including intermodal containers and passenger cars that are mounted on a rail car.
- 134 Water vehicle fire. Includes boats, barges, hovercraft, and all other vehicles designed for navigation on water.
- 135 Aircraft fire. Includes fires originating in or on an aircraft, regardless of use.
- 136 Self-propelled motor home or recreational vehicle. Includes only self-propelled motor homes or recreational vehicles when being used in a transport mode. Excludes those used for normal residential use (122).
- 137 Camper or recreational vehicle (RV) fire, not self-propelled. Includes trailers. Excludes RVs on blocks or used regularly as a fixed building (122) and the vehicle towing the camper or RV or the campers mounted on pickups (131).

- 138 Off-road vehicle or heavy equipment fire. Includes dirt bikes, specialty off-road vehicles, earth-moving equipment (bulldozers), and farm equipment.
- 130 Mobile property (vehicle) fire, other.

**Natural vegetation fire.** Excludes crops or plants under cultivation (see 170 series).

- 141 Forest, woods, or wildland fire. Includes fires involving vegetative fuels, other than prescribed fire (632), that occur in an area in which development is essentially nonexistent, except for roads, railroads, power lines, and the like. Also includes forests managed for lumber production and fires involving elevated fuels such as tree branches and crowns. Excludes areas in cultivation for agricultural purposes such as tree farms or crops (17x series).
- 142 Brush or brush-and-grass mixture fire. Includes ground fuels lying on or immediately above the ground such as duff, roots, dead leaves, fine dead wood, and downed logs.
- 143 Grass fire. Includes fire confined to area characterized by grass ground cover, with little or no involvement of other ground fuels; otherwise, see 142.
- 140 Natural vegetation fire, other.

**Outside rubbish fire.** Includes all rubbish fires outside a structure or vehicle.

- 151 Outside rubbish, trash, or waste fire not included in 152–155. Excludes outside rubbish fires in a container or receptacle (154).
- 152 Garbage dump or sanitary landfill fire.
- 153 Construction or demolition landfill fire.
- 154 Dumpster or other outside trash receptacle fire. Includes waste material from manufacturing or other production processes. Excludes materials that are not rubbish or have salvage value (161 or 162).
- 155 Outside stationary compactor or compacted trash fire. Includes fires where the only material burning is rubbish. Excludes fires where the compactor is damaged (162).
- 150 Outside rubbish fire, other.

**Special outside fire.** Includes outside fires with definable value. Excludes crops and orchards (170 series).

- 161 Outside storage fire on residential or commercial/industrial property, not rubbish. Includes recyclable materials at dropoff points.
- 162 Outside equipment fire. Includes outside trash compactors, outside HVAC units, and irrigation pumps. Excludes special structures (110 series) and mobile construction equipment (130 series).
- 163 Outside gas or vapor combustion explosion without sustained fire.
- 164 Outside mailbox fire. Includes dropoff boxes for delivery services.
- 160 Special outside fire, other.

**Cultivated vegetation, crop fire**

- 171 Cultivated grain or crop fire. Includes fires involving corn, wheat, soybeans, rice, and other plants before harvest.
- 172 Cultivated orchard or vineyard fire.
- 173 Cultivated trees or nursery stock fire. Includes fires involving Christmas tree farms and plants under cultivation for transport off-site for ornamental use.
- 170 Cultivated vegetation, crop fire, other.

**Fire, other**

- 100 Fire, other.

**Overpressure Rupture, Explosion, Overheat (No Fire).** Excludes steam mistaken for smoke.

**Overpressure rupture from steam (no ensuing fire)**

- 211 Overpressure rupture of steam pipe or pipeline.
- 212 Overpressure rupture of steam boiler.
- 213 Overpressure rupture of pressure or process vessel from steam.
- 210 Overpressure rupture from steam, other.

**Overpressure rupture from air or gas (no ensuing fire).** Excludes steam or water vapor.

- 221 Overpressure rupture of air or gas pipe or pipeline.
- 222 Overpressure rupture of boiler from air or gas. Excludes steam-related overpressure ruptures.

- 223 Overpressure rupture of pressure or process vessel from air or gas, not steam.
- 220 Overpressure rupture from air or gas, other.

**Overpressure rupture from chemical reaction (no ensuing fire)**

- 231 Overpressure rupture of pressure or process vessel from a chemical reaction.

**Explosion (no fire)**

- 241 Munitions or bomb explosion (no fire). Includes explosions involving military ordnance, dynamite, nitroglycerin, plastic explosives, propellants, and similar agents with a UN classification 1.1 or 1.3. Includes primary and secondary high explosives.
- 242 Blasting agent explosion (no fire). Includes ammonium nitrate and fuel oil (ANFO) mixtures and explosives with a UN Classification 1.5 (also known as blasting agents).
- 243 Fireworks explosion (no fire). Includes all classes of fireworks.
- 244 Dust explosion (no fire).
- 240 Explosion (no fire), other.

**Excessive heat, scorch burns with no ignition**

- 251 Excessive heat, overheat scorch burns with no ignition. Excludes lightning strikes with no ensuing fire (814).

**Overpressure rupture, explosion, overheat, other**

- 200 Overpressure rupture, explosion, overheat, other.

**Rescue and Emergency Medical Service Incident****Medical assist**

- 311 Medical assist. Includes incidents where medical assistance is provided to another group/agency that has primary EMS responsibility. (Example, providing assistance to another agency-assisting EMS with moving a heavy patient.)

**Emergency medical service incident**

- 321 EMS call. Includes calls when the patient refuses treatment. Excludes vehicle accident with injury (322) and pedestrian struck (323).
- 322 Motor vehicle accident with injuries. Includes collision with other vehicle, fixed objects, or loss of control resulting in leaving the roadway.
- 323 Motor vehicle/pedestrian accident (MV Ped). Includes any motor vehicle accident involving a pedestrian injury.
- 324 Motor vehicle accident with no injuries.
- 320 Emergency medical service incident, other.

**Lock-In**

- 331 Lock-in. Includes opening locked vehicles and gaining entry to locked areas for access by caretakers or rescuers, such as a child locked in a bathroom. Excludes lock-outs (511).

**Search for lost person**

- 341 Search for person on land. Includes lost hikers and children, even where there is an incidental search of local bodies of water, such as a creek or river.
- 342 Search for person in water. Includes shoreline searches incidental to a reported drowning call.
- 343 Search for person underground. Includes caves, mines, tunnels, and the like.
- 340 Search for lost person, other.

**Extrication, rescue**

- 351 Extrication of victim(s) from building or structure, such as a building collapse. Excludes high-angle rescue (356).
- 352 Extrication of victim(s) from vehicle. Includes rescues from vehicles hanging off a bridge or cliff.
- 353 Removal of victim(s) from stalled elevator.
- 354 Trench/Below-grade rescue.
- 355 Confined space rescue. Includes rescues from the interiors of tanks, including areas with potential for hazardous atmospheres such as silos, wells, and tunnels.
- 356 High-angle rescue. Includes rope rescue and rescues off of structures.
- 357 Extrication of victim(s) from machinery. Includes extrication from farm or industrial equipment.

350 Extrication, rescue, other.

#### **Water and ice-related rescue**

361 Swimming/Recreational water areas rescue. Includes pools and ponds. Excludes ice rescue (362).

362 Ice rescue. Includes only cases where victim is stranded on ice or has fallen through ice.

363 Swift-water rescue. Includes flash flood conditions.

364 Surf rescue.

365 Watercraft rescue. Excludes rescues near the shore and in swimming/recreational areas (361). Includes people falling overboard at a significant distance from land.

360 Water and ice-related rescue, other.

#### **Electrical rescue**

371 Electrocution or potential electrocution. Excludes people trapped by power lines (372).

372 Trapped by power lines. Includes people trapped by downed or dangling power lines or other energized electrical equipment.

370 Electrical rescue, other.

#### **Rescue or EMS standby**

381 Rescue or EMS standby for hazardous conditions. Excludes aircraft standby (462).

#### **Rescue, emergency medical service (EMS) incident, other**

300 Rescue and EMS incident, other.

### **Hazardous Condition (No Fire)**

#### **Combustible/Flammable spills and leaks**

411 Gasoline or other flammable liquid spill (flash point below 100 degrees F at standard temperature and pressure (Class I)).

412 Gas leak (natural gas or LPG). Excludes gas odors with no source found (671).

413 Oil or other combustible liquid spill (flash point at or above 100 degrees F at standard temperature and pressure (Class II or III)).

410 Combustible and flammable gas or liquid spills or leaks, other.

#### **Chemical release, reaction, or toxic condition**

421 Chemical hazard (no spill or leak). Includes the potential for spills or leaks.

422 Chemical spill or leak. Includes unstable, reactive, explosive material.

423 Refrigeration leak. Includes ammonia.

424 Carbon monoxide incident. Excludes incidents with nothing found (736 or 746).

420 Toxic chemical condition, other.

#### **Radioactive condition**

431 Radiation leak, radioactive material. Includes release of radiation due to breaching of container or other accidental release.

430 Radioactive condition, other.

#### **Electrical wiring/Equipment problem**

441 Heat from short circuit (wiring), defective or worn insulation.

442 Overheated motor or wiring.

443 Breakdown of light ballast.

444 Power line down. Excludes people trapped by downed power lines (372).

445 Arcing, shorted electrical equipment.

440 Electrical wiring/equipment problem, other.

#### **Biological hazard**

451 Biological hazard, confirmed or suspected.

#### **Accident, potential accident**

461 Building or structure weakened or collapsed. Excludes incidents where people are trapped (351).

462 Aircraft standby. Includes routine standby for takeoff and landing as well as emergency alerts at airports.

463 Vehicle accident, general cleanup. Includes incidents where FD is dispatched after the accident to clear away debris. Excludes extrication from vehicle (352) and flammable liquid spills (411 or 413).

460 Accident, potential accident, other.

**Explosive, bomb removal**

- 471 Explosive, bomb removal. Includes disarming, rendering safe, and disposing of bombs or suspected devices. Excludes bomb scare (721).

**Attempted burning, illegal action**

- 481 Attempt to burn. Includes situations in which incendiary devices fail to function.  
 482 Threat to burn. Includes verbal threats and persons threatening to set themselves on fire. Excludes an attempted burning (481).  
 480 Attempted burning, illegal action, other.

**Hazardous condition, other**

- 400 Hazardous condition (no fire), other.

**Service Call****Person in distress**

- 511 Lock-out. Includes efforts to remove keys from locked vehicles. Excludes lock-ins (331).  
 512 Ring or jewelry removal, without transport to hospital. Excludes persons injured (321).  
 510 Person in distress, other.

**Water problem**

- 521 Water (not people) evacuation. Includes the removal of water from basements. Excludes water rescues (360 series).  
 522 Water or steam leak. Includes open hydrant. Excludes overpressure ruptures (211).  
 520 Water problem, other.

**Smoke, odor problem**

- 531 Smoke or odor removal. Excludes the removal of any hazardous materials.

**Animal problem or rescue**

- 541 Animal problem. Includes persons trapped by an animal or an animal on the loose.  
 542 Animal rescue.  
 540 Animal problem or rescue, other.

**Public service assistance**

- 551 Assist police or other governmental agency. Includes forcible entry and the provision of lighting.  
 552 Police matter. Includes incidents where FD is called to a scene that should be handled by the police.  
 553 Public service. Excludes service to governmental agencies (551 or 552).  
 554 Assist invalid. Includes incidents where the invalid calls the FD for routine help, such as assisting a person in returning to bed or chair, with no transport or medical treatment given.  
 555 Defective elevator, no occupants.  
 550 Public service assistance, other.

**Unauthorized burning**

- 561 Unauthorized burning. Includes fires that are under control and not endangering property.

**Cover assignment, standby at fire station, move-up**

- 571 Cover assignment, assist other fire agency such as standby at a fire station or move-up.

**Service call, other**

- 500 Service call, other.

**Good Intent Call****Dispatched and canceled en route**

- 611 Dispatched and canceled en route. Incident cleared or canceled prior to arrival of the responding unit. If a unit arrives on the scene, fill out the applicable code.

**Wrong location, no emergency found**

- 621 Wrong location. Excludes malicious false alarms (710 series).
- 622 No incident found on arrival at dispatch address.

**Controlled burning**

- 631 Authorized controlled burning. Includes fires that are agricultural in nature and managed by the property owner. Excludes unauthorized controlled burning (561) and prescribed fires (632).
- 632 Prescribed fire. Includes fires ignited by management actions to meet specific objectives and have a written, approved prescribed fire plan prior to ignition. Excludes authorized controlled burning (631).

**Vicinity alarm**

- 641 Vicinity alarm (incident in other location). For use only when an erroneous report is received for a legitimate incident. Includes separate locations reported for an actual fire and multiple boxes pulled for one fire.

**Steam, other gas mistaken for smoke**

- 651 Smoke scare, odor of smoke, not steam (652). Excludes gas scares or odors of gas (671).
- 652 Steam, vapor, fog, or dust thought to be smoke.
- 653 Smoke from barbecue or tar kettle (no hostile fire).
- 650 Steam, other gas mistaken for smoke, other.

**EMS call where party has been transported**

- 661 EMS call where injured party has been transported by a non-fire service agency or left the scene prior to arrival.

**HazMat release investigation w/no HazMat found**

- 671 Hazardous material release investigation with no hazardous condition found. Includes odor of gas with no leak/gas found.
- 672 Biological hazard investigation with no hazardous condition found.

**Good intent call, other**

- 600 Good intent call, other.

**False Alarm and False Call****Malicious, mischievous false alarm**

- 711 Municipal alarm system, malicious false alarm. Includes alarms transmitted on street fire alarm boxes.
- 712 Direct tie to fire department, malicious false alarm. Includes malicious alarms transmitted via fire alarm system directly tied to the fire department, not via dialed telephone.
- 713 Telephone, malicious false alarm. Includes false alarms transmitted via the public telephone network using the local emergency reporting number of the fire department or another emergency service agency.
- 714 Central station, malicious false alarm. Includes malicious false alarms via a central-station-monitored fire alarm system.
- 715 Local alarm system, malicious false alarm. Includes malicious false alarms reported via telephone or other means as a result of activation of a local fire alarm system.
- 710 Malicious, mischievous false alarm, other.

**Bomb scare**

- 721 Bomb scare (no bomb).

**System or detector malfunction.** Includes improper performance of fire alarm system that is not a result of a proper system response to environmental stimuli such as smoke or high heat conditions.

- 731 Sprinkler activated due to the failure or malfunction of the sprinkler system. Includes any failure of sprinkler equipment that leads to sprinkler activation with no fire present. Excludes unintentional operation caused by damage to the sprinkler system (740 series).
- 732 Extinguishing system activation due to malfunction.
- 733 Smoke detector activation due to malfunction.
- 734 Heat detector activation due to malfunction.
- 735 Alarm system activation due to malfunction.
- 736 Carbon monoxide detector activation due to malfunction.
- 730 System or detector malfunction, other.

**Unintentional system or detector operation (no fire).** Includes tripping an interior device accidentally.

- 741 Sprinkler activation (no fire), unintentional. Includes testing the sprinkler system without fire department notification.
- 742 Extinguishing system activation. Includes testing the extinguishing system without fire department notification.
- 743 Smoke detector activation (no fire), unintentional. Includes proper system responses to environmental stimuli such as non-hostile smoke.
- 744 Detector activation (no fire), unintentional. A result of a proper system response to environmental stimuli such as high heat conditions.
- 745 Alarm system activation (no fire), unintentional.
- 746 Carbon monoxide detector activation (no carbon monoxide detected). Excludes carbon monoxide detector malfunction.
- 740 Unintentional transmission of alarm, other.

**Biohazard scare**

- 751 Biological hazard, malicious false report.

**False alarm and false call, other**

- 700 False alarm or false call, other.

**Severe Weather and Natural Disaster**

- 811 Earthquake assessment, no rescue or other service rendered.
- 812 Flood assessment. Excludes water rescue (360 series).
- 813 Wind storm. Includes tornado, hurricane, or cyclone assessment. No other service rendered.
- 814 Lightning strike (no fire). Includes investigation.
- 815 Severe weather or natural disaster standby.
- 800 Severe weather or natural disaster, other.

**Special Incident Type****Citizen complaint**

- 911 Citizen's complaint. Includes reports of code or ordinance violation.

**Special type of incident, other**

- 900 Special type of incident, other.

**SECTION D****Aid Given or Received** ☆**D** **Definition**

Aid given or received, either automatically (i.e., prearranged) or mutually for a specific incident. These actions are defined as:

*Aid Received (automatic or mutual):* A fire department handles an incident within its jurisdiction with additional manpower or equipment from one or more fire departments outside its jurisdiction. Aid received can be either mutual or automatic aid.

*Aid Given (automatic or mutual):* A fire department responds into another fire department's jurisdiction to provide assistance at an incident or to cover a vacated station while the receiving fire department is busy at an incident. Aid received can be either mutual or automatic aid.

*Other Aid Given:* A fire department covers and responds to another jurisdiction or locale that has no fire

department.

*No Aid:* A fire department handles an incident within its jurisdiction without help from adjacent or outside fire departments.

### *Purpose*

Aid information can be used to study response levels necessary to control various fire and emergency situations. It can be used to determine the adequacy of resources at the local level and the need for adjusting cooperative agreements. The Aid Given or Received entry serves as data control to ensure that the same incident is not counted more than once while still giving credit for activity performed by outside departments.

### *Entry*

Check or mark the box indicating whether aid was given or received. If no aid was given or received, check or mark the None box.

- ☛ Unless otherwise stipulated, whenever the following instructions indicate completion of the “Basic Module,” the appropriate supporting and optional modules must also be completed.

*Mutual/Automatic Aid Received:* If either of these boxes is checked or marked, complete the Basic Module.

*Mutual/Automatic Aid Given:* If your department provided mutual fill-in service only, check or mark the appropriate aid-given box; complete Their FDID, Their State, and Their Incident Number fields; enter the two-digit Actions Taken code (codes 90, 91, or 92 only) in Section F; and complete Block G1 (Resources).

- ☛ No other information is required for the Basic Module unless a fire service casualty occurs. In this case, you must also complete Block H1 (Casualties) and a Fire Service Casualty Module.

*Other Aid Given:* Check or mark this box if your department covers and responds to another jurisdiction or locale that has no fire department. Complete the Basic Module. In Section D, leave the Their FDID and Their Incident Number fields blank; the Their State field is optional.

*None:* Check or mark this box if no mutual aid was involved.

If the receiving fire department completes the incident, then the giving department should complete the required portion of the module as needed for its own documentation of the incident. This can be particularly important for documenting fire service casualties.

*Resources:* If you give aid, you may choose to report your own resources as an option (Block G1). Similarly, if you receive aid, you may choose to count only your own resources or count your own resources plus those of the aid-giving department. If you include aid-received resources, check or mark the corresponding box.

*Casualties:* The aid-receiving department reports the details on all casualties other than the fire service ca-

sualties of the aid-giving department. Each department reports the details on its own fire service casualties.

- It is critical to the reporting system that the aid-receiving departments always report the total number of civilian casualties associated with the incident.

**Examples**

Three examples given below illustrate aid entries.

- A fire department receives automatic aid from another department in fighting a fire. The Gorman County Fire Department responded to a structure fire to assist the Buckley Fire & Rescue Department. Buckley FRD completes all required modules and checks the “Automatic aid received” box in Section D on the Basic Module.
  - The equipment provided by the Gorman County FD may be listed in the Remarks section (L). For example, “Gorman County Fire Department: one pumper, one aerial ladder.”
  - The Gorman County FD completes Section A through Section G1 on the Basic Module. In Section D, check or mark the Automatic Aid Given box and indicate Buckley FRD’s FDID, State, and incident number. If the incident number is unknown, then the Gorman County FD is required to complete the entire Basic Module.
- A fire department sends apparatus and personnel to a nearby community to “fill-in” for its fire department. Buckley Fire & Rescue Department sent one pumper to fill-in at Station 13 in Gorman County FD’s jurisdiction.
  - If the Buckley FRD fill-in unit responded to an incident: Buckley FRD completes the Basic Module using Gorman County FD’s FDID and Incident Number because, once they are in the Gorman station, it is the same as if they are Gorman fire department personnel.
  - If Buckley FRD did not respond to an incident: Buckley FRD completes the Basic Module with the Action Taken (Section F) as “Fill-in, Standby” (code 92) using the Buckley FDID and Incident Number:
- A fire department gives aid to another jurisdiction without a fire department. The Buckley Fire & Rescue Department covers the neighboring town of Dunnville, which has no fire protection services of its own.
  - For each incident that Buckley FRD responds to in Dunnville, the Other Aid Given box should be checked or marked and the Basic Module completed.

D Aid Given or Received ☆		<input type="checkbox"/> None																
1	<input type="checkbox"/> Mutual aid received																	
2	<input type="checkbox"/> Auto. aid received																	
3	<input checked="" type="checkbox"/> Mutual aid given	<table border="1"> <tr> <td>0</td><td>7</td><td>4</td><td>3</td><td>4</td> <td>V</td><td>A</td> </tr> <tr> <td colspan="5">Their FDID</td> <td colspan="2">Their State</td> </tr> </table>	0	7	4	3	4	V	A	Their FDID					Their State			
0	7	4	3	4	V	A												
Their FDID					Their State													
4	<input type="checkbox"/> Auto. aid given																	
5	<input type="checkbox"/> Other aid given	<table border="1"> <tr> <td></td><td></td><td></td><td></td><td></td> <td>0</td><td>0</td><td>0</td> </tr> <tr> <td colspan="8">Their Incident Number</td> </tr> </table>						0	0	0	Their Incident Number							
					0	0	0											
Their Incident Number																		

**AID GIVEN OR RECEIVED CODES**

- |   |   |
|---|---|
| 1 | Mutual aid received from an outside fire service entity upon request from the initial responding department.  |
| 2 | Automatic aid received. Includes a department receiving aid from an outside fire service entity that was dispatched automatically based on a prior agreement between two jurisdictions. |
| 3 | Mutual aid given to an outside fire service entity on request of the outside entity.  |
| 4 | Automatic aid given. Includes departments automatically dispatched to give aid to an outside fire service entity based on a prior agreement between two jurisdictions.                  |
| 5 | Other aid given. Includes a fire department responding to another jurisdiction or locale that has no fire department.   |
| N | No aid given or received.   |

**SECTION E**

Section E collects the dates and times of when the alarm was received, when the units arrived on scene, when the incident was controlled, and when the last unit left the scene.

**E1 Dates and Times**

All dates and times are entered as numerals. For time of day, the 24-hour clock is used. (Midnight is 0000.)

**Alarm Time ☆***Definition*

The actual month, day, year, and time of day (hour, minute, and (optional in on-line entry) seconds) when the alarm was received by the fire department. This is not an elapsed time.

- ☛ The Alarm time is the same as the Incident Date (Section A), except if the incident is an exposure and the exposure occurs on a subsequent day.

*Purpose*

Alarm time is important for three reasons: (1) as a legal requirement for recording the precise time notification was made of the incident, (2) as information for determining the frequency of particular types of incidents by time period, and (3) as the starting time to determine the length of time taken to arrive at an incident and the total amount of time spent on the incident scene.

- ☛ For all automated systems, NFIRS supports the collection of all times in seconds in addition to hours and minutes, although it is not required. Collection of seconds is usually used by fire departments using computer-aided dispatch.

*Entry*

Enter the month, day, year (mm/dd/yyyy), and time to the nearest minute when the original alarm was received by the fire department.

01 January	04 April	07 July	10 October
02 February	05 May	08 August	11 November
03 March	06 June	09 September	12 December
12:00 midnight = 0000	12:01 a.m. = 0001	1:06 a.m. = 0106	2:20 p.m. = 1420

**Example**

The alarm was received at 5:37 p.m. on December 23, 2002:

E1 Dates and Times		Midnight is 0000				
		Month	Day	Year	Hour	Min
Check boxes if dates are the same as Alarm Date. 	<input checked="" type="checkbox"/> <b>Alarm</b> ☆	ALARM always required				
	<input type="checkbox"/> <b>Arrival</b> ☆	ARRIVAL required, unless canceled or did not arrive				
	<input type="checkbox"/> <b>Controlled</b>	CONTROLLED optional, except for wildland fires				
	<input type="checkbox"/> <b>Last Unit Cleared</b>	LAST UNIT CLEARED, required except for wildland fires				
		1   2	2   3	2   0   0   2	1   7	3   7

**Arrival Time ☆**

**Definition**

The actual month, day, year, and time of day when the first responding unit arrived at the incident scene. This is not an elapsed time.

**Purpose**

This element reflects the time spent traveling to the scene of the incident. This information can be useful to fire department management in determining (1) the actual time spent at an incident and (2) any delay between alarm and arrival.

**Entry**

Enter the month, day, year (mm/dd/yyyy), and time that the first fire department unit arrived on the scene. If the date is the same as the Alarm date, check or mark the corresponding box; do not reenter the date.

☛ If canceled on the way to a call (Incident Type 611), Arrival time is not required.

**Example**

The first responding units arrived at 5:42 p.m. on December 23, 2002:

E1 Dates and Times		Midnight is 0000				
		Month	Day	Year	Hour	Min
Check boxes if dates are the same as Alarm Date. 	<input checked="" type="checkbox"/> <b>Alarm</b> ☆	ALARM always required				
	<input checked="" type="checkbox"/> <b>Arrival</b> ☆	ARRIVAL required, unless canceled or did not arrive				
	<input type="checkbox"/> <b>Controlled</b>	CONTROLLED optional, except for wildland fires				
	<input type="checkbox"/> <b>Last Unit Cleared</b>	LAST UNIT CLEARED, required except for wildland fires				
		1   2	2   3	2   0   0   2	1   7	4   2

## Controlled Time

### Definition

The actual month, day, year, and time of day when the fire is brought under control or the incident is stabilized and does not require additional emergency resources. “Controlled” is the time when the incident commander determines that the fire will not escape from its containment perimeter.

☛ This is a required field for wildland fires.

### Purpose

The time spent stabilizing a fire provides fire department management with the information needed to analyze the duration patterns of different types of fires. This can assist in determining service demand and costs for resource allocation.

### Entry

Enter the month, day, year (mm/dd/yyyy), and time that the incident was controlled. If the date is the same as the Alarm date, check or mark the corresponding box; do not reenter the date. However, if the incident extended (from the Alarm time to the Controlled time) through midnight, do not check or mark the box; instead, enter the date.

### Example

The fire was controlled at 12:24 a.m. on December 24, 2002:

E1 Dates and Times		Midnight is 0000					
		Month	Day	Year	Hour	Min	
Check boxes if dates are the same as Alarm Date.		ALARM always required					
<input type="checkbox"/>	Alarm ☆	1 2	2 3	2 0 0 2	1 7	3 7	
		ARRIVAL required, unless canceled or did not arrive					
<input checked="" type="checkbox"/>	Arrival ☆				1 7	4 2	
		CONTROLLED optional, except for wildland fires					
<input type="checkbox"/>	Controlled	1 2	2 4	2 0 0 2	0 0	2 4	
		LAST UNIT CLEARED, required except for wildland fires					
<input type="checkbox"/>	Last Unit Cleared						

## Last Unit Cleared Time

### Definition

The actual month, day, year, and time of day when the last unit cleared the incident scene. This is not an elapsed time.

### Purpose

Combined with the previously recorded times, this element is valuable to fire department management in determining the actual time spent at an incident.

### Entry

Enter the month, day, year (mm/dd/yyyy), and time that the last unit cleared the scene. If the date is the same as the Alarm date, check or mark the corresponding box; do not reenter the date. However, if the incident extended (from the Alarm time to the Last Unit Cleared time) through midnight, do not check or mark the box; instead, enter the date.

### Example

The last unit cleared at 1:00 a.m. on December 24, 2002:

E1 Dates and Times		Midnight is 0000				
		Month	Day	Year	Hour	Min
Check boxes if dates are the same as Alarm Date. 	<input type="checkbox"/> Alarm ☆	ALARM always required				
		1 2	2 3	2 0 0 2	1 7	3 7
	<input checked="" type="checkbox"/> Arrival ☆	ARRIVAL required, unless canceled or did not arrive				
					1 7	4 2
<input type="checkbox"/> Controlled	CONTROLLED optional, except for wildland fires					
	1 2	2 4	2 0 0 2	0 0	2 4	
<input type="checkbox"/> Last Unit Cleared	LAST UNIT CLEARED, required except for wildland fires					
	1 2	2 4	2 0 0 2	0 1	0 0	

## E2 Shift and Alarms

### Shift or Platoon

#### Definition

Identifies the on-duty shift or platoon that responded to the incident. This applies only to fire departments with organized work force arrangements.

#### Purpose

Recording the shift that responded to an incident assists fire departments in determining workload balances and staffing requirements. This is a local option.

### Entry

If your fire department uses this data element, enter the designation of the on-duty shift that responded to the incident. If the incident was of such duration that the shift changed during the control of the incident, record the shift change time and the designation of the new shift in the Remarks section (L).

☛ Fire departments should establish and publish the codes or values to be used in this field.

### Example

C Shift responds to an incident:

<b>E2 Shifts and Alarms</b>		
Local Option		
[ C ]	[   ]	[   ]
Shift or platoon	Alarms	District

### Alarms

#### Definition

The actual number of alarms transmitted for the incident. The definition of an alarm is determined at the local level.

#### Purpose

The number of alarms is one method of measuring incident severity. Knowing the number of alarms can be useful for local analysis of resource requirements. The number of alarms also may be related to mutual aid support. *This is a local option.*

#### Entry

If your fire department has a standard method of designating alarms, enter the number of alarms required for this incident.

### Example

A three-alarm fire in a business district:

<b>E2 Shifts and Alarms</b>		
Local Option		
[ C ]	[ 3 ]	[   ]
Shift or platoon	Alarms	District

### District

#### Definition

An area identified by the fire department that is useful for administrative purposes.

#### Purpose

Fire departments can develop their own method of locating the frequency and severity of incidents by district. District numbers may identify specific townships, contract service areas, political wards, station response areas, inspection or administrative districts, or any other boundary a department may wish to use. This data element can be a powerful tool for local use. *This is a local option.*

### Entry

Enter the fire department-assigned District number where the incident occurred. These positions can contain any combination of letters or numbers as designated by your fire department.

### Example

The fire occurred in Station 1A's first due area:

<b>E2 Shifts and Alarms</b>		
Local Option		
C	3	1A
Shift or platoon	Alarms	District

## E3 Special Studies

### Definition

Temporary data elements that can be used for collection of information that is of special interest for a defined period. Special studies are typically required to capture information on emerging trends, problem areas, or a specific issue being studied. When the answer becomes known through the special study, the collection of that field is no longer required. If the data will always be needed for permanent collection, a State- or department-defined permanent user field should be created and used instead of the Special Studies field. A State, a fire department, or the NFDC can define special studies.

*Special Study ID Number:* This number uniquely identifies each special study that is being run by the fire department, State, or NFDC.

*Special Study Value:* The value in the field being collected. Responses for special studies can be defined as codes or as alphanumeric entries of numeric values or dates. States, fire departments, and the NFDC can define Special Studies fields.

### Purpose

The use of special studies allows departments, States, and the NFDC to quickly collect information on an issue or problem and to answer a specific question through the temporary use of a special study field over a defined period of time. *This is a State or local option.*

### Entry

If you are participating in a Special Study, your entry will depend on the type of data being collected. Use the codeset defined for the particular Special Study field if it is a coded entry. The data entered may also be a date or a numeric entry if the field has been so defined. Additional Special Study fields are available on the Supplemental Form (NFIRS-1S).

## SECTION F

**F Actions Taken** ☆

☛ Actions Taken was known as Type of Action Taken in NFIRS 4.1.

*Definition*

The duties performed at the incident scene by the responding fire department personnel.

*Purpose*

These data elements, together with Incident Type, enable a fire department to document the breadth of activities and the resources required by the responding fire department to effectively handle the incident. This information also provides some indication of the specific types of services provided by the fire department.

*Entry*

The Actions Taken field(s) is required for all incidents where actions were taken, including “investigation only.” Enter the two-digit codes and descriptions for up to three of the *most significant* actions taken at the scene of the incident. Specific actions may include extinguishing fires, forcible entry, providing first aid, identifying and analyzing hazardous materials, and transporting the injured. The action may involve simply standing by at an incident for possible service.

Be as specific as possible in stating the action taken. The Additional Action Taken fields are optional. If this is a HazMat incident and the HazMat Module is being completed, list the non-HazMat actions taken in this field and the Actions Taken specific to handling the hazardous materials incident in the HazMat Module.

- ☛ The Primary Action Taken is the most significant action taken by the fire department at the scene (i.e., use the code with the lowest numerical value). This is a required field.
- ☛ When canceled en route, enter code 93, “Canceled en route;” in the case, the Incident Type (Section C) must be code 611.

*Example*

The fire department extinguished the fire (11), provided first aid to a fire victim (31), and overhauled the fire scene (12):

F Actions Taken ☆	
1   1	Extinguished the fire
Primary Action Taken (1)	
3   1	Provided first aid
Additional Action Taken (2)	
1   2	Overhauled the scene
Additional Action Taken (3)	

**ACTIONS TAKEN CODES****Fire Control or Extinguishment**

- 11 Extinguishment by fire service personnel.
- 12 Salvage and overhaul.
- 13 Establish fire lines around wildfire perimeter. Includes clearing firebreaks using direct, indirect, and burnout tactics as appropriate.
- 14 Contain fire (wildland). Includes taking suppression action that can reasonably be expected to check the fire spread under prevailing and predicted conditions.
- 15 Confine fire (wildland). Includes when fire crews or resources stop the forward progress of a fire but have not put in all control lines.
- 16 Control fire (wildland). Includes when fire crews or resources completely surround the fire perimeter with control lines; extinguish any spot fires; burn any area adjacent to the fire side of the control lines; and cool down all hot spots that are immediate threats to the control line, until the lines can reasonably be expected to hold under foreseeable conditions.
- 17 Manage prescribed fire (wildland).
- 10 Fire control or extinguishment, other.

**Search and Rescue**

- 21 Search for lost or missing person. Includes animals.
- 22 Rescue, remove from harm. Excludes vehicle extrication (23).
- 23 Extrication or disentangling of a person. Excludes body recovery (24).
- 24 Recover body or body parts.
- 20 Search and rescue, other.

**EMS and Transport**

- 31 Provide first aid and check for injuries. Medical evaluation of patient.
- 32 Provide basic life support (BLS).
- 33 Provide advanced life support (ALS).
- 34 Transport of person from scene in fire service ambulance or apparatus.
- 30 Emergency medical services, other.

**Hazardous Condition**

- 41 Identification, analysis of hazardous materials.
- 42 Hazardous materials detection, monitoring, sampling, and analysis using a variety of detection instruments including combustible gas indicators (CGIs) or explosimeter, oxygen monitors, colorimetric tubes, specific chemical monitors, and others. Results from these devices must be analyzed to provide information about the hazardous nature of the material or environment.
- 43 Hazardous materials spill control and confinement. Includes confining or diking hazardous materials. These are actions taken to confine the product released to a limited area including the use of absorbents, damming/diking, diversion of liquid runoff, dispersion, retention, or vapor suppression.
- 44 Hazardous materials leak control and containment. Includes actions taken to keep a material within its container, such as plugging/patching operations, neutralization, pressure isolation/reduction, solidification, and vacuuming.
- 45 Remove hazard. Includes neutralizing a hazardous condition.
- 46 Decontaminate persons or equipment. Includes actions taken to prevent the spread of contaminants from the "hot zone" to the "cold zone." This includes gross, technical, or advanced personal decontamination of victims, emergency responders, and equipment.
- 47 Decontamination of occupancy or area exposed to hazardous materials.
- 48 Remove hazardous materials. Includes a broad range of actions taken to remove hazardous materials from a damaged container or contaminated area. Examples of actions to remove hazards include product offload/transfer, controlled burning or product flaring, venting, and overpacking.
- 40 Hazardous condition, other.

**Fires, Rescues, and Hazardous Conditions**

- 51 Ventilate. Includes nonhazardous odor removal and removal of smoke from nonhazardous materials-related fires.
- 52 Forcible entry, performed by fire service. Includes support to law enforcement.
- 53 Evacuate area. Removal of civilians from an area determined to be hazardous. Includes actions taken to isolate the contaminated area and/or evacuate those persons affected by a hazardous materials release or potential release.
- 54 Determine if the materials released are nonhazardous through product identification and environmental monitoring.
- 55 Establish safe area. Includes isolating the area affected by denying entry to unprotected persons and establishing hazard control zones (hot, warm, cold).
- 56 Provide air supply.
- 57 Provide light or electrical power.
- 58 Operate apparatus or vehicle.
- 50 Fires, rescues, and hazardous conditions, other.

**Systems and Services**

- 61 Restore municipal services. Includes turning water back on and notifying the gas company to turn the gas on.
- 62 Restore sprinkler or fire protection system.
- 63 Restore fire alarm system. Includes restoring fire alarm systems monitored by the fire service.
- 64 Shut down system. Includes shutting down water, gas, and fire alarm systems.
- 65 Secure property. Includes property conservation activities such as covering broken windows or holes in roofs.
- 66 Remove water or control flooding condition.
- 60 Systems and services, other.

**Assistance**

- 71 Assist physically disabled. Includes providing nonmedical assistance to physically disabled, handicapped, or elderly citizens.
- 72 Assist animal. Includes animal rescue, extrication, removal, or transport.
- 73 Provide manpower. Includes providing manpower to assist rescue/ambulance units lift patients or providing manpower to assist police.
- 74 Provide apparatus.
- 75 Provide equipment, where equipment is used by another agency.
- 76 Provide water. Includes tanker shuttle operations and pumping in a relay or from a water source. Excludes normal fire suppression operations.
- 77 Control crowd. Includes restricting pedestrian access to an area. Excludes control of vehicles (78).
- 78 Control traffic. Includes setting up barricades and directing traffic.
- 79 Assess damage from severe weather or the results of a natural disaster.
- 70 Assistance, other.

**Information, Investigation, and Enforcement**

- 81 Incident command. Includes providing support to incident command activities.
- 82 Notify other agencies. Includes notifications of utility companies, property owners, and the like.
- 83 Provide information to the public or media.
- 84 Refer to proper authority. Includes turnover of incidents to other authorities or agencies such as the police.
- 85 Enforce fire code and other codes. Includes response to public complaints and abatement of code violations.
- 86 Investigate. Includes investigations done on arrival to determine the situation and post-incident investigations; and collecting incident information for incident reporting purposes.
- 87 Investigate. Fire out on arrival.
- 80 Information, investigation, and enforcement, other.

**Fill-in, Standby**

- 91 Fill in, move up to another fire station.
- 92 Standby.
- 93 Canceled en route.
- 00 Actions taken, other.
- 90 Fill-in, standby, other.

**SECTION G**

Section G collects data on the number of personnel and equipment used for suppression, EMS, etc., in the response to a specific incident.

**G1 Resources ☆**

*Definition*

The total complement of fire department personnel and apparatus (suppression, EMS, other) that responded to the incident. This includes all fire and EMS personnel assigned to the incident whether they arrived at the scene or were canceled before arrival.

*Purpose*

This information is used to determine actual personnel and apparatus requirements for different types of incidents and for different levels of incident severity. This data element may be examined with respect to casualties and damage estimates.

*Entry*

Enter the total number of fire department personnel and apparatus that responded to the incident for the Suppression, EMS, and Other fields. If the Apparatus or Personnel Modules are used, check or mark the appropriate box (top) and skip this section. If these personnel and apparatus counts include mutual aid resources, check or mark the box at the bottom of Block G1.

- ☛ Chief officer vehicles and privately owned vehicles should be counted as “Other.” The personnel arriving in these vehicles should be counted according to their primary assignment at the incident.

*Example*

Four firefighters (one engine), two EMS personnel (one ambulance), and one incident commander (one car) responded to an incident:

<b>G1 Resources ☆</b>	
<input type="checkbox"/> Check this box and skip this block if an Apparatus or Personnel Module is used.	
	<b>Apparatus    Personnel</b>
<b>Suppression</b>	_ _ _  1    _ _ _  4
<b>EMS</b>	_ _ _  1    _ _ _  2
<b>Other</b>	_ _ _  1    _ _ _  1
<input type="checkbox"/> Check box if resource counts include aid received resources.	

## **G<sub>2</sub>** Estimated Dollar Losses and Values

### *Definition*

Estimates of the total property and contents dollar loss and the pre-incident value of the property and contents.

- ☛ An estimate of the property and contents dollar loss is required for all fires where the value is known.

*Losses:* Rough estimation of the total loss to the structure and contents, in terms of the cost of replacement in like kind and quantity. This estimation of the fire loss includes contents damaged by fire, smoke, water, and overhaul. This does not include indirect loss, such as business interruption.

*Pre-incident Value:* Estimation of the replacement cost of the structure and contents.

### *Purpose*

Collecting property and content losses illustrates the magnitude of the fire problem, provides an additional indicator of the incident severity, and can be used to evaluate progress in fire protection. This information can help local communities, States, and the country determine the amount of money that should be spent on fire protection.

Estimated property and content losses are also crucial for identifying types of situations where high monetary losses are common. This information helps target fire prevention programs. Loss estimates also can be used to evaluate the cost effectiveness of various equipment and fire protection practices.

Pre-incident values help delimit the magnitude of the potential fire problem by providing a basis for comparison.

### *Entry*

Enter the best estimates of dollar losses (required for all fires when obtainable) and pre-incident values (local option) that are practical to make or obtain. Monetary losses should be estimated as accurately as possible, though it is understood that the estimates may be rough approximations. If there was no loss or no pre-incident value, check or mark the appropriate None boxes.

- ☛ In making this entry, use only whole dollars; do not include cents.
- ☛ A better estimate of losses for a fire often becomes available after the incident report is submitted. Revision of the original estimate should be made as a change entry when better information becomes available, especially for large fires.

*Example*

The estimated dollar loss was \$3,450; the estimated pre-incident value was \$7,500:

<b>G2 Estimated Dollar Losses and Values</b>			
<b>LOSSES:</b>	Required for all fires if known. Optional for non-fires.		<b>None</b>
Property	\$ [ ] [ ] [ ] , [ ] [ ] [ ] 3 , [ ] 4 , [ ] 5 [ ] 0		<input type="checkbox"/>
Contents	[ ] [ ] [ ] , [ ] [ ] [ ] , [ ] [ ] [ ]		<input checked="" type="checkbox"/>
<b>PRE-INCIDENT VALUE:</b> Optional			
Property	\$ [ ] [ ] [ ] , [ ] [ ] [ ] 7 , [ ] 5 , [ ] 0 [ ] 0		<input type="checkbox"/>
Contents	\$ [ ] [ ] [ ] , [ ] [ ] [ ] , [ ] [ ] [ ]		<input checked="" type="checkbox"/>

**COMPLETED MODULES**

This area of the Basic Module is used to determine the totality of all the modules submitted for a specific incident. It acts as a checklist for completed modules under the paper form system.

*Definition*

Listing of NFIRS–2 through NFIRS–11 modules completed for the incident.

*Purpose*

This section is for paper form management to ensure receiving authorities that the incident package is complete. It also serves as a reminder to the responder as to which modules must be completed.

*Entry*

Check or mark all the Completed Module boxes that apply to the incident.

*Example*

A fire department responded to fire in an apartment building; one firefighter was injured. Three additional forms will be attached to the Basic Module: Fire, Structure Fire, and Fire Service Casualty

<b>Completed Modules</b>	
<input checked="" type="checkbox"/>	Fire–2
<input checked="" type="checkbox"/>	Structure Fire–3
<input type="checkbox"/>	Civilian Fire Cas.–4
<input checked="" type="checkbox"/>	Fire Service Cas.–5
<input type="checkbox"/>	EMS–6
<input type="checkbox"/>	HazMat–7
<input type="checkbox"/>	Wildland Fire–8
<input type="checkbox"/>	Apparatus–9
<input type="checkbox"/>	Personnel–10
<input type="checkbox"/>	Arson–11

## SECTION H

Section H captures information on the number of civilians and firefighters injured or killed as a result of the incident. Other information in this section relates to whether a detector alerted occupants in a structure and whether hazardous materials were released.

## Casualties ☆

### Definition

A person injured or killed either as a result of the incident or during the mitigation of the incident. An injury is physical damage to a person that requires either (1) treatment by a practitioner of medicine within 1 year of the incident, or (2) at least 1 day of restricted activity immediately following the incident. Deaths also include people who die within 1 year because of injuries sustained from the incident.

☛ Either the None box is checked or marked or the number of casualties is entered.

Civilians include emergency personnel who are not members of the fire department, such as police officers or utility workers.

### Purpose

This information can be correlated with occupancy type, structural conditions, and other data to help understand how to reduce future fire injuries and deaths. Furthermore, this information can be used to reduce firefighter injuries and deaths through better equipment, training, and physical conditioning.

### Entry

Identify and separately record the number of fire service personnel and the number of civilians or other non-fire department personnel killed or injured as a result of the incident. Check the None box if there were no civilian or fire service personnel casualties.

**Fire Service Deaths:** Enter the number of fire service personnel from your department who died in connection with this incident regardless of incident type. A Fire Service Casualty Module must be completed for each individual counted here.

**Fire Service Injuries:** Enter the number of fire service personnel from your department who were injured (but did not die) in connection with this incident regardless of incident type. A Fire Service Casualty Module must be completed for each individual counted here.

- ☛ Include those people injured or killed while responding to or returning from the incident. If the injury or death occurred on fire department property after the apparatus was placed back in service, do not include it in this section.
- ☛ On-duty firefighter injuries or deaths that did not occur during an incident may be collected using the Fire Service Casualty Module. Remember when reporting a firefighter casualty of this type, the Basic Module must still be filled out, complete with an incident number. In this event, create an EMS incident with the appropriate response information.

**Civilian Deaths:** Enter the number of civilians or non-fire department personnel who died in connection with this incident. Enter only fire-related deaths here. For HazMat deaths, enter the number in Section P of the HazMat Module when that optional module is selected by your State reporting authority. A Civilian Casualty Module must be completed for each individual counted here.

**Civilian Injuries:** Enter the number of civilians or non-fire department personnel who were injured (but did not die) in connection with this incident. Enter only fire-related injuries here. For HazMat injuries, enter the number in Section P of the HazMat Module when that optional module is selected by your State reporting authority. The Civilian Casualty Module must be completed for each individual counted here.

☛ EMS civilian deaths or injuries are not entered on either the Basic or the HazMat Modules.

### Example

One civilian and one firefighter were injured at the scene of a tractor-trailer accident:

<b>H<sub>1</sub></b> ☆	<b>Casualties</b>	<input type="checkbox"/> None
	<b>Deaths</b>	<b>Injuries</b>
<b>Fire Service</b>	<input type="text"/>	<input type="text"/> 1
<b>Civilian</b>	<input type="text"/>	<input type="text"/> 1

## Detector

### Definition

The presence in the general area of fire origin of one or more detectors that was within the operational range of the detector(s) at the time of an incident.

☛ This is required for all confined fires (Incident Type codes 113–118, Section C).

### Purpose

The information on whether or not a detector alerted the occupants of a structure to an emergency is important for understanding fire control and life safety with and without detection equipment.

### Entry

Check or mark the box if a detector alerted the occupants in this incident (regardless of whether the detector was smoke, heat, carbon monoxide, etc.). This block can be left blank for non-fire incidents, and can optionally be used for a carbon monoxide (CO) incident and whether a CO detector operated.

*Example*

Burning food on the stove set off the smoke detector and alerted the occupants:

<b>H<sub>2</sub> Detector</b>	
Required for confined fires	
1	<input checked="" type="checkbox"/> Detector alerted occupants
2	<input type="checkbox"/> Detector did not alert them
U	<input type="checkbox"/> Unknown

**DETECTOR CODES**

- 1      Detector alerted occupants.
- 2      Detector did not alert occupants.
- U      Unknown.

**H<sub>2</sub> Hazardous Materials Release**

*Definition*

The occurrence and nature of a hazardous material release at the incident.

*Purpose*

This element provides information on whether or not hazardous materials were released at the incident, what the materials were, and whether the HazMat Module should be completed. This allows fire departments to document releases of hazardous materials as minor spills that occur in the everyday environment without the need to complete the HazMat Module.

*Entry*

Check or mark the box best describing the type of spill or release that occurred at the incident. If no hazardous materials were involved or no HazMat release, check or mark the None box. Complete the HazMat Module if special HazMat actions were required, including the need for special protective clothing or equipment, or if the spill was equal to or greater than 55 gallons.

*Example*

Gasoline was leaking from the car involved in a motor vehicle accident:

<b>H<sub>3</sub> Hazardous Materials Release</b>	<input type="checkbox"/> None
1	<input type="checkbox"/> <b>Natural gas:</b> slow leak, no evacuation or HazMat actions
2	<input type="checkbox"/> <b>Propane gas:</b> <21-lb tank (as in home BBQ grill)
3	<input checked="" type="checkbox"/> <b>Gasoline:</b> vehicle fuel tank or portable container
4	<input type="checkbox"/> <b>Kerosene:</b> fuel burning equipment or portable storage
5	<input type="checkbox"/> <b>Diesel fuel/fuel oil:</b> vehicle fuel tank or portable storage
6	<input type="checkbox"/> <b>Household solvents:</b> home/office spill, cleanup only
7	<input type="checkbox"/> <b>Motor oil:</b> from engine or portable container
8	<input type="checkbox"/> <b>Paint:</b> from paint cans totaling <55 gallons
0	<input type="checkbox"/> <b>Other:</b> special HazMat actions required or spill > 55 gal (Please complete the HazMat form.)

**HAZARDOUS MATERIALS RELEASE CODES**

- 1 Natural gas, slow leak, no evacuation or HazMat actions taken.
- 2 Propane gas, less than a 21-pound tank (as in home BBQ grill).
- 3 Gasoline, vehicle fuel tank or portable container. Includes leaks or releases from equipment tanks where the release is less than 55 gallons.
- 4 Kerosene, fuel-burning equipment or portable storage container less than 55 gallons.
- 5 Diesel fuel or fuel oil, vehicle fuel tank or portable storage container less than 55 gallons.
- 6 Household/Office solvent or chemical spill. Includes spills of mineral spirits, acetone, and turpentine. Cleanup only.
- 7 Motor oil from engine or portable container less than 55 gallons.
- 8 Paint from paint cans less than 55 gallons.
- 0 Other special HazMat actions were required or the spill was equal to or greater than 55 gallons. Complete the HazMat Module.
- N No HazMat involved.

**SECTION I****■ Mixed Use Property**

- ☛ Mixed Use Property is similar to Complex in NFIRS 4.1.

*Definition*

This data element captures the overall use of a property. If a property has two or more uses, then the Mixed Use Property designation applies.

*Purpose*

Documenting an incident that occurs on a property with more than one use is important to better identify the overall or main use of the property in which emergency incidents occur. Knowing the overall property use allows for better analysis of incident causes and targeting of prevention strategies. It also is important information for use in code development and enforcement as well as for inspection activities.

*Entry*

If the property is of mixed use, check or mark the box best describing the overall use of the property where the incident occurred. Check or mark the appropriate box even if the incident did not involve the entire complex (for example, a single store in a row of stores). If it is not a mixed use property, check or mark the Not mixed box.

- ☛ For example, a restaurant in an office building would be a structure with two or more property uses, assembly use and office use. The Mixed Use Property designation would be office use (code 59). A warehouse on the property of an amusement park would have a designation of assembly use (10). A stand-alone service station would not be a Mixed Use although it has a driveway and parking area.

**Example**

An electrical fire in the store of a hotel lobby (40):

I Mixed Use Property		<input type="checkbox"/> Not mixed
10	<input type="checkbox"/> Assembly Use	
20	<input type="checkbox"/> Education use	
33	<input type="checkbox"/> Medical use	
40	<input checked="" type="checkbox"/> Residential use	
51	<input type="checkbox"/> Row of stores	
53	<input type="checkbox"/> Enclosed mall	
58	<input type="checkbox"/> Business & residential	
59	<input type="checkbox"/> Office use	
60	<input type="checkbox"/> Industrial use	
63	<input type="checkbox"/> Military use	
65	<input type="checkbox"/> Farm use	
00	<input type="checkbox"/> Other mixed use	

**MIXED USE PROPERTY CODES**

10	Assembly use. Places for the gathering of people for amusement, recreation, social, religious, civic, patriotic, travel, and similar purposes. The occupants are present voluntarily and for a limited duration.
20	Educational use. Properties used for the gathering of groups of persons for purposes of instruction. These occupancies differ from assembly occupancies in that persons are present regularly and under some control or discipline.
33	Medical use. Properties dedicated to health care, including hospitals, treatment centers, clinics, and doctor's office buildings. Medical complexes include facilities for psychological and physical care.
40	Residential use. A property in which sleeping accommodations are furnished. Accommodations may be permanent, as in an apartment; transient, as in a hotel; or temporary, as in a dormitory or barracks.
51	Row of stores. Includes strip malls. Excludes enclosed malls (53).
53	Enclosed mall. A shopping center with multiple stores sharing a common, enclosed area. The principal use is for retail trade, with incidental other uses such as office and business. Excludes strip malls (51).
58	Business and residential properties containing a mixture of commercial activity with residential uses. Includes mixed-use developments and apartments with first-floor retailing.
59	Office use. Office properties are those used primarily for the transaction of business and the keeping of records. Includes those with incidental retail sales or eating establishments.
60	Industrial use. Properties characterized by the mechanical, chemical, or electromagnetic transformation of inorganic or organic substances into new products via machinery or by hand. Includes the assembly of component parts to produce finished or intermediate goods for further processing.
63	Military use. Any property under the regular control of the U.S. military or authorized State militias. Includes military bases, training centers, armories, and related facilities.
65	Farm use. Included are croplands, orchards, and livestock production.
00	Mixed use, other.
NN	Not mixed use. Incident property consists of a single use.

## SECTION J

**J Property Use** ☆

☛ Property Use was known as Fixed Property Use in NFIRS 4.1.

*Definition*

Each individual property has a specific use, whether a structure or open land. This entry refers to the actual use of the property where the incident occurred, not the overall use of mixed use properties of which the property is part (see Mixed Use Property, Section I). The intent of this entry is to specify the property use, not the configuration of the building or other details of the property.

*Purpose*

This element permits analyses of differing fire problems that occur on a wide range of property types. Information on the frequency, losses, and types of fires for each property use can assist in targeting fire prevention programs and fire protection or suppression systems for each type of property. It often assists in ordering priorities for inspection, developing new building codes, and evaluating the success of programs directed at particular types of properties.

*Entry*

Check or mark the box best describing the specific property use. If the property use is not listed in Section J of the paper form, look up the specific property use code and enter the appropriate three-digit code and the code's description. If no property was involved in the incident (e.g., Incident Type code 611), check or mark the None box.

- ☛ If the property is a structure that is under construction, select the use for which it will be used. This is not applicable to construction site incidents (code 981). If the structure is vacant or being demolished, select its last significant use.
- ☛ Property that is mobile or in transit is reported separately, and the property it is located on at that time is reported in this entry box. If the mobile property is not in transit, indicate its current location. The most common property use classifications for structures and outside property are listed.
- ☛ *Mobile homes.* Use code 419 for mobile homes used primarily as fixed residences. Incident Type code 121 (Section C) should have been used to indicate that this was a fire in a mobile home used as a fixed residence. If the mobile home is in transit, use the code describing the property where the mobile home is located at the time of the incident.
- ☛ If the Property Type is in the 400 series, Block B1, Estimated Number of Residential Living Units in the Building on the Fire Module must be completed.
- ☛ *Property Type 500s, 600s, 700s, or 800s.* If the property use code falls in the 500, 600, 700, or 800 series, the On-Site Materials field (Section C) on the Fire Module must be completed.

Example

Fire in a small electronics warehouse (891)

<b>J</b> Property Use ☆ <input type="checkbox"/> None		
<b>Structures</b>		
131 <input type="checkbox"/> Church, place of worship	341 <input type="checkbox"/> Clinic, clinic-type infirmary	539 <input type="checkbox"/> Household goods, sales, repairs
161 <input type="checkbox"/> Restaurant or cafeteria	342 <input type="checkbox"/> Doctor/Dentist office	571 <input type="checkbox"/> Gas or service station
162 <input type="checkbox"/> Bar/Tavern or nightclub	361 <input type="checkbox"/> Prison or jail, not juvenile	579 <input type="checkbox"/> Motor vehicle/Boat sales/repairs
213 <input type="checkbox"/> Elementary school, kindergarten	419 <input type="checkbox"/> 1- or 2-family dwelling	599 <input type="checkbox"/> Business office
215 <input type="checkbox"/> High school, junior high	429 <input type="checkbox"/> Multifamily dwelling	615 <input type="checkbox"/> Electric-generating plant
241 <input type="checkbox"/> College, adult education	439 <input type="checkbox"/> Rooming/Boarding house	629 <input type="checkbox"/> Laboratory/Science laboratory
311 <input type="checkbox"/> Nursing home	449 <input type="checkbox"/> Commercial hotel or motel	700 <input type="checkbox"/> Manufacturing plant
331 <input type="checkbox"/> Hospital	459 <input type="checkbox"/> Residential, board and care	819 <input type="checkbox"/> Livestock/Poultry storage (barn)
	464 <input type="checkbox"/> Dormitory/Barracks	882 <input type="checkbox"/> Non-residential parking garage
	519 <input type="checkbox"/> Food and beverage sales	891 <input checked="" type="checkbox"/> Warehouse
<b>Outside</b>		
124 <input type="checkbox"/> Playground or park	936 <input type="checkbox"/> Vacant lot	981 <input type="checkbox"/> Construction site
655 <input type="checkbox"/> Crops or orchard	938 <input type="checkbox"/> Graded/Cared for plot of land	984 <input type="checkbox"/> Industrial plant yard
669 <input type="checkbox"/> Forest (timberland)	946 <input type="checkbox"/> Lake, river, stream	
807 <input type="checkbox"/> Outdoor storage area	951 <input type="checkbox"/> Railroad right-of-way	
919 <input type="checkbox"/> Dump or sanitary landfill	960 <input type="checkbox"/> Other street	
931 <input type="checkbox"/> Open land or field	961 <input type="checkbox"/> Highway/Divided highway	
	962 <input type="checkbox"/> Residential street/driveway	

Look up and enter a Property Use code and description only if you have NOT checked a Property Use box.

Property Use Code

Property Use Description

The above example requires completion of Section C, On-Site Materials or Products, on the Fire Module. There, code 712 would be entered as the On-Site Material; Electronics Parts would be entered as the description; and the code 1 box indicating Bulk Storage or Warehousing would be checked or marked.

An alphabetized synonym list for the following Property Use codes is presented in Appendix B.

**PROPERTY USE CODES**

**Assembly**

- 111 Bowling establishment.
- 112 Billiard center, pool hall.
- 113 Electronic amusement center. Includes video arcades and the like.
- 114 Ice rink. Includes indoor or outdoor facilities for use exclusively as ice rinks. Excludes combination ice rinks/basketball or other uses (123).
- 115 Roller rink. Includes indoor or outdoor facilities for use exclusively as roller skating rinks or skateboard parks. Excludes facilities with multiple uses (123).
- 116 Swimming facility. Includes indoor or outdoor swimming pools, related cabanas, bathhouses, and equipment locations.
- 110 Fixed-use recreation places, other. Includes miniature golf courses, driving, and batting ranges.
- 121 Ballroom, gymnasium. Includes dance halls, basketball courts, indoor running tracks.
- 122 Convention center, exhibit hall. Includes large open hall without fixed seating, such as convention center, exhibit hall, armory hall, and field house.
- 123 Stadium, arena. Includes fixed seating in large areas, such as ballpark, football stadium, grandstand, and race track.
- 124 Playground or outdoor area with fixed recreational equipment.
- 129 Amusement center, indoor/outdoor. Includes carnivals, circuses. Excludes video arcades (113).
- 120 Variable-use amusement, recreation places, other.
- 131 Church, mosque. Includes synagogues, temples, chapels, religious educational facilities, and church halls.
- 134 Funeral parlor. Includes crematoriums, mortuaries, morgues, and mausoleums.

- 130 Places of worship, funeral parlors, other.
- 141 Athletic or health club. Includes YMCA or YWCA, lodge, swimming, and baths. If sleeping facilities are included, use 449.
- 142 Clubhouse associated with country club that includes golf, tennis, hunting, fishing, and riding activities.
- 143 Yacht club. Includes boating and yacht club facilities. Excludes marinas, boat mooring facilities (898); boat repair/refueling facilities (571); or boat sales, services, and repairs (579).
- 144 Casino, gambling clubs. Includes bingo halls. Use only where primary use is for gambling.
- 140 Clubs, other.
- 151 Library.
- 152 Museum. Includes art galleries, planetariums, and aquariums.
- 154 Memorial structure. Includes monuments and statues.
- 155 Courthouse. Includes courtrooms.
- 150 Public or government, other.
- 161 Restaurant or cafeteria. Places specializing in on-premises consumption of food. Includes carryout and drive-through restaurants.
- 162 Bar, nightclub, saloon, tavern, pub.
- 160 Eating, drinking places, other.
- 171 Airport passenger terminal. Includes heliports.
- 173 Bus station.
- 174 Rapid transit station. Includes subway stations, rail stations, light rail stations, monorail stations, and the like.
- 170 Passenger terminal, other.
- 181 Live performance theater.
- 182 Auditorium, concert hall.
- 183 Movie theater. Includes facilities designed exclusively for showing motion pictures.
- 185 Radio, television studio.
- 186 Film/Movie production studio. For film processing facilities, use (700). On the Fire Module, use Onsite Materials (714).
- 180 Studio, theater, other.
- 100 Assembly, other.

**Educational**

- 210 Schools, non-adult, other.
- 211 Preschool, not in same facility with other grades. Includes nursery schools. Excludes kindergartens (213) and daycare facilities (254, 255).
- 213 Elementary school. Includes kindergarten.
- 215 High school, junior high, middle school.
- 241 Adult education center, college classroom. Includes any building containing adult education classrooms. The building may include other uses incidental to teaching.
- 254 Day care in commercial property.
- 255 Day care in residence, licensed.
- 256 Day care in residence, unlicensed.
- 200 Educational, other.

**Health Care, Detention, and Correction**

- 311 Nursing homes licensed by the State, providing 24-hour nursing care for four or more persons.
- 321 Mental retardation/development disability facility that houses, on a 24-hour basis, four or more persons.
- 322 Alcohol or substance abuse recovery center where four or more persons who are incapable of self-preservation are housed on a 24-hour basis.
- 323 Asylum, mental institution. Includes facilities for the criminally insane. Must include sleeping facilities.
- 331 Hospital: medical, pediatrics, psychiatric. Includes hospital-type infirmaries and specialty hospitals where treatment is provided on a 24-hour basis.
- 332 Hospices. Includes facilities where the care and treatment of the terminally ill is provided on a 24-hour basis.
- 341 Clinic, clinic-type infirmary. Includes ambulatory care facilities. Excludes facilities that provide overnight care (331).
- 342 Doctor, dentist, or oral surgeon office.

- 343 Hemodialysis unit, free standing, not a part of a hospital.
- 340 Clinics, doctors' offices, hemodialysis centers, other.
- 361 Jail, prison (not juvenile). Excludes police stations (365) or courthouses (153) where a jail is part of the facility.
- 363 Reformatory, juvenile detention center.
- 365 Police station.
- 300 Health care, detention, and correction, other. Includes animal care.

#### **Residential**

- 419 1- or 2-family dwelling, detached, manufactured home, mobile home not in transit, duplex.
- 429 Multifamily dwelling. Includes apartments, condos, townhouses, rowhouses, tenements.
- 439 Boarding/Rooming house. Includes residential hotels and shelters.
- 449 Hotel/Motel, commercial.
- 459 Residential board and care. Includes long-term care facilities, halfway houses, and assisted-care housing facilities. Excludes nursing facilities (311).
- 460 Dormitory-type residence, other.
- 462 Sorority house, fraternity house.
- 464 Barracks, dormitory. Includes nurses' quarters, military barracks, monastery/convent dormitories, bunk houses, workers' barracks.
- 400 Residential, other.

#### **Mercantile, Business**

- 511 Convenience store. Excludes service stations with associated convenience stores (571).
- 519 Food and beverage sales, grocery store. Includes supermarkets, specialty food stores, liquor stores, dairy stores, and delicatessens.
- 529 Textile, wearing apparel sales. Includes clothing, shoes, tailor furs, and dry goods shops.
- 539 Household goods, sales, repairs. Includes furniture, appliances, hardware, paint, wallpaper, music, and video stores.
- 549 Specialty shop. Sale of materials commonly used in the home, such as books, stationery, newspapers, tobacco, licit drugs, jewelry, leather goods, flowers, optical goods. Excludes liquor stores (519).
- 557 Personal service. Includes barber and beauty shops.
- 559 Recreational stores. Includes hobby supply, sporting goods, toy, pet, photographic supply, garden supply, lumber, and fireworks stores and sales.
- 564 Laundry, dry cleaning. Includes self-service facilities.
- 569 Professional supplies, services. Includes art supply, home maintenance service, and linen supply firms.
- 571 Service station, gas station. Includes LP-gas stations with associated convenience stores and boat refueling stations. Excludes vehicle sales (579).
- 579 Motor vehicle or boat sales, services, repair. Includes facilities that have incidental fuel dispensing.
- 581 Department or discount store. Includes stores selling a wide range of items that cannot readily be classified, such as mall kiosks, drug stores, and discount buying club stores that require memberships.
- 580 General retail, other.
- 592 Bank. Includes ATM kiosks when not part of another structure.
- 593 Office: veterinary or research. Excludes laboratories (629).
- 596 Post office or mailing firms.
- 599 Business office. Includes engineering, architectural, and technical offices. Excludes military offices (631).
- 500 Mercantile, business, other.

#### **Industrial, Utility, Defense, Agriculture, Mining**

- 614 Steam- or heat-generating plant.
- 615 Electric-generating plant, regardless of fuel source. Includes power generation for public or private use, power generation for rail transport, and nuclear powerplants that generate electrical power.
- 610 Energy production plant, other.
- 629 Laboratory or science laboratory. Includes chemical, medical, biological, physical materials testing, psychological, electronics, and general research laboratories. Also includes classrooms and offices incidental to laboratory facilities. Minor laboratory areas incidental to operations in another property should be considered part of the predominating property.
- 631 Defense, military installation.

- 632 Flight control tower.
- 635 Computer center. Includes computer laboratories.
- 639 Communications center. Includes radio, TV, and telecommunications facilities.
- 642 Electrical distribution. Includes electrical substations, transformers, and utility poles.
- 644 Gas distribution, gas pipeline.
- 645 Flammable liquid distribution system, flammable liquid pipeline.
- 647 Water utility. Includes collection, treatment, storage, and distribution of water.
- 648 Sanitation utility. Includes incinerators and industrial rubbish burners. Excludes dumps and landfills.
- 640 Utility or distribution system, other.
- 655 Crops or orchard. Includes plant nurseries and greenhouses as well as the processing or packaging of agricultural crops or fruit that occurs on the property.
- 659 Livestock production. Includes milking facilities, poultry and egg production, and fish hatcheries. Excludes crops or orchard (655), meat, and milk processing plants.
- 669 Forest, timberland, woodland. Includes standing timber without logging operations; wildlife preserves; timber tracts where planting, replanting, and conservation of forests are conducted; and areas where uncultivated materials such as wild rubber, barks, and roots are gathered. Also includes facilities for extracting, concentrating, and distilling of such materials when the facilities are located within the forest. Excludes grasslands and brush (931).
- 679 Mine, quarry. Mining and quarrying of raw and natural materials. Includes underground and surface mines, gravel pits, oil wells, coal mines, ore mines, salt mines, chemical mines, stone and gravel quarries, mineral mines, peat mines, natural gas wells, and the like.
- 600 Industrial, utility, defense, agriculture, mining, other.

**Manufacturing, Processing**

- 700 Manufacturing, processing. Properties where there is mechanical or chemical transformation of inorganic or organic substances into new products. Includes factories making products of all kinds and properties devoted to operations such as processing, assemblies, mixing, packing, finishing or decorating, and repairing.

**Storage**

- 807 Outside material storage area.
- 808 Outbuilding or shed. Includes tool and contractor sheds. Excludes contractor field offices (599).
- 816 Grain elevator, silo.
- 819 Livestock, poultry storage. Includes barns, stockyards, and animal pens.
- 839 Refrigerated storage. Includes storage lockers.
- 849 Outside storage tank.
- 880 Vehicle storage, other. Includes airplane and boat hangars. Excludes parking garages (881, 882).
- 881 Parking garage, detached residential garage. Includes detached parking structures associated with multifamily housing. If the garage is attached to the residence, use the 400 series.
- 882 Parking garage, general vehicle. Includes bus, truck, fleet, or commercial parking structures.
- 888 Fire station.
- 891 Warehouse. Includes all general storage facilities. Excludes refrigerated storage (839).
- 898 Dock, marina, pier, wharf. Includes associated passenger facilities.
- 899 Residential storage or self-storage units. Includes mini-storage units.
- 800 Storage, other.

**Outside or Special Property**

- 919 Dump, sanitary landfill. Includes recycling collection points.
- 921 Bridge, trestle.
- 922 Tunnel.
- 926 Outbuilding, protective shelter. Includes toll booths, weather shelters, mailboxes, telephone booths, privies, charitable collection boxes, and aerial tramways. Excludes parking garages.
- 931 Open land or field. Includes grasslands and brushlands. Excludes crops or areas under cultivation.
- 935 Campsite with utilities. Includes parks for camping trailers or recreational vehicles.

936	Vacant lot. Undeveloped land, not paved, may include incidental untended plant growth or building materials or debris.
937	Beach.
938	Graded and cared-for plots of land. Includes parks, cemeteries, golf courses, and residential yards.
941	Open ocean, sea, or tidal waters. Includes ports. Excludes piers and wharves (898).
946	Lake, river, stream.
940	Water area, other.
951	Railroad right-of-way. Includes light rail or rapid transit when their right-of-way usage is exclusive (i.e., not part of the street).
952	Railroad yard, switch or classification area.
961	Highway or divided highway. Includes limited-access highways with few intersections or at grade crossings.
962	Residential street, road, or residential driveway.
963	Street or road in commercial area.
965	Vehicle parking area. Excludes parking garages (882). Includes paved non-residential driveways.
960	Street, other.
972	Aircraft runway.
973	Aircraft taxiway. Includes all aircraft operation areas other than runways and aircraft loading areas (974).
974	Aircraft loading area. Includes helipads and helistops.
981	Construction site. Excludes buildings under construction or demolition. Buildings or structures under construction or demolition should be classified by their proposed or former use.
982	Oil or gas field.
983	Pipeline, power line, or other utility right-of-way.
984	Industrial plant yard area, not outdoor storage.
900	Outside or special property, other.
000	Property use, other.
NNN	None.
UUU	Undetermined.

## SECTION K

The entries for Section K are for identifying both the property occupant and the property owner involved in the incident. One completed example is presented at the end of Block K1 that shows all the field entries for both Blocks K1 and K2.

### **K1** Person/Entity Involved

#### **Business Name**

##### *Definition*

The full name of the company or agency occupying, managing, or leasing the property where the incident occurred.

##### *Purpose*

This element provides a basis for long-term analysis in recognizing patterns of repeated fires in the same or different locations over a period of time. The business name is required at the local government level to establish an official document of record.

##### *Entry*

Enter the full name of the company or agency occupying the property where the incident occurred. This may or may not be the same as the owner.

*Example*

A fire in the rear office of Rex Associates.

**Telephone***Definition*

The telephone number of the person or entity involved in the incident.

*Purpose*

This field collects additional information on the person or entity involved, which may be required at a later date.

*Entry*

Enter the area code and telephone number in the spaces provided.

*Example*

Rex Associates' telephone number is (828) 867-5309.

**Person Involved***Definition*

The full name of the person involved in the incident. If an entity, enter the name under Business Name at the top of Block K1.

*Purpose*

This information provides a basis for long-term analysis in recognizing patterns of repeated incidents in the same or different locations over a period of time. The name of the person involved is required at the local government level to establish an official document of record.

*Entry*

Enter the full name of the person as normally written. Enter the name using the format: prefix, first name, middle initial, last name, and suffix. If the name is unknown, several available resources may be checked for this information, such as street directory publications, utility company records, or other public agencies. Leave blank if unknown. Name prefixes and suffixes are as follows:

Name Prefix		Name Suffix	
MR	Mr.	JR	Junior
MRS	Mrs.	SR	Senior
MS	Ms.	I	The First
DR	Doctor	II	The Second
REV	Reverend	III	The Third
		IV	The Fourth
		V	The Fifth
		MD	Medical Doctor
		DDS	Doctor of Dental Science

### *Example*

The manager's name is Mr. Morgan I. Teal, Jr.

### **Address**

#### *Definition*

The address of the person or entity involved in the incident.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident. The incident address is required at the local government level to establish an official document of record.

#### *Entry*

Enter the address where the person or entity involved in the incident can be contacted. The full address includes the street number, prefix, street or highway name, street type, and suffix. (For a more detailed explanation of the address components, see Section B of this module.)

### *Example*

The manager who reported and attempted to put out the fire lives at 1001 Wilson Street.

### **Post Office Box (P.O. Box)**

#### *Definition*

The number of a rented compartment in a post office for the storage of mail that is picked up by the business occupant.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident. The incident address is required at the local government level to establish an official document of record.

#### *Entry*

Enter the post office box number in the spaces provided. Leave blank if not applicable.

### **Apartment, Suite, or Room**

#### *Definition*

The number of the specific apartment, suite, or room where the incident occurred.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident. The incident address is required at the local government level to establish an official document of record.

### *Entry*

Enter the apartment, suite, or room number in the block. Leave blank if not applicable.

### *Example*

The manager's apartment was 2-B.

### **City**

#### *Definition*

The city where the person or entity involved in the incident lives.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident. The incident address is required at the local government level to establish an official document of record.

### *Entry*

Enter the city associated with the person's or entity's address.

### *Example*

The manager lived in Asheville.

### **State**

#### *Definition*

The State or U.S. territory where the person or entity involved in the incident lives.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident, and provides a means of linking fire incident data to other geographic and population factors for comparative analysis at the local or State level.

### *Entry*

Enter the abbreviation for the State or U.S. territory associated with the person's or entity's address.

### *Example*

Asheville is in North Carolina and is entered as NC.

☛ A list of State/territory abbreviations is on page 3-5.

### **ZIP Code**

#### *Definition*

A numerical code assigned by the U.S. Postal Service to all jurisdictions within the United States and U.S. Territories.



### *Entry*

Enter the full name of the company or agency that owns the property where the incident occurred. If the owner is the same as the person or entity listed in Block K1, check or mark the box at the top of the K2 block and skip to Section L.

### **Telephone**

#### *Definition*

The telephone number of the property owner involved in the incident.

#### *Purpose*

This field collects additional information on the owner of the property involved, which may be required at a later date.

### *Entry*

Enter the area code and telephone number of the owner in the spaces provided.

### **Owner Name**

#### *Definition*

The full name of the person who owns the property where the incident occurred. If an entity, enter the name under Business Name at the top of Block K2.

#### *Purpose*

This information provides a basis for long-term analysis in recognizing patterns of repeated incidents. The name of the owner of the property involved is required at the local government level to establish an official document of record.

### *Entry*

Enter the full name of the person as normally written. Enter the name using the format: prefix, first name, middle initial, last name, and suffix. If the owner name is unknown, several available resources may be checked for this information, such as street directory publications, utility company records, or other public agencies. Leave blank if unknown.

☛ Name prefixes and suffixes are listed in Block K1.

### **Address**

#### *Definition*

The address of the owner of the property where the incident occurred.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity who owns the property involved in the incident. This information is a critical part of the documentation of the incident at the local level and may be used by jurisdictions to help investigate the cause of the fire and for insurance purposes.

### *Entry*

Enter the address where the owner of the property where the incident occurred can be contacted. The full address includes the street number, prefix, street or highway name, street type, and suffix. (For a more detailed explanation of the address components, see Section B of this module.)

### **Post Office Box (P.O. Box)**

#### *Definition*

The number of a rented compartment in a post office for the storage of mail that is picked up by the owner.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity who owns the property involved in the incident. The address is required at the local government level to establish an official document of record.

### *Entry*

Enter the post office box number in the spaces provided. Leave blank if not applicable.

### **Apartment, Suite, or Room**

#### *Definition*

The number of the specific apartment, suite, or room of the owner of the property involved in the incident.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity who owns the property involved in the incident. The address is required at the local government level to establish an official document of record.

### *Entry*

Enter the apartment, suite, or room number in the block. Leave blank if not applicable.

### **City**

#### *Definition*

The city where the owner of the property involved in the incident lives, or the city that is used in the mailing address if the property is not located within city limits.

#### *Purpose*

The complete address provides local authorities with the location of the person or entity who owns the property involved in the incident. The address is required at the local government level to establish an official document of record.

### *Entry*

Enter the city associated with the owner's address.

**State***Definition*

The State or U.S. territory where the owner of the property lives.

*Purpose*

The complete address provides local authorities with the location of the person or entity who owns the property involved in the incident, and provides a means of linking fire incident data to other geographic and population factors for comparative analysis at the State level.

*Entry*

Enter the abbreviation for the State or U.S. territory associated with the owner's address. If the owner lives outside the United States or its territories, enter the code for "Other" (OO).

☛ A list of State/territory abbreviations is on page 3–5.

**ZIP Code***Definition*

A numerical code assigned by the U.S. Postal Service to all jurisdictions within the United States.

*Purpose*

The complete address provides local authorities with the location of the person or entity who owns the property involved in the incident, and provides a means of linking fire incident data to other geographic and population factors for comparative analysis at the State level.

*Entry*

Enter the postal ZIP code associated with the owner's address. Include the Plus Four digits of the ZIP code if known.

**SECTION L****L Remarks**

The Remarks section is an area for any comments that might be made concerning the incident. It is also a place to describe what happened, fire department operations, or unusual conditions encountered. Use this space to describe the incident in your own words. Of particular importance are observations that could aid investigators. Use additional sheets (i.e., Supplemental Form (NFIRS–1S)) as necessary. Additional sheets must have Section A at the top of each sheet completed.

This section also includes an instructional box (paper form only) intended to provide guidance to the person filling out the report. The block indicates whether a Fire Module or Structure Fire Module is required according to the Incident Type recorded in Section C of this module.

Fire Module Required?	
Check the box that applies and then complete the Fire Module based on Incident Type, as follows:	
<input type="checkbox"/> Buildings 111	Complete Fire & Structure Modules
<input type="checkbox"/> Special structure 112	Complete Fire Module & Section I, Structure Module
<input type="checkbox"/> Confined 113–118	Basic Module Only
<input type="checkbox"/> Mobile property 120–123	Complete Fire & Structure Modules
<input type="checkbox"/> Vehicle 130–138	Complete Fire Module
<input type="checkbox"/> Vegetation 140–143	Complete Fire or Wildland Module
<input type="checkbox"/> Outside rubbish fire 150–155	Basic Module Only
<input type="checkbox"/> Special outside fire 160	Complete Fire or Wildland Module
<input type="checkbox"/> Special outside fire 161–164	Complete Fire Module
<input type="checkbox"/> Crop fire 170–173	Complete Fire or Wildland Module

## SECTION M

Section M requires the identification and signatures of the person completing the incident report and his/her supervisor. A completed example of the fields used is presented at the end of this section.

## M Authorization

### Officer in Charge

#### Definition

The officer in charge is the ranking fire service person dealing with the incident. Position refers to the person's rank, while assignment refers to the job held at the time of the incident. The date is the day the form is signed.

#### Purpose

The signature and the date make the report a legal document and indicate a source for further information on the incident.

#### Entry

Enter the personnel or ID number as assigned by the fire department, the position, and the assignment of the officer in charge of the incident. That officer should then sign and date the report after he/she has reviewed and agreed with the information.

#### Example

The officer in charge was Captain John Hart.

### Member Making Report

If the member making the report is the same as the officer in charge, check or mark the box by the member ID and skip the rest of Section M.

#### Definition

The member of the fire department who completed the report.

*Purpose*

When someone other than the officer in charge completes the report, the signature of that person indicates a source for further information on the incident. In these cases, the officer in charge should review the completed report and sign it as well.

*Entry*

Enter the personnel or ID number as assigned by the fire department, the position, and the assignment of the member completing the report. That member should then sign and date the report after he/she has reviewed and agreed with the information.

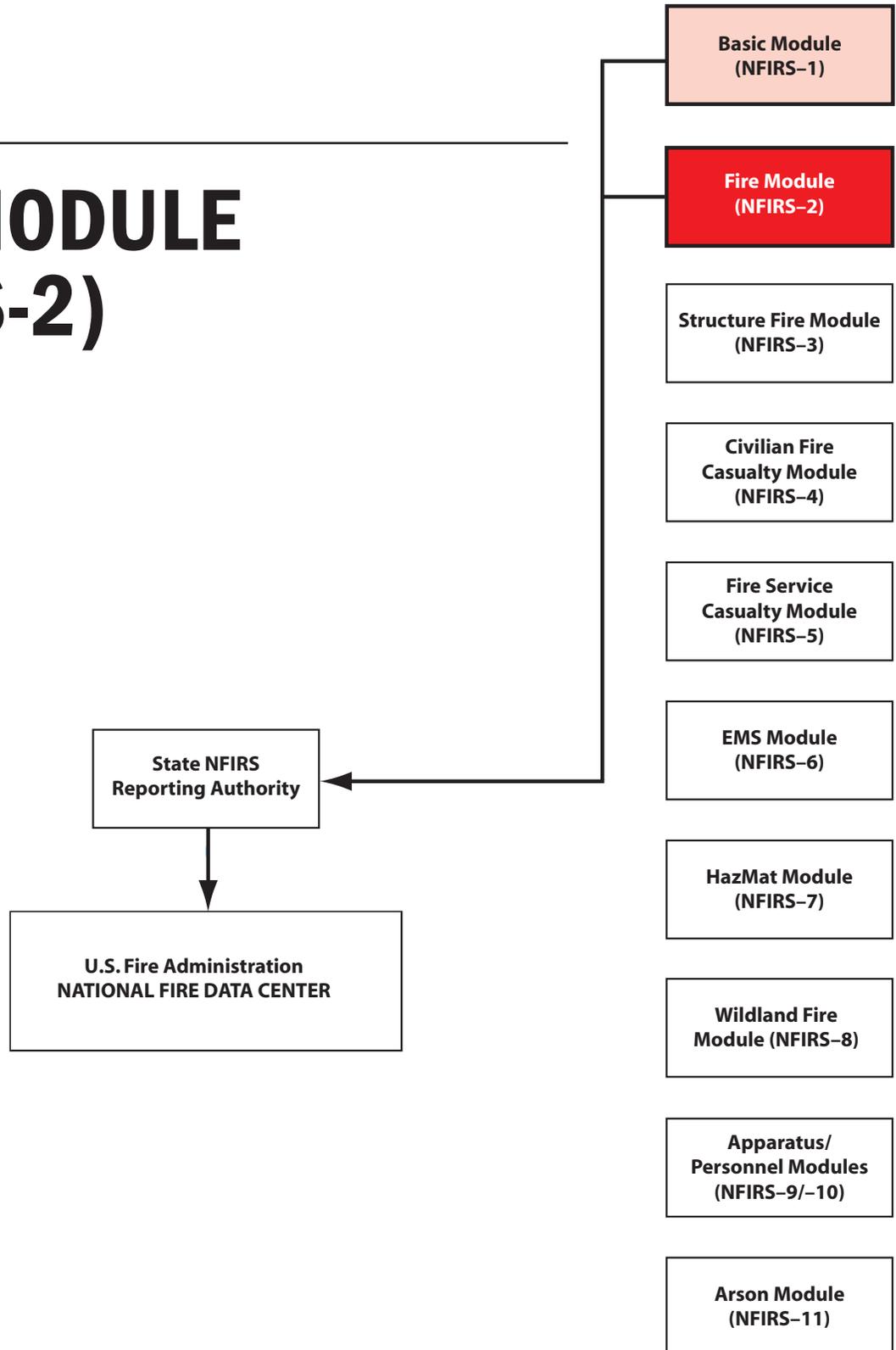
*Example*

The person completing the report was Firefighter Kate Ivey:

M Authorization															
<input type="checkbox"/> <small>Check box if same as Officer in charge.</small>	<table border="1"> <tr> <td>Officer in charge ID</td> <td>Signature</td> <td>Position or rank</td> <td>Assignment</td> <td>Month</td> <td>Day</td> <td>Year</td> </tr> <tr> <td> _ _ _ _ 1 1 9 9 </td> <td>[Signature by John Hart]</td> <td>Captain</td> <td>Fire suppression</td> <td>0 1</td> <td>0 7</td> <td>2 0 0 2</td> </tr> </table>	Officer in charge ID	Signature	Position or rank	Assignment	Month	Day	Year	_ _ _ _ 1 1 9 9	[Signature by John Hart]	Captain	Fire suppression	0 1	0 7	2 0 0 2
Officer in charge ID	Signature	Position or rank	Assignment	Month	Day	Year									
_ _ _ _ 1 1 9 9	[Signature by John Hart]	Captain	Fire suppression	0 1	0 7	2 0 0 2									
<input checked="" type="checkbox"/> <small>Officer in charge.</small>	<table border="1"> <tr> <td>Member making report ID</td> <td>Signature</td> <td>Position or rank</td> <td>Assignment</td> <td>Month</td> <td>Day</td> <td>Year</td> </tr> <tr> <td> _ _ _ _ 2 1 0 7 </td> <td>[Signature by Kate Ivey]</td> <td>Firefighter</td> <td>Fire suppression</td> <td>0 1</td> <td>0 7</td> <td>2 0 0 2</td> </tr> </table>	Member making report ID	Signature	Position or rank	Assignment	Month	Day	Year	_ _ _ _ 2 1 0 7	[Signature by Kate Ivey]	Firefighter	Fire suppression	0 1	0 7	2 0 0 2
Member making report ID	Signature	Position or rank	Assignment	Month	Day	Year									
_ _ _ _ 2 1 0 7	[Signature by Kate Ivey]	Firefighter	Fire suppression	0 1	0 7	2 0 0 2									

## Chapter 4

# FIRE MODULE (NFIRS-2)



**A** FDID  Star State  Star Incident Date MM DD YYYY  Star Station Incident Number  Star Exposure  Star  Delete  Change **NFIRS-2 Fire**

**B Property Details**

**B1**  Not Residential  
Estimated number of residential living units in building of origin *whether or not all units became involved.*

**B2**  Buildings not involved  
Number of buildings involved

**B3**  None  Less than one acre  
Acres burned (outside fires)

**C On-Site Materials or Products**  None  
Complete if there were any significant amounts of commercial, industrial, energy, or agricultural products or materials on the property, *whether or not they became involved.*

Enter up to three codes. Check one box for each code entered.

On-site material (1) \_\_\_\_\_

On-site material (2) \_\_\_\_\_

On-site material (3) \_\_\_\_\_

**On-Site Materials Storage Use**

1  Bulk storage or warehousing  
2  Processing or manufacturing  
3  Packaged goods for sale  
4  Repair or service  
U  Undetermined

**D Ignition**

**D1** \_\_\_\_\_  Star  
Area of fire origin

**D2** \_\_\_\_\_  Star  
Heat source

**D3** \_\_\_\_\_  Star 1  Check box if fire spread was confined to object of origin.  
Item first ignited

**D4** \_\_\_\_\_  
Type of material first ignited  
Required only if item first ignited code is 00 or <70.

**E1 Cause of Ignition**  Star  
 Check box if this is an exposure report.

1  Intentional  
2  Unintentional  
3  Failure of equipment or heat source  
4  Act of nature  
5  Cause under investigation  
U  Cause undetermined after investigation

**E2 Factors Contributing to Ignition**  Star  None

Factor contributing to ignition (1) \_\_\_\_\_

Factor contributing to ignition (2) \_\_\_\_\_

**E3 Human Factors Contributing to Ignition**  Star  
Check all applicable boxes  None

1  Asleep  
2  Possibly impaired by alcohol or drugs  
3  Unattended person  
4  Possibly mentally disabled  
5  Physically disabled  
6  Multiple persons involved  
7  Age was a factor

Estimated age of person involved \_\_\_\_\_

1  Male 2  Female

**F1 Equipment Involved in Ignition**  None If equipment was not involved, skip to Section G.

Equipment Involved \_\_\_\_\_

Brand \_\_\_\_\_

Model \_\_\_\_\_

Serial # \_\_\_\_\_

Year \_\_\_\_\_

**F2 Equipment Power Source** \_\_\_\_\_  
Equipment Power Source

**F3 Equipment Portability**

1  Portable  
2  Stationary

Portable equipment normally can be moved by one or two persons, is designed to be used in multiple locations, and requires no tools to install.

**G Fire Suppression Factors**  None  
Enter up to three codes.

Fire suppression factor (1) \_\_\_\_\_

Fire suppression factor (2) \_\_\_\_\_

Fire suppression factor (3) \_\_\_\_\_

**H1 Mobile Property Involved**  None

1  Not involved in ignition, but burned  
2  Involved in ignition, but did not burn  
3  Involved in ignition and burned

Mobile property model \_\_\_\_\_

License Plate Number \_\_\_\_\_ State \_\_\_\_\_ VIN \_\_\_\_\_

**H2 Mobile Property Type and Make**

Mobile property type \_\_\_\_\_

Mobile property make \_\_\_\_\_

Year \_\_\_\_\_

**Local Use**

Pre-Fire Plan Available  
Some of the information presented in this report may be based upon reports from other agencies:

Arson report attached  
 Police report attached  
 Coroner report attached  
 Other reports attached

Structure fire? Please be sure to complete the Structure Fire form (NFIRS-3).

## CHAPTER 4 • FIRE MODULE (NFIRS-2)

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The Fire Module (NFIRS-2) is completed for incidents involving a noncontained fire. Each section or block in the Fire Module asks for information on particular types of fires or items involved in the fire.

This module should be completed for Incident Types 100, 111, 112, 120–143, 160–173, and 170–173 found in Section C of the Basic Module. The optional Wildland Fire Module may be used instead of the Fire Module for Incident Types 140–143, 160, 170–173, 631, and 632. Users may also optionally complete the Fire Module for confined fires (Incident Types 113–118), although it is not required.

### SECTION A

The guidance and directions for completing Section A of the Fire Module are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Fire Module must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3–8.

#### **A Fire Department Identification (FDID) ☆**

##### *Entry*

Enter the same FDID number found in Section A of the Basic Module.

#### **State ☆**

##### *Entry*

Enter the same State abbreviation found in Section A of the Basic Module.

#### **Incident Date ☆**

##### *Entry*

Enter the same incident date found in Section A of the Basic Module.

#### **Station Number**

##### *Entry*

Enter the same station number found in Section A of the Basic Module.

#### **Incident Number ☆**

##### *Entry*

Enter the same incident number found in Section A of the Basic Module.

## Exposure Number ☆

### Entry

Enter the same exposure number found in Section A of the Basic Module.

## Delete/Change

### Definition

Indicates a change to information submitted on a previous Fire Module or the deletion of an incorrect report.

### Purpose

To delete or correct previously reported information.

### Entry

**Delete:** Check or mark this box when you have previously submitted data on this incident and now want to have the data on this incident deleted from the database. If this box is marked, complete Section A and leave the rest of the report blank. This will delete all data regarding the incident. Forward the report according to your normally established procedures.

**Change:** Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

## Property Details

Section B collects details about the specific property involved in the fire, whether a structure or an open piece of land.

### **B1** Number of Residential Living Units

#### Definition

The estimated total number of residential living units in the building of origin, whether or not all of the units became involved in the fire.

☛ This field is required when the Property Use on the Basic Module (Section J) is coded in the 400s.

#### Purpose

This information permits analysis of the fire problem by specific property use details. Information on the number of residential living units in the fire building provides a measure of the potential human exposure and can assist in targeting fire prevention and suppression programs.

The ☆ denotes a required field.

### Entry

Enter the estimated total number of residential living units in the building of origin, whether or not all the units became involved or were occupied at the time of the fire. If the fire did not occur in a residential property, check or mark the Not Residential box.

*One- and two-family dwelling:* Enter 1 or 2 as appropriate.

*Apartment buildings, condominiums, townhouses, and rowhouses:* Enter the number of separately owned or rented units in the building of origin.

*Hotels and motels:* Enter the number of lodging units in the building of origin.

*Dormitories, rooming houses, and live-in-care centers:* Enter the number of beds.

### Example

For an apartment fire in a high-rise building with 100 total apartments, enter “100” for the number of residential living units:

B Property Details	
<b>B1</b>	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;"> <span style="font-size: 1.2em;"> </span> 1 <span style="font-size: 1.2em;"> </span> 0 <span style="font-size: 1.2em;"> </span> 0 <span style="font-size: 1.2em;"> </span> </div> <div style="margin-left: 20px;"> <input type="checkbox"/> <b>Not Residential</b> </div> </div> <p style="font-size: 0.8em; margin-top: 5px;">Estimated number of residential living units in building of origin <i>whether or not all units became involved</i></p>
<b>B2</b>	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;"> <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> </div> <div style="margin-left: 20px;"> <input type="checkbox"/> <b>Buildings not involved</b> </div> </div> <p style="font-size: 0.8em; margin-top: 5px;">Number of buildings involved</p>
<b>B3</b>	<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 2px;"> <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> , <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> <span style="font-size: 1.2em;"> </span> </div> <div style="margin-left: 20px;"> <input type="checkbox"/> <b>None</b>  <input type="checkbox"/> <b>Less than one acre</b> </div> </div> <p style="font-size: 0.8em; margin-top: 5px;">Acres burned (outside fires)</p>

## B2 Number of Buildings Involved

### Definition

The number of buildings directly involved in the fire. Each building involved in the fire should be documented as a separate exposure.

### Purpose

This element helps measure the size of the fire, which can assist with analyzing issues such as exposure protection and building density.

### Entry

Enter the total number of buildings involved in the fire. If the fire was confined to the building of origin, enter a “1.” If no buildings were involved, check or mark the Buildings Not Involved box.

### Example

For a fire in a single-family house that extended to a neighboring house due to radiant heat transmission, enter “2” for the number of buildings involved:

B Property Details	
<b>B1</b>	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 60px; height: 20px; display: flex; justify-content: flex-end; align-items: center; margin-right: 5px;">1</div> <div style="margin-left: 10px;"> <input type="checkbox"/> <b>Not Residential</b>  <small>Estimated number of residential living units in building of origin <i>whether or not all units became involved</i></small> </div> </div>
<b>B2</b>	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 60px; height: 20px; display: flex; justify-content: flex-end; align-items: center; margin-right: 5px;">2</div> <div style="margin-left: 10px;"> <input type="checkbox"/> <b>Buildings not involved</b>  <small>Number of buildings involved</small> </div> </div>
<b>B3</b>	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; width: 60px; height: 20px; display: flex; justify-content: space-between; align-items: center; margin-right: 5px;"> <span style="width: 30px;"></span> <span style="width: 30px;"></span> </div> <div style="margin-left: 10px;"> <input type="checkbox"/> <b>None</b>  <input type="checkbox"/> <b>Less than one acre</b>  <small>Acres burned (outside fires)</small> </div> </div>

## B3 Number of Acres Burned (outside fires)

### Definition

The estimated number of acres burned in the fire incident.

### Purpose

The outside fire situation can be assessed by examining the extent of the property involved. Information on the number of acres burned can assist in targeting fire prevention programs and planning fire suppression activities.

### Entry

Enter the total number of acres burned in the fire. If it was not a brush/grass fire, or no acres were burned, or less than one acre burned, check or mark the appropriate box.

### Example

For a fire that burned approximately 10 acres of a field, enter “10”:

B Property Details	
B1	<div style="display: flex; justify-content: space-between;"> <div style="border-bottom: 1px solid black; width: 100px; margin-bottom: 5px;"></div> <div style="text-align: right;"><input checked="" type="checkbox"/> Not Residential</div> </div> <p style="font-size: small;">Estimated number of residential living units in building of origin <i>whether or not all units became involved</i></p>
B2	<div style="display: flex; justify-content: space-between;"> <div style="border-bottom: 1px solid black; width: 100px; margin-bottom: 5px;"></div> <div style="text-align: right;"><input checked="" type="checkbox"/> Buildings not involved</div> </div> <p style="font-size: small;">Number of buildings involved</p>
B3	<div style="display: flex; justify-content: space-between;"> <div style="border-bottom: 1px solid black; width: 100px; margin-bottom: 5px;"></div> <div style="border-bottom: 1px solid black; width: 100px; margin-bottom: 5px; text-align: right;">1,0</div> <div style="text-align: right;"><input type="checkbox"/> None</div> </div> <p style="font-size: small;">Acres burned (outside fires)</p> <div style="text-align: right;"><input type="checkbox"/> Less than one acre</div>

## SECTION C

## C On-Site Materials or Products and On-Site Materials Storage Use

### Definition

Identifies any significant amounts of commercial, industrial, energy, or agricultural products or materials on the property, whether or not they became involved in the fire.

- ☛ If a Property Use in the 500s, 600s, 700s, or 800s was listed in Block J of the Basic Module, then this field is required. This field may also be useful for other property uses.

### Purpose

This element permits analysis of the fire problem by the materials and products present on the property involved in the fire. Information on materials and products present can assist in targeting fire prevention and suppression programs and identifying training and equipment needs.

### Entry

Enter the three-digit codes and descriptions for up to three of the most significant on-site materials or products, whether or not they became involved in the fire. Check or mark the Undetermined box if the on-site material is unknown. If there is no on-site material, check or mark the None box and go to Block D.

For each material or product entered, check or mark the box to the right that best describes whether the material is being stored, processed or manufactured, sold, or repaired or serviced on the property (required whenever an On-Site Material or Product entry is made).

- ☛ Storage incidental to a retail or industrial operation does not have to be reported separately. Bulk storage or warehousing is generally associated with storage of large quantities of raw material awaiting transformation into a finished product or storage of finished products awaiting shipment for sale or final use.

*Example*

A lumberyard involved in the fire incident was coded as an outside material storage area in Section J of the Basic Module (Property Use code 807); enter “311” Lumber as the on-site material or product:

<p><b>C On-Site Materials or Products</b> <input type="checkbox"/> <b>None</b></p> <p>Enter up to three codes. Check one or more boxes for each code entered.</p> <p><input type="text" value="3"/> <input type="text" value="1"/> <input type="text" value="1"/>   Lumber, sawed wood</p> <p>On-site material (1)</p> <p><input type="text"/>   <input type="text"/></p> <p>On-site material (2) <span style="float: right;">k</span></p> <p><input type="text"/>   <input type="text"/></p> <p>On-site material (3)</p>	<p>Complete if there were any significant amounts of commercial, industrial, energy, or agricultural products or materials on the property, <i>whether or not they became involved</i></p>
	<p><b>On-Site Materials Storage Use</b></p> <p>1 <input checked="" type="checkbox"/> Bulk storage or warehousing</p> <p>2 <input type="checkbox"/> Processing or manufacturing</p> <p>3 <input type="checkbox"/> Packaged goods for sale</p> <p>4 <input type="checkbox"/> Repair or service</p> <p>U <input type="checkbox"/> Undetermined</p>
	<p>1 <input type="checkbox"/> Bulk storage or warehousing</p> <p>2 <input type="checkbox"/> Processing or manufacturing</p> <p>3 <input type="checkbox"/> Packaged goods for sale</p> <p>4 <input type="checkbox"/> Repair or service</p> <p>U <input type="checkbox"/> Undetermined</p>
	<p>1 <input type="checkbox"/> Bulk storage or warehousing</p> <p>2 <input type="checkbox"/> Processing or manufacturing</p> <p>3 <input type="checkbox"/> Packaged goods for sale</p> <p>4 <input type="checkbox"/> Repair or service</p> <p>U <input type="checkbox"/> Undetermined</p>

☛ An alphabetized synonym list for the following On-Site Materials or Products codes is presented in Appendix B.

## ON-SITE MATERIALS OR PRODUCTS CODES

### Food, Beverages, Agriculture

**Food**

- 111 Baked goods.
- 112 Meat products. Includes poultry and fish.
- 113 Dairy products.
- 114 Produce, fruit, or vegetables.
- 115 Sugar, spices.
- 116 Deli products.
- 117 Cereals, grains; packaged.
- 118 Fat/Cooking grease. Includes lard and animal fat.
- 110 Food, other.

**Beverages**

- 121 Alcoholic beverage.
- 122 Nonalcoholic beverage.
- 120 Beverages, other.

**Agriculture**

- 131 Trees, plants, flowers.
- 132 Feed, grain, seed.
- 133 Hay, straw.
- 134 Crop, not grain.
- 135 Livestock.
- 136 Pets.

- 137 Pesticides.
- 138 Fertilizer.
- 130 Agriculture, other.
- Food, beverages, agriculture, other**
- 100 Foods, beverages, agriculture, other.

## Personal and Home Products

### Fabrics

- 211 Curtains, drapes.
- 212 Linens.
- 213 Bedding.
- 214 Cloth, yarn, dry goods.
- 210 Fabrics, other.

### Wearable products

- 221 Clothes.
- 222 Footwear.
- 223 Eyeglasses.
- 225 Perfumes, colognes, cosmetics.
- 226 Toiletries.
- 220 Wearable products, other.

### Accessories

- 231 Jewelry, watches.
- 232 Luggage, suitcases.
- 233 Purses, satchels, briefcases, wallets, belts, backpacks.
- 230 Accessories, other.

### Furnishings

- 240 Furnishings, other.
- 241 Furniture.
- 242 Beds, mattresses.
- 243 Clocks.
- 244 Housewares.
- 245 Glass, ceramics, china, pottery, stoneware, earthenware.
- 246 Silverware.

### Personal and home products, other

- 200 Personal and home products, other.

## Raw Materials

### Wood

- 311 Lumber, sawn wood.
- 312 Timber.
- 313 Cork.
- 314 Pulp
- 315 Sawdust, wood chips.
- 310 Wood, other.

### Fibers

- 321 Cotton.
- 322 Wool.
- 323 Silk.
- 320 Fibers, other.

**Animal skins**

- 331 Leather.
- 332 Fur.
- 330 Animal skins, other.

**Other raw materials**

- 341 Ore.
- 342 Rubber.
- 343 Plastics.
- 344 Fiberglass.
- 345 Salt.
- 300 Raw materials, other

**Paper Products, Rope****Paper products**

- 411 Newspapers, magazines.
- 412 Books.
- 413 Greeting cards.
- 414 Paper, rolled
- 415 Cardboard.
- 416 Packaged paper products. Includes stationery.
- 417 Paper records or reports.
- 410 Paper products, other.

**Rope, twine, cordage**

- 421 Rope, twine, cordage.

**Paper products, rope, other**

- 400 Paper products, rope, other.

**Flammables, Chemicals, Plastics****Flammables, combustible liquids**

- 511 Gasoline, diesel fuel.
- 512 Flammable liquid. Excludes gasoline (511).
- 513 Combustible liquid. Includes heating oil. Excludes diesel fuel (511).
- 514 Motor oil.
- 515 Heavy oils, grease, noncooking related.
- 516 Asphalt.
- 517 Adhesive, resin, tar.
- 510 Flammables, combustible liquids, other.

**Flammable gases**

- 521 Natural gas.
- 522 LP gas, butane, propane.
- 523 Hydrogen gas.
- 520 Flammable gases, other.

**Solid fuel, coal type**

- 531 Charcoal.
- 532 Coal.
- 533 Peat.
- 534 Coke.
- 530 Solid fuel, coal type, other.

**Chemicals, drugs**

- 541 Hazardous chemicals.
- 542 Nonhazardous chemicals.
- 543 Cleaning supplies.
- 544 Pharmaceuticals, drugs.
- 545 Illegal drugs.
- 540 Chemicals, drugs, other.

**Radioactive materials**

- 551 Radioactive materials.

**Flammables, chemicals, plastics, other**

- 500 Flammables, chemicals, plastics, other.

**Construction, Machinery, Metals****Machinery, tools**

- 611 Industrial machinery.
- 612 Machine parts.
- 613 Tools (power and hand tools).
- 610 Machinery, tools, other.

**Construction supplies**

- 621 Hardware products.
- 622 Construction and home improvement products. Excludes pipes and fittings (623), electrical parts and supplies (626), insulation (627), lumber (311).
- 623 Pipes, fittings.
- 624 Stone-working materials.
- 625 Lighting fixtures and lamps.
- 626 Electrical parts, supplies, equipment. Excludes light fixtures (625).
- 627 Insulation.
- 628 Abrasives. Includes sandpaper and grinding materials.
- 629 Fencing, fence supplies.
- 620 Construction supplies, other.

**Floor and wall coverings**

- 631 Carpets, rugs.
- 632 Linoleum, tile.
- 633 Ceramic tile.
- 634 Wallpaper.
- 635 Paint.
- 630 Floor and wall coverings, other.

**Metal products**

- 641 Steel, iron products.
- 642 Nonferrous metal products. Includes aluminum products (no combustible metals).
- 643 Combustible metal products. Includes magnesium and titanium.
- 640 Metal products, other.

**Construction, machinery, metals, other**

- 600 Construction, machinery, metals, other.

**Appliances, Electronics, Medical, Laboratory****Appliances, electronics**

- 711 Appliances. Includes refrigerators, stoves, irons.
- 712 Electronic parts, supplies, equipment. Includes components such as circuit boards, radios, computers.

- 713 Electronic media. Includes diskettes, CD-ROMs, recorded music.
- 714 Photographic equipment, supplies, materials. Includes cameras, film. Excludes digital electronic cameras (712) and electronic storage media (713).
- 710 Appliances, electronics, other.

**Medical, laboratory products**

- 721 Dental supplies.
- 722 Medical supplies. Includes surgical products.
- 723 Optical products.
- 724 Veterinary supplies.
- 725 Laboratory supplies.
- 720 Medical, laboratory products, other.

**Appliances, electronics, medical, laboratory, other**

- 700 Appliances, electronics, medical, laboratory, other.

**Vehicles, Vehicle Parts****Motor vehicles and parts**

- 811 Autos, trucks, buses, recreational vehicles, riding mowers, farm vehicles.
- 812 Construction vehicles.
- 813 Motor vehicle parts. Excludes tires (814).
- 814 Tires.
- 810 Motor vehicles and parts, other.

**Watercraft**

- 821 Boats, ships.
- 820 Watercraft, other.

**Aircraft**

- 830 Aircraft, other.
- 831 Planes, airplanes.
- 832 Helicopters.

**Rail**

- 841 Trains, light rail, rapid transit cars.
- 842 Rail equipment.
- 840 Rail, other.

**Non-motorized vehicles**

- 851 Bicycles, tricycles, unicycles. Includes tandem bicycles.
- 850 Non-motorized vehicles, other.

**Other Products****Containers, packing materials**

- 911 Bottles, barrels, boxes.
- 912 Packing material.
- 913 Pallets.
- 910 Containers, packing materials, other.

**Previously owned products**

- 921 Antiques.
- 922 Collectibles.
- 923 Used merchandise.
- 920 Previously owned products, other.

**Ordnance, explosives, fireworks**

- 931 Guns.
- 932 Ammunition.
- 933 Explosives
- 934 Fireworks, commercially made.
- 935 Rockets, missiles.
- 930 Ordnance, explosives, fireworks, other.

**Recreation, arts products**

- 941 Musical instruments.
- 942 Hobby, crafts. Excludes artwork (943).
- 943 Art supply/artwork. Includes finished works, paint, finishing materials.
- 944 Sporting goods. Includes balls, nets, rackets, protective equipment used in sport.
- 945 Camping, hiking, outdoor products. Includes related equipment such as portable stoves, rope.
- 946 Games, toys.
- 940 Recreation, art products, other.

**Mixed sales products**

- 951 Office supplies.
- 952 Restaurant supplies. Excludes food (110 series).
- 950 Mixed sales products, other.

**Discarded material**

- 961 Junkyard materials.
- 962 Recyclable materials. Includes materials gathered specifically for the purpose of recycling.
- 960 Discarded material, other.
- 963 Trash, not recyclable.

**Other On-Site Materials**

- 000 On-site materials, other.
- NNN None.
- UUU Undetermined.

**ON-SITE MATERIALS STORAGE USE CODES**

- 1 Bulk storage or warehousing.
- 2 Processing or manufacturing.
- 3 Packaged goods for sale.
- 4 Repair or service.
- N None.
- U Undetermined.

**SECTION D**

## Ignition

Section D is intended to collect data on several factors related to the ignition of the fire including the area of fire origin, heat source, item first ignited, and type of material first ignited.

### **D1** Area of Fire Origin ☆

#### *Definition*

The primary use of the area where the fire started within the property. The area of origin may be a room, a portion of a room, a vehicle, a portion of a vehicle, or an open area devoted to a specific use. Every fire has an area of fire origin.

### Purpose

Combined with data on the fire's ignition, knowing the area where the fire originated assists in determining the cause of the fire. Such information is useful for targeting fire prevention, investigation, and suppression efforts.

### Entry

Enter the two-digit code and description that best describes the area of fire origin.

- For chimney fires, the area of fire origin is classified as the first area where ignition occurred. For example, if the chimney is associated with a fireplace in the family room, the code would be "14." The chimney is considered the Equipment Involved in Ignition (Section F).

### Example

D Ignition							
D1	<table border="1"> <tr> <td>2</td> <td>1</td> <td>Bedroom</td> </tr> </table> <p>Area of fire origin ☆</p>	2	1	Bedroom			
2	1	Bedroom					
D2	<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table> <p>Heat source ☆</p>						
D3	<table border="1"> <tr> <td></td> <td></td> <td></td> <td>1</td> <td><input type="checkbox"/></td> <td>Check box if fire spread was confined to object of origin.</td> </tr> </table> <p>Item first ignited ☆</p>				1	<input type="checkbox"/>	Check box if fire spread was confined to object of origin.
			1	<input type="checkbox"/>	Check box if fire spread was confined to object of origin.		
D4	<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table> <p>Type of material first ignited</p> <p>Required only if item first ignited code is 00 or &lt;70</p>						

A fire started in a bedroom (21) of a home:

- An alphabetized synonym list for the following Area of Fire Origin codes is presented in Appendix B.

### AREA OF FIRE ORIGIN CODES

#### Means of Egress

- |    |   |
|----|---|
| 01 | Hallway corridor, mall.                                   |
| 02 | Exterior stairway. Includes fire escapes, exterior ramps. |
| 03 | Interior stairway or ramp. Includes interior ramps.       |
| 04 | Escalator: exterior, interior.                            |
| 05 | Entranceway, lobby.                                       |
| 09 | Egress/exit, other.                                       |

**Assembly or Sales Areas (Groups of People)**

- 11 Arena, assembly area with fixed seats for 100 or more people. Includes auditoriums, chapels, places of worship, class rooms, lecture halls, arenas, theaters.
- 12 Assembly area without fixed seats for 100 or more people. Includes ballrooms, bowling alleys, gymnasiums, multiuse areas, roller or ice skating rinks.
- 13 Assembly area without fixed seats for less than 100 people. Includes meeting rooms, classrooms, multiuse areas.
- 14 Common room, den, family room, living room, lounge, music room, recreation room, sitting room.
- 15 Sales area, showroom. Excludes display windows (56).
- 16 Art gallery, exhibit hall, library.
- 17 Swimming pool.
- 10 Assembly or sales areas, other.

**Function Areas**

- 21 Bedroom for less than five people. Includes jail or prison cells, lockups, patient rooms, sleeping areas.
- 22 Bedroom for more than five people. Includes barracks, dormitories, patient wards.
- 23 Dining room, cafeteria, bar area, beverage service area, canteen area, lunchroom, mess hall.
- 24 Cooking area, kitchen.
- 25 Bathroom, checkroom, lavatory, locker room, powder room, outhouse, portable toilet, sauna area.
- 26 Laundry area, wash house (laundry).
- 27 Office.
- 28 Personal service area. Includes barber/beauty salon area, exercise/health club, massage area.
- 20 Function areas, other.

**Technical Processing Areas**

- 31 Laboratory.
- 32 Dark room, photography area, printing area.
- 33 Treatment: first-aid area, surgery area (minor procedures).
- 34 Surgery area: major operations, operating room or theater, recovery room.
- 35 Computer room, control room or center, data processing center, electronic equipment area, telephone booth or area, radar room.
- 36 Stage area: performance, basketball court, boxing ring, dressing room (backstage), ice rink.
- 37 Projection room, spotlight area, stage light area.
- 38 Processing/manufacturing area, workroom, assembly area.
- 30 Technical processing areas, other.

**Storage Areas**

- 41 Storage room, area, tank, bin. Includes all areas where products are held awaiting process, shipment, use, sale.
- 42 Closet.
- 43 Storage: supplies or tools. Includes dead storage, maintenance supply room, tool room, basement (unfinished).
- 44 Records storage room, storage vault.
- 45 Shipping/receiving area: loading area, dock or bay, mail room, packing area.
- 46 Chute/container: trash, rubbish, waste. Includes compactor and garbage areas. Excludes incinerators (64).
- 47 Vehicle storage area: garage, carport.
- 40 Storage areas, other.

**Service Areas**

- 51 Dumbwaiter or elevator shaft.
- 52 Conduit, pipe, utility, or ventilation shaft.
- 53 Light shaft.
- 54 Chute. Includes laundry or mail chutes. Excludes trash chutes (46).
- 55 Duct. Includes HVAC, cable, exhaust.

- 56 Display window.
- 58 Conveyor.
- 50 Service areas, other.

### Service or Equipment Areas

- 61 Machinery room or area. Includes elevator machinery room, engine room, head house, pump room, refrigeration room.
- 62 Heating room or area, water heater area.
- 63 Switchgear area, transformer vault.
- 64 Incinerator area.
- 65 Maintenance shop or area. Includes paint shop, repair shop, welding area, workshop.
- 66 Cell, test.
- 67 Enclosure, pressurized air.
- 68 Enclosure with enriched oxygen atmosphere.
- 60 Service or equipment areas, other.

### Structural Areas

- 71 Substructure area or space, crawl space.
- 72 Exterior balcony, unenclosed porch. Excludes enclosed porches (93).
- 73 Ceiling and floor assembly, crawl space between stories.
- 74 Attic: vacant, crawl space above top story. Includes cupola, concealed roof/ceiling space, steeple.
- 75 Wall assembly, concealed wall space.
- 76 Wall surface, exterior.
- 77 Roof surface, exterior.
- 78 Awning.
- 70 Structural areas, other.

### Transportation, Vehicle Areas

- 81 Operator/passenger area of transportation equipment.
- 82 Cargo/trunk area—all vehicles.
- 83 Engine area, running gear, wheel area.
- 84 Fuel tank, fuel line.
- 85 Separate operator/control area of transportation equipment. Includes bridges of ships, cockpit of planes. Excludes automobiles, trucks, buses (81).
- 86 Exterior, exposed surface.
- 80 Vehicle areas, other.

### Outside Areas

- 91 Railroad right-of-way: on or near.
- 92 Highway, parking lot, street: on or near.
- 93 Courtyard, patio, terrace. Includes screened-in porches. Excludes unenclosed porches (72).
- 94 Open area, outside. Includes farmland, fields, lawns, parks, vacant lots.
- 95 Wildland, woods.
- 96 Construction/Renovation area.
- 97 Multiple areas.
- 98 Vacant structural area.
- 90 Outside areas, other.

### Other Area of Fire Origin

- 00 Area of fire origin, other.
- UU Undetermined.

## D2 Heat Source ☆

☛ Heat Source was known as Form of Heat of Ignition in NFIRS 4.1.

### Definition

The heat source that ignited the Item First Ignited (Block D3) to cause the fire.

### Purpose

This information, combined with other factors in the ignition sequence, permits analysis of how fires start. Also, some heat sources (e.g., cigarettes, lighters) are objects whose frequency of involvement in fires is of direct interest for fire prevention efforts.

### Entry

Enter the two-digit code and description that best describes the heat source that ignited the fire.

### Example

A discarded cigarette (61) ignited the bed (21):

<b>D Ignition</b>				
<b>D1</b>	<table border="1"> <tr> <td>2</td> <td>1</td> <td>Bedroom</td> </tr> </table> <p>Area of fire origin ☆</p>	2	1	Bedroom
2	1	Bedroom		
<b>D2</b>	<table border="1"> <tr> <td>6</td> <td>1</td> <td>Discarded cigarette</td> </tr> </table> <p>Heat source ☆</p>	6	1	Discarded cigarette
6	1	Discarded cigarette		
<b>D3</b>	<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table> <p>Item first ignited ☆ 1 <input type="checkbox"/> Check box if fire spread was confined to object of origin.</p>			
<b>D4</b>	<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table> <p>Type of material first ignited <span style="float: right;">Required only if item first ignited code is 00 or &lt;70</span></p>			

## HEAT SOURCE CODES

### Operating Equipment

- 11 Spark, ember, or flame from operating equipment.
- 12 Radiated or conducted heat from operating equipment.
- 13 Electrical arcing.
- 10 Heat from operating equipment, other.

### Hot or Smoldering Object

- 41 Heat, spark from friction. Includes overheated tires.
- 42 Molten, hot material. Includes molten metal, hot forging, hot glass, hot metal fragment, brake shoe, hot box, and slag from arc welding operations.
- 43 Hot ember or ash. Includes hot coals, coke, and charcoal; and sparks or embers from a chimney that ignite

- the roof of the same structure. Excludes flying brand, embers, and sparks (83); and embers accidentally escaping from operating equipment (11).
- 40 Hot or smoldering object, other.

### Explosives, Fireworks

- 51 Munitions. Includes bombs, ammunition, and military rockets.
- 53 Blasting agent, primer cord, black powder fuse. Includes fertilizing agents, ammonium nitrate, and sodium, potassium, or other chemical agents.
- 54 Fireworks. Includes sparklers, paper caps, party poppers, and firecrackers.
- 55 Model and amateur rockets.
- 56 Incendiary device. Includes Molotov cocktails and arson sets.
- 50 Explosive, fireworks, other.

### Other Open Flame or Smoking Materials

- 61 Cigarette.
- 62 Pipe or cigar.
- 63 Heat from undetermined smoking material.
- 64 Match.
- 65 Lighter: cigarette lighter, cigar lighter.
- 66 Candle.
- 67 Warning or road flare; fusee.
- 68 Backfire from internal combustion engine. Excludes flames and sparks from an exhaust system (11).
- 69 Flame/torch used for lighting. Includes gas light and gas-/liquid-fueled lantern.
- 60 Heat from open flame or smoking materials, other.

### Chemical, Natural Heat Sources

- 71 Sunlight. Usually magnified through glass, bottles, etc.
- 72 Spontaneous combustion, chemical reaction.
- 73 Lightning discharge.
- 74 Other static discharge. Excludes electrical arcs (13) or sparks (11).
- 70 Chemical, natural heat sources, other.

### Heat Spread From Another Fire. Excludes operating equipment.

- 81 Heat from direct flame, convection currents spreading from another fire.
- 82 Radiated heat from another fire. Excludes heat from exhaust systems of fuel-fired, fuel-powered equipment (12).
- 83 Flying brand, ember, spark. Excludes embers, sparks from a chimney igniting the roof of the same structure (43).
- 84 Conducted heat from another fire.
- 80 Heat spread from another fire, other.

### Other Heat Sources

- 97 Multiple heat sources, including multiple ignitions. If one type of heat source was primarily involved, use that classification.
- 00 Heat sources, other.
- UU Undetermined.

### D3 Item First Ignited ☆

☛ Item First Ignited was known as Form of Material Ignited in NFIRS 4.1.

#### Definition

The use or configuration of the item or material first ignited by the heat source. This block identifies the first item that had sufficient volume or heat intensity to extend to uncontrolled or self-perpetuating fire.

#### Purpose

This data element permits analysis of how fires start and spread. A study of this entry also helps assess the need for flammability and other materials standards. This information is helpful to manufacturers for product improvement, as well as for fire prevention efforts.

#### Entry

Enter the two-digit code and description that best describes the item first ignited by the heat source.

☛ If fire spread was confined to the object of origin, check or mark the box (1) below the written entry. This is the only opportunity to enter this code—Confined to Object of Origin is not an option in Block J2 of the Structure Fire Module.

#### Example

Fire in a living room fireplace (14) ignited (11) creosote (95) that had built up in the chimney, causing a fire:

<b>D Ignition</b>				
<b>D1</b>	<table border="1"> <tr> <td>1</td> <td>4</td> <td>Living room fireplace</td> </tr> </table> <p>Area of fire origin ☆</p>	1	4	Living room fireplace
1	4	Living room fireplace		
<b>D2</b>	<table border="1"> <tr> <td>1</td> <td>1</td> <td>Spark, ember, flame</td> </tr> </table> <p>Heat source ☆</p>	1	1	Spark, ember, flame
1	1	Spark, ember, flame		
<b>D3</b>	<table border="1"> <tr> <td>9</td> <td>5</td> <td>Creosote buildup</td> </tr> </table> <p>Item first ignited ☆ 1 <input type="checkbox"/> Check box if fire spread was confined to object of origin.</p>	9	5	Creosote buildup
9	5	Creosote buildup		
<b>D4</b>	<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table> <p>Type of material first ignited</p> <p>Required only if item first ignited code is 00 or &lt;70</p>			

☛ An alphabetized synonym list for the following Item First Ignited codes is presented in Appendix B.

**ITEM FIRST IGNITED CODES****Structural Component, Finish**

- 11 Exterior roof covering, surface, finish.
- 12 Exterior sidewall covering, surface, finish. Includes eaves.
- 13 Exterior trim, appurtenances. Includes doors, porches, and platforms.
- 14 Floor covering or rug/carpet/mat, surface.
- 15 Interior wall covering. Includes cloth wall coverings, wood paneling, and items permanently affixed to a wall or door. Excludes curtains and draperies (36) and decorations (42).
- 16 Interior ceiling covering or finish. Includes cloth permanently affixed to ceiling and acoustical tile.
- 17 Structural member or framing.
- 18 Thermal, acoustical insulation within wall, partition or floor/ceiling space. Includes fibers, batts, boards, loose fills.
- 10 Structural component or finish, other.

**Furniture, Utensils.** Includes built-in furniture.

- 21 Upholstered sofa, chair, vehicle seats.
- 22 Non-upholstered chair, bench.
- 23 Cabinetry. Includes filing cabinets, pianos, dressers, chests of drawers, desks, tables, and bookcases. Excludes TV sets, bottle warmers, and appliance housings (25).
- 24 Ironing board.
- 25 Appliance housing or casing.
- 26 Household utensils. Includes kitchen and cleaning utensils.
- 20 Furniture, utensils, other.

**Soft Goods, Wearing Apparel**

- 31 Mattress, pillow.
- 32 Bedding: blanket, sheet, comforter. Includes heating pads.
- 33 Linen, other than bedding. Includes towels and tablecloths.
- 34 Wearing apparel not on a person.
- 35 Wearing apparel on a person.
- 36 Curtain, blind, drapery, tapestry.
- 37 Goods not made up. Includes fabrics and yard goods.
- 38 Luggage.
- 30 Soft goods, wearing apparel, other.

**Adornment, Recreational Material, Signs**

- 41 Christmas tree.
- 42 Decoration.
- 43 Sign. Includes outdoor signs such as billboards.
- 44 Chips. Includes wood chips.
- 45 Toy, game.
- 46 Awning, canopy.
- 47 Tarpaulin, tent.
- 40 Adornment, recreational material, signs, other.

**Storage Supplies**

- 51 Box, carton, bag, basket, barrel. Includes wastebaskets.
- 52 Material being used to make a product. Includes raw materials used as input to a manufacturing or construction process. Excludes finished products.
- 53 Pallet, skid (empty). Excludes palletized stock (58).
- 54 Cord, rope, twine, yarn.

- 55 Packing, wrapping material.
- 56 Baled goods or material. Includes bale storage.
- 57 Bulk storage.
- 58 Palletized material, material stored on pallets.
- 59 Rolled, wound material. Includes rolled paper and fabrics.
- 50 Storage supplies, other.

### Liquids, Piping, Filters

- 61 Atomized, vaporized liquid. Included are aerosols.
- 62 Flammable liquid/gas (fuel) in or escaping from combustion engines.
- 63 Flammable liquid/gas in or escaping from final container or pipe before engine or burner. Includes piping between the engine and the burner.
- 64 Flammable liquid/gas in or escaping from container or pipe. Excludes engines, burners, and their fuel systems.
- 65 Flammable liquid/gas, uncontained. Includes accelerants.
- 66 Pipe, duct, conduit, hose.
- 67 Pipe, duct, conduit, or hose covering. Includes insulating materials whether for acoustical or thermal purposes, and whether inside or outside the pipe, duct, conduit, or hose.
- 68 Filter. Includes evaporative cooler pads.
- 60 Liquids, piping, filters, other.

### Organic Materials

- 71 Agricultural crop. Includes fruits and vegetables.
- 72 Light vegetation (not crop). Includes grass, leaves, needles, chaff, mulch, and compost.
- 73 Heavy vegetation (not crop). Includes trees and brush.
- 74 Animal, living or dead.
- 75 Human, living or dead.
- 76 Cooking materials. Includes edible materials for man or animal. Excludes cooking utensils (26).
- 77 Feathers or fur not on a bird or animal, but not processed into a product.
- 70 Organic materials, other.

### General Materials

- 81 Electrical wire, cable insulation. Do not classify the insulation on the wiring as the item first ignited unless there were no other materials in the immediate area, such as might be found in a cable tray or electrical vault.
- 82 Transformer. Includes transformer fluids.
- 83 Conveyor belt, drive belt, V-belt.
- 84 Tire.
- 85 Railroad ties.
- 86 Fence, pole.
- 87 Fertilizer.
- 88 Pyrotechnics, explosives.

### General Materials Continued

- 91 Book.
- 92 Magazine, newspaper, writing paper. Includes files.
- 93 Adhesive.
- 94 Dust, fiber, lint. Includes sawdust and excelsior.
- 95 Film, residue. Includes paint, resin, and chimney film or residue and other films and residues produced as a byproduct of an operation.
- 96 Rubbish, trash, waste.
- 97 Oily rags.
- 99 Multiple items first ignited. Use only where there are multiple fires started at approximately the same time on the same property and more than one item was initially involved.

**Other Items First Ignited**

00	Item first ignited, other.
UU	Undetermined.

**D4 Type of Material First Ignited**

- ☛ Type of Material First Ignited was known as Type of Material Ignited in NFIRS 4.1.

**Definition**

The composition of the material in the item first ignited by the heat source. The type of material ignited refers to the raw, common, or natural state of the material. The type of material ignited may be a gas, flammable liquid, chemical, plastic, wood, paper, fabric, or any number of other materials.

- ☛ This field is required only if the Item First Ignited code is “00” or a code less than “70.”

**Purpose**

This information assists in determining why fires start and spread and their severity. A study of this entry also helps assess the need for flammability and other material characteristic standards. This information is important to manufacturers for product improvement, as well as for fire prevention efforts.

**Entry**

Enter the code and description that best describes the type of material first ignited by the heat source.

- ☛ Be certain to enter the first material ignited by the heat source. For example, if an arsonist poured gasoline on a wooden floor, it was the gasoline and not the wood that was the material first ignited.
- ☛ If an insulated wire short circuits, it may be the wire’s insulation that was first ignited; or it may be the wood studs in the wall, thermal insulation nearby, or another material.

**Example**

A board game (45) made of cardboard (60) ignited (81) after being left too close to the living room fireplace (14), causing a fire:

<b>D</b>	<b>Ignition</b>	
<b>D1</b>	[ 1   4 ] Living room fireplace	Area of fire origin ☆
<b>D2</b>	[ 8   1 ] Fireplace flame, convection	Heat source ☆
<b>D3</b>	[ 4   5 ] Toy or game	Item first ignited ☆ 1 <input type="checkbox"/> Check box if fire spread was confined to object of origin.
<b>D4</b>	[ 6   0 ] Wood or paper, other	Type of material first ignited Required only if item first ignited code is 00 or <70

- An alphabetized synonym list for the following Type of Material First Ignited codes is presented in Appendix B.

## TYPE OF MATERIAL FIRST IGNITED CODES

### Flammable Gas

- 11 Natural gas. Includes methane and marsh gas.
- 12 LP gas. Includes butane, butane and air mixtures, and propane gas.
- 13 Anesthetic gas.
- 14 Acetylene gas
- 15 Hydrogen.
- 10 Flammable gas, other. Includes benzene, benzol, carbon disulfide, carbon monoxide, ethylene, ethylene oxide, and vinyl chloride.

### Flammable or Combustible Liquid

- 21 Ether, pentane-type flammable liquid. Includes all Class 1A flammable liquids.
- 22 JP-4 jet fuel and methyl-ethyl-ketone-type flammable liquid. Includes all Class 1B flammable liquids. Excludes gasoline (23).
- 23 Gasoline.
- 24 Turpentine, butyl-alcohol-type flammable liquid. Includes all Class 1C flammable liquids.
- 25 Kerosene; Nos. 1 and 2 fuel oil; diesel-type combustible liquid. Includes all Class II combustible liquids.
- 26 Cottonseed oil; Nos. 4, 5, and 6 fuel oil; creosote-oil-type combustible liquid. Includes all Class IIIA combustible liquids.
- 27 Cooking oil, transformer oil, lubricating oil. Includes all Class IIIB combustible liquids.
- 28 Ethanol.
- 20 Flammable or combustible liquid, other.

### Volatile Solid or Chemical

- 31 Fat, grease, butter, margarine, lard, tallow.
- 32 Petroleum jelly and nonfood grease.
- 33 Polish, paraffin, wax.
- 34 Adhesive, resin, tar, glue, asphalt, pitch, soot.
- 35 Paint, varnish—applied.
- 36 Combustible metal. Includes magnesium, titanium, and zirconium.
- 37 Solid chemical. Includes explosives. Excludes liquid chemicals (division 2) and gaseous chemicals (division 1).
- 38 Radioactive material.
- 30 Volatile solid or chemical, other.

### Plastics

- 41 Plastic, regardless of type. Excludes synthetic fibers, coated fabrics, plastic upholstery.

### Natural Product

- 51 Rubber, tire rubber. Excludes synthetic rubbers (classify as plastics (41)).
- 52 Cork.
- 53 Leather.
- 54 Hay, straw.
- 55 Grain, natural fiber. Includes cotton, feathers, felt, barley, corn, coconut. Excludes fabrics and furniture batting (71).
- 56 Coal, coke, briquettes, peat. Includes briquettes of carbon black and charcoal.
- 57 Food, starch. Includes flour. Excludes fat or grease (31).

- 58 Tobacco.
- 50 Natural product, other. Includes manure.

### Wood or Paper – Processed

- 61 Wood chips, sawdust, wood shavings.
- 62 Round timber. Includes round posts, poles, and piles.
- 63 Sawn wood. Includes all finished lumber and wood shingles.
- 64 Plywood.
- 65 Fiberboard, particleboard, and hardboard. Includes low-density pressed wood fiberboard products.
- 66 Wood pulp, wood fiber.
- 67 Paper. Includes cellulose, waxed paper, sensitized paper, and ground-up processed paper and newsprint used as thermal insulation.
- 68 Cardboard.
- 60 Wood or paper, processed, other.

### Fabric, Textiles, Fur

- 71 Fabric, fiber, cotton, blends, rayon, wool, finished goods. Includes yarn and canvas. Excludes fur and silk (74).
- 74 Fur, silk, other fabric, finished goods. Excludes fabrics listed in Code 71.
- 75 Wig.
- 76 Human hair.
- 77 Plastic-coated fabric. Includes plastic upholstery fabric and other vinyl fabrics.
- 70 Fabric, textiles, fur, other.

### Material Compounded With Oil

- 81 Linoleum.
- 82 Oilcloth.
- 86 Asphalt-treated material. Excludes by-products of combustion, soot, carbon, creosote (34).
- 80 Material compounded with oil, other.

### Other Material

- 99 Multiple types of material.
- 00 Type of material first ignited, other.
- UU Undetermined.

## SECTION E

This section deals with the causes and factors that contribute to a fire's ignition, which are essential pieces of information in guiding fire prevention efforts.

## E1 Cause of Ignition ☆

### Definition

The general causal factor that resulted in a heat source igniting a combustible material. The cause could be the result of a deliberate act, mechanical failure, or act of nature.

### Purpose

This information is used to determine if further information about the factors related to the fire's ignition will be collected later in the module. When combined with other data elements that make up the fire's "ignition chain," it provides critical information about the nature of the events and the circumstances that caused the fire. This is an important element in understanding the causes of fires.

### Entry

Check or mark the box best describing why the heat source and the combustible material were able to combine to initiate the fire. If this is an exposure report, check or mark the top box in this block and skip to Section G.

- ☛ This is the best determination of the firefighter at the scene and may be changed later as a result of further investigation or other information.

### Example

A house caught fire as a result of a lightning strike on the combustible roof (4):

<b>E1</b>	<b>Cause of Ignition</b> ☆	
	<input type="checkbox"/> Check box if this is an exposure report.	➔ Skip to Section G
1	<input type="checkbox"/> Intentional	
2	<input type="checkbox"/> Unintentional	
3	<input type="checkbox"/> Failure of equipment or heat source	
4	<input checked="" type="checkbox"/> Act of nature	
5	<input type="checkbox"/> Cause under investigation	
U	<input type="checkbox"/> Cause undetermined after investigation	

### CAUSE OF IGNITION CODES

- |   |   |
|---|---|
| 1 | Intentional. Includes deliberate misuse of heat source or a fire of an incendiary nature. |
| 2 | Unintentional. Includes fires caused by careless, reckless, or accidental acts.           |
| 3 | Failure of equipment or heat source. Includes mechanical problems.                        |
| 4 | Act of nature. Includes causes related to weather, earthquakes, floods, and animals.      |
| 5 | Cause under investigation.  |
| U | Cause undetermined after investigation.   |

## E2 Factors Contributing to Ignition ☆

- ☛ Factors Contributing to Ignition was known as Ignition Factors in NFIRS 4.1.

### Definition

The contributing factors that allowed the heat source and combustible material to combine to ignite the fire.

### Purpose

Combined with Cause of Ignition and Human Factors Contribution to Ignition, this information explains how and why the fire started. It can also indicate whether a fire is potentially preventable through public education, code enforcement, or other strategies.

### Entry

Enter the two-digit codes and descriptions for up to two contributing factors. The primary factor should be entered first. If there were no factors contributing to ignition, check or mark the None box.

The ☆ denotes a required field.

**Example**

A vehicle caught fire immediately after colliding with a garbage truck; enter “51” Collision:

<b>E<sub>2</sub> Factors Contributing to Ignition</b> ☆ <input type="checkbox"/> None	
5   1	Collision
Factor contributing to ignition (1)	
Factor contributing to ignition (2)	

**FACTORS CONTRIBUTING TO IGNITION CODES****Misuse of Material or Product**

- 11 Abandoned or discarded materials or products. Includes discarded cigarettes, cigars, tobacco embers, hot ashes, or other burning matter. Excludes outside fires left unattended.
- 12 Heat source too close to combustibles.
- 13 Cutting, welding too close to combustibles.
- 14 Flammable liquid or gas spilled. Excludes improper fueling technique (15) and release due to improper container (18).
- 15 Improper fueling technique. Includes overfueling, failure to ground. Excludes fuel spills (14) and using the improper fuel (27).
- 16 Flammable liquid used to kindle fire.
- 17 Washing part or material, painting with flammable liquid.
- 18 Improper container or storage procedure. Includes gasoline in unimproved containers, gas containers stored at excessive temperature, and storage conditions that lead to spontaneous ignition.
- 19 Playing with heat source. Includes playing with matches, candles, and lighters and bringing combustibles into a heat source.
- 10 Misuse of material or product, other.

**Mechanical Failure, Malfunction**

- 21 Automatic control failure.
- 22 Manual control failure.
- 23 Leak or break. Includes leaks or breaks of containers or pipes. Excludes operational deficiencies and spill mishaps.
- 25 Worn out.
- 26 Backfire. Excludes fires originating as a result of hot catalytic converters (41).
- 27 Improper fuel used. Includes the use of gasoline in a kerosene heater and the like.
- 20 Mechanical failure, malfunction, other.

**Electrical Failure, Malfunction**

- 31 Water-caused short-circuit arc.
- 32 Short-circuit arc from mechanical damage.
- 33 Short-circuit arc from defective, worn insulation.
- 34 Unspecified short-circuit arc.
- 35 Arc from faulty contact, broken conductor. Includes broken power lines and loose connections.
- 36 Arc, spark from operating equipment, switch, or electric fence.
- 37 Fluorescent light ballast.
- 30 Electrical failure, malfunction, other.

**Design, Manufacturing, Installation Deficiency**

- 41 Design deficiency.
- 42 Construction deficiency.
- 43 Installation deficiency.
- 44 Manufacturing deficiency.
- 40 Design, manufacturing, installation deficiency, other.

**Operational Deficiency**

- 51 Collision, knock down, run over, turn over. Includes automobiles and other vehicles.
- 52 Accidentally turned on, not turned off.
- 53 Equipment unattended.
- 54 Equipment overloaded.
- 55 Failure to clean. Includes lint and grease buildups in chimneys, stove pipes.
- 56 Improper startup/shutdown procedure.
- 57 Equipment not used for purpose intended. Excludes overloaded equipment (54).
- 58 Equipment not operated properly.
- 50 Operational deficiency, other.

**Natural Condition**

- 61 High wind.
- 62 Storm.
- 63 High water, including floods.
- 64 Earthquake.
- 65 Volcanic action.
- 66 Animal.
- 60 Natural condition, other.

**Fire Spread or Control**

- 71 Exposure fire.
- 72 Rekindle.
- 73 Outside/Open fire for debris or waste disposal.
- 74 Outside/Open fire for warming or cooking.
- 75 Agriculture or land management burns. Includes prescribed burns.
- 70 Fire spread or control, other.

**Other Factors Contributing to Ignition**

- 00 Factors contributing to ignition, other.
- NN None.
- UU Undetermined.

**E3 Human Factors Contributing to Ignition ☆***Definition*

The human condition or situation that allowed the heat source and combustible material to combine to ignite the fire.

*Purpose*

Combined with Cause of Ignition and Factors Contributing to Ignition, this element explains how and why the fire started. It can also indicate whether a fire is potentially preventable through public education, code enforcement, or other strategies.

### Entry

Check or mark all applicable boxes. If age was a factor, enter the estimated age of the person involved in the space provided. If known, the gender of the person involved should also be checked or marked. If there were no known human factors contributing to ignition, check or mark the None box.

### Example

An elderly man (1) of 88 years who was physically disabled (5) and home alone (3) fell asleep (1) in his chair while smoking. The dropped cigarette contacted combustible materials next to his chair. The respondent determined that even had the occupant awakened, he would have been unable to extinguish the fire due to his age (7):

E3 Human Factors  Contributing to Ignition	
Check all applicable boxes <input type="checkbox"/> None	
1	<input checked="" type="checkbox"/> Asleep
2	<input type="checkbox"/> Possibly impaired by alcohol or drugs
3	<input checked="" type="checkbox"/> Unattended person
4	<input type="checkbox"/> Possibly mentally disabled
5	<input checked="" type="checkbox"/> Physically disabled
6	<input type="checkbox"/> Multiple persons involved
<hr/>	
7	<input checked="" type="checkbox"/> Age was a factor
Estimated age of person involved <input type="text" value="8"/> <input type="text" value="8"/>	
1	<input checked="" type="checkbox"/> Male
2	<input type="checkbox"/> Female

### HUMAN FACTORS CONTRIBUTING TO IGNITION CODES

- 1 Asleep. Includes fires that result from a person falling asleep while smoking.
- 2 Possibly impaired by alcohol or drugs. Includes people who fall asleep or act recklessly or carelessly as a result of drugs or alcohol. Excludes people who simply fall asleep (1).
- 3 Unattended or unsupervised person. Includes “latch key” situations whether the person involved is young or old and situations where the person involved lacked supervision or care.
- 4 Possibly mentally disabled. Excludes impairments of a temporary nature such as those caused by drugs or alcohol (2).
- 5 Physically disabled.
- 6 Multiple persons involved. Includes gang activity.
- 7 Age was a factor.
- N None.

### AGE FACTOR GENDER CODES

- 1 Male.
- 2 Female.

## SECTION F

This section identifies the equipment where the heat of ignition originated, the power source that actually operated the equipment, and whether the equipment is normally stationary or is designed to move from location to location.

- ☛ The three blocks in this section—Equipment Involved in Ignition, Equipment Power Source, and Equipment Portability—were collectively known as Equipment Involved in Ignition in NFIRS 4.1.

## F1 Equipment Involved in Ignition

### Equipment Type

#### Definition

The piece of equipment that provided the principal heat source to cause ignition.

#### Purpose

Analysis of the equipment involved in ignition is useful for improving product safety and preventive maintenance. It is just as important to know the kind of equipment that was used improperly as it is to know the kind of equipment that malfunctioned. Misuse can be the direct result of the way the equipment is designed and constructed. When involved in ignition, equipment information provides an important part of the causal data. Equipment involved in ignition can be compared to other causal data to determine if the equipment was (or was not) operating properly.

#### Entry

Enter the three-digit code and description that best describes the equipment involved in ignition. If no equipment was involved, check or mark the None box and skip to Section G.

- ☛ If a vehicle was involved in ignition, use Section H.

#### Example

A fire started by a short circuit in a dryer (811):

F1 Equipment Involved in Ignition	
<input type="checkbox"/> None	⇒ If equipment was not involved, skip to Section G
[ 8   1   1 ]	Clothes dryer
Equipment Involved	
Brand	_____
Model	_____
Serial #	_____
Year	____ ____ ____ ____

- ☛ An alphabetized synonym list for the following Equipment Involved in Ignition codes is presented in Appendix B.

## EQUIPMENT INVOLVED IN IGNITION CODES

### Heating, Ventilation, and Air Conditioning

- 111 Air conditioner.
- 112 Heat pump.
- 113 Fan.
- 114 Humidifier, non-heat producing. Excludes heaters with built-in humidifiers (131, 132).
- 115 Ionizer.
- 116 Dehumidifier, portable.
- 117 Evaporative cooler, cooling tower.
- 121 Fireplace, masonry.
- 122 Fireplace, factory-built.
- 123 Fireplace, insert/stove.
- 124 Stove, heating.
- 125 Chimney connector, vent connector.
- 126 Chimney: brick, stone, masonry.
- 127 Chimney: metal. Includes stovepipes and flues.
- 120 Fireplace, chimney, other.
- 131 Furnace, local heating unit, built-in. Includes built-in humidifiers. Excludes process furnaces, kilns (353).
- 132 Furnace, central heating unit. Includes built-in humidifiers. Excludes process furnaces, kilns. (353)
- 133 Boiler (power, process, heating).
- 141 Heater. Includes floor furnaces, wall heaters, and baseboard heaters. Excludes catalytic heaters (142), oil-filled heaters (143), hot water heaters (152).
- 142 Heater, catalytic.
- 143 Heater, oil-filled. Excludes kerosene heaters (141).
- 144 Heat lamp.
- 145 Heat tape.
- 151 Water heater. Includes sink-mounted instant hot water heaters and waterbed heaters.
- 152 Steam line, heat pipe, hot air duct. Includes radiators and hot water baseboard heaters.
- 100 Heating, ventilation, and air conditioning, other.

### Electrical Distribution, Lighting, and Power Transfer

- 211 Electrical power (utility) line. Excludes wires from the utility pole to the structure.
- 212 Electrical service supply wires; wires from utility pole to meter box.
- 213 Electric meter, meter box.
- 214 Electrical wiring from meter box to circuit breaker board, fuse box, or panel board.
- 215 Panel board (fuse); switchboard, circuit breaker board with or without ground-fault interrupter
- 216 Electrical branch circuit. Includes armored (metallic) cable, nonmetallic sheathing, or wire in conduit.
- 217 Outlet, receptacle. Includes wall-type receptacles, electric dryer and stove receptacles.
- 218 Wall-type switch. Includes light switches.
- 219 Ground-fault interrupter (GFI), portable, plug-in.
- 210 Electrical wiring, other.
- 221 Transformer, distribution-type.
- 222 Overcurrent, disconnect equipment. Excludes panel boards.
- 223 Transformer, low-voltage (not more than 50 volts).
- 224 Generator.
- 225 Inverter.
- 226 Uninterrupted power supply (UPS).

227	Surge protector.
228	Battery charger, rectifier.
229	Battery. Includes all battery types.
231	Lamp: tabletop, floor, desk. Excludes halogen fixtures (235) and light bulbs (238).
232	Lantern, flashlight.
233	Incandescent lighting fixture.
234	Fluorescent lighting fixture, ballast.
235	Halogen lighting fixture or lamp.
236	Sodium, mercury vapor lighting fixture or lamp.
237	Portable or movable work light, trouble light.
238	Light bulb.
230	Lamp, lighting, other.
241	Night light.
242	Decorative lights, line voltage. Includes holiday lighting, Christmas lights.
243	Decorative or landscape lighting, low voltage.
244	Sign. Includes neon signs.
251	Fence, electric.
252	Traffic control device
253	Lightning rod, arrester/grounding device.
261	Power cord, plug; detachable from appliance.
262	Power cord, plug; permanently attached to appliance.
263	Extension cord.
260	Cord, plug, other.
200	Electrical distribution, lighting, and power transfer, other.

### Shop Tools and Industrial Equipment

311	Power saw.
312	Power lathe.
313	Power shaper, router, jointer, planer.
314	Power cutting tool.
315	Power drill, screwdriver.
316	Power sander, grinder, buffer, polisher.
317	Power hammer, jackhammer.
318	Power nail gun, stud driver, stapler.
310	Power tools, other.
321	Paint dipper.
322	Paint flow coating machine.
323	Paint mixing machine.
324	Paint sprayer.
325	Coating machine. Includes asphalt-saturating and rubber-spreading machines.
320	Painting tools, other.
331	Welding torch. Excludes cutting torches (332).
332	Cutting torch. Excludes welding torches (331).
333	Burners. Includes Bunsen burners, plumber furnaces, and blowtorches. Excludes weed burners (523).
334	Soldering equipment.
341	Air compressor.
342	Gas compressor.
343	Atomizing equipment. Excludes paint spraying equipment (324).
344	Pump. Excludes pumps integrated with other types of equipment.
345	Wet/Dry vacuum (shop vacuum).
346	Hoist, lift, crane.
347	Powered jacking equipment. Includes hydraulic rescue tools.
348	Drilling machinery or equipment. Includes water or gas drilling equipment.
340	Hydraulic equipment, other.

351	Heat-treating equipment.
352	Incinerator.
353	Industrial furnace, oven, kiln. Excludes ovens for cooking (646).
354	Tarpot, tar kettle.
355	Casting, molding, forging equipment.
356	Distilling equipment.
357	Digester, reactor.
358	Extractor, waste recovery machine. Includes solvent extractors such as used in dry-cleaning operations and garnetting equipment.
361	Conveyor. Excludes agricultural conveyors (513).
362	Power transfer equipment: ropes, cables, blocks, belts.
363	Power takeoff.
364	Powered valves.
365	Bearing or brake.
371	Picking, carding, weaving machine. Includes cotton gins.
372	Testing equipment.
373	Gas regulator. Includes propane, butane, LP, or natural gas regulators and flexible hose connectors to gas appliances.
374	Motor, separate. Includes bench motors. Excludes internal combustion motors (375).
375	Internal combustion engine (nonvehicular).
376	Printing press.
377	Car washing equipment.
300	Shop tools and industrial equipment, other.

### Commercial and Medical Equipment

411	Dental, medical, or other powered bed or chair. Includes powered wheelchairs.
412	Dental equipment, other.
413	Dialysis equipment.
414	Medical imaging equipment. Includes MRI, CAT scan, and ultrasound.
415	Medical monitoring equipment.
416	Oxygen administration equipment.
417	Radiological equipment, x-ray, radiation therapy.
418	Sterilizer, medical.
419	Therapeutic equipment.
410	Medical equipment, other.
421	Transmitter.
422	Telephone switching gear, including PBX.
423	TV monitor array. Includes control panels with multiple TV monitors and security monitoring stations. Excludes single TV monitor configurations (753).
424	Studio-type TV camera. Includes professional studio television cameras. Excludes home camcorders and video equipment (756).
425	Studio-type sound recording/modulating equipment.
426	Radar equipment.
431	Amusement ride equipment.
432	Ski lift.
433	Elevator or lift.
434	Escalator.
441	Microfilm, microfiche viewing equipment.
442	Photo processing equipment. Includes microfilm processing equipment.
443	Vending machine.
444	Nonvideo arcade game. Includes pinball machines and the like. Excludes electronic video games (755).
445	Water fountain, water cooler.
446	Telescope. Includes radio telescopes.
451	Electron microscope.

- 450 Laboratory equipment, other.
- 400 Commercial and medical equipment, other.

### **Garden Tools and Agricultural Equipment**

- 511 Combine, threshing machine.
- 512 Hay processing equipment.
- 513 Farm elevator or conveyor.
- 514 Silo loader, unloader, screw/sweep auger.
- 515 Feed grinder, mixer, blender.
- 516 Milking machine.
- 517 Pasteurizer. Includes milk pasteurizers.
- 518 Cream separator.
- 521 Sprayer, farm or garden.
- 522 Chain saw.
- 523 Weed burner.
- 524 Lawn mower.
- 525 Lawn, landscape trimmer, edger.
- 531 Lawn vacuum.
- 532 Leaf blower.
- 533 Mulcher, grinder, chipper. Includes leaf mulchers.
- 534 Snow blower, thrower.
- 535 Log splitter.
- 536 Post hole auger.
- 537 Post driver, pile driver.
- 538 Tiller, cultivator.
- 500 Garden tools and agricultural equipment, other.

### **Kitchen and Cooking Equipment**

- 611 Blender, juicer, food processor, mixer.
- 612 Coffee grinder.
- 621 Can opener.
- 622 Knife.
- 623 Knife sharpener.
- 631 Coffee maker or teapot.
- 632 Food warmer, hot plate.
- 633 Kettle.
- 634 Popcorn popper.
- 635 Pressure cooker or canner.
- 636 Slow cooker.
- 637 Toaster, toaster oven, countertop broiler.
- 638 Waffle iron, griddle.
- 639 Wok, frying pan, skillet.
- 641 Bread-making machine.
- 642 Deep fryer.
- 643 Grill, hibachi, barbecue.
- 644 Microwave oven.
- 645 Oven, rotisserie.
- 646 Range or kitchen stove with or without oven or cooking surface. Includes counter-mounted stoves.
- 647 Steam table, warming drawer/table.
- 651 Dishwasher.
- 652 Freezer when separate from refrigerator.
- 653 Garbage disposer.
- 654 Grease hood/duct exhaust fan.

- 655 Ice maker (separate from refrigerator).
- 656 Refrigerator, refrigerator/freezer.
- 600 Kitchen and cooking equipment, other.

### Electronic and Other Electrical Equipment

- 711 Computer. Includes devices such as hard drives and modems installed inside the computer casing. Excludes external storage devices (712).
- 712 Computer storage device, external. Includes CD-ROM devices, tape drives, and disk drives. Excludes such devices when they are installed within a computer (711).
- 713 Computer modem, external. Includes digital, ISDN modems, cable modems, and modem racks. Excludes modems installed within a computer (711).
- 714 Computer monitor. Includes LCD or flat-screen monitors.
- 715 Computer printer. Includes multifunctional devices such as copier, fax, and scanner.
- 716 Computer projection device, LCD panel, projector.
- 710 Computer device, other.
- 721 Adding machine, calculator.
- 722 Telephone or answering machine.
- 723 Cash register.
- 724 Copier. Includes large standalone copiers. Excludes small copiers and multifunctional devices (715).
- 725 Fax machine.
- 726 Paper shredder.
- 727 Postage, shipping meter equipment.
- 728 Typewriter.
- 720 Office equipment, other.
- 731 Guitar.
- 732 Piano, organ. Includes player pianos. Excludes synthesizers and musical keyboards (733).
- 733 Musical synthesizer or keyboard. Excludes pianos, organs (732).
- 730 Musical instrument, other.
- 741 CD player (audio). Excludes computer CD, DVD players (712).
- 742 Laser disk player. Includes DVD players and recorders.
- 743 Radio. Excludes two-way radios (744).
- 744 Radio, two-way.
- 745 Record player, phonograph, turntable.
- 747 Speakers, audio; separate components.
- 748 Stereo equipment. Includes receivers, amplifiers, equalizers. Excludes speakers (747).
- 749 Tape recorder or player.
- 740 Sound recording or receiving equipment, other.
- 751 Cable converter box.
- 752 Projector: film, slide, overhead.
- 753 Television.
- 754 VCR or VCR-TV combination.
- 755 Video game, electronic.
- 756 Camcorder, video camera.
- 757 Photographic camera and equipment. Includes digital cameras.
- 750 Video equipment, other.
- 700 Electronic equipment, other.

### Personal and Household Equipment

- 811 Clothes dryer.
- 812 Trash compactor.
- 813 Washer/Dryer combination (within one frame).
- 814 Washing machine, clothes.
- 821 Hot tub, whirlpool, spa.
- 822 Swimming pool equipment.
- 830 Floor care equipment, other.

831	Broom, electric.
832	Carpet cleaning equipment. Includes rug shampoos.
833	Floor buffer, waxer, cleaner.
834	Vacuum cleaner.
841	Comb, hair brush.
842	Curling iron.
843	Electrolysis equipment.
844	Hair curler warmer.
845	Hair dryer.
846	Makeup mirror, lighted.
847	Razor, shaver (electric).
848	Suntan equipment, sunlamp.
849	Toothbrush (electric).
850	Portable appliance designed to produce heat, other.
851	Baby bottle warmer.
852	Blanket, electric.
853	Heating pad.
854	Clothes steamer.
855	Clothes iron.
861	Automatic door opener. Excludes garage door openers (863).
862	Burglar alarm.
863	Garage door opener.
864	Gas detector.
865	Intercom.
866	Smoke or heat detector, fire alarm. Includes control equipment.
868	Thermostat.
871	Ashtray.
872	Charcoal lighter, utility lighter.
873	Cigarette lighter, pipe lighter.
874	Fire-extinguishing equipment. Includes electronic controls.
875	Insect trap. Includes bug zappers.
876	Timer.
877	Novelty Lighter.
881	Model vehicles. Includes model airplanes, boats, rockets, and powered vehicles used for hobby and recreational purposes.
882	Toy, powered.
883	Woodburning kit.
891	Clock.
892	Gun.
893	Jewelry-cleaning machine.
894	Scissors.
895	Sewing machine.
896	Shoe polisher.
897	Sterilizer, non-medical.
800	Personal and household equipment, other.

### Other Equipment Involved in Ignition

000	Equipment involved in ignition, other.
NNN	None.
UUU	Undetermined

## Equipment Brand, Model, Serial Number, and Year

### Definition

The information in this block precisely identifies the equipment that was involved in ignition. As possible, the following information should be recorded:

**Brand:** The name by which the equipment is most commonly known.

**Model:** The model name or number assigned to the equipment by the manufacturer. If there is no specific model name or number, use the common physical description of the equipment.

**Serial Number:** The manufacturer's serial number that is generally stamped on an identification plate on the equipment.

**Year:** The year that the equipment was built.

### Purpose

Provides detailed information identifying specific types of equipment that failed or contributed to the fire. This information can be used to determine whether particular brands or models cause problems more frequently than others; and to identify equipment for product recalls or in the development of new product safety codes.

### Entry

Enter the brand, model, serial number, and year of the equipment involved in ignition. If no equipment was involved in ignition, check or mark the None box and go to Section G.

### Example

The clothes dryer was a 1985 Maytag Model XRS-130, serial number 34-2345:

F <sub>1</sub> Equipment Involved in ignition	
<input type="checkbox"/> None	➔ If equipment was not involved, skip to Section G
8   1   1	Clothes dryer
Equipment Involved	
Brand	Maytag
Model	XRS-130
Serial #	34-2345
Year	1   9   8   5

## F<sub>2</sub> Equipment Power Source

### Definition

The type of power used by the equipment involved in ignition of the fire. This does not include what actually produces the power.

### Purpose

Combined with other factors in the ignition sequence, this element helps identify fire causes for analysis. Power source data are useful for determining compliance with standards, analyzing the effectiveness of codes and regulations, and targeting prevention programs.

### Entry

Enter the two-digit code and description that best describes the power source of the equipment involved in ignition.

### Example

<b>F<sub>2</sub></b>	<b>Equipment Power Source</b>
1 1	240V Electric
Equipment Power Source	

Enter electrical line voltage (11) to describe the power source of an electric range:

## EQUIPMENT POWER SOURCE CODES

### Electrical

- 11 Electrical line voltage (50 volts or greater). Includes typical house current.
- 12 Batteries and low voltage (less than 50 volts).
- 10 Electrical, other.

### Gas Fuels

- 21 Natural gas or other lighter-than-air gas. Includes hydrogen.
- 22 LP gas or other heavier-than-air gas. Includes propane and butane gas.
- 20 Gas fuels, other.

### Liquid Fuels

- 31 Gasoline.
- 32 Alcohol.
- 33 Kerosene, diesel fuel, No. 1 and 2 fuel oil. Includes industrial furnace oils and bunker oils.
- 34 No. 4, 5, and 6 fuel oils.
- 30 Liquid fuels, other.

### Solid Fuels

- 41 Wood, paper.
- 42 Coal, charcoal.
- 43 Chemicals.
- 40 Solid fuels, other.

**Other Power Sources**

51	Compressed air.
52	Steam.
53	Water.
54	Wind.
55	Solar.
56	Geothermal.
57	Nuclear.
58	Fluid/Hydraulic power source.
00	Power source, other.
UU	Undetermined.

**F3 Equipment Portability***Definition*

Describes the equipment involved in ignition as either portable or stationary.

*Purpose*

This information is useful for better defining the type of equipment involved in ignition, improving product safety, and highlighting possible preventive maintenance.

*Entry*

Check or mark the box best indicating the portability of the equipment involved in ignition of the fire.

- ☛ Portable equipment normally can be moved by one or two persons, is designed to be used in multiple locations, and requires no tools to install.

*Example*

A fire involves a tripod-mounted halogen quartz light used at a construction site:

**F3 Equipment Portability**

1  **Portable**

2  **Stationary**

Portable equipment normally can be moved by one or two persons, is designed to be used in multiple locations, and requires no tools to install.

**EQUIPMENT PORTABILITY CODES**

- 1 Portable. Includes equipment that can be carried or moved by one or two persons and designed to be used in a variety of locations. Tools are not needed to install or operate the equipment.
- 2 Stationary. Includes equipment that is mounted at a fixed site or location or designed to be operated in one location.

## SECTION G

The data elements in this section help provide a uniform way to identify factors contributing to the growth and spread of the fire. This is useful to report incident information that has not been captured by other data elements and that may have a bearing on the incident.

## G Fire Suppression Factors

### Definition

Factors that contributed to the growth, spread, or suppression of the fire. This is used to report incident information that directly impacted the ignition, spread of fire or smoke, incident complexity, or presence of hazardous conditions.

### Purpose

Fire suppression factors provide essential guides for planning strategic and tactical procedures for future incidents, as well as for identifying fire training and equipment needs.

### Entry

Enter the three-digit code and description for up to three fire suppression factors or conditions that constituted a significant fire suppression problem or affected how the fire was managed. If no conditions or factors affected fire suppression efforts, check or mark the None box.

### Example

The first-due engine company was delayed due to “trouble finding location” (436) after incorrect information was given by the dispatcher.

Due to the instability of the “wood truss construction” (185) roof, firefighters halted their interior attack and went into a defensive fire suppression mode:

G Fire Suppression Factors		<input type="checkbox"/> None
Enter up to three codes.		
4   3   6	Trouble finding location	
Fire suppression factor (1)		
1   8   5	Wood truss construction	
Fire suppression factor (2)		
Fire suppression factor (3)		

**FIRE SUPPRESSION FACTORS CODES****Building Construction or Design**

112	Roof collapse.
113	Roof assembly combustible.
115	Solar panels.
121	Ceiling collapse.
125	Holes or openings in walls or ceilings.
131	Wall collapse.
132	Difficult to ventilate.
134	Combustible interior finish.
137	Balloon construction.
138	Internal arrangement of partitions.
139	Internal arrangement of stock or contents.
141	Floor collapse.
151	Lack of fire barrier walls or doors.
153	Transoms.
161	Attic undivided.
166	Insulation combustible.
173	Stairwell not enclosed.
174	Elevator shaft.
175	Dumbwaiter.
176	Duct, vertical.
177	Chute: rubbish, garbage, laundry.
181	Supports unprotected.
182	Composite plywood I-beam construction.
183	Composite roof/floor sheathing construction.
185	Wood truss construction.
186	Metal truss construction.
187	Fixed burglar protection assemblies (bars, grills on windows or doors).
188	Quick release failure of bars on windows or doors.
192	Previously damaged by fire.
100	Building construction or design, other.

**Act or Omission**

213	Doors left open or outside door unsecured.
214	Fire doors blocked or did not close properly.
218	Violation of applicable or locally adopted fire, building, or life safety code.
222	Illegal and clandestine drug operation.
232	Intoxication, drugs or alcohol.
253	Riot or civil disturbance. Includes hostile acts.
254	Person(s) interfered with operations.
283	Accelerant used.
200	Act or omission, other.

**On-Site Materials**

311	Aisles blocked or improper width.
312	Significant and unusual fuel load from structure components.
313	Significant and unusual fuel load from contents of structure.
314	Significant and unusual fuel load outside from natural environment conditions.
315	Significant and unusual fuel load from man-made condition.
316	Storage, improper.
321	Radiological hazard onsite.

322	Biological hazard onsite.
323	Cryogenic hazard onsite.
324	Hazardous chemical, corrosive material, or oxidizer.
325	Flammable/Combustible liquid hazard.
327	Explosives hazard present.
331	Decorations. Includes crepe paper, garland.
341	Natural or other lighter-than-air gas present.
342	Liquefied petroleum (LPG) or other heavier-than-air gas present.
361	Combustible storage >12 feet to top of storage. Excludes rack storage (362).
362	High rack storage.
300	On-site materials, other.

### Delays

411	Delayed detection of fire.
412	Delayed reporting of fire. Includes occupants investigating the source of the alarm or smoke before calling the fire department.
413	Alarm system malfunction.
414	Alarm system shut off for valid reason. Includes systems being maintained or repaired.
415	Alarm system inappropriately shut off.
421	Unable to contact fire department. Includes use of wrong phone number and cellular mobile phone problems.
424	Information incomplete or incorrect.
425	Communications problem; system failure of local, public, or other telephone network.
431	Blocked or obstructed roadway. Includes blockages due to construction or illegal parking.
434	Poor or no access for fire department apparatus.
435	Traffic delay.
436	Trouble finding location.
437	Size, height, or other building characteristic delayed access to fire.
438	Power lines down/arcings.
443	Poor access for firefighters.
444	Secured area.
445	Guard dogs.
446	Aggressive animals. Excludes guard dogs (445).
447	Suppression delayed due to evaluation of hazardous or unknown materials at incident scene.
448	Locked or jammed doors.
451	Apparatus failure before arrival at incident.
452	Hydrants inoperative.
461	Airspace restriction.
462	Military activity.
481	Closest apparatus unavailable.
400	Delays, other.

### Protective Equipment

510	Automatic fire suppression system problem. Includes system failures, shutoffs, inadequate protection to cover hazard, and the like.
520	Automatic sprinkler or standpipe/fire department connection problem. Includes damage, blockage, failure, improper installation.
531	Water supply inadequate: private.
532	Water supply inadequate: public.
543	Electrical power outage.
561	Failure of rated fire protection assembly. Includes fire doors, fire walls, floor/ceiling assemblies, and the like.
562	Protective equipment negated illegally or irresponsibly. Includes fire doors, dampers, sprinklers, and the like.
500	Protective equipment, other.

**Egress/Exit Problems**

611	Occupancy load above legal limit.
612	Evacuation activity impeded fire department access.
613	Window type impeded egress. Includes windows too small.
614	Windowless wall.
621	Young occupants.
622	Elderly occupants
623	Physically disabled occupants.
624	Mentally disabled occupants.
625	Physically restrained/confined occupants.
626	Medically disabled occupants.
641	Special event.
642	Public gathering.
600	Egress/exit problems, other.

**Natural Conditions**

711	Drought or low fuel moisture.
712	Humidity, low.
713	Humidity, high.
714	Temperature, low.
715	Temperature, high.
721	Fog.
722	Flooding.
723	Ice.
724	Rain.
725	Snow.
732	Wind. Includes hurricanes and tornados.
741	Earthquake.
760	Unusual vegetation fuel loading.
771	Threatened or endangered species.
772	Timber sale activity.
773	Fire restriction.
774	Historic disturbance (past fire history can dictate fire behavior).
775	Urban-wildland interface area.
700	Natural conditions, other.

**Other Fire Suppression Factors**

000	Fire suppression factors, other.
NNN	None.

**SECTION H**

Mobile property is property that is designed to be movable in relation to fixed property whether or not it still is. Mobile property is always located on a specific property and, when mobile property is involved, the Property Use (Basic Module, Section J) should always be completed.

**H1 Mobile Property Involved***Definition*

This element is used to determine how mobile property relates to a fire (i.e., if involved in the ignition and whether or not it burned).

### Purpose

The role that mobile property played in the incident can reveal problems and lead to appropriate corrective actions.

### Entry

Check or mark the box best describing the role that mobile property had in the fire. If no mobile property was involved in ignition, check or mark the None box.

- ☛ If “1” is checked or marked, it is not necessary to complete Block H2. If “2” or “3” is checked or marked, proceed to Block H2.

### Example

A fire started under the hood of an automobile (3):

<b>H<sub>1</sub></b>	<b>Mobile Property Involved</b>	<input type="checkbox"/> None
1	<input type="checkbox"/> Not involved in ignition, but burned	}
2	<input type="checkbox"/> Involved in ignition, but did not burn	
3	<input checked="" type="checkbox"/> Involved in ignition and burned	

#### MOBILE PROPERTY INVOLVED CODES

- |   |   |
|---|---|
| 1 | Mobile property not involved in ignition, but burned in fire following ignition.  |
| 2 | Mobile property was involved in ignition, but did not burn. Includes fires started by exhaust systems of automobiles and sparks thrown off by trains. |
| 3 | Mobile property involved in ignition, and it burned.  |
| N | None.   |

## H<sub>2</sub> Mobile Property: Type, Make, Model, Year, License Number, State, VIN

### Definition

The information in this block precisely identifies the mobile property involved in a fire’s ignition. As possible, the following information should be recorded:

**Type:** Property that is designed and constructed to be mobile, movable under its own power, or towed, such as an airplane, automobile, boat, cargo trailer, farm vehicle, motorcycle, or recreational vehicle.

**Make:** The name of the manufacturer of the mobile property.

**Model:** The manufacturer’s model name. If one does not exist, use the physical description of the property that is commonly used to describe it, such as “three-bedroom” (mobile home) or “four-door” (sedan).

**Year:** The year the mobile property was manufactured.

**License Plate Number (if any):** The number on the license plates affixed to the vehicle; plates are generally issued by a State agency of motor vehicles. License numbers may also be available for boats, airplanes, and farm vehicles.

**State:** The State in which the vehicle is licensed.

- ☛ If a commercial vehicle that is involved in the incident is licensed in multiple States, record the State license where the incident occurred. If no license exists for the incident’s State, use the State license of the vehicle’s home origin.

**VIN:** The manufacturer’s Vehicle Identification Number that is generally stamped on an identification plate on the mobile property.

**Purpose**

This element provides detailed information that identify the specific types of mobile property involved in an incident, which can be used to determine whether particular brands or models are more often a problem than others. Data on make, model, year, and other information are useful for determining compliance to standards of mobile properties and analyzing the effectiveness of these codes, standards, and regulations. The data also can be used to identify special hazards.

**Entry**

Enter the two-digit code and description of the property type. Enter the two-character code (from the list at the end of this chapter) and description of the property make. Enter the remaining information in Block H2 as appropriate. Be as specific as possible in making these entries.

- ☛ Both the License Plate Number and VIN are left-justified in their fields.

**Example**

A 1997 Ford XLT (11), licensed in North Carolina (AYB5628), ignited when it hit a telephone pole. The vehicle identification number was 234–233–1111–2676:

		<b>H2 Mobile Property Type and Make</b>	
1   1		Automobile	
Mobile property type			
F   O		Ford	
Mobile property make			
Explorer XLT		1   9   9   7	
Mobile property model		Year	
A   Y   B   5   6   2   8		N   C	
License Plate Number		State	
		2   3   4   2   3   3   1   1   1   1   2   6   7   6	
		VIN	

**MOBILE PROPERTY TYPE CODES****Passenger Road Vehicles**

- 11 Automobile, passenger car, ambulance, limousine, race car, taxicab.
- 12 Bus, school bus. Includes “trackless” trolley buses.
- 13 Off-road recreational vehicle. Includes dune buggies, golf carts, go-carts, snowmobiles. Excludes sport utility vehicles (11) and motorcycles (18).
- 14 Motor home (has own engine), camper mounted on pickup, bookmobile.
- 15 Trailer, travel; designed to be towed.
- 16 Trailer, camping; collapsible, designed to be towed.
- 17 Mobile home, bank, classroom, or office (all designed to be towed), whether mounted on a chassis or on blocks for semipermanent use.
- 18 Motorcycle, trail bike. Includes motor scooters and mopeds.
- 10 Passenger road vehicles, other.

**Freight Road Transport Vehicles**

- 21 General use truck, dump truck, fire apparatus.
- 22 Pickup truck, hauling rig (non-motorized).
- 23 Trailer, semi; designed for freight (with or without tractor).
- 24 Tank truck, nonflammable cargo. Includes milk and water tankers, liquid nitrogen tankers.
- 25 Tank truck, flammable or combustible liquid, chemical cargo.
- 26 Tank truck, compressed gas or LP gas.
- 27 Garbage, waste, refuse truck. Includes recyclable material collection trucks. Excludes roll-on-type trash containers (73).
- 20 Freight road transport vehicles, other.

**Rail Transport Vehicles**

- 31 Diner car, passenger car.
- 32 Box, freight, or hopper car.
- 33 Tank car.
- 34 Container or piggyback car (see 73 for container).
- 35 Engine/locomotive.
- 36 Rapid transit car, trolley (self-powered for use on track). Includes self-powered rail passenger vehicles.
- 37 Maintenance equipment car. Includes cabooses and cranes.
- 30 Rail transport vehicles, other.

**Water Vessels**

- 41 Boat less than 65 ft (20 m) in length overall. Excludes commercial fishing vessels (48).
- 42 Boat or ship equal to or greater than 65 ft (20 m) in length but less than 1,000 tons.
- 43 Cruise liner or passenger ship equal to or greater than 1,000 tons.
- 44 Tank ship.
- 45 Personal water craft. Includes one- or two-person recreational water craft.
- 46 Cargo or military ship equal to or greater than 1,000 tons. Includes vessels not classified in 44 and 47.
- 47 Non-self-propelled vessel. Includes all vessels without their own motive power, such as towed petroleum balloons, barges, and other towed or towable vessels. Excludes sailboats (49).
- 48 Commercial fishing or processing vessel. Includes shell fishing vessels.
- 49 Sailboats. Includes those with auxiliary power.
- 40 Water vessels, other.

**Aircraft**

- 51 Personal, business, utility aircraft less than 12,500 lb (5,670 kg) gross weight. Includes gliders.
- 52 Personal, business, utility aircraft equal to or greater than 12,500 lb (5,670 kg) gross weight.
- 53 Commercial aircraft: propeller-driven, fixed-wing. Includes turbo props.
- 54 Commercial aircraft: jet and other turbine-powered, fixed-wing.
- 55 Helicopters, nonmilitary. Includes gyrocopters.
- 56 Military fixed-wing aircraft. Includes bomber, fighter, patrol, vertical takeoff and landing (fixed-wing vertical stall) aircraft.

- 57 Military non-fixed-wing aircraft. Includes helicopters.  
 58 Balloon vehicles. Includes hot air balloons and blimps.  
 50 Aircraft, other.

### Industrial, Agricultural, Construction Vehicles

- 61 Construction vehicle. Includes bulldozers, shovels, graders, scrapers, trenchers, plows, tunneling equipment, and road pavers.  
 63 Loader, industrial. Includes fork lifts, industrial tow motors, loaders, and stackers.  
 64 Crane.  
 65 Agricultural vehicle, baler, chopper (farm use).  
 67 Timber harvest vehicle. Includes skycars, loaders.  
 60 Industrial, construction, or agricultural vehicles, other.

### Mobile Property, Miscellaneous

- 71 Home, garden vehicle. Includes riding lawnmowers, snow removal vehicles, riding tractors. Excludes equipment where operator does not ride. See Equipment Involved in Ignition.  
 73 Shipping container, mechanically moved. Includes haulable trash containers, intermodal shipping containers.  
 74 Armored vehicle. Includes armored cars and military vehicles. Excludes armored aircraft and ships.  
 75 Missile, rocket, and space vehicles.  
 76 Aerial tramway vehicle.  
 00 Mobile property, other.  
 NN No mobile property.

### MOBILE PROPERTY MAKE CODES

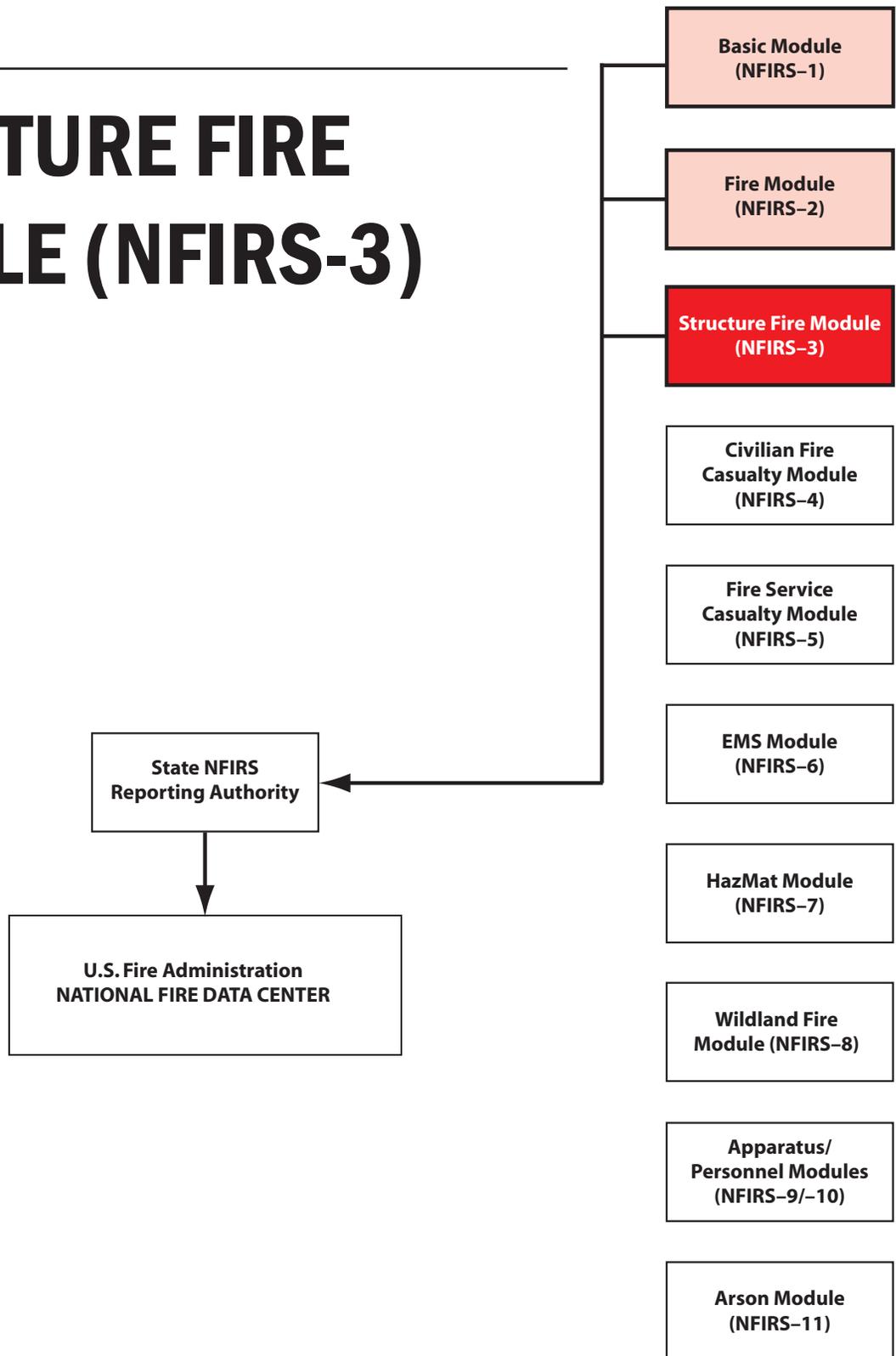
AC	Acura	CO	Continental	GE	Geo
AG	Agco	CC	Crane Carrier (CCC)	GI	Giehl
AR	Alfa Romeo	CU	Cub Cadet	GL	Gleaner
AL	Allis Chalmers	DA	Daihatsu	GM	GMC (General Motors)
AV	Antique Vehicle	DE	Demco	GV	GVM
AN	Ariens	DR	Diamond Reo	HD	Harley Davidson
AM	Aston Martin	DI	Dixon	HV	Harvester
AT	ATK	DO	Dodge	HB	Haybuster
AU	Audi	DU	Ducati	HS	Hesston
AY	Avery	DT	Duetz	HI	Hino
BS	Belarus	DS	Duetz-Allis	HO	Honda
BE	Beta	DF	Duetz-Fahr	HG	Hough
BM	BMW	ER	Eager	HS	Husky
BO	Bobcat	EA	Eagle	HU	Husqverna
BR	Briggs	EU	Euclid	HX	Hydrax
BL	Buell	FK	Farm King	HY	Hyundai
BU	Buick	FA	Farmall	IF	Infiniti
CD	Cadillac	FA	Farmall	IN	International
CA	Case	FM	Farmtrac	IL	International Farmall
CB	Case - David Brown	FE	Ferrari	IH	International Harvester
CI	Case IH	FT	Fetrel	IS	Isuzu
CP	Caterpillar	FO	Ford	IT	Italjet
CE	Century	FR	Freightliner	IV	Iveco
CH	Chevrolet	FG	Frigstad	JA	Jaguar
CR	Chrysler	FW	FWD	JE	Jeep
CV	Classic Vehicle	GH	Gehl	JD	John Deere

KA	Kawasaki	MO	Montesa	SD	Simon Duplex
KE	Kenworth	MW	Montgomery Ward	SI	Simplicity
KI	Kia	MG	Moto Guzzi	SN	Snapper
KZ	Kinze	MM	Moto Morini	SR	Steiger
KO	Kioti	MD	MTD	ST	Sterling
KN	Knight	MU	Murray	SU	Subaru
KM	Komatsu	NA	Navistar	SZ	Suzuki
KR	Krause	NH	New Holland	TT	Toro
KT	KTM	NE	New Idea	TO	Toyota
KU	Kubota	NI	Nissan	TL	Trelan
LC	Land Chief	OL	Oldsmobile	TR	Triumph
LR	Land Rover	OV	Oliver	TJ	Trojan
LT	Landtrac	OS	Oshkosh	TB	Troy-Bilt
LE	Lexus	OW	Owatona	UD	UD
LI	Lincoln	PT	Peterbilt	UR	Ursus
LN	Long	PU	Peugeot	UT	Utilmaster
LO	Lotus	PI	Pierce	VR	Vermeer
MN	MacDon	PL	Plymouth	VS	Versatile
MK	Mack	PN	Pontiac	VE	Vespa
ML	Maely	PR	Porsche	VO	Volkswagen
MI	Mahindra	RN	Range Rover	VL	Volvo
MA	Maico	RD	Red Devil	VG	Volvo GMC
MH	Marmon	RG	Rogue (Ottowa)	WK	Walker
MS	Maserati	RR	Rolls Royce	WL	Walter
MY	Massey Ferguson	SB	Saab	WS	Western Star
MV	Massey Harris-Ferguson	SA	Saturn	WW	Westward
MZ	Mazda	SG	Scagg	WH	White
MJ	McKee	SC	Scania	WG	White GMC
ME	Melroe	SE	Sears Craftsman	WD	Woods
MB	Mercedes Benz	SD	Simon Duplex	YA	Yamaha
MC	Mercury	SI	Simplicity	YM	Yardman
MR	Merkur	SN	Snapper	YU	Yugo
MF	MHF	SC	Scania	ZT	Zetor
MT	Mitsubishi	SE	Sears Craftsman	OO	Other Make



## Chapter 5

# STRUCTURE FIRE MODULE (NFIRS-3)



<b>I1 Structure Type</b> ☆ If fire was in an enclosed building or a portable/mobile structure, complete the rest of this form. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Enclosed building</li> <li>2 <input type="checkbox"/> Portable/Mobile structure</li> <li>3 <input type="checkbox"/> Open structure</li> <li>4 <input type="checkbox"/> Air-supported structure</li> <li>5 <input type="checkbox"/> Tent</li> <li>6 <input type="checkbox"/> Open platform (e.g., piers)</li> <li>7 <input type="checkbox"/> Underground structure (work areas)</li> <li>8 <input type="checkbox"/> Connective structure (e.g., fences)</li> <li>0 <input type="checkbox"/> Other type of structure</li> </ul>	<b>I2 Building Status</b> ☆ <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Under construction</li> <li>2 <input type="checkbox"/> In normal use</li> <li>3 <input type="checkbox"/> Idle, not routinely used</li> <li>4 <input type="checkbox"/> Under major renovation</li> <li>5 <input type="checkbox"/> Vacant and secured</li> <li>6 <input type="checkbox"/> Vacant and unsecured</li> <li>7 <input type="checkbox"/> Being demolished</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>I3 Building Height</b> ☆ Count the roof as part of the highest story. <div style="border: 1px solid black; width: 50px; height: 15px; margin: 5px 0;"></div> Total number of stories at or above grade. <div style="border: 1px solid black; width: 50px; height: 15px; margin: 5px 0;"></div> Total number of stories below grade.	<b>I4 Main Floor Size</b> ☆ NFIRS-3 Structure Fire <div style="border: 1px solid black; width: 100px; height: 15px; margin: 5px 0;"></div> Total square feet <p style="text-align: center; font-weight: bold;">OR</p> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; width: 40px; height: 15px;"></div> <div style="border: 1px solid black; width: 40px; height: 15px;"></div> </div> Length in feet      Width in feet
---	---	---	---

<b>J1 Fire Origin</b> ☆ <div style="border: 1px solid black; width: 50px; height: 15px; margin: 5px 0;"></div> Story of fire origin <input type="checkbox"/> Below grade	<b>J3 Number of Stories Damaged by Flame</b> ☆ Count the roof as part of the highest story. <div style="border: 1px solid black; width: 50px; height: 15px; margin: 5px 0;"></div> Number of stories w/minor damage (1 to 24% flame damage) <div style="border: 1px solid black; width: 50px; height: 15px; margin: 5px 0;"></div> Number of stories w/significant damage (25 to 49% flame damage) <div style="border: 1px solid black; width: 50px; height: 15px; margin: 5px 0;"></div> Number of stories w/heavy damage (50 to 74% flame damage) <div style="border: 1px solid black; width: 50px; height: 15px; margin: 5px 0;"></div> Number of stories w/extreme damage (75 to 100% flame damage)	<b>K Type of Material Contributing Most to Flame Spread</b> ☆ <input type="checkbox"/> Check if no flame spread OR if same as Material First Ignited (Block D4, Fire Module) OR if unable to determine. <div style="float: right; border: 1px solid black; padding: 2px; font-size: small;">Skip to Section L</div> <b>K1</b> <div style="border: 1px solid black; width: 100px; height: 15px;"></div> Item contributing most to flame spread  <b>K2</b> <div style="border: 1px solid black; width: 100px; height: 15px;"></div> Type of material contributing most to flame spread      Required only if item contributing code is 00 or <70.
<b>J2 Fire Spread</b> ☆ If fire spread was confined to object of origin, do not check a box (Ref. Block D3, Fire Module). <ul style="list-style-type: none"> <li>2 <input type="checkbox"/> Confined to room of origin</li> <li>3 <input type="checkbox"/> Confined to floor of origin</li> <li>4 <input type="checkbox"/> Confined to building of origin</li> <li>5 <input type="checkbox"/> Beyond building of origin</li> </ul>		

<b>L1 Presence of Detectors</b> ☆ (In area of the fire) <ul style="list-style-type: none"> <li>N <input type="checkbox"/> None Present → Skip to Section M</li> <li>1 <input type="checkbox"/> Present</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>L3 Detector Power Supply</b> ☆ <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Battery only</li> <li>2 <input type="checkbox"/> Hardwire only</li> <li>3 <input type="checkbox"/> Plug-in</li> <li>4 <input type="checkbox"/> Hardwire with battery</li> <li>5 <input type="checkbox"/> Plug-in with battery</li> <li>6 <input type="checkbox"/> Mechanical</li> <li>7 <input type="checkbox"/> Multiple detectors &amp; power supplies</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>L5 Detector Effectiveness</b> ☆ Required if detector operated. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Alerted occupants, occupants responded</li> <li>2 <input type="checkbox"/> Alerted occupants, occupants failed to respond</li> <li>3 <input type="checkbox"/> There were no occupants</li> <li>4 <input type="checkbox"/> Failed to alert occupants</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>
<b>L2 Detector Type</b> ☆ <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Smoke</li> <li>2 <input type="checkbox"/> Heat</li> <li>3 <input type="checkbox"/> Combination smoke and heat</li> <li>4 <input type="checkbox"/> Sprinkler, water flow detection</li> <li>5 <input type="checkbox"/> More than one type present</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>L4 Detector Operation</b> ☆ <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Fire too small to activate</li> <li>2 <input type="checkbox"/> Operated → Complete Block L5</li> <li>3 <input type="checkbox"/> Failed to operate → Complete Block L6</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>L6 Detector Failure Reason</b> ☆ Required if detector failed to operate. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Power failure, shutoff, or disconnect</li> <li>2 <input type="checkbox"/> Improper installation or placement</li> <li>3 <input type="checkbox"/> Defective</li> <li>4 <input type="checkbox"/> Lack of maintenance, includes not cleaning</li> <li>5 <input type="checkbox"/> Battery missing or disconnected</li> <li>6 <input type="checkbox"/> Battery discharged or dead</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>

<b>M1 Presence of Automatic Extinguishing System</b> ☆ <ul style="list-style-type: none"> <li>N <input type="checkbox"/> None Present → Complete rest of Section M</li> <li>1 <input type="checkbox"/> Present</li> <li>2 <input type="checkbox"/> Partial System Present</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>M3 Operation of Automatic Extinguishing System</b> ☆ Required if fire was within designed range. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Operated/effective (go to M4)</li> <li>2 <input type="checkbox"/> Operated/Not effective (go to M4)</li> <li>3 <input type="checkbox"/> Fire too small to activate</li> <li>4 <input type="checkbox"/> Failed to operate (go to M5)</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>M5 Reason for Automatic Extinguishing System Failure</b> ☆ Required if system failed or not effective. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> System shut off</li> <li>2 <input type="checkbox"/> Not enough agent discharged</li> <li>3 <input type="checkbox"/> Agent discharged but did not reach fire</li> <li>4 <input type="checkbox"/> Wrong type of system</li> <li>5 <input type="checkbox"/> Fire not in area protected</li> <li>6 <input type="checkbox"/> System components damaged</li> <li>7 <input type="checkbox"/> Lack of maintenance</li> <li>8 <input type="checkbox"/> Manual intervention</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>
<b>M2 Type of Automatic Extinguishing System</b> ☆ Required if fire was within designed range of AES. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Wet-pipe sprinkler</li> <li>2 <input type="checkbox"/> Dry-pipe sprinkler</li> <li>3 <input type="checkbox"/> Other sprinkler system</li> <li>4 <input type="checkbox"/> Dry chemical system</li> <li>5 <input type="checkbox"/> Foam system</li> <li>6 <input type="checkbox"/> Halogen-type system</li> <li>7 <input type="checkbox"/> Carbon dioxide (CO<sub>2</sub>) system</li> <li>0 <input type="checkbox"/> Other special hazard system</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>M4 Number of Sprinkler Heads Operating</b> ☆ Required if system operated. <div style="border: 1px solid black; width: 50px; height: 15px; margin: 5px 0;"></div> Number of sprinkler heads operating	

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## CHAPTER 5 • STRUCTURE FIRE MODULE (NFIRS-3)

The Structure Fire Module (NFIRS-3) should be completed for all structure fires. A structure is an assembly of materials forming a construction for occupancy or use to serve a specific purpose. This includes, but is not limited to, buildings, open platforms, bridges, roof assemblies over open storage or process areas, tents, air-supported structures, and grandstands. Users may also optionally complete the Fire Module for confined building fires (Incident Types 113–118), although it is not required.

Like the other modules, the Structure Fire Module is divided into sections and further subdivided into blocks. Only Block I1 must be completed for all structure fires. Completion of the remainder of the module is required only for building fires, although that portion of the module may also be completed for non-building structure fires if desired.

### SECTION I

This section collects information about the structure involved in the fire, including its type, current status, height, and size.

#### I1 Structure Type ☆

##### *Definition*

The identification of a structure as a specific property type.

##### *Purpose*

Information on the structure type, combined with other structural characteristics, is useful for understanding fire behavior and provides assistance in targeting fire prevention or protection efforts.

##### *Entry*

Check or mark the box best indicating the type of structure involved in the fire. If the fire was in an enclosed building or a portable or mobile structure, complete the rest of the module.

- ☛ If the fire was not in an enclosed building (codes 0 and 3–8), no other entries on this module are required.

### Example

The fire occurred in a two-story house (1):

I1 Structure Type ☆	
If fire was in an enclosed building or a portable/mobile structure, complete the rest of this form.	
1	<input checked="" type="checkbox"/> Enclosed building
2	<input type="checkbox"/> Portable/Mobile structure
3	<input type="checkbox"/> Open structure
4	<input type="checkbox"/> Air-supported structure
5	<input type="checkbox"/> Tent
6	<input type="checkbox"/> Open platform (e.g., piers)
7	<input type="checkbox"/> Underground structure (work areas)
8	<input type="checkbox"/> Connective structure (e.g., fences)
0	<input type="checkbox"/> Other type of structure

### STRUCTURE TYPE CODES

- |   |   |
|---|---|
| 1 | Enclosed building. Includes subway terminals and underground buildings.   |
| 2 | Fixed portable or mobile structure. Includes mobile homes, campers, portable buildings, and the like that are used as permanent fixed structures. |
| 3 | Open structure. Includes bridges, trestles, drilling structures, open stairways and walkways, and the like.                                       |
| 4 | Air-supported structure.  |
| 5 | Tent.   |
| 6 | Open platform. Includes piers, wharves without a superstructure, loading docks without a roof, and the like.                                      |
| 7 | Underground structure work area. Includes tunnels and mines. Excludes subway terminals and underground buildings (1).                             |
| 8 | Connective structure. Includes fences, telephone poles, and pipelines.  |
| 0 | Structure type, other.  |

## I2 Building Status ☆

### Definition

The operational status of the building involved in the fire. This element indicates the actual use of the building at the time of the fire.

### Purpose

Building status, combined with other structural characteristics, is useful for understanding fire behavior, the potential for loss of life and property, and the likely effectiveness of fire protection that existed before the fire.

### Entry

Check or mark the box best indicating the status of the building involved in the fire.

### Example

A family of four occupied the house (2):

I2 Building Status ☆	
1	<input type="checkbox"/> Under construction
2	<input checked="" type="checkbox"/> In normal use
3	<input type="checkbox"/> Idle, not routinely used
4	<input type="checkbox"/> Under major renovation
5	<input type="checkbox"/> Vacant and secured
6	<input type="checkbox"/> Vacant and unsecured
7	<input type="checkbox"/> Being demolished
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

### BUILDING STATUS CODES

1	Under construction.
2	In normal use. Includes properties that are closed or unoccupied for a brief period of time, such as business closed for the weekend or a house with no one at home.
3	Idle, not routinely used (furnishings are in place). Includes seasonal properties during the off-season.
4	Under major renovation.
5	Vacant and secured.
6	Vacant and unsecured.
7	Being demolished.
0	Building status, other.
U	Undetermined.

### I3 Building Height ☆

#### Definition

The number of stories at or above grade level and the number of stories below grade level in the fire building.

#### Purpose

Building height and depth below grade, combined with other structural characteristics, are useful for pre-fire planning as well as for gaining a better understanding of fire behavior. Some fire departments use building height and depth to determine life safety hazard values. The more difficult it is for people to escape, the higher the life safety hazard value for the building.

#### Entry

Enter the total number of stories at or above grade level and the total number of stories below grade level.

- ☛ For split grades, consider the main egress point as the “at grade” portion of the building.
- ☛ Do not count normally inaccessible attics, attics with less than standing height, or the roof as a story (i.e., the roof is counted as part of the highest story).



## SECTION J

This section collects information on where in the structure the fire originated, how far the fire spread, and the number of stories damaged by flame.

## J1 Fire Origin ☆

### Definition

Identifies the story where the fire originated within the building.

### Purpose

The story of fire origin, combined with other structural characteristics, is helpful for gaining a better understanding of fire behavior and identifying any special problems in fire strategy and tactics. Information on the frequency and nature of above- or below-grade-level fires is needed for assessing aerial apparatus needs and performance. A fire in the upper levels of a high-rise building is often difficult to control because of delays in moving personnel and equipment to the fire floor.

### Entry

Enter the story of fire origin. If below grade level, check or mark the Below Grade box.

☛ Checking or marking the Below Grade box has the effect of entering a negative number in NFIRS 5.0.

### Example

The fire began in the master bedroom on the second story:

<b>J1</b>	<b>Fire Origin</b> ☆
<input type="text" value="2"/>	<input type="checkbox"/> Below grade
Story of fire origin	

## J2 Fire Spread ☆

### Definition

The extent of fire spread in terms of how far the flame damage extended. The extent of flame damage is the area actually burned or charred and does not include the area receiving only heat, smoke, or water damage.

### Purpose

In combination with other information, this element describes the magnitude or seriousness of the fire. It can be used to evaluate the effectiveness of built-in fire protection features or the effectiveness of the fire suppression force relative to the conditions faced. The confinement and extinguishment of a fire is influenced by many factors. Fire spread indicates the combined effect of these conditions. Also, the analysis of fire spread over many fires can reveal the effects of individual factors.

### Entry

Check or mark the box best describing the extent of fire spread.

- ☛ If the fire was confined to the object of origin, an entry should have been made in Block D3 of the Fire Module. Do not check or mark any additional box in this block.
- ☛ A room is a partitioned part of the inside of a building. If the flame damage extends beyond the area of origin in a one-room building, such as a shed, the damage should be described as Confined to the Building of Origin. The Confined to the Building of Origin box is also the appropriate description if the fire was on the roof or outside wall of a building.

### Example

A fire causes flame damage only in the room of origin (2):

J2 Fire Spread ☆	
If the fire spread was confined to object of origin, do not check a box (Ref. Block D3, Fire Module).	
2	<input checked="" type="checkbox"/> Confined to room of origin
3	<input type="checkbox"/> Confined to floor of origin
4	<input type="checkbox"/> Confined to building of origin
5	<input type="checkbox"/> Beyond building of origin

#### FIRE SPREAD CODES

- |   |                                 |
|---|---------------------------------|
| 1 | Confined to object of origin.   |
| 2 | Confined to room of origin.     |
| 3 | Confined to floor of origin.    |
| 4 | Confined to building of origin. |
| 5 | Beyond building of origin.      |

## J3 Number of Stories Damaged by Flame

### Definition

The number of stories damaged by flame spread. Flame damage is the area actually burned or charred and does not include areas receiving only heat, smoke, or water damage.

### Purpose

In combination with other information, this element describes the magnitude or seriousness of the fire. It can be used to evaluate the effectiveness of built-in fire protection features or the effectiveness of the fire suppression force relative to the conditions faced. The confinement and extinguishment of a fire is influenced by many factors. Fire spread indicates the combined effect of these conditions. Also, the analysis of fire spread over many fires can reveal the effects of individual factors.

### Entry

Enter the number of stories damaged by flame according to the indicated criteria.



**Example**

A sofa (21) contributed most to flame spread:

<b>K Material Contributing Most to Flame Spread</b>			
<input type="checkbox"/>	Check if no flame spread <b>OR</b> if same as Material First Ignited (Block D4, Fire Module) <b>OR</b> if unable to determine.		
			
<b>K1</b>	<table border="1"> <tr> <td style="width: 100px;">21</td> <td>Sofa</td> </tr> </table> <p>Item contributing most to flame spread</p>	21	Sofa
21	Sofa		
<b>K2</b>	<table border="1"> <tr> <td style="width: 100px;"></td> <td></td> </tr> </table> <p>Type of material contributing most to flame spread</p> <p style="text-align: right;">Required only if item contributing code is 00 or &lt;70.</p>		

- ☛ An alphabetized synonym list for the following Item Contributing Most to Flame Spread codes is presented in Appendix B.

**ITEM CONTRIBUTING MOST TO FLAME SPREAD CODES****Structural Component, Finish**

- 11 Exterior roof covering, surface, finish.
- 12 Exterior sidewall covering, surface, finish. Includes eaves.
- 13 Exterior trim, appurtenances. Includes doors, porches, and platforms.
- 14 Floor covering or rug/carpet/mat, surface.
- 15 Interior wall covering. Includes cloth wall coverings, wood paneling, and items permanently affixed to a wall or door. Excludes curtains and draperies (36) and decorations (42).
- 16 Interior ceiling covering or finish. Includes cloth permanently affixed to ceiling and acoustical tile.
- 17 Structural member or framing.
- 18 Thermal, acoustical insulation within wall, partition or floor/ceiling space. Includes fibers, batts, boards, loose fills.
- 10 Structural component or finish, other.

**Furniture, Utensils.** Includes built-in furniture.

- 21 Upholstered sofa, chair, vehicle seats.
- 22 Non-upholstered chair, bench.
- 23 Cabinetry. Includes filing cabinets, pianos, dressers, chests of drawers, desks, tables, and bookcases. Excludes TV sets, bottle warmers, and appliance housings (25).
- 24 Ironing board.
- 25 Appliance housing or casing.
- 26 Household utensils. Includes kitchen and cleaning utensils.
- 20 Furniture, utensils, other.

**Soft Goods, Wearing Apparel**

- 31 Mattress, pillow.
- 32 Bedding: blanket, sheet, comforter. Includes heating pads.
- 33 Linen, other than bedding. Includes towels and tablecloths.
- 34 Wearing apparel not on a person.
- 35 Wearing apparel on a person.

- 36 Curtain, blind, drapery, tapestry.
- 37 Goods not made up. Includes fabrics and yard goods.
- 38 Luggage.
- 30 Soft goods, wearing apparel, other.

### **Adornment, Recreational Material, Signs**

- 41 Christmas tree.
- 42 Decoration.
- 43 Sign. Includes outdoor signs such as billboards.
- 44 Chips. Includes wood chips.
- 45 Toy, game.
- 46 Awning, canopy.
- 47 Tarpaulin, tent.
- 40 Adornment, recreational material, signs, other.

### **Storage Supplies**

- 51 Box, carton, bag, basket, barrel. Includes wastebaskets.
- 52 Material being used to make a product. Includes raw materials used as input to a manufacturing or construction process. Excludes finished products.
- 53 Pallet, skid (empty). Excludes palletized stock (58).
- 54 Cord, rope, twine, yarn.
- 55 Packing, wrapping material.
- 56 Baled goods or material. Includes bale storage.
- 57 Bulk storage.
- 58 Palletized material, material stored on pallets.
- 59 Rolled, wound material. Includes rolled paper and fabrics.
- 50 Storage supplies, other.

### **Liquids, Piping, Filters**

- 61 Atomized, vaporized liquid. Included are aerosols.
- 62 Flammable liquid/gas (fuel) in or escaping from combustion engines.
- 63 Flammable liquid/gas in or escaping from final container or pipe before engine or burner. Includes piping between the engine and the burner.
- 64 Flammable liquid/gas in or escaping from container or pipe. Excludes engines, burners, and their fuel systems.
- 65 Flammable liquid/gas, uncontained. Includes accelerants.
- 66 Pipe, duct, conduit, hose.
- 67 Pipe, duct, conduit, or hose covering. Includes insulating materials whether for acoustical or thermal purposes, and whether inside or outside the pipe, duct, conduit, or hose.
- 68 Filter. Includes evaporative cooler pads.
- 60 Liquids, piping, filters, other.

### **Organic Materials**

- 71 Agricultural crop. Includes fruits and vegetables.
- 72 Light vegetation (not crop). Includes grass, leaves, needles, chaff, mulch, and compost.
- 73 Heavy vegetation (not crop). Includes trees and brush.
- 74 Animal, living or dead.
- 75 Human, living or dead.
- 76 Cooking materials. Includes edible materials for man or animal. Excludes cooking utensils (26).
- 77 Feathers or fur. Excludes feathers or fur not on bird or animal, and not processed into a product.
- 70 Organic materials, other.

**General Materials**

81	Electrical wire, cable insulation. Do not classify the insulation on the wiring as the item first ignited unless there were no other materials in the immediate area, such as might be found in a cable tray or electrical vault.
82	Transformer. Includes transformer fluids.
83	Conveyor belt, drive belt, V-belt.
84	Tire.
85	Railroad ties.
86	Fence, pole.
87	Fertilizer.
88	Pyrotechnics, explosives.

**General Materials Continued**

91	Book.
92	Magazine, newspaper, writing paper. Includes files.
93	Adhesive.
94	Dust, fiber, lint. Includes sawdust and excelsior.
95	Film, residue. Includes paint, resin, and chimney film or residue and other films and residues produced as a by-product of an operation.
96	Rubbish, trash, waste.
97	Oily rags.
00	Item contributing most to flame spread, other.
UU	Undetermined.

## Type of Material Contributing Most to Flame Spread

- ☛ This field is required only if the Item Contributing Most to Flame Spread code is “00” or a number less than “70.”

### Definition

The type of material contributing most to flame spread, if different from the Type of Material First Ignited (Fire Module, Block D4). Skip this block if the material is unknown.

*Type of material* refers to the raw, common, or natural state in which the material exists. The type of material may be a gas, flammable liquid, chemical, plastic, wood, paper, fabric, or any number of other materials.

### Purpose

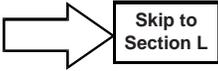
Knowing what type of material contributed most to flame spread is helpful in finding out why fires advance through a structure and understanding the rate at which fires develop. A study of this entry also aids in assessing the need for standards on the flammability of materials. This information can also be helpful to manufacturers for improving products.

### Entry

Enter the two-digit code and description that best describes the type of material contributing most to flame spread.

**Example**

The fabric (71) that the sofa was upholstered with contributed most to flame spread:

<b>K</b>	<b>Type of Material Contributing Most to Flame Spread</b>	
	<input type="checkbox"/>	Check if no flame spread <b>OR</b> if same as Material First Ignited (Block D4, Fire Module) <b>OR</b> if unable to determine.
		
<b>K1</b>	<input type="text" value="21"/>   <input type="text" value="Sofa"/>	
	Item contributing most to flame spread	
<b>K2</b>	<input type="text" value="71"/>   <input type="text" value="Fabric"/>	
	Type of material contributing most to flame spread	
		Required only if item contributing code is 00 or <70.

- An alphabetized synonym list for the following Type of Material Contributing Most to Flame Spread codes is presented in Appendix B.

**TYPE OF MATERIAL CONTRIBUTING MOST TO FLAME SPREAD CODES****Flammable Gas**

- 11 Natural gas. Includes methane and marsh gas.
- 12 LP gas. Includes butane, butane and air mixtures, and propane gas.
- 13 Anesthetic gas.
- 14 Acetylene gas
- 15 Hydrogen.
- 10 Flammable gas, other. Includes benzene, benzol, carbon disulfide, carbon monoxide, ethylene, ethylene oxide, and vinyl chloride.

**Flammable or Combustible Liquid**

- 21 Ether, pentane-type flammable liquid. Includes all Class 1A flammable liquids.
- 22 JP-4 jet fuel and methyl-ethyl-ketone-type flammable liquid. Includes all Class 1B flammable liquids. Excludes gasoline (23).
- 23 Gasoline.
- 24 Turpentine, butyl-alcohol-type flammable liquid. Includes all Class 1C flammable liquids.
- 25 Kerosene; Nos. 1 and 2 fuel oil; diesel-type combustible liquid. Includes all Class II combustible liquids.
- 26 Cottonseed oil; Nos. 4, 5, and 6 fuel oil; creosote-oil-type combustible liquid. Includes all Class IIIA combustible liquids.
- 27 Cooking oil, transformer oil, lubricating oil. Includes all Class IIIB combustible liquids.
- 20 Flammable or combustible liquid, other.

**Volatile Solid or Chemical**

- 31 Fat, grease, butter, margarine, lard, tallow.
- 32 Petroleum jelly and nonfood grease.
- 33 Polish, paraffin, wax.
- 34 Adhesive, resin, tar, glue, asphalt, pitch, soot.

- 35 Paint, varnish—applied.
- 36 Combustible metal. Includes magnesium, titanium, and zirconium.
- 37 Solid chemical. Includes explosives. Excludes liquid chemicals (division 2) and gaseous chemicals (division 1).
- 38 Radioactive material.
- 30 Volatile solid or chemical, other.

**Plastics**

- 41 Plastic, regardless of type. Excludes synthetic fibers, coated fabrics, plastic upholstery.

**Natural Product**

- 51 Rubber, tire rubber. Excludes synthetic rubbers (classify as plastics (41)).
- 52 Cork.
- 53 Leather.
- 54 Hay, straw.
- 55 Grain, natural fiber. Includes cotton, feathers, felt, barley, corn, coconut. Excludes fabrics and furniture batting (71).
- 56 Coal, coke, briquettes, peat. Includes briquettes of carbon black and charcoal.
- 57 Food, starch. Includes flour. Excludes fat or grease (31).
- 58 Tobacco.
- 50 Natural product, other. Includes manure.

**Wood or Paper – Processed**

- 61 Wood chips, sawdust, wood shavings.
- 62 Round timber. Includes round posts, poles, and piles.
- 63 Sawn wood. Includes all finished lumber and wood shingles.
- 64 Plywood.
- 65 Fiberboard, particleboard, and hardboard. Includes low-density pressed wood fiberboard products.
- 66 Wood pulp, wood fiber.
- 67 Paper. Includes cellulose, waxed paper, sensitized paper, and ground-up processed paper and newsprint used as thermal insulation.
- 68 Cardboard.
- 60 Wood or paper, processed, other.

**Fabric, Textiles, Fur**

- 71 Fabric, fiber, cotton, blends, rayon, wool, finished goods. Includes yarn and canvas. Excludes fur and silk (74).
- 74 Fur, silk, other fabric, finished goods. Excludes fabrics listed in Code 71.
- 75 Wig.
- 76 Human hair.
- 77 Plastic-coated fabric. Includes plastic upholstery fabric and other vinyl fabrics.
- 70 Fabric, textiles, fur, other.

**Material Compounded With Oil**

- 81 Linoleum.
- 82 Oilcloth.
- 86 Asphalt-treated material. Excludes by-products of combustion, soot, carbon, creosote (34).
- 80 Material compounded with oil, other.
- 00 Type of material contributing most to flame spread, other.
- UU Undetermined.

## SECTION L

These data elements identify the type and operating principle of detectors present in the area of origin or in near proximity to the area of origin such that they would be instrumental in detecting the fire in its early stages.

## L<sup>1</sup> Presence of Detectors ☆

### Definition

The existence of fire detection equipment within its designed range of the fire.

### Purpose

Knowing whether or not detectors were present at the fire is useful for evaluating their effectiveness can be evaluated if they were present and within their designed range.

### Entry

Check or mark the box that best describes the presence of detectors. If no detectors were present within their designed range of the fire, check or mark the None Present box and skip to Section M.

### Example

No detectors (N) were present in a structure where the fire occurred:

L <sup>1</sup>	<b>Presence of Detectors</b> ☆	
	(In area of the fire)	
	N	<input checked="" type="checkbox"/> None Present → Skip to Section M
	1	<input type="checkbox"/> Present
	U	<input type="checkbox"/> Undetermined

### PRESENCE OF DETECTORS CODES

1	Present.
N	None present.
U	Undetermined.

## L<sup>2</sup> Detector Type

### Definition

Identifies the type of fire detection system that was present in the area of fire origin.

### Purpose

The type of detectors present at the fire is important to the understanding of fire control and life safety in properties with and without detection equipment.

### Entry

Check or mark the box that indicates the type of detector present in the area of fire origin.

☛ This field is required if the fire was within the designed range of the detector.

### Example

A smoke detector (1) was present in the area of fire origin:

L <sub>2</sub> Detector Type	
1	<input checked="" type="checkbox"/> Smoke
2	<input type="checkbox"/> Heat
3	<input type="checkbox"/> Combination smoke and heat
4	<input type="checkbox"/> Sprinkler, water flow detection
5	<input type="checkbox"/> More than one type present
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

#### DETECTOR TYPE CODES

1	Smoke.
2	Heat.
3	Combination smoke and heat in a single unit.
4	Sprinkler, water flow detection.
5	More than one type present.
0	Detector type, other.
U	Undetermined.

## L<sup>3</sup> Detector Power Supply

### Definition

Identifies the type of power supplying the detector.

### Purpose

The reliability of detectors present at a fire is an important part of detector performance, especially if maintenance was poor or a power failure occurred before or during the fire.

### Entry

Check or mark the box best indicating the type of power supply used by the detector.

☛ This field is required if the fire was within the designed range of the detector.

### Example

The smoke detector ran on battery (1) power:

L <sub>3</sub> Detector Power Supply	
1	<input checked="" type="checkbox"/> Battery only
2	<input type="checkbox"/> Hardwire only
3	<input type="checkbox"/> Plug-in
4	<input type="checkbox"/> Hardwire with battery
5	<input type="checkbox"/> Plug-in with battery
6	<input type="checkbox"/> Mechanical
7	<input type="checkbox"/> Multiple detectors & power supplies
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

#### DETECTOR POWER SUPPLY CODES

1	Battery only.
2	Hardwire only.
3	Plug-in.
4	Hardwire with battery backup.
5	Plug-in with battery backup.
6	Mechanical. Includes spring-wound, stored pressure source, etc.
7	Multiple detectors and power supplies.
0	Detector power supply, other.
U	Undetermined.

## L<sup>4</sup> Detector Operation

### Definition

The operation and effectiveness of the detector relative to the area of fire origin.

### Purpose

The information on the usage, reliability, and effectiveness of automatic detection equipment is important to the understanding of fire control and life safety with and without detection equipment. This item is not designed to evaluate any alarm transmission capability of the system, only the detection of the fire.

### Entry

Check or mark the box best describing the location and operation of the detector.

☛ This field is required if the fire was within the designed range of the detector.

### Example

The smoke detector failed to operate (3):

L4 Detector Operation	
1	<input type="checkbox"/> Fire too small to activate
2	<input type="checkbox"/> Operated → Complete Block L5
3	<input checked="" type="checkbox"/> Failed to operate → Complete Block L6
4	<input type="checkbox"/> Undetermined

#### DETECTOR OPERATION CODES

- |   |                                      |
|---|--------------------------------------|
| 1 | Fire too small to activate detector. |
| 2 | Detector operated.                   |
| 3 | Detector failed to operate.          |
| U | Undetermined.                        |

## L5 Detector Effectiveness

### Definition

The effectiveness of the fire detection equipment in alerting occupants.

### Purpose

Information on the effectiveness of automatic detection equipment is important for understanding whether fire detection equipment is accomplishing the task for which it is designed.

### Entry

Check or mark the box best describing the effectiveness of the detector.

☛ This field is required if the detector operated.

### Example

Heat detectors in the room of origin alerted the building occupants (1), who promptly evacuated:

L5 Detector Effectiveness	
Required if detector operated.	
1	<input checked="" type="checkbox"/> Alerted occupants, occupants responded
2	<input type="checkbox"/> Alerted occupants, occupants failed to respond
3	<input type="checkbox"/> There were no occupants
4	<input type="checkbox"/> Failed to alert occupants
U	<input type="checkbox"/> Undetermined

**DETECTOR EFFECTIVENESS CODES**

- 1 Detector alerted occupants, occupants responded.
- 2 Detector alerted occupants, occupants failed to respond.
- 3 There were no occupants.
- 4 Detector failed to alert occupants.
- U Undetermined.

**L<sup>6</sup> Detector Failure Reason***Definition*

The reason why the detector failed to operate or did not operate properly.

*Purpose*

Information on why automatic detection equipment did not operate is important to the evaluation of detection equipment and can be used to improve reliability or installation of detectors.

*Entry*

Check or mark the box best describing why the detector failed to operate or did not operate properly.

☛ This field is required if the detector failed to operate.

*Example*

Heat detectors in the room of origin did not activate because they were improperly installed (2):

**L<sup>6</sup> Detector Failure Reason**

Required if detector failed to operate

- 1  Power failure, shutoff, or disconnect
- 2  Improper installation or placement
- 3  Defective
- 4  Lack of maintenance, includes not cleaning
- 5  Battery missing or disconnected
- 6  Battery discharged or dead
- 0  Other
- U  Undetermined

**DETECTOR FAILURE REASON CODES**

- 1 Power failure or hardwired detector shut off or disconnected.
- 2 Improper installation or placement of detector.
- 3 Defective detector.
- 4 Lack of maintenance. Includes not cleaning.
- 5 Battery missing or disconnected.
- 6 Battery discharged or dead.
- 0 Detector failure reason, other.
- U Undetermined.

## SECTION M

These data elements identify the type and operating principle of an automatic extinguishing system (AES) present in the area of origin or in near proximity to the area of origin such that it would be instrumental in suppressing the fire in its early stages.

## M<sup>1</sup> Presence of Automatic Extinguishing System ☆

### Definition

The existence of an AES within the AES's designed range of a fire.

### Purpose

If an AES was present at the fire, its effectiveness can be evaluated if it was within its designed range of the fire.

### Entry

Check or mark the box that best describes the presence of an AES. If no AES was present, check or mark the None Present box; no other entries are required on this module.

### Example

An AES was present (1) in the structure where the fire occurred:

M <sub>1</sub> Presence of Automatic Extinguishing System ☆	
N	<input type="checkbox"/> None Present
1	<input checked="" type="checkbox"/> Present
2	<input type="checkbox"/> Partial System Present
U	<input type="checkbox"/> Undetermined

Complete rest of Section M

### PRESENCE OF AUTOMATIC EXTINGUISHING SYSTEM CODES

1	Present.
2	Partial System Present.
N	None present.
U	Undetermined.

## M<sup>2</sup> Type of Automatic Extinguishing System

### Definition

Identifies the type of automatic extinguishing system that was present in the area of fire origin.

### Purpose

Information on the type of AES present at the fire is important to the understanding of fire control and life safety in properties with and without automatic extinguishing system.

### Entry

Check or mark the box that indicates the type of AES present in the area of fire origin. If multiple systems are present, indicate the system designed to protect the hazard where the fire started.

☛ This field is required if the fire was within the designed range of the AES.

### Example

The AES was a wet-pipe sprinkler system (1):

<b>M<sub>2</sub></b>		<b>Type of Automatic Extinguishing System</b>
Required if fire was within designed range of AES		
1	<input checked="" type="checkbox"/>	<b>Wet-pipe sprinkler</b>
2	<input type="checkbox"/>	<b>Dry-pipe sprinkler</b>
3	<input type="checkbox"/>	<b>Other sprinkler system</b>
4	<input type="checkbox"/>	<b>Dry chemical system</b>
5	<input type="checkbox"/>	<b>Foam system</b>
6	<input type="checkbox"/>	<b>Halogen-type system</b>
7	<input type="checkbox"/>	<b>Carbon dioxide (CO<sub>2</sub>) system</b>
0	<input type="checkbox"/>	<b>Other special hazard system</b>
U	<input type="checkbox"/>	<b>Undetermined</b>

#### TYPE OF AUTOMATIC EXTINGUISHING SYSTEM CODES

- |   |  |
|---|--|
| 1 | Wet-pipe sprinkler system.   |
| 2 | Dry-pipe sprinkler system.   |
| 3 | Other sprinkler system. Includes deluge sprinkler systems and pre-action sprinkler systems.          |
| 4 | Dry chemical system.   |
| 5 | Foam system.   |
| 6 | Halogen-type system. Includes nonhalogenated suppression systems that operate on the same principle. |
| 7 | Carbon dioxide system.   |
| 0 | Special hazard system, other.  |
| U | Undetermined.  |

## M<sup>3</sup> Operation of Automatic Extinguishing System

### Definition

The operation and effectiveness of the automatic extinguishing system relative to the area of fire origin.

### Purpose

Knowing the usage, reliability, and effectiveness of AESs is important to the understanding of fire control and life safety in buildings with and without extinguishing equipment.

### Entry

Check or mark the box that indicates if the AES operated and was or was not effective. Effective does not necessarily mean complete extinguishing, but the system must at least contain and control the fire until the fire department can complete extinguishment.

### Example

The fire was too small to activate the system (3):

<b>M3</b>		<b>Operation of Automatic Extinguishing System</b>
Required if fire was within designed range		
1	<input type="checkbox"/>	<b>Operated &amp; effective</b> (go to M4)
2	<input type="checkbox"/>	<b>Operated &amp; not effective</b> (go to M4)
3	<input checked="" type="checkbox"/>	<b>Fire too small to activate</b>
4	<input type="checkbox"/>	<b>Failed to operate</b> (go to M5)
0	<input type="checkbox"/>	<b>Other</b>
U	<input type="checkbox"/>	<b>Undetermined</b>

#### OPERATION OF AUTOMATIC EXTINGUISHING SYSTEM CODES

1	System operated and was effective.
2	System operated and was not effective.
3	Fire too small to activate the system.
4	System did not operate.
0	Operation of AES, other.
U	Undetermined..

## **M4** Number of Sprinkler Heads Operating

### Definition

The total number of sprinkler heads that operated during the fire.

### Purpose

Recording the number of sprinkler heads that operated is useful in determining how fast the fire developed. This is not an indication of the effectiveness of the sprinkler system.

### Entry

Enter the total number of sprinkler heads that operated during the fire. This field is required if the sprinkler system activated.

### Example

One sprinkler head activated:

<b>M4</b>		<b>Number of Sprinkler Heads Operating</b>
Required if system operated		
<div style="border: 1px solid black; display: inline-block; padding: 2px;"> <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-right: 1px solid black; width: 100%;"></div> <div style="border-left: 1px solid black; width: 100%;"></div> <div style="border-top: 1px solid black; width: 100%;"></div> <div style="text-align: right; padding-right: 5px;">1</div> </div>		
Number of sprinkler heads operating		

## M<sup>5</sup> Reason for Automatic Extinguishing System Failure

### Definition

The reason why the automatic extinguishing system failed to operate or did not operate properly.

### Purpose

Information on the effectiveness of an AES is important for understanding the reasons why systems fail so they can be redesigned or additional safeguards put in place.

### Entry

Check or mark the box that best describes why the AES failed to operate or was not effective.

☛ This field is required if the system failed to operate.

### Example

The system did not operate because the fire was in the ceiling space above the AES (5):

<b>M<sup>5</sup> Reason for Automatic Extinguishing System Failure</b>	
Required if system failed or not effective	
1	<input type="checkbox"/> System shut off
2	<input type="checkbox"/> Not enough agent discharged
3	<input type="checkbox"/> Agent discharged but did not reach fire
4	<input type="checkbox"/> Wrong type of system
5	<input checked="" type="checkbox"/> Fire not in area protected
6	<input type="checkbox"/> System components damaged
7	<input type="checkbox"/> Lack of maintenance
8	<input type="checkbox"/> Manual intervention
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

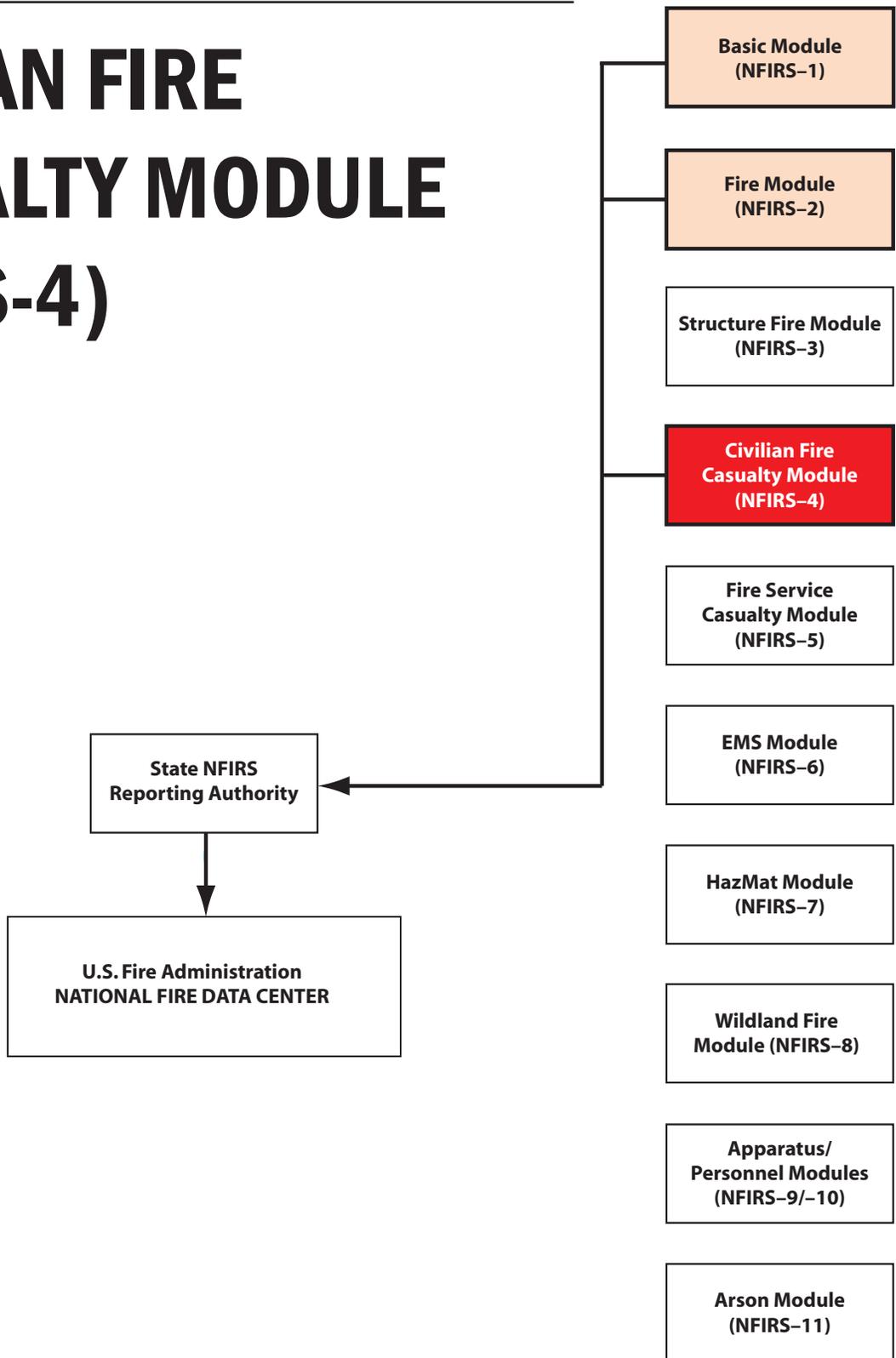
### REASON FOR AUTOMATIC EXTINGUISHING SYSTEM FAILURE CODES

1	System shut off.
2	Not enough agent discharged to control the fire.
3	Agent discharged, but did not reach the fire.
4	Inappropriate system for the type of fire.
5	Fire not in area protected by the system.
6	System components damaged.
7	Lack of maintenance. Includes corrosion or heads painted.
8	Manual intervention defeated the system.
0	Reason system not effective, other.
U	Undetermined.



## Chapter 6

# CIVILIAN FIRE CASUALTY MODULE (NFIRS-4)





## CHAPTER 6 • CIVILIAN FIRE CASUALTY MODULE (NFIRS-4)

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The Civilian Fire Casualty Module should be completed whenever there are civilian casualties resulting from a fire. A *fire casualty* is a person who is injured or killed as a result of a fire, including injuries or deaths from natural or accidental causes sustained while involved in the activities of fire control, attempting rescue, or escaping from the dangers of the fire. Fires include Incident Types 100–199 as recorded on the Basic Module, Section C.

- ☛ If a civilian injury is not directly related to fire, it may be reported on an EMS Module with the same incident ID information.

A separate Civilian Fire Casualty Module is required for each fire casualty.

### SECTION A

The guidance and directions for completing Section A of the Civilian Fire Casualty Module are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Civilian Fire Casualty Module must be identical with the entries on the corresponding Basic Module. If injuries occur in an exposure fire, the casualty report should have the same entries as those from Section A of the Basic Module for that exposure fire. An example of a completed Section A can be found on page 3–8.

### **A** Fire Department Identification (FDID) ☆

#### *Entry*

Enter the same FDID number found in Section A of the Basic Module.

### **State** ☆

#### *Entry*

Enter the same State abbreviation found in Section A of the Basic Module.

### **Incident Date** ☆

#### *Entry*

Enter the same incident date found in Section A of the Basic Module.

### **Station Number**

#### *Entry*

Enter the same station number found in Section A of the Basic Module.

## Incident Number ☆

### Entry

Enter the same incident number found in Section A of the Basic Module.

## Exposure Number ☆

### Entry

If the casualty resulted from an exposure fire, enter the same exposure number that was entered in Section A of the Basic Module for that exposure.

## Delete/Change

### Definition

Indicates a change to information submitted on a previous Civilian Fire Casualty Module or a deletion of all information regarding the casualty.

### Purpose

To delete or change previously reported information.

### Entry

**Delete.** Check or mark this box when you have previously submitted data on this civilian casualty and now want to have the data on this casualty deleted from the database. If this box is marked, complete Section A, the Casualty Number originally assigned (Section C), and leave the rest of the report blank. Forward the report according to your normally established procedures.

**Change.** Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

## B Injured Person

### Definition

The first name, middle initial, last name, and gender that identifies the casualty.

### Purpose

The name of the casualty may be required for legal purposes. It may also be useful for notification to employers, for insurance purposes, and for filing disability claims.

### Entry

Enter the full name of the person. Names should be clearly printed or typed. Check or mark the appropriate box that indicates the injured person's gender.

☛ Gender is a required field.

### Example

The casualty's name is Elizabeth P. Dandridge:

<b>B Injured Person</b>			★ Gender	
			1 <input type="checkbox"/> Male	2 <input checked="" type="checkbox"/> Female
Elizabeth	P	Dandridge		
First Name	MI	Last Name	Suffix	

### GENDER CODES

- 1 Male.
- 2 Female.

## SECTION C

### C Casualty Number ★

#### Definition

A unique number is assigned to each casualty occurring at a single incident or resulting from an incident.

#### Purpose

The casualty number identifies each casualty separately in the casualty file. Data and information concerning the casualty can be accessed using this number in conjunction with other unique field information.

#### Entry

Enter the casualty number assigned to this casualty. A separate Casualty Number is assigned to each casualty. The first casualty is always coded "001," and each succeeding casualty is numbered sequentially and incremented by 1 beginning with "002." The three-character numeric field is zero filled, not right justified.

#### Example

There were four casualties as a result of a vehicle fire; the first casualty's number is 001:

<b>C Casualty Number</b> ★
0 0 1
Casualty Number



- ☛ This data element is used as an alternate method for calculating the casualty's age. Age is collected in NFIRS but Date of Birth is not.

### Entry

Enter the date of birth showing the month, day, and year (mm/dd/yyyy).

### Example

A casualty was born on February 10, 1937

D Age or Date of Birth ☆	
<input type="text"/>	<input type="checkbox"/> Months (for infants)
OR	
Date of Birth	
<input type="text"/>	<input type="text"/>
Month	Day
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
Year	

## SECTION E

### E2 Race

#### Definition

The identification of the race of the casualty, based on U.S. Office of Management and Budget (OMB) designations.

#### Purpose

This entry is useful for the study of diseases and important to data systems in order to obtain certain Federal or State funds that are directed toward specific racial groups.

#### Entry

Check or mark the appropriate box. If race cannot be determined, check or mark the Undetermined box.

- ☛ Hispanic is not considered a race, because a person can be black and Hispanic, white and Hispanic, etc.

### Example

The casualty was an African American (2):

E <sub>1</sub> Race	
1	<input type="checkbox"/> White
2	<input checked="" type="checkbox"/> Black, African American
3	<input type="checkbox"/> Am. Indian, Alaska Native
4	<input type="checkbox"/> Asian
5	<input type="checkbox"/> Native Hawaiian, Other Pacific Islander
0	<input type="checkbox"/> Other, multiracial
U	<input type="checkbox"/> Undetermined

The ☆ denotes a required field.

**RACE CODES**

1	White.
2	Black or African American.
3	American Indian or Alaska Native.
4	Asian.
5	Native Hawaiian or other Pacific Islander.
0	Other. Includes multiracial.
U	Undetermined.

**Ethnicity***Definition*

Identifies the ethnicity of the casualty. Ethnicity is an ethnic classification or affiliation. Ethnicity designates a population subgroup having a common cultural heritage, as distinguished by customs, characteristics, language, common history, etc. Currently, Hispanic/Latino is the only OMB designation for ethnicity.

*Purpose*

This entry permits an analysis of casualties by ethnicity with type, severity, and cause of injury to identify trends and patterns that might be helpful in planning casualty prevention techniques. It is also useful for studies of diseases and important to data systems in order to obtain certain Federal or State funds that are directed toward specific ethnic groups.

*Entry*

Check or mark the appropriate box.

*Example*

The casualty was an Hispanic (1):

<b>E2</b>	<b>Ethnicity</b>
1	<input checked="" type="checkbox"/> Hispanic or Latino
0	<input type="checkbox"/> Non Hispanic or Latino

**ETHNICITY CODES**

1	Hispanic or Latino.
0	Non Hispanic or Latino.

## SECTION F

**F Affiliation***Definition*

Indicates whether the casualty involved in the incident was an emergency services responder or a civilian.

- ☛ Firefighter casualties are not reported on this module; instead, use the Fire Service Casualty Module (NFIRS-5).

Non-firefighter casualties who may be injured directly by the fire include:

*Civilian:* Non-emergency services personnel such as occupants, passers-by, and onlookers.

*EMS:* Emergency EMS personnel who are not members of the fire department.

*Police:* Persons from law enforcement agencies working at the scene.

*Other:* Persons working at the scene from other public or private service organizations such as the utility company, other city agencies, the Red Cross, the Salvation Army, etc.

*Purpose*

This entry identifies the groups suffering casualties. This information, along with data on the cause of the casualty and associated incident, can help target programs for reducing casualties and can be used to measure their success.

*Entry*

Check or mark the box that best describes the casualty's affiliation.

- ☛ If an injury occurs to EMS fire service personnel, use the Fire Service Casualty Module instead.

*Example*

A police officer (3) falls and sprains his ankle while helping an occupant leave an apartment building that was on fire:

F Affiliation	
1	<input type="checkbox"/> Civilian
2	<input type="checkbox"/> EMS, not fire department
3	<input checked="" type="checkbox"/> Police
0	<input type="checkbox"/> Other

**AFFILIATION CODES**

1	Civilian.
2	EMS, not fire department.
3	Police.
0	Other.

## SECTION G

**G Date and Time of Injury****Date***Entry*

Enter the month, day, and year when the injury occurred (mm/dd/yyyy). (See example at Time.)

**Time***Definition*

The time of day, using the 24-hour clock, when the injury occurred. Midnight is 0000 and signifies the start of a new day.

*Purpose*

This information is sometimes needed for legal or insurance purposes. It is most frequently used to analyze the time of day fatalities occur for different types of incidents.

*Entry*

Enter as closely as possible the time when the injury occurred using the 24-hour clock (i.e., 0000–2359). This could be before or after the alarm time shown on the Basic Module.

*Example*

A woman burned her hand at 5:25 p.m. on May 2, 2002:

G Date and Time of Injury						Midnight is 0000.					
Date of Injury			Time of Injury								
0	5	0	2	2	0	0	2	1	7	2	5
Month	Day	Year	Hour	Minute							

## SECTION H

**H Severity ☆**

☛ Severity was known as Case Severity in NFIRS 4.1.

*Definition*

The relative severity or seriousness of the injury on a scale from “least serious” (minor) to “most serious” (death).

*Purpose*

The severity of a casualty’s injury is often used as an indicator of the impact of the incident. It can be used as a measure for prevention programs aimed at reducing injuries and deaths.

### Entry

Check or mark the box that best describes the severity of the injury.

### Example

A second degree burn (2) on the forearm and shoulder:

H	Severity	☆
1	<input type="checkbox"/> Minor	
2	<input checked="" type="checkbox"/> Moderate	
3	<input type="checkbox"/> Severe	
4	<input type="checkbox"/> Life threatening	
5	<input type="checkbox"/> Death	
U	<input type="checkbox"/> Undetermined	

### SEVERITY CODES

- |   |  |
|---|--|
| 1 | Minor. The patient is not in danger of death or permanent disability. Immediate medical care is not necessary.   |
| 2 | Moderate. There is little danger of death or permanent disability. Quick medical care is advisable. This category includes injuries such as fractures or lacerations requiring sutures.  |
| 3 | Severe. The situation is potentially life threatening if the condition remains uncontrolled. Immediate medical care is necessary even though body processes may still be functioning and vital signs may be normal.                        |
| 4 | Life threatening. Death is imminent; body processes and vital signs are not normal. Immediate medical care is necessary. This category includes cases such as severe hemorrhaging, severe multiple trauma, and multiple internal injuries. |
| 5 | Death.   |
| U | Undetermined.  |

## SECTION I

### I Cause of Injury

#### Definition

The physical event that caused the injury.

#### Purpose

This is another dimension in describing the cause of an injury and how and why the injury occurred. The analysis of this information may further an understanding of the conditions causing the injury and provide a means for planning suitable preventive techniques.

#### Entry

Check or mark the box that best describes the cause of the injury.

### Example

The fire burned (1) the victim's hand:

Cause of Injury	
1	<input checked="" type="checkbox"/> Exposed to fire products including flame, heat, smoke, and gas
2	<input type="checkbox"/> Exposed to toxic fumes other than smoke
3	<input type="checkbox"/> Jumped in escape attempt
4	<input type="checkbox"/> Fell, slipped, or tripped
5	<input type="checkbox"/> Caught or trapped
6	<input type="checkbox"/> Structural collapse
7	<input type="checkbox"/> Struck by or contact with object
8	<input type="checkbox"/> Overexertion or strain
9	<input type="checkbox"/> Multiple causes
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

### CAUSE OF INJURY CODES

- |   |  |
|---|--|
| 1 | Exposed to fire products, such as flame, heat, smoke, or gas.              |
| 2 | Exposed to hazardous materials or toxic fumes other than smoke.            |
| 3 | Jumped in escape attempt.  |
| 4 | Fell, slipped, or tripped.   |
| 5 | Caught or trapped.   |
| 6 | Structural collapse.   |
| 7 | Struck by or contact with object. Includes assaults by persons or animals. |
| 8 | Overexertion or strain.  |
| 9 | Multiple causes.   |
| 0 | Cause of injury, other.  |
| U | Undetermined.  |

## SECTION J

### J Human Factors Contributing to Injury

☛ Human Factors Contributing to Injury was known as Condition Before Injury in NFIRS 4.1.

#### Definition

The physical or mental state of the person before becoming a casualty.

#### Purpose

One purpose for understanding the human factors that contributed to the injury is to design programs that specifically deal with the problems either through education or by reengineering the environment.

#### Entry

Check or mark all applicable boxes describing the human factors that contributed to this person's injury. If no preexisting human factors contributed to the injury, check or mark the None box.

### Example

A disabled man (6) was asleep (1) in a wheelchair when the fire trapped him in the room:

<b>J Human Factors Contributing to Injury</b>		<input type="checkbox"/> None
Check all applicable boxes		
1	<input checked="" type="checkbox"/> Asleep	
2	<input type="checkbox"/> Unconscious	
3	<input type="checkbox"/> Possibly impaired by alcohol	
4	<input type="checkbox"/> Possibly impaired by other drug	
5	<input type="checkbox"/> Possibly mentally disabled	
6	<input checked="" type="checkbox"/> Physically disabled	
7	<input type="checkbox"/> Physically restrained	
8	<input type="checkbox"/> Unattended person	

### HUMAN FACTORS CONTRIBUTING TO INJURY CODES

- |   |   |
|---|---|
| 1 | Asleep, no known impairment.  |
| 2 | Unconscious.  |
| 3 | Possibly impaired by alcohol.   |
| 4 | Possibly impaired by other drug or chemical.                              |
| 5 | Possibly mentally disabled.   |
| 6 | Physically disabled. Includes temporary conditions or overexertion.       |
| 7 | Physically restrained.  |
| 8 | Unattended or unsupervised person. Includes persons too young/old to act. |
| N | None.   |

## SECTION K

### K Factors Contributing to Injury

#### Definition

The most significant factors contributing to the injury of the casualty.

#### Purpose

This additional information on how an injury occurred can help in targeting fire prevention programs and checking the adequacy and enforcement of codes. For example, if many casualties resulted from illegally locked window bars, inspection practices might need to be reviewed.

#### Entry

Enter the two-digit code and description for up to three factors that best describe the contributions to the injury. If no factors were involved, check or mark the None box.

#### Example

The casualty was injured because the exits were blocked by fire (21) and his clothing caught fire (35) while he was trying to escape:

K Factors Contributing to Injury		<input type="checkbox"/> None
Enter up to three contributing factors		
<input type="text" value="2"/> <input type="text" value="1"/>	<input type="text" value="Exit blocked by fire"/>	
Contributing factor (1)		
<input type="text" value="3"/> <input type="text" value="5"/>	<input type="text" value="Clothing caught fire"/>	
Contributing factor (2)		
<input type="text"/>	<input type="text"/>	
Contributing factor (3)		

## FACTORS CONTRIBUTING TO INJURY CODES

### Egress Problem

- 11 Crowd situation, limited exits.
- 12 Mechanical obstacles to exit. Includes items blocking exit.
- 13 Locked exit or other problem with exit.
- 14 Problem with quick-release burglar or security bar.
- 15 Burglar or security bar, intrusion barrier.
- 16 Window type or size impeded egress.
- 10 Egress problem, other.

### Fire Pattern

- 21 Exits blocked by flame.
- 22 Exits blocked by smoke.
- 23 Vision blocked or impaired by smoke.
- 24 Trapped above fire.
- 25 Trapped below fire.
- 20 Fire pattern, other.

### Escape

- 31 Unfamiliar with exits.
- 32 Excessive travel distance to nearest clear exit.
- 33 Chose inappropriate exit route.
- 34 Re-entered building.
- 35 Clothing caught fire while escaping. Excludes clothing on a person intimately involved with ignition (91).
- 30 Escape, other.

### Collapse

- 40 Collapse, other.
- 41 Roof collapse.
- 42 Wall collapse.
- 43 Floor collapse.

### Vehicle-Related Factors

- 51 Trapped in/by vehicle.
- 52 Vehicle collision, rollover.
- 50 Vehicle-related, other.

### Equipment-Related Factors

- 61 Unvented heating equipment.
- 62 Improper use of heating equipment.
- 63 Improper use of cooking equipment.
- 60 Equipment-related factors, other.

### Other Special Factors

- 91 Clothing burned, not while escaping. Includes clothing on a person intimately involved with ignition. Excludes clothing that caught fire while escaping (35).
- 92 Overexertion.
- 00 Factor contributing to injury, other.
- NN None.

## SECTION L

### Activity When Injured

Activity When Injured was known as Activity at Time of Injury in NFIRS 4.1.

#### Definition

The action or activity in which the person was engaged at the time of the injury.

#### Purpose

This element identifies the situations when people are injured most frequently so that public education programs can be targeted at reducing fire injuries.

#### Entry

Check or mark the box that best describes the activity of the casualty when injured.

#### Example

A person was injured while trying to control the fire (3):

L Activity When Injured	
1	<input type="checkbox"/> Escaping
2	<input type="checkbox"/> Rescue attempt
3	<input checked="" type="checkbox"/> Fire control
4	<input type="checkbox"/> Return to fire before control
5	<input type="checkbox"/> Return to fire after control
6	<input type="checkbox"/> Sleeping
7	<input type="checkbox"/> Unable to act
8	<input type="checkbox"/> Irrational act
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

## ACTIVITY WHEN INJURED CODES

1	Escaping.
2	Rescue attempt.
3	Fire control.
4	Returning to vicinity of fire before control of fire. Excludes rescue attempt (2).
5	Returning to vicinity of fire after control of fire. Includes cleanup and salvage.
6	Sleeping.
7	Unable to act.
8	Irrational act.
0	Activity, other.
U	Undetermined.

## SECTION M

This section captures the relationship between the location of a casualty at the time of the incident, location of the origin of the fire, and whether the casualty was intimately involved with the ignition of the fire.

**M1** Location at Time of Incident*Definition*

The location of the casualty in relationship to the area of fire origin at the time the fire started.

*Purpose*

This element provides specific information on how the injury occurred. This can be helpful in directing public education efforts and injury prevention.

*Entry*

Check or mark the box that best describes the location of the casualty in relation to the area of fire origin and whether the casualty was involved with the ignition at the time the fire started.

*Example*

The casualty was in the area of the fire origin and was not involved in the ignition of the fire (1):

<b>M1</b>	<b>Location at Time of Incident</b>
1	<input checked="" type="checkbox"/> In area of origin and not involved
2	<input type="checkbox"/> Not in area of origin and not involved
3	<input type="checkbox"/> Not in area of origin, but involved
4	<input type="checkbox"/> In area of origin and involved
0	<input type="checkbox"/> Other location
U	<input type="checkbox"/> Undetermined

**LOCATION AT TIME OF INCIDENT CODES**

- 1 In area of origin and not involved in starting the fire.
- 2 Not in area of origin and not involved in starting the fire.
- 3 Not in area of origin, but involved in starting the fire.
- 4 In area of ignition and involved in starting the fire.
- 0 Other location.
- U Undetermined.

**M2 General Location at Time of Injury***Definition*

The general location of the casualty in relationship to the area of fire origin at the time the injury was sustained.

*Purpose*

This element provides more information on how the injury occurred and the relationship of the ignition to the casualty location at time of injury and at the time of ignition.

*Entry*

Check or mark the box that best describes the casualty's general location at the time of injury. If Code "1" or "U" is marked, skip to Section N. If Code "3" is marked, skip to Block M5. If the general location is undetermined, leave this block blank and skip to Section N.

*Example*

The casualty was in the building, but not in the area of origin (2):

<b>M2</b>		<b>General Location at Time of Injury</b>	
1	<input type="checkbox"/>	In area of fire origin	Skip to Section N
2	<input checked="" type="checkbox"/>	In building, but not in area	
3	<input type="checkbox"/>	Outside, but not in area	Skip to Section M5
U	<input type="checkbox"/>	Undetermined	

**GENERAL LOCATION AT TIME OF INJURY CODES**

- 1 In area of fire origin, whether that is inside or outside a building.
- 2 In building of origin, but not in area of origin.
- 3 Outside, but not in area of origin.
- U Undetermined.

**M3 Story at Start of Incident***Definition*

Identifies the story where the casualty was located at the start of the incident.

*Purpose*

Providing information on the physical separation between the person injured and the area of origin at the start of the fire can be helpful in assessing the adequacy of exits.

*Entry*

If the injury occurred inside a structure, enter the story where the casualty was located at the start of the incident. If the story is below grade, check or mark the Below Grade box.

- ☛ For split grades, consider the main egress point as the first story.
- ☛ Checking or marking the Below Grade box has the effect of entering a negative number in NFIRS 5.0.

*Example*

The casualty was on the fifth story at the start of the incident:

<p><b>M3 Story at Start of Incident</b>          Complete ONLY if injury occurred INSIDE          Story at start of incident <input type="text" value="5"/> <input type="checkbox"/> Below grade</p>
--

**M4 Story Where Injury Occurred***Definition*

Identifies the story where the casualty was located when the injury occurred.

*Purpose*

This element provides more information on how far the casualty was from the area of origin when the injury occurred. This can be helpful in assessing the adequacy of detection, alarm, and exit systems as well as assisting in code enforcement.

*Entry*

If the injury occurred in a structure and the person was on a story different from that in Block M3, enter the story where the injury occurred. If the story is below grade, check or mark the Below Grade box.

*Example*

The injury occurred on the third story:

<p><b>M4 Story Where Injury Occurred</b>          Story where injury occurred, if different from M3 <input type="text" value="3"/> <input type="checkbox"/> Below grade</p>
---

## M5 Specific Location at Time of Injury

☛ Specific Location at Time of Injury was known as Area of Fire Origin in NFIRS 4.1.

### Definition

Identifies the specific location of the casualty at the time of the injury.

### Purpose

This element provides more information on how the injury occurred.

### Entry

If the injury did not occur in the area of fire origin, enter the two-digit code and description that best describes the specific location or area where the casualty was located when injured.

### Example

The casualty occurred in the maintenance shop of the factory (65):

<b>M5</b>	<b>Specific Location at Time of Injury</b>
Complete ONLY if casualty NOT in area of origin	
6   5	Maintenance Shop
Specific location at time of injury	

☛ An alphabetized synonym list for Specific Location at Time of Injury Codes is presented in Appendix B.

## SPECIFIC LOCATION AT TIME OF INJURY CODES

### Means of Egress

- 01 Hallway corridor, mall.
- 02 Exterior stairway. Includes fire escapes, exterior ramps.
- 03 Interior stairway or ramp. Includes interior ramps.
- 04 Escalator: exterior, interior.
- 05 Entranceway, lobby.
- 09 Egress/Exit, other.

### Assembly or Sales Areas (Groups of People)

- 11 Arena, assembly area with fixed seats for 100 or more people. Includes auditoriums, chapels, places of worship, classrooms, lecture halls, arenas, theaters.
- 12 Assembly area without fixed seats for 100 or more people. Includes ballrooms, bowling alleys, gymnasiums, multiuse areas, roller or ice skating rinks.
- 13 Assembly area without fixed seats for less than 100 people. Includes meeting rooms, classrooms, multiuse areas.
- 14 Common room, den, family room, living room, lounge, music room, recreation room, sitting room.
- 15 Sales area, showroom. Excludes display windows (56).
- 16 Art gallery, exhibit hall, library.
- 17 Swimming pool.
- 10 Assembly or sales areas, other.

**Function Areas**

- 21 Bedroom for less than five people. Includes jail or prison cells, lockups, patient rooms, sleeping areas.
- 22 Bedroom for more than five people. Includes barracks, dormitories, patient wards.
- 23 Bar area, beverage service area, cafeteria, canteen area, dining room, lunchroom, mess hall.
- 24 Cooking area, kitchen.
- 25 Bathroom, checkroom, lavatory, locker room, powder room, outhouse, portable toilet, sauna area.
- 26 Laundry area, wash house (laundry).
- 27 Office.
- 28 Personal service area. Includes barber/beauty salon area, exercise/health club, massage area.
- 20 Function areas, other.

**Technical Processing Areas**

- 31 Laboratory.
- 32 Dark room, photography area, printing area.
- 33 Treatment: first-aid area, surgery area (minor procedures).
- 34 Surgery area: major operations, operating room or theater, recovery room.
- 35 Computer room, control room or center, data processing center, electronic equipment area, telephone booth or area, radar room.
- 36 Stage area: performance, basketball court, boxing ring, dressing room (backstage), ice rink.
- 37 Projection room, spotlight area, stage light area.
- 38 Processing/Manufacturing area, workroom, assembly area.
- 30 Technical processing areas, other.

**Storage Areas**

- 41 Storage room, area, tank, bin. Includes all areas where products are held awaiting process, shipment, use, sale.
- 42 Closet.
- 43 Storage: supplies or tools. Includes dead storage, maintenance supply room, tool room, basement (unfinished).
- 44 Records storage room, storage vault.
- 45 Shipping/Receiving area: loading area, dock or bay, mail room, packing area.
- 46 Chute/Container: trash, rubbish, waste. Includes compactor and garbage areas. Excludes incinerators (64).
- 47 Vehicle storage area: garage, carport.
- 40 Storage areas, other.

**Service Areas**

- 51 Dumbwaiter or elevator shaft.
- 52 Conduit, pipe, utility, or ventilation shaft.
- 53 Light shaft.
- 54 Chute. Includes laundry or mail chutes. Excludes trash chutes (46).
- 55 Duct. Includes HVAC, cable, exhaust.
- 56 Display window.
- 58 Conveyor.
- 50 Service areas, other.

**Service or Equipment Areas**

- 61 Machinery room or area. Includes elevator machinery room, engine room, head house, pump room, refrigeration room.
- 62 Heating room or area, water heater area.
- 63 Switchgear area, transformer vault.
- 64 Incinerator area.
- 65 Maintenance shop or area. Includes paint shop, repair shop, welding area, workshop.
- 66 Cell, test.

- 67 Enclosure, pressurized air.
- 68 Enclosure with enriched oxygen atmosphere.
- 60 Service or equipment areas, other.

### Structural Areas

- 71 Substructure area or space, crawl space.
- 72 Exterior balcony, unenclosed porch. Excludes enclosed porches (93).
- 73 Ceiling and floor assembly, crawl space between stories.
- 74 Attic: vacant, crawl space above top story. Includes cupola, concealed roof/ceiling space, steeple.
- 75 Wall assembly, concealed wall space.
- 76 Wall surface, exterior.
- 77 Roof surface, exterior.
- 78 Awning.
- 70 Structural areas, other.

### Transportation, Vehicle Areas

- 81 Operator/Passenger area of transportation equipment.
- 82 Cargo/Trunk area—all vehicles.
- 83 Engine area, running gear, wheel area.
- 84 Fuel tank, fuel line.
- 85 Separate operator/control area of transportation equipment. Includes bridges of ships, cockpit of planes. Excludes automobiles, trucks, buses (81).
- 86 Exterior, exposed surface.
- 80 Vehicle areas, other.

### Outside Areas

- 91 Railroad right-of-way: on or near.
- 92 Highway, parking lot, street: on or near.
- 93 Courtyard, patio, terrace. Includes screened-in porches. Excludes unenclosed porches (72).
- 94 Open area, outside. Includes farmland, fields, lawns, parks, vacant lots.
- 95 Wildland, woods.
- 96 Construction/Renovation area.
- 97 Multiple areas.
- 98 Vacant structural area.
- 90 Outside areas, other.

### Other Specific Area of Fire Origin

- 00 Specific area of fire origin, other.
- UU Undetermined.

## SECTION N

## N Primary Apparent Symptom

### Definition

The casualty's most serious apparent injury.

### Purpose

Knowing the types of injuries caused by fire incidents allows analyses of the frequency and nature of injuries at different types of fires. This aids in creating correct and effective public prevention messages and in determining and improving the emergency responders' equipment and training.

### Entry

Seven of the most common symptoms are listed on the paper form. Check or mark the box that best describes the casualty's most apparent serious injury. If the symptom is not listed on the paper form, enter the two-digit code and description that best describes the primary apparent symptom.

### Example

The casualty received a cut (21) to the forearm:

N Primary Apparent Symptom	
01	<input type="checkbox"/> Smoke only, asphyxiation
11	<input type="checkbox"/> Burns and smoke inhalation
12	<input type="checkbox"/> Burns only
21	<input checked="" type="checkbox"/> Cut, laceration
33	<input type="checkbox"/> Strain or sprain
96	<input type="checkbox"/> Shock
98	<input type="checkbox"/> Pain only

Look up a code only if the symptom is NOT found above

--	--

Primary apparent symptom

### PRIMARY APPARENT SYMPTOM CODES

01	Smoke inhalation.
02	Hazardous fumes inhalation.
03	Breathing difficulty or shortness of breath.
11	Burns and smoke inhalation.
12	Burns only, thermal.
13	Burn, scald.
14	Burn, chemical.
15	Burn, electric.
21	Cut or laceration.
22	Stab or puncture wound: penetrating.
23	Gunshot wound, projectile wound.
24	Contusion/Bruise, minor trauma.
25	Abrasion.
31	Dislocation.
32	Fracture.
33	Strain or sprain.
34	Swelling.
35	Crushing.
36	Amputation.
41	Cardiac symptoms.
42	Cardiac arrest.
43	Stroke.
44	Respiratory arrest.
51	Chills.
52	Fever.
53	Nausea.

54	Vomiting.
55	Numbness or tingling, paresthesia.
56	Paralysis.
57	Frostbite.
50	Sickness, other.
61	Miscarriage.
63	Eye trauma, avulsion.
64	Drowning.
65	Foreign body obstruction.
66	Electric shock.
67	Poison.
71	Convulsion or seizure.
72	Internal trauma.
73	Hemorrhaging, bleeding internally.
81	Disorientation.
82	Dizziness/Fainting/Weakness.
83	Exhaustion/Fatigue. Includes heat exhaustion.
84	Heat stroke.
85	Dehydration.
91	Allergic reaction. Includes anaphylactic shock and hypersensitivity to medication.
92	Drug overdose.
93	Alcohol impairment.
94	Emotional/Psychological stress.
95	Mental disorder.
96	Shock.
97	Unconscious.
98	Pain only.
00	Primary apparent symptom, other.
UU	Undetermined.

## SECTION O

**O Primary Area of Body Injured***Definition*

The part of the body that sustained the most serious injury.

*Purpose*

An analysis of the data from Sections L, N, and O will assist in planning for the emergency treatment of injuries and for injury prevention.

*Entry*

Check or mark the box that best describes the area of the body that was most seriously injured. It should be the same part of the body affected by the Primary Apparent Symptom (Section N).

*Example*

The casualty's shoulder (2) was dislocated while escaping the burning building:

○ Primary Area of Body Injured	
1	<input type="checkbox"/> Head
2	<input checked="" type="checkbox"/> Neck and shoulder
3	<input type="checkbox"/> Thorax
4	<input type="checkbox"/> Abdomen
5	<input type="checkbox"/> Spine
6	<input type="checkbox"/> Upper extremities
7	<input type="checkbox"/> Lower extremities
8	<input type="checkbox"/> Internal
9	<input type="checkbox"/> Multiple body parts

**PRIMARY AREA OF BODY INJURED CODES**

- |   |  |
|---|--|
| 1 | Head.  |
| 2 | Neck or shoulder.                                    |
| 3 | Thorax. Includes chest and back. Excludes spine (5). |
| 4 | Abdomen.   |
| 5 | Spine. Excludes back (3).                            |
| 6 | Upper extremities. Includes arms and hands.          |
| 7 | Lower extremities. Includes legs and feet.           |
| 8 | Internal.  |
| 9 | Multiple body parts.                                 |

**SECTION P****P Disposition***Definition*

Stipulates whether the casualty was taken to an emergency care facility.

*Purpose*

This information assists in determining the personnel and equipment requirements for handling civilian fire casualties.

*Entry*

Check or mark the box if the casualty was transported to an emergency care facility by the fire department, other emergency medical service provider, or any other means.

*Example*

The patient was transported to the hospital by the fire department:

<b>P</b> <b>Disposition</b>
<input checked="" type="checkbox"/> <b>Transported to emergency care facility</b>

**Remarks**

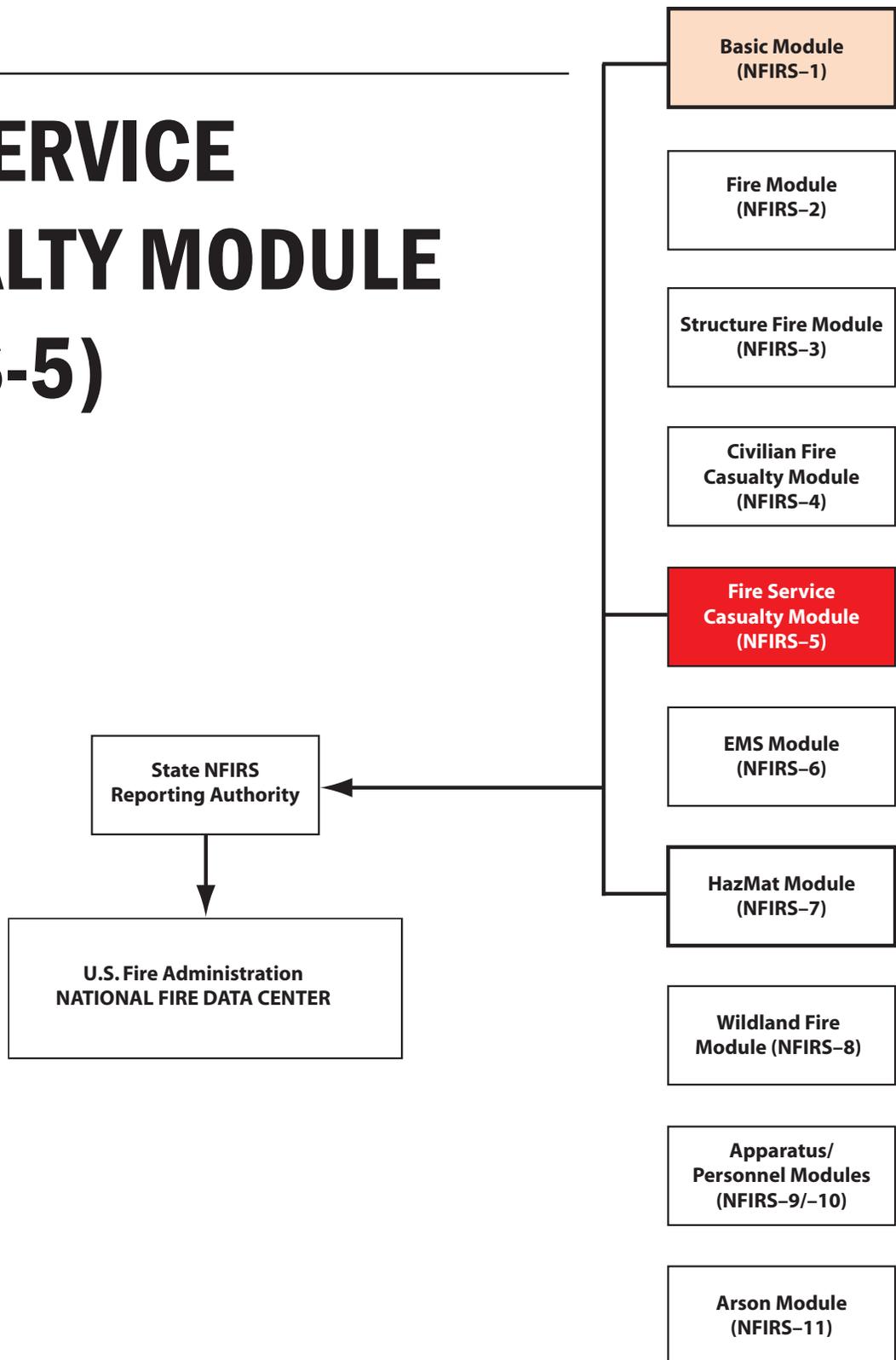
The Remarks section is an area for any other remarks that might be made concerning the incident. A narrative description of the incident may be written in this block.

<b>Remarks</b>	Local option
_____	
_____	
_____	
_____	
_____	



## Chapter 7

# FIRE SERVICE CASUALTY MODULE (NFIRS-5)





<b>K1</b> Did protective equipment fail and contribute to the injury? Please complete the remainder of this form ONLY if you answer YES.	Yes Y <input type="checkbox"/> No N <input type="checkbox"/>	Equipment Sequence Number _____	<b>NFIRS-5 Fire Service Casualty</b>
---	---	------------------------------------	--

<b>K2</b> Protective Equipment Item  <b>Head or Face Protection</b> 11 <input type="checkbox"/> Helmet 12 <input type="checkbox"/> Full face protector 13 <input type="checkbox"/> Partial face protector 14 <input type="checkbox"/> Goggles/eye protection 15 <input type="checkbox"/> Hood 16 <input type="checkbox"/> Ear protector 17 <input type="checkbox"/> Neck protector 10 <input type="checkbox"/> Other	<b>Coat, Shirt, or Trousers</b> 21 <input type="checkbox"/> Protective coat 22 <input type="checkbox"/> Protective trousers 23 <input type="checkbox"/> Uniform shirt 24 <input type="checkbox"/> Uniform T-shirt 25 <input type="checkbox"/> Uniform trousers 26 <input type="checkbox"/> Uniform coat or jacket 27 <input type="checkbox"/> Coveralls 28 <input type="checkbox"/> Apron or gown 20 <input type="checkbox"/> Other
--	--

<b>Boots or Shoes</b> 31 <input type="checkbox"/> Knee length boots with steel baseplate and steel toes 32 <input type="checkbox"/> Knee length boots with steel toes only 33 <input type="checkbox"/> 3/4 length boots with steel baseplate and steel toes 34 <input type="checkbox"/> 3/4 length boots with steel toes only 35 <input type="checkbox"/> Boots without steel baseplate and steel toes 36 <input type="checkbox"/> Safety shoes with steel baseplate and steel toes 37 <input type="checkbox"/> Safety shoes with steel toes only 38 <input type="checkbox"/> Non-safety shoes 30 <input type="checkbox"/> Other
---

<b>Respiratory Protection</b> 41 <input type="checkbox"/> SCBA (demand) open circuit 42 <input type="checkbox"/> SCBA (positive pressure) open circuit 43 <input type="checkbox"/> SCBA closed circuit 44 <input type="checkbox"/> Not self-contained 45 <input type="checkbox"/> Cartridge respirator 46 <input type="checkbox"/> Dust or particle mask 40 <input type="checkbox"/> Other
---

<b>Hand Protection</b> 51 <input type="checkbox"/> Firefighter gloves with wristlets 52 <input type="checkbox"/> Firefighter gloves without wristlets 53 <input type="checkbox"/> Work gloves 54 <input type="checkbox"/> HazMat gloves 55 <input type="checkbox"/> Medical gloves 50 <input type="checkbox"/> Other
--

<b>Special Equipment</b> 61 <input type="checkbox"/> Proximity suit for entry 62 <input type="checkbox"/> Proximity suit for non-entry 63 <input type="checkbox"/> Totally encapsulated, reusable chemical suit 64 <input type="checkbox"/> Totally encapsulated, disposable chemical suit 65 <input type="checkbox"/> Partially encapsulated, reusable chemical suit 66 <input type="checkbox"/> Partially encapsulated, disposable chemical suit 67 <input type="checkbox"/> Flash protection suit 68 <input type="checkbox"/> Flight or jump suit 69 <input type="checkbox"/> Brush suit 71 <input type="checkbox"/> Exposure suit 72 <input type="checkbox"/> Self-contained underwater breathing apparatus (SCUBA) 73 <input type="checkbox"/> Life preserver 74 <input type="checkbox"/> Life belt or ladder belt 75 <input type="checkbox"/> Personal alert safety system (PASS) 76 <input type="checkbox"/> Radio distress device 77 <input type="checkbox"/> Personal lighting 78 <input type="checkbox"/> Fire shelter or tent 79 <input type="checkbox"/> Vehicle safety belt 70 <input type="checkbox"/> Special equipment, other 00 <input type="checkbox"/> Protective equipment, other
---

Was the failure of more than one item of protective equipment a factor in the injury? If so, complete an additional page of this form for each piece of failed equipment.

<b>K3</b> Protective Equipment Problem Check one box to indicate the main problem that occurred. 11 <input type="checkbox"/> Burned 12 <input type="checkbox"/> Melted 21 <input type="checkbox"/> Fractured, cracked or broken 22 <input type="checkbox"/> Punctured 23 <input type="checkbox"/> Scratched 24 <input type="checkbox"/> Knocked off 25 <input type="checkbox"/> Cut or ripped 31 <input type="checkbox"/> Trapped steam or hazardous gas 32 <input type="checkbox"/> Insufficient insulation 33 <input type="checkbox"/> Object fell in or onto equipment item 41 <input type="checkbox"/> Failed under impact 42 <input type="checkbox"/> Face piece or hose detached 43 <input type="checkbox"/> Exhalation valve inoperative or damaged 44 <input type="checkbox"/> Harness detached or separated 45 <input type="checkbox"/> Regulator failed to operate 46 <input type="checkbox"/> Regulator damaged by contact 47 <input type="checkbox"/> Problem with admissions valve 48 <input type="checkbox"/> Alarm failed to operate 49 <input type="checkbox"/> Alarm damaged by contact 51 <input type="checkbox"/> Supply cylinder or valve failed to operate 52 <input type="checkbox"/> Supply cylinder/valve damaged by contact 53 <input type="checkbox"/> Supply cylinder—insufficient air/oxygen 94 <input type="checkbox"/> Did not fit properly 95 <input type="checkbox"/> Not properly serviced or stored prior to use 96 <input type="checkbox"/> Not used for designed purpose 97 <input type="checkbox"/> Not used as recommended by manufacturer 00 <input type="checkbox"/> Other equipment problem UU <input type="checkbox"/> Undetermined
--

<b>K4</b> Equipment Manufacturer, Model and Serial Number _____ <small>Manufacturer</small> _____ <small>Model</small> _____ <small>Serial Number</small> <div style="text-align: right; font-size: small;">NFIRS-5 Revision 05/01/03</div>
--

## CHAPTER 7 • FIRE SERVICE CASUALTY MODULE (NFIRS-5)

---

The Fire Service Casualty Module is used to report all injuries, deaths, or exposures to fire service personnel. This includes casualties that occur in conjunction both with incident responses and with non-incident events such as station duties or training.

- **Important:** In the event of a non-incident casualty, it is critical that an EMS incident report is created in the system and that it is treated as if the same department with the injury responded to the EMS.

A *health exposure* occurs when fire service personnel come in contact with a toxic substance or harmful physical agent through any route of entry into the body (e.g., inhalation, ingestion, skin absorption, direct contact). These exposures can be reported regardless of the presence of clinical signs and symptoms. An *exposure fire*, which is captured in Section A of the Basic Module, is not the same as a health exposure to personnel.

A separate Fire Service Casualty Module is required for each casualty or health exposure.

### SECTION A

The guidance and directions for completing Section A of the Fire Service Casualty Module are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Fire Service Casualty Module must be identical with the entries on the corresponding Basic Module. If injuries occur in an exposure fire, the casualty report should have the same entries as those from Section A of the Basic Module for that exposure fire. An example of a completed Section A can be found on page 3–8.

### **A** Fire Department Identification (FDID) ☆

#### *Entry*

Enter the same FDID number found in Section A of the Basic Module.

### **State** ☆

#### *Entry*

Enter the same State abbreviation found in Section A of the Basic Module.

### **Incident Date** ☆

#### *Entry*

Enter the same incident date found in Section A of the Basic Module.

### **Station Number**

#### *Entry*

Enter the same station number found in Section A of the Basic Module.

The ☆ denotes a required field.

## Incident Number ☆

### Entry

Enter the same incident number found in Section A of the Basic Module.

## Exposure Number ☆

### Entry

If the casualty resulted from an exposure fire, enter the same exposure number that was entered in Section A of the Basic Module for that exposure.

## Delete/Change

### Definition

Indicates a change to information submitted on a previous Fire Service Casualty Module or a deletion of all information regarding the casualty.

### Purpose

To delete or change previously reported information.

### Entry

**Delete.** Check or mark this box when you have previously submitted data on this fire service casualty and now want to have the data on this casualty deleted from the database. If this box is marked, complete Section A, the Casualty Number originally assigned (Section C), and leave the rest of the report blank. Forward the report according to your normally established procedures.

**Change.** Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

## B Injured Person ☆

### Name

### Definition

The first name, middle initial, and last name that identifies the fire service casualty.

### Purpose

The name of the casualty may be required for legal or insurance purposes, filing disability claims, and tracking injuries and health exposures by the individual fire department

### *Entry*

Enter the full name of the person. Names should be clearly printed or typed.

### *Example*

The casualty's name is Jeff R. MacFadyen. (See example at Affiliation.)

### **Identification Number**

#### *Definition*

The identification or employee number of the fire service casualty. This number is often the individual's social security number, but it may be any combination of letters or numbers up to nine characters in length.

#### *Purpose*

The identification number uniquely identifies each fire service casualty.

### *Entry*

Enter the casualty's identification number in the spaces provided. This field is left-justified.

### *Example*

The firefighter's identification number is A23-4556-6789. (See example at Affiliation).

### **Gender ☆**

#### *Definition*

The identification of the fire service casualty as male or female.

#### *Purpose*

Combined with other field information, this data element assists in the identification of each firefighter injury.

### *Entry*

Check or mark the appropriate gender of the fire service casualty.

### *Example*

The firefighter is male (1). (See example at Affiliation.)

#### **GENDER CODES**

- 1 Male.
- 2 Female.

### **Affiliation**

#### *Definition*

The identification of the fire service casualty as a volunteer (includes paid on-call) or career firefighter at the time of injury.

*Purpose*

This data element contributes to the identification of the fire service casualty and helps track injury trends and patterns of volunteer vs. career personnel.

*Entry*

Check or mark the box that best describes the affiliation of the fire service casualty.

*Example*

The casualty is a volunteer firefighter (2):

<b>B</b>	<b>Injured Person</b>	<table border="1"> <tr> <td>A</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> </table>			A	2	3	4	5	6	7	8	9	1 <input checked="" type="checkbox"/> Male ☆ 2 <input type="checkbox"/> Female	1 <input type="checkbox"/> Career 2 <input checked="" type="checkbox"/> Volunteer
		A	2	3	4	5	6	7	8	9					
<table border="1"> <tr> <td>Jeff</td> <td>R</td> <td>MacFadyen</td> <td></td> </tr> </table>		Jeff	R	MacFadyen		<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>									
Jeff	R	MacFadyen													
	First Name	MI	Last Name	Suffix											

**AFFILIATION CODES**

- 1 Career.
- 2 Volunteer. Includes paid on-call firefighter.

**SECTION C**

**C Casualty Number ☆**

*Definition*

A unique number is assigned to each fire service casualty occurring at a single incident or resulting from an incident.

*Purpose*

The casualty number of the firefighter identifies each fire service casualty separately in the casualty file. Data and information concerning the casualty can be accessed using this number in conjunction with other unique field information.

*Entry*

Enter the firefighter casualty number assigned to this casualty. A separate Casualty Number is assigned to each fire service casualty. The first casualty is always coded “001,” and each succeeding casualty is numbered sequentially and incremented by 1 beginning with “002.” The three-character numeric field is zero filled, not right justified.

*Example*

Three firefighters were injured at a warehouse fire on 32nd street; the first firefighter injured is assigned the casualty number of 001:

*Example on next page*

<b>C</b>	<b>Casualty Number</b> ☆
0   0   1	
Casualty Number	

## SECTION D

**D Age or Date of Birth** ☆

Enter either the fire service casualty's age or the casualty's date of birth. Do not enter both.

**Age** ☆*Definition*

The fire service casualty's age in years.

*Purpose*

The age of the fire service casualty provides an indication of fire loss. Age can also be used to indicate type, severity, and cause of injury to identify trends and patterns that might be helpful in preventing future fire-fighter injuries and deaths.

*Entry*

Enter the age of the firefighter.

*Example*

The injured firefighter is 39 years old:

<b>D</b>	<b>Age or Date of Birth</b> ☆
<b>Age</b>	<b>Date of Birth</b>
3   9	
In years	Month Day Year

**Date of Birth** ☆*Definition*

The month, day, and year of birth of the fire service casualty.

*Purpose*

This data element is an alternative entry for Age. It can provide an indication of fire loss, and can be used to indicate type, severity, and cause of injury to identify trends and patterns that might be helpful in preventing future firefighter injuries and deaths.

- ☛ This data element is used as an alternate method for calculating the casualty's age. Age is collected in NFIRS but Date of Birth is not.

### Entry

Enter the date of birth showing the month, day, and year (mm/dd/yyyy).

### Example

The fire service casualty was born on August 5, 1959:

<b>D</b> Age or Date of Birth ☆																													
<table style="width: 100%; border: none;"> <tr> <td style="text-align: center; padding: 5px;"> <table style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"> <tr> <td style="text-align: center; padding: 2px;">Age</td> </tr> <tr> <td style="text-align: center; padding: 2px;"> _ _ _ </td> </tr> <tr> <td style="text-align: center; padding: 2px;">In years</td> </tr> </table> </td> <td style="text-align: center; padding: 5px; font-weight: bold;">OR</td> <td style="text-align: center; padding: 5px;"> <table style="border: none;"> <tr> <td colspan="3" style="text-align: center; padding: 2px;">Date of Birth</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">0</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">8</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;"> </td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">0</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">5</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;"> </td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">1</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">9</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">5</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">9</td> </tr> <tr> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Year</td> </tr> </table> </td> </tr> </table>	<table style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"> <tr> <td style="text-align: center; padding: 2px;">Age</td> </tr> <tr> <td style="text-align: center; padding: 2px;"> _ _ _ </td> </tr> <tr> <td style="text-align: center; padding: 2px;">In years</td> </tr> </table>	Age	_ _ _	In years	OR	<table style="border: none;"> <tr> <td colspan="3" style="text-align: center; padding: 2px;">Date of Birth</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">0</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">8</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;"> </td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">0</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">5</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;"> </td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">1</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">9</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">5</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">9</td> </tr> <tr> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Year</td> </tr> </table>	Date of Birth			0	8		0	5		1	9	5	9	Month	Day	Year	Month	Day	Year	Month	Day	Year	Year
<table style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto;"> <tr> <td style="text-align: center; padding: 2px;">Age</td> </tr> <tr> <td style="text-align: center; padding: 2px;"> _ _ _ </td> </tr> <tr> <td style="text-align: center; padding: 2px;">In years</td> </tr> </table>	Age	_ _ _	In years	OR	<table style="border: none;"> <tr> <td colspan="3" style="text-align: center; padding: 2px;">Date of Birth</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">0</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">8</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;"> </td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">0</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">5</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;"> </td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">1</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">9</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">5</td> <td style="border: 1px solid black; padding: 2px; width: 30px; text-align: center;">9</td> </tr> <tr> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Month</td> <td style="text-align: center; padding: 2px;">Day</td> <td style="text-align: center; padding: 2px;">Year</td> <td style="text-align: center; padding: 2px;">Year</td> </tr> </table>	Date of Birth			0	8		0	5		1	9	5	9	Month	Day	Year	Month	Day	Year	Month	Day	Year	Year	
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In years																													
Date of Birth																													
0	8		0	5		1	9	5	9																				
Month	Day	Year	Month	Day	Year	Month	Day	Year	Year																				

## SECTION E

## E Date and Time of Injury ☆

### Date ☆

#### Entry

If the injury date is the same as the Incident Date in Section A, enter the same date as the Alarm date entry in Block E1 of the Basic Module. If different, enter the appropriate month, day, and year (mm/dd/yyyy). (See example at Time.)

### Time ☆

#### Definition

The time of day, using the 24-hour clock, when the injury occurred. Midnight is 0000 and signifies the start of a new day.

#### Purpose

This information is sometimes needed for legal or insurance purposes. In addition, it may be used to analyze when firefighter injuries occur during the course of a fire and during fire suppression activities.

#### Entry

Enter as closely as possible the time when the injury occurred using the 24-hour clock (i.e., 0000–2359).

#### Example

A firefighter received a burn on his back and hip at 5:36 a.m. on July 26, 2001:

*Example on next page*

E Date and Time of Injury ☆ Midnight is 0000.					
Date of Injury			Time of Injury		
0	7	2	6	2	0
Month	Day	Year	Year	Hour	Minute

## SECTION F

## F Responses

### Definition

The number of incidents the firefighter responded to in the 24-hour period prior to the time of injury.

### Purpose

The number of incidences that a firefighter responds to in a short period of time, when analyzed with the other casualty data, can be a useful indicator for identifying possible reasons for the injury or death. This is useful in determining cases of fatigue and cumulative exposure to heat and gases, which may have contributed to the injury.

### Entry

Enter the number of incidents responded to by the firefighter in the immediate 24-hour period prior to the time of injury. Do not count the incident at which the injury occurred.

### Example

The fire service casualty had been on three other calls prior to the injury.

F Responses
3
Number of prior responses during past 24 hours

## SECTION G

This section collects information pertaining to the injured firefighter's assignment, physical condition before the injury, the severity of the injury, where the injury was treated, and the activity being performed when injured.

## G<sup>1</sup> Usual Assignment

☛ Usual Assignment was known as Assignment in NFIRS 4.1.

### Definition

This element describes the official assignment of the fire service casualty. This may not coincide with the firefighter's activity at the time of injury (Block G5).

### Purpose

When analyzed with the other firefighter casualty data, the duty to which the firefighter was assigned can be used to identify possible reasons for injury or death.

### Entry

Check or mark the box that best describes the primary duty assignment of the injured firefighter.

### Example

The injured firefighter is normally assigned to the training division (4):

G <sub>1</sub> Usual Assignment	
1	<input type="checkbox"/> Suppression
2	<input type="checkbox"/> EMS
3	<input type="checkbox"/> Prevention
4	<input checked="" type="checkbox"/> Training
5	<input type="checkbox"/> Maintenance
6	<input type="checkbox"/> Communications
7	<input type="checkbox"/> Administration
8	<input type="checkbox"/> Fire investigation
0	<input type="checkbox"/> Other

#### USUAL ASSIGNMENT CODES

1	Fire suppression. Includes HazMat, rescue, incident command, and safety.
2	EMS.
3	Prevention or inspection.
4	Training.
5	Maintenance.
6	Communications. Includes fire alarm.
7	Administration.
8	Fire investigation.
0	Other assignment.

## G<sub>2</sub> Physical Condition Just Prior to Injury

☛ Physical Condition Just Prior to Injury was known as Physical Condition at Time of Injury in NFIRS 4.1.

### Definition

The general physical condition of the firefighter prior to injury.

### Purpose

The condition of the firefighter at the time of injury is important in determining and understanding how and why the injuries occurred.

*Entry*

Check or mark the box that best describes the physical condition of the firefighter at the time of injury.

*Example*

A firefighter was injured while under treatment for a cold (4):

<b>G<sub>2</sub></b>				<b>Physical Condition Just Prior to Injury</b>			
1	<input type="checkbox"/>	Rested	0	<input type="checkbox"/>	Other		
2	<input type="checkbox"/>	Fatigued	U	<input type="checkbox"/>	Undetermined		
4	<input checked="" type="checkbox"/>	Ill or injured					

**PHYSICAL CONDITION JUST PRIOR TO INJURY CODES**

- 1 Rested.
- 2 Fatigued.
- 4 Ill or injured.
- 0 Physical condition, other.
- U Undetermined.

**G<sub>3</sub> Severity ☆**

*Definition*

The relative severity or seriousness of the injury based on a scale ranging from “no time lost from work” to “death.”

*Purpose*

An indication of severity can be used as a measure for prevention programs aimed at reducing injuries and deaths. At the local level, this element can be used to track lost-time injuries.

*Entry*

Check or mark the box that best describes the severity of the casualty.

*Example*

The injured firefighter would not be able to go to work the next day because of his injury (4):

☛ A health exposure occurs when fire service personnel are exposed to a toxic substance or harmful physi-

<b>G<sub>3</sub></b>		<b>Severity ☆</b>	
1	<input type="checkbox"/>	Report only, including exposure	
2	<input type="checkbox"/>	First aid only	
3	<input type="checkbox"/>	Treated by physician (no lost time)	
4	<input checked="" type="checkbox"/>	Moderate (lost time)	
5	<input type="checkbox"/>	Severe (lost time)	
6	<input type="checkbox"/>	Life threatening (lost time)	
7	<input type="checkbox"/>	Death	

cal agent through any route of entry into the body (e.g., inhalation, ingestion, skin absorption, direct contact). These exposures can be reported regardless of the presence of clinical signs and symptoms. Exposures are treated as “report only” (1).

### SEVERITY CODES

- |   |  |
|---|--|
| 1 | Report only. Includes exposures to toxic substances or harmful physical agents through any route of entry into the body (e.g. inhalation, ingestion, skin absorption, direct contact). |
| 2 | First aid only.  |
| 3 | Treated by physician, not a lost-time injury.  |
| 4 | Moderate severity, lost-time injury. There is little danger of death or permanent disability.  |
| 5 | Severe, lost-time injury. The situation is potentially life threatening if the condition remains uncontrolled.   |
| 6 | Life threatening, lost-time injury. Death is imminent; body processes and vital signs are not normal.  |
| 7 | Death.   |

## G<sup>4</sup> Taken To

☛ Taken To was known as Patient Taken To in NFIRS 4.1.

### Definition

Identifies where the fire service casualty was taken after the injury occurred.

### Purpose

This information is useful in determining the personnel and equipment requirements for handling fire service casualties.

### Entry

Check or mark the box that best describes where the fire service casualty was taken, regardless of who transported the firefighter. If the firefighter was not transported, check or mark the Not Transported box.

### Example

An injured firefighter was taken to the hospital (1):

<b>G<sup>4</sup></b>	<b>Taken To</b>	<input type="checkbox"/> Not transported
1	<input checked="" type="checkbox"/> Hospital	
4	<input type="checkbox"/> Doctor's office	
5	<input type="checkbox"/> Morgue/Funeral home	
6	<input type="checkbox"/> Residence	
7	<input type="checkbox"/> Station or quarters	
0	<input type="checkbox"/> Other	

**TAKEN TO CODES**

1	Hospital.
4	Doctor's office, non-emergency health care facility.
5	Morgue or funeral home.
6	Residence (firefighter's home).
7	Station or quarters.
0	Taken to, other.
N	Not transported.

**G<sup>5</sup> Activity at Time of Injury**

☛ Activity at Time of Injury was known as *Firefighter Activity* in NFIRS 4.1.

**Definition**

The activity being performed by the firefighter at the time the injury occurred.

**Purpose**

The activity at the time of injury is a prime factor in determining the cause of the injury and developing methods to minimize the hazards involved with that activity.

**Entry**

Enter the two-digit code and description of the activity of the casualty when injured.

**Example**

A firefighter was injured using power tools to ventilate the roof (42):

<b>G<sup>5</sup></b>	<b>Activity at Time of Injury</b>
4   2	Ventilating w/power tools
Activity at time of injury	

**ACTIVITY AT TIME OF INJURY CODES****Driving or Riding Vehicle**

11	Boarding fire department vehicle.
12	Driving fire department vehicle.
13	Tillering fire department vehicle.
14	Riding fire department vehicle.
15	Exiting fire department vehicle.
16	Driving/Riding non-fire department vehicle.
17	Boarding/Exiting non-fire department vehicle.
10	Driving or riding vehicle, other.

**Operating Fire Department Apparatus**

- 21 Operating engine or pumper.
- 22 Operating aerial ladder or elevating platform.
- 23 Operating EMS vehicle.
- 24 Operating HazMat vehicle.
- 25 Operating rescue vehicle.
- 20 Operating fire department apparatus, other.

**Extinguishing Fire or Neutralizing Incident**

- 31 Handling charged hoselines.
- 32 Using hand extinguishers.
- 33 Operating master steam device.
- 34 Using handtools in extinguishment activity.
- 35 Removing power lines.
- 36 Removing flammable liquids/chemicals.
- 37 Shutting off utilities, gas lines, etc.
- 30 Extinguishing fire/neutralizing incident, other.

**Suppression Support**

- 41 Forcible entry.
- 42 Ventilation with power tools.
- 43 Ventilation with hand tools.
- 44 Salvage.
- 45 Overhaul.
- 40 Suppression support, other.

**Access or Egress**

- 51 Carrying ground ladder.
- 52 Raising ground ladder.
- 53 Lowering ground ladder.
- 54 Climbing ladder.
- 55 Scaling.
- 56 Escaping fire or hazard.
- 57 Moving/Lifting patient with carrying device.
- 58 Moving/Lifting patient without carrying device.
- 50 Access/Egress, other.

**EMS or Rescue**

- 61 Searching for victim.
- 62 Rescuing fire victim.
- 63 Rescuing non-fire victim.
- 64 Water rescue.
- 65 Providing EMS care.
- 66 Diving operations.
- 67 Extraction with power tools.
- 68 Extraction with hand tools.
- 60 EMS/Rescue, other.

**Other Incident Scene Activity**

- 71 Directing traffic.
- 72 Catching hydrant.
- 73 Laying hose.
- 74 Moving tools or equipment around scene.

- 75 Picking up tools, equipment, or hose on scene.
- 76 Setting up lighting. Includes portable generator operations.
- 77 Operating portable pump.
- 70 Other incident scene activity, other.

**Station Activity**

- 81 Moving about station, alarm sounding.
- 82 Moving about station, normal activity.
- 83 Station maintenance.
- 84 Vehicle maintenance.
- 85 Equipment maintenance.
- 86 Physical fitness activity, supervised.
- 87 Physical fitness activity, unsupervised.
- 88 Training activity or drill.
- 80 Station activity, other.

**Other Activity**

- 91 Incident investigation, during incident.
- 92 Incident investigation, after incident.
- 93 Inspection activity.
- 94 Administrative work.
- 95 Communications work.
- 00 Activity at time of injury, other.
- UU Undetermined.

**SECTION H**

This section focuses on the injury itself—the symptom that appears to be the most serious and the part of the body that has been injured.

**H Primary Apparent Symptom***Definition*

The firefighter's most serious apparent injury.

*Purpose*

This entry, in conjunction with other related entries, can improve the understanding of the nature and cause of firefighter casualties and can aid in improving firefighter equipment and training needs. For example, large numbers of smoke inhalation injuries to firefighters would indicate a need to reevaluate the uses or adequacy of breathing apparatus.

*Entry*

Enter the two-digit code and description of the casualty's that appears to be the most serious.

*Example*

A firefighter is overcome by smoke (01):

<b>H<sub>1</sub></b>	<b>Primary Apparent Symptom</b>
[ 0   1 ]	[ Smoke inhalation ]
Primary apparent symptom	

## PRIMARY APPARENT SYMPTOM CODES

01	Smoke inhalation.
02	Hazardous fumes inhalation.
03	Breathing difficulty or shortness of breath.
11	Burns and smoke inhalation.
12	Burns only, thermal.
13	Burn, scald.
14	Burn, chemical.
15	Burn, electric.
21	Cut or laceration.
22	Stab or puncture wound: penetrating.
23	Gunshot wound, projectile wound.
24	Contusion/Bruise, minor trauma.
25	Abrasion.
31	Dislocation.
32	Fracture.
33	Strain or sprain.
34	Swelling.
35	Crushing.
36	Amputation.
41	Cardiac symptoms.
42	Cardiac arrest.
43	Stroke.
44	Respiratory arrest.
51	Chills.
52	Fever.
53	Nausea.
54	Vomiting.
55	Numbness or tingling, paresthesia.
56	Paralysis.
57	Frostbite.
50	Sickness, other.
61	Miscarriage.
63	Eye trauma, avulsion.
64	Drowning.
65	Foreign body obstruction.
66	Electric shock.
67	Poison.
71	Convulsion or seizure.
72	Internal trauma.
73	Hemorrhaging, bleeding internally.
81	Disorientation.
82	Dizziness/Fainting/Weakness.
83	Exhaustion/Fatigue. Includes heat exhaustion.
84	Heat stroke.
85	Dehydration.
91	Allergic reaction. Includes anaphylactic shock and hypersensitivity to medication.
92	Drug overdose.
93	Alcohol impairment.
94	Emotional/Psychological stress.
95	Mental disorder.
96	Shock.
97	Unconscious.
98	Pain only.
00	Primary apparent symptom, other.
UU	Undetermined.

## H<sup>2</sup> Primary Part of Body Injured

### Definition

The body part or area that was affected or sustained the most serious injury.

### Purpose

An analysis of the data from Blocks G5, H1, and H2 will assist in the development of protective clothing, equipment, safe operating procedures, and safety training.

### Entry

Enter the two-digit code and description of the part of the body that was most seriously injured. It should be the same part of the body affected by the Primary Apparent Symptom. If no body part was injured, check or mark the None box.

### Example

A firefighter was overcome by smoke (81):

<b>H2</b>	<b>Primary Part of Body Injured</b>	<input type="checkbox"/> None
81	Lungs	
Primary injured body part		

## PRIMARY PART OF BODY INJURED CODES

### Head

- 11 Ear.
- 12 Eye.
- 13 Nose.
- 14 Mouth. Includes lips, teeth, and interior.
- 10 Head, other.

### Neck and Shoulders

- 21 Neck.
- 22 Throat.
- 23 Shoulder.

### Thorax

- 31 Back. Excludes spine (51).
- 32 Chest.

### Abdominal Area

- 41 Abdomen.
- 42 Pelvis or groin.
- 43 Hip, lower back, or buttocks.

**Spine**

51 Spine. Excludes back (31).

**Upper Extremities**

61 Arm, upper. Excludes elbows (63) and shoulders (23).

62 Arm, lower. Excludes elbows (63) and wrists (64).

63 Elbow.

64 Wrist.

65 Hand and fingers.

**Lower Extremities**

71 Leg, upper. Excludes knees (73).

72 Leg, lower. Excludes knees (73), ankles (74), and foot and toes (75).

73 Knee.

74 Ankle.

75 Foot and toes.

**Internal**

81 Trachea and lungs.

82 Heart.

83 Stomach.

84 Intestinal tract.

85 Genito-urinary.

80 Internal, other.

**Multiple Parts**

91 Multiple body parts, upper body.

92 Multiple body parts, lower body.

93 Multiple body parts, whole body.

**Other Body Parts**

00 Part of body injured, other.

NN None.

UU Undetermined.

**SECTION I**

This section collects information on the cause and factor that contributed to the firefighter's injury and whether an object was involved.

**I Cause of Firefighter Injury***Definition*

The action or lack of action that directly resulted in the injury.

*Purpose*

An analysis of this information may permit an understanding of the condition causing the injury and a means of planning suitable preventive techniques. For example, firefighter injuries resulting from a blow to the head may indicate inadequacies in helmet design.

### Entry

Enter the code and a written description for the immediate cause or condition responsible for the injury.

### Example

A firefighter receives burns (4) on the forearm:

I <sub>1</sub>	<b>Cause of Firefighter Injury</b>	
	<input type="text" value="4"/>	<input type="text" value="Exposure"/>
Cause of injury		

### CAUSE OF FIREFIGHTER INJURY CODES

1	Fall.
2	Jump.
3	Slip/Trip.
4	Exposure to hazard. Includes exposure to heat, smoke, or toxic agents.
5	Struck or assaulted by person, animal, moving object.
6	Contact with object (firefighter moved into or onto object). Includes running into objects, stepping on objects, or grabbing a hot or electrically charged object.
7	Overexertion/Strain.
0	Cause of injury, other.
U	Undetermined.

## I<sup>2</sup> Factor Contributing to Injury

☛ Factor Contributing to Injury was a part of Cause of Firefighter Injury in NFIRS 4.1.

### Definition

The most significant factor contributing to the injury of the fire service casualty.

### Purpose

This element provides additional information on how an injury occurred. The analysis of this information may permit an understanding of the events causing the injury and a means of planning suitable preventive techniques.

### Entry

Enter the two-digit code and description of the most significant factor contributing to the injury. Check or mark the None box if there was no apparent factor that contributed to the injury.

### Example

The firefighter suffered from smoke inhalation after becoming disoriented and lost in the building (32):

I <sub>2</sub>	<b>Factor Contributing to Injury</b> <input type="checkbox"/> None	
	<input type="text" value="3 2"/>	<input type="text" value="Lost in the building"/>
Contributing factor		

**FACTOR CONTRIBUTING TO INJURY CODES****Collapse or Falling Object**

- 11 Roof collapse.
- 12 Wall collapse.
- 13 Floor collapse.
- 14 Ceiling collapse.
- 15 Stair collapse.
- 16 Falling objects.
- 17 Cave-in (earth).
- 10 Collapse or falling object, other.

**Fire Development**

- 21 Fire progress. Includes smoky conditions.
- 22 Backdraft.
- 23 Flashover.
- 24 Explosion.
- 20 Fire development, other.

**Lost, Caught, Trapped, or Confined**

- 31 Person physically caught or trapped. Excludes persons directly injured by a structural collapse or falling object (10 series).
- 32 Lost in building.
- 33 Operating in confined structural areas. Includes attics and crawl spaces.
- 34 Operating under water or ice.
- 30 Lost, caught, trapped, or confined, other.

**Holes**

- 41 Unguarded hole in structure.
- 42 Hole burned through roof.
- 43 Hole burned through floor.
- 40 Holes, other.

**Slippery or Uneven Surfaces**

- 51 Icy surface.
- 52 Wet surface. Includes water, soap, foam, lubricating materials, etc.
- 53 Loose material on surface.
- 54 Uneven surface. Includes holes in the ground.
- 50 Slippery or uneven surfaces, other.

**Vehicle or Apparatus**

- 61 Vehicle left road or overturned.
- 62 Vehicle collided with another vehicle.
- 63 Vehicle collided with nonvehicular object.
- 64 Vehicle stopped too fast.
- 65 Seat belt not fastened.
- 66 Firefighter standing on apparatus.
- 60 Vehicle or apparatus, other.

**Other Contributing Factors**

- 91 Civil unrest. Includes riots and civil disturbances.
- 92 Hostile acts.
- 00 Factor contributing to injury, other.
- NN None.
- UU Undetermined.

## **13** Object Involved in Injury

### *Definition*

The description of the object, if one was involved, that contributed to the injury of the fire service casualty.

### *Purpose*

This field provides additional information on how a casualty occurred. The analysis of this information, in combination with other entries, may permit an understanding of the events causing the injury and a means of planning suitable preventive techniques.

### *Entry*

Enter the two-digit code and description of the object involved in the injury. If no object was involved, check or mark the None box.

### *Example*

The firefighter received a cut on the forearm when a piece of glass dropped from a second-story window (43):

<b>13</b>	<b>Object Involved in Injury</b>	<input type="checkbox"/> <b>None</b>
4   3	Glass	
Object involved in injury		

### **OBJECT INVOLVED IN INJURY CODES**

11	Coupling.
12	Hose, not charged.
13	Hose, charged.
14	Water from master stream.
15	Water from hose line.
16	Water, not from a hose.
17	Steam.
18	Extinguishing agent, not water.
21	Ladder, aerial.
22	Ladder, ground.
23	Tools/Equipment.
24	Knife, scissors.
25	Syringe.
26	Fire department vehicle or apparatus.
27	Fire department vehicle door. Includes apparatus compartments.
28	Station sliding pole.
31	Curb.
32	Door in building.
33	Fire escape.
34	Ledge.
35	Stairs.
36	Wall. Includes other vertical surfaces such as cliffs.
37	Window.
38	Roof.

39	Floor or ceiling.
30	Structural component, other.
41	Asbestos.
42	Dirt, stones, or debris.
43	Glass.
45	Nails.
46	Splinters.
47	Embers.
48	Hot tar.
49	Hot metal.
51	Biological agents.
52	Chemicals.
53	Fumes, gases, or smoke.
54	Poisonous plants.
55	Insects.
56	Radioactive materials.
61	Electricity.
62	Extreme weather.
63	Utility flames, flares, torches.
64	Heat or flame.
91	Person: victim.
92	Property and structure contents.
93	Animal.
94	Non-fire department vehicle.
95	Gun. Includes all other projectile weapons.
90	Person, other.
00	Object involved in injury, other.
NN	None.
UU	Undetermined.

## SECTION J

This section captures information on the specific location where the firefighter was injured and, if in a vehicle, the type of vehicle involved.

### J<sup>1</sup> Where Injury Occurred

#### *Definition*

The place where the injury occurred. This location may be en route to or from the scene, at the incident scene, at the station, or some other location.

#### *Purpose*

In conjunction with other fields, this element can help identify why the firefighter sustained a certain type of injury. It can indicate areas in which safety training and safer operating procedures may be necessary.

#### *Entry*

Check or mark the box that best describes where the injury took place.

### Example

A firefighter was killed en route to a call when the tanker overturned (3):

J <sub>1</sub> Where Injury Occurred	
1	<input type="checkbox"/> En route to FD location
2	<input type="checkbox"/> At FD location
3	<input checked="" type="checkbox"/> En route to incident scene
4	<input type="checkbox"/> En route to medical facility
5	<input type="checkbox"/> At scene in structure
6	<input type="checkbox"/> At scene outside
7	<input type="checkbox"/> At medical facility
8	<input type="checkbox"/> Returning from incident
9	<input type="checkbox"/> Returning from med facility
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

### WHERE INJURY OCCURRED CODES

1	En route to fire department location. Includes volunteers responding to the fire station or apparatus traveling between fire department locations.
2	At fire department location.
3	En route to incident or assignment.
4	En route to medical facility.
5	At scene, in structure.
6	At scene, outside structure.
7	At medical facility.
8	Returning from incident or assignment.
9	Returning from medical facility.
0	Where injury occurred, other.
U	Undetermined.

## J<sup>2</sup> Story Where Injury Occurred

### Definition

This element identifies the story where the injury occurred.

### Purpose

This entry provides additional information on where the injury occurred, which can help in directing injury prevention efforts. This element, combined with other elements, better describes the accident scene.

### Entry

If the injury occurred inside or on a structure, enter the story where the injury occurred. If the story is below grade, check or mark the Below Grade box.

☛ Complete this block only if the injury occurred inside a structure.

☛ Checking or marking the Below Grade box has the effect of entering a negative number in NFIRS 5.0.

*Example*

The casualty occurred inside the building on the third story:

**J<sub>2</sub> Story Where Injury Occurred**

1  Check this box and enter the story if the injury occurred inside or on a structure

|\_|\_| 3 | Story of injury  Below grade

2  Injury occurred outside

**J<sup>3</sup> Specific Location Where Injury Occurred**

*Definition*

This element identifies the specific location of the fire service casualty at the time of injury.

*Purpose*

This element provides additional information on where the injury occurred. This can be helpful in directing injury prevention efforts.

*Entry*

Check or mark the box that best describes the specific location at time of injury.

☛ If any code greater than 60 is checked or marked, continue to Block J4.

*Example*

The firefighter sprained an ankle climbing down a ground ladder (25):

**J<sub>3</sub> Specific Location Where Injury Occurred**

65	<input type="checkbox"/>	In aircraft	Complete Block J4
64	<input type="checkbox"/>	In boat, ship, or barge	
63	<input type="checkbox"/>	In rail vehicle	
61	<input type="checkbox"/>	In motor vehicle	
54	<input type="checkbox"/>	In sewer	
53	<input type="checkbox"/>	In tunnel	
49	<input type="checkbox"/>	In structure	
45	<input type="checkbox"/>	In attic	
36	<input type="checkbox"/>	In water	00 <input type="checkbox"/> Other
35	<input type="checkbox"/>	In well	UU <input type="checkbox"/> Undetermined
34	<input type="checkbox"/>	In ravine	
33	<input type="checkbox"/>	In quarry or mine	
32	<input type="checkbox"/>	In ditch or trench	
31	<input type="checkbox"/>	In open pit	
28	<input type="checkbox"/>	On steep grade	
27	<input type="checkbox"/>	On fire escape/outside stairs	
26	<input type="checkbox"/>	On vertical surface or ledge	
25	<input checked="" type="checkbox"/>	On ground ladder	
24	<input type="checkbox"/>	On aerial ladder or in basket	
23	<input type="checkbox"/>	On roof	
22	<input type="checkbox"/>	Outside at grade	

## SPECIFIC LOCATION WHERE INJURY OCCURRED CODES

22	Outside at grade.
23	On roof.
24	On aerial ladder or in basket.
25	On ground ladder.
26	On vertical surface or ledge.
27	On fire escape or outside stairway.
28	On steep grade.
31	In open pit.
32	In ditch or trench.
33	In quarry or mine.
34	In ravine.
35	In well.
36	In water.
45	In attic or other confined structural space.
49	In structure. Excludes attic, roof, or wall.
53	In tunnel.
54	In sewer.
61	In motor vehicle.
63	In rail vehicle.
64	In boat, ship, or barge.
65	In aircraft.
00	Specific location where injury occurred, other.
UU	Undetermined.

**J<sup>4</sup> Vehicle Type***Definition*

Identifies the type of vehicle that the firefighter was in at time of injury.

*Purpose*

This element provides more information on where and how the injury occurred. This can be helpful in directing injury prevention efforts.

*Entry*

Check or mark the box that best describes the vehicle type.

☛ Complete this block only if the Specific Location code (Block J3) is greater than 60.

*Example*

The volunteer firefighter was injured in his personal vehicle on the way to a call:

<b>J<sup>4</sup></b>	<b>Vehicle Type</b>	Complete ONLY if Specific Location code is >60
	1 <input type="checkbox"/> Suppression vehicle	
	2 <input type="checkbox"/> EMS vehicle	
	3 <input type="checkbox"/> Other FD vehicle	
	4 <input checked="" type="checkbox"/> Non-FD vehicle	

## VEHICLE TYPE CODES

- 1 Suppression vehicle.
- 2 EMS vehicle.
- 3 Other fire department vehicle. Includes passenger vehicles.
- 4 Non-fire department vehicle. Includes private auto.
- N None.

## SECTION K

Information on whether firefighter equipment failed and contributed to the injury is collected in this section.

**K<sup>1</sup> Equipment Sequence Number***Definition*

A unique number assigned to each piece of faulty equipment worn or used by the injured firefighter.

*Purpose*

In conjunction with other field in the section, the sequence number permits each piece of equipment associated with an injury to be identified separately on the casualty file.

*Entry*

If no equipment failed, check or mark the No box, which completes the entries of this module. If protective equipment failed and it contributed to the injury, check or mark the Yes box and complete the remainder of this section (Blocks K1 through K4). Enter the equipment sequence number. A separate Equipment Sequence Number is assigned to each piece of equipment that failed and contributed to the injury. The first equipment is always coded "001," and each succeeding equipment is numbered sequentially and incremented by 1 beginning with "002." The three-character numeric field is zero filled, not right justified.

☛ A separate form is required for each piece of equipment that failed and contributed to the injury.

*Example*

The first piece of faulty equipment associated with an injury to a firefighter:

<b>K1</b>	<b>Did protective equipment fail and contribute to the injury?</b> Please complete the remainder of this form ONLY if you answer YES.	<b>Yes</b> Y <input checked="" type="checkbox"/>	Equipment Sequence Number
		<b>No</b> N <input type="checkbox"/>	

## EQUIPMENT FAILED CODES

Y Yes.  
N No.

**K<sup>2</sup> Protective Equipment Item**

☛ Protective Equipment Item replaces the five individual equipment lists in NFIRS 4.1

*Definition*

This block records information about the faulty protective equipment item that was a factor in the firefighter's injury.

*Purpose*

This element provides more information on why the injury occurred and may help detect problems with equipment that could lead to future injuries.

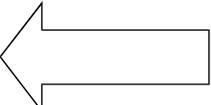
*Entry*

Check or mark the box that best describes the piece of protective equipment that failed and contributed to the injury.

*Example*

The firefighter's face piece melted (12) causing burns on the side of his face:

<b>K<sup>2</sup> Protective Equipment Item</b>	
Head or Face Protection	
11	<input type="checkbox"/> Helmet
12	<input checked="" type="checkbox"/> Full face protector
13	<input type="checkbox"/> Partial face protector
14	<input type="checkbox"/> Goggles/eye protection
15	<input type="checkbox"/> Hood
16	<input type="checkbox"/> Ear protector
17	<input type="checkbox"/> Neck protector
10	<input type="checkbox"/> Other



## PROTECTIVE EQUIPMENT ITEM CODES

**Head or Face Protection**

11 Helmet.  
12 Full face protector.  
13 Partial face protector.  
14 Goggles/Eye protection.  
15 Hood.  
16 Ear protector.  
17 Neck protector.  
10 Head or face protection, other.

**Coat, Shirt, or Trousers**

- 21 Protective coat.
- 22 Protective trousers.
- 23 Uniform shirt.
- 24 Uniform T-shirt.
- 25 Uniform trousers.
- 26 Uniform coat or jacket.
- 27 Coveralls.
- 28 Apron or gown.
- 20 Coat, shirt, or trousers, other.

**Boots or Shoes**

- 31 Knee-length boots with steel baseplate and steel toes.
- 32 Knee-length boots with steel toes only.
- 33 3/4-length boots with steel baseplate and steel toes.
- 34 3/4-length boots with steel toes only.
- 35 Boots without steel baseplate or steel toes.
- 36 Safety shoes with steel baseplate and steel toes.
- 37 Safety shoes with steel toes only.
- 38 Non-safety shoes.
- 30 Boots or shoes, other.

**Respiratory Protection**

- 41 Self-contained breathing apparatus (SCBA), demand, open circuit.
- 42 Self-contained breathing apparatus (SCBA), positive pressure, open circuit.
- 43 Self-contained breathing apparatus (SCBA), closed circuit.
- 44 Non-self-contained breathing apparatus.
- 45 Cartridge respirator.
- 46 Dust or particle mask.
- 40 Respiratory protection, other.

**Hand Protection**

- 51 Firefighter gloves with wristlets.
- 52 Firefighter gloves without wristlets.
- 53 Work gloves.
- 54 HazMat gloves.
- 55 Medical gloves.
- 50 Hand protection, other.

**Special Equipment**

- 61 Proximity suit for entry.
- 62 Proximity suit for non-entry.
- 63 Totally encapsulated, reusable chemical suit.
- 64 Totally encapsulated, disposable chemical suit.
- 65 Partially encapsulated, reusable chemical suit.
- 66 Partially encapsulated, disposable chemical suit.
- 67 Flash protection suit.
- 68 Flight or jump suit.
- 69 Brush suit.

**Special Equipment Continued**

- 71 Exposure suit.
- 72 Self-contained underwater breathing apparatus (SCUBA).
- 73 Life preserver.
- 74 Life belt or ladder belt.
- 75 Personal alert safety system (PASS).
- 76 Radio distress device.
- 77 Personal lighting.
- 78 Fire shelter or tent.
- 79 Vehicle safety belt.
- 70 Special equipment, other.
- 00 Protective equipment item, other.

**K<sup>3</sup> Protective Equipment Problem**

☛ *Protective Equipment Problem* replaces the five individual equipment problem lists in NFIRS 4.1

**Definition**

The most serious problem with the piece of equipment that failed and contributed to the injury.

**Purpose**

Provides additional information on why the injury occurred and highlights problems with specific equipment.

**Entry**

Check or mark the box that best describes the protective equipment problem.

**Example**

The firefighter's face piece melted (12):

K <sub>3</sub> Protective Equipment Problem	
Check one box to indicate the main problem that occurred	
11	<input type="checkbox"/> Burned
12	<input checked="" type="checkbox"/> Melted
21	<input type="checkbox"/> Fractured, cracked or broken
22	<input type="checkbox"/> Punctured
23	<input type="checkbox"/> Scratched
24	<input type="checkbox"/> Knocked off
25	<input type="checkbox"/> Cut or ripped
31	<input type="checkbox"/> Trapped steam or hazardous gas
32	<input type="checkbox"/> Insufficient insulation
33	<input type="checkbox"/> Object fell in or onto equipment item
41	<input type="checkbox"/> Failed under impact
42	<input type="checkbox"/> Face piece or hose detached
43	<input type="checkbox"/> Exhalation valve inoperative or damaged
44	<input type="checkbox"/> Harness detached or separated
45	<input type="checkbox"/> Regulator failed to operate
46	<input type="checkbox"/> Regulator damaged by contact
47	<input type="checkbox"/> Problem with admissions valve
48	<input type="checkbox"/> Alarm failed to operate
49	<input type="checkbox"/> Alarm damaged by contact
51	<input type="checkbox"/> Supply cylinder or valve failed to operate
52	<input type="checkbox"/> Supply cylinder/valve damaged by contact
53	<input type="checkbox"/> Supply cylinder—insufficient air/oxygen
94	<input type="checkbox"/> Did not fit properly
95	<input type="checkbox"/> Not properly serviced or stored prior to use
96	<input type="checkbox"/> Not used for designed purpose
97	<input type="checkbox"/> Not used as recommended by manufacturer
00	<input type="checkbox"/> Other equipment problem
UU	<input type="checkbox"/> Undetermined

## PROTECTIVE EQUIPMENT PROBLEM CODES

11	Burned.
12	Melted.
21	Fractured, cracked, or broke.
22	Punctured.
23	Scratched.
24	Knocked off.
25	Cut or ripped.
31	Trapped steam or hazardous gas.
32	Insufficient insulation.
33	Object fell in or onto equipment item.
41	Failed under impact.
42	Face piece or hose detached.
43	Exhalation valve inoperative or damaged.
44	Harness detached or separated.
45	Regulator failed to operate.
46	Regulator damaged by contact.
47	Problem with admissions valve.
48	Alarm failed to operate.
49	Alarm damaged by contact.
51	Supply cylinder or valve failed to operate.
52	Supply cylinder or valve damaged by contact.
53	Supply cylinder contained insufficient air or oxygen.
94	Did not fit properly.
95	Not properly serviced or stored prior to use.
96	Not used for designed purpose.
97	Not used as recommended by manufacturer.
00	Protective equipment problem, other.
UU	Undetermined.

## **K<sup>4</sup>** Equipment Manufacturer, Model, and Serial Number

### *Definition*

This block identifies the specific equipment that failed.

*Manufacturer* is to the name of the company that made the piece of equipment.

*Model* is to the manufacturer's model name. If one does not exist, use the equipment's common physical description.

*Serial Number* is to the manufacturer's serial number that is generally stamped on an identification plate on the equipment. Lot number may also be used here if no serial number is available.

### *Purpose*

These data elements provide detailed information on the specific equipment that failed and contributed to the injury. Data on model and other information are useful in determining the compliance with standards for protective equipment involved in firefighting and for analyzing the effectiveness of these codes, standards, and regulations.

### Entry

Enter the manufacturer's name, the model name, and the serial number.

- ☛ The actual length of each of these three fields is 12 characters. Complete as much as possible to provide a positive identification.

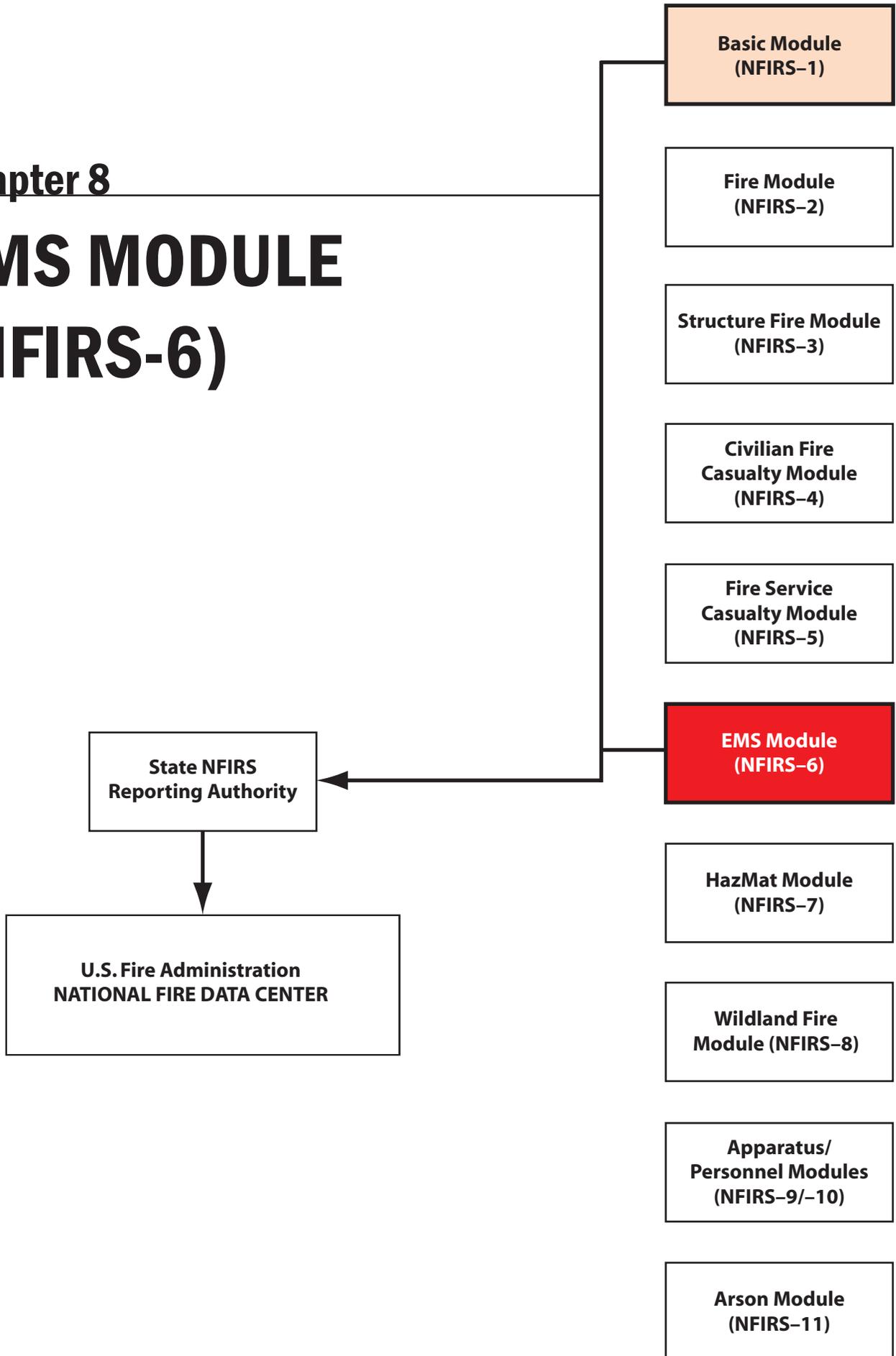
### Example

The face piece that melted was a Lingo Model 23-001, serial number 147AC01.

<b>K4</b>	<b>Equipment Manufacturer, Model, and Serial Number</b>
	Lingo Inc. Manufacturer
	23-001 Model
	1 4 7 A C 0 1 Serial Number

## Chapter 8

# EMS MODULE (NFIRS-6)



**A** FDID  Star State  Star Incident Date  Star MM DD YYYY Station Incident Number  Star Exposure  Star  Delete  Change **NFIRS-6 EMS**

**B** Number of Patients Patient Number  Star **C** Date/Time  Time Arrived at Patient  Time of Patient Transfer

Use a separate form for each patient

Check if same date as Alarm date

Month Day Year Hour/Min

**D** Provider Impression/Assessment  Star Check one box only  None/no patient or refused treatment

10 <input type="checkbox"/> Abdominal pain	18 <input type="checkbox"/> Chest pain	26 <input type="checkbox"/> Hypovolemia	34 <input type="checkbox"/> Sexual assault
11 <input type="checkbox"/> Airway obstruction	19 <input type="checkbox"/> Diabetic symptom	27 <input type="checkbox"/> Inhalation injury	35 <input type="checkbox"/> Sting/Bite
12 <input type="checkbox"/> Allergic reaction	20 <input type="checkbox"/> Do not resuscitate	28 <input type="checkbox"/> Obvious death	36 <input type="checkbox"/> Stroke/CVA
13 <input type="checkbox"/> Altered LOC	21 <input type="checkbox"/> Electrocutation	29 <input type="checkbox"/> OD/Poisoning	37 <input type="checkbox"/> Syncope
14 <input type="checkbox"/> Behavioral/Psych	22 <input type="checkbox"/> General illness	30 <input type="checkbox"/> Pregnancy/OB	38 <input type="checkbox"/> Trauma
15 <input type="checkbox"/> Burns	23 <input type="checkbox"/> Hemorrhaging/Bleeding	31 <input type="checkbox"/> Respiratory arrest	00 <input type="checkbox"/> Other
16 <input type="checkbox"/> Cardiac arrest	24 <input type="checkbox"/> Hyperthermia	32 <input type="checkbox"/> Respiratory distress	
17 <input type="checkbox"/> Cardiac dysrhythmia	25 <input type="checkbox"/> Hypothermia	33 <input type="checkbox"/> Seizure	

<b>E1</b> Age or Date of Birth Age <input type="checkbox"/> Months (for infants) OR Month Day Year	<b>F1</b> Race 1 <input type="checkbox"/> White 2 <input type="checkbox"/> Black, African American 3 <input type="checkbox"/> Am. Indian, Alaska Native 4 <input type="checkbox"/> Asian 5 <input type="checkbox"/> Native Hawaiian, Other Pacific Islander 0 <input type="checkbox"/> Other, multiracial U <input type="checkbox"/> Undetermined	<b>G1</b> Human Factors Contributing to Injury <input type="checkbox"/> None Check all applicable boxes 1 <input type="checkbox"/> Asleep 2 <input type="checkbox"/> Unconscious 3 <input type="checkbox"/> Possibly impaired by alcohol 4 <input type="checkbox"/> Possibly impaired by drug 5 <input type="checkbox"/> Possibly mentally disabled 6 <input type="checkbox"/> Physically disabled 7 <input type="checkbox"/> Physically restrained 8 <input type="checkbox"/> Unattended person	<b>G2</b> Other Factors <input type="checkbox"/> None <b>If an illness, not an injury, skip G2 and go to H3</b> 1 <input type="checkbox"/> Accidental 2 <input type="checkbox"/> Self-inflicted 3 <input type="checkbox"/> Inflicted, not self
<b>E2</b> Gender 1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female	<b>F2</b> Ethnicity 1 <input type="checkbox"/> Hispanic or Latino 2 <input type="checkbox"/> Non Hispanic or Latino		

**H1** Body Site of Injury List up to five body sites

**H2** Injury Type List one injury type for each body site listed under H1

**H3** Cause of Illness/Injury

<b>I</b> Procedures Used Check all applicable boxes <input type="checkbox"/> No treatment 01 <input type="checkbox"/> Airway insertion 02 <input type="checkbox"/> Anti-shock trousers 03 <input type="checkbox"/> Assist ventilation 04 <input type="checkbox"/> Bleeding control 05 <input type="checkbox"/> Burn care 06 <input type="checkbox"/> Cardiac pacing 07 <input type="checkbox"/> Cardioversion (defib) manual 08 <input type="checkbox"/> Chest/Abdominal thrust 09 <input type="checkbox"/> CPR 10 <input type="checkbox"/> Cricothyrotomy 11 <input type="checkbox"/> Defibrillation by AED 12 <input type="checkbox"/> EKG monitoring 13 <input type="checkbox"/> Extrication 14 <input type="checkbox"/> Intubation (EGTA) 15 <input type="checkbox"/> Intubation (ET) 16 <input type="checkbox"/> IO/IV therapy 17 <input type="checkbox"/> Medications therapy 18 <input type="checkbox"/> Oxygen therapy 19 <input type="checkbox"/> OB care/delivery 20 <input type="checkbox"/> Prearrival instructions 21 <input type="checkbox"/> Restrain patient 22 <input type="checkbox"/> Spinal immobilization 23 <input type="checkbox"/> Splinted extremities 24 <input type="checkbox"/> Suction/Aspirate 00 <input type="checkbox"/> Other	<b>J</b> Safety Equipment <input type="checkbox"/> None Used or deployed by patient. Check all applicable boxes. 1 <input type="checkbox"/> Safety/Seat belts 2 <input type="checkbox"/> Child safety seat 3 <input type="checkbox"/> Airbag 4 <input type="checkbox"/> Helmet 5 <input type="checkbox"/> Protective clothing 6 <input type="checkbox"/> Flotation device 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined	<b>K</b> Cardiac Arrest Check all applicable boxes 1 <input type="checkbox"/> Pre-arrival arrest? If pre-arrival arrest, was it: 1 <input type="checkbox"/> Witnessed? 2 <input type="checkbox"/> Bystander CPR? 2 <input type="checkbox"/> Post-arrival arrest? Initial Arrest Rhythm 1 <input type="checkbox"/> V-Fib/V-Tach 0 <input type="checkbox"/> Other U <input type="checkbox"/> Undetermined
---	---	--

<b>L1</b> Initial Level of Provider <input type="checkbox"/> Star 1 <input type="checkbox"/> First Responder 2 <input type="checkbox"/> EMT-B (Basic) 3 <input type="checkbox"/> EMT-I (Intermediate) 4 <input type="checkbox"/> EMT-P (Paramedic) 0 <input type="checkbox"/> Other provider N <input type="checkbox"/> No Training	<b>L2</b> Highest Level of Care Provided On Scene <input type="checkbox"/> None 1 <input type="checkbox"/> First Responder 2 <input type="checkbox"/> EMT-B (Basic) 3 <input type="checkbox"/> EMT-I (Intermediate) 4 <input type="checkbox"/> EMT-P (Paramedic) 0 <input type="checkbox"/> Other provider	<b>M</b> Patient Status 1 <input type="checkbox"/> Improved 2 <input type="checkbox"/> Remained same 3 <input type="checkbox"/> Worsened Check if: 1 <input type="checkbox"/> Pulse on transfer 2 <input type="checkbox"/> No pulse on transfer	<b>N</b> EMS Disposition <input type="checkbox"/> Not transported 1 <input type="checkbox"/> FD transport to ECF 2 <input type="checkbox"/> Non-FD transport 3 <input type="checkbox"/> Non-FD trans/FD attend 4 <input type="checkbox"/> Non-emergency transfer 0 <input type="checkbox"/> Other
---	---	---	--

## CHAPTER 8 • EMS MODULE (NFIRS-6)

The EMS Module is an optional module. It should be used when that option has been chosen by your State or local authorities.

- ☛ This module is completed only if the fire department provides emergency medical service. If an independent provider performs EMS, do not use this module.

The purpose of the EMS Module is to gather basic data as it relates to the provision of emergency medical care to the community. It may be used by both responding EMS unit(s) and responding fire suppression unit(s) that provide emergency medical services. This module does not include patient care information. The data collected from this form are incident based not patient based.

The EMS Module is not intended to replace or otherwise interfere with State or local EMS patient care reporting requirements. Instead, it is the intent that the data elements contained in this module be viewed as “core elements” and be included in the design of upgrades or new EMS data collection systems.

The EMS Module may be completed when an Incident Type 100–243, 311, 321–323, 351–381, 400–431, 451, or 900 is reported in Section C of the Basic Module (NFIRS-1).

- ☛ If the EMS is a fire casualty, completion of a separate Fire Service Casualty Module (NFIRS-5) is required.

### SECTION A

The guidance and directions for completing Section A of the EMS Module are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the EMS Module must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3–8.

### A Fire Department Identification (FDID) ☆

#### Entry

Enter the same FDID number found in Section A of the Basic Module.

### State ☆

#### Entry

Enter the same State abbreviation found in Section A of the Basic Module.

### Incident Date ☆

#### Entry

Enter the same incident date found in Section A of the Basic Module.

## Station Number

### *Entry*

Enter the same station number found in Section A of the Basic Module.

## Incident Number ☆

### *Entry*

Enter the same incident number found in Section A of the Basic Module.

## Exposure Number ☆

### *Entry*

If the casualty resulted from an exposure fire, enter the same exposure number that was entered in Section A of the Basic Module for that exposure.

## Delete/Change

### *Definition*

Indicates a change to information submitted on a previous EMS Module or a deletion of all information regarding that patient.

### *Purpose*

To delete or change previously reported information.

### *Entry*

**Delete.** Check or mark this box when you have previously submitted data on this EMS patient and now want to have the data on this patient deleted from the database. If this box is marked, complete Section A, the Patient Number originally assigned (Section B), and leave the rest of the report blank. Forward the report according to your normally established procedures.

**Change.** Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

## **B** Number of Patients

### *Definition*

Total number of patients who were treated by fire department emergency responders at the EMS incident.

### Purpose

Fire departments can track the number of patients they treated at each EMS incident and identify how many EMS Modules should be completed for the incident (one per patient).

### Entry

Enter the total number of patients.

- ☛ Complete a separate EMS Module for each patient treated.

### Example

Two people were injured in a bicycle accident:

<b>B</b>	<b>Number of Patients</b>	<b>Patient Number</b> ☆
	<input type="text" value="2"/>	<input type="text" value=""/>
Use a separate form for each patient		

## Patient Number ☆

### Definition

A unique number is assigned to each patient treated at a single EMS incident.

### Purpose

The patient number identifies each EMS patient separately in the EMS file. Data and other information concerning the patient can be accessed using this number in conjunction with other unique field information.

### Entry

Enter the identification number assigned to this patient. A separate Patient Number is assigned to each EMS patient. The first patient is always coded “001,” and each succeeding patient is numbered sequentially and incremented by 1 beginning with “002.” The three-character numeric field is zero filled, not right justified.

### Example

Three patients needed medical attention in the wrecked automobile; this report is for patient number two:

<b>B</b>	<b>Number of Patients</b>	<b>Patient Number</b> ☆
	<input type="text" value="3"/>	<input type="text" value="002"/>
Use a separate form for each patient		

## SECTION C

**C Date and Time Arrived at Patient and Time of Patient Transfer***Definitions*

**Time arrived at patient.** The time when the fire department's emergency personnel established direct contact with the patient.

**Time of patient transfer.** The time when the response unit physically left the scene to transport the patient to an emergency care facility or the time when the patient was transferred to another care provider.

*Purpose*

This information is needed to analyze time spent providing patient care on the scene of an incident. If the Apparatus/Personnel Module (NFIRS-9/-10) is also used, then this element can document situations when there is a significant delay between the time the response unit arrives on the scene and the time at which personnel can access the patient.

*Entry*

For each incident, enter the dates (mm/dd/yyyy) and times of day (using the 24-hour clock) when emergency personnel arrived at the patient and when the patient was transferred to another care provider. Midnight is 0000 and signifies the start of a new day.

- ☛ If the date(s) is the same as the Alarm date (Block E1, Basic Module), check the box(es) and enter only the time of day.

*Example*

The fire department BLS unit arrived at the patient at 0105 on July 2, 2002. The patient was transferred to the hospital 14 minutes later at 0199:

<b>C Date/Time</b> Check if same date as Alarm date →	<input type="checkbox"/> Time Arrived at Patient	Month  0 7	Day  0 2	Year  2 0 0 2	Hour/Min  0 1 0 5
	<input type="checkbox"/> Time of Patient Transfer	0 7	0 2	2 0 0 2	0 1 1 9

## SECTION D

**D Provider Impression/Assessment ☆***Definition*

The emergency care provider's primary clinical assessment that led to the management (treatments, medications, procedures) given to the patient.

*Purpose*

This element identifies whether the treatments or medications provided were consistent with the protocols related to the clinical impression.

The ☆ denotes a required field.

## Entry

Check or mark the box (one only) that best describes the emergency provider's impression/assessment. When more than one choice is applicable to the patient, choose the single most significant clinical assessment that drove the choice of treatment. Check or mark the None/No Patient or Refused Treatment box when there is no patient upon arrival or if the patient refused treatment.

## Example

The patient suffered a traumatic injury as a result of a bicycle fall (38):

D Provider Impression/Assessment ☆ Check one box only				☐ None/no patient or refused treatment	
10	<input type="checkbox"/> Abdominal pain	18	<input type="checkbox"/> Chest pain	26	<input type="checkbox"/> Hypovolemia
11	<input type="checkbox"/> Airway obstruction	19	<input type="checkbox"/> Diabetic symptom	27	<input type="checkbox"/> Inhalation injury
12	<input type="checkbox"/> Allergic reaction	20	<input type="checkbox"/> Do not resuscitate	28	<input type="checkbox"/> Obvious death
13	<input type="checkbox"/> Altered LOC	21	<input type="checkbox"/> Electrocution	29	<input type="checkbox"/> OD/poisoning
14	<input type="checkbox"/> Behavioral/psych	22	<input type="checkbox"/> General illness	30	<input type="checkbox"/> Pregnancy/OB
15	<input type="checkbox"/> Burns	23	<input type="checkbox"/> Hemorrhaging/bleeding	31	<input type="checkbox"/> Respiratory arrest
16	<input type="checkbox"/> Cardiac arrest	24	<input type="checkbox"/> Hyperthermia	32	<input type="checkbox"/> Respiratory distress
17	<input type="checkbox"/> Cardiac dysrhythmia	25	<input type="checkbox"/> Hypothermia	33	<input type="checkbox"/> Seizure
				34	<input type="checkbox"/> Sexual assault
				35	<input type="checkbox"/> Sting/bite
				36	<input type="checkbox"/> Stroke/CVA
				37	<input type="checkbox"/> Syncope
				38	<input checked="" type="checkbox"/> Trauma
				00	<input type="checkbox"/> Other

## PROVIDER IMPRESSION/ASSESSMENT CODES

- 10 Abdominal pain. Includes an acute or painful abdomen and cramps. Excludes abdominal trauma (38).
- 11 Airway obstruction. Includes choking, swelling of the neck, croup, epiglottitis, and a foreign body in the air way.
- 12 Allergic reaction. Includes reaction to drugs, plants, and insects. Reactions include hives, urticaria, and wheezing. Excludes stings and venomous bites (35).
- 13 Altered level of consciousness. Includes patients who appear to be substance abusers or under the influence of drugs or alcohol.
- 14 Behavioral: mental status, psychiatric disorder. Includes all situations in which a behavioral or psychiatric problem is considered the major problem for the EMS provider.
- 15 Burns.
- 16 Cardiac arrest.
- 17 Cardiac dysrhythmia. Includes any rhythm disturbance that was noted on the physical examination or with a cardiac monitor when the rhythm was the major clinical reason for care rendered by the EMS responder.
- 18 Chest pain. Includes patients with chest pain related to heart disease, upset stomach, or muscle pain in the chest wall.
- 19 Diabetic symptom, related to history of diabetes. Includes hypoglycemia, ketoacidosis, and other complications of diabetes.
- 20 Do not resuscitate. Use when there is a legal requirement to prevent emergency medical personnel from initiating CPR.
- 21 Electrocution.
- 22 General illness.
- 23 Hemorrhaging/Bleeding. Includes vaginal bleeding, GI bleeding, and epistaxis. When pregnancy is involved, only use bleeding if this is the major concern to the EMS responder.
- 24 Hyperthermia.
- 25 Hypothermia. Usually relates to environmental hypothermia, such as following submersion in cold water, avalanches, or other environmental exposures.
- 26 Hypovolemia. Includes patients with clinical shock, usually felt to be hypovolemic.
- 27 Inhalation injury, toxic gases. Includes smoke inhalation. Excludes overdose and poisoning (29).

- 28 Obvious death. Patients who were dead upon arrival and no therapy was undertaken.
- 29 Overdose/Poisoning. Includes taking inappropriate drugs, overdosing, and poisoning from chemicals. Excludes inhalation of toxic gases (27).
- 30 Pregnancy/OB. Includes all aspects of obstetric care rendered in the pre-hospital setting.
- 31 Respiratory arrest. Includes incidents where the patient stops breathing and requires ventilatory support on at least a temporary basis.
- 32 Respiratory distress. Includes patients who have only spontaneous breathing.
- 33 Seizure. Includes major and minor seizures.
- 34 Apparent sexual assault or rape.
- 35 Sting/Bite. Includes poisonous snakes, insects, bees, wasps, ants, etc. If an allergic reaction occurs, use code 12.
- 36 Stroke, cerebrovascular accidents (CVA), or transient ischemic attack (TIA).
- 37 Syncope, fainting.
- 38 Trauma. Excludes abdominal pain (10).
- 00 Provider impression/assessment, other.
- NN None/No patient or refused treatment.

## SECTION E

**E<sup>1</sup> Age or Date of Birth**

Enter either the patient's age or the patient's date of birth. Do not enter both.

**Age***Definition*

The patient's age in years or, if the patient is an infant, the age in months.

*Purpose*

The age of the patient provides an indication of fire loss. Age can also be used to indicate type, severity, and cause of illness/injury to identify trends and patterns that might be helpful in planning injury prevention techniques.

*Entry*

Enter the age of the patient. Estimate the age if it cannot be determined. If the age is calculated in months, check or mark the Months (for Infants) box.

*Example*

The patient was 87 years old:

<b>E<sup>1</sup> Age or Date of Birth</b>		
<input style="width: 20px; height: 20px;" type="text" value="8"/> <input style="width: 20px; height: 20px;" type="text" value="7"/>	<input type="checkbox"/>	Months (for infants)
<b>OR</b>		
<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 30px; height: 20px;" type="text"/>	<input style="width: 60px; height: 20px;" type="text"/>
Month	Day	Year

## Date of Birth

### Definition

The month, day, and year of birth of the patient.

### Purpose

This data entry is an alternative entry to Age. It can provide an indication of fire loss, and can be used to indicate type, severity, and cause of illness/injury to identify trends and patterns that might be helpful in planning injury prevention techniques.

- ☛ This data element is used as an alternate method for calculating the patient's age. Age is collected in NFIRS but Date of Birth is not.

### Entry

Enter the date of birth showing the month, day, and year (mm/dd/yyyy).

### Example

The patient was born on January 7, 1910:

E1 Age or Date of Birth			
<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	Months (for infants)
Age			
<b>OR</b>			
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Month	Day	Year	

## E<sup>2</sup> Gender

### Definition

The identification of the patient as male or female.

### Purpose

This entry assists in identifying the individual and for tracking trends and patterns.

### Entry

Check or mark the box that indicates the patient's gender.

### Example

The patient was a male (1):

E2 Gender	
1 <input checked="" type="checkbox"/> Male	2 <input type="checkbox"/> Female

## GENDER CODES

- 1 Male.
- 2 Female.

## SECTION F

**F<sup>1</sup>** Race*Definition*

The identification of the race of the patient, based on U.S. Office of Management and Budget (OMB) designations.

*Purpose*

This entry is useful for the study of diseases and important to data systems in order to obtain certain Federal or State funds that are directed toward specific racial groups.

*Entry*

Check or mark the appropriate box. If race cannot be determined, check or mark the Undetermined box.

☛ Hispanic is not considered a race, because a person can be black and Hispanic, white and Hispanic, etc.

*Example*

The patient was a white male (1):

F <sup>1</sup> Race	
1	<input checked="" type="checkbox"/> White
2	<input type="checkbox"/> Black, African American
3	<input type="checkbox"/> American Indian, Alaska Native
4	<input type="checkbox"/> Asian
5	<input type="checkbox"/> Native Hawaiian, Other Pacific Islander
0	<input type="checkbox"/> Other, multiracial
U	<input type="checkbox"/> Undetermined

## RACE CODES

- 1 White.
- 2 Black or African American.
- 3 American Indian or Alaska Native.
- 4 Asian.
- 5 Native Hawaiian or other Pacific Islander.
- 0 Other. Includes multiracial.
- U Undetermined Ethnicity.

## F<sup>2</sup> Ethnicity

### Definition

Identifies the ethnicity of the patient. Ethnicity is an ethnic classification or affiliation. Ethnicity designates a population subgroup having a common cultural heritage, as distinguished by customs, characteristics, language, common history, etc. Currently, Hispanic/Latino is the only OMB designation for ethnicity.

### Purpose

This entry permits an analysis of patients by ethnicity with type, severity, and cause of injury to identify trends and patterns that might be helpful in planning injury prevention techniques. It is also useful for studies of diseases and important to data systems in order to obtain certain Federal or State funds that are directed toward specific ethnic groups.

### Entry

Check or mark the appropriate box.

### Example

The patient was an Hispanic (1):

<b>F<sub>2</sub></b>	<b>Ethnicity</b>
1	<input checked="" type="checkbox"/> Hispanic or Latino
0	<input type="checkbox"/> Non Hispanic or Latino

### ETHNICITY CODES

- |   |                         |
|---|-------------------------|
| 1 | Hispanic or Latino.     |
| 0 | Non Hispanic or Latino. |

## SECTION G

Entries in this section collect information on the factors that contributed to the injury of the patient.

## G Human Factors Contributing to Injury

☛ Human Factors Contributing to Injury was known as Condition Before Injury in NFIRS 4.1.

### Definition

The physical or mental state of the person shortly before becoming a patient.

### Purpose

This is an important data element for injury research used by public health researchers and policymakers. It is also useful for understanding the relationship between human factors and incident type, such as automobile accidents where the driver was “possibly impaired by alcohol.”

### Entry

Check or mark all the applicable boxes describing the human factors that contributed to the patient's injury. If no human factor was involved, check or mark the None box.

### Example

A cigarette burned the patient after she fell asleep (1):

<b>G1</b>	<b>Human Factors Contributing to Injury</b>	<input type="checkbox"/> None
Check all applicable boxes		
1	<input checked="" type="checkbox"/> Asleep	
2	<input type="checkbox"/> Unconscious	
3	<input type="checkbox"/> Possibly impaired by alcohol	
4	<input type="checkbox"/> Possibly impaired by drug	
5	<input type="checkbox"/> Possibly mentally disabled	
6	<input type="checkbox"/> Physically disabled	
7	<input type="checkbox"/> Physically restrained	
8	<input type="checkbox"/> Unattended person	

### HUMAN FACTORS CONTRIBUTING TO INJURY CODES

1	Asleep, no known impairment.
2	Unconscious.
3	Possibly impaired by alcohol.
4	Possibly impaired by other drug or chemical.
5	Possibly mentally disabled.
6	Physically disabled. Includes temporary conditions or overexertion.
7	Physically restrained.
8	Unattended or unsupervised person. Includes persons too young/old to act.
N	None.

## **G<sup>2</sup>** Other Factors

### Definition

Factors contributing to the patient's injury other than those covered by Human Factors (Block G1).

☛ If the response was to an illness instead of an injury, skip to Block H3.

### Purpose

This is an important data element for injury research used by public health researchers and policymakers. This information is useful in determining the need for special training and safety precautions. It also helps identify trends and patterns such as the trend of inflicted (hostile) injuries over an extended period of time.

### Entry

Check or mark the appropriate box. If the three codes are not applicable, check or mark the None box.

### Example

A dog attacked the patient (3):

<b>G2</b>	Other Factors	<input type="checkbox"/> None
	<div style="border: 1px solid black; padding: 5px; margin: 5px auto; width: fit-content;">           If an illness, not an injury, skip G2 and go to H3         </div>	
1	<input type="checkbox"/> Accidental	
2	<input type="checkbox"/> Self-inflicted	
3	<input checked="" type="checkbox"/> Inflicted, not self	

#### OTHER FACTORS CODES

- |   |   |
|---|---|
| 1 | Accidental.   |
| 2 | Self-inflicted.   |
| 3 | Inflicted, not self-inflicted. Includes attacks by animals and persons. |
| N | None.   |

## SECTION H

This section collects information cause, type and location of the patient's injury.

### H<sup>1</sup> Body Site of Injury

☛ Body Site of Injury was known as Part of Body Injured in NFIRS 4.1

#### Definition

The area of the body that sustained the injury. This field is designed to be used in conjunction with Injury Type (Block H2).

#### Purpose

When combined with Injury Type and Cause of Injury, this entry provides useful data for EMS planners to track patient's injuries that required the use of the EMS system.

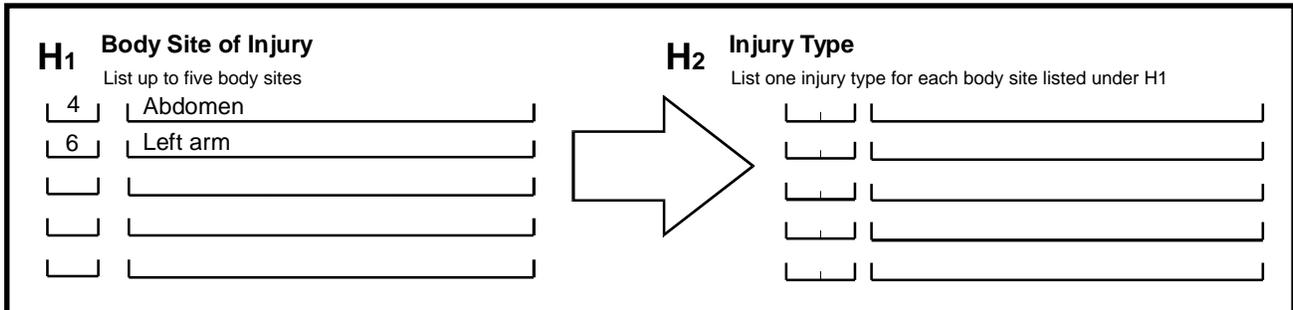
#### Entry

Enter up to five parts of the body where injuries occurred. List the body site with the most serious injury first. If the patient is suffering from an illness and not an injury, skip to Block H3.

- ☛ This data element should reflect the clinical impression of the injury by the EMS responder, not necessarily the final or correct diagnosis.
- ☛ Each Body Site entered should have an associated Injury Type (Block H2). There is a one-to-one correspondence between Body Site and Injury Type.

**Example**

The patient’s abdomen (4) and left arm (6) were injured in the accident:



**BODY SITE OF INJURY CODES**

- 1 Head.
- 2 Neck and shoulder.
- 3 Thorax. Includes chest and back. Excludes spine (5).
- 4 Abdomen.
- 5 Spine. Excludes back (3).
- 6 Upper extremities. Includes arms and hands.
- 7 Lower extremities. Includes legs and feet.
- 8 Internal.
- 9 Multiple body parts.

**H<sup>2</sup> Injury Type**

*Definition*

The clinical description of the injury received by the patient.

*Purpose*

When combined with Body Site and Cause of Injury, this element enables EMS planners to analyze the types of injuries treated by EMS responders. This entry can be correlated with other data collected in the Basic and EMS Modules to provide useful information for tracking trends and reducing injuries. When used in conjunction with follow-up patient information, this data element is valuable in assessing the correlation between injury assessment in the field and actual injuries as evaluated in medical facilities.

*Entry*

Enter a description of the primary injuries sustained by a patient for each part of the body listed in Block H1. The first Injury Type is associated with the first Body Site of Injury listed in Block H1, the second type with the second site, etc. Then select and record the appropriate code number for injury type recorded. If the patient is suffering from an illness and not an injury, skip to Block H3.

- ☛ Each Injury Type entered should have an associated Body Site (Block H2). There is a one-to-one correspondence between Injury Type and Body Site.

*Example*

The patient had a laceration on the abdomen (16) and a fracture of the upper left arm (14):

H1	Body Site of Injury	H2	Injury Type
	List up to five body sites		List one injury type for each body site listed under H1
4	Abdomen	1 6	Laceration
6	Left arm	1 4	Fracture

**INJURY TYPE CODES**

- 10 Amputation.
- 11 Blunt injury.
- 12 Burn.
- 13 Crush.
- 14 Dislocation/Fracture.
- 15 Gunshot.
- 16 Laceration.
- 17 Pain without swelling.
- 18 Puncture/Stab.
- 19 Soft tissue swelling.
- 00 Injury type, other.

**H<sup>3</sup> Cause of Illness/Injury**

*Definition*

The physical event that caused the injury or illness.

*Purpose*

When combined with Body Site and Type of Injury, this element permits an understanding of the conditions causing injury or illness and provides a means of developing strategies to reduce injuries and sudden illnesses.

### Entry

Enter the two-digit code that indicates the immediate cause or condition responsible for the injury or illness.

### Example

The cause of the patient's injuries was a fall from a bicycle (15):

<b>H3</b>	<b>Cause of Illness/Injury</b>
1	5
Cause of illness/injury	
Bicycle related	

### CAUSE OF ILLNESS/INJURY CODES

- |    |  |
|----|--|
| 10 | Chemical exposure. Includes accidental poisoning by solid or liquid substances, gases, and vapors, which are not included under accidental drug poisoning (11).  |
| 11 | Drug poisoning. Includes accidental poisoning by drugs, medicinal substances, or biological products.  |
| 12 | Fall. Excludes falls that occur in the context of other external causes of injury, such as fires, falling off boats, or falling in accidents involving machinery in operation.   |
| 13 | Aircraft-related accident. Includes spacecraft.  |
| 14 | Bite. Includes animal bites, including non-venomous snakes and lizards. Excludes venomous stings (36).   |
| 15 | Bicycle accident. Includes any pedal cycle accident. Pedal cycle is defined to include bicycles and tricycles. Excludes motor vehicle or motorbike accidents.  |
| 16 | Building collapse/construction accident. Includes all accidents on construction sites. Not to be used for specific mechanism of injury (e.g., "Fall").   |
| 17 | Drowning, not related to watercraft use. Includes swimming accidents, bathtubs, etc.   |
| 18 | Electrical shock. Includes accidents related to electric current from exposed wires, faulty appliances, high-voltage cables, live rails, or open electric sockets. Excludes lightning (26).  |
| 19 | Cold. Includes cold injuries due to weather exposure or cold produced by man, such as in a freezer.  |
| 20 | Heat. Includes thermal injuries related to weather or heat produced by man, such as in a boiler room or factory. Excludes heat injury from conflagration (22).   |
| 21 | Explosives. Includes all injuries related to explosives. Excludes fireworks (25).  |
| 22 | Fire and flames. Includes burning by fire, asphyxia or poisoning from conflagration or ignition, and fires secondary to explosions.  |
| 23 | Firearm. Includes accidental and purposeful firearm injuries.  |
| 25 | Fireworks. Injuries caused by pyrotechnics designed for or used for display purposes. Includes consumer fire works.  |
| 26 | Lightning. Excludes falling objects as a result of lightning and injuries from fires that are a result of lightning.   |
| 27 | Machinery. Includes machinery accidents except when machinery is not in operation. Excludes electrocution (18).  |
| 28 | Mechanical suffocation. Includes suffocation in bed or cradle (crib death), closed space suffocation, plastic bag asphyxia, and accidental hanging.  |
| 29 | Motor vehicle accident. Includes any motor vehicle accident occurring on or off a public roadway or highway.   |
| 30 | Motor vehicle accident, pedestrian. Motor vehicle accidents in which the patient was a pedestrian struck by a motor vehicle of any type. Includes individuals on skates, in baby carriages, in wheelchairs, on skateboards, and on skis. |

- 31 Non-traffic vehicle accident. Includes any motor vehicle accident occurring entirely off public roadways or highways. For instance, an accident involving an all-terrain vehicle (ATV) in an off-road location would be a non-traffic accident.
- 32 Physical assault/abuse. Includes all forms of battering and non-accidental injury to patients.
- 33 Scalds/Other thermal. Includes all burn injuries resulting from hot liquids or steam.
- 34 Smoke inhalation. Includes smoke and fume inhalation from fire.
- 35 Stabbing assault. Includes cuts, punctures, or stabs of any part of the body.
- 36 Venomous sting. Includes bites and stings from venomous snakes, lizards, spiders, scorpions, insects, marine life, or plants. For animal bite, use 14.
- 37 Water transport. Includes all accidents related to watercraft. Excludes drowning and submersion accidents (17) unless they are related to watercraft use. Thus, if a person falls out of a boat and drowns, it should be coded within this category. If a person drowns in a swimming pool or bathtub, it should be coded as "Drowning."
- 00 Cause of illness/injury, other.
- UU Unknown. Includes situations when data cannot be accurately reconstructed from the run record.

## SECTION I

## I Procedures Used

*Definition*

The nature of the procedures attempted or performed on a patient by emergency personnel. The term procedures include anything done by way of assessment or treatment of the patient.

*Purpose*

Planners and educators use this information to determine which procedures are conducted in the field, by whom, and for what indications. This information can also help determine the equipment and supplies needed by emergency responders.

*Entry*

Check or mark all applicable boxes. If no treatment was provided, check only the No Treatment box.

*Example*

A laceration was bandaged to control bleeding (04), and a fractured arm was splinted (23):

	Procedures Used	Check all applicable boxes	<input type="checkbox"/> No treatment
01	<input type="checkbox"/> Airway insertion	14	<input type="checkbox"/> Intubation (EGTA)
02	<input type="checkbox"/> Anti-shock trousers	15	<input type="checkbox"/> Intubation (ET)
03	<input type="checkbox"/> Assist ventilation	16	<input type="checkbox"/> IO/IV therapy
04	<input checked="" type="checkbox"/> Bleeding control	17	<input type="checkbox"/> Medications therapy
05	<input type="checkbox"/> Burn care	18	<input type="checkbox"/> Oxygen therapy
06	<input type="checkbox"/> Cardiac pacing	19	<input type="checkbox"/> OB care/delivery
07	<input type="checkbox"/> Cardioversion (defib) manual	20	<input type="checkbox"/> Prearrival instructions
08	<input type="checkbox"/> Chest/abdominal thrust	21	<input type="checkbox"/> Restrain patient
09	<input type="checkbox"/> CPR	22	<input type="checkbox"/> Spinal immobilization
10	<input type="checkbox"/> Cricothyroidotomy	23	<input checked="" type="checkbox"/> Splinted extremities
11	<input type="checkbox"/> Defibrillation by AED	24	<input type="checkbox"/> Suction/aspirate
12	<input type="checkbox"/> EKG monitoring	00	<input type="checkbox"/> Other
13	<input type="checkbox"/> Extrication		

## PROCEDURES USED CODES

01	Airway insertion.
02	Anti-shock trousers.
03	Assist ventilation.
04	Bleeding control.
05	Burn care.
06	Cardiac pacing.
07	Cardioversion (defibrillation), manual.
08	Chest/Abdominal thrust.
09	CPR.
10	Cricothyroidotomy.
11	Defibrillation by AED.
12	EKG monitoring.
13	Extrication.
14	Intubation (EGTA).
15	Intubation (ET).
16	IO/IV therapy.
17	Medications therapy.
18	Oxygen therapy.
19	Obstetrical care/delivery.
20	Preadmission instructions.
21	Restrained patient.
22	Spinal immobilization.
23	Splinted extremities.
24	Suction/Aspirate.
00	Procedures used, other.
NN	No treatment.

## SECTION J

**J Safety Equipment***Definition*

The types of safety equipment in use by the patient at time of injury.

*Purpose*

This element provides important information about safety devices used. The data can be used with police reports concerning collisions, tracking various trends and patterns, and determining the focus of public education campaigns.

*Entry*

Check or mark all applicable boxes to indicate the safety equipment that was in use. If no safety equipment was used, check or mark the None box.

*Example*

The patient was wearing a helmet when the bicycle accident occurred (4):

Example on next page

<b>J</b>	<b>Safety Equipment</b>	<input type="checkbox"/> None
	Used or deployed by patient. Check all applicable boxes.	
1	<input type="checkbox"/> Safety/seat belts	
2	<input type="checkbox"/> Child safety seat	
3	<input type="checkbox"/> Airbag	
4	<input checked="" type="checkbox"/> Helmet	
5	<input type="checkbox"/> Protective clothing	
6	<input type="checkbox"/> Flotation device	
0	<input type="checkbox"/> Other	
U	<input type="checkbox"/> Undetermined	

### SAFETY EQUIPMENT CODES

1	Safety, seat belts.
2	Child safety seat.
3	Airbag.
4	Helmet.
5	Protective clothing.
6	Flotation device.
0	Safety equipment, other.
N	None.
U	Undetermined.

## SECTION K

This section is completed only if the patient went into or was found in cardiac arrest.

## K Cardiac Arrest

### When Cardiac Arrest Occurred

#### Definition

When the cardiac arrest occurred in relation to the arrival of fire department's EMS personnel and whether CPR was performed before EMS personnel arrived.

#### Purpose

The effectiveness of bystander CPR on morbidity (or patient outcome) on a cardiac arrest patient can be determined.

#### Entry

Check or mark all applicable boxes. The intent here is to determine whether it was a pre-arrival or post-arrival arrest. If it was a pre-arrival arrest, check whether it was witnessed or whether bystander CPR was performed.

*Example*

The patient went into cardiac arrest while eating dinner (1) and a bystander witnessed the incident and initiated CPR (2):

<b>K</b>	<b>Cardiac Arrest</b>
	Check all applicable boxes
<b>1</b>	<input checked="" type="checkbox"/> <b>Pre-arrival arrest?</b>
	If pre-arrival arrest, was it:
<b>1</b>	<input checked="" type="checkbox"/> <b>Witnessed?</b>
<b>2</b>	<input checked="" type="checkbox"/> <b>Bystander CPR?</b>
<b>2</b>	<input type="checkbox"/> <b>Post-arrival arrest?</b>
	<b>Initial Arrest Rhythm</b>
<b>1</b>	<input type="checkbox"/> <b>V-Fib/V-Tach</b>
<b>0</b>	<input type="checkbox"/> <b>Other</b>
<b>U</b>	<input type="checkbox"/> <b>Undetermined</b>

**CARDIAC ARREST CODES**

- 1 Pre-arrival arrest.
- 2 Post-arrival arrest.

**PRE-ARRIVAL DETAILS CODES**

- 1 Witnessed.
- 2 Bystander CPR.

**Initial Arrest Rhythm***Definition*

The patient's initial heart arrest rhythm as measured by the fire department's EMS personnel with an EKG monitor.

*Purpose*

This element tracks trends and patterns in the types and the survival of cardiac patients.

*Entry*

Check or mark the appropriate box.

*Example*

The patient's arrest rhythm was V-Tach (1):

Example on next page

<b>K</b>	<b>Cardiac Arrest</b>
	Check all applicable boxes
1	<input checked="" type="checkbox"/> Pre-arrival arrest?
	If pre-arrival arrest, was it:
1	<input checked="" type="checkbox"/> Witnessed?
2	<input checked="" type="checkbox"/> Bystander CPR?
2	<input type="checkbox"/> Post-arrival arrest?
	<b>Initial Arrest Rhythm</b>
1	<input checked="" type="checkbox"/> V-Fib/V-Tach
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Undetermined

### INITIAL ARREST RHYTHM CODES

1	V-Fib/V-Tach.
0	Initial arrest rhythm, other.
U	Undetermined.

## SECTION L

This section collects information on the level of training of the fire department responder who treated the patient and the level of care the responder provided.

### **L<sup>1</sup>** Initial Level of Provider ☆

#### *Definition*

The certified training level of the first fire department responder(s) to treat the patient.

#### *Purpose*

This element aids researchers in identifying trends of pre-hospital care delivered by the fire service. This information may also aid researchers in evaluating the effect of pre-hospital CPR and cardiac care on morbidity (or patient outcomes).

#### *Entry*

Check or mark the box that best describes the level of care the first responder was trained to provide as certified by the fire department or State.

#### *Example*

The first fire department responder to arrive on the scene and treat the patient was a first responder (1):

*Example on next page*

L1 Initial Level of Provider 	
1	<input checked="" type="checkbox"/> First Responder
2	<input type="checkbox"/> EMT-B (Basic)
3	<input type="checkbox"/> EMT-I (Intermediate)
4	<input type="checkbox"/> EMT-P (Paramedic)
0	<input type="checkbox"/> Other provider
N	<input type="checkbox"/> No training

### INITIAL LEVEL OF PROVIDER CODES

1	First responder.
2	EMT-B (Basic).
3	EMT-I (Intermediate).
4	EMT-P (Paramedic).
0	Other health care provider. Includes doctor, nurses, etc.
N	No training.

## L<sup>2</sup> Highest Level of Care Provided on Scene

### Definition

The highest level of fire department care that the patient received at the scene of the EMS incident.

### Purpose

This element determines the personnel and equipment requirements for handling EMS incidents. This information may also aid researchers in evaluating the effect of pre-hospital care on morbidity (or patient outcome).

### Entry

Check or mark the box that indicates the highest level of care provided at the scene by the fire department. If no care was provided, check or mark the None box.

### Example

The fire department provided intermediate-level treatment at the scene (3):

L2 Highest Level of Care Provided On Scene		<input type="checkbox"/> None
1	<input type="checkbox"/> First Responder	
2	<input type="checkbox"/> EMT-B (Basic)	
3	<input checked="" type="checkbox"/> EMT-I (Intermediate)	
4	<input type="checkbox"/> EMT-P (Paramedic)	
0	<input type="checkbox"/> Other provider	

**HIGHEST LEVEL OF CARE PROVIDED ON SCENE CODES**

- 1 First responder.
- 2 EMT-B (Basic).
- 3 EMT-I (Intermediate).
- 4 EMT-P (Paramedic).
- 0 Other health care provider. Includes doctors, nurses, etc.
- N No care provided.

**SECTION M****M Patient Status***Definition*

The overall change in the status of the patient as recorded at the time responsibility for the patient is transferred to another agency.

*Purpose*

This element is used to track trends and patterns in relation to the status of the patient at the time of transfer. This entry can also be correlated with other data collected in the EMS module to evaluate pre-hospital care and its influence on patient outcomes.

*Entry*

Check or mark the box that best describes the patient's status when he/she was transferred to another agency for care as compared to the patient's status when the fire department began treatment.

☛ Remember to check or mark the box indicating whether or not the patient had a Pulse on Transfer.

*Example*

The patient's status worsened as the incident progressed (3); by the time he was transferred to hospital care, he had no pulse (2):

<b>M Patient Status</b>	
1	<input type="checkbox"/> Improved
2	<input type="checkbox"/> Remained same
3	<input checked="" type="checkbox"/> Worsened
Check if:	
1	<input type="checkbox"/> Pulse on transfer
2	<input checked="" type="checkbox"/> No pulse on transfer

**PATIENT STATUS CODES**

- 1 Improved.
- 2 Remained same.
- 3 Worsened.

**PULSE ON TRANSFER CODES**

- 1 Pulse on transfer.
- 2 No pulse on transfer.

**SECTION N****N EMS Disposition***Definition*

A description of whether or not the patient was transported from the scene and, if transported, who provided the transport.

*Purpose*

This element is used to correlate the initial call for service with the final actions in the field by providers. For instance, it may be valuable to know how often EMS is activated for patients who require no treatment or transport. Reports generated from this data element may be of use in coordinating the dispatch and responder functions.

*Entry*

Check or mark the box that describes the disposition of the patient. Check or mark the Not Transported box if the patient was not removed from the scene.

*Example*

The patient was transported to the hospital by the fire department (1):

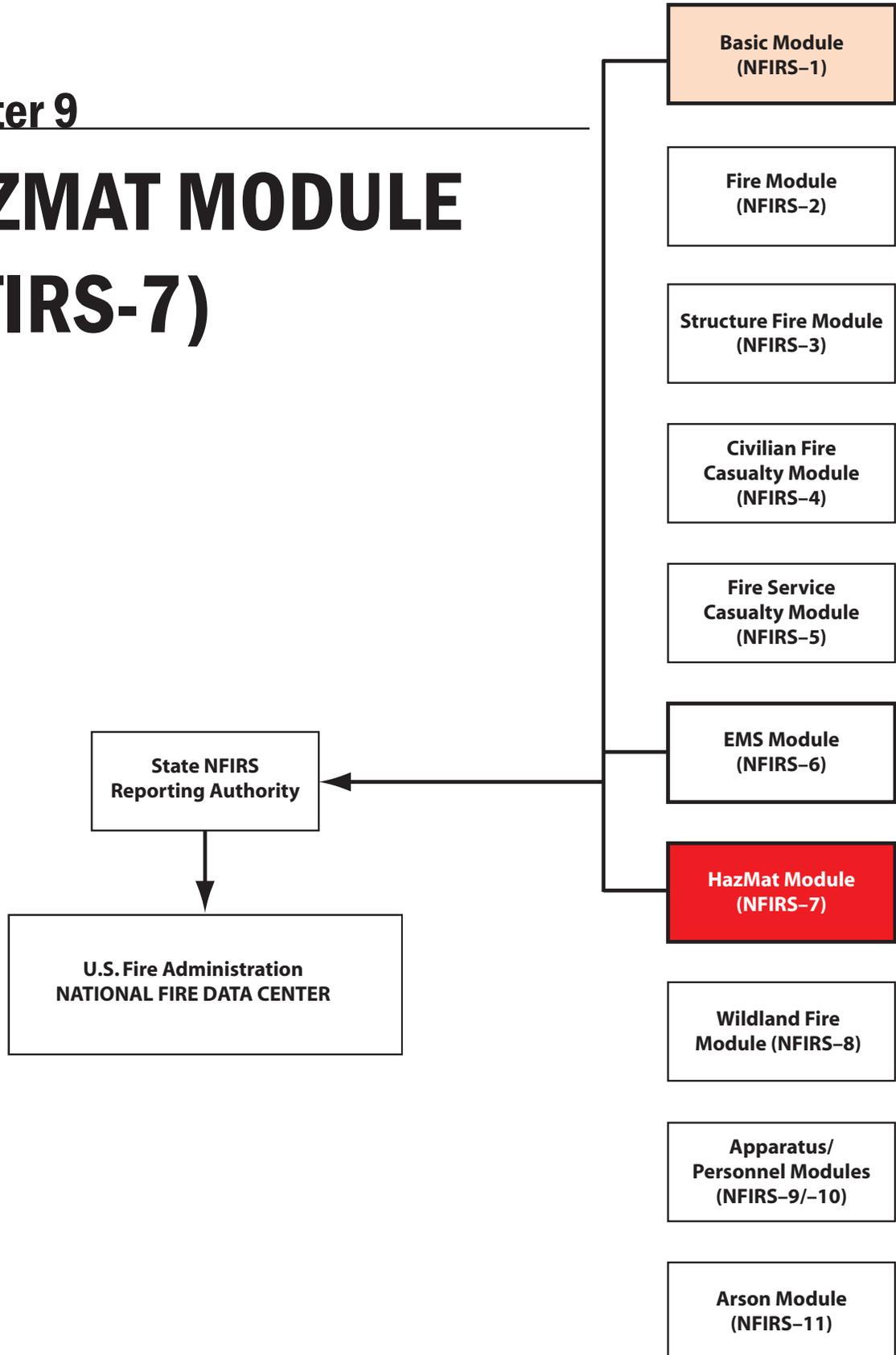
<b>N</b>	<b>EMS Disposition</b>	<input type="checkbox"/> Not transported
1	<input checked="" type="checkbox"/> <b>FD transport to ECF</b>	
2	<input type="checkbox"/> <b>Non-FD transport</b>	
3	<input type="checkbox"/> <b>Non-FD trans/FD attend</b>	
4	<input type="checkbox"/> <b>Non-emergency transfer</b>	
0	<input type="checkbox"/> <b>Other</b>	

**EMS DISPOSITION CODES**

- 1 Fire department transport to emergency care facility (ECF). Includes situations where the EMS responder transports a patient to a rendezvous point for transfer to another EMS responder.
- 2 Non-fire department transport. Fire department EMS responder provided treatment at the scene, but the patient was transferred to the care of another service (at the scene).
- 3 Non-fire department transport with fire department attendant. Fire department EMS responder provided treatment or came upon the scene of a private provider giving treatment and assisted, then rode with the non-fire department transport to the ECF.
- 4 Non-emergency transfer. Includes interfacility transfers under non-emergency conditions.
- 0 EMS disposition, other.
- N Not transported by EMS.

## Chapter 9

# HAZMAT MODULE (NFIRS-7)





## CHAPTER 9 • HAZARDOUS MATERIALS MODULE (NFIRS-7)

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The Hazardous Materials (HazMat) Module is an optional module. It should be used when that option has been chosen by your State or local authorities.

The HazMat Module is used when the Other box in Block H3 (“Hazardous Materials Release”) of the Basic Module (NFIRS-1) has been checked. Its purpose is to document reportable HazMat incidents. Generally speaking, a reportable HazMat incident is when either:

1. Specialized HazMat resources were dispatched or used, or should have been dispatched or used, for assessing, mitigating, or managing the situation.

OR

2. Releases or spills of hazardous materials that exceed 55 gallons occur.

Nothing in this definition is meant to alter compliance with State or local HazMat reporting requirements. In States with mandatory reporting, the State reporting authority determines which optional modules (EMS, HazMat, Wildland, etc.) are to be submitted to the State.

The HazMat Module permits hazardous materials incidents to be thoroughly profiled for incident management analysis and response strategy development. It collects relevant information on:

- Hazardous materials identification.
- Container information.
- Release amounts and location.
- Actions taken.
- Mitigating factors.

In addition, aggregated data on hazardous materials incidents will provide invaluable information that can be used by policymakers who develop regulations for the storage, use, and transportation of hazardous materials. It can also be used to develop recommended guidance for emergency personnel response to HazMat incidents.

- ☛ If more than one HazMat was involved, one form is completed for each HazMat released. (The term *release* is intended to include spill.)

### SECTION A

The guidance and directions for completing Section A of the HazMat Module are essentially the same as for Section A in the Basic Module. One additional field is included in Section A of the HazMat Module (Haz No.). It is stressed that the entries in Section A of the HazMat Module must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3–8.

**A Fire Department Identification (FDID) ☆***Entry*

Enter the same FDID number found in Section A of the Basic Module.

**State ☆***Entry*

Enter the same State abbreviation found in Section A of the Basic Module.

**Incident Date ☆***Entry*

Enter the same incident date found in Section A of the Basic Module.

**Station Number***Entry*

Enter the same station number found in Section A of the Basic Module.

**Incident Number ☆***Entry*

Enter the same incident number found in Section A of the Basic Module.

**Exposure Number ☆***Entry*

If the HazMat release was in connection with a fire incident and the release was in an exposure property, enter the same exposure number that was entered in Section A of the Basic Module for that exposure.

**HazMat Number (Haz No.) ☆***Definition*

A unique HazMat number is assigned to each hazardous material involved in the incident.

*Purpose*

Distinguishes among multiple hazardous materials involved in the incident. Data and information concerning the HazMat can be accessed using this number in conjunction with other unique field information.

*Entry*

Enter the HazMat number for the particular HazMat reported on this module. A separate Haz No. is assigned to each HazMat involved. The first material is always coded “01,” and each succeeding material is numbered sequentially and incremented by 1 beginning with “02.” The two-character numeric field is zero filled, not right justified.

### Example

An incident involving a release from two drums, where the first drum is filled with a flammable liquid and the second drum contains a weak acid. Since two hazardous materials are involved, two separate HazMat Modules are completed. The Haz No. for the first drum would be “01” and the second would be “02”:

A	FDID	State	MM	DD	YYYY	Station	Incident Number	Exposure	01	<input type="checkbox"/> Delete
	☆	☆	Incident Date	☆			☆	☆	Haz No.	☆ <input type="checkbox"/> Change

## Delete/Change

### Definition

Indicates a change to information submitted on a previous HazMat Module or a deletion of all information regarding that specific HazMat release.

### Purpose

To delete or change previously reported information.

### Entry

**Delete.** Check or mark this box when you have previously submitted data on this HazMat release and now want to have the data on this release deleted from the database. If this box is marked, complete Section A, including the HazMat number assigned to this HazMat, and leave the rest of the report blank. Forward the report according to your normally established procedures.

**Change.** Check or mark this box only if you previously submitted this HazMat release to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

### B HazMat ID

The purpose of Section B is to identify the hazardous materials involved in an incident as specifically as possible. Several identification systems exist that can aid fire department personnel in identifying hazardous materials:

- UN Number
- DOT Hazard Classification
- CAS Registration Number
- Chemical Name

Identification of specific hazardous materials involved in fire or rescue incidents is a priority for emergency response personnel.

### UN Number

#### Definition

A four-digit number assigned to the hazardous material that conforms to United Nations (UN) standards for the identification of hazardous materials in international transportation. In some cases, a single UN number will be assigned to several materials with similar properties. Not all hazardous materials have been assigned a UN number.

#### Purpose

Aggregate information on the identities of hazardous materials being released can reveal trends or patterns for particular materials or classes of materials. These trends may provide direction for policymakers, prevention efforts, and training curricula.

#### Entry

Enter the four-digit UN number assigned to the hazardous material. Leave the entry blank if a UN number has not been assigned.

These numbers may be found in a variety of reference materials, including USFA's *Hazardous Materials Guide for First Responders* and the *North American Emergency Response Guidebook (NAERG)*, published by the Research and Special Programs Administration, U.S. Department of Transportation (DOT). A list of commonly encountered materials is included in Appendix D.

#### Example

Enter the UN Number "1203" for a hazardous materials release involving gasoline:

<b>B</b>	HazMat ID	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="0"/>	<input type="text" value="3"/>	<input type="text"/>	Chemical	☆	<input type="text"/>							
		UN Number	DOT Hazard Classification	CAS Registration Number										Chemical Name		

### DOT Hazard Classification

#### Definition

The Department of Transportation hazard classification describes the primary hazard associated with various categories of hazardous materials. The DOT hazard classification is intended for use on placards or labels during the transportation of hazardous materials. Since many materials have multiple hazards, these placards or labels may not describe all of the potential hazards faced by emergency responders at a HazMat incident.

#### Purpose

Aggregate information on the identities of hazardous materials being released can reveal trends or patterns for particular materials or classes of materials. These trends may provide direction for policymakers, prevention efforts, and training curricula.

## Entry

Enter the two-digit code that corresponds with the hazard classification and division code as found on a placard or label, in the NAERG, or from the list below.

- The DOT Hazard Classification consists of a single-digit hazard class code, followed by a decimal point and a single-digit code for the division. For NFIRS data collection, this two-part hazard class/division code has been converted into a two-digit code.

## Example

The HazMat release was a flammable liquid (30):

<b>B</b>	HazMat ID	1   2   0   3	3   0							Chemical Name ☆	
		UN Number	DOT Hazard Classification	CAS Registration Number							

## DOT HAZARD CLASSIFICATION CODES

### Class 1 – Explosives

- 11 Division 1.1 – Explosives with mass explosion hazard.
- 12 Division 1.2 – Explosives with projectile hazard.
- 13 Division 1.3 – Explosives with predominant fire hazard.
- 14 Division 1.4 – Explosives with no significant blast hazard.
- 15 Division 1.5 – Very insensitive explosives; blasting agents.
- 16 Division 1.6 – Extremely insensitive detonating articles.

### Class 2 – Gases

- 21 Division 2.1 – Flammable gases.
- 22 Division 2.2 – Non-flammable, non-toxic compressed gases.
- 23 Division 2.3 – Gases toxic by inhalation.
- 24 Division 2.4 – Corrosive gases (Canada).

### Class 3 – Flammable Liquids (and Combustible Liquids (U.S.))

- 30 Flammable and combustible liquids.

### Class 4 – Flammable Solids, Spontaneously Combustible Materials, and Dangerous-When-Wet Materials

- 41 Division 4.1 – Flammable solids.
- 42 Division 4.2 – Spontaneously combustible materials.
- 43 Division 4.3 – Dangerous-when-wet materials.

### Class 5 – Oxidizers and Organic Peroxides

- 51 Division 5.1 – Oxidizers.
- 52 Division 5.2 – Organic peroxides.

### Class 6 – Toxic Materials and Infectious Substances

- 61 Division 6.1 – Toxic materials.
- 62 Division 6.2 – Infectious substances.

### Class 7 – Radioactive Materials

- 70 Radioactive materials.

### Class 8 – Corrosive Materials

- 80 Corrosive materials.

### Class 9 – Miscellaneous Dangerous Goods

- 91 Division 9.1 – Miscellaneous dangerous goods (Canada).
- 92 Division 9.2 – Environmentally hazardous substances (Canada).
- 93 Division 9.3 – Dangerous wastes (Canada).
- UU Undetermined.

**CAS Registration Number***Definition*

The identification number assigned to a chemical by the Chemical Abstract Service (CAS) of the Chemical Abstract Society. Not all hazardous materials have an assigned CAS number.

*Purpose*

Aggregate information on the identities of hazardous materials being released can reveal trends or patterns for particular materials or classes of materials. These trends may provide direction for policymakers, prevention efforts, and training curricula.

*Entry*

Enter the number assigned by the CAS to the chemical. This number may be found in reference materials, on Material Safety Data Sheets (MSDSs), and on some product labels. A list of CAS numbers for commonly encountered chemicals is included in Appendix D. Leave the entry blank if a CAS registration number has not been assigned.

☛ Enter the number as it appears, including dashes.

*Example*

For gasoline, enter the CAS number “8006–61–9”:

<b>B</b>	<b>HazMat ID</b>	<input type="text" value="1203"/>	<input type="text" value="30"/>	<input type="text" value="8006-61-9"/>	<b>Chemical Name</b> ☆	<input type="text"/>
		UN Number	DOT Hazard Classification	CAS Registration Number		

**Chemical Name ☆***Definition*

A standard chemical or trade name by which the hazardous material is commonly known. Products from different manufacturers with similar active chemical ingredients may have different trade names.

*Purpose*

Aggregate information on the identities of hazardous materials being released can reveal trends or patterns for particular materials or classes of materials. These trends may provide direction for policymakers, prevention efforts, and training curricula.

*Entry*

Enter the chemical or trade name of the hazardous material as shown on the MSDS, product label, packaging, or container.

*Example*

A common herbicide used for household applications may be entered by the trade name “Weed-B-Gone™,” or by the chemical name “2,4-Dichlorophenoxyacetic acid”:

<b>B</b>	<b>HazMat ID</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Chemical Name ☆	<input type="text" value="Weed-B-Gone™"/>
		UN Number	DOT Hazard Classification	CAS Registration Number		

- Those chemicals listed in the *Hazardous Materials Guide for First Responders*, published by the USFA, are also cross-referenced in Appendix D.

## SECTION C

This section collects information on the type and capacity of the container involved in the HazMat release.

### **C<sup>1</sup>** Container Type

#### *Definition*

The type or configuration of the container, equipment, or facility used to transport or store the hazardous material.

#### *Purpose*

Aggregate information on the types of containers involved in HazMat incidents may provide (1) guidance to regulators that establish container design requirements and (2) direction to prevention and code development efforts, emergency response training, and policymaking.

#### *Entry*

Enter the two-digit code for the container type. If no container was involved, check or mark the None box and skip to Block D1.

#### *Example*

The release was from a drum (11):

<b>C<sup>1</sup> Container Type</b> <input type="checkbox"/> None		
<table border="1" style="margin: auto;"> <tr> <td style="width: 20px; text-align: center;">1</td> <td style="width: 20px; text-align: center;">1</td> </tr> </table> Container Type	1	1
1	1	
<div style="border: 1px solid black; padding: 5px; background-color: #f0f0f0; width: fit-content; margin: auto;"> <b>More hazardous materials? Use additional sheets.</b> </div>		

## CONTAINER TYPE CODES

**Portable Container.** A container designed to be transported to a location and left there until emptied, when it may be disposed of or returned to a vendor for refill and reuse.

- 11 Drum. Cylindrical container used to hold non-bulk quantities of product typically in the 55-gallon range. Drums can be of closed- or open-head design and can be constructed of a range of materials, including metal, plastic, or fiberboard. Drums can be used for liquid or solid materials, including flammable liquids or solvents, corrosives, poisons, and other hazardous materials.
- 12 Cylinder. Container used for storing pressurized, liquefied, and dissolved gases. The three types of cylinders include aerosol containers, uninsulated containers, and cryogenic/insulated containers. Cylinders are usually constructed of metal, but some aerosol containers may be plastic or glass. Cylinders have a wide range of service pressures from a few psi to several thousand psi. Some examples of materials stored in cylinders include acetylene, oxygen, carbon dioxide, nitrogen, and propane. Large cylinders known as “ton containers” are used to store chlorine.
- 13 Can or bottle. Container used to store quantities of liquids or solids often intended for household or laboratory use. Cans and bottles can be constructed of metal, glass, plastic, or ceramic. Flammable liquids, solvents, corrosives, and other hazardous materials can be stored in these containers.
- 14 Carboy. A glass or plastic container used to store moderate amounts (up to over 20 gallons) of liquids in industrial or laboratory settings. Carboys are usually shipped in an outer packaging of polystyrene or wood.
- 15 Box or carton. Rigid packages that completely enclose their contents; they can be constructed of metal, plastic, fiberboard, or wood. Boxes or cartons can be used to store liquids or solids and can contain a wide range of hazardous materials. They can also be used as exterior packaging around bottles or cans and can contain radioactive or infectious materials packaged for use in medical facilities or laboratories.
- 16 Bag or sack. Most commonly used for the storage of solid materials, but can also be used for liquids. Bags and sacks can be constructed of cloth, paper, plastic, or a combination of materials in sizes ranging from a few to 100 pounds of material. Flexible intermediate bulk containers (FIBCs), known as “supersacks,” can contain from 119 to 793 gallons of product.
- 17 Cask. Specially designed, tested, and certified containers designed to transport highly radioactive materials. They are constructed to withstand high impacts and have a very low potential of container failure.
- 18 Hose. A portable, flexible tube used to transfer liquid product from one location to another.
- 10 Portable container, other. A container that meets the definition of a portable container but is not specified below.

**Fixed Container.** A container designed and built in a fixed location that is not intended to be moved or transported from that location.

- 21 Tank or silo. These containers can hold a wide range of liquid or solid materials in quantities ranging from several pounds or gallons to bulk storage tanks that can hold thousands of gallons of product. They are usually constructed of metal and may or may not be pressurized.
- 22 Pipe or pipeline. Pipes are used to transport liquids or gases from one location to another. They can be constructed of metal, PVC, or plastic. Pipes can begin and end within a fixed facility, or they may travel some distance as part of a pipeline.
- 23 Bin. Used to store any quantity of solid or granular materials at a fixed facility. Bins can be open or closed and are often used for materials that are insensitive to moisture or minimally reactive.
- 24 Machinery or process equipment. Equipment used for the manufacture of chemical compounds at a fixed facility. Process equipment may include a variety of containers that are combined to facilitate the reaction of chemicals into different compounds.
- 28 Hose. A fixed, flexible hose that can be permanently attached to a storage vessel or can be used to transport materials from one location to another within a facility.
- 20 Fixed container, other. A container that meets the definition of a fixed container but is not specified below.

**Natural Containment.** Any feature that is part of the permanent topography of the area. Natural containment areas can be manmade (for example, a manmade lake or pond).

- 31 Sump or pit. A depression created in the ground that forms a containment area for the storage of liquid or solid materials. Includes sewage treatment or sludge pits.

- 32 Pond or surface impoundment. A natural containment feature used to hold liquid or solid materials, such as a manure pond at a farm or water storage areas at a wastewater treatment facility.
- 33 Well. A well is a deep hole in the ground that was originally intended to provide access to groundwater. Dry wells can be used for the storage of hazardous materials.
- 34 Dump site or landfill. A location where various articles of trash and rubbish are routinely deposited (legally or otherwise). Dump sites and landfills may contain a wide variety of hazardous substances.
- 30 Natural containment, other. A containment that meets the definition of a natural container but is not specified below.

**Mobile Container.** A container designed to be transported from one location to another, intended to store quantities of product that can be offloaded at intermediate locations, or provided for the use of the transporting vehicle itself.

- 41 Vehicle fuel tank and associated piping. Vehicle fuel tanks are mobile tanks that can hold from a few gallons to several thousand gallons of product. Vehicle fuel tanks provide fuel solely for the operation of the vehicle.
- 42 Product tank on or towed by vehicle. These mobile containers may be on the vehicle or towed behind it. They are usually intended to transport product from one location to another for offloading or storage. This includes semi-trailers, trailers, or vehicles specifically designed for the transport of a commodity such as home heating oil or propane.
- 43 Piping associated with mobile product tank loading or offloading. The piping and associated loading/offloading hardware attached to the mobile container.
- 48 Hose. A flexible hose used for loading or offloading mobile containers after it is attached to a discharge pipe or outlet.
- 40 Mobile container, other. Any container that fits the definition of a mobile container but is not classified below.

#### Other Containers

- 91 Rigid intermediate bulk containers (RIBCs). RIBCs can contain from 119 to 793 gallons of liquid or solid product. They are used for the transport and storage of a wide variety of materials and may be constructed of steel or aluminum, but are often formed from rigid polyethylene. RIBCs are transported to a fixed facility where they are used until they are emptied of product, after which they are returned to a vendor for refill and reuse.
- 00 Container type, other.
- NN None.
- UU Undetermined.

## C<sup>2</sup> Estimated Container Capacity

### Definition

The amount of material the container was designed to hold. The container capacity is reported as two data elements. One is a numeric entry and expresses quantity (Block C2); the other defines the unit of measure (Block C3).

- ☛ Both the quantity (Block C2) and the unit of measure (Block C3) must be reported for the data to be meaningful.

### Purpose

Aggregate information on the size of containers involved in HazMat incidents may provide (1) guidance to regulators that establish container design requirements and (2) direction to prevention and code development efforts, emergency response training, and policymaking.

### Entry

Enter the estimated amount of material that the container was designed to hold, by volume or weight, to the nearest whole unit of measure.

*Example*

Enter “55” for a 55-gallon drum:

<b>C2</b>	<b>Estimated Container Capacity</b>
_____ , _____ , [ 5 ] [ 5 ] Capacity: by volume or weight	

**C3** **Units: Capacity**

*Definition*

The unit of measure that defines, by volume or weight, the capacity of the hazardous materials container.

- ☛ Both the quantity (Block C2) and the unit of measure (Block C3) must be reported for the data to be meaningful.

*Entry*

Check or mark the appropriate unit of measure.

*Example*

The unit of measure for the drum is gallons (12):

<b>C3</b>	<b>Units: Capacity</b>	Check one box		
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <b>VOLUME</b>                      11 <input type="checkbox"/> Ounces                      12 <input checked="" type="checkbox"/> Gallons                      13 <input type="checkbox"/> Barrels: 42 gal.                      14 <input type="checkbox"/> Liters                      15 <input type="checkbox"/> Cubic feet                      16 <input type="checkbox"/> Cubic meters                 </td> <td style="width: 50%; vertical-align: top;"> <b>WEIGHT</b>                      21 <input type="checkbox"/> Ounces                      22 <input type="checkbox"/> Pounds                      23 <input type="checkbox"/> Grams                      24 <input type="checkbox"/> Kilograms   <b>MICRO UNITS</b>                      _____ Enter Code                 </td> </tr> </table>			<b>VOLUME</b> 11 <input type="checkbox"/> Ounces 12 <input checked="" type="checkbox"/> Gallons 13 <input type="checkbox"/> Barrels: 42 gal. 14 <input type="checkbox"/> Liters 15 <input type="checkbox"/> Cubic feet 16 <input type="checkbox"/> Cubic meters	<b>WEIGHT</b> 21 <input type="checkbox"/> Ounces 22 <input type="checkbox"/> Pounds 23 <input type="checkbox"/> Grams 24 <input type="checkbox"/> Kilograms  <b>MICRO UNITS</b> _____ Enter Code
<b>VOLUME</b> 11 <input type="checkbox"/> Ounces 12 <input checked="" type="checkbox"/> Gallons 13 <input type="checkbox"/> Barrels: 42 gal. 14 <input type="checkbox"/> Liters 15 <input type="checkbox"/> Cubic feet 16 <input type="checkbox"/> Cubic meters	<b>WEIGHT</b> 21 <input type="checkbox"/> Ounces 22 <input type="checkbox"/> Pounds 23 <input type="checkbox"/> Grams 24 <input type="checkbox"/> Kilograms  <b>MICRO UNITS</b> _____ Enter Code			

**UNITS: CAPACITY CODES**

**Volume Units**

- 11 Ounces (liquid).
- 12 Gallons.
- 13 Barrels (42 gal).
- 14 Liters.
- 15 Cubic feet.
- 16 Cubic meters.

**Weight Units**

- 21 Ounces (weight).
- 22 Pounds.
- 23 Grams.
- 24 Kilograms.

**Micro Units**

31	Parts per billion.
32	Parts per million.
33	Micro Roentgen.
34	Milli Roentgen.
35	Roentgen.
36	RAD.
37	REM.
38	Curie.

**SECTION D****D<sup>1</sup> Estimated Amount Released ☆***Definition*

The amount of hazardous material released from a container expressed as a standard unit of measure. The quantity released is reported as two data elements. One is a numeric entry and expresses quantity (Block D1); the other defines the unit of measure (Block D2).

- ☛ Both the quantity (Block D1) and the unit of measure (Block D2) must be reported for the data to be meaningful.

*Purpose*

Aggregate information on the amount of HazMat released provides an important measure of the magnitude of the release problem.

*Entry*

Enter the estimated amount of material released from the container, by volume or weight, to the nearest whole unit of measure.

*Example*

The HazMat release was estimated at 100 gallons of material:

<b>D<sub>1</sub></b>	<b>Estimated Amount Released ☆</b>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
Amount released: by volume or weight	

**D<sup>2</sup> Units: Released***Definition*

The unit of measure, by volume or weight, for the amount of the hazardous material released from the container.

- Both the quantity (Block D1) and the unit of measure (Block D2) must be reported for the data to be meaningful.

**Entry**

Check or mark the appropriate unit of measure.

**Example**

The unit of measure for the release is gallons (12):

<b>D2 Units: Released</b>		Check one box	
<b>VOLUME</b>		<b>WEIGHT</b>	
11	<input type="checkbox"/> Ounces	21	<input type="checkbox"/> Ounces
12	<input checked="" type="checkbox"/> Gallons	22	<input type="checkbox"/> Pounds
13	<input type="checkbox"/> Barrels: 42 gal.	23	<input type="checkbox"/> Grams
14	<input type="checkbox"/> Liters	24	<input type="checkbox"/> Kilograms
15	<input type="checkbox"/> Cubic feet	<b>MICRO UNITS</b>	
16	<input type="checkbox"/> Cubic meters	<input type="text"/> Enter Code	

**UNITS: RELEASED CODES**

**Volume Units**

- 11 Ounces (liquid).
- 12 Gallons.
- 13 Barrels (42 gal).
- 14 Liters.
- 15 Cubic feet.
- 16 Cubic meters.

**Weight Units**

- 21 Ounces (weight).
- 22 Pounds.
- 23 Grams.
- 24 Kilograms.

**Micro Units**

- 31 Parts per billion.
- 32 Parts per million.
- 33 Micro Roentgen.
- 34 Milli Roentgen.
- 35 Roentgen.
- 36 RAD.
- 37 REM.
- 38 Curie.

## SECTION E

This section deals with the physical state of the HazMat and the environment in which it was released.

## E<sup>1</sup> Physical State When Released

### Definition

The simple physical state of the material during release.

### Purpose

Aggregate information on the physical state of hazardous materials being released can reveal trends or patterns for particular materials, classes of materials, and physical states. These trends may provide direction for policymakers, prevention efforts, and training curricula.

### Entry

Check or mark the box best describing the physical state of the material when released.

### Example

The release of hazardous material was in a liquid state (2).

E <sup>1</sup> Physical State When Released	
1	<input type="checkbox"/> Solid
2	<input checked="" type="checkbox"/> Liquid
3	<input type="checkbox"/> Gas
U	<input type="checkbox"/> Undetermined

#### PHYSICAL STATE WHEN RELEASED CODES

1	Solid.
2	Liquid.
3	Gas.
U	Undetermined.

## E<sup>2</sup> Released Into

### Definition

The general environment contaminated by the hazardous material after release.

### Purpose

Aggregate information on environmental contamination can provide insight on the extent and environmental impact of hazardous materials releases. This may provide important information to resource planners and policymakers who develop zoning ordinances and regulations for the use or transportation of hazardous materials.

### Entry

Enter the code that best describes the environment contaminated by the hazardous material.

### Example

A hazardous materials release spread down a street and into a river (4):

<b>E2</b>	<b>Released Into</b>
	<input type="text" value="4"/> Released into

#### RELEASED INTO CODES

1	Air.
2	Water.
3	Ground.
4	Water and ground.
5	Air and ground.
6	Water and air.
7	Air, water, and ground.
8	Confined, no environmental impact; not released into air, water, or ground.

#### SECTION F

Information on the location of the release and the population density in the area of the release is captured in this section.

## F<sup>1</sup> Released From

### Definition

The physical location from which the hazardous material was released.

### Purpose

Aggregate information on the physical location of hazardous material releases may reveal trends or patterns for particular materials, classes of materials, and physical states. These trends may provide direction for code enforcement or prevention efforts, policymakers, and training curricula.

### Entry

If the location of the release was below grade, check or mark the Below Grade box. If the release was inside or on a structure, check or mark the Inside/On Structure box and enter the Story of Release directly below. If the release was outside a structure, check or mark the Outside of Structure box.

- ☛ For purposes of HazMat data collection, Below Grade also refers to underground releases.
- ☛ Checking or marking the Below Grade box has the effect of entering a negative number in NFIRS 5.0.

### Example

The HazMat release came from an above-ground pipeline (2):

<b>F<sub>1</sub></b>	<b>Released From</b>
	Check all applicable boxes
	<input type="checkbox"/> Below grade
1	<input type="checkbox"/> Inside/on structure
	<input type="checkbox"/> Story of release
2	<input checked="" type="checkbox"/> Outside of structure

#### RELEASED FROM CODES

- |   |                         |
|---|-------------------------|
| 1 | Inside or on structure. |
| 2 | Outside of structure.   |

## F<sub>2</sub> Population Density

### Definition

An estimate of the population density in the area of the hazardous materials release.

### Purpose

Aggregate information on the population density of areas where hazardous materials are released can help define prevention, enforcement, training, and emergency response needs for different areas.

### Entry

Check or mark the box best describing the area where the hazardous material was released.

### Example

The HazMat release occurred in a busy city center (1):

<b>F<sub>2</sub></b>	<b>Population Density</b>
1	<input checked="" type="checkbox"/> Urban
2	<input type="checkbox"/> Suburban
3	<input type="checkbox"/> Rural

#### POPULATION DENSITY CODES

- |   |   |
|---|---|
| 1 | Urban center. Densely populated with extensive development.   |
| 2 | Suburban. Predominantly single-family residential, within a short distance of an urban area. Suburban communities are less densely populated than urban areas but may contain areas of significant development. |
| 3 | Rural. Scattered small communities and isolated family dwellings. Rural areas may be sparsely populated with widely scattered homes or housing developments.  |

## SECTION G

This section collects information on the size of the area affected by a HazMat release and whether an evacuation occurred.

## G<sup>1</sup> Area Affected

### Definition

The amount of area or space directly affected by the hazardous material release. This does not include the area evacuated, or the area contaminated. Evacuation information is recorded in Blocks G1 and G2.

- Both the Area Affected (Block G1) and the Area Evacuated (Block G2) must be reported for the data to be meaningful.

### Purpose

Information on the area affected guides future planning and incident management efforts.

### Entry

Check or mark the appropriate unit-of-measurement box and enter the numeric value for the measurement of the area affected.

### Example

A HazMat release affected a 2,000-square-foot area (1):

<b>G<sub>1</sub> Area Affected</b>	
1	<input checked="" type="checkbox"/> Square feet
2	<input type="checkbox"/> Blocks
3	<input type="checkbox"/> Square miles
2   ,   0   0   0	
Enter measurement	

#### AREA AFFECTED CODES

- |   |               |
|---|---------------|
| 1 | Square feet.  |
| 2 | Blocks.       |
| 3 | Square miles. |

## G<sup>2</sup> Area Evacuated

### Definition

The amount of area or space evacuated as a result of the hazardous materials release or potential release. This includes the contaminated area (Block G1).

- Both the Area Affected (Block G1) and the Area Evacuated (Block G2) must be reported for the data to be meaningful.

### Purpose

Information on the area evacuated can guide future training and incident management efforts. It is also an indirect measure of the amount of emergency resources needed to deal with the release.

### Entry

Check or mark the appropriate unit-of-measurement box and enter the numeric value for the measurement (rounded to the nearest whole number) of the area evacuated. If there was no evacuation, check or mark the None box.

### Example

A daytime chlorine release necessitated the evacuation of 2 square miles (3).

<b>G2 Area Evacuated</b>		<input type="checkbox"/> None
1	<input type="checkbox"/> Square feet	<input type="text"/> , <input type="text"/> 2
2	<input type="checkbox"/> Blocks	Enter
3	<input checked="" type="checkbox"/> Square miles	measurement

#### AREA EVACUATED CODES

- |   |               |
|---|---------------|
| 1 | Square feet.  |
| 2 | Blocks.       |
| 3 | Square miles. |

## G<sup>3</sup> Estimated Number of People Evacuated

### Definition

The estimated number of people evacuated due to the hazardous materials release or potential release.

### Purpose

Information on the number of people evacuated can provide important information to resource planners and policymakers developing zoning ordinances or regulations for the use and transportation of hazardous materials. This information may also help direct future training and incident management efforts for emergency response personnel. It is also an indirect measure of the amount of emergency resources needed to deal with the release.

### Entry

Enter the estimated number of people evacuated.

*Example*

An estimated 800 people were evacuated from a high school that was the site of a hazardous material release in a chemistry laboratory:

<b>G<sub>3</sub></b>	<b>Estimated Number of People Evacuated</b>
	<input type="text"/> , <input type="text"/>

**G<sup>4</sup> Estimated Number of Buildings Evacuated***Definition*

The estimated number of buildings evacuated due to the hazardous materials release or potential release.

*Purpose*

Information on the number of buildings evacuated can provide important information to resource planners and policymakers developing zoning ordinances or regulations for the use and transportation of hazardous materials. This information may also help direct future training and incident management efforts for emergency response personnel. It is also an indirect measure of the amount of emergency resources needed to deal with the release.

*Entry*

Enter the estimated number of buildings evacuated. Include buildings that were already empty in the evacuated area (e.g., houses during the day with no one home). If no buildings were evacuated, check or mark the None box.

*Example*

A two-story commercial structure with a hazardous materials release from a dry cleaning establishment on the first floor was evacuated:

<b>G<sub>4</sub></b>	<b>Estimated Number of Buildings Evacuated</b>
	<input type="text"/> , <input type="text"/> <input type="checkbox"/> None

## SECTION H

**H HazMat Actions Taken***Definition*

Specialized HazMat response actions taken at the scene of an incident by personnel specifically trained and equipped to mitigate hazards arising from hazardous materials releases. Other actions taken by fire service personnel should be entered in the Basic Module.

## Purpose

Information on the actions taken by specialized hazardous materials response personnel can guide future training and incident management efforts.

## Entry

Enter the two-digit code and description for up to three significant HazMat actions taken.

- ☛ Significant non-HazMat actions taken should be entered in the Actions Taken section (F) of the Basic Module.
- ☛ If more than three significant HazMat actions were taken, the additional actions can be documented on the Basic Module.

## Example

Flammable liquid from a semi-trailer was released. HazMat personnel controlled the spill (13), isolated the area (22), and released a statement to the media (33):

<b>H HazMat Actions Taken</b>	
Enter up to three actions taken	
1   3	Spill control & confinement
Primary action taken (1)	
2   2	Isolate, deny entry, zones
Additional action taken (2)	
3   3	Information to public & media
Additional action taken (3)	

## HAZMAT ACTIONS TAKEN CODES

### Hazardous Condition

- |    |   |
|----|---|
| 11 | Identify, analyze hazardous materials.  |
| 12 | HazMat detection, monitoring, sampling, and analysis. Actions taken to detect, monitor, and sample hazardous materials using a variety of detection instruments including combustible gas indicators (CGIs) or explosimeter, oxygen monitors, colorimetric tubes, specific chemical monitors, and others. Results from these devices must be analyzed to provide information about the hazardous nature of the material or environment. |
| 13 | HazMat spill control and confinement. These are actions taken to confine the product release to a limited area including the use of absorbents, damming/diking, diversion of liquid runoff, dispersion, retention, or vapor suppression.  |
| 14 | HazMat leak control and containment. These are actions taken to keep a material within its container including plugging/patching operations, neutralization, pressure isolation/reduction, solidification, and vacuuming.   |
| 15 | Remove hazard or hazardous materials. A broad range of actions taken to remove hazardous materials from a damaged container or contaminated area. Examples of actions to remove hazards include product offload/transfer, controlled burning or product flaring, venting, and overpacking.  |
| 16 | Decontaminate persons or equipment. Actions taken to prevent the spread of contaminants from the “hot zone” to the “cold zone.” This includes gross, technical, or advanced personal decontamination of victims, emergency responders, and equipment.   |

**Isolation and Evacuation.** Actions taken to isolate the contaminated area or evacuate those persons affected by a hazardous materials release or potential release.

- 21 Determine the materials released to be non-hazardous through product identification and environmental monitoring.
- 22 Isolate area and establish hazard control zones. Actions taken to isolate the affected area, deny entry to unprotected persons, and establish hazard control zones (hot, warm, cold).
- 23 Provide apparatus. Actions taken to provide apparatus to conduct evacuation and isolation efforts.
- 24 Provide equipment. Actions taken to provide equipment for evacuation and isolation efforts. Includes equipment provided to care for evacuees.
- 25 Provide water. Actions taken to provide water supply for exposure protection or fire control efforts.
- 26 Control crowd. Actions taken by fire department personnel to control crowds and onlookers.
- 27 Control traffic. Actions taken by fire department personnel to control traffic along evacuation routes.
- 28 Protect in-place operations. Actions taken to protect civilians in their homes, schools, or places of work, without evacuating them from a potentially hazardous area.

**Information, Investigation, and Enforcement.** Actions taken to disseminate information about a hazardous materials incident for the purposes of notifying the public; requesting mutual aid from local, State, or Federal agencies; and conducting investigation or enforcement operations.

- 31 Refer to proper authority. Actions taken to “hand off” the incident from emergency response personnel to cleanup crews or other agencies responsible for restoring the facility and environment to a pre-incident condition.
- 32 Notify other agencies. Actions taken to ensure that other agencies are involved or notified of the incident so that they may provide assistance or fulfill their legally mandated responsibilities.
- 33 Provide information to the public or media. Actions taken to provide information to the public through media resources or through alerting systems like the Emergency Broadcast System. Horns, klaxons, and other warning devices located at fixed facilities for evacuation purposes are included here.
- 34 Investigate. Actions taken to investigate the cause of a hazardous materials release, identify the financially responsible party, and enable cost-recovery efforts.
- 35 Standby. Actions taken to ensure that sufficient resources are on standby for possible use at a hazardous materials incident.
- 00 HazMat actions taken, other. Any other actions taken during the course of a hazardous materials incident that are not identified on the Basic or HazMat Modules.

## SECTION I

### I Release/Ignition Sequence

#### *Definition*

The indication of when a fire or explosion occurred in relation to the actual release of the hazardous material.

#### *Purpose*

Information on the causal relationship of the events occurring during a hazardous materials release can guide future training and incident management efforts.

#### *Entry*

Check or mark the Ignition box if a fire led to a release of hazardous materials. Check or mark the Release box if a hazardous material was spilled or released and then caught fire.

*Example*

An explosion and fire occurred following the spill of a flammable liquid (2):

<b>I</b>		<b>If fire or explosion is involved with a release, which occurred first?</b>	
1	<input type="checkbox"/>	Ignition	U <input type="checkbox"/> Undetermined
2	<input checked="" type="checkbox"/>	Release	

**RELEASE/IGNITION SEQUENCE CODES**

- |   |               |
|---|---------------|
| 1 | Ignition.     |
| 2 | Release.      |
| U | Undetermined. |

**SECTION J****J Cause of Release ☆***Definition*

The cause of the situation present at the time and location of the incident that caused the release or threatened release of a hazardous material.

*Purpose*

Information on the cause of release can guide prevention and enforcement efforts.

*Entry*

Check or mark the box that best describes the cause or reason for the release.

*Example*

The hazardous material was released from a rusted drum (3):

<b>J</b>		<b>Cause of Release ☆</b>	
1	<input type="checkbox"/>	Intentional	
2	<input type="checkbox"/>	Unintentional release	
3	<input checked="" type="checkbox"/>	Container/containment failure	
4	<input type="checkbox"/>	Act of nature	
5	<input type="checkbox"/>	Cause under investigation	
U	<input type="checkbox"/>	Cause undetermined after investigation	

**CAUSE OF RELEASE CODES**

- 1 Intentional.
- 2 Unintentional release.
- 3 Container or containment failure.
- 4 Act of nature.
- 5 Cause under investigation.
- U Cause undetermined after investigation.

**SECTION K****K Factors Contributing to Release***Definition*

Factors present at the time and location of the incident that contributed to the release or threatened release of a hazardous material.

*Purpose*

Information on factors contributing to the release can guide prevention and enforcement efforts.

*Entry*

Enter the two-digit codes and descriptions for up to three significant factors that contributed to the release or threatened release of the hazardous material.

*Example*

Hazardous materials were released from rusted drums (32) (45) at an illegal dump site (31):

<b>K Factors Contributing to Release</b>	
Enter up to three contributing factors	
<input type="text" value="3"/> <input type="text" value="1"/>	<input type="text" value="Discarded HazMat"/>
Factor contributing to release (1)	
<input type="text" value="3"/> <input type="text" value="2"/>	<input type="text" value="Improper storage/temperature"/>
Factor contributing to release (2)	
<input type="text" value="4"/> <input type="text" value="5"/>	<input type="text" value="Improper container"/>
Factor contributing to release (3)	

**FACTORS CONTRIBUTING TO RELEASE CODES**

**Failure To Control Hazardous Material.** Factors where human failure to control the hazardous material contributed to a release or potential release.

- 31 Abandoned or discarded hazardous material. Excludes falling asleep (33), impairment by drugs or alcohol (37), and other impairments (38).
- 32 Failure to maintain the hazardous material within the proper storage or use temperature range.

- 33 Failure to control the hazardous material due to a vehicle or process operator falling asleep.
- 34 Inadequate control of hazardous materials. Includes improper transfer or overfilling of a container. Excludes accidental release due to improper container (45).
- 37 Person possibly impaired by drugs or alcohol while controlling hazardous materials. Excludes people who simply fall asleep (33).
- 38 Person otherwise impaired or unconscious. Includes mental or physical impairment. Excludes people who simply fall asleep (33).
- 30 Failure to control hazardous materials, other. A human failure to control hazardous materials not classified below.

**Misuse of Hazardous Materials**

- 42 Improper mixing technique. Includes mixing and compounding of chemicals. Excludes hazardous materials spills (34).
- 43 Hazardous materials used improperly. Includes chemicals used for the wrong purpose.
- 45 Improper container. Includes containers not designed for the hazardous material contained.
- 46 Improper movement of hazardous materials containers.
- 47 Improper storage procedures. Includes storage near heating equipment and moving parts.
- 48 Children playing with hazardous materials and having no knowledge of the dangers of hazardous materials.
- 49 Criminal Activity.
- 40 Misuse of hazardous materials, other.

**Mechanical Failure, Malfunction.** (Where there is human failure to control, classify in division 3.)

- 51 Automatic control failure.
- 52 Manual control failure.
- 53 Short circuit, ground fault.
- 54 Other part failure, leak, or break.
- 55 Other electrical failure.
- 56 Lack of maintenance, worn out. Includes failures to maintain hazardous materials handling equipment. Excludes short circuits and ground faults (53) and failure to clean (75).
- 50 Mechanical failure, malfunction, other.

**Design, Construction, Installation Deficiency**

- 61 Design deficiency. Includes structures and containers improperly designed for the specific hazardous material.
- 62 Construction deficiency. Includes improperly built structures and containers.
- 64 Installation deficiency. Includes the improper installation of equipment for handling or processing hazardous materials.
- 60 Design, construction, installation deficiency, other.

**Operational Deficiency.** (Where equipment was misused, classify in division 7; misuse of hazardous materials should be classified in division 4.)

- 71 Collision, overturn, knockdown. Includes automobiles and other vehicles.
- 72 Accidentally turned on, not turned off.
- 73 Equipment unattended.
- 74 Equipment overload.
- 75 Failure to clean equipment.
- 76 Improper startup, shutdown procedures.
- 77 Equipment used for purpose not intended. Excludes overloaded equipment (74).
- 78 Equipment not being operated properly. Includes situations where safety or control devices are bypassed.
- 70 Operational deficiency, other.

**Natural Condition.** (For use where the natural condition changed a normally safe operation into an unsafe one.)

- 81 High wind. Includes tornadoes and hurricanes.
- 82 Earthquake.
- 83 High water, flood.
- 84 Lightning.
- 85 Low humidity.
- 86 High humidity.
- 87 Low temperature.
- 88 High temperature.
- 80 Natural condition, other.

**Special Release Factors**

- 91 Animal.
- 92 Secondary release following previous release.
- 93 Reaction with other chemical.
- 97 Failure to use ordinary care under the circumstances, other than as classified above.
- 00 Factors contributing to release, other.
- UU Undetermined.

**SECTION L****L Factors Affecting Mitigation***Definition*

Factors present at the time and location of the incident that affected the fire department's mitigation of the release or threatened release of a hazardous material.

*Purpose*

Information on factors affecting or impeding the mitigation of a release can guide training efforts, resource planning, incident management, and prevention efforts.

*Entry*

Enter the two-digit codes and descriptions for up to three significant factors that impeded or affected the mitigation of the release or threatened release of the hazardous material. If no factors affected the mitigation of the release, check or mark the None box.

*Example*

Flammable liquid was released from an overturned semi-trailer on an interstate highway (18) during rush hour (34) in a severe thunderstorm (42):

<b>L Factors Affecting Mitigation</b>		<input type="checkbox"/> None
Enter up to three factors or impediments that affected the mitigation of the incident		
<input type="text" value="4"/>   <input type="text" value="2"/>	<input type="text" value="Storm"/>	
Factor or impediment (1)		
<input type="text" value="3"/>   <input type="text" value="4"/>	<input type="text" value="Traffic delay"/>	
Factor or impediment (2)		
<input type="text" value="1"/>   <input type="text" value="8"/>	<input type="text" value="Released on major roadway"/>	
Factor or impediment (3)		

**FACTORS AFFECTING MITIGATION CODES****Site Factors**

- 11 Released into water table.
- 12 Released into sewer system.
- 13 Released into wildland/wetland area.
- 14 Released in residential area.

- 15 Released in occupied building.
- 16 Air release in confined area.
- 17 Released, slick on waterway.
- 18 Released on major roadway.
- 10 Site factors, other.

#### Release Factors

- 21 Release of extremely dangerous agent. Includes chemical or biohazard agent; population at risk.
- 22 Threatened release of extremely dangerous agent. Includes chemical or biohazard agent; population at risk.
- 23 Combination of release and fire impeded mitigation of HazMat incident.
- 24 Multiple chemicals released, unknown potential effects.
- 25 Release of unidentified chemicals, unknown potential effects.
- 20 Release factors, other.

#### Impediment or Delay Factors

- 31 Access to release area.
- 32 HazMat apparatus unavailable.
- 33 HazMat apparatus failure.
- 34 Traffic delay.
- 35 Trouble finding location.
- 36 Communications delay.
- 37 HazMat-trained crew unavailable or delayed.
- 30 Impediment or delay factors, other.

#### Natural Conditions

- 41 High wind.
- 42 Storm.
- 43 High water. Includes floods.
- 44 Earthquake.
- 45 Extreme high temperature.
- 46 Extreme low temperature.
- 47 Ice or snow conditions.
- 48 Lightning.
- 49 Animal.
- 40 Natural conditions, other.
- 00 Factors affecting mitigation, other.
- NN None.

### SECTION M

## M Equipment Involved in Release

☛ Most of the *Equipment Involved in Release* codes were included in *Equipment Involved in Ignition* in NFIRS 4.1.

### Equipment Type

#### Definition

The piece of equipment that either malfunctioned or, while working properly, allowed the release or threatened release of hazardous materials.

#### Purpose

Analysis of the equipment involved in a HazMat release is useful for improving product safety and preventive maintenance. It is just as important to know the kind of equipment that was used improperly as it is to know the kind of equipment that malfunctioned. Misuse can be the direct result of the way the equipment is designed and constructed. When involved in release, equipment information provides an important part of the causal data. Equipment involved in release can be compared to other causal data to determine if the equipment was (or was not) operating properly.

### Entry

Enter the three-digit code and description that best describes the equipment involved in the release. If no equipment was involved, check or mark the None box.

- ☛ If a vehicle was involved in the release, use Section N.

### Example

Refrigerant from a large commercial air conditioning unit was released (111):

<b>M</b>	<b>Equipment Involved in Release</b>	<input type="checkbox"/> None
1   1   1	Industrial air conditioner	
Equipment involved in release		
Brand		
Model		
Serial #		
Year		

- ☛ An alphabetized synonym list for the following Equipment Involved in Release codes is presented in Appendix B.

## EQUIPMENT INVOLVED IN RELEASE CODES

### Heating, Ventilation, and Air Conditioning

- 111 Air conditioner.
- 112 Heat pump.
- 113 Fan.
- 114 Humidifier, non-heat producing. Excludes heaters with built-in humidifiers (131, 132).
- 115 Ionizer.
- 116 Dehumidifier, portable.
- 117 Evaporative cooler, cooling tower.
- 121 Fireplace, masonry.
- 122 Fireplace, factory-built.
- 123 Fireplace, insert/stove.
- 124 Stove, heating.
- 125 Chimney connector, vent connector.
- 126 Chimney: brick, stone, masonry.
- 127 Chimney: metal. Includes stovepipes and flues.
- 120 Fireplace, chimney, other.
- 131 Furnace, local heating unit, built-in. Includes built-in humidifiers. Excludes process furnaces, kilns (353).
- 132 Furnace, central heating unit. Includes built-in humidifiers. Excludes process furnaces, kilns. (353)
- 133 Boiler (power, process, heating).
- 141 Heater. Includes floor furnaces, wall heaters, and baseboard heaters. Excludes catalytic heaters (142), oil-filled heaters (143), hot water heaters (152).

- 142 Heater, catalytic.
- 143 Heater, oil-filled. Excludes kerosene heaters (141).
- 144 Heat lamp.
- 145 Heat tape.
- 151 Water heater. Includes sink-mounted instant hot water heaters and waterbed heaters.
- 152 Steam line, heat pipe, hot air duct. Includes radiators and hot water baseboard heaters.
- 100 Heating, ventilation, and air conditioning, other.

### **Electrical Distribution, Lighting, and Power Transfer**

- 211 Electrical power (utility) line. Excludes wires from the utility pole to the structure.
- 212 Electrical service supply wires; wires from utility pole to meter box.
- 213 Electric meter, meter box.
- 214 Electrical wiring from meter box to circuit breaker board, fuse box, or panel board.
- 215 Panel board (fuse); switchboard, circuit breaker board with or without ground-fault interrupter
- 216 Electrical branch circuit. Includes armored (metallic) cable, nonmetallic sheathing, or wire in conduit.
- 217 Outlet, receptacle. Includes wall-type receptacles, electric dryer and stove receptacles.
- 218 Wall-type switch. Includes light switches.
- 219 Ground-fault interrupter (GFI), portable, plug-in.
- 210 Electrical wiring, other.
- 221 Transformer, distribution-type.
- 222 Overcurrent, disconnect equipment. Excludes panel boards.
- 223 Transformer, low-voltage (not more than 50 volts).
- 224 Generator.
- 225 Inverter.
- 226 Uninterrupted power supply (UPS).
- 227 Surge protector.
- 228 Battery charger, rectifier.
- 229 Battery. Includes all battery types.
- 231 Lamp: tabletop, floor, desk. Excludes halogen fixtures (235) and light bulbs (238).
- 232 Lantern, flashlight.
- 233 Incandescent lighting fixture.
- 234 Fluorescent lighting fixture, ballast.
- 235 Halogen lighting fixture or lamp.
- 236 Sodium, mercury vapor lighting fixture or lamp.
- 237 Portable or movable work light, trouble light.
- 238 Light bulb.
- 230 Lamp, lighting, other.
- 241 Night light.
- 242 Decorative lights, line voltage. Includes holiday lighting, Christmas lights.
- 243 Decorative or landscape lighting, low voltage.
- 244 Sign. Includes neon signs.
- 251 Fence, electric.
- 252 Traffic control device
- 253 Lightning rod, arrester/grounding device.
- 261 Power cord, plug; detachable from appliance.
- 262 Power cord, plug; permanently attached to appliance.
- 263 Extension cord.
- 260 Cord, plug, other.
- 200 Electrical distribution, lighting, and power transfer, other.

**Shop Tools and Industrial Equipment**

- 311 Power saw.
- 312 Power lathe.
- 313 Power shaper, router, jointer, planer.
- 314 Power cutting tool.
- 315 Power drill, screwdriver.
- 316 Power sander, grinder, buffer, polisher.
- 317 Power hammer, jackhammer.
- 318 Power nail gun, stud driver, stapler.
- 310 Power tools, other.
- 321 Paint dipper.
- 322 Paint flow coating machine.
- 323 Paint mixing machine.
- 324 Paint sprayer.
- 325 Coating machine. Includes asphalt-saturating and rubber-spreading machines.
- 320 Painting tools, other.
- 331 Welding torch. Excludes cutting torches (332).
- 332 Cutting torch. Excludes welding torches (331).
- 333 Burners. Includes Bunsen burners, plumber furnaces, and blowtorches. Excludes weed burners (523).
- 334 Soldering equipment.
- 341 Air compressor.
- 342 Gas compressor.
- 343 Atomizing equipment. Excludes paint spraying equipment (324).
- 344 Pump. Excludes pumps integrated with other types of equipment.
- 345 Wet/Dry vacuum (shop vacuum).
- 346 Hoist, lift, crane.
- 347 Powered jacking equipment. Includes hydraulic rescue tools.
- 348 Drilling machinery or equipment. Includes water or gas drilling equipment.
- 340 Hydraulic equipment, other.
- 351 Heat-treating equipment.
- 352 Incinerator.
- 353 Industrial furnace, oven, kiln. Excludes ovens for cooking (646).
- 354 Tarpot, tar kettle.
- 355 Casting, molding, forging equipment.
- 356 Distilling equipment.
- 357 Digester, reactor.
- 358 Extractor, waste recovery machine. Includes solvent extractors such as used in dry-cleaning operations and garnetting equipment.
- 361 Conveyor. Excludes agricultural conveyors (513).
- 362 Power transfer equipment: ropes, cables, blocks, belts.
- 363 Power takeoff.
- 364 Powered valves.
- 365 Bearing or brake.
- 371 Picking, carding, weaving machine. Includes cotton gins.
- 372 Testing equipment.
- 373 Gas regulator. Includes propane, butane, LP, or natural gas regulators and flexible hose connectors to gas appliances.
- 374 Motor, separate. Includes bench motors. Excludes internal combustion motors (375).
- 375 Internal combustion engine (nonvehicular).
- 376 Printing press.
- 377 Car washing equipment.
- 300 Shop tools and industrial equipment, other.

### Commercial and Medical Equipment

- 411 Dental, medical, or other powered bed or chair. Includes powered wheelchairs.
- 412 Dental equipment, other.
- 413 Dialysis equipment.
- 414 Medical imaging equipment. Includes MRI, CAT scan, and ultrasound.
- 415 Medical monitoring equipment.
- 416 Oxygen administration equipment.
- 417 Radiological equipment, x-ray, radiation therapy.
- 418 Sterilizer, medical.
- 419 Therapeutic equipment.
- 410 Medical equipment, other.
- 421 Transmitter.
- 422 Telephone switching gear, including PBX.
- 423 TV monitor array. Includes control panels with multiple TV monitors and security monitoring stations. Excludes single TV monitor configurations (753).
- 424 Studio-type TV camera. Includes professional studio television cameras. Excludes home camcorders and video equipment (756).
- 425 Studio-type sound recording/modulating equipment.
- 426 Radar equipment.
- 431 Amusement ride equipment.
- 432 Ski lift.
- 433 Elevator or lift.
- 434 Escalator.
- 441 Microfilm, microfiche viewing equipment.
- 442 Photo processing equipment. Includes microfilm processing equipment.
- 443 Vending machine.
- 444 Nonvideo arcade game. Includes pinball machines and the like. Excludes electronic video games (755).
- 445 Water fountain, water cooler.
- 446 Telescope. Includes radio telescopes.
- 451 Electron microscope.
- 450 Laboratory equipment, other.
- 400 Commercial and medical equipment, other.

### Garden Tools and Agricultural Equipment

- 511 Combine, threshing machine.
- 512 Hay processing equipment.
- 513 Farm elevator or conveyor.
- 514 Silo loader, unloader, screw/sweep auger.
- 515 Feed grinder, mixer, blender.
- 516 Milking machine.
- 517 Pasteurizer. Includes milk pasteurizers.
- 518 Cream separator.
- 521 Sprayer, farm or garden.
- 522 Chain saw.
- 523 Weed burner.
- 524 Lawn mower.
- 525 Lawn, landscape trimmer, edger.
- 531 Lawn vacuum.
- 532 Leaf blower.
- 533 Mulcher, grinder, chipper. Includes leaf mulchers.
- 534 Snow blower, thrower.
- 535 Log splitter.
- 536 Post hole auger.

- 537 Post driver, pile driver.
- 538 Tiller, cultivator.
- 500 Garden tools and agricultural equipment, other.

### **Kitchen and Cooking Equipment**

- 611 Blender, juicer, food processor, mixer.
- 612 Coffee grinder.
- 621 Can opener.
- 622 Knife.
- 623 Knife sharpener.
- 631 Coffee maker or teapot.
- 632 Food warmer, hot plate.
- 633 Kettle.
- 634 Popcorn popper.
- 635 Pressure cooker or canner.
- 636 Slow cooker.
- 637 Toaster, toaster oven, countertop broiler.
- 638 Waffle iron, griddle.
- 639 Wok, frying pan, skillet.
- 641 Bread-making machine.
- 642 Deep fryer.
- 643 Grill, hibachi, barbecue.
- 644 Microwave oven.
- 645 Oven, rotisserie.
- 646 Range with or without an oven or cooking surface. Includes counter-mounted stoves.
- 647 Steam table, warming drawer/table.
- 651 Dishwasher.
- 652 Freezer when separate from refrigerator.
- 653 Garbage disposer.
- 654 Grease hood/duct exhaust fan.
- 655 Ice maker (separate from refrigerator).
- 656 Refrigerator, refrigerator/freezer.
- 600 Kitchen and cooking equipment, other.

### **Electronic and Other Electrical Equipment**

- 711 Computer. Includes devices such as hard drives and modems installed inside the computer casing. Excludes external storage devices (712).
- 712 Computer storage device, external. Includes CD-ROM devices, tape drives, and disk drives. Excludes such devices when they are installed within a computer (711).
- 713 Computer modem, external. Includes digital, ISDN modems, cable modems, and modem racks. Excludes modems installed within a computer (711).
- 714 Computer monitor. Includes LCD or flat-screen monitors.
- 715 Computer printer. Includes multifunctional devices such as copier, fax, and scanner.
- 716 Computer projection device, LCD panel, projector.
- 710 Computer device, other.
- 721 Adding machine, calculator.
- 722 Telephone or answering machine.
- 723 Cash register.
- 724 Copier. Includes large standalone copiers. Excludes small copiers and multifunctional devices (715).
- 725 Fax machine.
- 726 Paper shredder.
- 727 Postage, shipping meter equipment.
- 728 Typewriter.

720	Office equipment, other.
731	Guitar.
732	Piano, organ. Includes player pianos. Excludes synthesizers and musical keyboards (733).
733	Musical synthesizer or keyboard. Excludes pianos, organs (732).
730	Musical instrument, other.
741	CD player (audio). Excludes computer CD, DVD players (712).
742	Laser disk player. Includes DVD players and recorders.
743	Radio. Excludes two-way radios (744).
744	Radio, two-way.
745	Record player, phonograph, turntable.
747	Speakers, audio; separate components.
748	Stereo equipment. Includes receivers, amplifiers, equalizers. Excludes speakers (747).
749	Tape recorder or player.
740	Sound recording or receiving equipment, other.
751	Cable converter box.
752	Projector: film, slide, overhead.
753	Television.
754	VCR or VCR-TV combination.
755	Video game, electronic.
756	Camcorder, video camera.
757	Photographic camera and equipment. Includes digital cameras.
750	Video equipment, other.
700	Electronic equipment, other.

### Personal and Household Equipment

811	Clothes dryer.
812	Trash compactor.
813	Washer/Dryer combination (within one frame).
814	Washing machine, clothes.
821	Hot tub, whirlpool, spa.
822	Swimming pool equipment.
830	Floor care equipment, other.
831	Broom, electric.
832	Carpet cleaning equipment. Includes rug shampooers.
833	Floor buffer, waxer, cleaner.
834	Vacuum cleaner.
841	Comb, hair brush.
842	Curling iron.
843	Electrolysis equipment.
844	Hair curler warmer.
845	Hair dryer.
846	Makeup mirror, lighted.
847	Razor, shaver (electric).
848	Suntan equipment, sunlamp.
849	Toothbrush (electric).
850	Portable appliance designed to produce heat, other.
851	Baby bottle warmer.
852	Blanket, electric.
853	Heating pad.
854	Clothes steamer.
855	Clothes iron.
861	Automatic door opener. Excludes garage door openers (863).
862	Burglar alarm.
863	Garage door opener.

864	Gas detector.
865	Intercom.
866	Smoke or heat detector, fire alarm. Includes control equipment.
868	Thermostat.
871	Ashtray.
872	Charcoal lighter, utility lighter.
873	Cigarette lighter, pipe lighter.
874	Fire-extinguishing equipment. Includes electronic controls.
875	Insect trap. Includes bug zappers.
876	Timer.
881	Model vehicles. Includes model airplanes, boats, rockets, and powered vehicles used for hobby and recreational purposes.
882	Toy, powered.
883	Woodburning kit.
891	Clock.
892	Gun.
893	Jewelry-cleaning machine.
894	Scissors.
895	Sewing machine.
896	Shoe polisher.
897	Sterilizer, non-medical.
800	Personal and household equipment, other.

### Other Equipment Involved in Release

000	Equipment involved in release, other.
NNN	None.
UUU	Undetermined

### Equipment Brand, Model, Serial Number, and Year

#### Definition

The information in this block precisely identifies the equipment that was involved in the HazMat release. As possible, the following information should be recorded:

**Brand:** The name by which the equipment is most commonly known.

**Model:** The model name or number assigned to the equipment by the manufacturer. If there is no specific model name or number, use the common physical description of the equipment.

**Serial Number:** The manufacturer's serial number that is generally stamped on an identification plate on the equipment.

**Year:** The year that the equipment was built.

#### Purpose

This element identifies specific types of equipment that failed or contributed to the release. This information can be used to determine whether particular brands or models cause problems more frequently than others; and to identify equipment for product recalls or in the development of new product safety codes.

### Entry

Enter the brand, model, serial number, and year of the equipment involved in the release.

### Example

The commercial air conditioner was a 1997 Freezidaire Model Z2000, serial number 1267-45-0078:

<b>M</b>	<b>Equipment Involved in Release</b>	<input type="checkbox"/> None
1   1   1	Industrial air conditioner	
Equipment involved in release		
Brand	Freezidaire	
Model	Z2000	
Serial #	1267-45-0078	
Year	1   9   9   7	

## SECTION N

### N Mobile Property Involved in Release

#### Property Type

##### Definition

Property designed and constructed to be mobile, movable under its own power, or towed, such as an airplane, automobile, boat, cargo trailer, farm vehicle, motorcycle, or recreational vehicle, that either failed or, while working properly, allowed the release or threatened release of hazardous materials.

##### Purpose

This information can guide prevention, enforcement, and product design efforts. Depending on State and local laws, specific documentation on mobile property involved in the release of a hazardous material may assist the fire department in collecting reimbursement from the responsible party for the expenses incurred in mitigating the hazardous materials incident.

### Entry

Enter the two-digit code and description of the type of mobile property. If no mobile property was involved, check or mark the None box.

### Example

Flammable gas was released from a propane delivery truck (26):

Example on next page

<b>N Mobile Property Involved in Release</b>		<input type="checkbox"/> None
2 6 LP Gas Tank Truck		
Mobile property type		
Mobile property make		
Model		Year
License plate number		State
DOT number/ICC number		

### Make, Model, Year, License Number, State, DOT/ICC Number

#### Definitions

The information in this block precisely identifies the mobile property involved in a HazMat release. As possible, the following information should be recorded:

**Make:** The name of the manufacturer of the property.

**Model:** The manufacturer's model name. If one does not exist, use the physical description of the property that is commonly used to describe it, such as an "8,500-gallon tank truck."

**Year:** The year the property was manufactured.

**License Plate Number (if any):** The number on the license plates affixed to the vehicle; plates are generally issued by the State agency of motor vehicles. License numbers may also be available for boats, airplanes, and farm vehicles.

**State:** The State where the vehicle is licensed.

- ☛ If a commercial vehicle that is involved in the incident is licensed in multiple States, record the State license where the release occurred. If no license exists for the State where the release occurred, use the State license of the vehicle's home origin.

**DOT/ICC Number:** The identification number assigned to the commercial carrier by either the Interstate Commerce Commission (ICC) or the Department of Transportation (DOT). It is generally stenciled on the vehicle or trailer.

**Purpose**

This element provides detailed information that identifies the specific types of mobile property involved in a hazardous materials release, which can be used to determine whether particular brands or models are more often a problem than others. Data on make, model, year, and other information are useful for determining compliance to standards of mobile properties and analyzing the effectiveness of these codes, standards, and regulations. The data also can be used to identify any special hazards.

**Entry**

Enter the two-digit code and description of the property type. Enter the two-character code (from the list at the end of this section) and description of the property make. Enter the remaining information as appropriate. Be as specific as possible in making these entries.

☛ Both the License Plate Number and DOT Number/ICC Number are left-justified in their fields.

**Example**

A release of LP gas from a 1967 Mack (MK) Bobtail tank truck occurred. The truck was licensed in Virginia (plate 12345) and was stenciled with a DOT number of 189267:

<b>N</b>		<b>Mobile Property Involved in Release</b>		<input type="checkbox"/> None	
2   6		LP Gas Tank Truck			
Mobile property type					
M   K		Mack			
Mobile property make					
Bobtail				1   9   6   7	
Model				Year	
1   2   3   4   5					V   A
License plate number					State
1   8   9   2   6   7					
DOT number/ICC number					

**MOBILE PROPERTY TYPE CODES**

**Passenger Road Vehicles**

- 11 Automobile, passenger car, ambulance, limousine, race car, taxicab.
- 12 Bus, school bus. Includes “trackless” trolley buses.
- 13 Off-road recreational vehicle. Includes dune buggies, golf carts, go-carts, snowmobiles. Excludes sport utility vehicles (11) and motorcycles (18).
- 14 Motor home (has own engine), camper mounted on pickup, bookmobile.
- 15 Trailer, travel; designed to be towed.
- 16 Trailer, camping; collapsible, designed to be towed.
- 17 Mobile home, bank, classroom, or office (all designed to be towed), whether mounted on a chassis or on blocks for semipermanent use.
- 18 Motorcycle, trail bike. Includes motor scooters and mopeds.
- 10 Passenger road vehicles, other.

**Freight Road Transport Vehicles**

- 21 General use truck, dump truck, fire apparatus.
- 22 Hauling rig (non-motorized), pickup truck.
- 23 Trailer, semi; designed for freight (with or without tractor).
- 24 Tank truck, nonflammable cargo. Includes milk and water tankers, liquid nitrogen tankers.
- 25 Tank truck, flammable or combustible liquid, chemical cargo.
- 26 Tank truck, compressed gas or LP gas.
- 27 Garbage, waste, refuse truck. Includes recyclable material collection trucks. Excludes roll-on-type trash containers (73).
- 20 Freight road transport vehicles, other.

**Rail Transport Vehicles**

- 31 Diner car, passenger car.
- 32 Box, freight, or hopper car.
- 33 Tank car.
- 34 Container or piggyback car (see 73 for container).
- 35 Engine/locomotive.
- 36 Rapid transit car, trolley (self-powered for use on track). Includes self-powered rail passenger vehicles.
- 37 Maintenance equipment car. Includes cabooses and cranes.
- 30 Rail transport vehicles, other.

**Water Vessels**

- 41 Boat less than 65 ft (20 m) in length overall. Excludes commercial fishing vessels (48).
- 42 Boat or ship equal to or greater than 65 ft (20 m) in length but less than 1,000 tons.
- 43 Cruise liner or passenger ship equal to or greater than 1,000 tons.
- 44 Tank ship.
- 45 Personal water craft. Includes one- or two-person recreational water craft.
- 46 Cargo or military ship equal to or greater than 1,000 tons. Includes vessels not classified in 44 and 47.
- 47 Non-self-propelled vessel. Includes all vessels without their own motive power, such as towed petroleum balloons, barges, and other towed or towable vessels. Excludes sailboats (49).
- 48 Commercial fishing or processing vessel. Includes shell fishing vessels.
- 49 Sailboats. Includes those with auxiliary power.
- 40 Water vessels, other.

**Aircraft**

- 51 Personal, business, utility aircraft less than 12,500 lb (5,670 kg) gross weight. Includes gliders.
- 52 Personal, business, utility aircraft equal to or greater than 12,500 lb (5,670 kg) gross weight.
- 53 Commercial aircraft: propeller-driven, fixed-wing. Includes turbo props.
- 54 Commercial aircraft: jet and other turbine-powered, fixed-wing.
- 55 Helicopters, nonmilitary. Includes gyrocopters.
- 56 Military fixed-wing aircraft. Includes bomber, fighter, patrol, vertical takeoff and landing (fixed-wing vertical stall) aircraft.
- 57 Military non-fixed-wing aircraft. Includes helicopters.
- 58 Balloon vehicles. Includes hot air balloons and blimps.
- 50 Air, other.

**Industrial, Agricultural, Construction Vehicles**

- 61 Construction vehicle. Includes bulldozers, shovels, graders, scrapers, trenchers, plows, tunneling equipment, and road pavers.
- 63 Loader, industrial. Includes fork lifts, industrial tow motors, loaders, and stackers.
- 64 Crane.
- 65 Agricultural vehicle, baler, chopper (farm use).
- 67 Timber harvest vehicle. Includes skycars, loaders.
- 60 Industrial, construction, or agricultural vehicles, other.

**Mobile Property, Miscellaneous**

71	Home, garden vehicle. Includes riding lawnmowers, snow removal vehicles, riding tractors. Excludes equipment where operator does not ride. See Equipment Involved in Ignition.
73	Shipping container, mechanically moved. Includes haulable trash containers, intermodal shipping containers.
74	Armored vehicle. Includes armored cars and military vehicles. Excludes armored aircraft and ships.
75	Missile, rocket, and space vehicles.
76	Aerial tramway vehicle.
00	Mobile property, other.
NN	No mobile property.

MOBILE PROPERTY MAKE CODES					
AC	Acura	IF	Infiniti	PT	Peterbilt
AR	Alfa Romeo	IN	International	PU	Peugeot
AN	Antique Vehicle	IS	Isuzu	PI	Pierce
AM	Aston Martin	IT	Italjet	PL	Plymouth
AT	ATK	IV	Iveco	PN	Pontiac
AU	Audi	JA	Jaguar	PR	Porsche
BE	Beta	JE	Jeep	RG	Range Rover
BM	BMW	KA	Kawasaki	RN	Rogue (Ottawa)
BL	Buell	KE	Kenworth	RR	Rolls Royce
BU	Buick	KI	Kia	SB	Saab
CD	Cadillac	KT	KTM	SA	Saturn
CP	Caterpillar	LR	Land Rover	SC	Scania
CH	Chevrolet	LE	Lexus	SD	Simon Duplex
CR	Chrysler	LI	Lincoln	ST	Sterling
CV	Classic Vehicle	LO	Lotus	SU	Subaru
CC	Crane Carrier (CCC)	MK	Mack	SZ	Suzuki
DA	Daihatsu	ML	Maely	TO	Toyota
DR	Diamond Reo	MA	Maico	TR	Triumph
DO	Dodge	MH	Marmon	UD	UD
DU	Ducati	MS	Maserati	UT	Utilmaster
EA	Eagle	MZ	Mazda	VE	Vespa
FE	Ferrari	MB	Mercedes Benz	VO	Volkswagen
FO	Ford	MC	Mercury	VL	Volvo
FR	Freightliner	MR	Merkur	VG	Volvo GMC
FW	FWD	MT	Mitsubishi	WK	Walker
GE	Geo	MO	Montesa	WL	Walter
GM	GMC (General Motors)	MG	Moto Guzzi	WS	Western Star
HD	Harley Davidson	MM	Moto Morini	WG	White GMC
HI	Hino	NA	Navistar	YA	Yamaha
HO	Honda	NI	Nissan	YU	Yugo
HU	Husqvarna	OL	Oldsmobile	OO	Other Make
HY	Hyundai	OS	Oshkosh		

## SECTION 0

**0 HazMat Disposition ☆***Definition*

The fire department either completed the handling of the hazardous materials incident or the incident was released to another agency or to the property owner for completion.

*Purpose*

This element assists in understanding the extent to which the fire department is involved in resolving the incident and the frequency in which other agencies or contractors are used for incident mitigation.

*Entry*

Check or mark the box that best describes the final disposition of the incident by the fire department.

*Example*

The scene was released to a qualified cleanup contractor (7):

0 HazMat Disposition ☆	
1	<input type="checkbox"/> Completed by fire service only
2	<input type="checkbox"/> Completed w/fire service present
3	<input type="checkbox"/> Released to local agency
4	<input type="checkbox"/> Released to county agency
5	<input type="checkbox"/> Released to state agency
6	<input type="checkbox"/> Released to federal agency
7	<input checked="" type="checkbox"/> Released to private agency
8	<input type="checkbox"/> Released to property owner or manager

**HAZMAT DISPOSITION CODES**

- |   |  |
|---|--|
| 1 | Completed by fire service only.        |
| 2 | Completed with fire service present.   |
| 3 | Released to local agency.              |
| 4 | Released to county agency.             |
| 5 | Released to State agency.              |
| 6 | Released to Federal agency.            |
| 7 | Released to private agency.            |
| 8 | Released to property owner or manager. |

## SECTION P

**P HazMat Civilian Casualties***Definition*

The number of civilians injured or killed, either as a result of a HazMat incident or the action of handling the HazMat incident. The term *injury* refers to physical damage to a person that requires either:

- ☛ Treatment within 1 year of the incident by a practitioner of medicine,

OR

- ☛ At least 1 day of restricted activity immediately following the incident. An injured person is a casualty.

*Purpose*

The collection of information on the number of persons injured or killed as a result of their contact or exposure to hazardous materials that have been spilled or released can provide a concise measure of the scope of the human cost associated with hazardous materials incidents. This information can also be correlated with container types, transport conditions, actions taken, and other data to help understand how to reduce future HazMat injuries.

*Entry*

Identify and record separately the number of civilians injured and the number of civilians killed as a result of a HazMat incident.

- ☛ The optional EMS Module may be completed for all non-fire service persons injured or killed as a result of their contact or exposure to hazardous materials. The Civilian Fire Casualty Module should not be used for this purpose unless the release resulted in a fire and the civilians were injured as a result of the fire. The Fire Service Casualty Module should be completed for all fire service personnel injured or killed as a result of their contact or exposure to hazardous materials.
- ☛ HazMat civilian casualties should not be entered in Block H1 of the Basic Module.

*Example*

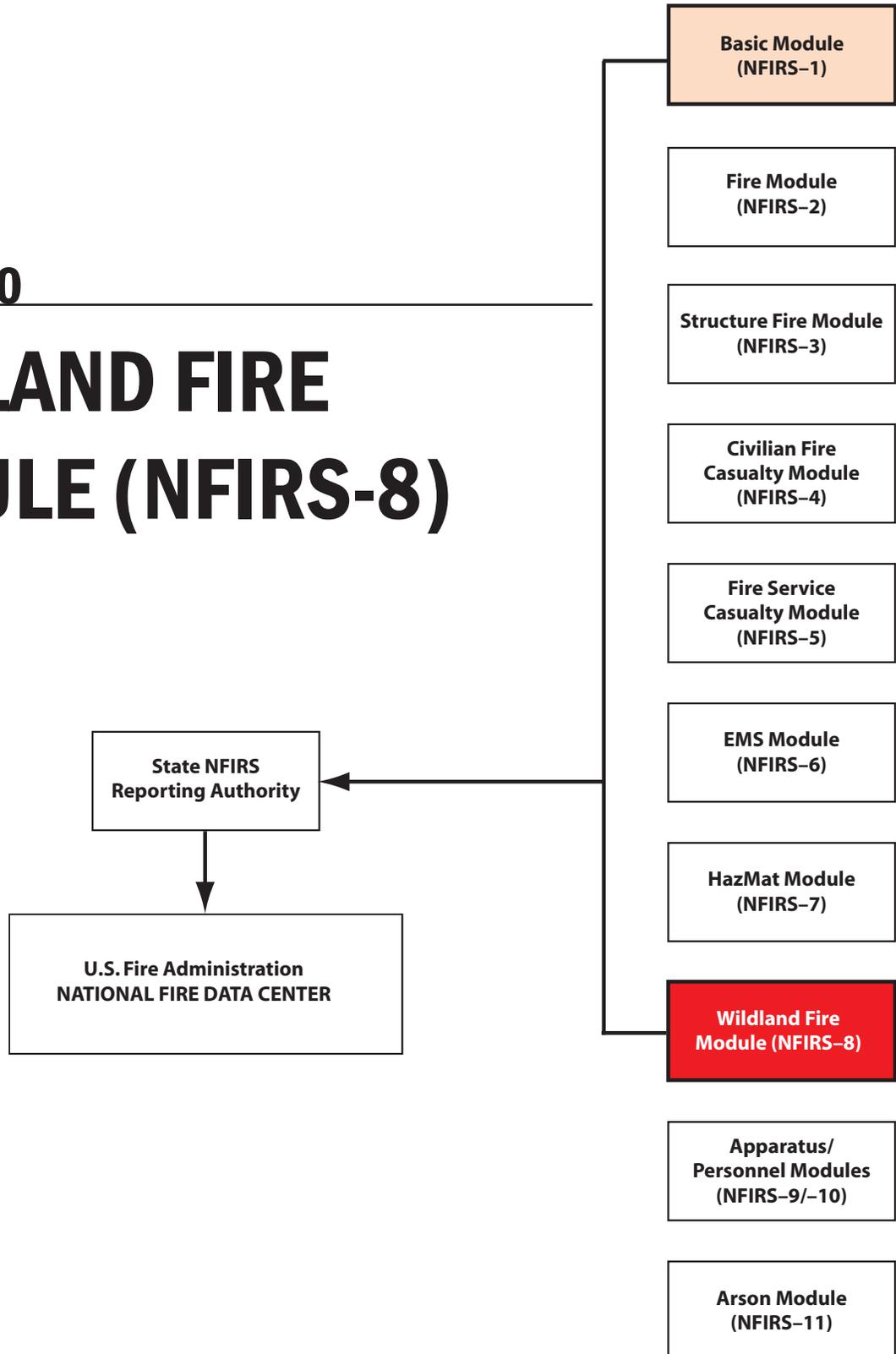
One hundred civilians had varying degrees of nausea and dizziness as a result of the HazMat release:

P HazMat Civilian Casualties	
Deaths	Injuries
<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
	1 0 0



## Chapter 10

# WILDLAND FIRE MODULE (NFIRS-8)



**A**

FDID ☆      State ☆      Incident Date ☆      Station      Incident Number ☆      Exposure ☆

MM      DD      YYYY

Delete       Change

**B Alternate Location Specification**

Enter Latitude/Longitude OR Township/Range/Section/Subsection Meridian if Section B on the Basic Module is not completed.

Latitude      Longitude

**OR**

Township      Range      East      West

Section      Subsection      Meridian

**C Area Type ☆**

1  Rural, farms >50 acres  
 2  Urban (heavily populated)  
 3  Rural/Urban or suburban  
 4  Urban-wildland interface area

**D1 Wildland Fire Cause ☆**

1  Natural source      8  Misuse of fire  
 2  Equipment      0  Other  
 3  Smoking      U  Undetermined  
 4  Open/Outdoor fire  
 5  Debris/Vegetation burn  
 6  Structure (exposure)  
 7  Incendiary

**D2 Human Factors Contributing to Ignition ☆**

Check as many boxes as are applicable.  None

1  Asleep  
 2  Possibly impaired by alcohol or drugs  
 3  Unattended person  
 4  Possibly mentally disabled  
 5  Physically disabled  
 6  Multiple persons involved  
 7  Age was a factor

**D3 Factors Contributing to Ignition ☆  None**

#1      #2

**D4 Fire Suppression Factors  None**

Enter up to three factors

#1      #2      #3

**E Heat Source ☆**

**F Mobile Property Type  None**

**G Equipment Involved in Ignition  None**

**H Weather Information**

NFDRS Weather Station ID

Weather Type      Wind Direction

Wind Speed (mph)      Air Temperature F°       Check if negative

Relative Humidity %      Fuel Moisture %      Fire Danger Rating

**I1 Number of Buildings Ignited  None**

Number of buildings that were ignited in Wildland fire.

**I2 Number of Buildings Threatened  None**

Number of buildings that were threatened by Wildland fire but were not involved.

**I3 Total Acres Burned ☆**

    ,      ,      .

**I4 Primary Crops Burned**

Identify up to 3 crops if any crops were burned.

Crop 1

Crop 2

Crop 3

**J Property Management**

Indicate the percent of the total acres burned for each ownership type then check the ONE box to identify the property ownership at the origin of the fire. If the ownership at origin is Federal, enter the Federal Agency Code.

Ownership      % Total Acres Burned

**U  Undetermined**      %

**Private**

1  Tax paying      %  
 2  Non-tax paying      %

**Public**

3  City, town, village, local      %  
 4  County or parish      %  
 5  State or province      %  
 6  Federal      %  
 Federal Agency Code

7  Foreign      %  
 8  Military      %  
 0  Other      %

**K NFDRS Fuel Model at Origin**

Enter the code and the descriptor corresponding to the NFDRS Fuel Model at Origin.

**L1 Person Responsible for Fire**

1  Identified person caused fire  
 2  Unidentified person caused fire  
 3  Fire not caused by person

If person identified, complete the rest of Section L.

**L2 Gender of Person Involved**

1  Male  
 2  Female

**L3 Age or Date of Birth**

Age in Years      Date of Birth

    OR      Month      Day      Year

**L4 Activity of Person Involved**

Activity of Person Involved

**M Type of Right-of-Way  None**

Required if less than 100 feet.

    Feet      Type of right-of-way

Horizontal distance from right-of-way

**N Fire Behavior**

These optional descriptors refer to observations made at the point of initial attack.

    Feet

Elevation

Relative position on slope

Aspect

    Feet

Flame length

    Chains per Hour

Rate of spread

# CHAPTER 10

## WILDLAND FIRE MODULE (NFIRS-8)

Historically, NFIRS data have not proven useful in understanding the nature and magnitude of the wildland fire problem. The optional Wildland Fire Module, in conjunction with the Basic Module and other optional modules, attempts to rectify this problem by capturing data about the number of acres burned, the type of materials involved, the conditions that contributed to the ignition and spread of wildland fires, and the resources needed to control or extinguish them.

The purpose of the Wildland Fire Module is to document reportable wildland fires:

*Reportable Wildland Fire:* Any fire involving vegetative fuels, including a prescribed fire, that occurs in the wildland or urban-wildland interface areas, including those fires that threaten or consume structures.

Prescribed fires are included in this definition of reportable fires to better understand the role of fire in the wildland ecosystem.

In accordance with your State or local policy, the Wildland Fire Module may be used in place of the Fire Module (NFIRS-2) for the following Incident Type recorded on the Basic Module (Section C).

- 140 – Natural Vegetation Fire, Other.
- 141 – Forest, Woods, or Wildland Fire.
- 142 – Brush, or Brush-and-Grass Mixture Fire.
- 143 – Grass Fire.
- 160 – Special Outside Fire, Other.
- 170 – Cultivated Vegetation, Crop Fire, Other.
- 171 – Cultivated Grain or Crop Fire.
- 172 – Cultivated Orchard or Vineyard Fire.
- 173 – Cultivated Trees or Nursery Stock Fire.
- 561 – Unauthorized Burning.
- 631 – Authorized Controlled Burning.
- 632 – Prescribed Fire.

- ☛ A prescribed fire that escapes management is a hostile fire (Incident Type 141). A hostile fire cannot become a prescribed fire, but the management strategy (actions taken) may change.

### Definitions

For the purpose of wildland fire reporting, the following definitions are used:

*Prescribed Fire:* Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist prior to ignition.

*Urban-Wildland Interface Area:* The geographical area where structures and other human development meets or intermingles with wildland or vegetative fuels.

*Urban-Wildland Interface Fire:* Any fire, other than a prescribed fire, where fire suppression tactics were influenced by a geographical area where structures and other human development meets or intermingles with wildland or vegetative fuels.

*Wildland Fire:* Any fire involving vegetative fuels, other than a prescribed fire, that occurs in the wildland. A wildland fire may expose and possibly consume structures (Incident Type 141).

*Wildland:* An area where development is essentially nonexistent, except for roads, railroads, power lines, and similar facilities.

The Wildland Fire Module permits wildland fires to be profiled in detail for resource allocation, incident management, and fire impact analysis.

## SECTION A

The guidance and directions for completing Section A of the Wildland Fire Module are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Wildland Fire Module must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3–8.

### **A** Fire Department Identification (FDID) ☆

#### *Entry*

Enter the same FDID number found in Section A of the Basic Module.

### **State** ☆

#### *Entry*

Enter the same State abbreviation found in Section A of the Basic Module.

### **Incident Date** ☆

#### *Entry*

Enter the same incident date found in Section A of the Basic Module.

### **Station Number**

#### *Entry*

Enter the same station number found in Section A of the Basic Module.

## Incident Number ☆

### Entry

Enter the same incident number found in Section A of the Basic Module.

## Exposure Number ☆

### Entry

If this report is for an exposure fire, enter the same exposure number that was entered in Section A of the Basic Module for that exposure.

## Delete/Change

### Definition

Indicates a change to information submitted on a previous Wildland Fire Module or a deletion of all information regarding the incident.

### Purpose

To delete or change previously reported information.

### Entry

**Delete.** Check or mark this box when you have previously submitted data on this wildland incident and now want to have the data on this incident deleted from the database. If this box is marked, complete Section A and leave the rest of the report blank. Forward the report according to your normally established procedures.

**Change.** Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

## B Alternate Location Specification

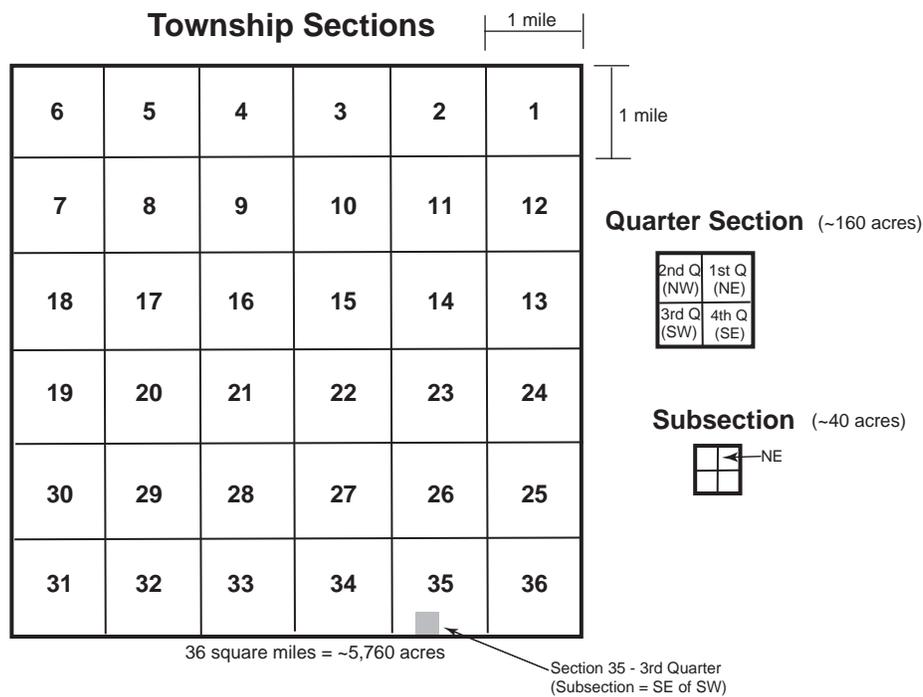
- ☛ Enter either latitude/longitude or section/township/range/subsection/meridian location information. Do not enter both.
- ☛ To use this addressing feature, the alternate address box on the Basic Module (Section B) must be checked or marked.

**Definition**

The location of the wildland fire. This block documents the geographical location of the wildland fire and is used in place of Section B of the Basic Module when traditional addressing methods are not suitable.

*Latitude and Longitude:* Angular coordinates measured with respect to the center of the Earth. The value is expressed in degrees and minutes. Valid inputs for Latitude are in the range -90 to 90 (north is positive). Valid inputs for Longitude are in the range -180 to 180 (east is positive).

*Township:* Consists of 36 sections arranged in a six-by-six array, measuring 6 miles by 6 miles. Sections are numbered beginning with the northeast-most section, proceeding west to 6, then south along the west edge of the township and to the east. This array is depicted below:



The last digit (decimal point) in this field denotes quarter Townships represented by the following coding:

- |   |             |   |             |
|---|-------------|---|-------------|
| 3 | 1st Quarter | 7 | 3rd Quarter |
| 5 | 2nd Quarter | 0 | 4th Quarter |

*Range:* Assigned to a township by measuring east or west of a principal meridian.

*Section:* Basic unit of the system, a square tract of line 1 mile by 1 mile containing 640 acres.

*Subsection:* Within each section, the land is referred to as half and quarter sections. A one-sixteenth division is called a subsection (sometimes referred to as a quarter of a quarter). A valid entry is one of the following 16 possibilities:

SUBSECTION CODES			
NENE	Northeast of northeast	NWNE	Northwest of northeast
NENW	Northeast of northwest	NWNW	Northwest of northwest
NESE	Northeast of southeast	NWSE	Northwest of southeast
NESW	Northeast of southwest	NWSW	Northwest of southwest
SENE	Southeast of northeast	SWNE	Southwest of northeast
SENW	Southeast of northwest	SWNW	Southwest of northwest
SESE	Southeast of southeast	SWSE	Southwest of southeast
SESW	Southeast of southwest	SWSW	Southwest of southwest

☛ In some regions, the term subsection is not used. Thus, it is permissible to leave this field blank.

*Principal Meridian:* Reference or beginning point for measuring east or west ranges.

MERIDIAN CODES			
01	First Principal	17	Indian
02	Second Principal	18	Louisiana
03	Third Principal	19	Michigan
04	Fourth Principal	20	Principal
05	Fifth Principal	21	Mt. Diablo
06	Sixth Principal	22	Navajo
07	Black Hills	23	New Mexico
08	Boise	24	St. Helena
09	Chickasaw	25	St. Stephens
10	Choctaw	26	Salt Lake
11	Cimarron	27	San Bernardino
12	Copper River	28	Seward
13	Fairbanks	29	Tallahassee
14	Gila and Salt River	30	Uintah
15	Humboldt	31	Ute
16	Huntsville	32	Washington
		33	Willamette
		34	Wind River
		35	Ohio
		36	Great Miami River
		37	Muskingum River
		38	Ohio River
		39	First Scioto River
		40	Second Scioto River
		41	Third Scioto River
		42	Ellicotts Line
		43	12 Mile Square
		44	Kateel River
		45	Umat
		UU	Undetermined

### *Purpose*

This information may be of value to local authorities for contacting the owner in connection with the fire and in making a long-term analysis of wildland fires in similar areas or on property under the same ownership.

### *Entry*

Enter the alternate location information using the specific Latitude and Longitude where the fire started or, alternatively, enter the Section, Township, Range, and Meridian.



## AREA TYPE CODES

- 1 Rural, open fields, forests, or cultivated land greater than 50 acres that is located away from any concentrated housing areas.
- 2 Urban, cities, or heavily populated areas.
- 3 Rural/Urban or suburban. Includes a predominantly residential area outlying an urban area. May include small open fields, forests, and cultivated land.
- 4 Urban-wildland interface area. Includes geographical area where structures and other human development meets or intermingles with wildland/vegetative fuels.

## SECTION D

This section collects information on the factors and causes of the fire's ignition, and what conditions may have affected fire suppression efforts.

## D<sup>1</sup> Wildland Fire Cause ☆

### Definition

This block provides for the broadest classification of ignition causes consistent with the “General Fire Causes” adopted by the National Wildfire Coordinating Group (NWCG).

### Purpose

The primary use of this information is to distinguish between human- and nature-caused wildland fires.

### Entry

Check or mark the box that best describes the cause of the wildland fire.

- ☛ Wildland Fire Cause is a critical data element, and it is important to complete the additional blocks in this module to provide a better understanding of how and why the fire started.

### Example

A discarded cigarette (3) started the wildland fire:

D <sup>1</sup> Wildland Fire Cause ☆			
1	<input type="checkbox"/> Natural source	8	<input type="checkbox"/> Misuse of fire
2	<input type="checkbox"/> Equipment	0	<input type="checkbox"/> Other
3	<input checked="" type="checkbox"/> Smoking	U	<input type="checkbox"/> Undetermined
4	<input type="checkbox"/> Open/Outdoor fire		
5	<input type="checkbox"/> Debris, vegetation burn		
6	<input type="checkbox"/> Structure (exposure)		
7	<input type="checkbox"/> Incendiary		

**WILDLAND FIRE CAUSE CODES**

- 1 Natural source.
- 2 Equipment.
- 3 Smoking.
- 4 Open/Outdoor fire.
- 5 Debris, vegetation burn.
- 6 Structure (exposure).
- 7 Incendiary.
- 8 Misuse of fire.
- 0 Wildland fire cause, other.
- U Undetermined.

**D<sup>2</sup> Human Factors Contributing to Ignition ☆***Definition*

The human condition or situation that allowed the heat source and combustible material to combine to ignite the fire.

*Purpose*

Combined with Wildland Fire Cause and Factors Contributing to Ignition, this element explains how and why the fire started. The data element Age Was a Factor is particularly useful in tracking juvenile firesetter trends when used in combination with Gender of Person Involved (Block L2) and Age or Date of Birth (Block L3). It can also indicate whether a fire is potentially preventable through public education or other strategies.

*Entry*

Check or mark the boxes that best describe any human factors that contributed to the ignition of the wildland fire. Multiple factors can be selected. If human factors were not involved or cannot be determined, check or mark the None box only.

*Example*

The camper fell asleep (1) after starting a campfire that went out of control:

<b>D<sup>2</sup></b>	<b>Human Factors Contributing to Ignition ☆</b>	<input type="checkbox"/> None
Check as many boxes as are applicable		
1	<input checked="" type="checkbox"/> Asleep	
2	<input type="checkbox"/> Possibly impaired by alcohol or drugs	
3	<input type="checkbox"/> Unattended person	
4	<input type="checkbox"/> Possibly mentally disabled	
5	<input type="checkbox"/> Physically disabled	
6	<input type="checkbox"/> Multiple persons involved	
7	<input type="checkbox"/> Age was a factor	

## HUMAN FACTORS CONTRIBUTING TO IGNITION CODES

- 1 Asleep. Includes fires that result from a person falling asleep while smoking.
- 2 Possibly impaired by alcohol or drugs. Includes people who fall asleep or act recklessly or carelessly as a result of drugs or alcohol. Excludes people who simply fall asleep (1).
- 3 Unattended or unsupervised person. Includes “latch key” situations whether the person involved is young or old and situations where the person involved lacked supervision or care.
- 4 Possibly mentally disabled. Excludes impairments of a temporary nature such as those caused by drugs or alcohol (2).
- 5 Physically disabled.
- 6 Multiple persons involved. Includes gang activity.
- 7 Age was a factor.
- N None.

## D<sup>3</sup> Factors Contributing to Ignition ☆

☛ Factors Contributing to Ignition was known as Ignition Factors in NFIRS 4.1.

### Definition

The contributing factors that allowed the heat source and combustible material to combine to ignite the fire.

### Purpose

When used in conjunction with other elements such as Wildland Fire Cause, Equipment Involved in Ignition, Heat Source, and Human Factors, this element explains how and why the fire started. The analysis of how these elements interact provides valuable information to guide and direct fire prevention and fire safety education programs.

### Entry

Enter the two-digit code and description for up to two factors that contributed to the ignition of the wildland fire. The primary factor should be entered first. If it is known that no factors contributed to ignition, check or mark the None box only; if uncertain, leave the block blank.

### Example

The campers placed their trash bag too close to the cooking fire (12 and 74):

<b>D<sub>3</sub></b>	<b>Factors Contributing to Ignition ☆</b>	<input type="checkbox"/> None	
#1	1 2   Too close	#2	7 4   Open fire

## FACTORS CONTRIBUTING TO IGNITION CODES

### Misuse of Material or Product

- 11 Abandoned or discarded materials or products. Includes discarded cigarettes, cigars, tobacco embers, hot ashes, or other burning matter. Excludes outside fires left unattended.
- 12 Heat source too close to combustibles.
- 13 Cutting, welding too close to combustibles.

- 14 Flammable liquid or gas spilled. Excludes improper fueling technique (15) and release due to improper container (18).
- 15 Improper fueling technique. Includes overfueling, failure to ground. Excludes fuel spills (14) and using the improper fuel (27).
- 16 Flammable liquid used to kindle fire.
- 17 Washing part or material, painting with flammable liquid.
- 18 Improper container or storage procedure. Includes gasoline in unimproved containers, gas containers stored at excessive temperature, and storage conditions that lead to spontaneous ignition.
- 19 Playing with heat source. Includes playing with matches, candles, and lighters and bringing combustibles into a heat source.
- 10 Misuse of material or product, other.

### **Mechanical Failure, Malfunction**

- 21 Automatic control failure.
- 22 Manual control failure.
- 23 Leak or break. Includes leaks or breaks of containers or pipes. Excludes operational deficiencies and spill mishaps.
- 25 Worn out.
- 26 Backfire. Excludes fires originating as a result of hot catalytic converters (41).
- 27 Improper fuel used. Includes the use of gasoline in a kerosene heater and the like.
- 20 Mechanical failure, malfunction, other.

### **Electrical Failure, Malfunction**

- 31 Water-caused short-circuit arc.
- 32 Short-circuit arc from mechanical damage.
- 33 Short-circuit arc from defective, worn insulation.
- 34 Unspecified short-circuit arc.
- 35 Arc from faulty contact, broken conductor. Includes broken power lines and loose connections.
- 36 Arc, spark from operating equipment, switch, or electric fence.
- 37 Fluorescent light ballast.
- 30 Electrical failure, malfunction, other.

### **Design, Manufacturing, Installation Deficiency**

- 41 Design deficiency.
- 42 Construction deficiency.
- 43 Installation deficiency.
- 44 Manufacturing deficiency.
- 40 Design, manufacturing, installation deficiency, other.

### **Operational Deficiency**

- 51 Collision, knock down, run over, turn over. Includes automobiles and other vehicles.
- 52 Accidentally turned on, not turned off.
- 53 Equipment unattended.
- 54 Equipment overloaded.
- 55 Failure to clean. Includes lint and grease buildups in chimneys, stove pipes.
- 56 Improper startup/shutdown procedure.
- 57 Equipment not used for purpose intended. Excludes overloaded equipment (54).
- 58 Equipment not operated properly.
- 50 Operational deficiency, other.

### **Natural Condition**

- 61 High wind.
- 62 Storm.

- 63 High water, including floods.
- 64 Earthquake.
- 65 Volcanic action.
- 66 Animal.
- 60 Natural condition, other.

### Fire Spread or Control

- 71 Exposure fire.
- 72 Rekindle.
- 73 Outside/Open fire for debris or waste disposal.
- 74 Outside/Open fire for warming or cooking.
- 75 Agriculture or land management burns. Includes prescribed burns.
- 70 Fire spread or control, other.

### Other Human Factors Contributing to Ignition

- 00 Human factors contributing to ignition, other.
- NN None.
- UU Undetermined.

## D<sup>4</sup> Fire Suppression Factors

### Definition

Factors that contributed to the growth, spread, or suppression of the fire. This is used to report incident information that directly impacted the ignition, spread of fire, incident complexity, or presence of hazardous conditions.

### Purpose

Fire suppression factors provide essential guides for planning strategic and tactical procedures for future incidents, as well as for identifying fire training and equipment needs.

### Entry

Enter the three-digit code and description for up to three fire suppression factors or conditions that constituted a significant fire suppression problem or affected how the fire was managed. If no factors were involved in the fire suppression effort, check or mark the None box.

### Example

A large brush fire was burning on a military installation (462) in an area where unexploded munitions (327) could be encountered. The incident commander decided the best course of action was to allow the fire to burn but to establish a control line outside the perimeter of the installation:

D <sup>4</sup> Fire Suppression Factors		<input type="checkbox"/> None
#1	4   6   2	Military activity
#2	3   2   7	Explosive hazard
#3		

Enter up to three factors

**FIRE SUPPRESSION FACTORS CODES****Building Construction or Design**

- 112 Roof collapse.
- 113 Roof assembly combustible.
- 121 Ceiling collapse.
- 125 Holes or openings in walls or ceilings.
- 131 Wall collapse.
- 132 Difficult to ventilate.
- 134 Combustible interior finish.
- 137 Balloon construction.
- 138 Internal arrangement of partitions.
- 139 Internal arrangement of stock or contents.
- 141 Floor collapse.
- 151 Lack of fire barrier walls or doors.
- 153 Transoms.
- 161 Attic undivided.
- 166 Insulation combustible.
- 173 Stairwell not enclosed.
- 174 Elevator shaft.
- 175 Dumbwaiter.
- 176 Duct, vertical.
- 177 Chute: rubbish, garbage, laundry.
- 181 Supports unprotected.
- 182 Composite plywood I-beam construction.
- 183 Composite roof/floor sheathing construction.
- 185 Wood truss construction.
- 186 Metal truss construction.
- 187 Fixed burglar protection assemblies (bars, grills on windows or doors).
- 188 Quick release failure of bars on windows or doors.
- 192 Previously damaged by fire.
- 100 Building construction or design, other.

**Act or Omission**

- 213 Doors left open or outside door unsecured.
- 214 Fire doors blocked or did not close properly.
- 218 Violation of applicable or locally adopted fire, building, or life safety code.
- 222 Illegal and clandestine drug operation.
- 232 Intoxication, drugs or alcohol.
- 253 Riot or civil disturbance. Includes hostile acts.
- 254 Person(s) interfered with operations.
- 283 Accelerant used.
- 200 Act or omission, other.

**On-Site Materials**

- 311 Aisles blocked or improper width.
- 312 Significant and unusual fuel load from structure components.
- 313 Significant and unusual fuel load from contents of structure.
- 314 Significant and unusual fuel load outside from natural environment conditions.
- 315 Significant and unusual fuel load from man-made condition.
- 316 Storage, improper.
- 321 Radiological hazard onsite.
- 322 Biological hazard onsite.

- 323 Cryogenic hazard onsite.
- 324 Hazardous chemical, corrosive material, or oxidizer.
- 325 Flammable/Combustible liquid hazard.
- 327 Explosives hazard present.
- 331 Decorations. Includes crepe paper, garland.
- 341 Natural or other lighter-than-air gas present.
- 342 Liquefied petroleum (LPG) or other heavier-than-air gas present.
- 361 Combustible storage >12 ft to top of storage. Excludes rack storage (362).
- 362 High rack storage.
- 300 On-site materials, other.

### Delays

- 411 Delayed detection of fire.
- 412 Delayed reporting of fire. Includes occupants investigating the source of the alarm or smoke before calling the fire department.
- 413 Alarm system malfunction.
- 414 Alarm system shut off for valid reason. Includes systems being maintained or repaired.
- 415 Alarm system inappropriately shut off.
- 421 Unable to contact fire department. Includes use of wrong phone number and cellular mobile phone problems.
- 424 Information incomplete or incorrect.
- 425 Communications problem; system failure of local, public, or other telephone network.
- 431 Blocked or obstructed roadway. Includes blockages due to construction or illegal parking.
- 434 Poor or no access for fire department apparatus.
- 435 Traffic delay.
- 436 Trouble finding location.
- 437 Size, height, or other building characteristic delayed access to fire.
- 438 Power lines down/arcng.
- 443 Poor access for firefighters.
- 444 Secured area.
- 445 Guard dogs.
- 446 Aggressive animals. Excludes guard dogs (445).
- 447 Suppression delayed due to evaluation of hazardous or unknown materials at incident scene.
- 448 Locked or jammed doors.
- 451 Apparatus failure before arrival at incident.
- 452 Hydrants inoperative.
- 461 Airspace restriction.
- 462 Military activity.
- 481 Closest apparatus unavailable.
- 400 Delays, other.

### Protective Equipment

- 510 Automatic fire suppression system problem. Includes system failures, shutoffs, inadequate protection to cover hazard, and the like.
- 520 Automatic sprinkler or standpipe/fire department connection problem. Includes damage, blockage, failure, improper installation.
- 531 Water supply inadequate: private.
- 532 Water supply inadequate: public.
- 543 Electrical power outage.
- 561 Failure of rated fire protection assembly. Includes fire doors, fire walls, floor/ceiling assemblies, and the like.
- 562 Protective equipment negated illegally or irresponsibly. Includes fire doors, dampers, sprinklers, and the like.
- 500 Protective equipment, other.

**Egress/Exit Problems**

611	Occupancy load above legal limit.
612	Evacuation activity impeded fire department access.
613	Window type impeded egress. Includes windows too small.
614	Windowless wall.
621	Young occupants.
622	Elderly occupants
623	Physically disabled occupants.
624	Mentally disabled occupants.
625	Physically restrained/confined occupants.
626	Medically disabled occupants.
641	Special event.
642	Public gathering.
600	Egress/Exit problems, other.

**Natural Conditions**

711	Drought or low fuel moisture.
712	Humidity, low.
713	Humidity, high.
714	Temperature, low.
715	Temperature, high.
721	Fog.
722	Flooding.
723	Ice.
724	Rain.
725	Snow.
732	Wind. Includes hurricanes and tornados.
741	Earthquake.
760	Unusual vegetation fuel loading
771	Threatened or endangered species.
772	Timber sale activity.
773	Fire restriction.
774	Historic disturbance (past fire history can dictate fire behavior).
775	Urban-wildland interface area.
700	Natural conditions, other.

**Other Fire Suppression Factors**

000	Fire suppression factors, other.
NNN	None.

**SECTION E****E Heat Source ☆**

☛ Heat Source was known as Form of Heat of Ignition in NFIRS 4.1.

**Definition**

The specific source of the heat energy that started the fire.

**Purpose**

This information, combined with other factors in the ignition sequence, permits analysis of how fires start. Also, some heat sources (e.g., cigarettes, lighters) are objects whose frequency of involvement in fires is of direct interest for fire prevention efforts.

## Entry

Enter the two-digit code and description that best describes the heat source that ignited the fire.

## Example

A discarded cigarette (61) ignited the brush, resulting in a wildland fire:

E	Heat Source ☆
	61   Cigarette

## HEAT SOURCE CODES

### Operating Equipment

- 11 Spark, ember, or flame from operating equipment.
- 12 Radiated or conducted heat from operating equipment.
- 13 Electrical arcing.
- 10 Heat from operating equipment, other.

### Hot or Smoldering Object

- 41 Heat, spark from friction. Includes overheated tires.
- 42 Molten, hot material. Includes molten metal, hot forging, hot glass, hot metal fragment, brake shoe, hot box, and slag from arc welding operations.
- 43 Hot ember or ash. Includes hot coals, coke, and charcoal; and sparks or embers from a chimney that ignite the roof of the same structure. Excludes flying brand, embers, and sparks (83); and embers accidentally escaping from operating equipment (11).
- 40 Hot or smoldering object, other.

### Explosives, Fireworks

- 51 Munitions. Includes bombs, ammunition, and military rockets.
- 53 Blasting agent, primer cord, black powder fuse. Includes fertilizing agents, ammonium nitrate, and sodium, potassium, or other chemical agents.
- 54 Fireworks. Includes sparklers, paper caps, party poppers, and firecrackers.
- 55 Model and amateur rockets.
- 56 Incendiary device. Includes Molotov cocktails and arson sets.
- 50 Explosive, fireworks, other.

### Other Open Flame or Smoking Materials

- 61 Cigarette.
- 62 Pipe or cigar.
- 63 Heat from undetermined smoking material.
- 64 Match.
- 65 Lighter: cigarette lighter, cigar lighter.
- 66 Candle.
- 67 Warning or road flare; fusee.
- 68 Backfire from internal combustion engine. Excludes flames and sparks from an exhaust system (11).
- 69 Flame/Torch used for lighting. Includes gas light and gas-/liquid-fueled lantern.
- 60 Heat from open flame or smoking materials, other.

**Chemical, Natural Heat Sources**

- 71 Sunlight. Usually magnified through glass, bottles, etc.
- 72 Spontaneous combustion, chemical reaction.
- 73 Lightning discharge.
- 74 Other static discharge. Excludes electrical arcs (13) or sparks (11).
- 70 Chemical, natural heat sources, other.

**Heat Spread From Another Fire.** Excludes operating equipment.

- 81 Heat from direct flame, convection currents spreading from another fire.
- 82 Radiated heat from another fire. Excludes heat from exhaust systems of fuel-fired, fuel-powered equipment (12).
- 83 Flying brand, ember, spark. Excludes embers, sparks from a chimney igniting the roof of the same structure (43).
- 84 Conducted heat from another fire.
- 80 Heat spread from another fire, other.

**Other Heat Sources**

- 97 Multiple heat sources, including multiple ignitions. If one type of heat source was primarily involved, use that classification.
- 00 Heat sources, other.
- UU Undetermined.

## SECTION F

**F Mobile Property Type***Definition*

Property that is designed and constructed to be mobile, movable under its own power, or towed, such as an airplane, automobile, boat, cargo trailer, farm vehicle, motorcycle, or recreation vehicle.

*Purpose*

This data element provides detailed information to identify the specific types of mobile property involved in an incident. The data also can be used to see if the public needs to be alerted to special hazards.

*Entry*

If the mobile property type started the fire, but did not burn itself, enter the two-digit code and description that best describes the mobile property type. If no mobile property started the fire, check or mark the None box.

*Example*

A camping trailer (16) caught fire and spread to the surrounding brush:

<b>F</b>	<b>Mobile Property Type</b>	<input type="checkbox"/> None
	1, 6	Camping trailer

**MOBILE PROPERTY TYPE CODES****Passenger Road Vehicles**

- 11 Automobile, passenger car, ambulance, limousine, race car, taxicab.
- 12 Bus, school bus. Includes “trackless” trolley buses.
- 13 Off-road recreational vehicle. Includes dune buggies, golf carts, go-carts, snowmobiles. Excludes sport utility vehicles (11) and motorcycles (18).
- 14 Motor home (has own engine), camper mounted on pickup, bookmobile.
- 15 Trailer, travel; designed to be towed.
- 16 Trailer, camping; collapsible, designed to be towed.
- 17 Mobile home, bank, classroom, or office (all designed to be towed), whether mounted on a chassis or on blocks for semipermanent use.
- 18 Motorcycle, trail bike. Includes motor scooters and mopeds.
- 10 Passenger road vehicles, other.

**Freight Road Vehicles**

- 21 General use truck, dump truck, fire apparatus.
- 22 Hauling rig (non-motorized), pickup truck.
- 23 Trailer, semi; designed for freight (with or without tractor).
- 24 Tank truck, nonflammable cargo. Includes milk and water tankers, liquid nitrogen tankers.
- 25 Tank truck, flammable or combustible liquid, chemical cargo.
- 26 Tank truck, compressed gas or LP gas.
- 27 Garbage, waste, refuse truck. Includes recyclable material collection trucks. Excludes roll-on-type trash containers (73).
- 20 Freight road transport vehicles, other.

**Rail Transport Vehicles**

- 31 Diner car, passenger car.
- 32 Box, freight, or hopper car.
- 33 Tank car.
- 34 Container or piggyback car (see 73 for container).
- 35 Engine/locomotive.
- 36 Rapid transit car, trolley (self-powered for use on track). Includes self-powered rail passenger vehicles.
- 37 Maintenance equipment car. Includes cabooses and cranes.
- 30 Rail transport vehicles, other.

**Water Vessels**

- 41 Boat less than 65 ft (20 m) in length overall. Excludes commercial fishing vessels (48).
- 42 Boat or ship equal to or greater than 65 ft (20 m) in length but less than 1,000 tons.
- 43 Cruise liner or passenger ship equal to or greater than 1,000 tons.
- 44 Tank ship.
- 45 Personal water craft. Includes one- or two-person recreational water craft.
- 46 Cargo or military ship equal to or greater than 1,000 tons. Includes vessels not classified in 44 and 47.
- 47 Non-self-propelled vessel. Includes all vessels without their own motive power, such as towed petroleum balloons, barges, and other towed or towable vessels. Excludes sailboats (49).
- 48 Commercial fishing or processing vessel. Includes shell fishing vessels.
- 49 Sailboats. Includes those with auxiliary power.
- 40 Water transport vessels, other.

**Aircraft**

- 51 Personal, business, utility aircraft less than 12,500 lb (5,670 kg) gross weight. Includes gliders.
- 52 Personal, business, utility aircraft equal to or greater than 12,500 lb (5,670 kg) gross weight.

- 53 Commercial aircraft: propeller-driven, fixed-wing. Includes turbo props.
- 54 Commercial aircraft: jet and other turbine-powered, fixed-wing.
- 55 Helicopters, nonmilitary. Includes gyrocopters.
- 56 Military fixed-wing aircraft. Includes bomber, fighter, patrol, vertical takeoff and landing (fixed-wing vertical stall) aircraft.
- 57 Military non-fixed-wing aircraft. Includes helicopters.
- 58 Balloon vehicles. Includes hot air balloons and blimps.
- 50 Air transport vehicles, other.

### Industrial, Agricultural, Construction Vehicles

- 61 Construction vehicle. Includes bulldozers, shovels, graders, scrapers, trenchers, plows, tunneling equipment, and road pavers.
- 63 Loader, industrial. Includes fork lifts, industrial tow motors, loaders, and stackers.
- 64 Crane.
- 65 Agricultural vehicle, baler, chopper (farm use).
- 67 Timber harvest vehicle. Includes skycars, loaders.
- 60 Industrial, construction, or agricultural vehicles, other.

### Mobile Property, Miscellaneous

- 71 Home, garden vehicle. Includes riding lawnmowers, snow removal vehicles, riding tractors. Excludes equipment where operator does not ride. See Equipment Involved in Ignition.
- 73 Shipping container, mechanically moved. Includes haulable trash containers, intermodal shipping containers.
- 74 Armored vehicle. Includes armored cars and military vehicles. Excludes armored aircraft and ships.
- 75 Missile, rocket, and space vehicles.
- 76 Aerial tramway vehicle.
- 00 Mobile property, other.
- NN No mobile property.

## SECTION G

## G Equipment Involved in Ignition

### Definition

The piece of equipment that provided the principal heat source to cause the ignition if the equipment malfunctioned or was used improperly.

### Purpose

Analysis of the equipment involved in ignition is useful for improving product safety and preventive maintenance. It is just as important to know the kind of equipment that was used improperly as it is to know the kind of equipment that malfunctioned. Misuse can be the direct result of the way the equipment is designed and constructed. When involved in ignition, equipment information provides an important part of the causal data. Equipment involved in ignition can be compared to other casual data to determine if the equipment was (or was not) operating properly.

### Entry

Enter the three-digit code and description that best describes the equipment involved in ignition. If no equipment was involved in ignition, check or mark the None box.

**Example**

The fire was started by an overturned hibachi grill (643):

<b>G</b>	<b>Equipment Involved in Ignition</b>	<input type="checkbox"/> None
	6 4 3   Hibachi grill	

- ☛ An alphabetized synonym list for the following Equipment Involved in Ignition codes is presented in Appendix B.

**EQUIPMENT INVOLVED IN IGNITION CODES****Heating, Ventilation, and Air Conditioning**

- 111 Air conditioner.
- 112 Heat pump.
- 113 Fan.
- 114 Humidifier, non-heat producing. Excludes heaters with built-in humidifiers (131, 132).
- 115 Ionizer.
- 116 Dehumidifier, portable.
- 117 Evaporative cooler, cooling tower.
- 121 Fireplace, masonry.
- 122 Fireplace, factory-built.
- 123 Fireplace, insert/stove.
- 124 Stove, heating.
- 125 Chimney connector, vent connector.
- 126 Chimney: brick, stone, masonry.
- 127 Chimney: metal. Includes stovepipes and flues.
- 120 Fireplace, chimney, other.
- 131 Furnace, local heating unit, built-in. Includes built-in humidifiers. Excludes process furnaces, kilns (353).
- 132 Furnace, central heating unit. Includes built-in humidifiers. Excludes process furnaces, kilns. (353)
- 133 Boiler (power, process, heating).
- 141 Heater. Includes floor furnaces, wall heaters, and baseboard heaters. Excludes catalytic heaters (142), oil-filled heaters (143), hot water heaters (152).
- 142 Heater, catalytic.
- 143 Heater, oil-filled. Excludes kerosene heaters (141).
- 144 Heat lamp.
- 145 Heat tape.
- 151 Water heater. Includes sink-mounted instant hot water heaters and waterbed heaters.
- 152 Steam line, heat pipe, hot air duct. Includes radiators and hot water baseboard heaters.
- 100 Heating, ventilation, and air conditioning, other.

**Electrical Distribution, Lighting, and Power Transfer**

- 211 Electrical power (utility) line. Excludes wires from the utility pole to the structure.
- 212 Electrical service supply wires; wires from utility pole to meter box.
- 213 Electric meter, meter box.
- 214 Electrical wiring from meter box to circuit breaker board, fuse box, or panel board.
- 215 Panel board (fuse); switchboard, circuit breaker board with or without ground-fault interrupter.
- 216 Electrical branch circuit. Includes armored (metallic) cable, nonmetallic sheathing, or wire in conduit.
- 217 Outlet, receptacle. Includes wall-type receptacles, electric dryer and stove receptacles.
- 218 Wall-type switch. Includes light switches.

- 219 Ground-fault interrupter (GFI), portable, plug-in.
- 210 Electrical wiring, other.
- 221 Transformer, distribution-type.
- 222 Overcurrent, disconnect equipment. Excludes panel boards.
- 223 Transformer, low-voltage (not more than 50 volts).
- 224 Generator.
- 225 Inverter.
- 226 Uninterrupted power supply (UPS).
- 227 Surge protector.
- 228 Battery charger, rectifier.
- 229 Battery. Includes all battery types.
- 231 Lamp: tabletop, floor, desk. Excludes halogen fixtures (235) and light bulbs (238).
- 232 Lantern, flashlight.
- 233 Incandescent lighting fixture.
- 234 Fluorescent lighting fixture, ballast.
- 235 Halogen lighting fixture or lamp.
- 236 Sodium, mercury vapor lighting fixture or lamp.
- 237 Portable or movable work light, trouble light.
- 238 Light bulb.
- 230 Lamp, lighting, other.
- 241 Night light.
- 242 Decorative lights, line voltage. Includes holiday lighting, Christmas lights.
- 243 Decorative or landscape lighting, low voltage.
- 244 Sign. Includes neon signs.
- 251 Fence, electric.
- 252 Traffic control device.
- 253 Lightning rod, arrester/grounding device.
- 261 Power cord, plug; detachable from appliance.
- 262 Power cord, plug; permanently attached to appliance.
- 263 Extension cord.
- 260 Cord, plug, other.
- 200 Electrical distribution, lighting, and power transfer, other.

### Shop Tools and Industrial Equipment

- 311 Power saw.
- 312 Power lathe.
- 313 Power shaper, router, jointer, planer.
- 314 Power cutting tool.
- 315 Power drill, screwdriver.
- 316 Power sander, grinder, buffer, polisher.
- 317 Power hammer, jackhammer.
- 318 Power nail gun, stud driver, stapler.
- 310 Power tools, other.
- 321 Paint dipper.
- 322 Paint flow coating machine.
- 323 Paint mixing machine.
- 324 Paint sprayer.
- 325 Coating machine. Includes asphalt-saturating and rubber-spreading machines.
- 320 Painting tools, other.
- 331 Welding torch. Excludes cutting torches (332).
- 332 Cutting torch. Excludes welding torches (331).
- 333 Burners. Includes Bunsen burners, plumber furnaces, and blowtorches. Excludes weed burners (523).
- 334 Soldering equipment.
- 341 Air compressor.

- 342 Gas compressor.
- 343 Atomizing equipment. Excludes paint spraying equipment (324).
- 344 Pump. Excludes pumps integrated with other types of equipment.
- 345 Wet/Dry vacuum (shop vacuum).
- 346 Hoist, lift, crane.
- 347 Powered jacking equipment. Includes hydraulic rescue tools.
- 348 Drilling machinery or equipment. Includes water or gas drilling equipment.
- 340 Hydraulic equipment, other.
- 351 Heat-treating equipment.
- 352 Incinerator.
- 353 Industrial furnace, oven, kiln. Excludes ovens for cooking (646).
- 354 Tarpot, tar kettle.
- 355 Casting, molding, forging equipment.
- 356 Distilling equipment.
- 357 Digester, reactor.
- 358 Extractor, waste recovery machine. Includes solvent extractors such as used in dry-cleaning operations and garnetting equipment.
- 361 Conveyor. Excludes agricultural conveyors (513).
- 362 Power transfer equipment: ropes, cables, blocks, belts.
- 363 Power takeoff.
- 364 Powered valves.
- 365 Bearing or brake.
- 371 Picking, carding, weaving machine. Includes cotton gins.
- 372 Testing equipment.
- 373 Gas regulator. Includes propane, butane, LP, or natural gas regulators and flexible hose connectors to gas appliances.
- 374 Motor, separate. Includes bench motors. Excludes internal combustion motors (375).
- 375 Internal combustion engine (nonvehicular).
- 376 Printing press.
- 377 Car washing equipment.
- 300 Shop tools and industrial equipment, other.

### Commercial and Medical Equipment

- 411 Dental, medical, or other powered bed or chair. Includes powered wheelchairs.
- 412 Dental equipment, other.
- 413 Dialysis equipment.
- 414 Medical imaging equipment. Includes MRI, CAT scan, and ultrasound.
- 415 Medical monitoring equipment.
- 416 Oxygen administration equipment.
- 417 Radiological equipment, x-ray, radiation therapy.
- 418 Sterilizer, medical.
- 419 Therapeutic equipment.
- 410 Medical equipment, other.
- 421 Transmitter.
- 422 Telephone switching gear, including PBX.
- 423 TV monitor array. Includes control panels with multiple TV monitors and security monitoring stations. Excludes single TV monitor configurations (753).
- 424 Studio-type TV camera. Includes professional studio television cameras. Excludes home camcorders and video equipment (756).
- 425 Studio-type sound recording/modulating equipment.
- 426 Radar equipment.
- 431 Amusement ride equipment.
- 432 Ski lift.
- 433 Elevator or lift.

- 434 Escalator.
- 441 Microfilm, microfiche viewing equipment.
- 442 Photo processing equipment. Includes microfilm processing equipment.
- 443 Vending machine.
- 444 Nonvideo arcade game. Includes pinball machines and the like. Excludes electronic video games (755).
- 445 Water fountain, water cooler.
- 446 Telescope. Includes radio telescopes.
- 451 Electron microscope.
- 450 Laboratory equipment, other.
- 400 Commercial and medical equipment, other.

### **Garden Tools and Agricultural Equipment**

- 511 Combine, threshing machine.
- 512 Hay processing equipment.
- 513 Farm elevator or conveyor.
- 514 Silo loader, unloader, screw/sweep auger.
- 515 Feed grinder, mixer, blender.
- 516 Milking machine.
- 517 Pasteurizer. Includes milk pasteurizers.
- 518 Cream separator.
- 521 Sprayer, farm or garden.
- 522 Chain saw.
- 523 Weed burner.
- 524 Lawn mower.
- 525 Lawn, landscape trimmer, edger.
- 531 Lawn vacuum.
- 532 Leaf blower.
- 533 Mulcher, grinder, chipper. Includes leaf mulchers.
- 534 Snow blower, thrower.
- 535 Log splitter.
- 536 Post hole auger.
- 537 Post driver, pile driver.
- 538 Tiller, cultivator.
- 500 Garden tools and agricultural equipment, other.

### **Kitchen and Cooking Equipment**

- 611 Blender, juicer, food processor, mixer.
- 612 Coffee grinder.
- 621 Can opener.
- 622 Knife.
- 623 Knife sharpener.
- 631 Coffee maker or teapot.
- 632 Food warmer, hot plate.
- 633 Kettle.
- 634 Popcorn popper.
- 635 Pressure cooker or canner.
- 636 Slow cooker.
- 637 Toaster, toaster oven, countertop broiler.
- 638 Waffle iron, griddle.
- 639 Wok, frying pan, skillet.
- 641 Bread-making machine.
- 642 Deep fryer.
- 643 Grill, hibachi, barbecue.

644	Microwave oven.
645	Oven, rotisserie.
646	Range with or without an oven or cooking surface. Includes counter-mounted stoves.
647	Steam table, warming drawer/table.
651	Dishwasher.
652	Freezer when separate from refrigerator.
653	Garbage disposer.
654	Grease hood/duct exhaust fan.
655	Ice maker (separate from refrigerator).
656	Refrigerator, refrigerator/freezer.
600	Kitchen and cooking equipment, other.

### Electronic and Other Electrical Equipment

711	Computer. Includes devices such as hard drives and modems installed inside the computer casing. Excludes external storage devices (712).
712	Computer storage device, external. Includes CD-ROM devices, tape drives, and disk drives. Excludes such devices when they are installed within a computer (711).
713	Computer modem, external. Includes digital, ISDN modems, cable modems, and modem racks. Excludes modems installed within a computer (711).
714	Computer monitor. Includes LCD or flat-screen monitors.
715	Computer printer. Includes multifunctional devices such as copier, fax, and scanner.
716	Computer projection device, LCD panel, projector.
710	Computer device, other.
721	Adding machine, calculator.
722	Telephone or answering machine.
723	Cash register.
724	Copier. Includes large standalone copiers. Excludes small copiers and multifunctional devices (715).
725	Fax machine.
726	Paper shredder.
727	Postage, shipping meter equipment.
728	Typewriter.
720	Office equipment, other.
731	Guitar.
732	Piano, organ. Includes player pianos. Excludes synthesizers and musical keyboards (733).
733	Musical synthesizer or keyboard. Excludes pianos, organs (732).
730	Musical instrument, other.
741	CD player (audio). Excludes computer CD, DVD players (712).
742	Laser disk player. Includes DVD players and recorders.
743	Radio. Excludes two-way radios (744).
744	Radio, two-way.
745	Record player, phonograph, turntable.
747	Speakers, audio; separate components.
748	Stereo equipment. Includes receivers, amplifiers, equalizers. Excludes speakers (747).
749	Tape recorder or player.
740	Sound recording or receiving equipment, other.
751	Cable converter box.
752	Projector: film, slide, overhead.
753	Television.
754	VCR or VCR-TV combination.
755	Video game, electronic.
756	Camcorder, video camera.
757	Photographic camera and equipment. Includes digital cameras.
750	Video equipment, other.
700	Electronic equipment, other.

**Personal and Household Equipment**

811	Clothes dryer.
812	Trash compactor.
813	Washer/Dryer combination (within one frame).
814	Washing machine, clothes.
821	Hot tub, whirlpool, spa.
822	Swimming pool equipment.
830	Floor care equipment, other.
831	Broom, electric.
832	Carpet cleaning equipment. Includes rug shampoos.
833	Floor buffer, waxer, cleaner.
834	Vacuum cleaner.
841	Comb, hair brush.
842	Curling iron.
843	Electrolysis equipment.
844	Hair curler warmer.
845	Hair dryer.
846	Makeup mirror, lighted.
847	Razor, shaver (electric).
848	Suntan equipment, sunlamp.
849	Toothbrush (electric).
850	Portable appliance designed to produce heat, other.
851	Baby bottle warmer.
852	Blanket, electric.
853	Heating pad.
854	Clothes steamer.
855	Clothes iron.
861	Automatic door opener. Excludes garage door openers (863).
862	Burglar alarm.
863	Garage door opener.
864	Gas detector.
865	Intercom.
866	Smoke or heat detector, fire alarm. Includes control equipment.
868	Thermostat.
871	Ashtray.
872	Charcoal lighter, utility lighter.
873	Cigarette lighter, pipe lighter.
874	Fire-extinguishing equipment. Includes electronic controls.
875	Insect trap. Includes bug zappers.
876	Timer.
881	Model vehicles. Includes model airplanes, boats, rockets, and powered vehicles used for hobby and recreational purposes.
882	Toy, powered.
883	Woodburning kit.
891	Clock.
892	Gun.
893	Jewelry-cleaning machine.
894	Scissors.
895	Sewing machine.
896	Shoe polisher.
897	Sterilizer, non-medical.
800	Personal and household equipment, other.

**Other Equipment Involved in Ignition**

000	Equipment involved in ignition, other.
NNN	None.
UUU	Undetermined.

**SECTION H****H Weather Information**

Descriptive information regarding weather conditions that existed at the time and location of the fire origin helps identify conditions that may have contributed to the fire cause or spread.

**NFDRS Weather Station ID***Definition*

Space is provided to record the six-character identification number for the National Fire Danger Rating System (NFDRS) Weather Station that monitors weather conditions at the location of fire origin.

*Purpose*

Researchers can obtain specific weather data for the time and location of the fire origin. Specific weather data permits analysis of those conditions that may have contributed to the fire cause or spread.

*Entry*

Enter the six-digit NFDRS Weather Station ID number. See the completed example at the end of Section H.

- ☛ If the descriptive weather information is not provided, it will be necessary for the local fire department to access the NFDRS database to perform later analysis of wildland fires using weather data. Because this may not always be feasible, fire departments should always complete this section themselves whenever possible.

**Weather Type***Definition*

The general description of weather conditions at the time and location of fire origin.

*Purpose*

A description of weather conditions at the time and location of fire origin helps to understand the conditions that may have contributed to the fire cause or spread.

*Entry*

Enter the two-digit code and description for the weather conditions at the time and location of fire origin. See the completed example at the end of Section H.

**WEATHER TYPE CODES**

10	Clear (less than 1/10 cloud cover).
11	Scattered clouds (1/10 to 5/10 cloud cover).
12	Broken clouds (6/10 to 9/10 cloud cover).
13	Overcast (more than 9/10 cloud cover).
14	Foggy.
15	Drizzle or mist.
16	Rain.
17	Snow or sleet.
18	Shower.
19	Thunderstorm in progress.
00	Weather type, other.

**Wind Direction***Definition*

The direction that the wind was blowing from at ground level. For instance, a north wind blows out of the north and would push a fire to the south.

*Purpose*

This information helps determine fire causes, rate of spread, and direction of a fire.

*Entry*

Enter the code and description for the direction that the ground-level wind is coming from. If Wind Speed (next) is zero, enter “N” for Wind Direction. See the completed example at the end of Section H.

**WIND DIRECTION CODES**

1	North.
2	Northeast.
3	East.
4	Southeast.
5	South.
6	Southwest.
7	West.
8	Northwest.
9	Shifting winds.
N	None/Calm.
U	Undetermined.

**Wind Speed***Definition*

The speed of the wind at the fire origin upon arrival of the fire suppression forces.

*Purpose*

Wind speed is possibly the most important factor affecting the rate of fire spread at an incident. This information is used to understand and predict fire behavior as well as to evaluate fire protection strategies.

### *Entry*

Enter the average wind speed, to the nearest mile per hour, at the origin of the fire. Wind speed may be measured using an anemometer. Calm conditions are recorded as “0.” See the completed example at the end of Section H.

## **Temperature and Relative Humidity**

### *Definitions*

Air temperature is measured in degrees Fahrenheit at the location of the fire origin when the fire started. Relative humidity is the ratio expressed as a percent of the amount of water vapor to the greatest amount possible at the same temperature.

### *Purpose*

Temperature and humidity information is used to assess the potential for ignition in various weather conditions and to understand problems associated with suppressing fires in different ambient temperatures and humidity levels.

### *Entries*

Enter the actual or estimated air temperature in degrees Fahrenheit at the time the incident started. If the temperature is below zero, check or mark the box that indicates a negative temperature.

Enter the percent humidity at the time the incident started. See the completed example at the end of Section H.

## **Fuel Moisture**

### *Definition*

The 10-hour reading of the moisture content of a fuel stick taken in the general area of fire origin. Fuel moisture is expressed as a percentage of the weight (generally ranging from 0 to 25 percent).

### *Purpose*

Information about fuel moisture is used in fire modeling to assess the potential for ignition and rate of spread for different fuels under various weather conditions.

### *Entry*

Enter the fuel moisture percentage level. See the completed example at the end of Section H.

## **Fire Danger Rating**

### *Definition*

Fire danger rating refers to one method of describing the wildfire threat in a particular area, based on the NFDRS. It is derived from both constant and variable fire danger factors that affect the ignition, spread, and difficulty of control of fires and the damage they cause. Factors considered when estimating the fire danger are temperature, relative humidity, wind speed, fuel type, and fuel moisture.

### *Purpose*

This information is used in fire prevention activities to determine when fires are most likely to occur and their severity. Burning bans and park or forest closures or restrictions may be invoked based on the fire danger rating. It is also useful in pre-suppression planning to determine staffing levels and critical initial attack times.

*Entry*

Enter the code and description that best describes the fire danger.

**FIRE DANGER RATING CODES**

- 1 Low fire danger.
- 2 Moderate fire danger.
- 3 High fire danger.
- 4 Very high fire danger.
- 5 Extreme fire danger.
- U Undetermined.

*Example*

NFDRS number: BLM’s Storm King Station, ID number 199065.

The fire started during a thunderstorm (19).

The winds came from the northwest (8).

The Weather Service reported that the local weather station registered winds of 15–20 miles per hour with occasional gusts up to 25 miles per hour.

95°F, humidity at 20 percent, fuel moisture level at 10 percent.

The danger rating in the fire area was moderate (2).

**H Weather Information**

| 1 | 9 | 9 | 0 | 6 | 5 |  
NFDRS Weather Station ID

| 1 | 9 | | Thunderstorm | | | 8 | | NW | |  
Weather Type Wind Direction

| | 1 | 5 | | | 9 | 5 | °F |  Check if negative  
Wind Speed (mph) Air Temperature

| | 2 | 0 | % | | 1 | 0 | % | | 2 | | Moderate | |  
Relative Humidity Fuel Moisture Fire Danger Rating

**SECTION I**

This section collects information on the types of properties threatened or destroyed in a wildland fire and the magnitude of the loss.

**I<sup>1</sup> Number of Buildings Ignited**

*Definition*

The number of buildings, if any, that were ignited by the wildland fire.

### Purpose

This information provides important information to resource planners and policymakers developing zoning ordinances and regulations regarding wildland and rural areas. This information may also help direct future training and incident management efforts.

### Entry

Enter the number of buildings ignited by the wildland fire. If no buildings were ignited, check or mark the None box.

- ☛ A separate exposure report should be filled out for each building ignited.

### Example

One building was ignited in a wildland fire:

Number of Buildings Ignited	
1	<input type="checkbox"/> None
Number of buildings that were ignited in Wildland fire	

## 1<sup>2</sup> Number of Buildings Threatened

### Definition

The number of buildings, if any, that were threatened, but not ignited by the wildland fire. This field implies that these buildings were “saved” by the efforts of fire suppression resources.

- ☛ This field is completed only when the fire management tactics employed were for the specific purpose of protecting threatened structures.

### Purpose

The number of buildings threatened provides important information to resource planners and policymakers developing zoning ordinances and regulations regarding wildland and rural areas. This information may also help direct future training and incident management efforts.

### Entry

Enter the number of buildings threatened but not ignited by the wildland fire. Check or mark the None box if no buildings were threatened.

### Example

Two farm buildings were threatened in the wildland fire:

Number of Buildings Threatened	
2	<input type="checkbox"/> None
Number of buildings that were threatened by Wildland fire but were not involved	

## I<sup>3</sup> Total Acres Burned ☆

### Definition

This data element captures the total acres burned by a wildland fire.

### Purpose

Recording the estimated number of acres burned indicates the magnitude of each fire and of the wildland fire problem overall. This can be used to evaluate progress in wildland fire prevention. This information can also help determine the magnitude of resources that should be devoted to fire protection and the cost effectiveness of various programs. An estimate of the number of acres burned represents a vital component of the overall fire loss picture.

### Entry

Enter the total number of acres burned. If less than one acre was burned, the decimal point field should be used to denote tenths of an acre.

- ☛ This entry should be the most accurate estimate of acres burned that is practical to obtain (one acre equals 43,560 square feet). Estimates based on the use of accurately scaled maps, dot grids, planimeters, or other accurate measuring methods are preferred.

### Example

A fire destroys 1,671 acres:

I <sup>3</sup> Total Acres Burned ☆	
_ _	_ _ 1  ,  6 7 1  •  _

## I<sup>4</sup> Primary Crops Burned

### Definition

This data element identifies up to three types of crops that burned.

### Purpose

Information about what type of crops burned is useful as a measure of loss and in tracking trends and patterns in wildland fires as well as planning prevention strategies.

### Entry

Enter up to three primary crops that burned in the fire. Enter the crop with the most burned acres first. If no crops were burned, leave this block blank.

### Example

The fire burned 100 acres of wheat and 150 acres of corn:

4 Primary Crops Burned	
Identify up to 3 crops if any crops were burned	
Corn	
Crop 1	
Wheat	
Crop 2	
Crop 3	

## SECTION J

### J Property Management

#### Definition

The name of the principle entity having responsibility for the maintenance or control of the property where the fire originated. It also allows for the reporting of the percent of the total acres burned for each type of ownership involved.

#### Purpose

The number of acres burned by property ownership is of significant value to local fire departments as well as to State and Federal wildland agencies. It provides a means to determine the frequency and impact of fire on property managers, especially major holders of land, such as ranchers, lumber and paper companies, agricultural producers, and Federal and State governments. This information also can help target fire protection programs at entities having the greatest risk or loss potential.

#### Entry

Indicate the percent of the total acres burned for each type of ownership involved, then check or mark the box that best describes the principle entity responsible for the property where the fire originated. If responsibility cannot be determined or is unknown, check or mark the Undetermined box.

- ☛ Check or mark only one owner/management entity.
- ☛ If the Federal (6) box was checked or marked, enter the Federal Agency Code.

**Example**

The fire started on a privately owned and operated farm (private tax paying) (1) and spread to Montana’s Big Horn Canyon (Federal Agency Code MTBIP). Thirty percent of the total acres burned was on the farm and 70 percent was owned by the Federal government:

**J Property Management**

Indicate the percent of the total acres burned for *each* ownership type then check the ONE box to identify the property ownership at the origin of the fire. If the ownership at origin is Federal, enter the Federal Agency Code.

Ownership	% Total Acres Burned
↓	↓
U <input type="checkbox"/> Undetermined	_____ %
<b>Private</b>	
1 <input checked="" type="checkbox"/> Tax paying	_ 3  _ 0   %
2 <input type="checkbox"/> Non-tax paying	_____ %
<b>Public</b>	
3 <input type="checkbox"/> City, town, village, local	_____ %
4 <input type="checkbox"/> County or parish	_____ %
5 <input type="checkbox"/> State or province	_____ %
6 <input checked="" type="checkbox"/> Federal <u>MTBIP</u>	_ 7  _ 0   %
Federal Agency Code	
7 <input type="checkbox"/> Foreign	_____ %
8 <input type="checkbox"/> Military	_____ %
0 <input type="checkbox"/> Other	_____ %

**PROPERTY MANAGEMENT CODES**

**Private**

- 1 Tax paying.
- 2 Non-tax paying.

**Public**

- 3 City, town, village, or other locality.
- 4 County or parish.
- 5 State or province.
- 6 Federal.
- 7 Foreign.
- 8 Military.
- 0 Other.
- U Undetermined.

<b>WILDLAND FEDERAL AGENCY CODES - (WILDLAND NIFC STANDARD CODESET)</b>			
<b>DEPARTMENT OF AGRICULTURE, FOREST SERVICE</b>			
PAALF	Allegheny National Forest	UTFIF	Fishlake National Forest
CAANF	Angeles National Forest	MTFNF	Flathead National Forest
AZASF	Apache-Sitgreaves National Forest	SCFMF	Francis Marion & Sumter National Forests
COARF	Arapaho & Roosevelt National Forests/ Pawnee National Grassland	ORFRF	Fremont National Forest
UTASF	Ashley National Forest	MTGNF	Gallatin National Forest
MTBDF	Beaverhead/Deerlodge National Forest	VAVAF	George Washington & Jefferson National Forests
WYBHF	Bighorn National Forest	WAGPF	Gifford Pinchot National Forest
MTBRF	Bitterroot National Forest	NMGNF	Gila National Forest
SDBKF	Black Hills National Forest	COGMF	Grand Mesa/Uncompahgre/Gunnison National Forest
IDBOF	Boise National Forest	VTGMF	Green Mountain National Forest
WYBTF	Bridger-Teton National Forest	MTHNF	Helena National Forest
PRCAF	Caribbean National Forest	MIHIF	Hiawatha National Forest
IDCTF	Caribou-Targhee National Forest	INHOF	Hoosier National Forest
NMCAF	Carson National Forest	NVHTF	Humboldt-Toiyabe National Forest
NMCHP	Chaco Culture National Monument	MIHMF	Huron-Manistee National Forest
GACHF	Chattahoochee-Oconee National Forest	IDIPF	Idaho Panhandle National Forest
WICNF	Chequamegon-Nicolet National Forest	CAINF	Inyo National Forest
TNCNF	Cherokee National Forest	AZKNF	Kaibab National Forest
MNCPF	Chippewa National Forest	LAKIF	Kisatchie National Forest
AKCGF	Chugach National Forest	CAKNF	Klamath National Forest
NMCIF	Cibola National Forest	MTKNF	Kootenai National Forest
IDCWF	Clearwater National Forest	KYLBF	Land Between the Lakes National Recreation Area
CACNF	Cleveland National Forest	CALNF	Lassen National Forest
AZCOF	Coconino National Forest	MTLCF	Lewis & Clark National Forest
ORCGF	Columbia River Gorge National Scenic Area	NMLNF	Lincoln National Forest
WACOF	Colville National Forest	MTLNF	Lolo National Forest
AZCNF	Coronado National Forest	CALPF	Los Padres National Forest
MTCNF	Custer National Forest	ORMAF	Malheur National Forest
NDDPF	Dakota Prairie National Grasslands	UTMLF	Manti-Lasal National Forest
KYDBF	Daniel Boone National Forest	MOMTF	Mark Twain National Forest
ORDEF	Deschutes National Forest	WYMBF	Medicine Bow National Forest
UTDIF	Dixie National Forest	CAMNF	Mendocino National Forest
CAENF	Eldorado National Forest	ILMPF	Midewin National Tall Grass Prairie

**DEPARTMENT OF AGRICULTURE, FOREST SERVICE (CONT'D)**

CAMDF	Modoc National Forest	COSJF	San Juan National Forest
WVMOF	Monongahela National Forest	NMSNF	Santa Fe National Forest
WAMSF	Mt. Baker-Snoqualmie National Forest	SCSRF	Savannah River Forest
ORMHF	Mt. Hood National Forest	IDSTF	Sawtooth National Forest
TXTXF	National Forests and Grasslands In Texas	CASQF	Sequoia National Forest
ALALF	National Forests in Alabama	CASHF	Shasta-Trinity National Forest
FLNF	National Forests in Florida	ILSHF	Shawnee National Forest
MSMNF	National Forests in Mississippi	WYSHF	Shoshone National Forest
NCNCF	National Forests in North Carolina	CASNF	Sierra National Forest
NENBF	Nebraska National Forest	ORSIF	Siskiyou National Forest
IDNPF	Nez Perce National Forest	ORSUF	Siuslaw National Forest
OROCF	Ochoco National Forest	CASRF	Six Rivers National Forest
WAOWF	Okanogan/Wenatchee National Forest	CASTF	Stanislaus National Forest
WAOLF	Olympic National Forest	MNSUF	Superior National Forest
MIOTF	Ottawa National Forest	CATNF	Tahoe National Forest
AROUF	Ouachita National Forest	AKTNF	Tongass National Forest
AROZF	Ozark & St. Francis National Forests	AZTNF	Tonto National Forest
IDPAF	Payette National Forest	UTUIF	Uinta National Forest
COPSF	Pike & San Isabel National Forest	ORUMF	Umatilla National Forest
CAPNF	Plumas National Forest	ORUPF	Umpqua National Forest
AZPNF	Prescott National Forest	ORWWF	Wallowa-Whitman National Forest
CORGF	Rio Grande National Forest	UTWCF	Wasatch-Cache National Forest
ORRRF	Rogue River National Forest	OHWAF	Wayne National Forest
CORTF	Routt National Forest	NHWMF	White Mountain National Forest
IDSCF	Salmon-Challis National Forest	COWRF	White River National Forest
CABDF	San Bernardino National Forest	ORWIF	Willamette National Forest
		ORWNF	Winema National Forest

**DEPARTMENT OF COMMERCE, NATIONAL WEATHER SERVICE**

MTBLW	Billings Weather Service	MTGFW	Great Falls Weather Service
NDBMW	Bismark Weather Service	MTMSW	Missoula Weather Service
MTGGW	Glasgow Weather Service	CANWS	National Weather Service
NDGFW	Grand Forks Weather Service		

**DEPARTMENT OF DEFENSE**

MDABQ	Aberdeen Proving Grounds	NCCLQ	Camp Lejeune
KYBGQ	Blue Grass Army Depot	CAMCP	Camp Pendleton Marine Corps Base

**DEPARTMENT OF DEFENSE (CONT'D)**

NCCPQ	Cherry Point	CAFHL	Hunter Liggett Military Reservation
FLEAQ	Eglin Air Force Base	NVNAF	Nellis Air Force Base
NVFNA	Fallon Naval Air Station	NVNTE	Nevada Test Site
NCFBQ	Fort Bragg	NHNBQ	New Boston Air Force Station
KYFCQ	Fort Campbell	SCSHQ	Shaw Air Force Base
NYFDQ	Fort Drum Military Reservation	CASAD	Sierra Army Depot
SCFJQ	Fort Jackson Army Training Center	CAAFV	Vandenburg Air Force Base
KYFKQ	Fort Knox	NYWPQ	West Point Military Reservation
GAFSQ	Fort Stewart	CTWEQ	Westover Air Force Base

**DEPARTMENT OF ENERGY**

WAHNE Hanford Site

**DEPARTMENT OF INTERIOR**

OKACA	Alabama-Coushatta Agency	NDFTA	Fort Totten Agency
AKANA	Anchorage Agency	AZFYA	Fort Yuma Agency
AKBEA	Bethel Agency	WIGLA	Great Lakes Agency
MTBFA	Blackfeet Agency	CAHIA	Hoopa Agency
CACCA	Central Calif Agency	AZHOA	Hopi Agency
SDCRA	Cheyenne River Reservation	KSHTA	Horton Reservation
OKCHA	Chickasaw Agency	NMJIA	Jicarilla Agency
MSCHA	Choctaw Agency	NMLAA	Laguna Agency
AKCIA	Chugachmiut Agency	SDLBA	Lower Brule Reservation
AZCRA	Colorado River Agency	WIMEA	Menominee Agency
WACOA	Colville Agency	NMMEA	Mescalero Agency
MTCRA	Crow Agency	AKMEA	Metlakatla Agency
SDCCA	Crow Creek Reservation	OKMIA	Miami Agency
NCECA	Eastern Cherokee Agency	MIMIA	Michigan Agency
NVENA	Eastern Nevada Agency	MNMNA	Minnesota Agency
AKFAA	Fairbanks Agency	AKNOA	Nome Agency
MTFHA	Flathead Agency	IDNIA	North Idaho Agency
AZFTA	Fort Apache Agency	CANCA	Northern California Agency
MTFBA	Fort Belknap Agency	MTNCA	Northern Cheyenne Agency
NDFBA	Fort Berthold Agency	NMNPA	Northern Pueblos Agency
CAFBA	Fort Bidwell Agency	WAOPA	Olympic Peninsula Agency
IDFHA	Fort Hall Agency	OKOSA	Osage Agency
MTFPA	Fort Peck Agency	AZPPA	Papago Agency

**DEPARTMENT OF INTERIOR (CONT'D)**

MEPAA	Passamaquoddy Agency	COSUA	Southern Ute Reservation
OKPAA	Pawnee Agency	WASPA	Spokane Agency
MEPEA	Penobscot Agency	NDSRA	Standing Rock Reservation
AZPMA	Pima Agency	CASYC	Sycuan Agency
SDPRA	Pine Ridge Reservation	NMTAA	Taos NPA Agency
WAPSA	Puget Sound Agency	AZTCA	Truxton Canon Agency
NMRNA	Ramah Navajo Agency	CATIA	Tule River Agency
MNRLA	Red Lake Agency	NDTMA	Turtle Mountain Agency
MTRBA	Rocky Boys Agency	UTUOA	Uintah and Ouray Agency
MTRNA	Ronan Agency	ORUMA	Umatilla Agency
SDRBA	Rosebud Reservation	COUMA	Ute Mountain Reservation
IASFA	Sac & Fox Agency	ORWSA	Warm Springs Agency
AZSCA	San Carlos Agency	NVWNA	Western Nevada Agency
FLSEA	Seminole Agency	OKWEA	Wewoka Agency
ORSIA	Siletz Agency	UTUMA	White Mesa/Ute Mountain Agency
SDSWA	Sisseton–Wahpeton Reservation	WYWRA	Wind River Reservation
CASCA	Southern California Agency	NEWBA	Winnebago Reservation
UTPIA	Southern Piute Agency	WAYAA	Yakima Agency
SCAAA	Southern Plains Agency	SDYAA	Yankton Reservation
OKAAA	Southern Plains Agency	NMZUA	Zuni Agency
NMSPA	Southern Pueblos Agency		

**DEPARTMENT OF INTERIOR, BUREAU OF LAND MANAGEMENT**

CABBD	Bakersfield District	CACDD	California Desert District
NVBAC	Battle Mountain Airtanker Base	CANOD	Northern California District

**DEPARTMENT OF INTERIOR, BUREAU OF RECLAMATION**

NDAWR	Arrowwood National Wildlife Refuge	MTLMR	Lee Metcalf National Wildlife Refuge
NDADR	Audubon National Wildlife Refuge	NDLLR	Long Lake National Wildlife Refuge
MTBLR	Benton Lake National Wildlife Refuge	NDLWR	Lostwood Lake National Wildlife Refuge
MTBWR	Bowdoin National Wildlife Refuge	MTMLR	Medicine Lake National Wildlife Refuge
MTCMR	Charles M. Russell National Wildlife Refuge	CABRL	Mid-Pacific Region
NDCLR	Chase Lake National Wildlife Refuge	MTNBR	National Bison Range
NDCRR	Crosby Wetland Management District	MTRLR	Red Rock Lakes National Wildlife Refuge
NDDLRL	Des Lacs National Wildlife Refuge	NDSLRL	Spirit Lake Wetland Management District
NDJCR	J. Clark Salyer National Wildlife Refuge	NDSHR	Sullys Hill National Game Preserve
IDKOR	Kootenai National Wildlife Refuge	NDTWR	Tewaukon National Wildlife Refuge
NDKMR	Kulm Wetland Management District	NDUSR	Upper Souris National Wildlife Refuge
NDLIR	Lake Ilo National Wildlife Refuge	NDVCR	Valley City Wetland Management District

<b>DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE</b>			
SCACR	Ace Basin National Wildlife Refuge	MNBGR	Big Stone National Wildlife Refuge
MNAGR	Agassiz National Wildlife Refuge	AZBWR	Bill Williams National Wildlife Refuge
COALR	Alamosa National Wildlife Refuge	NMBTR	Bitter Lake National Wildlife Refuge
AKAMR	Alaska Maritime National Wildlife Refuge	GABLR	Blackbeard Island National Wildlife Refuge
AKAPR	Alaska Peninsula National Wildlife Refuge	ALBWR	Blowing Wind Cave National Wildlife Refuge
NCALR	Alligator River National Wildlife Refuge	DEBHR	Bombay Hook National Wildlife Refuge
NVAIR	Anaho Island National Wildlife Refuge	ALBOR	Bon Secour National Wildlife Refuge
TXAHR	Anahuac National Wildlife Refuge	GABSR	Bond Swamp National Wildlife Refuge
ORAKR	Ankeny National Wildlife Refuge	NMBDR	Bosque del Apache National Wildlife Refuge
CAADR	Antioch Dunes National Wildlife Refuge	LABCR	Bouge Chitto National Wildlife Refuge
TXARR	Aransas National Wildlife Refuge	TXBRR	Brazoria National Wildlife Refuge
COARR	Arapaho National Wildlife Refuge	LABTR	Breton National Wildlife Refuge
FLACR	Archie Carr National Wildlife Refuge	COBPR	Brown's Park National Wildlife Refuge
AKARR	Arctic National Wildlife Refuge	VIBIR	Buck Island National Wildlife Refuge
MEARR	Arrostook National Wildlife Refuge	AZBAR	Buenos Aires National Wildlife Refuge
FLLXR	Arthur R. Marshall/Loxahatchee National Wildlife Refuge	TXBFR	Buffalo Lake National Wildlife Refuge
NVAMR	Ash Meadows National Wildlife Refuge	AZCPR	Cabeza National Wildlife Refuge
LAATR	Atchafalaya National Wildlife Refuge	PRCBR	Cabo Rojo National Wildlife Refuge
TXATR	Attwater Prairie Chicken National Wildlife Refuge	ARCRR	Cache River National Wildlife Refuge
COBAR	Baca National Wildlife Refuge	TXCLR	Caddo Lake National Wildlife Refuge
VABBR	Back Bay National Wildlife Refuge	FLCAR	Caloosahatchee National Wildlife Refuge
TXBAR	Balcones Canyon National Wildlife Refuge	IDCSR	Camas National Wildlife Refuge
ORBMR	Bandon Marsh National Wildlife Refuge	LACPR	Cameron Prairie National Wildlife Refuge
GABNR	Banks Lake National Wildlife Refuge	WVCVR	Canaan Valley National Wildlife Refuge
ORBKR	Baskett Slough National Wildlife Refuge	NJCMR	Cape May National Wildlife Refuge
LABAR	Bayou Cocodrie National Wildlife Refuge	ORCPR	Cape Meares National Wildlife Refuge
LABSR	Bayou Sauvage National Wildlife Refuge	SCCMR	Cape Romain National Wildlife Refuge
IDBLR	Bear Lake National Wildlife Refuge	SCCRR	Carolina Sandhills National Wildlife Refuge
UTBBR	Bear River Migratory Bird Refuge	CACAR	Castle Rock National Wildlife Refuge
ORBVR	Bear Valley National Wildlife Refuge	LACTR	Catahoula National Wildlife Refuge
AKBCR	Becharof National Wildlife Refuge	NCCDR	Cedar Island National Wildlife Refuge
XBBR	Big Boggy National Wildlife Refuge	FLCKR	Cedar Keys National Wildlife Refuge
LABBR	Big Branch Marsh National Wildlife Refuge	FLCHR	Chassahowitzka National Wildlife Refuge
ARBGR	Big Lake National Wildlife Refuge	ILCTR	Chautauqua National Wildlife Refuge
MOBMR	Big Muddy National Wildlife Refuge	MDBWR	Chesapeake Marshlands National Wildlife Refuge Complex
INBOR	Big Oaks National Wildlife Refuge	TNCHR	Chicksaw National Wildlife Refuge

DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE (CONT'D)			
VACHR	Chincoteague National Wildlife Refuge	MAEMR	Eastern Massachusetts National Wildlife Refuge Complex
ALCHR	Choctaw National Wildlife Refuge	MDENR	Eastern Neck National Wildlife Refuge
CACBR	Cibola National Wildlife Refuge	VAESR	Eastern Shore of Virginia
AZCBR	Cibola National Wildlife Refuge	VAEVR	Eastern Virginia Rivers Refuges
KYCLR	Clark's River National Wildlife Refuge	NJERR	Edwin B. Forsythe National Wildlife Refuge
CACLR	Clear Lake National Wildlife Refuge	FLEGR	Egmont Key National Wildlife Refuge
ORCOR	Cold Springs National Wildlife Refuge	PAERR	Erie National Wildlife Refuge
WACBR	Columbia National Wildlife Refuge	ALEFR	Eufaula National Wildlife Refuge
TXCOR	Columbia Lakes National Wildlife Refuge	NVFLR	Fallon National Wildlife Refuge
CACUR	Colusa National Wildlife Refuge	ARFSR	Felsenthal National Wildlife Refuge
WACNR	Conboy Lake National Wildlife Refuge	MNFFR	Fergus Falls Wetland Management District
WACOR	Copalis National Wildlife Refuge	ALFER	Fern Cave National Wildlife Refuge
ILCOR	Crab Orchard National Wildlife Refuge	UTFSR	Fish Springs National Wildlife Refuge
MNCMR	Crane Meadows National Wildlife Refuge	WAFLR	Flattery Rocks National Wildlife Refuge
NECLR	Crescent Lake National Wildlife Refuge	KSFLR	Flint Hills National Wildlife Refuge
FLCLR	Crocodile Lake National Wildlife Refuge	FLFPR	Florida Panther National Wildlife Refuge
TNCRR	Cross Creeks National Wildlife Refuge	NEFNR	Fort Niobrara
FLCRR	Crystal River National Wildlife Refuge	WIGNR	Genoa National Fish Hatchery
PRCUR	Culebra National Wildlife Refuge	MSGBR	Grand Bay National Wildlife Refuge
NCCRR	Currituck National Wildlife Refuge	LAGCR	Grand Cote National Wildlife Refuge
ILCYR	Cypress Creek National Wildlife Refuge	WAGHR	Gray's Harbor National Wildlife Refuge
MSDAR	Dahomey National Wildlife Refuge	IDGLR	Grays Lake National Wildlife Refuge
LADRR	D'Arbonne National Wildlife Refuge	NHGBR	Great Bay National Wildlife Refuge
IDDFR	Deer Flat National Wildlife Refuge	VAGDR	Great Dismal Swamp National Wildlife Refuge
CADLR	Delevan National Wildlife Refuge	MOGRR	Great Rivers National Wildlife Refuge
LADLR	Delta National Wildlife Refuge	NJGSR	Great Swamp National Wildlife Refuge
PRDER	Desecheo National Wildlife Refuge	FLGWR	Great White Heron National Wildlife Refuge
NVDSR	Desert National Wildlife Refuge	VIGCR	Green Cay National Wildlife Refuge
IADSR	DeSoto National Wildlife Refuge	NMGRR	Gruha National Wildlife Refuge
MNDLR	Detroit Lakes Wetland Management District	TXHGR	Hagerman National Wildlife Refuge
MIDRR	Detroit River International Wildlife Refuge	IDHFR	Hagerman National Fish Hatchery
NDDVR	Devil's Lake Wetland Management District	HIHAR	Hakalau Forest National Wildlife Refuge
OKDXR	Dexter National Fish Hatchery	MNHSR	Hamden Slough National Wildlife Refuge
NMDXR	Dexter National Fish Hatchery & Technology Center	HIHNR	Hanalei National Wildlife Refuge
IADAR	Driftless National Wildlife Refuge	LAHAR	Handy Brake National Wildlife Refuge
WADNR	Dungeness National Wildlife Refuge	WAHFR	Hanford Reach National Monument

<b>DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE</b>			
MIHAR	Harbor Island National Wildlife Refuge	HIKIR	Kilauea Point National Wildlife Refuge
GAHSR	Harris Neck National Wildlife Refuge	MIKWR	Kirtlands Warbler National Wildlife Refuge
ORHMR	Hart Mountain National Antelope Refuge	KSKIR	Kirwin National Wildlife Refuge
TNHTR	Hatchie National Wildlife Refuge	CAKLR	Klamath Basin National Wildlife Refuge
AZHVR	Havasu National Wildlife Refuge	ORKLR	Klamath Forest National Wildlife Refuge
HIPCR	Hawaii Pacific Islands National Wildlife Refuge Complex	AKKDR	Kodiak National Wildlife Refuge
HIHIR	Hawaiian Islands National Wildlife Refuge	AZKGR	Kofa National Wildlife Refuge
MIHFR	Hiawatha Forest National Fish Hatchery	AKKUR	Koyukuk National Wildlife Refuge
MSHLR	Hillside National Wildlife Refuge	LALCR	Lacassine National Wildlife Refuge
FLHBR	Hobe Sound National Wildlife Refuge	SDLCR	Lacreek National Wildlife Refuge
ARHLR	Holla Bend National Wildlife Refuge	WILCR	LaCrosse District, Upper Mississippi National Wildlife Refuge
WIHRR	Horicon National Wildlife Refuge	TXLGR	Laguna Atascosa National Wildlife Refuge
HIHLR	Huleia National Wildlife Refuge	PRLCR	Laguna Cartagena National Wildlife Refuge
CAHBR	Humboldt Bay	SDLAR	Lake Andes National Wildlife Refuge
MIHUR	Huron National Wildlife Refuge	TNLIR	Lake Isom National Wildlife Refuge
SDHUR	Huron Wetland Management District	LALOR	Lake Ophelia National Wildlife Refuge
ILILR	Illinois River National Wildlife Refuge	NHUBR	Lake Umbagog National Wildlife Refuge
WIIRR	Illinois River National Wildlife Refuge	FLLRR	Lake Wales Ridge National Wildlife Refuge
AZIMR	Imperial National Wildlife Refuge	FLLWR	Lake Woodruff National Wildlife Refuge
AKINR	Innoko National Wildlife Refuge	NMLVR	Las Vegas National Wildlife Refuge
NYIRR	Iroquois National Wildlife Refuge	WALWR	Leavenworth National Fish Hatchery
FLISR	Island Bay National Wildlife Refuge	WILPR	Leopold Wetland Management
AKIZR	Izembek National Wildlife Refuge	ORLAR	Lewis & Clark National Wildlife Refuge
FLJNR	J.N. "Ding" Darling National Wildlife Refuge	MNLFR	Litchfield Wetland Management District
HIJCR	James C. Campbell National Wildlife Refuge	WALPR	Little Pend Oreille National Wildlife Refuge
VAJRR	James River National Wildlife Refuge	OKLRR	Little River National Wildlife Refuge
PATNR	John Heinz at Tinicum National Wildlife Refuge	OKLSR	Little Sandy National Wildlife Refuge
WIJRR	Jordan River National Fish Hatchery	ARLOR	Logan Cave National Wildlife Refuge
WAJHR	Julia Bulter Hansen National Wildlife Refuge for the Columbia White Tailed Deer	NYLIR	Long Island National Wildlife Refuge Complex
HIKKR	Kakahaia National Wildlife Refuge	LALWR	Louisiana Wetlands
AKKAR	Kanutu National Wildlife Refuge	TNLHR	Lower Hatchie National Wildlife Refuge
AKKNR	Kenai National Wildlife Refuge	CALKR	Lower Klamath National Wildlife Refuge
CAKRR	Kern National Wildlife Refuge	ORLOR	Lower Klamath National Wildlife Refuge
FLKER	Key West National Wildlife Refuge	TXRGR	Lower Rio Grande Valley National Wildlife Refuge

DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE (CONT'D)			
FLLSR	Lower Suwannee National Wildlife Refuge	MEMHR	Moosehorn National Wildlife Refuge
NCMCR	Mackay Island National Wildlife Refuge	NMMRR	Mora National Wildlife Refuge
SDMDR	Madison Wetland Management District	MSMKR	Morgan Brake National Wildlife Refuge
MECMR	Maine Coastal Islands National Wildlife Refuge Complex	MNBNR	Morris National Wildlife Refuge
ORMAR	Malheur National Wildlife Refuge	TXMLR	Mule Shoe National Wildlife Refuge
LAMYR	Mandalay National Wildlife Refuge	INMSR	Muscatatuck National Wildlife Refuge
KSMCR	Maris des Cygnes National Wildlife Refuge	WYNER	National Elk Refuge
ILMTR	Mark Twain National Wildlife Refuge	FLNKR	National Key Deer Refuge
VAMNR	Mason Neck National Wildlife Refuge	IANSR	Neal Smith National Wildlife Refuge
TXMAR	Matagorda National Wildlife Refuge	WINCR	Necedah National Wildlife Refuge
MSMBR	Mathews Brake National Wildlife Refuge	ORNTR	Nestucca Bay National Wildlife Refuge
FLMAR	Matlacha Pass National Wildlife Refuge	WANQR	Nisqually National Wildlife Refuge
NCMTR	Mattamuskeet National Wildlife Refuge	NENPR	North Platte National Wildlife Refuge
NMMXR	Maxwell National Wildlife Refuge	ARNAR	Northeast Arkansas Refuges
TXMCR	McFaddin National Wildlife Refuge	AKNOR	Nowitna National Wildlife Refuge
MNMGR	McGregor District, Upper Mississippi National Wildlife Refuge	MSNXR	Noxubee National Wildlife Refuge
ORMKR	McKay Creek National Wildlife Refuge	VAOQR	Occoquan Bay National Wildlife Refuge
WAMNR	McNary National Wildlife Refuge	WVOHR	Ohio River Islands National Wildlife Refuge
FLMIR	Merritt Island National Wildlife Refuge	GAOKR	Okefenokee National Wildlife Refuge
NMMSR	Mescalero Refuge Hatchery	OKOBR	Oklahoma Bat Caves National Wildlife Refuge
MIMWR	Michigan Wetland Management District	OKOPR	Optima National Wildlife Refuge
MIMIR	Michigan Island National Wildlife Refuge	ORORR	Oregon Islands National Wildlife Refuge
WAMCR	Mid Columbia National Wildlife Refuge Complex	OHOTR	Ottawa National Wildlife Refuge
MOMOR	Mingo National Wildlife Refuge	UTOWR	Ouray National Wildlife Refuge
IDMNR	Minidoka National Wildlife Refuge	AROVR	Overflow National Wildlife Refuge
MNMVR	Minnesota Valley National Wildlife Refuge	NVPRR	Pahranagat National Wildlife Refuge
VTMQR	Missisquoi National Wildlife Refuge	VAPBX	Paint Bank National Fish Hatchery
MSMSR	Mississippi Sandhill Crane National Wildlife Refuge	MSPNR	Panther Swamp National Wildlife Refuge
MSMWR	Mississippi Wetlands Authority	MAPRR	Parker River National Wildlife Refuge
NVMVR	Moapa Valley National Wildlife Refuge	FLPAR	Passage Key National Wildlife Refuge
CAMDR	Modoc National Wildlife Refuge	INPKR	Patoka River National Wildlife Refuge
COMVR	Monte Vista National Wildlife Refuge	MDPWR	Patuxent National Wildlife Refuge
NYMZR	Montezuma National Wildlife Refuge	NCPLR	Pea Island National Wildlife Refuge
TXMDR	Moody National Wildlife Refuge	HIPHR	Pearl Harbor National Wildlife Refuge

## DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE (CONT'D)

NCPER	Pee Dee National Wildlife Refuge	OKSLR	Salt Plains National Wildlife Refuge
FLPLR	Pelican Island National Wildlife Refuge	CASSR	Salton Sea National Wildlife Refuge
MIPCR	Pendills Creek National Fish Hatchery	NMSNR	San Andreas National Wildlife Refuge
GAPDR	Piedmont National Wildlife Refuge	TXSNR	San Bernard National Wildlife Refuge
WAPIR	Pierce National Wildlife Refuge	AZSBR	San Bernardino National Wildlife Refuge
SCPKR	Pinckney Island National Wildlife Refuge	CAFW	San Francisco Bay National Wildlife Refuge
FLPIR	Pine Island National Wildlife Refuge	WASNR	San Juan Islands National Wildlife Refuge
FLPNR	Pinellas National Wildlife Refuge	CALUR	San Luis National Wildlife Refuge
NCPOR	Pocosin Lakes National Wildlife Refuge	CASPR	San Pablo National Wildlife Refuge
ARPCR	Pond Creek National Wildlife Refuge	SDSLR	Sand Lake National Wildlife Refuge
IAPLR	Port Louisa National Wildlife Refuge	VISPR	Sandy Point National Wildlife Refuge
VAPRR	Potomac River Refuges	TXSTR	Santa Ana National Wildlife Refuge
VAPQR	Presquile National Wildlife Refuge	SCSNR	Santee National Wildlife Refuge
DEPHR	Prime Hook National Wildlife Refuge	ILSVR	Savanna District, Upper Mississippi National Wildlife Refuge
WAPRR	Protection Island National Wildlife Refuge	GASAR	Savannah Coastal Refuges
NCMUR	Pungo National Wildlife Refuge	WYSER	Seedskeadee National Wildlife Refuge
WAQLR	Quillayute Needles National Wildlife Refuge	AKSWR	Selawik National Wildlife Refuge
KSQUR	Quivira National Wildlife Refuge	MISNR	Seney National Wildlife Refuge
MERCRC	Rachel Carson National Wildlife Refuge	OKSQR	Sequoyah National Wildlife Refuge
NERBR	Rainwater Basin Wetland Management District	NMSER	Seville National Wildlife Refuge
VARVR	Rappahannock River Valley	NVSAR	Sheldon Antelope National Wildlife Refuge
LARRR	Red River National Wildlife Refuge	ORSHR	Sheldon-Hart Mountain National Wildlife Refuge Complex
TNRLR	Reelfoot National Wildlife Refuge	LASHR	Shell Keys National Wildlife Refuge
RIRIR	Rhode Island National Wildlife Refuge Complex	MNSBR	Sherburne National Wildlife Refuge
MNRLR	Rice Lake National Wildlife Refuge	MISSR	Shiawassee National Wildlife Refuge
WARFR	Ridgefield National Wildlife Refuge	ORSIR	Siletz Bay National Wildlife Refuge
NCRRR	Roanoke River National Wildlife Refuge	TXSRR	South Texas Refuge Complex
CORMR	Rocky Mountain Arsenal National Wildlife Refuge	FLSWR	Southwest Florida Gulf Coast Refuges
NVRLR	Ruby Lake National Wildlife Refuge	MOSQR	Squaw Creek National Wildlife Refuge
MNRYR	Rydell National Wildlife Refuge	MSSCR	St. Catherine Creek National Wildlife Refuge
LASBR	Sabine National Wildlife Refuge	WISCR	St. Croix Wetland Management District
CASWR	Sacramento National Wildlife Refuge	FLSJR	St. Johns National Wildlife Refuge
CASAR	Sacramento River National Wildlife Refuge	FLSMR	St. Marks National Wildlife Refuge
WASAR	Saddle Mountain National Wildlife Refuge	FLSVR	St. Vincent National Wildlife Refuge

DEPARTMENT OF INTERIOR, FISH AND WILDLIFE SERVICE (CONT'D)			
WASGR	Steigerwald Lake National Wildlife Refuge	GATYR	Tybee National Wildlife Refuge
CTSMR	Stewart B. McKinney National Wildlife Refuge	ORUMR	Umatilla National Wildlife Refuge
NVSWR	Stillwater National Wildlife Refuge	IAUSR	Union Slough National Wildlife Refuge
MESHR	Sunkhaze Meadows National Wildlife Refuge	ORUKR	Upper Klamath National Wildlife Refuge
NJSPR	Supawna Meadows National Wildlife Refuge	LAUOR	Upper Ouachita National Wildlife Refuge
CASTR	Sutter National Wildlife Refuge	NEVAR	Valentine National Wildlife Refuge
MOSWR	Swan Lake National Wildlife Refuge	SCWAR	Waccamaw National Wildlife Refuge
NCSWR	Swanquarter National Wildlife Refuge	NJWKR	Walkill River National Wildlife Refuge
MASCR	Sylvio O. Conte National Wildlife Refuge	ARWPR	Wapanocca National Wildlife Refuge
MSTAR	Tallehatchie National Wildlife Refuge	ORWTR	Wapato National Wildlife Refuge
MNTMR	Tamarac National Wildlife Refuge	ORWSR	Warm Springs National Fish Hatchery
FLTBR	Tampa Bay Refuges	WAWIR	Washington Islands National Wildlife Refuge
FLTTR	Ten Thousand Islands National Wildlife Refuge	OKWSR	Washita National Wildlife Refuge
TNTNR	Tennessee National Wildlife Refuge	GAWSR	Wassaw National Wildlife Refuge
LATNR	Tensas River National Wildlife Refuge	ALWAR	Watercress Darter National Wildlife Refuge
AKTER	Tetlin National Wildlife Refuge	SDWAR	Waubay National Wildlife Refuge
TXTCR	Texas Chenier Plain Complex	ALWLR	Wheeler National Wildlife Refuge
TXTMR	Texas Mid Coast Refuge Complex	ARWHR	White River National Wildlife Refuge
TXTPR	Texas Point National Wildlife Refuge	WIWCR	Whittlesey Creek National Wildlife Refuge
ORTAR	Three Arch Rocks National Wildlife Refuge	OKWMR	Wichita Mountains National Wildlife Refuge
CATNR	Tijuana Slough National Wildlife Refuge	WAWLR	Willapa National Wildlife Refuge
OKTSR	Tishomingo National Wildlife Refuge	ORWMR	William L. Finley National Wildlife Refuge
AKTGR	Togiak National Wildlife Refuge	AZWCR	William's Creek National Wildlife Refuge
WATPR	Toppenish National Wildlife Refuge	MNWWR	Windom Wetland Management District
WITPR	Trempeleau National Wildlife Refuge	WIWNR	Winona District, Upper Mississippi National Wildlife Refuge
TXTRR	Trinity River National Wildlife Refuge	GAWLR	Wolf Island National Wildlife Refuge
ORTUR	Tualatin River National Wildlife Refuge	MSYZR	Yazoo National Wildlife Refuge
CATLR	Tule Lake National Wildlife Refuge	AKYDR	Yukon Delta National Wildlife Refuge
WATBR	Turnbull National Wildlife Refuge	AKYFR	Yukon Flats National Wildlife Refuge
ILTWR	Two Rivers National Wildlife Refuge		

<b>DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE</b>			
KYALP	Abraham Lincoln Birthplace National Historic Site	COBCP	Black Canyon of the Gunnison National Preserve
MEACP	Acadia National Park	NCBRP	Blueridge Parkway
MAADP	Adams National Historic Site	VABWP	Booker T. Washington National Monument
NEAFP	Agate Fossil Beds National Monument	MABOP	Boston National Historic Park
AKROP	AKRO Default Park Group	MSBCP	Brices Cross Roads National Battlefield Site
TXAFP	Alibates Flint Quarries National Monument	UTBRP	Bryce Canyon National Park
PAAPP	Allegheny Portage Railroad National Historic Site	VIBIP	Buck Island Reef National Monument
GUAMP	American Memorial Park	ARBUP	Buffalo National River
TXAMP	Amistad National Recreation Area	CACAP	Cabrillio National Monument
GAANP	Andersonville National Historic Site	FLCAP	Canaveral National Seashore
TNASP	Andrew Johnson National Historic Site	LACAP	Cane River Creole National Historic Park
AKANP	Aniakchak National Park & Preserve	AZCAP	Canyon De Chelly National Monument
DCANP	Antietam National Battlefield	UTCAP	Canyonlands National Park
WIAIP	Apostle Islands National Lakeshore	MACCP	Cape Cod National Seashore
DCAPP	Appalachian National Scenic Trail	NCCHP	Cape Hatteras National Seashore
VAACP	Appomattox Court House National Historic Park	AKKRP	Cape Krusenstern National Monument
UTARP	Arches National Park	NCCLP	Cape Lookout National Seashore
ARARP	Arkansas Post National Monument	UTCRP	Capitol Reef National Park
MDAIP	Assateague Island National Seashore	NMCAP	Capulin Volcano National Monument
MIAUP	Automobile National Heritage Area	NCCSP	Carl Sandburg Home National Historic Site
NMAZP	Aztec Ruins National Monument	NMCCP	Carlsbad Caverns National Park
SDBDP	Badlands National Park	AZCGP	Casa Grande National Monument
NMBAP	Bandelier National Monument	FLCDP	Castillo De San Marcos National Monument
COBFP	Bents Old Fort National Historic Site	DCCAP	Catoctin Mountain Park
AKBLP	Bering Land Bridge National Preserve	UTCBP	Cedar Breaks National Monument
TXBBP	Big Bend National Park	TXCHP	Chamizal National Monument
FLBCP	Big Cypress National Park	CACNP	Channel Islands National Park
MTBHP	Big Hole National Battlefield	SCCPP	Charles Pinckney National Historic Site
MTBIP	Big Horn Canyon National Recreation Area	GACRP	Chattahoochee River National Recreation Area
TNBSP	Big South Fork National Recreation Area	DCCOP	Chesapeake & Ohio Canal National Historic Park
TXBTP	Big Thicket National Preserve	ILCPP	Chicago Portage National Historic Site
WYBHP	Bighorn Canyon National Recreation Area	GACHP	Chickamauga & Chatanooga National Memorial Park
FLBIP	Biscayne National Preserve	OKCHP	Chickasaw National Recreation Area

**DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE (CONT'D)**

AZCHP	Chiricahua National Monument	NYFIP	Fire Island National Seashore
VICHP	Christiansted National Historic Site	OHFLP	First Ladies National Historic Site
IDCRP	City of Rocks National Reserve	COFFP	Florissant Fossil Beds National Park
DCCDP	Clara Barton Park	TXFDP	Fort Davis National Historic Site
VACOP	Colonial National Historic Park	KSFLP	Fort Larned National Historic Site
COCNP	Colorado National Monument	CAFPP	Fort Point National Historic Site
SCCSP	Congaree Swamp National Monument	KSFSP	Fort Scott National Historic Site
AZCOP	Coronado National Monument	SCFSP	Fort Sumter National Monument
SCCWP	Cowpens National Monument	NMFUP	Fort Union National Monument
ORCLP	Crater Lake National Park	NDFUP	Fort Union Trading Post National Historic Site
IDCMP	Craters of the Moon National Monument	DCFWP	Fort Washington Park
KYCGP	Cumberland Gap National Historic Park	WYFBP	Fossil Butte National Monument
GACIP	Cumberland Island National Seashore	MAFRP	Frederick Law Olmsted National Historic Site
COCCP	Curecanti National Recreation Area	VAFSP	Fredricksburg/Spotsylvania National Memorial Park
OHCVP	Cuyahoga Valley National Park	PAFHP	Friendship Hill National Historic Site
OHDBP	David Berger National Monument	FLFCP	Fort Caroline National Monument
OHDAP	Dayton Aviation Heritage National Historic Park	ORFCP	Fort Clatsop National Monument
CADVP	Death Valley National Park	TNFDP	Fort Donelson National Memorial Park
PADWP	Delaware Water Gap National Recreation Area	GAFFP	Fort Frederica National Monument
AKDEP	Denali National Park & Preserve	FLFJP	Fort Jefferson National Monument
FLDNP	DeSoto National Monument	WYFLP	Fort Laramie National Historic Site
CADPP	Devils Postpile National Monument	FLFMP	Fort Matanzas National Monument
WYDTP	Devils Tower National Monument	MDFMP	Fort McHenry National Monument
UTDSP	Dinosaur National Monument	PAFNP	Fort Necessity National Battlefield
CODSP	Dinosaur National Park	GAFPP	Fort Pulaski National Monument
FLDTP	Dry Tortugas National Park	NCFRP	Fort Raleigh National Historic Site
AKEAP	Eastern Alaska Park Group	NYFOP	Ft. Sanwix National Monument
WAELP	Ebey's Landing National Historical Reserve	ARFSP	Fort Smith National Historic Site
NJEDP	Edison National Historic Site	WAFVP	Fort Vancouver National Historic Site
IAEMP	Effigy Mounds National Monument	AKGAP	Gates of the Arctic National Park & Preserve
NMEMP	El Malpais National Monument	NYGAP	Gateway National Recreation Area
NMELP	El Morrow National Monument	INGRP	George Rogers Clark National Historic Park
CAEOP	Eugene O'Neill National Historic Site	VAGWP	George Washington Birthplace National Monument
FLEVP	Everglades National Park	MOGWP	George Washington Carver National Monument
MIFMP	Father Marquette National Monument		

**DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE (CONT'D)**

VAGMP	George Washington Memorial Parkway	AZHUP	Hubbell Trading Post National Historic Park
PAGEP	Gettysburg National Memorial Park	WIIAP	Ice Age National Park
NMGIP	Gila Cliff Dwellings National Monument	ILIMP	Illinois and Michigan Canal National Heritage Corridor
AKGBP	Glacier Bay National Park & Preserve	PAINP	Independence National Historic Park
MTGNP	Glacier National Park	INIDP	Indiana Dunes National Lakeshore
UTGLP	Glen Canyon National Recreation Area	NDIPP	International Peace Gardens
CAGNP	Golden Gate National Recreation Area	MIIRP	Isle Royale National Park
UTGSP	Golden Spike National Historic Site	OHJGP	James A. Garfield National Historic Site
AZGCP	Grand Canyon National Park	LAJEP	Jean Lafitte National Historic Park & Preserve
MNGPP	Grand Portage National Monument	MOJEP	Jefferson National Expansion Memorial
WYGTP	Grand Teton National Park	SDJCP	Jewel Cave National Monument
MTGKP	Grant-Kohrs Ranch National Historic Site	GAJCP	Jimmy Carter National Historic Site
NVGBP	Great Basin National Park	ORJDP	John Day Fossil Beds National Monument
COGSP	Great Sand Dunes National Monument	MAJFP	John Fitzgerald Kennedy National Historic Site
TNGSP	Great Smoky Mountains National Park	CAJMP	John Muir National Historic Site
DCGRP	Greenbelt Park	PAJFP	Johnstown Flood National Monument
TXGUP	Guadalupe Mountains National Park	CAJTP	Joshua Tree National Monument
NCGIP	Guilford Courthouse National Memorial Park	HIKAP	Kalaupapa National Historic Park
FLGIP	Gulf Island National Seashore	HIKHP	Kaloko-Hokohau National Historic Park
IDHFP	Hagerman Fossil Beds National Monument	AKKAP	Katmai National Park & Preserve
HIHKP	Haleakala National Park	AKKEP	Kenai Fjords National Park
MDHAP	Hampton National Historic Site	GAKEP	Kennesaw Mountain National Battlefield Park
DCHFP	Harpers Ferry National Historic Park	MIKWP	Keweenaw National Historic Park
MOHTP	Harry S. Truman National Historic Site	SCKMP	Kings Mountain National Memorial Park
HIHVP	Hawaii Volcanoes National Park	AKKLP	Klondike Gold Rush National Historic Park
IAHHP	Herbert Hoover National Historic Site	WAKGP	Klondike Gold Rush National Historic Park-Seattle Unit
NYFDP	Home of Franklin D. Roosevelt National Historic Site	NDKRP	Knife River Indian Villages National Historic Site
NEHOP	Homestead National Monument	AKKOP	Kobuk Valley National Park
OHHCP	Hopewell Culture National Historic Park	WALCP	Lake Chelan National Recreation Area
PAHEP	Hopewell Furnace National Historic Site	AKLCP	Lake Clark National Park & Preserve
ALHBP	Horseshoe Bend National Monument	NVLAP	Lake Mead National Recreation Area
ARHOP	Hot Springs National Park	TXLAP	Lake Meredith National Recreation Area
UTHOP	Hovenweep National Monument	WALRP	Lake Roosevelt National Recreation Area

**DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE (CONT'D)**

CALNP	Lassen Volcanic National Park	WVNRP	New River Gorge NR
CABNP	Lava Beds National Monument	IDNPP	Nez Perce National Historic Park
INLBP	Lincoln Boyhood National Monument	SCNIP	Ninety Six National Historic Site
ILLHP	Lincoln Home National Historic Site	AKNOP	Noatak Preserve
MTLBP	Little Bighorn Battlefield National Historic District	WANCP	North Cascades National Park
ALLRP	Little River Canyon National Park	WINCP	North Country National Scenic Trail
MALOP	Longfellow National Historic Site	TNOWP	Obed Wild & Scenic River
MALWP	Lowell National Historic Park	GAOCP	Ocmulgee National Monument
TXLYP	Lyndon B. Johnson National Historic Park	WAOLP	Olympic National Park
KYMCP	Mammoth Cave National Park	OROCP	Oregon Caves National Monument
VAMAP	Manassas National Battlefield Park	AZORP	Organ Pipe Cactus National Monument
NYMAP	Manhattan Sites	MOOZP	Ozark National Scenic River
VTMBP	Marsh–Billings–Rockefeller National Historic Park	TXPAP	Padre Island National Seashore
GAMLP	Martin Luther King Junior National Historic Site	TXPBP	Palo Alto Battlefield National Historic Site
NYMVP	Martin Van Buren National Historic Site	ARPEP	Pea Ridge National Memorial Park
COMVP	Mesa Verde National Park	NMPEP	Pecos National Historic Park
MAMIP	Minute Man National Historic Park	OHPVP	Perry's Victory & International Peace Memorial
MNMSP	Mississippi National Recreation Area	VAPEP	Petersburg National Battlefield
CAMNP	Mojave National Park	AZPFP	Petrified Forest National Park
DCMOP	Monocacy National Battlefield	NMPGP	Petroglyphs National Monument
AZMCP	Montezuma Castle National Monument	MIPRP	Pictured Rocks National Lakeshore
NCMOP	Moores Creek National Battlefield Park	CAPIP	Pinnacles National Monument
NJMOP	Morristown National Historic Park	MNPSP	Pipestone National Monument
SDMRP	Mount Rushmore National Monument	DCPIP	Piscataway Park
WAMRP	Mt. Rainier National Park	CARNP	Point Reyes National Seashore
MSNHP	Natchez National Historical Park	LAPOP	Poverty Point National Monument
MSNSP	Natchez Trace National Scenic Trail	CAPRP	Presidio of San Francisco
MSNAP	Natchez Trace Parkway	VAPWP	Prince William Forest Park
DCNPP	National Capitol Parks–Central	HIPHP	Puukohola Heiau National Historic Site
DCNEP	National Capitol Parks–East	HIPUP	Puuohonua O Honaunau National Historic Park
UTNBP	Natural Bridges National Monument	UTRAP	Rainbow Bridge National Monument
AZNAP	Navajo National Monument	CARWP	Redwood National Park
LANOP	New Orleans Jazz National Historic Park	VARIP	Richmond National Battlefield Park

## DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE (CONT'D)

DCRCP	Rock Creek Park	MDTSP	Thomas Stone National Historic Site
CORMP	Rocky Mountain National Park	UTTIP	Timpanogos Cave National Monument
RIROP	Roger Williams National Monument	FLTIP	Timucuan Ecological & Historic Preserve
MERCP	Roosevelt–Campabello International Park	AZTOP	Tonto National Monument
NYRVP	Roosevelt/Vanderbilt National Historic Site	AZTUP	Tumacacori National Monument
WARLP	Ross Lake National Recreation Area	MSTBP	Tupelo National Battlefield
ALRUP	Russell Cave National Monument	ALTAP	Tuskegee Airmen National Historic Site
NYSHP	Sagamore Hill National Historic Site	ALTUP	Tuskegee Institute National Historic Site
AZSAP	Saguaro National Park	AZTZP	Tuzigoot National Monument
WISCP	Saint Croix National Scenic River	HIUSP	U.S.S. Arizona Memorial
NYSPP	Saint Paul's Church National Historic Site	MOUGP	Ulysses S. Grant National Historic Site
NHSGP	Saint–Gaudens National Historic Site	NYUDP	Upper Delaware National Scenic & Recreational River
MASAP	Salem Maritime National Historic Site	PAVFP	Valley Forge National Historic Park
NMSAP	Salinas Pueblo Missions National Monument	MSVIP	Vicksburg National Memorial Park
VISRP	Salt River National Historic Park & Ecological Preserve	VIVIP	Virgin Islands National Park
TXSAP	San Antonio Missions National Historic Park	MNVOP	Voyageurs National Park
WASJP	San Juan Island National Historic Park	AZWAP	Walnut National Monument
PRSAP	San Juan National Historic Site	GUWPP	War in Pacific National Historic Park
CASMP	Santa Monica Mountains National Recreation Area	OKWBP	Washita Battlefield National Historic Site
NYSRP	Saratoga National Historic Park	CTWFP	Weir Farm National Historic Site
MASIP	Saugus Iron Works National Historic Site	AKWEP	Western Alaska Park Group
NESBP	Scotts Bluff National Monument	CAWNP	Whiskeytown National Recreation Area
CAKNP	Sequoia & Kings Canyon National Park	DCWHP	White House
VASHP	Shenandoah National Park	NMWHP	White Sands National Monument
TNSHP	Shiloh National Memorial Park	WAWMP	Whitman Mission National Historic Site
AKSIP	Sitka National Historic Park	OHWHP	William Howard Taft National Historic Site
MISDP	Sleeping Bear Dunes National Lakeshore	MOWCP	Wilson's Creek National Battlefield
MASPP	Springfield Armory National Historic Site	SDWCP	Wind Cave National Park
NYSTP	Statue of Liberty National Monument	VAWTP	Wolf Trap Farm Park
PASTP	Steamtown National Historic Site	NYWOP	Woman's Rights National Historic Park
TNSTP	Stones River National Battlefield	AKWSP	Wrangel–St. Elias National Park & Preserve
AZSUP	Sunset Crater Volcano	NCWRP	Wright Brothers National Monument
KSTGP	Tall Grass Prairie National Park	AZWUP	Wupatki National Monument
NDTRP	Theodore Roosevelt National Park	WYYNP	Yellowstone National Park

## DEPARTMENT OF INTERIOR, NATIONAL PARK SERVICE (CONT'D)

CAYNP	Yosemite National Park	AKYCP	Yukon–Charlie Rivers National Preserve
COYHP	Yucca House National Monument	UTZIP	Zion National Park

## SECTION K

## K NFDRS Fuel Model at Origin

### Definition

This data element identifies the type of wildland fuel involved in a wildland fire at the point of origin. The Fuel Model is a simulated fuel complex or description of various vegetative fuels and combinations of vegetative fuels. Fuel models were devised as a means of organizing information about vegetative fuels for use in the National Fire Danger Rating System (NFDRS) to predict fire danger. The local forester should be able to assist in identifying the fuel models in your area.

### Purpose

Fuel models were devised as a means for organizing the required wildland fuels information that is used in the NFDRS to predict the behavior of a potential wildfire.

### Entry

Enter the two-digit NFDRS Fuel Model code and description that best identifies the type of wildland vegetation burned at the point of origin.

### Example

The fire area consisted of mostly mature brush (02):NFDRS FUEL MODEL AT ORIGIN CODES

**K NFDRS Fuel Model at Origin**

Enter the code and the descriptor corresponding to the NFDRS Fuel Model at Origin

02 Mature brush

### NFDRS FUEL MODEL AT ORIGIN CODES

- 01 Fuel Model A—Annual grasses. This fuel model represents grasslands vegetated by annual grasses and forbs. Brush or trees may be present but are very sparse, occupying less than one-third of the area. Examples of types where Fuel Model A should be used are cheatgrass and medusahead. Open pinyon-juniper, sagebrush-grass, and desert shrub association may appropriately be assigned this fuel model if the woody plants meet the density criteria. The quantity and continuity of the ground fuels vary greatly with rainfall from year-to-year.
- 02 Fuel Model B—Mature brush (6 feet or higher). Mature, dense fields of brush 6 feet (2 m) or more in height are represented by this fuel model. One-fourth or more of the aerial fuel in such stands is dead. Foliage burns readily. Model B fuels are potentially very dangerous, fostering intense, fast-spreading fires. This model is for California mixed chaparral generally 30 years or older. The B model is more appropriate for pure chamise stands. The B model may also be used for the New Jersey pine barrens.

- 03 Fuel Model C—Open pine with grass. Open pine stands typify Model C fuels. Perennial grasses and forbs are the primary ground fuel, but there is enough needle litter and branchwood present to contribute significantly to the fuel loading. Some brush and shrubs may be present, but they are of little consequence. Situations covered by Fuel Model C are open, longleaf, slash, ponderosa, jeffrey, and sugar pine stands. Some pinyon-juniper stands may qualify.
- 04 Fuel Model D—Southern rough. This fuel model is specifically for the palmetto-gallberry understory–pine overstory association of the southeast coastal plains. It can also be used for the so-called “low pocosins” where Fuel Model O might be too severe. This model should only be used in the Southeast because of a high moisture of extinction.
- 05 Fuel Model E—Hardwood litter (fall). Use this model after leaf fall for hardwood and mixed hardwood–conifer types where the hardwoods dominate. The fuel is primarily hardwood leaf litter. The oak–hickory types are best represented by Fuel Model E, but E is an acceptable choice for northern hardwoods and mixed forests of the Southeast. In high winds, the fire danger may be underrated because rolling and blowing leaves are not taken into account. In the summer after the trees have leafed out, Fuel Model E should be replaced by Fuel Model R.
- 06 Fuel Model F—Intermountain West brush. Model F represents mature closed chamise stands and oakbrush fields of Arizona, Utah, and Colorado. It also applies to young, closed stands and mature, open stands of California mixed chaparral. Open stands of pinyon-juniper are represented; however, fire activity will be overrated when windspeeds are low and where ground fuels are sparse.
- 07 Fuel Model G—West Coast conifers; close, heavy down materials. Fuel Model G is used for dense conifer stands where there is a heavy accumulation of litter and downed woody material. Such stands are typically overmature and may also be suffering insect, disease, wind, or ice damage—natural events that create a very heavy buildup of dead material on the forest floor. The duff and litter are deep, and much of the woody material is more than 3 in (7.5 cm) in diameter. The undergrowth is variable, but shrubs are usually restricted to openings. Types meant to be represented by Fuel Model G are hemlock–Sitka spruce, coast douglas fir, and wind-thrown or bug-killed stands of lodgepole pine and spruce.
- 08 Fuel Model H—Short-needle conifers; normal down woody materials. The short-needled conifers (white pines, spruces, larches, and firs) are represented by Fuel Model H. In contrast to Model G fuels, Fuel Model H describes a healthy stand with sparse undergrowth and a thin layer of ground fuels. Fires in H fuels are typically slow spreading and are dangerous only in scattered areas where the downed woody material is concentrated.
- 09 Fuel Model I—Heavy slash, clear-cut conifers greater than 25 tons per acre. Fuel Model I was designed for clearcut conifer slash where the total loading of materials less than 6 in (15 cm) in diameter exceeds 25 tons per acre. After settling and the fines (needles and twigs) fall from the branches, Fuel Model I will overrate the fire potential. For lighter loadings of clearcut conifer slash, Fuel Model J should be used, and for light thinnings and partial cuts where the slash is scattered under a residual overstory, Fuel Model K should be used.
- 10 Fuel Model J—Medium slash, heavily thinned conifers (less than 25 tons per acre). This model complements Fuel Model I. It is for clearcuts and heavily thinned conifer stands where the total loading of materials less than 6 in (15 cm) in diameter is less than 25 tons per acre. Again, as the slash ages, the fire potential will be overrated.
- 11 Fuel Model K—Light slash (less than 15 tons per acre). Slash fuels from light thinnings and partial cuts in conifer stands are represented by Fuel Model K. Typically, the slash is scattered about under an open overstory. This model applies to hardwood slash and to southern pine clearcuts where the loading of all fuels is less than 15 tons per acre.
- 12 Fuel Model L—Perennial grasses. This fuel model is meant to represent grasslands vegetated by perennial grasses. The principal species are coarser and the loading heavier than those in Model A fuels. Otherwise the situations are very similar; shrubs and trees occupy less than one-third of the area. The quantity of fuel in these areas is more stable from year-to-year. In sagebrush areas, Fuel Model T may be more appropriate.

- 14 Fuel Model N—Sawgrass, marsh needle-like grass. This fuel model was constructed specifically for the sawgrass prairies of south Florida. It may be useful in other marsh situations where the fuel is coarse and reedlike. The model assumes that one-third of the aerial portion of the plants is dead. Fast-spreading, intense fires can occur even over standing water.
  - 15 Fuel Model O—High pocosin. Fuel Model O applies to dense, brushlike fuels of the Southeast. O fuels, except for a deep litter layer, are almost entirely living, in contrast to B fuels. The foliage burns readily except during the active growing season. The plants are typically over 6 ft (2 m) tall and are often found under an open stand of pine. The high pocosins of the Virginia, North Carolina, and South Carolina coasts are the ideal of Fuel Model O. If the plants do not meet the 6-ft (2-m) criteria in those areas, Fuel Model D should be used.
  - 16 Fuel Model P—Southern long-needle pine. Closed, thrifty stands of long-needled southern pines are characteristic of P fuels. A 2- to 4-in (5- to 10-cm) layer of lightly compacted needle litter is the primary fuel. Some small-diameter branchwood is present, but the density of the canopy precludes more than a scattering of shrubs and grass. Fuel Model P has the high moisture of extinction characteristic of the Southeast. The corresponding model for other long-needled pines is U.
  - 17 Fuel Model Q—Alaska black spruce. Upland Alaskan black spruce is represented by Fuel Model Q. The stands are dense but have frequent openings filled with usually flammable shrub species. The forest floor is a deep layer of moss and lichens, but there is some needle litter and small-diameter branchwood. The branches persist on the trees, and ground fires easily reach into the tree crowns. This fuel model may be useful for jack pine stands in the Lake States. Ground fires are typically slow spreading, but a dangerous crowning potential exists.
  - 18 Fuel Model R—Hardwood litter (summer). This fuel model represents the hardwood areas after the canopies leaf out in the spring. It is provided as the off-season substitute for Fuel Model F. It should be used during the summer in all hardwood and mixed conifer–hardwood stands where more than half of the overstory is deciduous.
  - 19 Fuel Model S—Tundra. Alaskan or alpine tundra on relatively well-drained sites is the S fuel. Grass and low shrubs are often present, but the principal fuel is a deep layer of lichens and moss. Fires in these fuels are not fast spreading or intense, but are difficult to extinguish.
  - 20 Fuel Model T—Sagebrush with grass. The bothersome sagebrush-grass types of the Great Basin and the Intermountain West are characteristic of T fuels. The shrubs burn easily and are not dense enough to shade out grass and other herbaceous plants. The shrubs must occupy at least one-third of the site, or the A or L fuel models should be used. Fuel Model I might be used for immature scrub oak and desert shrub associations in the West and the scrub oak–wire grass type in the Southeast.
  - 21 Fuel Model U—Western long-needled pine. Closed stands of western long-needled pines are covered by this model. The ground fuels are primarily litter and small branchwood. Grass and shrubs are precluded by the dense canopy, but occur in the occasional natural opening. Fuel Model U should be used for ponderosa, Jeffrey, sugar, and red pine stands of the Lake States. Fuel Model P is the corresponding model for southern pine plantations.
- UU Undetermined.

## SECTION L

This section collects demographic information on the person(s) who were responsible for the fire, whether it was intentionally set or started by an act of carelessness.

## L<sup>1</sup> Person Responsible for Fire

### Definition

The identification of whether a person (known or unknown) was responsible for the fire (either by carelessness or intent).

### Purpose

This information can be used with other demographic information to identify and target fire prevention education or enforcement programs for specific audiences.

### Entry

Check or mark the box that best describes the involvement of a person in causing the fire. If the person responsible for causing the fire is known, identifying information about the person can be entered in Block K1 of the Basic Module or the Supplemental Form (NFIRS-1S).

☛ If a person was identified as having caused the fire, complete Blocks L2–L4.

### Example

A wildland fire resulted from the ignition of a pan full of grease that had been left unattended on a camping stove by a man (1) who was subsequently questioned by investigators:

<b>L<sub>1</sub> Person Responsible for Fire</b>	
1	<input checked="" type="checkbox"/> <b>Identified person caused fire</b>
2	<input type="checkbox"/> <b>Unidentified person caused fire</b>
3	<input type="checkbox"/> <b>Fire not caused by person</b>
If person identified, complete the rest of Section L	

### PERSON RESPONSIBLE FOR FIRE CODES

- |   |                                  |
|---|----------------------------------|
| 1 | Identified person caused fire.   |
| 2 | Unidentified person caused fire. |
| 3 | Fire not caused by person.       |

## L<sup>2</sup> Gender of Person Involved

### Definition

The gender of the person responsible for the fire (either by carelessness or intent).

### Purpose

Information on the gender of persons involved can be used with other demographic information to identify fire problems in certain segments of the population, and to target fire prevention and fire safety programs for certain audiences.

### Entry

Check or mark the box that describes the gender of the person responsible for the fire.

### Example

The wildland fire was started when a young boy (1) set a fire in the woods:

<b>L2</b>	<b>Gender of Person Involved</b>
1	<input checked="" type="checkbox"/> Male
2	<input type="checkbox"/> Female

#### GENDER CODES

- 1 Male.
- 2 Female.

## **L<sup>3</sup>** Age or Date of Birth

Enter either the age or date of birth of the person identified as being responsible for the fire (either by carelessness or intent). Do not enter both.

### Age

#### Definition

The age of the person identified as being responsible for the fire.

### Purpose

This information can be used with other demographic information to identify fire problems in certain segments of the population and to target fire prevention and fire safety programs for certain audiences. This data element is particularly useful in tracking juvenile firesetter trends, when used in combination with Age Was a Factor (Block D2) and Gender of Person Involved (Block L2).

### Entry

Enter the age of the person responsible for the fire. Estimate the age if it cannot be determined.

### Example

The boy who started the fire was 10 years old:

Example on next page

L <sub>3</sub> Age or Date of Birth							
Age in Years	Date of Birth						
1   0	OR						
	<table border="1"> <tr> <td>Month</td> <td>Day</td> <td>Year</td> </tr> <tr> <td>     </td> <td>     </td> <td>         </td> </tr> </table>	Month	Day	Year			
Month	Day	Year					

## Date of Birth

### Definition

The month, day, and year of the birth of the person responsible for the fire.

### Purpose

This information is an alternative to Age, which can be used with other demographic information to identify fire problems in certain segments of the population and to target fire prevention and fire safety programs for certain audiences. This data element is particularly useful in tracking juvenile firesetter trends, when used in combination with Age Was a Factor (Block D2) and Gender of Person Involved (Block L2).

- ☛ This data element is used as an alternate method for calculating the casualty's age. Age is collected in NFIRS but Date of Birth is not.

### Entry

Enter the date of birth of the person responsible for the fire showing month, day, and year (mm/dd/yyyy).

### Example

The person responsible for the fire was born on November 18, 1993:

L <sub>3</sub> Age or Date of Birth							
Age in Years	Date of Birth						
	OR						
	<table border="1"> <tr> <td>Month</td> <td>Day</td> <td>Year</td> </tr> <tr> <td>  1   1  </td> <td>  1   8  </td> <td>  1   9   9   3  </td> </tr> </table>	Month	Day	Year	1   1	1   8	1   9   9   3
Month	Day	Year					
1   1	1   8	1   9   9   3					

## L<sub>4</sub> Activity of Person Involved

### Definition

Describes the primary activity of the person who was responsible for the fire.

### Purpose

Prevention programs and strategy development on wildland areas are of utmost importance in continuing education on fire behavior. Collecting information on the primary activity of the person involved will assist in developing programs that will better address the needs of each activity.

### Entry

Enter the two-digit code and description of the activity of the person involved. This entry should report the primary activity of the person who caused the fire.

*Example*

The fisherman's (6) discarded match ignited the dry brush:

L4	<b>Activity of Person Involved</b>	
	06	Fishing
	Activity of Person Involved	

**ACTIVITY OF PERSON INVOLVED CODES**

01	Logging/Timber harvest.
02	Management activities.
03	Construction/Maintenance.
04	Social gathering.
05	Hunting.
06	Fishing.
07	Other recreation.
08	Camping.
09	Other permitted harvest.
10	Picnicking.
11	Non-permitted harvest.
12	Harvest of illegal material.
13	Religious or ceremonial activity.
14	Oil/Gas production.
15	Military operations.
16	Subsistence.
17	Mining.
18	Livestock grazing.
19	Target practice.
20	Blasting.
21	Fireworks use.
00	Activity of person involved, other.

**SECTION M****M Type of Right-of-Way**

This data field is completed only for fires starting on or near (within 99 feet) roads, railroads, or power line rights-of-way.

*Definition*

This refers to the horizontal distance between the point of fire origin from the edge of the traveled surface of a road or the nearest outside rail of a railroad right-of-way, or from the nearest power line or power transmission equipment of a utility right-of-way.

This section contains two data elements: (1) the actual measured or estimated horizontal distance (to the nearest foot, up to 99 feet) of the point of fire origin from the right-of-way; and (2) a description of the type of right-of-way on or near where the fire started.

### Purpose

Aggregate data about horizontal distances from rights-of-way provide information necessary to assess the risks of certain hazards and to develop hazard reduction strategies such as regulations for controlling combustible fuels along roads and other rights-of-way.

### Entry

Enter the actual measured or estimated horizontal distance (to the nearest foot, up to 99 feet) of the point of fire origin from the right-of-way and the three-digit code and description of the right-of-way. If there is no right-of-way 100 or more feet from the fire origin, check or mark the None box.

### Example

A fire starts in brush located 5 feet from railroad tracks (951):

<b>M</b>	<b>Type of Right-of-Way</b>	<input type="checkbox"/> None
Required if less than 100 feet		
<u>  </u> <u>  </u> <u>  </u> 5 Feet	<u>  </u> <u>  </u> <u>  </u> 9, 5, 1   R&R tracks	
Horizontal distance from right-of-way	Type of right-of-way	

### TYPE OF RIGHT-OF-WAY CODES

919	Dump, sanitary landfill.
921	Bridge, trestle.
922	Tunnel.
926	Outbuilding. Excludes garage.
931	Open land, field.
935	Campsite with utilities.
936	Vacant lot.
938	Graded and cared-for plots of land.
940	Water area.
951	Railroad right-of-way.
952	Railroad yard.
960	Street, other.
961	Highway or divided highway.
962	Residential street, road, or residential driveway.
963	Street or road in commercial area.
965	Vehicle parking area.
972	Aircraft runway.
973	Aircraft taxiway.
974	Aircraft loading area.
981	Construction site.
982	Oil, gas field.
983	Pipeline, power line, or other utility right-of-way.
984	Industrial plant yard, area.
000	Type of right-of-way, other.
UUU	Undetermined.
NNN	None.

## SECTION N

**N Fire Behavior**

These optional descriptors refer to observations made at the point of initial attack. Use of these descriptors will most likely be limited to local, State, and Federal wildland management agencies that are trained in making such observations.

This section describes the topographical features and fire characteristics that contributed to the fire behavior. Information about fire behavior is used in fire modeling to assess the potential for ignition and rate of spread for different fuels under various conditions.

**Elevation***Definition*

Elevation refers to the numeric representation of the distance from mean sea level to the wildland fire, measured in feet.

*Purpose*

Aggregate data on the distance from sea level may provide information necessary to assess the risks and hazards of wildland fires at different elevations.

*Entry*

Enter the distance from mean sea level measured in feet. See completed example at the end of Section N.

**Relative Position on Slope***Definition*

This observation indicates a point location's relative position on a slope.

*Purpose*

Aggregate data on the relative position on a slope, combined with wind and weather information, may provide information necessary to assess the risks and hazards of wildland fires at different positions.

*Entry*

Enter the appropriate code and description of the relative position on the slope. See completed example at the end of Section N.

**RELATIVE POSITION ON SLOPE CODES**

0	Valley bottom.
1	Lower slope.
2	Mid slope.
3	Upper slope.
4	Ridge top.

**Aspect***Definition*

Aspect is the general direction that a given slope faces.

*Purpose*

Aggregate data on the general direction a given slope faces, combined with wind and weather information, may provide information necessary to assess the risks and hazards of wildland fires at different aspects.

*Entry*

Enter the appropriate code and description of the general direction that a given slope faces. See completed example at the end of Section N.

**ASPECT CODES**

0	Flat/None.
1	Northeast.
2	East.
3	Southeast.
4	South.
5	Southwest.
6	West.
7	Northwest.
8	North.

**Flame Length***Definition*

This observation refers to the distance between the flame tip and midpoint of the flame depth at the base of the flame (generally the ground surface), measured in feet.

*Entry*

Enter the flame length in feet. See completed example at the end of Section N.

**Rate of Spread***Definition*

This is a measurement of the approximate rate of forward spread of a fire front, expressed in chains per hour.

- ☛ The length of a chain is 66 feet (20.1 meters). The term is derived from a surveying instrument consisting of 100 links of metal.

*Entry*

Enter the approximate rate of spread in chains per hour.

*Example*

Elevation of 4,000 feet above sea level.

At the time of observation, the fire was mid slope (2).

The slope faced the northwest (7).

The flame was 4 feet in length.

Extreme fire behavior: spotting and crowing with a rate of spread of 80 chains per hour.

**N** **Fire Behavior**

These optional descriptors refer to observations made at the point of initial attack

Feet  
Elevation

Mid slope  
Relative position on slope

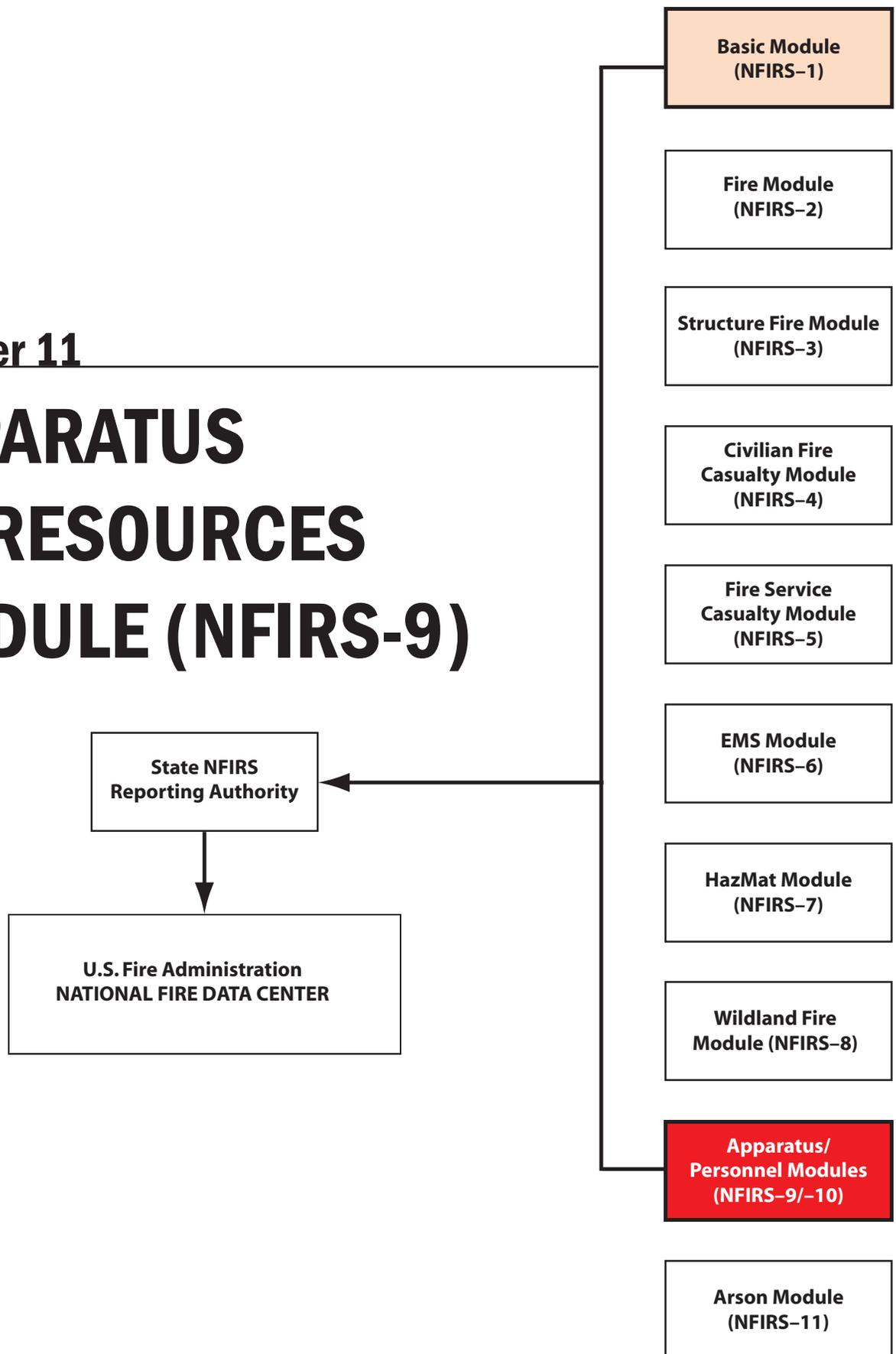
Northwest  
Aspect

Feet  
Flame length

Chains per Hour  
Rate of spread

## Chapter 11

# APPARATUS OR RESOURCES MODULE (NFIRS-9)



**A**

FDID ☆ State ☆ Incident Date MM DD YYYY Station Incident Number ☆ Exposure ☆

Delete  
 Change

**NFIRS-9 Apparatus or Resources**

<b>B Apparatus or Resources</b> Use codes listed below		<b>Dates and Times</b> Midnight is 0000 Check if same date as Alarm date on the Basic Module (Block E1). Month Day Year Hour/Min				<b>Sent</b> <input checked="" type="checkbox"/>	<b>Number of People</b> ☆	<b>Apparatus Use</b> ☆ Check ONE box for each apparatus to indicate its main use at the incident.	<b>Actions Taken</b> List up to 4 actions for each apparatus.
1	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	
2	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	
3	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	
4	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	
5	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	
6	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	
7	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	
8	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	
9	ID _____ ☆ Type _____	Dispatch <input type="checkbox"/>	Arrival <input type="checkbox"/>	Clear <input type="checkbox"/>	<input type="checkbox"/>	_____	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	_____ _____ _____ _____	

<b>Apparatus or Resource Type</b>		<b>Aircraft</b>	<b>Medical and Rescue</b>	<b>More apparatus? Use additional sheets.</b>
<b>Ground Fire Suppression</b> 11 Engine 12 Truck or aerial 13 Quint 14 Tanker and pumper combination 16 Brush truck 17 ARFF (aircraft rescue and firefighting) 10 Ground fire suppression, other  <b>Heavy Ground Equipment</b> 21 Dozer or plow 22 Tractor 24 Tanker or tender 20 Heavy ground equipment, other	41 Aircraft: fixed-wing tanker 42 Helitanker 43 Helicopter 40 Aircraft, other  <b>Marine Equipment</b> 51 Fire boat with pump 52 Boat, no pump 50 Marine equipment, other  <b>Support Equipment</b> 61 Breathing apparatus support 62 Light and air unit 60 Support apparatus, other	71 Rescue unit 72 Urban search and rescue unit 73 High-angle rescue unit 75 BLS unit 76 ALS unit 70 Medical and rescue unit, other  <b>Other</b> 91 Mobile command post 92 Chief officer car 93 HazMat unit 94 Type I hand crew 95 Type II hand crew 99 Privately owned vehicle 00 Other apparatus/resources	NN None UU Undetermined	

NFIRS-9 Revision 01/01/04

# CHAPTER 11

## APPARATUS OR RESOURCES MODULE (NFIRS-9)

The Apparatus or Resources Module (NFIRS-9) is an optional module that is used to help manage and track apparatus and resources used on incidents.

- If both apparatus and personnel need to be reported, use the Personnel Module (NFIRS-10) instead of this module.

### SECTION A

The guidance and directions for completing Section A of the Apparatus or Resources Module are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Apparatus or Resources Module must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3-8.

### A Fire Department Identification (FDID) ☆

#### Entry

Enter the same FDID number found in Section A of the Basic Module.

### State ☆

#### Entry

Enter the same State abbreviation found in Section A of the Basic Module.

### Incident Date ☆

#### Entry

Enter the same incident date found in Section A of the Basic Module.

### Station Number

#### Entry

Enter the same station number found in Section A of the Basic Module.

### Incident Number ☆

#### Entry

Enter the same incident number found in Section A of the Basic Module.

## Exposure Number ☆

### Entry

If this report is for an exposure fire, enter the same exposure number that was entered in Section A of the Basic Module for that exposure.

## Delete/Change

### Definition

Indicates a change to information submitted on a previous Apparatus or Resources Module or a deletion of all information regarding the incident.

### Purpose

To delete or change previously reported information.

### Entry

**Delete.** Check or mark this box when you have previously submitted data on this Apparatus or Resources Module and now want to have the data on this report deleted from the database. If this box is marked, complete Section A and the ID Number from Section B and leave the rest of the report blank. Forward the report according to your normally established procedures.

**Change.** Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

## B Apparatus or Resources Type ☆

### Definition

The type and identification number for the apparatus or resources used at the incident.

- ☛ The apparatus Type field is a required field; complete the ID number of the resource or apparatus if appropriate.

### Purpose

This information is useful in determining actual apparatus or resource requirements for different types of incidents and for different levels of incident severity as well as for tracking times and actions taken by apparatus or resource type.

## Entry

Enter the identification number for each apparatus or resource used at the incident and the two-digit code for the type of apparatus or resource. If more than nine apparatus or resources were used, complete an additional NFIRS-9 module.

- Individual fire departments often assign a unique number to each piece of apparatus in the department.

## Example

An engine (11) responded to the incident. Its assigned identification number is 12547:

B Apparatus or Resources	
Use codes listed below	
1	ID 1 2 5 4 7
★ Type	1 1

## APPARATUS OR RESOURCE TYPE CODES

### Ground Fire Suppression

- 11 Engine.
- 12 Truck or aerial.
- 13 Quint.
- 14 Tanker and pumper combination.
- 16 Brush truck.
- 17 ARFF (aircraft rescue and firefighting).
- 10 Ground fire suppression, other.

### Heavy Ground Equipment

- 21 Dozer or plow.
- 22 Tractor.
- 24 Tanker or tender.
- 20 Heavy ground equipment, other.

### Aircraft

- 41 Aircraft, fixed-wing tanker.
- 42 Helitanker.
- 43 Helicopter.
- 40 Aircraft, other.

### Marine Equipment

- 51 Fire boat with pump.
- 52 Boat, no pump.
- 50 Marine equipment, other.

### Support Equipment

- 61 Breathing apparatus support.
- 62 Light and air unit.
- 60 Support apparatus, other.

**Medical and Rescue Unit**

- 71 Rescue unit.
- 72 Urban search and rescue unit.
- 73 High-angle rescue unit.
- 75 BLS unit.
- 76 ALS unit.
- 70 Medical and rescue unit, other.

**Other**

- 91 Mobile command post.
- 92 Chief officer car.
- 93 HazMat unit.
- 94 Type I hand crew.
- 95 Type II hand crew.
- 99 Privately owned vehicle.
- 00 Other apparatus or resources.
- NN None.
- UU Undetermined.

## Dates and Times

All dates and time are entered as numerals. For time of day, the 24-hour clock is used. (Midnight is 0000.)

### Dispatch Time

*Definition*

The actual month, day, year, and time of day when this unit was dispatched by the communications center. This is not an elapsed time.

*Purpose*

The time when a unit is dispatched is valuable because it allows fire department management to calculate the time it took from dispatch to arrival of the apparatus or resource on the incident scene. This information is useful in determining response times for specific apparatus, stations, or districts.

*Entry*

Enter the month, day, year (mm/dd/yyyy), and time that the unit was dispatched. If the Dispatch date is the same as the Alarm date on the Basic Module (Block E1), check or mark the corresponding box and enter the time the unit was dispatched.

*Example*

The call was dispatched at 5:39 p.m. on May 15, 2002, which was the same date as the Alarm date. The respondent elected to enter the date rather than check the box:

Dates and Times				
				Midnight is 0000
<input type="checkbox"/> Check if same date as alarm date				
	Month	Day	Year	Hour/Min
Dispatch	<input type="checkbox"/>	0,5	1,5	2,0,0,2   1,7,3,9
Arrival	<input type="checkbox"/>	_ _	_ _	_ _ _
Clear	<input type="checkbox"/>	_ _	_ _	_ _ _

**Arrival Time***Definition*

The actual month, day, year, and time of day when this unit arrived at the incident scene. This is not an elapsed time.

*Purpose*

The time when a specific unit arrives at the scene is valuable to fire department management because it reflects the actual time spent traveling to the scene of the incident for that type of apparatus or resource. This information is useful in determining response times for specific apparatus, stations, or districts.

*Entry*

Enter the month, day, year (mm/dd/yyyy), and time that the fire department unit arrived on the scene. If the Arrival date is the same as the Alarm date on the Basic Module (Block E1), check or mark the corresponding box and enter the time the unit arrived.

*Example*

Engine 13 arrived at the scene at 5:42 p.m. on May 15, 2002:

Dates and Times				
	Month	Day	Year	Hours/Mins
Dispatch	<input type="checkbox"/>	0,5	1,5	2,0,0,2   1,7,3,9
Arrival	<input checked="" type="checkbox"/>			1,7,4,2
Clear	<input type="checkbox"/>			

**Clear Time***Definition*

The actual month, day, year, and time of day when this unit is cleared from the incident and is available for new duty.

- Usually, the Clear time represents when the apparatus or resources are cleared from the scene. In the case of transport of a casualty, however, the Clear time is when the apparatus completes the transport and is available for new duty.

*Purpose*

The time when the resources or apparatus are cleared is valuable to fire department management because it reflects the time spent stabilizing the incident. This assists in determining service demand and costs for resource allocation.

*Entry*

Enter the month, day, year (mm/dd/yyyy), and time that the units cleared the incident and are available for reassignment. If the Clear date is the same as the Alarm date on the Basic Module (Block E1), check or mark the corresponding box and enter the time that the unit is cleared from the incident.

*Example*

Engine 13 cleared the scene and was available for reassignment at 1:12 a.m. on May 16, 2002:

Dates and Times				
				Midnight is 0000
 Check if same date as alarm date on the basic module (Block E1)				
	Month	Day	Year	Hour/Min
Dispatch	<input type="checkbox"/>	0,5	1,5	2,0,0,2   1,7 3,9
Arrival	<input checked="" type="checkbox"/>			1,7 4,2
Clear	<input type="checkbox"/>	0,5	1,6	2,0,0,2   0,1 1,2

## Sent

*Definition*

Indicates which apparatus was sent on the incident. Fire departments can pre-print or pre-enter apparatus in this module. When an incident occurs, the firefighter completing the module can check or mark the Sent box to indicate which apparatus in the module actually responded.

*Purpose*

Fire departments can pre-print or pre-enter apparatus in the module.

*Entry*

Check or mark the Sent box if the apparatus responded to the incident.

*Example*

The apparatus was sent on the call:

<b>Sent</b>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

## Number of People ☆

*Definition*

The number of emergency personnel on the apparatus.

*Purpose*

This assists in determining personnel demands for different types of incidents and staffing requirements for apparatus.

*Entry*

Enter the number of personnel on the apparatus.

*Example*

Five personnel rode the squad:

Number of ☆ People
5

**Apparatus or Resources Use ☆**

*Definition*

The main use of the apparatus or resource at the incident.

*Purpose*

This information is useful in determining actual personnel and apparatus requirements for different types of incidents and for different levels of incident severity.

*Entry*

Check or mark the box that best describes the primary use of the apparatus or resource at the incident.

☛ Chief officer vehicles and privately owned vehicles should be classified as Other.

*Example*

The engine and its personnel were responsible for suppression activities:

<b>Apparatus Use ☆</b>	
Check ONE box for each apparatus to indicate its main use at the incident.	
<input checked="" type="checkbox"/>	Suppression
<input type="checkbox"/>	EMS
<input type="checkbox"/>	Other

**APPARATUS USE CODES**

- 1      Suppression.
- 2      EMS.
- 0      Other. Actions Taken

## Actions Taken

### Definition

The duties performed at the incident scene by the apparatus or resource personnel.

### Purpose

This data element, together with Incident Type on the Basic Module (Section C), enables a fire department to document the breadth of activities and the resources required by the responding fire department to effectively handle the range of emergency situations. This information also provides some indication on the specific types of service required of the fire department.

### Entry

Enter the two-digit code(s) for up to four actions taken by the specific piece of apparatus or resource at the scene of the incident. Always report the most significant actions taken before less significant actions taken. Specific actions may include extinguishing fires, forcible entry, providing first aid, identifying and analyzing hazardous materials, and transporting the injured. The action may involve simply standing by at an incident for possible service. Be as specific as possible in stating the actions taken.

### Example

The truck company ventilated the roof (51), forced entry (52), and overhauled the fire scene (12):

Actions Taken			
List up to 4 actions for each apparatus			
5	1	5	2
1	2		

## ACTIONS TAKEN CODES

### Fire Control or Extinguishment

- 11 Extinguishment by fire service personnel.
- 12 Salvage and overhaul.
- 13 Establish fire lines around wildfire perimeter. Includes clearing firebreaks using direct, indirect, and burnout tactics as appropriate.
- 14 Contain fire (wildland). Includes taking suppression action that can reasonably be expected to check the fire spread under prevailing and predicted conditions.
- 15 Confine fire (wildland). Includes when fire crews or resources stop the forward progress of a fire but have not put in all control lines.
- 16 Control fire (wildland). Includes when fire crews or resources completely surround the fire perimeter with control lines; extinguish any spot fires; burn any area adjacent to the fire side of the control lines; and cool down all hot spots that are immediate threats to the control line, until the lines can reasonably be expected to hold under foreseeable conditions.
- 17 Manage prescribed fire (wildland).
- 10 Fire control or extinguishment, other.

### Search and Rescue

- 21 Search for lost or missing person. Includes animals.
- 22 Rescue, remove from harm. Excludes vehicle extrication (23).
- 23 Extrication or disentangling of a person. Excludes body recovery (24).
- 24 Recover body or body parts.
- 20 Search and rescue, other.

### EMS and Transport

- 31 Provide first aid and check for injuries. Medical evaluation of patient.
- 32 Provide basic life support (BLS).
- 33 Provide advanced life support (ALS).
- 34 Transport of person from scene in fire service ambulance or apparatus.
- 30 Emergency medical services, other.

### Hazardous Condition

- 41 Identification, analysis of hazardous materials.
- 42 Hazardous materials detection, monitoring, sampling, and analyzing using a variety of detection instruments including combustible gas indicators (CGIs) or explosimeter, oxygen monitors, colorimetric tubes, specific chemical monitors, and others. Results from these devices must be analyzed to provide information about the hazardous nature of the material or environment.
- 43 Hazardous materials spill control and confinement. Includes confining or diking hazardous materials. These are actions taken to confine the product released to a limited area including the use of absorbents, damming/diking, diversion of liquid runoff, dispersion, retention, or vapor suppression.
- 44 Hazardous materials leak control and containment. Includes actions taken to keep a material within its container, such as plugging/patching operations, neutralization, pressure isolation/reduction, solidification, and vacuuming.
- 45 Remove hazard. Includes neutralizing a hazardous condition.
- 46 Decontaminate persons or equipment. Includes actions taken to prevent the spread of contaminants from the “hot zone” to the “cold zone.” This includes gross, technical, or advanced personal decontamination of victims, emergency responders, and equipment.
- 47 Decontamination of occupancy or area exposed to hazardous materials.
- 48 Remove hazardous materials. Includes a broad range of actions taken to remove hazardous materials from a damaged container or contaminated area. Examples of actions to remove hazards include product offload/transfer, controlled burning or product flaring, venting, and overpacking.
- 40 Hazardous condition, other.

### Fires, Rescues, and Hazardous Conditions

- 51 Ventilate. Includes nonhazardous odor removal and removal of smoke from nonhazardous materials-related fires.
- 52 Forcible entry, performed by fire service. Includes support to law enforcement.
- 53 Evacuate area. Removal of civilians from an area determined to be hazardous. Includes actions taken to isolate the contaminated area and/or evacuate those persons affected by a hazardous materials release or potential release.
- 54 Determine if the materials released are nonhazardous through product identification and environmental monitoring.
- 55 Establish safe area. Includes isolating the area affected by denying entry to unprotected persons and establishing hazard control zones (hot, warm, cold).
- 56 Provide air supply.
- 57 Provide light or electrical power.
- 58 Operate apparatus or vehicle.
- 50 Fires, rescues, and hazardous conditions, other.

### Systems and Services

- 61 Restore municipal services. Includes turning water back on and notifying the gas company to turn the gas on.
- 62 Restore sprinkler or fire protection system.
- 63 Restore fire alarm system. Includes restoring fire alarm systems monitored by the fire service.
- 64 Shut down system. Includes shutting down water, gas, and fire alarm systems.

- 65 Secure property. Includes property conservation activities such as covering broken windows or holes in roofs.
- 66 Remove water or control flooding condition.
- 60 Systems and services, other.

### Assistance

- 71 Assist physically disabled. Includes providing nonmedical assistance to physically disabled, handicapped, or elderly citizens.
- 72 Assist animal. Includes animal rescue, extrication, removal, or transport.
- 73 Provide manpower. Includes providing manpower to assist rescue/ambulance units lift patients or providing manpower to assist police.
- 74 Provide apparatus.
- 75 Provide equipment, where equipment is used by another agency.
- 76 Provide water. Includes tanker shuttle operations and pumping in a relay or from a water source. Excludes normal fire suppression operations.
- 77 Control crowd. Includes restricting pedestrian access to an area. Excludes control of vehicles (78).
- 78 Control traffic. Includes setting up barricades and directing traffic.
- 79 Assess damage from severe weather or the results of a natural disaster.
- 70 Assistance, other.

### Information, Investigation, and Enforcement

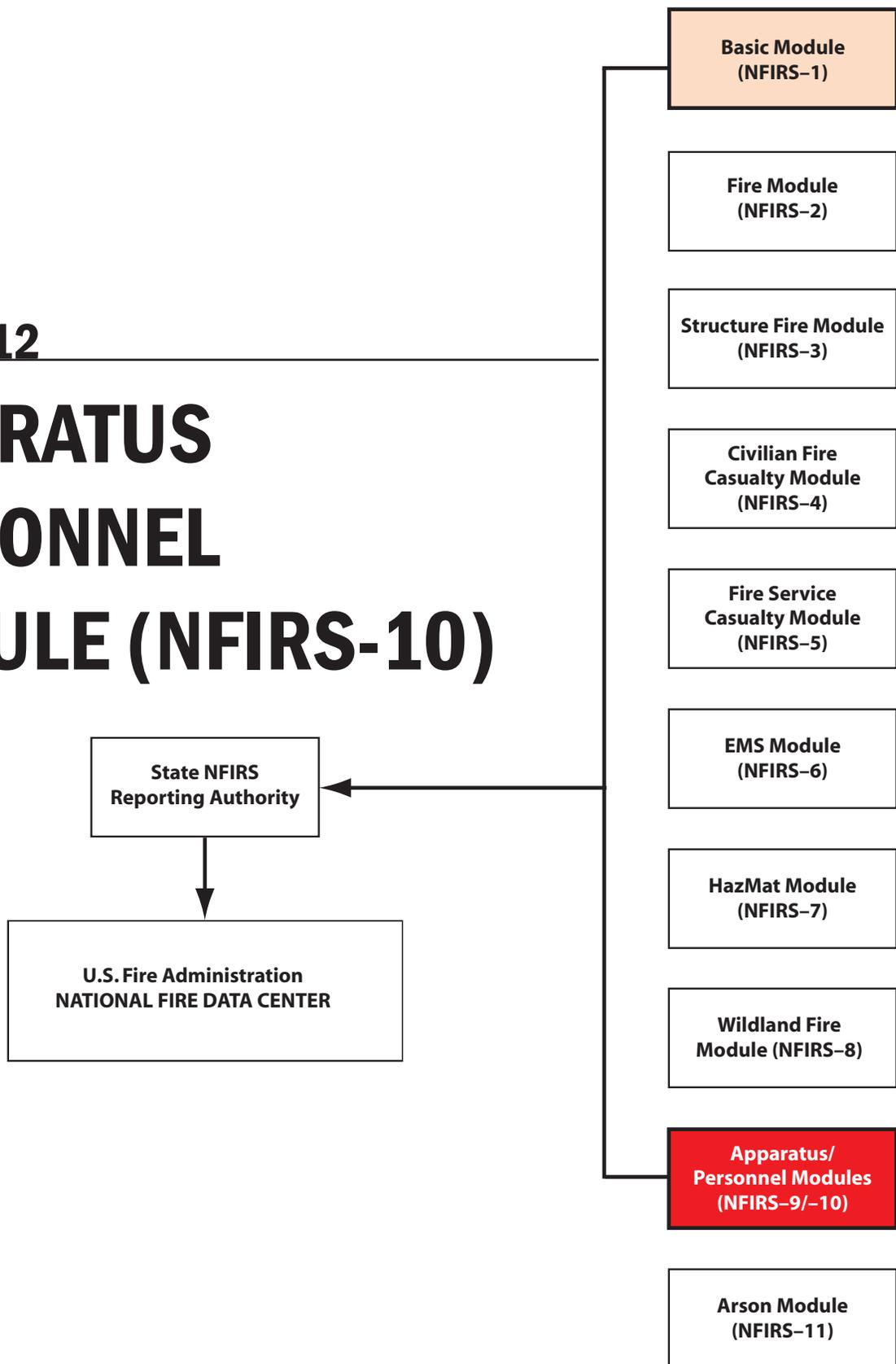
- 81 Incident command. Includes providing support to incident command activities.
- 82 Notify other agencies. Includes notifications of utility companies, property owners, and the like.
- 83 Provide information to the public or media.
- 84 Refer to proper authority. Includes turnover of incidents to other authorities or agencies such as the police.
- 85 Enforce fire code and other codes. Includes response to public complaints and abatement of code violations.
- 86 Investigate. Includes investigations done on arrival to determine the situation and post-incident investigations; and collecting incident information for incident reporting purposes.
- 80 Information, investigation, and enforcement, other.

### Fill-in, Standby

- 90 Fill-in, standby, other.
- 91 Fill in, move up to another fire station.
- 92 Standby.
- 93 Canceled en route.
- 00 Action taken, other.

## Chapter 12

# APPARATUS PERSONNEL MODULE (NFIRS-10)



<b>A</b>	FDID <input type="text"/>	State <input type="text"/>	Incident Date <input type="text"/> MM <input type="text"/> DD <input type="text"/> YYYY	Station <input type="text"/>	Incident Number <input type="text"/>	Exposure <input type="text"/>	<input type="checkbox"/> Delete	<b>NFIRS-10 Personnel</b>
							<input type="checkbox"/> Change	

B Apparatus or Resources	Dates and Times	Sent	Number of People	Apparatus Use	Actions Taken
	<small>Midnight is 0000</small> <input type="checkbox"/> Check if same date as Alarm date on the Basic Module (Block E1). Month Day Year Hour/Min	<input checked="" type="checkbox"/>	<input type="text"/>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	List up to 4 actions for each apparatus and each personnel.
<b>1</b> ID <input type="text"/> ☆Type <input type="text"/>	Dispatch <input type="checkbox"/> <input type="text"/> Arrival <input type="checkbox"/> <input type="text"/> Clear <input type="checkbox"/> <input type="text"/>	<input type="checkbox"/>	<input type="text"/>		<input type="text"/>

Personnel ID ☆	Name	Rank or Grade	Attend	Action Taken	Action Taken	Action Taken	Action Taken
<input type="text"/>			<input checked="" type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				

<b>2</b> ID <input type="text"/> ☆Type <input type="text"/>	Dispatch <input type="checkbox"/> <input type="text"/> Arrival <input type="checkbox"/> <input type="text"/> Clear <input type="checkbox"/> <input type="text"/>	Sent <input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	<input type="text"/>
--	--	-------------------------------	----------------------	--	----------------------

Personnel ID ☆	Name	Rank or Grade	Attend	Action Taken	Action Taken	Action Taken	Action Taken
<input type="text"/>			<input checked="" type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				

<b>3</b> ID <input type="text"/> ☆Type <input type="text"/>	Dispatch <input type="checkbox"/> <input type="text"/> Arrival <input type="checkbox"/> <input type="text"/> Clear <input type="checkbox"/> <input type="text"/>	Sent <input type="checkbox"/>	<input type="text"/>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other	<input type="text"/>
--	--	-------------------------------	----------------------	--	----------------------

Personnel ID ☆	Name	Rank or Grade	Attend	Action Taken	Action Taken	Action Taken	Action Taken
<input type="text"/>			<input checked="" type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				
<input type="text"/>			<input type="checkbox"/>				

# CHAPTER 12

## PERSONNEL MODULE (NFIRS-10)

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The Personnel Module (NFIRS-10) is an optional module that is used to help manage and track personnel and resources used on incidents.

- If only apparatus or resources need to be reported, use the Apparatus or Resources Module (NFIRS-9) instead of this module.

### SECTION A

The guidance and directions for completing Section A of the Personnel Module are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Personnel Module must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3–8.

### **A** Fire Department Identification (FDID) ☆

#### *Entry*

Enter the same FDID number found in Section A of the Basic Module.

### **State** ☆

#### *Entry*

Enter the same state abbreviation found in Section A of the Basic Module.

### **Incident Date** ☆

#### *Entry*

Enter the same incident date found in Section A of the Basic Module.

### **Station Number**

#### *Entry*

Enter the same station number found in Section A of the Basic Module.

### **Incident Number** ☆

#### *Entry*

Enter the same incident number found in Section A of the Basic Module.

## Exposure Number ☆

### Entry

If this report is for an exposure fire, enter the same exposure number that was entered in Section A of the Basic Module for that exposure.

## Delete/Change

### Definition

Indicates a change to information submitted on a previous Personnel Module or a deletion of all information regarding the incident.

### Purpose

To delete or change previously reported information.

### Entry

**Delete.** Check or mark this box when you have previously submitted data on this Personnel Module and now want to have the data on this report deleted from the database. If this box is marked, complete Section A and the ID Number from Section B and leave the rest of the report blank. Forward the report according to your normally established procedures.

**Change.** Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

## B Apparatus or Resources Type ☆

### Definition

The type and identification number for the apparatus or resources used at the incident.

- ☛ The apparatus Type field is a required field; complete the ID number of the resource or apparatus if appropriate.

### Purpose

This information is useful in determining actual apparatus and personnel requirements for different types of incidents and for different levels of incident severity as well as for tracking times and actions taken by apparatus type and personnel.

### Entry

Enter the identification number for each apparatus or resource used at the incident and the two-digit code for the type of apparatus or resource. If more than three apparatus or resources were used, complete an additional NFIRS-10 module.

- Individual fire departments often assign a unique number to each piece of apparatus in the department.

### Example

An engine (11) responded to the incident. Its assigned identification number is 12547:

<b>B</b>	<b>Apparatus or Resource</b>	☆
1	ID	1,2,5,4,7
	Type	1,1

## APPARATUS OR RESOURCE TYPE CODES

### Ground Fire Suppression

- 11 Engine.
- 12 Truck or aerial.
- 13 Quint.
- 14 Tanker and pumper combination.
- 16 Brush truck.
- 17 ARFF (aircraft rescue and firefighting).
- 10 Ground fire suppression, other.

### Heavy Ground Equipment

- 21 Dozer or plow.
- 22 Tractor.
- 24 Tanker or tender.
- 20 Heavy ground equipment, other.

### Aircraft

- 41 Aircraft, fixed-wing tanker.
- 42 Helitanker.
- 43 Helicopter.
- 40 Aircraft, other.

### Marine Equipment

- 51 Fire boat with pump.
- 52 Boat, no pump.
- 50 Marine equipment, other.

### Support Equipment

- 61 Breathing apparatus support.
- 62 Light and air unit.
- 60 Support apparatus, other.

**Medical and Rescue Unit**

- 71 Rescue unit.
- 72 Urban search and rescue unit.
- 73 High-angle rescue unit.
- 75 BLS unit.
- 76 ALS unit.
- 70 Medical and rescue unit, other.

**Other**

- 91 Mobile command post.
- 92 Chief officer car.
- 93 HazMat unit.
- 94 Type I hand crew.
- 95 Type II hand crew.
- 99 Privately owned vehicle.
- 00 Other apparatus or resources.
- NN None.
- UU Undetermined.

## Dates and Times

All dates and time are entered as numerals. For time of day, the 24-hour clock is used. (Midnight is 0000.)

### Dispatch Time

#### Definition

The actual month, day, year, and time of day when this unit was dispatched by the communications center. This is not an elapsed time.

#### Purpose

The time when a unit is dispatched is valuable because it allows fire department management to calculate the time it took from dispatch to arrival of the apparatus or resource on the incident scene. This information is useful in determining response times for specific apparatus, stations, or districts.

#### Entry

Enter the month, day, year (mm/dd/yyyy), and time that the unit was dispatched. If the Dispatch date is the same as the Alarm date on the Basic Module (Block E1), check or mark the corresponding box.

#### Example

The call was dispatched at 5:39 p.m. on May 15, 2002, the same date as the Alarm date:

Dates and Times				Midnight is 0000
	 Check if same date as alarm date on the Basic Module (Block E1)			
	Month	Day	Year	Hour/Min
Dispatch	<input checked="" type="checkbox"/>			1, 7, 3, 9
Arrival	<input type="checkbox"/>			
Clear	<input type="checkbox"/>			

## Arrival Time

### Definition

The actual month, day, year, and time of day when this unit arrived at the incident scene. This is not an elapsed time.

### Purpose

The time when a specific unit arrives at the scene is valuable to fire department management because it reflects the actual time spent traveling to the scene of the incident for that type of apparatus or resource. This information is useful in determining response times for specific apparatus, stations, or districts.

### Entry

Enter the month, day, year (mm/dd/yyyy), and time that the fire department unit arrived on the scene. If the Arrival date is the same as the Alarm date on the Basic Module (Block E1), check or mark the corresponding box and enter the time the unit arrived.

### Example

Engine 13 arrived at the scene at 5:42 p.m. on May 15, 2002:

Dates and Times		Midnight is 0000			
	<input checked="" type="checkbox"/>	Month	Day	Year	Hour/Min
Dispatch	<input checked="" type="checkbox"/>				1,7,3,9
Arrival	<input checked="" type="checkbox"/>				1,7,4,2
Clear	<input type="checkbox"/>				

## Clear Time

### Definition

The actual month, day, year, and time of day when this unit is cleared from the incident and is available for new duty.

- Usually, the Clear time represents when the apparatus or resources are cleared from the scene. In the case of transport of a casualty, however, the Clear time is when the apparatus completes the transport and is available for new duty.

### Purpose

The time when the resources or apparatus are cleared is valuable to fire department management because it reflects the time spent stabilizing the incident. This assists in determining service demand and costs for resource allocation.

### Entry

Enter the month, day, year (mm/dd/yyyy), and time that the units cleared the incident and are available for reassignment. If the Clear date is the same as the Alarm date on the Basic Module (Block E1), check or mark the corresponding box and enter the time that the unit is cleared from the incident.

*Example*

Engine 13 cleared the scene and was available for reassignment at 7:30 p.m. on May 15, 2002:

Dates and Times		Midnight is 0000			
	<input type="checkbox"/>	Check if same date as alarm date on the Basic Module (Block E1)			
		Month	Day	Year	Hour/Min
Dispatch	<input checked="" type="checkbox"/>	_	_	_ _	1,7,30
Arrival	<input checked="" type="checkbox"/>	_	_	_ _	1,7,42
Clear	<input checked="" type="checkbox"/>	_	_	_ _	1,9,30

## Sent

*Definition*

Indicates which apparatus was sent on the incident. Fire departments can pre-print or pre-enter apparatus in this module. When an incident occurs, the firefighter completing the module can check or mark the Sent box to indicate which apparatus in the module actually responded.

*Purpose*

Fire departments can pre-print or pre-enter apparatus in the module.

*Entry*

Check or mark the Sent box if the apparatus responded to the incident.

*Example*

The apparatus was sent on the call:

<b>Sent</b>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

## Number of People ☆

*Definition*

The number of emergency personnel on the apparatus.

*Purpose*

This assists in determining personnel demands for different types of incidents and staffing requirements for apparatus.



## Actions Taken

### Definition

The duties performed at the incident scene by the apparatus or resource personnel.

### Purpose

This data element, together with Incident Type on the Basic Module (Section C), enables a fire department to document the breadth of activities and the resources required by the responding fire department to effectively handle the range of emergency situations. This information also provides some indication on the specific types of service required of the fire department.

### Entry

Enter the two-digit code(s) for up to four actions taken by the specific piece of apparatus or resource at the scene of the incident. Always report the most significant actions taken before less significant actions taken. Specific actions may include extinguishing fires, forcible entry, providing first aid, identifying and analyzing hazardous materials, and transporting the injured. The action may involve simply standing by at an incident for possible service. Be as specific as possible in stating the actions taken.

### Example

The truck company ventilated the roof (51), forced entry (52), and overhauled the fire scene (12):

Actions Taken	
List up to 4 actions for each apparatus and each personnel.	
51	52
12	

## ACTIONS TAKEN CODES

### Fire Control or Extinguishment

- 11 Extinguishment by fire service personnel.
- 12 Salvage and overhaul.
- 13 Establish fire lines around wildfire perimeter. Includes clearing firebreaks using direct, indirect, and burnout tactics as appropriate.
- 14 Contain fire (wildland). Includes taking suppression action that can reasonably be expected to check the fire spread under prevailing and predicted conditions.
- 15 Confine fire (wildland). Includes when fire crews or resources stop the forward progress of a fire but have not put in all control lines.
- 16 Control fire (wildland). Includes when fire crews or resources completely surround the fire perimeter with control lines; extinguish any spot fires; burn any area adjacent to the fire side of the control lines; and cool down all hot spots that are immediate threats to the control line, until the lines can reasonably be expected to hold under foreseeable conditions.
- 17 Manage prescribed fire (wildland).
- 10 Fire control or extinguishment, other.

**Search and Rescue**

- 21 Search for lost or missing persons. Includes animals.
- 22 Rescue, remove from harm. Excludes vehicle extrication (23).
- 23 Extrication or disentangling of a person. Excludes body recovery (24).
- 24 Recover body or body parts.
- 20 Search and rescue, other.

**EMS and Transport**

- 31 Provide first aid and check for injuries. Medical evaluation of patient.
- 32 Provide basic life support (BLS).
- 33 Provide advanced life support (ALS).
- 34 Transport of person from scene in fire service ambulance or apparatus.
- 30 Emergency medical services, other.

**Hazardous Condition**

- 41 Identification, analysis of hazardous materials.
- 42 Hazardous materials detection, monitoring, sampling, and analyzing using a variety of detection instruments including combustible gas indicators (CGIs) or explosimeter, oxygen monitors, colorimetric tubes, specific chemical monitors, and others. Results from these devices must be analyzed to provide information about the hazardous nature of the material or environment.
- 43 Hazardous materials spill control and confinement. Includes confining or diking hazardous materials. These are actions taken to confine the product released to a limited area including the use of absorbents, damming/diking, diversion of liquid runoff, dispersion, retention, or vapor suppression.
- 44 Hazardous materials leak control and containment. Includes actions taken to keep a material within its container, such as plugging/patching operations, neutralization, pressure isolation/reduction, solidification, and vacuuming.
- 45 Remove hazard. Includes neutralizing a hazardous condition.
- 46 Decontaminate persons or equipment. Includes actions taken to prevent the spread of contaminants from the “hot zone” to the “cold zone.” This includes gross, technical, or advanced personal decontamination of victims, emergency responders, and equipment.
- 47 Decontamination of occupancy or area exposed to hazardous materials.
- 48 Remove hazardous materials. Includes a broad range of actions taken to remove hazardous materials from a damaged container or contaminated area. Examples of actions to remove hazards include product offload/transfer, controlled burning or product flaring, venting, and overpacking.
- 40 Hazardous condition, other.

**Fires, Rescues, and Hazardous Conditions**

- 51 Ventilate. Includes nonhazardous odor removal and removal of smoke from nonhazardous materials-related fires.
- 52 Forcible entry, performed by fire service. Includes support to law enforcement.
- 53 Evacuate area. Removal of civilians from an area determined to be hazardous. Includes actions taken to isolate the contaminated area and/or evacuate those persons affected by a hazardous materials release or potential release.
- 54 Determine if the materials released are nonhazardous through product identification and environmental monitoring.
- 55 Establish safe area. Includes isolating the area affected by denying entry to unprotected persons and establishing hazard control zones (hot, warm, cold).
- 56 Provide air supply.
- 57 Provide light or electrical power.
- 58 Operate apparatus or vehicle.
- 50 Fires, rescues, and hazardous conditions, other.

**Systems and Services**

- 61 Restore municipal services. Includes turning water back on and notifying the gas company to turn the gas on.
- 62 Restore sprinkler or fire protection system.

- 63 Restore fire alarm system. Includes restoring fire alarm systems monitored by the fire service.
- 64 Shut down system. Includes shutting down water, gas, and fire alarm systems.
- 65 Secure property. Includes property conservation activities such as covering broken windows or holes in roofs.
- 66 Remove water or control flooding condition.
- 60 Systems and services, other.

### Assistance

- 71 Assist physically disabled. Includes providing nonmedical assistance to physically disabled, handicapped, or elderly citizens.
- 72 Assist animal. Includes animal rescue, extrication, removal, or transport.
- 73 Provide manpower. Includes providing manpower to assist rescue/ambulance units lift patients or providing manpower to assist police.
- 74 Provide apparatus.
- 75 Provide equipment, where equipment is used by another agency.
- 76 Provide water. Includes tanker shuttle operations and pumping in a relay or from a water source. Excludes normal fire suppression operations.
- 77 Control crowd. Includes restricting pedestrian access to an area. Excludes control of vehicles (78).
- 78 Control traffic. Includes setting up barricades and directing traffic.
- 79 Assess damage from severe weather or the results of a natural disaster.
- 70 Assistance, other.

### Information, Investigation, and Enforcement

- 81 Incident command. Includes providing support to incident command activities.
- 82 Notify other agencies. Includes notifications of utility companies, property owners, and the like.
- 83 Provide information to the public or media.
- 84 Refer to proper authority. Includes turnover of incidents to other authorities or agencies such as the police.
- 85 Enforce fire code and other codes. Includes response to public complaints and abatement of code violations.
- 86 Investigate. Includes investigations done on arrival to determine the situation and post-incident investigations; and collecting incident information for incident reporting purposes.
- 80 Information, investigation, and enforcement, other.

### Fill-in, Standby

- 91 Fill in, move up to another fire station.
- 92 Standby.
- 93 Canceled en route.
- 00 Action taken, other.
- 90 Fill-in, standby, other.

## Personnel ID ☆, Name, and Rank

### Definition

The personnel identification number assigned to each emergency responder and name and rank. The ID number is often the social security number, but it may be any combination of letters and numbers up to nine characters.

### Purpose

This information is useful for identifying personnel on specific pieces of apparatus, their level of responsibility, and the actions that they took at the incident.

### Entry

Enter the responder's ID number, name, and rank (left-justify).

☛ Individual fire departments often assign a unique number to each employee in the department.

### Example

Firefighter Doug Kane, ID A23-4567 responded to the incident:

Personnel ID ☆	Name	Rank or Grade
A 2 3 4 5 6 7	Doug Kane	Firefighter

## Attend

### Definition

Indicates which personnel were on the apparatus sent to the incident. Fire departments can pre-print or pre-enter the names of personnel in this module. When an incident occurs, the firefighter completing the module can check or mark the Attend box to indicate which personnel on the apparatus actually responded.

### Purpose

Fire departments can pre-print or pre-enter personnel in the module.

### Entry

Check or mark the Attend box if the person responded to the incident.

### Example

Firefighter Doug Kane responded to the incident:

<b>Attend</b>
<input type="checkbox"/>
<input checked="" type="checkbox"/>

## Actions Taken

### Definition

The duties performed at the incident scene by the individual responder.

### Purpose

This data element documents the range of activities required by the responding emergency personnel to effectively handle the range of emergency situations.

*Entry*

Enter the two-digit code(s) for up to four actions taken by the individual responder at the scene of the incident. Always report the most significant actions taken before less significant actions taken. Specific actions may include extinguishing fires, forcible entry, providing first aid, identifying and analyzing hazardous materials, and transporting the injured. The action may involve simply standing by at an incident for possible service. Be as specific as possible in stating the actions taken.

☛ Actions Taken codes are listed on page 12–10 of this chapter.

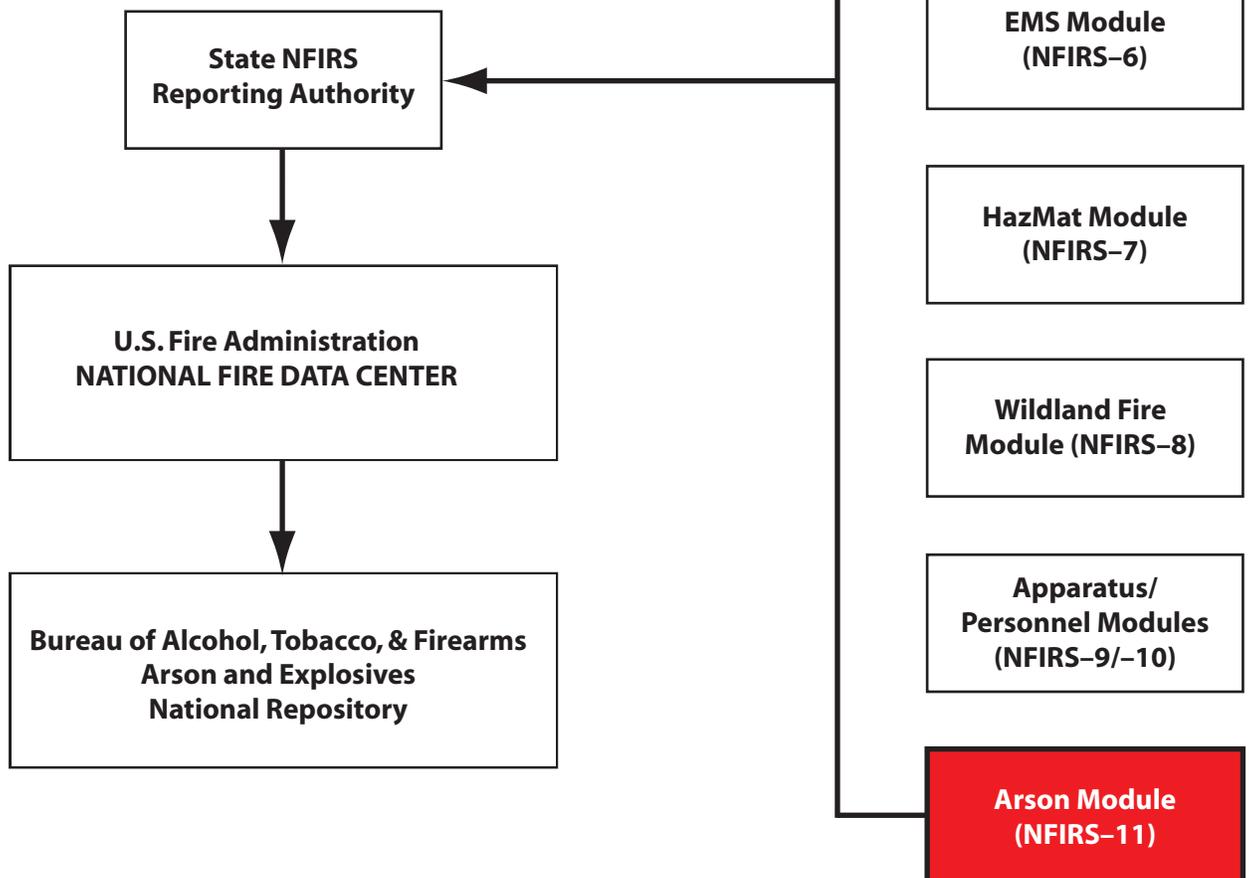
*Example*

Firefighter Doug Kane assisted with ventilating the roof (51) and overhauling the fire scene (12):

Action Taken	Action Taken	Action Taken	Action Taken
51	12		

## Chapter 13

# ARSON MODULE (NFIRS-11)







# CHAPTER 13

## ARSON MODULE (NFIRS-11)

An indispensable tool in the war against arson is the ability to identify with precision when and where the crime takes place, what form it takes, and the characteristics of its targets and perpetrators. Armed with such information, fire service and law enforcement agencies can develop and implement arson prevention initiatives that will allow them to use their resources in the most efficient and effective manner. The NFIRS 5.0 Arson Module (NFIRS-11) was developed with this goal in mind.

*Arson:* To unlawfully and intentionally damage, or attempt to damage, any real or personal property by fire or incendiary device.

This optional Arson Module may be used whenever the Cause of Ignition (Fire Module, Block E1) is coded as Intentional or as Cause Under Investigation without any distinction made as to whether a crime has occurred or a determination of criminal intent. The Arson Module may also be used when the fire is coded as Cause Undetermined After Investigation.

The Arson Module may also be used to document juvenile-set fires, whether determined to be intentional, unintentional, or under investigation. This information will permit analysis of juvenile firesetting trends, including intervention strategies and recidivism.

☛ Juvenile-set fires are defined to be those fires where the person involved in the ignition is under the age of 18.

The Arson Module consists of two parts: a local investigation module that permits a fire department or arson investigation unit to document certain details concerning the incident; and a juvenile firesetter section that identifies key items of information that could be used for local, State, and national intervention programs.

Many arson investigation units use an arson information management system to collect and compile information on arson incidents. This module is not intended to replace such systems; instead, it identifies those data elements that could be exported to NFIRS and included as an integral part of the U.S. Fire Administration National Fire Database and the Bureau of Alcohol, Tobacco and Firearms (BATF), Arson and Explosives National Repository.

### SECTION A

The guidance and directions for completing Section A of the Arson Module are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Arson Module must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3–8.

**A Fire Department Identification (FDID) ☆***Entry*

Enter the same FDID number found in Section A of the Basic Module.

**State ☆***Entry*

Enter the same State abbreviation found in Section A of the Basic Module.

**Incident Date ☆***Entry*

Enter the same incident date found in Section A of the Basic Module.

**Station Number***Entry*

Enter the same station number found in Section A of the Basic Module.

**Incident Number ☆***Entry*

Enter the same incident number found in Section A of the Basic Module.

**Exposure Number ☆***Entry*

Enter the same exposure number found in Section A of the Basic Module.

**Delete/Change***Definition*

Indicates a change to information submitted on a previous Arson Module or a deletion of all information regarding the incident.

*Purpose*

To delete or change previously reported information.

*Entry*

*Delete.* Check or mark this box when you have previously submitted data on this arson incident and now want to have the data on this report deleted from the database. If this box is marked, complete Section A and leave the rest of the report blank. Forward the report according to your normally established procedures.

*Change.* Check or mark this box only if you previously submitted this fire incident to your State reporting authority and now want to update or change the information in the State database. Complete Section A and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION B

### **B** Agency Referred To

#### *Definition*

Identifies the agency, if any, the incident was referred to for follow-up investigation. This might be a law enforcement agency that has jurisdiction for a criminal investigation or another fire department that may have been requested to conduct the investigation.

#### *Purpose*

This element provides the details necessary to contact the agency that conducted any follow-up of the incident. It also allows for the collection, compilation, and analysis of all data associated with a specific incident.

#### *Entry*

Enter the referred agency's name, telephone number, address, case number, Originating Agency Identifier (ORI) number, Federal Identifier (FID) code, and FDID (if applicable). Check or mark the None box if the case was not referred to another agency.

*ORI:* A unique identification number assigned to law enforcement agencies (towns, cities, counties, State police agencies, and some colleges and universities) participating in the FBI's Uniform Crime Reporting (UCR) system or the National Incident-Based Reporting System (NIBRS).

*FID:* A two-character identification number used by Federal departments to submit crime data to UCR/NIBRS gathered by its dependent bureau/agencies.

Collectively, the ORI, FID, and Incident numbers provide the necessary uniqueness to avoid duplication of reported incidents.

☛ "00" is used for State and local agencies as the FID codes. Federal departments such as the FBI use an assigned FID code. This list is not provided in this guide.

Also enter the complete address of the agency the incident was referred to for follow-up investigation. (Street prefixes, types, and suffixes are listed in Chapter 3, pages 13–16.)

**Example**

The case was referred to the BATF – 703–555–8976, 11234 Lee Highway, Fairfax, VA 20145, Case Number 19002021997, ORI 234568, FID 26:

<b>B Agency Referred To</b>		<input type="checkbox"/> None	Bureau of Alcohol, Tobacco & Firearms		1 9   0   0   2   0   2   1   9   9   7	
			Agency name		Their case number	
11234		Lee	H W Y		2 3   4   5   6   8	
Number	Prefix	Street or Highway	Street Type		Suffix	
Post Office Box		Apt./Suite/Room	Fairfax		City	
					2 6	
			7 0   3   -   5   5   5   -   8   9   7   6		Their Federal Identifier (FID)	
VA	2 0   1   4   5		Agency phone number		Their FDID	
State	ZIP Code					

**SECTION C**

**Case Status**

*Definition*

The current status of the investigation.

*Purpose*

This data element identifies the status of the investigation at the time the report was filed. This information is useful in tracking the closure rate of an investigation as well as providing information to other agencies concerning the status of cases that may be linked to cases they are investigating.

*Entry*

Check or mark the box that best describes the status of the investigation at this time.

*Example*

The case is closed with an arrest (4):

<b>C</b>	<b>Case Status</b>
1	<input type="checkbox"/> Investigation open
2	<input type="checkbox"/> Investigation closed
3	<input type="checkbox"/> Investigation inactive
4	<input checked="" type="checkbox"/> Closed with arrest
5	<input type="checkbox"/> Closed with exceptional clearance

**CASE STATUS CODES**

- 1 Investigation open.
- 2 Investigation closed.
- 3 Investigation inactive.
- 4 Investigation closed with arrest.
- 5 Closed with exceptional clearance.

## SECTION D

**D Availability of Material First Ignited***Definition*

Identifies the availability of an ignition source (including matches and lighters) to the subject.

*Purpose*

Understanding firesetting methods and trends can assist in the development of prevention and intervention strategies.

*Entry*

Check or mark the box that best describes the availability of the material first ignited.

*Example*

Matches were brought to the scene (1) by the subject:

<b>D</b>	<b>Availability of Material First Ignited</b>
1	<input checked="" type="checkbox"/> Transported to scene
2	<input type="checkbox"/> Available at scene
U	<input type="checkbox"/> Unknown

## AVAILABILITY OF MATERIAL FIRST IGNITED CODES

- |   |                       |
|---|-----------------------|
| 1 | Transported to scene. |
| 2 | Available at scene.   |
| U | Unknown.              |

## SECTION E

**E Suspected Motivation Factors***Definition*

Indicates the suspected stimulus that caused the subject(s) to burn any real or personal property.

*Purpose*

An analysis of arson trends may be based on the possible motivation for the crime.

*Entry*

Check or mark up to three boxes that best indicate the factors or conditions that constituted possible motivations for the subject.

**Example**

The suspect burned down the home of his former employer who had fired him (21):

E Suspected Motivation Factors		Check up to three factors					
11	<input type="checkbox"/> Extortion	21	<input checked="" type="checkbox"/> Personal	42	<input type="checkbox"/> Vanity/Recognition	54	<input type="checkbox"/> Burglary
12	<input type="checkbox"/> Labor unrest	22	<input type="checkbox"/> Hate crime	43	<input type="checkbox"/> Thrills	61	<input type="checkbox"/> Homicide concealment
13	<input type="checkbox"/> Insurance fraud	23	<input type="checkbox"/> Institutional	44	<input type="checkbox"/> Attention/Sympathy	62	<input type="checkbox"/> Burglary concealment
14	<input type="checkbox"/> Intimidation	24	<input type="checkbox"/> Societal	45	<input type="checkbox"/> Sexual excitement	63	<input type="checkbox"/> Auto theft concealment
15	<input type="checkbox"/> Void contract/lease	31	<input type="checkbox"/> Protest	51	<input type="checkbox"/> Homicide	64	<input type="checkbox"/> Destroy records/evidence
16	<input type="checkbox"/> Foreclosed property	32	<input type="checkbox"/> Civil unrest	52	<input type="checkbox"/> Suicide	00	<input type="checkbox"/> Other suspected motivation
		41	<input type="checkbox"/> Fireplay/Curiosity	53	<input type="checkbox"/> Domestic violence	UU	<input type="checkbox"/> Unknown motivation

**SUSPECTED MOTIVATION FACTORS CODES**

11	Extortion.
12	Labor unrest.
13	Insurance fraud.
14	Intimidation.
15	Void contract/lease.
16	Foreclosed property.
21	Personal.
22	Hate crime.
23	Institutional.
24	Societal.
31	Protest.
32	Civil unrest.
41	Fireplay/Curiosity.
42	Vanity/Recognition.
43	Thrills.
44	Attention/Sympathy.
45	Sexual excitement.
51	Homicide.
52	Suicide.
53	Domestic violence.
54	Burglary.
61	Homicide concealment.
62	Burglary concealment.
63	Auto theft concealment.
64	Destroy records/evidence.
00	Other suspected motivation.
UU	Unknown.

**SECTION F****Apparent Group Involvement****Definition**

Indicates whether the subject was motivated to commit the arson act because of involvement in a larger group or organization or as a means to promote the cause of a larger group or organization.

### Purpose

This information permits analysis of arson trends based on participation in criminal groups or organizations, and it provides possible links to other similar arson cases.

### Entry

Check or mark up to three boxes that best indicate the subject's involvement in a larger group or organization. If no group or organization was involved, check or mark the None box.

### Example

The suspect committed the crime as initiation into a gang (2):

<b>F</b>	<b>Apparent Group Involvement</b>	<input type="checkbox"/> None
	Check up to three factors	
1	<input type="checkbox"/> Terrorist group	
2	<input checked="" type="checkbox"/> Gang	
3	<input type="checkbox"/> Anti-government group	
4	<input type="checkbox"/> Outlaw motorcycle organization	
5	<input type="checkbox"/> Organized crime	
6	<input type="checkbox"/> Racial/Ethnic hate group	
7	<input type="checkbox"/> Religious hate group	
8	<input type="checkbox"/> Sexual preference hate group	
0	<input type="checkbox"/> Other criminal group	
U	<input type="checkbox"/> Unknown	

#### APPARENT GROUP INVOLVEMENT CODES

1	Terrorist group.
2	Gang.
3	Anti-government group.
4	Outlaw motorcycle organization.
5	Organized crime.
6	Racial/Ethnic hate group.
7	Religious hate group.
8	Sexual preference hate group.
0	Other criminal group.
N	None. Acted alone.
U	Unknown.

#### SECTION G

This section collects data on how entry was gained to the property and what conditions the fire department found on arrival at the scene.

## G<sup>1</sup> Entry Method

### Definition

Indicates how the subject gained access to the property.

### Purpose

This data item can be used to track common methods of entry for later analysis and to link other cases.

### Entry

Enter the two-digit code and description of the subject's method of entry to the property.

### Example

The subject broke the window in the back of the warehouse (14):

<b>G<sub>1</sub></b>	<b>Entry Method</b>
14	Broken window
Entry Method	

### ENTRY METHOD CODES

11	Door, open or unlocked.
12	Door, forced or broken.
13	Window, open or unlocked.
14	Window, forced or broken.
15	Gate, open or unlocked.
16	Gate, forced or broken.
17	Locks, pried.
18	Locks, cut.
19	Floor entry.
21	Vent.
22	Attic/Roof.
23	Key.
24	Help from inside.
25	Wall.
26	Crawl space.
27	Hid in/on premises.
00	Other entry method.
UU	Unknown.

## G<sup>2</sup> Extent of Fire Involvement on Arrival

### Definition

Indicates the fire department's observation of the extent of the fire's involvement when they arrived at the incident scene.

### Purpose

Case investigators can use this information to determine if arson is potentially involved in the fire and to measure the speed and the pattern of flame spread.

*Entry*

Enter the code and description for the extent of fire involvement on arrival at the incident scene.

*Example*

Flame and smoke were showing when the fire department arrived at the fire (3):

<b>G<sub>2</sub></b>	<b>Extent of Fire Involvement on Arrival</b>	
	<input type="text" value="3"/>	<input type="text" value="Flame and Smoke showing"/>
<small>Extent of Fire Involvement</small>		

**EXTENT OF FIRE INVOLVEMENT ON ARRIVAL CODES**

- |   |                            |
|---|----------------------------|
| 1 | No flame or smoke showing. |
| 2 | Smoke only showing.        |
| 3 | Flame and smoke showing.   |
| 4 | Fire through roof.         |
| 5 | Fully involved.            |

**SECTION H****H Incendiary Devices***Definition*

Identifies the methods, devices, and fuel that were used to burn or attempt to burn any real or personal property.

*Purpose*

This information is used to track common methods and devices for later analysis and linking of cases.

*Entry*

Check or mark one box only from each of the three categories as applicable. If no container, device, or fuel source was used, check the appropriate box(es).

*Example*

The suspect threw a molotov cocktail into the abandoned building (bottle (11) filled with gasoline (14) with a rag for an ignition device (11)):

*Example on next page*

<b>H Incendiary Devices</b> Select one from each category		
<b>CONTAINER</b>		
<input type="checkbox"/> No container		
11 <input checked="" type="checkbox"/> Bottle (glass)	14 <input type="checkbox"/> Pressurized container	17 <input type="checkbox"/> Box
12 <input type="checkbox"/> Bottle (plastic)	15 <input type="checkbox"/> Can (not gas or fuel)	00 <input type="checkbox"/> Other container
13 <input type="checkbox"/> Jug	16 <input type="checkbox"/> Gasoline or fuel can	UU <input type="checkbox"/> Unknown
<b>IGNITION/DELAY DEVICE</b>		
<input type="checkbox"/> No device		
11 <input checked="" type="checkbox"/> Wick or fuse	17 <input type="checkbox"/> Road flare/fuse	
12 <input type="checkbox"/> Candle	18 <input type="checkbox"/> Chemical component	
13 <input type="checkbox"/> Cigarette and matchbook	19 <input type="checkbox"/> Trailer/Streamer	
14 <input type="checkbox"/> Electronic component	20 <input type="checkbox"/> Open flame source	
15 <input type="checkbox"/> Mechanical device	00 <input type="checkbox"/> Other delay device	
16 <input type="checkbox"/> Remote control	UU <input type="checkbox"/> Unknown	
<b>FUEL</b>		
<input type="checkbox"/> None		
11 <input type="checkbox"/> Ordinary combustibles	16 <input type="checkbox"/> Pyrotechnic material	
12 <input type="checkbox"/> Flammable gas	17 <input type="checkbox"/> Explosive material	
14 <input checked="" type="checkbox"/> Ignitable liquid	00 <input type="checkbox"/> Other material	
15 <input type="checkbox"/> Ignitable solid	UU <input type="checkbox"/> Unknown	

## INCENDIARY DEVICES CODES

### Container

- 11 Bottle, glass.
- 12 Bottle, plastic.
- 13 Jug.
- 14 Pressurized container.
- 15 Can. Excludes gas and fuel cans (16).
- 16 Gasoline or fuel can.
- 17 Box.
- 00 Other container.
- NN No container.
- UU Unknown.

### Ignition/Delay Device

- 11 Wick or fuse.
- 12 Candle.
- 13 Cigarette and matchbook.
- 14 Electronic component.
- 15 Mechanical device.
- 16 Remote control.
- 17 Road flare/fuse.
- 18 Chemical component.
- 19 Trailer/Streamer.
- 20 Open flame source.
- 00 Other delay device.
- NN No device.
- UU Unknown.

### Fuel

- 11 Ordinary combustibles.
- 12 Flammable gas.

- 14 Ignitable liquid.
- 15 Ignitable solid.
- 16 Pyrotechnic material.
- 17 Explosive material.
- 00 Other material.
- NN None.
- UU Unknown.

## SECTION I

## I Other Investigative Information

### Definition

Identifies other investigative information pertinent to the case.

### Purpose

Additional information on the case defines the circumstances surrounding the investigation.

### Entry

Check or mark all the boxes that apply to the case.

### Example

The structure was vacant (3):

Other Investigative Information	
Check all that apply	
1	<input type="checkbox"/> Code violations
2	<input type="checkbox"/> Structure for sale
3	<input checked="" type="checkbox"/> Structure vacant
4	<input type="checkbox"/> Other crimes involved
5	<input type="checkbox"/> Illicit drug activity
6	<input type="checkbox"/> Change in insurance
7	<input type="checkbox"/> Financial problem
8	<input type="checkbox"/> Criminal/Civil actions pending

### OTHER INVESTIGATIVE INFORMATION CODES

- 1 Code violations.
- 2 Structure for sale.
- 3 Structure vacant.
- 4 Other crimes involved.
- 5 Illicit drug activity.
- 6 Change in insurance.
- 7 Financial problem.
- 8 Criminal/Civil actions pending.

## SECTION J

**J Property Ownership***Definition*

Identifies the ownership of the property involved in the arson.

- ☛ This field identifies the general owner of the property and differs from the specific ownership identified in Block K2 of the Basic Module.

*Purpose*

The general ownership of the property may provide useful information, such as motive, to case investigators.

*Entry*

Check or mark the box that best describes the ownership of the property.

*Example*

The storage company was owned and operated by a private citizen (1):

J Property Ownership	
1	<input checked="" type="checkbox"/> Private
2	<input type="checkbox"/> City, town, village, local
3	<input type="checkbox"/> County or parish
4	<input type="checkbox"/> State or province
5	<input type="checkbox"/> Federal
6	<input type="checkbox"/> Foreign
7	<input type="checkbox"/> Military
0	<input type="checkbox"/> Other

**PROPERTY OWNERSHIP CODES**

1	Private.
2	City, town, village, local.
3	County or parish.
4	State or province.
5	Federal.
6	Foreign.
7	Military.
0	Other.

## SECTION K

**K Initial Observations***Definition*

Identifies important initial observations made at the incident scene relating to the property's secure status or circumvention of security systems if present.

*Purpose*

A description of what the fire department found at the scene may be of use to arson investigators.

*Entry*

Check or mark all the boxes that apply.

*Example*

Windows were ajar (1) and the security system activated (7):

<b>K Initial Observations</b>	
Check all that apply	
1 <input checked="" type="checkbox"/> Windows ajar	5 <input type="checkbox"/> Fire department forced entry
2 <input type="checkbox"/> Doors ajar	6 <input type="checkbox"/> Entry forced prior to FD arrival
3 <input type="checkbox"/> Doors locked	7 <input checked="" type="checkbox"/> Security system activated
4 <input type="checkbox"/> Doors unlocked	8 <input type="checkbox"/> Security system present (not activated)

**INITIAL OBSERVATIONS CODES**

- |   |  |
|---|--|
| 1 | Windows ajar.                                  |
| 2 | Doors ajar.                                    |
| 3 | Doors locked.                                  |
| 4 | Doors unlocked.                                |
| 5 | Fire department forced entry.                  |
| 6 | Entry forced prior to fire department arrival. |
| 7 | Security system was activated.                 |
| 8 | Security system was present but not activated. |

## SECTION L

**L Laboratory Used***Definition*

Identifies the laboratory, if any, that analyzed evidence.

*Purpose*

Provides the means for the collection and analysis of all data associated with a specific incident.

The ☆ denotes a required field.

### Entry

Case investigators can use this information to locate all the evidence associated with a specific incident.

### Example

Local (1) and FBI (4) laboratories were used:

L Laboratory Used		Check all that apply		<input type="checkbox"/> None	
1	<input checked="" type="checkbox"/> Local	3	<input type="checkbox"/> ATF	5	<input type="checkbox"/> Other
2	<input type="checkbox"/> State	4	<input checked="" type="checkbox"/> FBI	Federal	
		6	<input type="checkbox"/> Private		

#### LABORATORY USED CODES

1	Local.
2	State.
3	ATF.
4	FBI.
5	Other federal laboratory.
6	Private.
N	None.

#### SECTION M

Section M is a submodule of the Arson Module that is completed for each juvenile (under age 18) who was involved in the fire's ignition. If this portion of the module is used, the guidance and directions for completing Section A are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Arson Module must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3–8.

## M<sup>1</sup> Subject Number

### Definition

A unique number is assigned to each juvenile subject involved in the fire's ignition.

- ☛ A separate submodule (Section M) may be completed for each juvenile involved. The front side of paper forms (Sections A–L) does not need to be completed for the second, third, etc., juveniles.

### Purpose

This data element allows tracking of any subject under 18 years of age; it permits analysis and tracking of juvenile firesetter trends.

### Entry

Enter the subject's number assigned to this juvenile. A separate Subject Number is assigned to each juvenile. The first juvenile is always coded "001," and each succeeding juvenile is numbered sequentially and incremented by 1 beginning with "002." The three-character numeric field is zero filled, not right justified.

*Example*

This report is for the first subject:

<b>M1</b>	<b>Subject Number</b>			
	Complete a separate Section M form for each juvenile			
	<table border="1"> <tr> <td>0</td> <td>0</td> <td>1</td> </tr> </table>	0	0	1
0	0	1		
	Subject Number			

**M<sup>2</sup> Age or Date of Birth**

Enter either the subject's age or the subject's date of birth. Do not enter both.

**Age***Definition*

The subject's age in years.

*Purpose*

This information can be used with other demographic information to identify arson problems in certain segments of the population and to target arson prevention programs for certain audiences. This data element is particularly useful in tracking juvenile firesetter trends.

*Entry*

Enter the age of the subject involved in the fire's ignition. Estimate the age if it cannot be determined.

*Example*

The subject was 16 years old:

<b>M2</b>	<b>Age or Date of Birth</b>								
<table border="1"> <tr> <td>1</td> <td>6</td> </tr> </table>	1	6							
1	6								
Age (in years)									
	<b>OR</b>								
<table border="1"> <tr> <td></td> <td></td> <td></td> </tr> </table>				<table border="1"> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					
Month	Day	Year							

**Date of Birth***Definition*

The month, day, and year of birth of the subject.

### Purpose

This data element is an alternative to Age, which can be used with other demographic information to identify arson problems in certain segments of the population and to target arson prevention programs for certain audiences. This data element is particularly useful in tracking juvenile firesetter trends.

- ☛ This data element is used as an alternate method for calculating the subject's age. Age is collected in NFIRS but Date of Birth is not.

### Entry

Enter the date of birth of the subject showing the month, day, and year (mm/dd/yyyy).

### Example

The subject was born on November 18, 1987:

M2 Age or Date of Birth		
<div style="border: 1px solid black; width: 40px; height: 20px; margin: 0 auto;"></div> Age (in years)	OR	
<div style="border: 1px solid black; width: 40px; height: 20px; display: flex; justify-content: space-between; padding: 2px;"> <span>1</span><span>1</span> </div> Month	<div style="border: 1px solid black; width: 40px; height: 20px; display: flex; justify-content: space-between; padding: 2px;"> <span>1</span><span>8</span> </div> Day	<div style="border: 1px solid black; width: 80px; height: 20px; display: flex; justify-content: space-between; padding: 2px;"> <span>1</span><span>9</span><span>8</span><span>7</span> </div> Year

## M<sup>3</sup> Gender

### Definition

The identification of the subject as male or female.

### Purpose

This information can be used with other demographic information to identify arson problems in certain segments of the population and to target arson prevention programs for certain audiences.

### Entry

Check or mark the box that indicates the subject's gender.

### Example

The subject was male (1):

M3 Gender	
1 <input checked="" type="checkbox"/> Male	2 <input type="checkbox"/> Female

### GENDER CODES

- |   |         |
|---|---------|
| 1 | Male.   |
| 2 | Female. |

**M<sup>4</sup> Race***Definition*

The identification of the race of the subject, based on U.S. Office of Management and Budget (OMB) designations.

*Purpose*

This information can be used with other demographic information to identify arson problems in certain segments of the population and to target arson prevention programs for certain audiences.

*Entry*

Check or mark the appropriate box. If race cannot be determined, check or mark the Undetermined box.

☛ Hispanic is not considered a race, because a person can be black and Hispanic, white and Hispanic, etc.

*Example*

The subject was multiracial (0):

<b>M<sub>4</sub> Race</b>	
1	<input type="checkbox"/> White
2	<input type="checkbox"/> Black, African American
3	<input type="checkbox"/> American Indian, Alaska Native
4	<input type="checkbox"/> Asian
5	<input type="checkbox"/> Native Hawaiian, Other Pacific Islander
0	<input checked="" type="checkbox"/> Other, multiracial
U	<input type="checkbox"/> Undetermined

**RACE CODES**

1	White.
2	Black or African American.
3	American Indian or Alaska Native.
4	Asian.
5	Native Hawaiian or other Pacific Islander.
0	Other. Includes multiracial.
U	Undetermined.

**M<sup>5</sup> Ethnicity***Definition*

Identifies the ethnicity of the subject. Ethnicity is an ethnic classification or affiliation. Ethnicity designates a population subgroup having a common cultural heritage, as distinguished by customs, characteristics, language, common history, etc. Currently, Hispanic/Latino is the only OMB designation for ethnicity.

### Purpose

This information can be used with other demographic information to identify arson problems in certain segments of the population and to target arson prevention programs.

### Entry

Check or mark the appropriate box.

### Example

The subject was an Hispanic (1):

<b>M5</b>	<b>Ethnicity</b>
1	<input checked="" type="checkbox"/> Hispanic or Latino
0	<input type="checkbox"/> Non Hispanic or Latino

#### ETHNICITY CODES

- |   |                         |
|---|-------------------------|
| 1 | Hispanic or Latino.     |
| 0 | Non Hispanic or Latino. |

## M<sup>6</sup> Family Type

### Definition

The nature of the family structure at the time of the incident.

### Purpose

Information on family type can assist researchers in determining those risk factors that may be a predictor of juvenile firesetting, delinquency, and adult arson.

### Entry

Check or mark the box that best describes the subject's family type.

### Example

The subject lived with a foster family (2):

<b>M6</b>	<b>Family Type</b>
1	<input type="checkbox"/> Single parent
2	<input checked="" type="checkbox"/> Foster parent(s)
3	<input type="checkbox"/> Two-parent family
4	<input type="checkbox"/> Extended family
N	<input type="checkbox"/> No family unit
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Unknown

**FAMILY TYPE CODES**

- 1 Single-parent family.
- 2 Foster parent(s).
- 3 Two-parent family.
- 4 Extended family. Includes multigenerational.
- N No family unit.
- 0 Other family type.
- U Unknown.

**M7 Motivation/Risk Factors***Definition*

The stimulus or risk factors that were present and constituted a possible motivation for the subject(s) to burn, or attempt to burn, any real or personal property.

*Purpose*

This information is particularly useful in tracking juvenile firesetting trends and in developing prevention and intervention strategies.

*Entry*

Check or mark only one box for codes 1–3; then check or mark all other boxes (4–9) that apply. If the motivation is not listed or is unknown, check or mark the Other or Unknown box, respectively.

*Example*

The subject had a history of firesetting:

<b>M7</b>	<b>Motivation/Risk Factors</b>	Check only one of codes 1–3 and then all others (4–9) that apply
	<ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Mild curiosity about fire</li> <li>2 <input type="checkbox"/> Moderate curiosity about fire</li> <li>3 <input checked="" type="checkbox"/> Extreme curiosity about fire</li> </ul>	
	<ul style="list-style-type: none"> <li>4 <input type="checkbox"/> Diagnosed (or suspected) ADD/ADHD</li> <li>5 <input type="checkbox"/> History of trouble outside school</li> <li>6 <input type="checkbox"/> History of stealing or shoplifting</li> <li>7 <input type="checkbox"/> History of physically assaulting others</li> <li>8 <input checked="" type="checkbox"/> History of fireplay or firesetting</li> <li>9 <input type="checkbox"/> Transiency</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Unknown</li> </ul>	

**MOTIVATION/RISK FACTORS CODES**

- 1 Mild curiosity about fire.
- 2 Moderate curiosity about fire.
- 3 Extreme curiosity about fire.
- 4 Diagnosed (or suspected) ADD/ADHD.
- 5 History of trouble outside school.
- 6 History of stealing or shoplifting.
- 7 History of physically assaulting others.
- 8 History of fireplay or firesetting.
- 9 Transiency.
- 0 Other.
- U Unknown.

**M<sup>8</sup> Disposition of Person Under 18***Definition*

Describes how the juvenile firesetter was handled at the end of the incident.

*Purpose*

The data element tracks the disposition of any subject under 18 years of age. It permits analysis of how juvenile offenders are handled and is particularly useful in tracking juvenile firesetter trends. At the local level, this field is also useful in determining where repeat offenders have been sent in the past.

*Entry*

Check or mark the box that best describes the disposition of the subject.

*Example*

The fire department released the subject to social services (3):

<b>M<sub>8</sub> Disposition of Person Under 18</b>	
1	<input type="checkbox"/> Handled within department
2	<input type="checkbox"/> Released to parent/guardian
3	<input checked="" type="checkbox"/> Referred to other authority
4	<input type="checkbox"/> Referred to treatment/counseling program
5	<input type="checkbox"/> Arrested, charged as adult
6	<input type="checkbox"/> Referred to firesetter intervention program
0	<input type="checkbox"/> Other
U	<input type="checkbox"/> Unknown

**DISPOSITION OF PERSON UNDER 18 CODES**

- 1      Handled within department (e.g., released with warning).
- 2      Released to parent or guardian.
- 3      Referred to other authority (e.g., social services, prosecuting attorney, juvenile court, probation).
- 4      Referred to treatment/counseling program (e.g., diversion program, in-patient or outpatient treatment program).
- 5      Arrested, charged as adult.
- 6      Referred to firesetter intervention program.
- 0      Other.
- U      Unknown.

## **Chapter 14**

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# **SUPPLEMENTAL FORM (NFIRS-1S)**

**A**  Delete  Change

FDID ☆ State ☆ Incident Date ☆ (MM DD YYYY) Station Incident Number ☆ Exposure ☆

**K1 Person/Entity Involved** Local Option Business Name (if applicable) Area Code Phone Number

Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

**K1 Person/Entity Involved** Local Option Business Name (if applicable) Area Code Phone Number

Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

**K1 Person/Entity Involved** Local Option Business Name (if applicable) Area Code Phone Number

Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

**K1 Person/Entity Involved** Local Option Business Name (if applicable) Area Code Phone Number

Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

**K1 Person/Entity Involved** Local Option Business Name (if applicable) Area Code Phone Number

Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

**E3**

**Supplemental Special Studies**

Local Option

**NFIRS-1S  
Supplemental**

1    
Special Study ID# Special Study Value

2    
Special Study ID# Special Study Value

3    
Special Study ID# Special Study Value

4    
Special Study ID# Special Study Value

5    
Special Study ID# Special Study Value

6    
Special Study ID# Special Study Value

7    
Special Study ID# Special Study Value

8    
Special Study ID# Special Study Value

**L**

**Remarks:**

Local Option

# CHAPTER 14

## SUPPLEMENTAL FORM (NFIRS-1S)

The Supplemental Form is a local option for recording additional persons or entities involved in the incident for those departments that use paper-based incident reporting. It adds flexibility to any incident report by expanding the ability to collect additional Basic Module (Block K1) data.

This form also provides (1) fields for recording additional Supplemental Special Studies beyond the one field provided on the Basic Module (Block E3), and (2) additional space for recording Remarks concerning an incident beyond the space available on the Basic Module (Section L).

### SECTION A

The guidance and directions for completing Section A of the Supplemental Form are the same as for Section A in the Basic Module. It is stressed that the entries in Section A of the Supplemental Form must be identical with the entries on the corresponding Basic Module. An example of a completed Section A can be found on page 3–8.

#### **A** Fire Department Identification (FDID) ☆

##### *Entry*

Enter the same FDID number found in Section A of the Basic Module.

#### **State** ☆

##### *Entry*

Enter the same State abbreviation found in Section A of the Basic Module.

#### **Incident Date** ☆

##### *Entry*

Enter the same incident date found in Section A of the Basic Module.

#### **Station Number**

##### *Entry*

Enter the same station number found in Section A of the Basic Module.

#### **Incident Number** ☆

##### *Entry*

Enter the same incident number found in Section A of the Basic Module.

## Exposure Number ☆

### Entry

Enter the same exposure number found in Section A of the Basic Module.

## Delete/Change

### Definition

Indicates a change to information submitted on a previous Supplemental Form or a deletion of an incorrect report.

### Purpose

To delete or change previously reported information.

### Entry

**Delete.** Check or mark this box when you have previously submitted a Supplemental Form and now want to have this report deleted from the database. If this box is marked, complete Section K and leave the rest of the report blank. Forward the report according to your normally established procedures.

**Change.** Check or mark this box only if you previously submitted a Supplemental Form to your state reporting authority and now want to update or change the information in the State database. Complete Section K and any other sections or blocks that need to be updated or corrected. If you need to blank a field that contains data, you must resubmit the original module containing the newly blanked field along with all the other original information in the module for that incident. This action is required only when sending an updated module to your State reporting authority. Forward the report according to your normally established procedures.

## SECTION K

## K<sup>1</sup> Person/Entity Involved

### Business Name

#### Definition

The full name of the company or agency occupying, managing, or leasing the property where the incident occurred.

#### Purpose

This element provides a basis for long-term analysis in recognizing patterns of repeated fires in the same or different locations over a period of time. The business name is required at the local government level to establish an official document of record.

#### Entry

Enter the full name of the company or agency occupying the property where the incident occurred. This may or may not be the same as the owner.

**Telephone***Definition*

The telephone number of the person or entity involved in the incident.

*Purpose*

This field collects additional information on the person or entity involved, which may be required at a later date.

*Entry*

Enter the area code and telephone number in the spaces provided.

**Person Involved***Definition*

The full name of the person involved in the incident. If an entity, enter the name under Business Name at the top of Block K1.

*Purpose*

This information provides a basis for long-term analysis in recognizing patterns of repeated incidents in the same or different locations over a period of time. The name of the person involved is required at the local government level to establish an official document of record.

*Entry*

Enter the full name of the person as normally written. Enter the name using the format: prefix, first name, middle initial, last name, and suffix. If the name is unknown, several available resources may be checked for this information, such as street directory publications, utility company records, or other public agencies. Leave blank if unknown. Name prefixes and suffixes are as follows:

PREFIX		SUFFIX	
MR	Mr.	JR	Junior
MRS	Mrs.	SR	Senior
MS	Ms.	I	The First
DR	Doctor	II	The Second
REV	Reverend	III	The Third
		IV	The Fourth
		MD	Medical Doctor
		DDS	Doctor of Dental Science

**Address***Definition*

The address of the person or entity involved in the incident.

*Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident. The incident address is required at the local government level to establish an official document of record.

*Entry*

Enter the address where the person or entity involved in the incident can be contacted. The full address includes the street number, prefix, street or highway name, street type, and suffix. (For a more detailed explanation of the address components, see Section B of the Basic Module.)

**Post Office Box (P.O. Box)***Definition*

The number of a rented compartment in a post office for the storage of mail that is picked up by the business occupant.

*Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident. The incident address is required at the local government level to establish an official document of record.

*Entry*

Enter the post office box number in the spaces provided. Leave blank if not applicable.

**Apartment, Suite, or Room***Definition*

The number of the specific apartment, suite, or room where the incident occurred.

*Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident. The incident address is required at the local government level to establish an official document of record.

*Entry*

Enter the apartment, suite, or room number in the block. Leave blank if not applicable.

**City***Definition*

The city where the person or entity involved in the incident lives.

### *Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident. The incident address is required at the local government level to establish an official document of record.

### *Entry*

Enter the city associated with the person's or entity's address.

### **State**

#### *Definition*

The State where the person or entity involved in the incident lives.

### *Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident, and provides a means of linking fire incident data to other geographic and population factors for comparative analysis at the local or State level.

### *Entry*

Enter the abbreviation for the State associated with the person's or entity's address.

☛ A list of State abbreviations is on page 3–5.

### **ZIP Code**

#### *Definition*

A numerical code assigned by the U.S. Postal Service to all jurisdictions within the United States and U.S. Territories.

### *Purpose*

The complete address provides local authorities with the location of the person or entity involved in the incident, and provides a means of linking fire incident data to other geographic and population factors for comparative analysis at the local or State level.

### *Entry*

Enter the postal ZIP code for the address of the person or entity involved in the incident. Include the Plus Four digits of the ZIP code if known.

☛ A completed example of the information in this block is shown a on page 3–56.

## SECTION E

**E<sup>3</sup> Supplemental Special Studies***Definition*

These fields should be used when you are using the paper forms and need space for more than one special study.

Temporary data elements that can be used for collection of information that is of special interest for a defined period. Special studies are typically required to capture information on emerging trends, problem areas, or a specific issue being studied. When the answer becomes known through the special study, the collection of that field is no longer required. If the data will always be needed for permanent collection, a State- or department-defined permanent user field should be created and used instead of the Special Studies field. A State, a fire department, or the NFDC can define special studies.

*Special Study ID Number:* This number uniquely identifies each special study that is being run by the fire department, State, or NFDC

*Special Study Value:* The value in the field being collected. Responses for special studies can be defined as codes or as alphanumeric entries of numeric values or dates. States, fire departments, and the NFDC can define Special Studies fields.

*Purpose*

The use of special studies allows departments, States, and the NFDC to quickly collect information on an issue or problem and answer a specific question through the temporary use of a special study field over a defined period of time. This is a State or local option.

*Entry*

If you are participating in a Special Study, your entry will depend on the type of data being collected. Use the codeset defined for the particular Special Study field if it is a coded entry. The data entered may also be a date or a numeric entry if the field has been so defined.

## SECTION L

**L Remarks**

This supplemental Remarks block is an additional area for comments concerning the incident if you run out of room on the Basic Module (Section L).



## **Appendix A**

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# **PAPER FORMS FOR NFIRS 5.0 MODULES**

**A** FDID  Star State  Star Incident Date  Star MM DD YYYY Station Incident Number  Star Exposure  Star  Delete  Change  No Activity **NFIRS-1 Basic**

**B Location Type**  Star  Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B, "Alternative Location Specification." Use only for wildland fires. Census Tract \_\_\_\_\_-\_\_\_\_\_  
 Street address  
 Intersection Number/Milepost Prefix Street or Highway Street Type Suffix  
 In front of  
 Rear of  
 Adjacent to Apt./Suite/Room City State ZIP Code  
 Directions  
 U.S. National Grid Cross Street, Directions or National Grid, as applicable

**C Incident Type**  Star  
 Incident Type \_\_\_\_\_

**E1 Dates and Times** Midnight is 0000  
 Check boxes if dates are the same as Alarm Date.  
 Alarm  Star Month Day Year Hour Min  
 ALARM always required

**E2 Shifts and Alarms** Local Option  
 Shift or Platoon Alarms District

**D Aid Given or Received**  Star  None  
 1  Mutual aid received  
 2  Auto. aid received  
 3  Mutual aid given  
 4  Auto. aid given  
 5  Other aid given  
 Their FDID Their State  
 Their Incident Number

Arrival  Star ARRIVAL required, unless canceled or did not arrive  
 Controlled CONTROLLED optional, except for wildland fires  
 Last Unit Cleared LAST UNIT CLEARED, required except for wildland fires

**E3 Special Studies** Local Option  
 Special Study ID# Special Study Value

**F Actions Taken**  Star  
 Primary Action Taken (1)  
 Additional Action Taken (2)  
 Additional Action Taken (3)

**G1 Resources**  Star  
 Check this box and skip this block if an Apparatus or Personnel Module is used.  
 Apparatus Personnel  
 Suppression  
 EMS  
 Other  
 Check box if resource counts include aid received resources.

**G2 Estimated Dollar Losses and Values**  
**LOSSES:** Required for all fires if known. Optional for non-fires. None  
 Property \$ \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_   
 Contents \$ \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_   
**PRE-INCIDENT VALUE:** Optional  
 Property \$ \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_   
 Contents \$ \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

**Completed Modules**  
 Fire-2  
 Structure Fire-3  
 Civilian Fire Cas.-4  
 Fire Service Cas.-5  
 EMS-6  
 HazMat-7  
 Wildland Fire-8  
 Apparatus-9  
 Personnel-10  
 Arson-11

**H1 Casualties**  None  
 Deaths Injuries  
 Fire Service \_\_\_\_\_  
 Civilian \_\_\_\_\_  
**H2 Detector** Required for confined fires.  
 1  Detector alerted occupants  
 2  Detector did not alert them  
 U  Unknown

**H3 Hazardous Materials Release**  None  
 1  Natural gas: slow leak, no evacuation or HazMat actions  
 2  Propane gas: <21-lb tank (as in home BBQ grill)  
 3  Gasoline: vehicle fuel tank or portable container  
 4  Kerosene: fuel burning equipment or portable storage  
 5  Diesel fuel/fuel oil: vehicle fuel tank or portable storage  
 6  Household solvents: home/office spill, cleanup only  
 7  Motor oil: from engine or portable container  
 8  Paint: from paint cans totaling <55 gallons  
 0  Other: special HazMat actions required or spill > 55 gal (Please complete the HazMat form.)

**Mixed Use Property**  Not mixed  
 10  Assembly use  
 20  Education use  
 33  Medical use  
 40  Residential use  
 51  Row of stores  
 53  Enclosed mall  
 58  Business & residential  
 59  Office use  
 60  Industrial use  
 63  Military use  
 65  Farm use  
 00  Other mixed use

**J Property Use**  Star  None  
**Structures**  
 131  Church, place of worship  
 161  Restaurant or cafeteria  
 162  Bar/Tavern or nightclub  
 213  Elementary school, kindergarten  
 215  High school, junior high  
 241  College, adult education  
 311  Nursing home  
 331  Hospital  
**Outside**  
 124  Playground or park  
 655  Crops or orchard  
 669  Forest (timberland)  
 807  Outdoor storage area  
 919  Dump or sanitary landfill  
 931  Open land or field

341  Clinic, clinic-type infirmary  
 342  Doctor/Dentist office  
 361  Prison or jail, not juvenile  
 419  1- or 2-family dwelling  
 429  Multifamily dwelling  
 439  Rooming/Boarding house  
 449  Commercial hotel or motel  
 459  Residential, board and care  
 464  Dormitory/Barracks  
 519  Food and beverage sales  
 936  Vacant lot  
 938  Graded/Cared for plot of land  
 946  Lake, river, stream  
 951  Railroad right-of-way  
 960  Other street  
 961  Highway/Divided highway  
 962  Residential street/driveway

539  Household goods, sales, repairs  
 571  Gas or service station  
 579  Motor vehicle/boat sales/repairs  
 599  Business office  
 615  Electric-generating plant  
 629  Laboratory/Science laboratory  
 700  Manufacturing plant  
 819  Livestock/Poultry storage (barn)  
 882  Non-residential parking garage  
 891  Warehouse  
 981  Construction site  
 984  Industrial plant yard  
 Look up and enter a Property Use code and description only if you have NOT checked a Property Use box.  
 Property Use Description Code

### K1 Person/Entity Involved

Local Option

Business Name (if applicable) \_\_\_\_\_ Area Code \_\_\_\_\_ Phone Number \_\_\_\_\_

Check this box if same address as incident location (Section B). Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name \_\_\_\_\_ MI \_\_\_\_\_ Last Name \_\_\_\_\_ Suffix \_\_\_\_\_

Number \_\_\_\_\_ Prefix \_\_\_\_\_ Street or Highway \_\_\_\_\_ Street Type \_\_\_\_\_ Suffix \_\_\_\_\_



Post Office Box \_\_\_\_\_ Apt./Suite/Room \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ ZIP Code \_\_\_\_\_ - \_\_\_\_\_

More people involved? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary.

### K2 Owner

Local Option

Same as person involved? Then check this box and skip the rest of this block.

Business Name (if applicable) \_\_\_\_\_ Area Code \_\_\_\_\_ Phone Number \_\_\_\_\_

Check this box if same address as incident location (Section B). Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name \_\_\_\_\_ MI \_\_\_\_\_ Last Name \_\_\_\_\_ Suffix \_\_\_\_\_

Number \_\_\_\_\_ Prefix \_\_\_\_\_ Street or Highway \_\_\_\_\_ Street Type \_\_\_\_\_ Suffix \_\_\_\_\_



Post Office Box \_\_\_\_\_ Apt./Suite/Room \_\_\_\_\_ City \_\_\_\_\_

State \_\_\_\_\_ ZIP Code \_\_\_\_\_ - \_\_\_\_\_



Remarks:

Local Option

#### Fire Module Required?

Check the box that applies and then complete the Fire Module based on Incident Type, as follows:

- Buildings 111 Complete Fire & Structure Modules
- Special structure 112 Complete Fire Module & Section I, Structure Module
- Confined 113-118 Basic Module Only
- Mobile property 120-123 Complete Fire & Structure Modules
- Vehicle 130-138 Complete Fire Module
- Vegetation 140-143 Complete Fire or Wildland Module
- Outside rubbish fire 150-155 Basic Module Only
- Special outside fire 160 Complete Fire or Wildland Module
- Special outside fire 161-164 Complete Fire Module
- Crop fire 170-173 Complete Fire or Wildland Module



ITEMS WITH A ★ MUST ALWAYS BE COMPLETED!

More remarks? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary.

### M Authorization

Check box if same as Officer in charge.

Officer in charge ID \_\_\_\_\_ Signature \_\_\_\_\_ Position or rank \_\_\_\_\_ Assignment \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

Member making report ID \_\_\_\_\_ Signature \_\_\_\_\_ Position or rank \_\_\_\_\_ Assignment \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

**A** FDID  Star State  Star Incident Date MM DD YYYY  Star Station Incident Number  Star Exposure  Star  Delete  Change **NFIRS-2 Fire**

**B Property Details**

**B1**  Not Residential  
Estimated number of residential living units in building of origin *whether or not all units became involved.*

**B2**  Buildings not involved  
Number of buildings involved

**B3**  None  Less than one acre  
Acres burned (outside fires)

**C On-Site Materials or Products**  None  
Complete if there were any significant amounts of commercial, industrial, energy, or agricultural products or materials on the property, *whether or not they became involved.*

Enter up to three codes. Check one box for each code entered.

On-site material (1) \_\_\_\_\_

On-site material (2) \_\_\_\_\_

On-site material (3) \_\_\_\_\_

**On-Site Materials Storage Use**

1  Bulk storage or warehousing  
2  Processing or manufacturing  
3  Packaged goods for sale  
4  Repair or service  
U  Undetermined

**D Ignition**

**D1** \_\_\_\_\_  Star  
Area of fire origin

**D2** \_\_\_\_\_  Star  
Heat source

**D3** \_\_\_\_\_  Star 1  Check box if fire spread was confined to object of origin.  
Item first ignited

**D4** \_\_\_\_\_  
Type of material first ignited Required only if item first ignited code is 00 or <70.

**E1 Cause of Ignition**  Star  Check box if this is an exposure report.

1  Intentional  
2  Unintentional  
3  Failure of equipment or heat source  
4  Act of nature  
5  Cause under investigation  
U  Cause undetermined after investigation

**E2 Factors Contributing to Ignition**  Star  None

Factor contributing to ignition (1) \_\_\_\_\_

Factor contributing to ignition (2) \_\_\_\_\_

**E3 Human Factors Contributing to Ignition**  Star

Check all applicable boxes  None

1  Asleep  
2  Possibly impaired by alcohol or drugs  
3  Unattended person  
4  Possibly mentally disabled  
5  Physically disabled  
6  Multiple persons involved  
7  Age was a factor

Estimated age of person involved \_\_\_\_\_

1  Male 2  Female

**F1 Equipment Involved in Ignition**  None   Star

Equipment Involved \_\_\_\_\_

Brand \_\_\_\_\_

Model \_\_\_\_\_

Serial # \_\_\_\_\_

Year \_\_\_\_\_

**F2 Equipment Power Source** \_\_\_\_\_  
Equipment Power Source

**F3 Equipment Portability**

1  Portable  
2  Stationary

Portable equipment normally can be moved by one or two persons, is designed to be used in multiple locations, and requires no tools to install.

**G Fire Suppression Factors**  None

Enter up to three codes.

Fire suppression factor (1) \_\_\_\_\_

Fire suppression factor (2) \_\_\_\_\_

Fire suppression factor (3) \_\_\_\_\_

**H1 Mobile Property Involved**  None

1  Not involved in ignition, but burned  
2  Involved in ignition, but did not burn  
3  Involved in ignition and burned

Mobile property model \_\_\_\_\_

License Plate Number \_\_\_\_\_ State \_\_\_\_\_ VIN \_\_\_\_\_

**H2 Mobile Property Type and Make**

Mobile property type \_\_\_\_\_

Mobile property make \_\_\_\_\_

Year \_\_\_\_\_

**Local Use**

Pre-Fire Plan Available  
Some of the information presented in this report may be based upon reports from other agencies:

Arson report attached  
 Police report attached  
 Coroner report attached  
 Other reports attached

**Structure fire? Please be sure to complete the Structure Fire form (NFIRS-3).**

<b>I1 Structure Type</b> ☆ If fire was in an enclosed building or a portable/mobile structure, complete the rest of this form. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Enclosed building</li> <li>2 <input type="checkbox"/> Portable/Mobile structure</li> <li>3 <input type="checkbox"/> Open structure</li> <li>4 <input type="checkbox"/> Air-supported structure</li> <li>5 <input type="checkbox"/> Tent</li> <li>6 <input type="checkbox"/> Open platform (e.g., piers)</li> <li>7 <input type="checkbox"/> Underground structure (work areas)</li> <li>8 <input type="checkbox"/> Connective structure (e.g., fences)</li> <li>0 <input type="checkbox"/> Other type of structure</li> </ul>	<b>I2 Building Status</b> ☆ <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Under construction</li> <li>2 <input type="checkbox"/> In normal use</li> <li>3 <input type="checkbox"/> Idle, not routinely used</li> <li>4 <input type="checkbox"/> Under major renovation</li> <li>5 <input type="checkbox"/> Vacant and secured</li> <li>6 <input type="checkbox"/> Vacant and unsecured</li> <li>7 <input type="checkbox"/> Being demolished</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>I3 Building Height</b> ☆ Count the roof as part of the highest story. <div style="margin-top: 10px;"> <input type="text"/>  Total number of stories at or above grade.         </div> <div style="margin-top: 10px;"> <input type="text"/>  Total number of stories below grade.         </div>	<b>I4 Main Floor Size</b> ☆ <div style="margin-top: 10px;"> <input type="text"/>, <input type="text"/>, <input type="text"/>  Total square feet         </div> <p style="text-align: center;">OR</p> <div style="margin-top: 10px;"> <input type="text"/>, <input type="text"/> BY <input type="text"/>, <input type="text"/>  Length in feet                      Width in feet         </div>
---	---	--	--

NFIRS-3  
Structure  
Fire

<b>J1 Fire Origin</b> ☆ <div style="margin-top: 10px;"> <input type="text"/>  Story of fire origin         </div> <input type="checkbox"/> Below grade	<b>J3 Number of Stories Damaged by Flame</b> Count the roof as part of the highest story. <div style="margin-top: 10px;"> <input type="text"/>  Number of stories w/minor damage (1 to 24% flame damage)         </div> <div style="margin-top: 10px;"> <input type="text"/>  Number of stories w/significant damage (25 to 49% flame damage)         </div> <div style="margin-top: 10px;"> <input type="text"/>  Number of stories w/heavy damage (50 to 74% flame damage)         </div> <div style="margin-top: 10px;"> <input type="text"/>  Number of stories w/extreme damage (75 to 100% flame damage)         </div>	<b>K Type of Material Contributing Most to Flame Spread</b> <input type="checkbox"/> Check if no flame spread OR if same as Material First Ignited (Block D4, Fire Module) OR if unable to determine. <div style="margin-top: 10px; text-align: right;"> <input type="text"/>  Item contributing most to flame spread         </div> <div style="margin-top: 10px; text-align: right;"> <input type="text"/>  Type of material contributing most to flame spread      Required only if item contributing code is 00 or &lt;70.         </div>
<b>J2 Fire Spread</b> ☆ If fire spread was confined to object of origin, do not check a box (Ref. Block D3, Fire Module). <ul style="list-style-type: none"> <li>2 <input type="checkbox"/> Confined to room of origin</li> <li>3 <input type="checkbox"/> Confined to floor of origin</li> <li>4 <input type="checkbox"/> Confined to building of origin</li> <li>5 <input type="checkbox"/> Beyond building of origin</li> </ul>	<b>K1</b> <input type="text"/> Item contributing most to flame spread	

Skip to  
Section L

<b>L1 Presence of Detectors</b> ☆ (In area of the fire) <ul style="list-style-type: none"> <li>N <input type="checkbox"/> None Present</li> <li>1 <input type="checkbox"/> Present</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>L3 Detector Power Supply</b> <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Battery only</li> <li>2 <input type="checkbox"/> Hardwire only</li> <li>3 <input type="checkbox"/> Plug-in</li> <li>4 <input type="checkbox"/> Hardwire with battery</li> <li>5 <input type="checkbox"/> Plug-in with battery</li> <li>6 <input type="checkbox"/> Mechanical</li> <li>7 <input type="checkbox"/> Multiple detectors &amp; power supplies</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>L5 Detector Effectiveness</b> Required if detector operated. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Alerted occupants, occupants responded</li> <li>2 <input type="checkbox"/> Alerted occupants, occupants failed to respond</li> <li>3 <input type="checkbox"/> There were no occupants</li> <li>4 <input type="checkbox"/> Failed to alert occupants</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>
<b>L2 Detector Type</b> <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Smoke</li> <li>2 <input type="checkbox"/> Heat</li> <li>3 <input type="checkbox"/> Combination smoke and heat</li> <li>4 <input type="checkbox"/> Sprinkler, water flow detection</li> <li>5 <input type="checkbox"/> More than one type present</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>L4 Detector Operation</b> <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Fire too small to activate</li> <li>2 <input type="checkbox"/> Operated</li> <li>3 <input type="checkbox"/> Failed to operate</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>L6 Detector Failure Reason</b> Required if detector failed to operate. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Power failure, shutoff, or disconnect</li> <li>2 <input type="checkbox"/> Improper installation or placement</li> <li>3 <input type="checkbox"/> Defective</li> <li>4 <input type="checkbox"/> Lack of maintenance, includes not cleaning</li> <li>5 <input type="checkbox"/> Battery missing or disconnected</li> <li>6 <input type="checkbox"/> Battery discharged or dead</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>

Skip to  
Section M

Complete  
Block L5

Complete  
Block L6

<b>M1 Presence of Automatic Extinguishing System</b> ☆ <ul style="list-style-type: none"> <li>N <input type="checkbox"/> None Present</li> <li>1 <input type="checkbox"/> Present</li> <li>2 <input type="checkbox"/> Partial System Present</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>M3 Operation of Automatic Extinguishing System</b> Required if fire was within designed range. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Operated/effective (go to M4)</li> <li>2 <input type="checkbox"/> Operated/Not effective (go to M4)</li> <li>3 <input type="checkbox"/> Fire too small to activate</li> <li>4 <input type="checkbox"/> Failed to operate (go to M5)</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>M5 Reason for Automatic Extinguishing System Failure</b> Required if system failed or not effective. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> System shut off</li> <li>2 <input type="checkbox"/> Not enough agent discharged</li> <li>3 <input type="checkbox"/> Agent discharged but did not reach fire</li> <li>4 <input type="checkbox"/> Wrong type of system</li> <li>5 <input type="checkbox"/> Fire not in area protected</li> <li>6 <input type="checkbox"/> System components damaged</li> <li>7 <input type="checkbox"/> Lack of maintenance</li> <li>8 <input type="checkbox"/> Manual intervention</li> <li>0 <input type="checkbox"/> Other</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>
<b>M2 Type of Automatic Extinguishing System</b> Required if fire was within designed range of AES. <ul style="list-style-type: none"> <li>1 <input type="checkbox"/> Wet-pipe sprinkler</li> <li>2 <input type="checkbox"/> Dry-pipe sprinkler</li> <li>3 <input type="checkbox"/> Other sprinkler system</li> <li>4 <input type="checkbox"/> Dry chemical system</li> <li>5 <input type="checkbox"/> Foam system</li> <li>6 <input type="checkbox"/> Halogen-type system</li> <li>7 <input type="checkbox"/> Carbon dioxide (CO<sub>2</sub>) system</li> <li>0 <input type="checkbox"/> Other special hazard system</li> <li>U <input type="checkbox"/> Undetermined</li> </ul>	<b>M4 Number of Sprinkler Heads Operating</b> Required if system operated. <div style="margin-top: 10px;"> <input type="text"/>  Number of sprinkler heads operating         </div>	





**K1 Did protective equipment fail and contribute to the injury?**

Please complete the remainder of this form ONLY if you answer YES.

Yes Y No N Equipment  
Sequence  
NumberNFIRS-5  
Fire Service  
Casualty**K2 Protective Equipment Item**

## Head or Face Protection

- 11  Helmet  
 12  Full face protector  
 13  Partial face protector  
 14  Goggles/eye protection  
 15  Hood  
 16  Ear protector  
 17  Neck protector  
 10  Other

## Coat, Shirt, or Trousers

- 21  Protective coat  
 22  Protective trousers  
 23  Uniform shirt  
 24  Uniform T-shirt  
 25  Uniform trousers  
 26  Uniform coat or jacket  
 27  Coveralls  
 28  Apron or gown  
 20  Other

## Boots or Shoes

- 31  Knee length boots with steel baseplate and steel toes  
 32  Knee length boots with steel toes only  
 33  3/4 length boots with steel baseplate and steel toes  
 34  3/4 length boots with steel toes only  
 35  Boots without steel baseplate and steel toes  
 36  Safety shoes with steel baseplate and steel toes  
 37  Safety shoes with steel toes only  
 38  Non-safety shoes  
 30  Other

## Respiratory Protection

- 41  SCBA (demand) open circuit  
 42  SCBA (positive pressure) open circuit  
 43  SCBA closed circuit  
 44  Not self-contained  
 45  Cartridge respirator  
 46  Dust or particle mask  
 40  Other

## Hand Protection

- 51  Firefighter gloves with wristlets  
 52  Firefighter gloves without wristlets  
 53  Work gloves  
 54  HazMat gloves  
 55  Medical gloves  
 50  Other

## Special Equipment

- 61  Proximity suit for entry  
 62  Proximity suit for non-entry  
 63  Totally encapsulated, reusable chemical suit  
 64  Totally encapsulated, disposable chemical suit  
 65  Partially encapsulated, reusable chemical suit  
 66  Partially encapsulated, disposable chemical suit  
 67  Flash protection suit  
 68  Flight or jump suit  
 69  Brush suit  
 71  Exposure suit  
 72  Self-contained underwater breathing apparatus (SCUBA)  
 73  Life preserver  
 74  Life belt or ladder belt  
 75  Personal alert safety system (PASS)  
 76  Radio distress device  
 77  Personal lighting  
 78  Fire shelter or tent  
 79  Vehicle safety belt  
 70  Special equipment, other  
 00  Protective equipment, other

Was the failure of more than one item of protective equipment a factor in the injury? If so, complete an additional page of this form for each piece of failed equipment.

**K3 Protective Equipment Problem**

Check one box to indicate the main problem that occurred.

- 11  Burned  
 12  Melted  
 21  Fractured, cracked or broken  
 22  Punctured  
 23  Scratched  
 24  Knocked off  
 25  Cut or ripped  
 31  Trapped steam or hazardous gas  
 32  Insufficient insulation  
 33  Object fell in or onto equipment item  
 41  Failed under impact  
 42  Face piece or hose detached  
 43  Exhalation valve inoperative or damaged  
 44  Harness detached or separated  
 45  Regulator failed to operate  
 46  Regulator damaged by contact  
 47  Problem with admissions valve  
 48  Alarm failed to operate  
 49  Alarm damaged by contact  
 51  Supply cylinder or valve failed to operate  
 52  Supply cylinder/valve damaged by contact  
 53  Supply cylinder—insufficient air/oxygen  
 94  Did not fit properly  
 95  Not properly serviced or stored prior to use  
 96  Not used for designed purpose  
 97  Not used as recommended by manufacturer  
 00  Other equipment problem  
 UU  Undetermined

**K4 Equipment Manufacturer, Model and Serial Number**  
Manufacturer  
Model  
Serial Number





**A**

FDID  State  Incident Date  MM  DD  YYYY  Station  Incident Number  Exposure

Delete  Change

**NFIRS-8 Wildland Fire**

**B Alternate Location Specification**

Enter Latitude/Longitude OR Township/Range/Section/Subsection Meridian if Section B on the Basic Module is not completed.

Latitude  Longitude

OR

Township  Range  Section  Subsection  Meridian

North  South  East  West

**C Area Type**

1  Rural, farms >50 acres  
 2  Urban (heavily populated)  
 3  Rural/Urban or suburban  
 4  Urban-wildland interface area

**D1 Wildland Fire Cause**

1  Natural source  
 2  Equipment  
 3  Smoking  
 4  Open/Outdoor fire  
 5  Debris/Vegetation burn  
 6  Structure (exposure)  
 7  Incendiary

8  Misuse of fire  
 0  Other  
 U  Undetermined

**D2 Human Factors Contributing to Ignition**

Check as many boxes as are applicable.  None

1  Asleep  
 2  Possibly impaired by alcohol or drugs  
 3  Unattended person  
 4  Possibly mentally disabled  
 5  Physically disabled  
 6  Multiple persons involved  
 7  Age was a factor

**D3 Factors Contributing to Ignition**

None

#1  #2

**D4 Fire Suppression Factors**

None

#1  #2  #3

Enter up to three factors

**E Heat Source**

**F Mobile Property Type**

None

**G Equipment Involved in Ignition**

None

**H Weather Information**

NFDRS Weather Station ID

Weather Type  Wind Direction

Wind Speed (mph)  Air Temperature  F°  Check if negative

Relative Humidity  Fuel Moisture  Fire Danger Rating

**I1 Number of Buildings Ignited**

None

Number of buildings that were ignited in Wildland fire.

**I2 Number of Buildings Threatened**

None

Number of buildings that were threatened by Wildland fire but were not involved.

**I3 Total Acres Burned**

,  ,  .

**I4 Primary Crops Burned**

Identify up to 3 crops if any crops were burned.

Crop 1

Crop 2

Crop 3

**J Property Management**

Indicate the percent of the total acres burned for each ownership type then check the ONE box to identify the property ownership at the origin of the fire. If the ownership at origin is Federal, enter the Federal Agency Code.

Ownership  Undetermined  % Total Acres Burned  %

**Private**

1  Tax paying  %  
 2  Non-tax paying  %

**Public**

3  City, town, village, local  %  
 4  County or parish  %  
 5  State or province  %  
 6  Federal  %  
 Federal Agency Code

7  Foreign  %  
 8  Military  %  
 0  Other  %

**K NFDRS Fuel Model at Origin**

Enter the code and the descriptor corresponding to the NFDRS Fuel Model at Origin.

**L1 Person Responsible for Fire**

1  Identified person caused fire  
 2  Unidentified person caused fire  
 3  Fire not caused by person

If person identified, complete the rest of Section L.

**L2 Gender of Person Involved**

1  Male  
 2  Female

**L3 Age or Date of Birth**

Age in Years  Date of Birth  OR

Month Day Year

**L4 Activity of Person Involved**

Activity of Person Involved

**M Type of Right-of-Way**

None

Required if less than 100 feet.

Feet

Horizontal distance from right-of-way Type of right-of-way

**N Fire Behavior**

These optional descriptors refer to observations made at the point of initial attack.

Feet  
Elevation

Relative position on slope

Aspect

Feet  
Flame length

Chains per Hour  
Rate of spread





**A** FDID  Star State  Star MM DD YYYY Incident Date  Star Station Incident Number  Star Exposure  Star  Delete  Change **NFIRS-11 Arson**

**B Agency Referred To**  None

Agency Name \_\_\_\_\_ Their case number \_\_\_\_\_

Number \_\_\_\_\_ Prefix \_\_\_\_\_ Street or Highway \_\_\_\_\_ Street Type \_\_\_\_\_ Suffix \_\_\_\_\_ Their ORI \_\_\_\_\_

Post Office Box \_\_\_\_\_ Apt./Suite/Room \_\_\_\_\_ City \_\_\_\_\_ Their Federal Identifier (FID) \_\_\_\_\_

State \_\_\_\_\_ ZIP Code \_\_\_\_\_ Agency phone number \_\_\_\_\_ Their FDID \_\_\_\_\_

**C Case Status**

1  Investigation open  
 2  Investigation closed  
 3  Investigation inactive

4  Closed with arrest  
 5  Closed with exceptional clearance

**D Availability of Material First Ignited**

1  Transported to scene  
 2  Available at scene  
 U  Unknown

**E Suspected Motivation Factors** Check up to three factors

11 <input type="checkbox"/> Extortion	22 <input type="checkbox"/> Hate crime	42 <input type="checkbox"/> Vanity/Recognition	54 <input type="checkbox"/> Burglary
12 <input type="checkbox"/> Labor unrest	23 <input type="checkbox"/> Institutional	43 <input type="checkbox"/> Thrills	61 <input type="checkbox"/> Homicide concealment
13 <input type="checkbox"/> Insurance fraud	24 <input type="checkbox"/> Societal	44 <input type="checkbox"/> Attention/Sympathy	62 <input type="checkbox"/> Burglary concealment
14 <input type="checkbox"/> Intimidation	31 <input type="checkbox"/> Protest	45 <input type="checkbox"/> Sexual excitement	63 <input type="checkbox"/> Auto theft concealment
15 <input type="checkbox"/> Void contract/lease	32 <input type="checkbox"/> Civil unrest	51 <input type="checkbox"/> Homicide	64 <input type="checkbox"/> Destroy records/evidence
21 <input type="checkbox"/> Personal	41 <input type="checkbox"/> Fireplay/Curiosity	52 <input type="checkbox"/> Suicide	00 <input type="checkbox"/> Other suspected motivation
		53 <input type="checkbox"/> Domestic violence	UU <input type="checkbox"/> Unknown motivation

**F Apparent Group Involvement**  None

Check up to three factors

1  Terrorist group  
 2  Gang  
 3  Anti-government group  
 4  Outlaw motorcycle organization  
 5  Organized crime  
 6  Racial/Ethnic hate group  
 7  Religious hate group  
 8  Sexual preference hate group  
 0  Other group  
 U  Unknown

**H Incendiary Devices**  No container

Select one from each category

**CONTAINER**

11  Bottle (glass) 14  Pressurized container 17  Box  
 12  Bottle (plastic) 15  Can (not gas or fuel) 00  Other Container  
 13  Jug 16  Gasoline or fuel can UU  Unknown

**IGNITION/DELAY DEVICE**  No device

11  Wick or fuse 17  Road flare/fuse  
 12  Candle 18  Chemical component  
 13  Cigarette and matchbook 19  Trailer/Streamer  
 14  Electronic component 20  Open flame source  
 15  Mechanical device 00  Other delay device  
 16  Remote control UU  Unknown

**G1 Entry Method**

Entry Method \_\_\_\_\_

**FUEL**  None

11  Ordinary combustibles 16  Pyrotechnic material  
 12  Flammable gas 17  Explosive material  
 14  Ignitable liquid 00  Other material  
 15  Ignitable solid UU  Unknown

**G2 Extent of Fire Involvement on Arrival**

Extent of Fire Involvement \_\_\_\_\_

**I Other Investigative Information** Check all that apply

1  Code violations  
 2  Structure for sale  
 3  Structure vacant  
 4  Other crimes involved  
 5  Illicit drug activity  
 6  Change in insurance  
 7  Financial problem  
 8  Criminal/Civil actions pending

**J Property Ownership**

1  Private  
 2  City, town, village, local  
 3  County or parish  
 4  State or province  
 5  Federal  
 6  Foreign  
 7  Military  
 0  Other

**K Initial Observations** Check all that apply

1  Windows ajar 5  Fire department forced entry  
 2  Doors ajar 6  Entry forced prior to FD arrival  
 3  Doors locked 7  Security system activated  
 4  Doors unlocked 8  Security system present (not activated)

**L Laboratory Used** Check all that apply  None

1  Local 3  ATF 5  Other 6  Private  
 2  State 4  FBI Federal



**A** FDID  Delete  Change  
State  MM DD YYYY Station Incident Number  Exposure

**K1 Person/Entity Involved** Local Option Business Name (if applicable) Area Code Phone Number

Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

**K1 Person/Entity Involved** Local Option Business Name (if applicable) Area Code Phone Number

Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

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Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

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Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

**K1 Person/Entity Involved** Local Option Business Name (if applicable) Area Code Phone Number

Check this box if same address as incident location. Then skip these three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State ZIP Code

**E3**

**Supplemental Special Studies**

Local Option

**NFIRS-1S  
Supplemental**

1 

Special Study ID#	Special Study Value
-------------------	---------------------

2 

Special Study ID#	Special Study Value
-------------------	---------------------

3 

Special Study ID#	Special Study Value
-------------------	---------------------

4 

Special Study ID#	Special Study Value
-------------------	---------------------

5 

Special Study ID#	Special Study Value
-------------------	---------------------

6 

Special Study ID#	Special Study Value
-------------------	---------------------

7 

Special Study ID#	Special Study Value
-------------------	---------------------

8 

Special Study ID#	Special Study Value
-------------------	---------------------

**L**

**Remarks:**

Local Option



## **Appendix B**

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# **ALPHABETIZED SYNONYMS OF SELECTED CODE LISTS**

# Appendix B

## Alphabetized Synonyms of Selected Code Lists

---

This appendix presents synonyms of several code lists presented in the chapters to this guide. These alphabetical lists are based on the logic and definitions of their respective code lists. They are designed to assist a user in selecting proper classifications. A person using this list, however, should compare the classification found here with those in the chapter to ensure that there are no qualifications on the definition of a term.

The six synonym lists of this appendix apply to eleven code lists in the chapters, as follows:

**Property Use – Page B-3:**

Chapter 3, Basic Module, Section J, *Property Use*

**Materials/Products – Page B-9:**

Chapter 4, Fire Module, Section C, *On-Site Materials or Products*

**Area/Location – Page B-14:**

Chapter 4, Fire Module, Block D, *Area of Fire Origin*

Chapter 6, Civilian Fire Casualty Module, Block M5, *Specific Location at Time of Injury*

**Items Ignited – Page B-18:**

Chapter 4, Fire Module, Block D3, *Item First Ignited*

Chapter 5, Structure Fire Module, Block K1, *Item Contributing Most to Flame Spread*

**Type of Material – Page B-22:**

Chapter 4, Fire Module, Block D4, *Type of Material First Ignited*

Chapter 5, Structure Fire Module, Block K2, *Type of Material Contributing Most to Flame Spread*

**Equipment Involved – Page B-25:**

Chapter 4, Fire Module, Block F1, *Equipment Involved in Ignition*

Chapter 9, HazMat Module, Section M, *Equipment Involved in Release*

Chapter 10, Wildland Fire Module, Section G, *Equipment Involved in Ignition*

## Property Use Codes

### A

599	Administrative office
241	Adult art school
241	Adult dance school
241	Adult education center
655	Agriculture: farm, crops, orchard (incl. processing and packaging on property)
974	Aircraft loading area
972	Aircraft runway
973	Aircraft taxiway
171	Airport terminal
322	Alcohol abuse recovery center
549	Ammunition sales
123	Amphitheater
113	Amusement center, electronic
129	Amusement center, indoor or outdoor
300	Animal hospital
819	Animal pen, shelter
539	Antique shop
429	Apartment
700	Appliance manufacturing
539	Appliance store
152	Aquarium
113	Arcade, video
123	Arena
123	Armory, with fixed seating
122	Armory, without fixed seating
152	Art gallery
241	Art school, adult
569	Art supplies
323	Asylum
141	Athletic club
592	ATM kiosk
599	Attorney's office
182	Auditorium
579	Automobile sales, service, repair

### B

519	Bakery sales
123	Ballpark
121	Ballroom
592	Bank
162	Bar
557	Barber shop
819	Barn
464	Barracks
110	Baseball batting range
121	Basketball court
116	Bathhouse
937	Beach
142	Beach club

557	Beauty shop
700	Beverage manufacturing
112	Billiard center
700	Bindery, book
144	Bingo parlor (gambling)
700	Blacksmith shop
439	Boarding house
898	Boat launching facility
571	Boat refueling facility
579	Boat sales, service, repair
143	Boating club
700	Book bindery
549	Book store
111	Bowling alley
141	Boys' club
921	Bridge
931	Brushland
464	Bunk house
173	Bus station
599	Business office

### C

116	Cabana
161	Cafe, cafeteria
935	Campsite with utilities
519	Candy store
579	Car sales, service, repair
129	Carnival
144	Casino
581	Catalog store
131	Cathedral
938	Cemetery
322	Center, alcohol/drug/substance abuse
131	Chapel
700	Chemical manufacturing
254	Child care, in commercial property
255	Child care, in residence, licensed
256	Child care, in residence, unlicensed
569	Chimney cleaning service
549	China shop
340	Chiropractor office
131	Church
129	Circus
241	Classroom, college
341	Clinic
529	Clothing store
141	Club: athletic, health
142	Club: country, golf, equestrian, tennis, hunting, fishing
144	Club, gambling
143	Club, yacht

## Property Use Codes (Cont'd)

142 Clubhouse  
 679 Coal mine  
 926 Collection box, charity  
 241 College building, classroom  
 464 College dormitory  
 963 Commercial street, road  
 639 Communications center  
 635 Computer center, laboratory  
 182 Concert hall  
 429 Condo  
 981 Construction site (not buildings)  
 311 Convalescent home  
 511 Convenience store  
 464 Convent dormitory  
 122 Convention center, without fixed seating  
 142 Country club  
 155 Courthouse, courtroom  
 946 Creek  
 134 Crematorium  
 323 Criminally insane facility  
 655 Crops

### D

519 Dairy store  
 121 Dance hall  
 241 Dance school, adult  
 254 Day care, in commercial property  
 255 Day care, in residence, licensed  
 256 Day care, in residence, unlicensed  
 631 Defense installation  
 519 Delicatessen  
 342 Dentist's office  
 581 Department store  
 419 Detached home  
 361 Detention camp, adult  
 363 Detention home, juvenile  
 161 Diner  
 161 Dining hall  
 162 Dinner theater  
 960 Dirt Road  
 321 Disability development facility  
 162 Disco club  
 581 Discount store  
 961 Divided highway  
 898 Dock  
 342 Doctor's office  
 464 Dormitory  
 183 Drive-in theater  
 962 Driveway, residential  
 322 Drug abuse recovery center  
 581 Drug store

564 Dry cleaning shop  
 529 Dry goods shop  
 919 Dump  
 419 Duplex  
 419 Dwelling, one- and two-family

### E

241 Education center, adult  
 659 Egg production  
 642 Electrical distribution system  
 700 Electrical equipment manufacturing  
 642 Electrical substation  
 615 Electric-generating plant  
 113 Electronic amusement center  
 213 Elementary school (incl. kindergarten)  
 921 Elevated roadway, railway  
 816 Elevator, grain  
 341 Emergency medical facility  
 142 Equestrian club, lodge  
 122 Exhibit hall, without fixed seating  
 800 Explosives storage  
 569 Exterminating service  
 549 Eyeglass store

### F

700 Factory  
 129 Fair (carnival)  
 655 Farm  
 122 Field house, without fixed seating  
 931 Field, open  
 123 Field, sports  
 982 Field: gas, oil  
 186 Film production studio  
 888 Fire station  
 559 Fireworks sales  
 659 Fish hatchery  
 142 Fishing lodge  
 645 Flammable liquid distribution  
 569 Floor cleaning service  
 549 Florist shop  
 519 Food and beverage sales  
 700 Food industry processing  
 700 Footwear manufacturing  
 669 Forest  
 462 Fraternity house  
 134 Funeral parlor  
 700 Furniture manufacturing  
 539 Furniture store

## Property Use Codes (Cont'd)

### G

144	Gambling club
882	Garage, commercial parking, general vehicle
881	Garage, parking (detached from residence)
648	Garbage disposal (not landfill)
559	Garden supply store
644	Gas distribution system
982	Gas field
571	Gas station
142	Golf club
938	Golf course, public or private
110	Golf driving range
599	Government office (not defense)
816	Grain elevator
123	Grandstand
931	Grassland
679	Gravel pit
655	Greenhouse
519	Grocery store
121	Gymnasium

### H

557	Hair salon
459	Halfway house
880	Hangar: airplane, boat
539	Hardware store
659	Hatchery, fish
141	Health club
614	Heat-generating plant
974	Helipad, helistop
171	Heliport
343	Hemodialysis unit (not part of hospital)
215	High school
961	Highway: divided, limited access
559	Hobby shop
123	Hockey rink (in arena)
419	Home: detached, manufactured, mobile
569	Home maintenance service
439	Homeless shelter
332	Hospice
331	Hospital: medical, pediatric, psychiatric
449	Hostel
449	Hotel, commercial
439	Hotel, residential
439	House: boarding, rooming
462	House: fraternity, sorority
539	Household goods, repairs, sales
142	Hunting lodge

### I

114	Ice skating rink, indoor or outdoor
648	Incinerator
984	Industrial plant yard area (not outdoor storage)
700	Industry
331	Infirmiry, hospital-type
341	Infirmiry, clinic-type
449	Inn
599	Insurance carrier's office

### J

361	Jail, not part of police station or other facility
549	Jewelry store
215	Junior high school
363	Juvenile detention center

### K

162	Karaoke bar
819	Kennel
162	Key club
213	Kindergarten

### L

599	Labor organization office
635	Laboratory, computer
629	Laboratory, science
946	Lake
938	Land plot, graded or cared-for
931	Land, open
919	Landfill, sanitary
898	Launching facility for boats
564	Laundry
599	Lawyer's office
151	Library
569	Linen supply house
519	Liquor store
659	Livestock production
819	Livestock storage
974	Loading area, aircraft
839	Locker, storage
449	Lodge
141	Lodge: athletic, health
142	Lodge: fishing, hunting
439	Lodging house
311	Long-term care facility, medical
459	Long-term care facility, nonmedical (not nursing home)
936	Lot, vacant
571	LP-gas bottle filling station, public

## Property Use Codes (Cont'd)

849 LP-gas storage  
 559 Lumber sales

### M

926 Mailbox  
 596 Mailing firm  
 581 Mall, common areas  
 419 Manufactured home  
 700 Manufacturing  
 898 Marina  
 898 Marine passenger terminal  
 571 Marine refueling facility  
 579 Marine sales, service, repair  
 519 Market  
 511 Market, convenience  
 952 Marshalling yard  
 174 Mass transit station  
 134 Mausoleum  
 931 Meadow  
 331 Medical hospital  
 154 Memorial structure  
 323 Mental institution  
 321 Mental retardation facility  
 700 Metal manufacturing  
 174 Metro  
 215 Middle school  
 464 Military barracks  
 631 Military installation  
 659 Milking facility  
 679 Mine  
 899 Mini-storage unit  
 110 Miniature golf course  
 131 Mission  
 419 Mobile home  
 464 Monastery dormitory  
 154 Monument  
 134 Morgue  
 134 Mortuary  
 131 Mosque  
 449 Motel, commercial  
 579 Motor vehicle sales, service, repair  
 186 Movie production studio  
 183 Movie theater  
 181 Movie theater with stage  
 429 Multifamily dwelling  
 152 Museum  
 539 Music store

### N

557 Nail salon

679 Natural gas well  
 700 Newspaper publishing  
 549 Newspaper stand, shop  
 162 Nightclub  
 615 Nuclear powerplant  
 211 Nursery school  
 464 Nurses' quarters  
 311 Nursing home

### O

941 Ocean  
 599 Office, business (incl. administrative, attorney's, insurance carrier, labor organization, real estate, trade association)  
 342 Office: dentist, doctor, oral surgeon  
 629 Office incidental to laboratory facility  
 300 Office, veterinary, research (not a laboratory)  
 982 Oil field  
 679 Oil well  
 419 One-family dwelling  
 181 Opera house  
 549 Optical goods sales  
 342 Oral surgeon's office  
 655 Orchard  
 926 Outbuilding (not garage or shed)  
 808 Outbuilding, storage  
 124 Outdoor area with recreational equipment  
 926 Outhouse  
 341 Outpatient clinic  
 807 Outside material storage area  
 849 Outside storage tank  
 921 Overpass

### P

539 Paint store  
 700 Papermill  
 938 Park  
 935 Park, camping trailer/recreational vehicle, with utilities  
 965 Parking area, uncovered  
 881 Parking garage, detached from residence  
 882 Parking garage, commercial, general vehicle  
 171 Passenger terminal, airport  
 173 Passenger terminal, bus  
 898 Passenger terminal, marine  
 174 Passenger terminal: rail, rapid transit, subway  
 931 Pasture  
 549 Pawn shop  
 331 Pediatric hospital  
 361 Penitentiary



## Property Use Codes (Cont'd)

529 Shoe store  
 557 Shop: barber, beauty  
 549 Shop, specialty  
 816 Silo  
 419 Single-family dwelling  
 115 Skateboard park  
 114 Skating rink, ice  
 115 Skating rink, roller  
 700 Slaughterhouse  
 161 Snack bar  
 141 Social club  
 462 Sorority house  
 549 Specialty shop  
 123 Sports arena, field, stadium  
 559 Sporting goods store  
 819 Stable  
 123 Stadium  
 174 Station, transit  
 549 Stationery shop  
 154 Statue  
 614 Steam-generating plant  
 819 Stockyard  
 882 Storage, commercial vehicle  
 800 Storage, explosives  
 819 Storage, livestock  
 807 Storage, outside material  
 849 Storage, outside tank  
 880 Storage, vehicle (incl. aircraft, boat; not parking garage)  
 891 Storage, warehouse (not refrigerated storage)  
 839 Storage: locker, refrigerated  
 899 Storage unit: self-, mini-  
 539 Store: antique, appliance, furniture, hardware, music, paint, wallpaper, video  
 519 Store: bakery, candy, dairy, grocery, liquor  
 529 Store: clothing, shoe, wearing apparel  
 511 Store, convenience  
 581 Store: department, discount, catalog, drug  
 559 Store, recreational (incl. hobby, toy, pet, sporting goods, photographic supply, garden supply, lumber supply, fireworks)  
 549 Store, specialty (incl. ammunition, book, china, florist, jewelry, optical, pharmacy, stationery, newspaper, tobacco)  
 946 Stream  
 963 Street, commercial  
 962 Street, residential  
 186 Studio, film or movie production  
 185 Studio, radio and television  
 322 Substance abuse recovery center  
 174 Subway station  
 519 Supermarket

162 Supper club  
 116 Swimming pool, indoor or outdoor  
 952 Switchyard  
 131 Synagogue

### T

849 Tank storage, gas  
 557 Tanning salon  
 162 Tavern  
 973 Taxiway, aircraft  
 926 Telephone booth  
 639 Television facility  
 185 Television studio  
 131 Temple  
 429 Tenement  
 142 Tennis club  
 171 Terminal, airport  
 173 Terminal, bus  
 898 Terminal, marine  
 174 Terminal: rail, rapid transit, subway  
 700 Textile processing, manufacturing  
 529 Textile, wearing apparel sales  
 162 Theater, dinner  
 183 Theater, drive-in  
 181 Theater, live performance  
 183 Theater, movie  
 669 Timberland  
 579 Tire store  
 700 Tobacco processing  
 549 Tobacco sales  
 926 Toll booth  
 808 Tool shed  
 429 Townhouse  
 559 Toy store  
 121 Track, running, indoor  
 599 Trade association office  
 926 Tramway, aerial  
 642 Transformer, electrical  
 921 Trestle  
 922 Tunnel  
 419 Two-family dwelling

### U

922 Underground passage  
 926 Underground shelter  
 241 University building, classroom  
 642 Utility pole  
 983 Utility right-of-way

## Property Use Codes (Cont'd)

### V

936	Vacant lot
700	Vehicle assembly, manufacturing
571	Vehicle fueling station
965	Vehicle parking area, uncovered
882	Vehicle parking, commercial, general vehicle
880	Vehicle storage: aircraft, boat (not parking garage)
593	Veterinary office
113	Video arcade
539	Video store
241	Vocational school

### W

549	Wallpaper store
891	Warehouse
647	Water utility (incl. collection, distribution, storage, and treatment)
700	Wearing apparel manufacturing
529	Wearing apparel store
898	Wharf
669	Wildland preserve
569	Window washing service
669	Woodland

### Y

143	Yacht club
938	Yard, residential
449	YMCA, YWCA, with sleeping facilities
141	YMCA, YWCA, without sleeping facilities

### Z

938	Zoo
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## On-Site Materials or Products Codes

### A

628	Abrasives
233	Accessories: backpacks, belts, briefcases, purses, satchels, wallets
231	Accessories: jewelry, watches
232	Accessories: luggage, suitcases
517	Adhesives
134	Agriculture, crops (not grain)
132	Agriculture: feed, grain, seed
138	Agriculture, fertilizer
133	Agriculture, hay, straw
135	Agriculture, livestock

137	Agriculture, pesticides
136	Agriculture, pets
131	Agriculture: trees, plants, flowers
831	Aircraft: airplanes
832	Aircraft: helicopters
831	Airplanes
121	Alcoholic beverages
811	All terrain vehicles (ATVs)
642	Aluminum products
932	Ammunition
118	Animal fat
332	Animal skins, fur
331	Animal skins, leather
712	Answering machines
921	Antiques
711	Appliances, electronics: appliances
713	Appliances, electronics: electronic media
712	Appliances, electronics: electronic supplies
714	Appliances, electronics: photographic supplies
943	Art supplies
943	Artwork
516	Asphalt
813	Automobile parts (not tires)
811	Automobiles

### B

233	Backpacks
111	Baked goods
911	Barrels
225	Beauty supply
213	Bedding
242	Beds
112	Beef, meat products
121	Beer
233	Belts
121	Beverages, alcoholic
122	Beverages, nonalcoholic
851	Bicycles (incl. tandem)
811	Bikes, mini
821	Boats
412	Books
911	Bottles
911	Boxes
622	Building supplies
233	Briefcases
811	Buses
522	Butane
113	Butter

## On-Site Materials or Products Codes (Cont'd)

### C

714	Cameras
811	Camper trailers
945	Camping products
821	Canoes
415	Cardboard
413	Cards, greeting
613	Carpentry tools
631	Carpets
811	Carts, golf
713	Cassette tapes
136	Cats
622	Cement mix
633	Ceramic tile
245	Ceramics
117	Cereals, packaged
531	Charcoal
113	Cheese
543	Chemicals, drugs: cleaning supplies
541	Chemicals, drugs: hazardous chemicals
545	Chemicals, drugs: illegal drugs
542	Chemicals, drugs: nonhazardous chemicals
544	Chemicals, drugs: pharmaceuticals
245	China
952	China, restaurant supplies
712	Circuit boards
543	Cleaning supplies
243	Clocks
214	Cloth
221	Clothes, wearable products
532	Coal
534	Coke
922	Collectibles
225	Cologne
513	Combustible liquid, including heating oil
643	Combustible metal products (magnesium, titanium)
712	Communications equipment
713	Compact disks (CD-ROMs)
712	Computers
622	Construction and home improvement products
628	Construction supplies, abrasives
622	Construction supplies, construction and home improvement
626	Construction supplies, electrical parts
629	Construction supplies, fencing
621	Construction supplies, hardware products
627	Construction supplies, insulation
625	Construction supplies: lighting fixtures, lamps
623	Construction supplies: pipes, fittings
624	Construction supplies, stone-working materials
812	Construction vehicles
911	Containers, packing materials: bottles, barrels, boxes

912	Containers, packing materials: packing material
913	Containers, packing materials: pallets
118	Cooking grease
416	Copier paper
421	Cordage
313	Cork
225	Cosmetics
321	Cotton
942	Crafts
134	Crops (not grain)
211	Curtains

### D

113	Dairy products
116	Delicatessen products: meat, poultry, fish
721	Dental supplies
511	Diesel fuel
952	Dinnerware, restaurant supplies
961	Discarded material, junkyard materials
962	Discarded material, recyclables
963	Discarded material, trash (not recyclable)
711	Dishwashers
713	Disks, computer
136	Dogs
211	Drapes
545	Drugs, illegal
544	Drugs, legal

### E

245	Earthenware
713	Electronic media
712	Electronic supplies
933	Explosives
223	Eyeglasses

### F

213	Fabrics, bedding
214	Fabrics: cloth, yarn, dry goods
211	Fabrics: curtains, drapes
212	Fabrics, linens
811	Farm vehicles
118	Fat, cooking
132	Feed
629	Fencing, fence supplies
138	Fertilizer
344	Fiberglass
321	Fibers, cotton
323	Fibers, silk
322	Fibers, wool
714	Film, photographic



## On-Site Materials or Products Codes (Cont'd)

625 Light fixtures  
 841 Light rail  
 625 Lighting  
 212 Linens  
 632 Linoleum  
 121 Liquor  
 135 Livestock  
 522 LP gas  
 232 Luggage  
 311 Lumber

### M

612 Machine parts  
 611 Machinery, tools: industrial machinery  
 612 Machinery, tools: machine parts  
 613 Machinery, tools: tools (power and hand)  
 411 Magazines  
 643 Magnesium products  
 225 Makeup (cosmetics)  
 242 Mattress  
 112 Meat products  
 116 Meat, deli products  
 722 Medical supplies  
 721 Medical, laboratory products: dental supplies  
 725 Medical, laboratory products: laboratory supplies  
 722 Medical, laboratory products: medical supplies  
 723 Medical, laboratory products: optical products  
 724 Medical, laboratory products: veterinary supplies  
 923 Merchandise, used  
 643 Metal products, combustible (incl. magnesium, titanium)  
 641 Metal products: iron, steel  
 642 Metal products, nonferrous metal (incl. aluminum)  
 811 Minibikes  
 935 Missiles  
 951 Mixed sales products, office supplies  
 952 Mixed sales products, restaurant supplies  
 841 Monorails  
 811 Motor homes  
 514 Motor oil  
 811 Motor vehicles: automobiles, trucks, buses, recreational vehicles, riding mowers, farm vehicles  
 812 Motor vehicles, construction  
 813 Motor vehicles, parts (not tires)  
 814 Motor vehicles, tires  
 811 Motorcycles  
 811 Mowers, lawn (riding)  
 932 Munitions  
 941 Musical instruments

### N

416 Napkins  
 521 Natural gas  
 411 Newspapers  
 122 Nonalcoholic beverages  
 642 Nonferrous metal products (incl. aluminum)  
 542 Nonhazardous chemicals  
 851 Nonmotorized vehicles  
 132 Nuts

### O

951 Office supplies  
 513 Oil, heating  
 515 Oil, heavy  
 514 Oil, motor  
 723 Optical products  
 932 Ordnance  
 932 Ordnance, explosives, fireworks: ammunition  
 933 Ordnance, explosives, fireworks: explosives  
 934 Ordnance, explosives, fireworks: fireworks  
 931 Ordnance, explosives, fireworks: guns  
 935 Ordnance, explosives, fireworks: rockets, missiles  
 341 Ore  
 945 Outdoor products

### P

416 Packaged paper products: stationery, copier paper, napkins, toilet paper.  
 912 Packing materials  
 635 Paint  
 913 Pallets  
 412 Paper products, books  
 415 Paper products, cardboard  
 413 Paper products, greeting cards  
 411 Paper products: newspapers, magazines  
 416 Paper products: packaged paper, stationery  
 414 Paper products, rolled paper  
 416 Paper towels  
 533 Peat  
 225 Perfume  
 821 Personal watercraft  
 137 Pesticides  
 136 Pets  
 544 Pharmaceuticals  
 714 Photographic film, supplies  
 623 Pipes  
 131 Plants  
 343 Plastics  
 623 Plumbing supplies  
 112 Pork, meat products



## On-Site Materials or Products Codes (Cont'd)

<b>U</b>		<b>W</b>	
851	Unicycles	233	Wallets
923	Used merchandise	634	Wallpaper
952	Utensils, restaurant supplies	231	Watches
		821	Watercraft
<b>V</b>		221	Wearable products, clothes
711	Vacuum cleaners	223	Wearable products, eyeglasses
114	Vegetables	222	Wearable products, footwear
813	Vehicle parts (not tires)	225	Wearable products: perfumes, colognes, cosmetics
814	Vehicle tires	226	Wearable products, toiletries
812	Vehicles, construction	121	Wine (incl. wine coolers)
811	Vehicles, farm	626	Wire, electrical
851	Vehicles, nonmotorized	315	Wood chips
811	Vehicles, recreational	313	Wood products, cork
724	Veterinary supplies	311	Wood products: lumber, sawn wood
712	Video cassette recorders	314	Wood products, pulp
713	Video tapes	315	Wood products: sawdust, wood chips
		312	Wood products, timber
		322	Wool
		<b>Y</b>	
		214	Yarn

## Area of Fire Origin and Specific Location at Time of Injury Codes

<b>A</b>			
55	Air conditioning duct	44	Bank vault
67	Air enclosure, pressurized	23	Bar area
53	Air shaft	28	Barber shop
85	Aircraft cockpit	22	Barracks, >5 persons
11	Arena, assembly area with fixed seats, >100 persons	43	Basement, storage
16	Art gallery	36	Basketball court, stage area
46	Ash pit	25	Bathroom
11	Assembly area with fixed seats, >100 persons	45	Bay, loading
13	Assembly area without fixed seats, <100 persons	28	Beauty salon
12	Assembly area without fixed seats, >100 persons	21	Bedroom, <5 persons
38	Assembly area, manufacturing	22	Bedroom, >5 persons
73	Assembly, ceiling and floor	23	Beverage service area
21	Attic, sleeping	41	Bin, storage
43	Attic, storage	62	Boiler room
74	Attic, vacant	92	Boulevard, on or near
11	Auditorium, assembly area with fixed seats, >100 persons	12	Bowling alley, assembly area without fixed seats, >100 persons
92	Avenue, on or near	36	Boxing ring, stage area
78	Awning	85	Bridge, ship
<b>B</b>		<b>C</b>	
36	Backstage	81	Cab of truck
72	Balcony, exterior	55	Cable duct
12	Ballroom, assembly area without fixed seats, >100 persons	23	Cafeteria
		23	Canteen area
		82	Cargo area, vehicle





**Area/Location Codes (Cont'd)**

43	Pantry
94	Park
92	Parking lot, on or near
81	Passenger area of transportation equipment
94	Pasture
21	Patient room, <5 persons
22	Patient room, >5 persons
93	Patio
36	Performance area, stage
28	Personal service area
32	Photography area
52	Pipe shaft
93	Porch, enclosed
72	Porch, unenclosed
25	Portable toilet
25	Powder room
67	Pressurized air enclosure
32	Printing area
21	Prison cell, <5 persons
25	Privy
38	Processing or machine area
37	Projection room
92	Public way, on or near
61	Pump room

**R**

35	Radar room
91	Railroad right-of-way, on or near
02	Ramp, exterior
03	Ramp, interior
94	Range land
45	Receiving area
44	Records storage room
34	Recovery room, surgery area
14	Recreation room
61	Refrigeration room
96	Renovation area
65	Repair shop or area
25	Restroom
91	Right-of-way, on or near railroad
12	Roller skating rink, assembly area without fixed seats, >100 persons
74	Roof and ceiling assembly
74	Roof member
77	Roof surface, exterior
46	Rubbish chute, container (incl. compactor and garbage areas)
83	Running gear

**S**

15	Sales area
25	Sauna area
53	Shaft: air, light
51	Shaft: dumbwaiter, elevator
52	Shaft: pipe, ventilation
85	Ship bridge
45	Shipping area
65	Shop: maintenance, paint, repair, work
25	Shower room
15	Showroom
14	Sitting room
21	Sleeping area, <5 persons
22	Sleeping area, >5 persons
75	Space, concealed wall
73	Space, crawl, between stories
71	Space, crawl, substructure
37	Spotlight area
65	Spray painting shop or area
38	Spray painting, production
36	Stage
37	Stage light area
02	Stairway, exterior
03	Stairway, interior
74	Steeple
41	Storage (bin, tank)
43	Storage area (basement, tool room, supply room)
47	Storage area, vehicle (carport, garage)
82	Storage area, vehicle (trunk)
44	Storage vault
15	Store
92	Street, on or near
98	Structural area, vacant
71	Substructure area or space
43	Supplies or tools: storage
34	Surgery area (major procedures)
33	Surgery area (minor procedures)
17	Swimming pool
63	Switchgear area
11	Synagogue, assembly area with fixed seats, >100 persons

**T**

84	Tank, fuel
41	Tank, storage
35	Telephone booth, equipment
14	Television room
11	Temple, assembly area with fixed seats, >100 persons
93	Terrace
66	Test cell

## Area/Location Codes (Cont'd)

11	Theater, assembly area with fixed seats, >100 persons	84	Vehicle fuel tank, line
92	Thoroughfare, on or near	81	Vehicle passenger area
25	Toilet, portable	83	Vehicle running gear, wheel area
43	Tool room, storage	47	Vehicle storage area (carport, garage)
63	Transformer vault	82	Vehicle, cargo/trunk area
85	Transportation equipment control area	55	Ventilation duct
84	Transportation equipment fuel area	52	Ventilation shaft
46	Trash chute, container (incl. compactor and garbage areas)		
33	Treatment: first aid area, surgery area (minor procedures)		
82	Trunk area, vehicle		
	<b>U</b>		<b>W</b>
96	Under construction and renovation areas	14	Waiting room
72	Unenclosed porch	75	Wall assembly
52	Utility conduit	76	Wall surface, exterior
		22	Ward, >5 persons
		26	Wash room
		46	Waste chute, container (incl. compactor and garbage areas)
		62	Water heater area
		65	Welding area for maintenance
		38	Welding with production
		83	Wheel area
		95	Wildland
		56	Window, display
		95	Woods
		38	Workroom, production
		65	Workshop or area
	<b>V</b>		
94	Vacant lot		
98	Vacant structural area		
44	Vault: records, storage		
63	Vault, transformer		
85	Vehicle control area, non-passenger		
83	Vehicle engine area		
86	Vehicle exterior/exposed surface		

## Item First Ignited and Item Contributing Most to Flame Spread Codes

	<b>A</b>		
65	Accelerant	51	Barrel
18	Acoustical insulation within structural area	51	Basket
16	Acoustical tile, ceiling	18	Batts, acoustical/thermal insulation within structural area
93	Adhesive	32	Bedding
61	Aerosol	83	Belt: conveyor, drive
71	Agricultural crop	22	Bench, not upholstered
74	Animal	23	Bench, work
34	Apparel not on person	43	Billboard
35	Apparel on person	32	Blanket
25	Appliance housing, casing	36	Blind
61	Atomized liquid	13	Blinds, external
46	Awning	18	Boards, acoustical/thermal insulation within structural area
		91	Book
	<b>B</b>	23	Bookcase
51	Bag	51	Box
56	Baled goods, material	26	Broom
86	Barbed wire fence	73	Brush, heavy vegetation

## Items Ignited Codes (Cont'd)

26	Brush: paint, dusting	66	Duct
57	Bulk storage	67	Duct covering (incl. insulating materials whether for acoustical or thermal purposes, and whether inside or outside the duct)
<b>C</b>			
23	Cabinet, cabinetry	94	Dust
81	Cable insulation	26	Duster
46	Canopy	88	Dynamite
14	Carpet	<b>E</b>	
51	Carton, case	12	Eave
25	Casing, appliance	32	Electric blanket
16	Ceiling covering, lining	81	Electrical insulation, wire
72	Chaff	25	Equipment housing
22	Chair, not upholstered	68	Evaporative cooler pads
21	Chair, upholstered	94	Excelsior
23	Chest of drawers	88	Explosives
86	Chicken wire fence	11	Exterior roof covering, surface, finish
95	Chimney film or residue	13	Exterior trim (incl. doors, porches, platforms)
44	Chips, wood	12	Exterior wall covering, surface, finish
41	Christmas tree	<b>F</b>	
26	Cleaning cloth, fluids, supplies	37	Fabric goods
26	Cleaning utensils	59	Fabric, rolled
34	Clothing not on person	77	Feathers, not on bird or animal
35	Clothing on person	86	Fence
32	Comforter	87	Fertilizer
72	Compost	94	Fiber
66	Conduit	18	Fibers, acoustical/thermal insulation within structural area
67	Conduit covering (incl. insulating materials whether for acoustical or thermal purposes, and whether inside or outside the conduit)	92	Files, paper
51	Container	23	Filing cabinet
83	Conveyor belt	95	Film: paint, resin, chimney residue
76	Cooking materials (incl. edible materials for man or animal) (not cooking utensils)	68	Filter
54	Cord	88	Firecracker, fireworks
21	Couch	74	Fish
51	Crate	65	Flammable gas/liquid, fuels (not contained)
71	Crops	64	Flammable gas/liquid, in or escaping from container or pipe
23	Cupboard	62	Flammable gas/liquid, in or escaping from engine or burner
36	Curtain	63	Flammable gas/liquid, in or escaping from final container or pipe before engine or burner
<b>D</b>			
21	Davenport	14	Floor covering
42	Decoration	14	Flooring
23	Desk	26	Fluids, cleaning
21	Divan	73	Forest
13	Door, external	74	Fowl
23	Drainboard	17	Framing: building, structural
36	Drapery	71	Fruit crop
23	Dresser	62	Fuel, flammable, from engine or burner
83	Drive belt		

## Items Ignited Codes (Cont'd)

65	Fuel, uncontained/spilled	65	Liquid fuel, gas (flammable, uncontained/spilled)
77	Fur, not on bird or animal	61	Liquid, atomized, vaporized
21	Furniture, upholstered	18	Loose fills, thermal acoustical insulation within structural area
		38	Luggage
		17	Lumber in place
			<b>M</b>
45	Game	92	Magazine
63	Gas, flammable liquid from container or pipe before engine or burner	15	Mantle
64	Gas, flammable, from container or pipe (not engines, burners, or their fuel systems)	87	Manure
62	Gas, flammable liquid from engine or burner	14	Mat
65	Gas, flammable liquid, uncontained/spilled	58	Material stored on pallets
37	Goods not made up	52	Material used to make a product (incl. raw materials used as input to a manufacturing or construction process)
72	Grass	59	Material, rolled or wound
		31	Mattress
		26	Mops, cleaning utensils
		72	Mulch
			<b>N</b>
		72	Needles, light vegetation
		92	Newspaper
		92	Newsprint, not rolled
		59	Newsprint, rolled
			<b>O</b>
		82	Oil, transformer
		97	Oily rags
		71	Orchard crop
		25	Organ case
		43	Outdoor sign
			<b>P</b>
		55	Packing material
		68	Pads, evaporative
		95	Paint film or residue
		53	Pallet, empty
		58	Palletized material
		15	Paneling, wood
		92	Paper
		59	Paper, rolled
		23	Piano
		31	Pillow
		66	Pipe
		67	Pipe covering (incl. insulating materials whether for acoustical or thermal purposes, and whether inside or outside the pipe)
		13	Platform
			<b>G</b>
45	Game		
63	Gas, flammable liquid from container or pipe before engine or burner		
64	Gas, flammable, from container or pipe (not engines, burners, or their fuel systems)		
62	Gas, flammable liquid from engine or burner		
65	Gas, flammable liquid, uncontained/spilled		
37	Goods not made up		
72	Grass		
			<b>H</b>
77	Hair, not on bird or animal		
72	Hay		
32	Heating pad		
73	Heavy vegetation		
66	Hose		
67	Hose covering (incl. insulating materials whether for acoustical or thermal purposes, and whether inside or outside the hose)		
26	Household utensils		
75	Human		
			<b>I</b>
81	Insulation: electrical, cable		
18	Insulation, acoustical/thermal within structural area		
16	Interior ceiling covering		
15	Interior wall covering (not curtains, drapes)		
24	Ironing board		
			<b>K</b>
26	Kitchen utensils		
			<b>L</b>
33	Laundry		
72	Leaves		
72	Light vegetation (not a crop)		
33	Linen (not bedding)		
16	Lining, ceiling		
94	Lint		
63	Liquid fuel, gas (flammable, from container or pipe before engine or burner)		
64	Liquid fuel, gas (flammable, from container or pipe) (not engines, burners, or their fuel systems)		
62	Liquid fuel, gas (flammable, from engine or burner)		

The ☆ denotes a required field.



## Type of Material First Ignited *and* Type of Material Contributing Most to Flame Spread Codes

<b>A</b>		25	Coal oil
22	Acetic acid: glacial	67	Coated paper
22	Acetone	55	Cocofilm
14	Acetylene gas	55	Coconut fiber
22	Acrylic acid	56	Coke
34	Adhesive	36	Combustible metal: magnesium, potassium, sodium, titanium, zirconium
22	Alcohol, ethyl	34	Contact cement
24	Alcohol, propyl	27	Cooking oil
37	Ammonium nitrate	52	Cork
13	Anesthetic gas	55	Corn
53	Animal skin	27	Corn oil
34	Asphalt	55	Cotton
86	Asphalt-treated material (siding)	71	Cotton yarn, fabric, finished goods
<b>B</b>		26	Cottonseed oil
55	Barley	34	Creosote
65	Beaverboard	26	Creosote oil
10	Benzene	20	Crude petroleum
10	Benzol	<b>D</b>	
34	Bitumen	25	Diesel fuel
71	Blends: fiber, fabrics	<b>E</b>	
56	Briquettes	34	Elemi
22	Butadiene	21	Ether
12	Butane	21	Ethyl ether
31	Butter	10	Ethylene
24	Butyl alcohol	10	Ethylene oxide
<b>C</b>		61	Excelsior
27	Canola oil	37	Explosives
71	Canvas, non-waterproof	<b>F</b>	
34	Carbon	71	Fabric, finished goods
56	Carbon black briquettes	77	Fabric: plastic coated, vinyl
10	Carbon disulfide	31	Fat
10	Carbon monoxide	55	Feathers
68	Cardboard	55	Felt
67	Cellulose	71	Fiber
34	Cement, contact	55	Fiber: natural, silk, vegetable
56	Charcoal briquettes	65	Fiber, wood
65	Chipboard	65	Fiberboard
61	Chips, wood	71	Finished goods: fabric, fiber
21	Class IA flammable liquid	27	Fish oil
22	Class IB flammable liquid (not gasoline)	55	Flax
24	Class IC flammable liquid	57	Flour
25	Class II combustible liquid	57	Food (not fat or grease)
26	Class IIIA combustible liquid	25	Fuel oil No. 1 and No. 2
27	Class IIIB combustible liquid		
71	Cloth		
56	Coal		

## Type of Material Codes (Cont'd)

26 Fuel oil No. 4, No. 5, and No. 6  
 74 Fur fabric, finished goods  
 26 Furfural

### G

14 Gas, acetylene  
 13 Gas, anesthetic  
 12 Gas, LP  
 11 Gas, natural  
 23 Gasoline  
 34 Gelatin  
 34 Glue  
 55 Grain  
 31 Grease, food  
 32 Grease, non-food  
 67 Ground-up processed paper used as thermal insulation

### H

76 Hair, human  
 75 Hairpiece  
 65 Hardboard  
 54 Hay  
 55 Hemp  
 55 Hessian  
 55 Hops  
 76 Human hair  
 27 Hydraulic fluid  
 22 Hydrazine  
 15 Hydrogen

### I

67 Insulation, newsprint  
 61 Insulation, processed wood

### J

22 Jet fuel, JP-4  
 25 Jet fuel, JP-5 and -6  
 55 Jute

### K

55 Kapok  
 34 Kauri  
 25 Kerosene

22 Lacquer  
 35 Lacquer, applied  
 31 Lard  
 53 Leather  
 81 Linoleum  
 27 Linseed oil  
 25 Liquid, combustible: Class II  
 26 Liquid, combustible: Class IIIA  
 27 Liquid, combustible: Class IIIB  
 21 Liquid, flammable: Class IA  
 22 Liquid, flammable: Class IB  
 24 Liquid, flammable: Class IC  
 23 Liquid, flammable: gasoline  
 12 LP gas  
 32 Lubricant grease  
 27 Lubricating oil  
 63 Lumber, finished

### L

### M

36 Magnesium  
 71 Man-made fabric, fiber (not fur and silk)  
 50 Manure  
 31 Margarine  
 11 Marsh grass  
 36 Metal, combustible: magnesium, potassium, sodium, titanium, zirconium  
 11 Methane  
 22 Methyl ethyl ketone  
 27 Mineral oil

### N

22 Naphtha: V.M. & P., regular  
 55 Natural fiber  
 11 Natural gas  
 51 Natural rubber  
 67 Newsprint used as thermal insulation  
 71 Nylon fabric

### O

55 Oats  
 27 Oil: canola, cooking, corn, fish, linseed, lubricating, mineral, tallow, transformer, vegetable  
 25 Oil: coal, range  
 26 Oil: creosote, No. 6 fuel  
 82 Oilcloth

### P

22 Paint  
 35 Paint, applied

## Type of Material Codes (Cont'd)

67	Paper	55	Soy bean
33	Paraffin	57	Starch
65	Particleboard	54	Straw
34	Paste	63	Structural material, wood
56	Peat	24	Styrene
21	Pentane	34	Sulfur
32	Petroleum jelly	71	Synthetic fiber
20	Petroleum, crude	41	Synthetic rubber
26	Phenol		
37	Phosphorus		
67	Photographic paper		

62	Pile, wood: round
34	Pitch
41	Plastic
77	Plastic-coated fabric
64	Plywood
62	Pole, wood: round
33	Polish
62	Post, wood: round
36	Potassium
65	Presswood
12	Propane
24	Propyl alcohol
66	Pulp, wood

### R

38	Radioactive material
55	Ramie
25	Range oil
71	Rayon
67	Records, paper
61	Residue, wood
34	Resin
86	Roofing, asphalt
63	Roofing, wood shingles
34	Rosin
62	Round timber: piles, poles, posts
51	Rubber, natural
41	Rubber, synthetic

### S

61	Sawdust
63	Sawn wood (incl. all finished lumber)
67	Sensitized paper
61	Shavings, wood
22	Shellac
63	Shingles, wood
53	Shoe leather
86	Siding, asphalt
74	Silk fabric, finished goods
55	Sisal
53	Skin, animal
36	Sodium
37	Solid chemical (incl. explosives)
34	Soot

31	Tallow
27	Tallow oil
34	Tar
71	Textile products
67	Thermal insulation, newsprint
62	Timber, round: piles, poles, posts
51	Tire rubber
36	Titanium
58	Tobacco
22	Toluol, toluene
75	Toupee
27	Transformer oil
67	Treated paper
24	Turpentine

### T

### V

22	Varnish
35	Varnish, applied
55	Vegetable fiber
27	Vegetable oil
10	Vinyl chloride
77	Vinyl fabric

### W

67	Waste paper
33	Wax
67	Waxed paper
55	Wheat
75	Wig
61	Wood chips, flour, sawdust, shavings, residue, processed (insulation), structural material
62	Wood pile, pole, post: round
66	Wood pulp, fiber
65	Wood, low-density pressed
63	Wood, roofing shingles, sawn, finished, split, structural
71	Wool

### Y

71	Yarn
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### Z

36	Zirconium
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## Equipment Involved in Ignition *and* Equipment Involved in Release Codes

	<b>A</b>		
223	Adapter, electrical	841	Brush, hair
721	Adding machine	316	Buffer
513	Agricultural elevator, conveyor	833	Buffer, floor
341	Air compressor	875	Bug zapper
111	Air conditioner	238	Bulb, electric
881	Airplane, model	333	Bunsen burner
862	Alarm, burglar	862	Burglar alarm
748	Amplifier, stereo	333	Burner, Bunsen
431	Amusement ride equipment	523	Burner, weed
722	Answering machine	373	Butane regulator
444	Arcade game (not electronic)		
253	Arrester, grounding device		<b>C</b>
871	Ashtray	751	Cable converter box
325	Asphalt-saturating coating machine	362	Cable power transfer equipment
343	Atomizing equipment (not paint spraying equipment)	721	Calculator
747	Audio speakers	756	Camcorder
536	Auger, post hole	757	Camera (incl. digital)
514	Auger, screw/sweep	621	Can opener
		443	Candy vending machine
		635	Canner, pressure
		377	Car washing equipment
	<b>B</b>	371	Carding machine
851	Baby bottle warmer	832	Carpet cleaner
234	Ballast, fluorescent lighting	723	Cash register
643	Barbecue grill	355	Casting equipment
152	Baseboard heater (electric/hot water)	414	CAT scan imaging equipment
731	Bass	142	Catalytic heater
229	Battery (all types)	741	CD player, audio
228	Battery charger, rectifier	712	CD-ROM device, external
365	Bearing	113	Ceiling fan
411	Bed, powered	132	Central heating unit
362	Belt, power transfer equipment	522	Chain saw
374	Bench motor	411	Chair, powered (incl. dental and medical chairs)
852	Blanket, electric	872	Charcoal lighter
515	Blender, feed	228	Charger, battery
611	Blender, food	126	Chimney: brick, concrete block, concrete block modules, masonry, stone
362	Block, power transfer equipment		
532	Blower, leaf	125	Chimney connector
534	Blower, snow	127	Chimney, metal (incl. gas vent flue and stovepipe)
333	Blowtorch	533	Chipper
881	Boat, model	242	Christmas lights
133	Boiler: power, process, heating	873	Cigarette lighter
365	Brake	215	Circuit breaker board
216	Branch circuit, electrical	833	Cleaner, floor
641	Bread-making machine	834	Cleaner, vacuum
126	Brick chimney	891	Clock
637	Broiler, countertop	811	Clothes dryer
831	Broom, electric	855	Clothes iron
533	Brush grinder	854	Clothes steamer

## Equipment Involved Codes (Cont'd)

814 Clothes washing machine  
 325 Coating machine  
 612 Coffee grinder  
 631 Coffee maker  
 841 Comb  
 511 Combine  
 812 Compactor, trash  
 341 Compressor, air  
 342 Compressor, gas  
 711 Computer  
 712 Computer CD-ROM device, tape drive  
 713 Computer modem, external  
 711 Computer modem, internal  
 714 Computer monitor  
 715 Computer printer  
 716 Computer projection device  
 125 Connector, chimney or vent  
 252 Control device, traffic  
 423 Control panel with multiple TV monitors  
 210 Converter  
 751 Converter, cable  
 361 Conveyor (not farm)  
 513 Conveyor, farm  
 635 Cooker, pressure  
 646 Cooktop  
 117 Cooler, evaporative  
 117 Cooling tower  
 724 Copier, large standalone  
 715 Copier, multifunctional (fax, scanner)  
 371 Cotton gin  
 637 Countertop broiler  
 346 Crane  
 518 Cream separator  
 538 Cultivator  
 842 Curling iron  
 314 Cutting tool, power  
 332 Cutting torch

### D

622 Dagger  
 242 Decorative lights, line voltage (incl. Christmas lights)  
 243 Decorative lights, low voltage  
 642 Deep fryer  
 116 Dehumidifier, portable  
 412 Dental equipment, other  
 411 Dental powered chair, bed  
 231 Desk lamp  
 864 Detector, gas  
 866 Detector: heat, smoke  
 413 Dialysis equipment  
 357 Digester

757 Digital camera  
 321 Dipper, paint  
 651 Dishwasher  
 712 Disk drive, external  
 356 Distilling equipment  
 215 Distribution panel  
 861 Door opener, automatic (not garage)  
 863 Door opener, automatic garage  
 315 Drill, power  
 348 Drilling machinery  
 537 Driver: post, pile  
 217 Dryer receptacle  
 811 Dryer, clothes  
 845 Dryer, hair  
 813 Dryer/Washer combination  
 654 Duct: exhaust fan, grease hood  
 152 Duct, hot air  
 433 Dumbwaiter  
 742 DVD device, external

### E

525 Edger, lawn  
 251 Electric fence  
 213 Electric meter  
 244 Electric sign  
 223 Electrical adapter  
 216 Electrical branch circuit  
 217 Electrical outlet, receptacle (incl. dryer and stove receptacles)  
 211 Electrical power (utility) line (not wire from utility pole to structure)  
 212 Electrical service supply wire; wire from utility pole to meter box  
 218 Electrical switch, wall-type  
 214 Electrical wiring from meter box to circuit breaker board, fuse box, or panelboard  
 843 Electrolysis equipment  
 451 Electron microscope  
 732 Electronic piano  
 433 Elevator  
 513 Elevator, farm  
 375 Engine, internal combustion engine  
 748 Equalizer, stereo  
 434 Escalator  
 117 Evaporative cooler  
 654 Exhaust fan  
 263 Extension cord  
 358 Extractor

## Equipment Involved Codes (Cont'd)

<b>F</b>			
113	Fan	643	Grill
113	Fan, ceiling	316	Grinder
654	Fan, grease duct/hood exhaust	612	Grinder, coffee
513	Farm elevator, conveyor	515	Grinder, feed
521	Farm sprayer	533	Grinder: leaf, brush, wood, stump
725	Fax machine	219	Ground-fault interrupter
515	Feed blender, grinder, mixer	253	Grounding device
251	Fence, electric	731	Guitar
752	Film projector	892	Gun
866	Fire alarm		
874	Fire extinguishing equipment		<b>H</b>
122	Fireplace, factory-built	841	Hair brush
123	Fireplace, insert/stove	844	Hair curler warmer
121	Fireplace, masonry	845	Hair dryer
232	Flashlight	235	Halogen lamp, lighting fixture
714	Flat-screen computer monitor	317	Hammer, power
833	Floor buffer, cleaner, waxer	711	Hard drive, internal
141	Floor furnace	512	Hay processing equipment
231	Floor lamp	866	Heat detector
234	Fluorescent lighting fixture	144	Heat lamp
611	Food mixer, processor	152	Heat pipe
632	Food warmer	112	Heat pump
355	Forging equipment	145	Heat tape
652	Freezer (separate from refrigerator)	141	Heater (not catalytic, oil-filled, or baseboard heater)
656	Freezer/Refrigerator	152	Heater, baseboard (electric/hot water)
433	Freight elevator	142	Heater, catalytic
639	Frying pan	132	Heater, central unit
132	Furnace, central heating unit	151	Heater: hot water, waterbed
141	Furnace, floor	143	Heater, oil-filled
353	Furnace, industrial	133	Heating boiler
131	Furnace, local heating unit, built-in	853	Heating pad
333	Furnace, plumber's	124	Heating stove
215	Fuse panel board	351	Heat-treating equipment
		643	Hibachi
		346	Hoist
		242	Holiday lighting, line voltage
		373	Hose connector to gas appliance
		152	Hot air duct
		632	Hot plate
		821	Hot tub
		152	Hot water baseboard heater
		151	Hot water heater
		132	Humidifier (built in to central heating system)
		131	Humidifier (built in to local heating system)
		114	Humidifier (not built in to heating system)
		347	Hydraulic rescue tools
			<b>I</b>
		655	Ice maker (separate from refrigerator)
		233	Incandescent lighting fixture

## Equipment Involved Codes (Cont'd)

352 Incinerator  
 361 Industrial conveyor  
 353 Industrial furnace, oven, kiln  
 875 Insect trap  
 151 Instant hot water heater  
 865 Intercom  
 375 Internal combustion engine (nonvehicular)  
 225 Inverter  
 115 Ionizer  
 855 Iron, clothes  
 842 Iron, curling

### J

317 Jackhammer  
 347 Jacking equipment, powered  
 893 Jewelry-cleaning machine  
 313 Jointer  
 611 Juicer

### K

633 Kettle  
 733 Keyboard, musical  
 353 Kiln  
 622 Knife  
 623 Knife sharpener

### L

231 Lamp: desk, floor, oil, portable, tabletop  
 235 Lamp, halogen  
 144 Lamp, heat  
 236 Lamp: sodium, mercury vapor  
 243 Landscape lighting, low voltage  
 525 Landscape trimmer, edger  
 232 Lantern  
 742 Laser disk player  
 312 Lathe  
 524 Lawn mower, powered  
 525 Lawn trimmer, edger  
 531 Lawn vacuum  
 714 LCD monitor  
 716 LCD panel  
 532 Leaf blower  
 533 Leaf chipper, grinder, mulcher  
 433 Lift (elevator): passenger, freight  
 346 Lift for equipment/materials  
 432 Lift, ski  
 238 Light bulb  
 218 Light switch  
 241 Light, night  
 237 Light: trouble, work

872 Lighter: charcoal, utility  
 873 Lighter: cigarette, pipe  
 234 Lighting fixture, fluorescent  
 235 Lighting fixture, halogen  
 233 Lighting fixture, incandescent  
 236 Lighting fixture: sodium, mercury vapor  
 253 Lightning rod  
 242 Lights, decorative, line voltage (incl. Christmas lights)  
 243 Lights, decorative/landscape, low voltage  
 514 Loader, silo  
 535 Log splitter  
 223 Low-voltage transformer (<51 volts)  
 373 LP-gas regulator

### M

846 Makeup mirror, lighted  
 126 Masonry chimney  
 410 Medical equipment, other  
 414 Medical imaging equipment  
 415 Medical monitoring equipment  
 411 Medical powered bed, chair  
 236 Mercury vapor fixture/lamp (incl. street lights)  
 214 Meter box wire to circuit breaker board, fuse box, or panel board  
 213 Meter, meter box (electric)  
 727 Meter: postage, shipping  
 442 Microfiche/Microfilm processing equipment  
 441 Microfiche/Microfilm viewing equipment  
 451 Microscope, electron  
 644 Microwave oven  
 517 Milk pasteurizer  
 516 Milking machine  
 846 Mirror, lighted  
 515 Mixer, feed  
 611 Mixer, food  
 323 Mixing machine, paint  
 881 Model vehicles  
 713 Modem, external  
 711 Modem, internal  
 355 Molding equipment  
 714 Monitor, computer  
 423 Monitoring station, security  
 374 Motor (not internal combustion engine)  
 375 Motor, internal combustion engine  
 524 Mower, lawn (powered)  
 414 MRI equipment  
 533 Mulcher  
 733 Musical keyboard, synthesizer

## Equipment Involved Codes (Cont'd)

### N

318 Nail gun  
373 Natural gas regulator  
244 Neon lighting  
241 Night light  
877 Novelty lighter

### O

143 Oil-filled heater  
732 Organ  
217 Outlet, electrical  
645 Oven, cooking  
353 Oven, industrial  
644 Oven, microwave  
222 Overcurrent, disconnect equipment associated with a transformer  
752 Overhead projector  
416 Oxygen administration equipment

### P

321 Paint dipper  
322 Paint flow coating machine  
323 Paint mixing machine  
324 Paint sprayer  
215 Panel board (fuse)  
726 Paper shredder  
433 Passenger elevator  
517 Pasteurizer  
422 PBX telephone equipment  
745 Phonograph  
442 Photo processing equipment  
757 Photographic camera and equipment  
732 Piano  
371 Picking machine  
537 Pile driver  
444 Pinball machine  
873 Pipe lighter  
152 Pipe, heat  
313 Planer  
732 Player piano  
741 Player, CD (audio)  
742 Player, laser disk  
745 Player, record  
749 Player, tape  
261 Plug, detachable from appliance  
262 Plug, permanently attached to appliance  
333 Plumber furnace  
316 Polisher  
822 Pool equipment (swimming)  
634 Popcorn popper

237 Portable work light, trouble light  
537 Post driver  
727 Postage meter equipment  
536 Post-hole auger  
636 Pot, warming  
133 Power boiler  
316 Power buffer, grinder, polisher, sander  
261 Power cord, detachable from appliance  
262 Power cord, permanently attached to appliance  
314 Power cutting tool  
315 Power drill, screwdriver  
317 Power hammer  
313 Power jointer, planer, router, shaper  
312 Power lathe  
318 Power nail gun, stapler, stud driver  
311 Power saw  
226 Power supply, uninterruptible  
363 Power takeoff  
362 Power transfer equipment: belts, blocks, cables, ropes  
881 Powered model vehicle  
364 Powered valve  
411 Powered wheelchair  
635 Pressure canner, cooker  
715 Printer, computer  
376 Printing press  
133 Process boiler  
611 Processor, food  
716 Projector, computer  
752 Projector: film, overhead, slide  
373 Propane regulator  
344 Pump  
112 Pump, heat

### R

426 Radar equipment  
417 Radiation therapy equipment  
152 Radiator, heating system  
446 Radio telescope  
743 Radio, AM/FM (not two-way radio)  
744 Radio, two-way  
417 Radiological equipment  
646 Range with or without an oven or cooking surface  
847 Razor, electric  
357 Reactor  
748 Receiver, stereo  
217 Receptacle, electrical  
229 Rechargeable battery  
745 Record player  
749 Recorder, tape  
656 Refrigeration equipment  
656 Refrigerator, refrigerator/freezer



## Equipment Involved Codes (Cont'd)

812	Trash compactor	211	Wire, utility line
525	Trimmer, lawn	212	Wire, utility pole to meter box
237	Trouble light	639	Wok
745	Turntable	883	Wood burning kit
424	TV camera, studio-type	237	Work light
423	TV monitor array, studio-type		
744	Two-way radio		
728	Typewriter		
		417	X-ray equipment

**X****U**

414	Ultrasound equipment
226	Uninterrupted power supply
514	Unloader, silo
872	Utility lighter
211	Utility line, electric

**V**

834	Vacuum cleaner
531	Vacuum, lawn
345	Vacuum, wet/dry (shop vacuum)
754	VCR, VCR-TV combination
443	Vending machine
125	Vent connector
756	Video camera
755	Video game

**W**

638	Waffle iron
141	Wall heater
218	Wall switch
632	Warmer, food
647	Warming drawer/table
636	Warming pot
813	Washer/Dryer combination
814	Washing machine, clothes
359	Waste recovery machine
445	Water cooler, fountain
348	Water drilling equipment
151	Water heater (incl. sink-mounted instant hot water heater)
151	Waterbed heater
833	Waxer, floor
371	Weaving machine
523	Weed burner
331	Welding torch
345	Wet/Dry vacuum (shop vacuum)
411	Wheelchair, powered
821	Whirlpool
214	Wire, meter box to fuse panel/circuit board



## **Appendix C**

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# **GLOSSARY OF TERMS AND ABBREVIATIONS**

# Appendix C

## Glossary of Terms and Abbreviations

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### Terms

The terminology used in this document provides a common language for recording fire service data. The following terms are used as defined and discussed below.

**Alarm.** Any notification made to the fire department that a situation exists or may exist that requires a response.

**Area of Origin.** The use of the room or area within the property where the fire originated.

**Automatic.** As applied to fire protection devices, a device or system providing an emergency function without the necessity of human intervention.

**Backfire.** A fire set along the inner edge of a fire control line to consume the fuel in the path of a wildland fire or change the direction of force of the fire's convection column. Doing this on a small scale and with closer control, in order to consume patches of unburned fuel and aid control line construction, is known as "burning out."

**Building.** A structure enclosed with walls and a roof and having a defined height.

**Building Fire.** See Structure Fire.

**Burning.** The process of self-perpetuating combustion, with or without an open flame. Smoldering is burning.

**Casualty (Fire).** A person who is injured or killed at the scene of a fire. (Includes injuries or deaths from natural or accidental causes sustained while involved in the activities of fire control, rescue attempt, or escaping from the dangers of the fire.)

**Census Data.** Demographic population data available by statistical areas from a governmental agency.

**Civilian Fire Casualty.** Any non-fire service casualty who is injured or killed at the scene of a fire.

**Char.** Material that has been partially burned on the exterior of the object and has a blackened carbonized appearance.

**Combustible.** A material or structure that will release heat energy on burning.

**Combustible Liquid.** Any liquid having a flash point at or above 100°F (37.8°C) (closed cup).

**Confine a Fire.** To restrict the fire within determined boundaries established either prior to the fire or during the fire. Wildland suppression action may be minimal and limited to surveillance under appropriate conditions.

**Contain a Fire.** To take suppression action as needed that can reasonably be expected to check the fire's spread under prevailing conditions.

**Emergency Scene.** The area encompassed by the incident and the surrounding area needed by the emergency forces to stage apparatus and mitigate the incident.

**EMT–Basic.** Technician has the knowledge and skills of the first responder, but is also qualified to function as minimum staff for an ambulance (see Table of Care). For example, at the scene of a cardiac arrest, the EMT–Basic would be expected to defibrillate and ventilate the patient with a manually operated device and supplemental oxygen.

**EMT–Intermediate.** Technician has the knowledge and skills of the preceding levels, but also can perform essential advanced techniques and administer a limited number of medications (see Table of Care). For example, at the scene of a cardiac arrest, the EMT–Intermediate would be expected to intubate and administer first-line ACLS medications.

**EMT–Paramedic.** Technician has demonstrated the competencies expected of an EMT–Intermediate provider, but also can administer additional interventions and medications (see Table of Care). For example, at the scene of a cardiac arrest, the EMT–Paramedic might administer second-line ACLS medications and use an external pacemaker.

**Explosion.** Violent bursting caused by either a combustion process or an overpressure condition. Typical combustion processes include ignition and burning of combustible gas, dust, or flammable vapor mixture. These are technically “fires.” Typical overpressure conditions include steam pressure, chemical reactions, and compressed gas container rupture. These are technically not “fires.”

**Exposure Fire.** A fire in a building, structure, vehicle, or outside property resulting from a fire outside that building, structure, vehicle, or outside property.

**Exposure (Human).** Potential for injury or death to humans.

**Fatality.** An injury that is fatal or becomes fatal within 1 year of the incident.

**Fire.** Any instance of destructive and uncontrolled burning, including explosion, of combustible solids, liquids, or gases. Fire does not include the following, except where they cause fire or occur as a consequence of fire:

- Lightning or electrical discharge.
- Rupture of a steam boiler, hot water tank, or other pressure vessel due to internal pressure and not to internal combustion.
- Explosion of munitions or other detonating material.

- Accident involving ship, aircraft, or other vehicle.
- Overheat condition.

**Fire Area (Structure).** The space within a structure bounded by fire division assemblies (2-hour fire rating or greater).

**Fire Area (Wildland).** The area within wildfire perimeter control lines.

**Fire Blackout.** That point in time when there is no longer any evidence of open flame or glow of burned material.

**Fire Contained.** That point in time when fire spread is stopped, but the fire is not necessarily under control.

**Fire Control Line.** Comprehensive term for all constructed or natural barriers and treated fire edges used to control a fire.

**Fire Damage.** The total damage to a building, structure, vehicle, natural vegetation cover, or outside property resulting from a fire and the act of controlling that fire. Included are smoke, water, backfires, firebreaks, and fire control damage.

**Fire Extinguished.** That point in time when there is no longer any abnormal heat or smoke being generated in material that was previously burning.

**Fire Ground.** See Emergency Scene.

**Fire Service Personnel.** All employees, whether career or volunteer, of a fire department who are assigned or may be assigned to perform duties at emergency incidents.

**Fire Under Control.** (1) That point in time when a fire is sufficiently surrounded and quenched so that in the judgment of the commanding officer it no longer threatens destruction of additional property. (2) In wildfire, that point in time when a control line is around a fire, any spot fires therefrom, and any interior islands to be saved. Any unburned area adjacent to the fire side of the control lines are burned out, and all hot spots that are immediate threats to the control line are cooled down, until the lines can reasonably be expected to hold under foreseeable conditions.

**First Responder.** Uses a limited amount of equipment with various knowledge and skill in each of the core elements (see EMS levels above). For example, at the scene of a cardiac arrest, the first responder would be expected to notify EMS (if not already notified) and initiate CPR with an oral airway and a barrier device.

**Fixed Object.** An object, device, or appliance that is fastened or secured at a specific location (e.g., a steam radiator).

**Flames.** Products of combustion that are illuminated by the heat of combustion and accompany the burning of most materials in normal atmospheres.

**Flammable Liquid.** Any liquid having a flash point below 100°F (37.8°C) (closed cup) and having a vapor pressure not exceeding 40 psia (2068 mm Hg) at 100°F (37.8°C).

**Gas.** A material that has a vapor pressure exceeding 40 psia (2068.6 mm) at 100°F (37.8°C). (Gasoline is a liquid, not a gas.)

**General Property Use.** The actual general (overall) use of land or space under the same management or ownership or within the same legal boundaries, including any structures, vehicles, or other appurtenances thereon.

**Grade.** Reference plane representing the elevation of finished ground level adjoining the building at the main entrance.

**Hazardous Material.** Any material that is an air-reactive material, flammable or combustible liquid, flammable gas, corrosive material, explosive material, organic peroxide, oxidizing material, radioactive material, toxic material, unstable material, or water-reactive material; and any substance or mixture of substances that is an irritant or a strong sensitizer or that generates pressure through exposure to heat, decomposition, or other means.

**Heat of Ignition.** The heat energy that brings about ignition. Heat energy comes in various forms and usually from a specific object or source. Therefore, the heat of ignition is divided into two parts: “equipment involved in ignition” and “form of heat of ignition.”

**Ignition.** The physical and chemical processes involved in reaching a point of self-perpetuation of fire whether or not there is an open flame.

**Ignition Factor.** The condition or situation that allowed a heat source and a combustible material to combine to initiate a fire.

**Incident.** An event to which the reporting agency responds or should have responded. Included are “walk-ins” treated at the station. An incident may have more than one response. A rekindle is a separate incident.

**Incident Record.** The official file on an incident.

**Incident Report.** A document prepared by fire department personnel about a particular incident. For understanding and legal purposes, this report should be in their own words. For summarization purposes, the information on this report can be classified into broad categories. The incident report is always part of the incident record or file.

**Injury.** Physical damage to a person suffered as the result of an incident that requires (or should require) treatment by a practitioner of medicine, a registered EMT, or a paramedic within 1 year of the incident (regardless of whether treatment was actually received) or that results in at least 1 day of restricted activity immediately following the incident.

**Latitude.** Latitude lines run east/west parallel to the equator. Values range from 0 degrees at the equator to 90 degrees at the North and South poles. The United States and Canada are in the Northern Hemisphere. Minutes and seconds range from 0 to 59.

**Longitude.** Longitude lines run north/south, are parallel at the equator, and converge at the North and South Poles. Values ranges from 0 degrees at Greenwich, England (near London at the Royal Naval Observatory) to 180 degrees at the International Date Line west of Hawaii. Most of the United States and all of Canada are in the Western Hemisphere. Minutes and seconds range from 0 to 59.

**Liquid.** A material that has a vapor pressure not exceeding 40 psia (2068.6 mm) at 100°F (37.8°C).

**Material First Ignited.** The combustible that is first set on fire by the heat of ignition.

**Mobile Property Type.** Property that was designed to be movable whether or not it still is (e.g., vehicles, ships, and airplanes).

**Mop-Up.** The act of making a fire scene safer after the fire has been controlled, such as extinguishing or removing burning material along or near the control line, felling snags, and trenching logs to prevent rolling. For structure fires, see *Overhaul*.

**Non-Fire Service Personnel.** All persons involved with an incident who are not fire service personnel. Included are police, utility company employees, non-fire service medical personnel, and civilians.

**Not Occupied.** An area with no persons present; contents or equipment present indicates the structure is not vacant.

**Occupancy.** The purpose for which a building or portion thereof is intended to be used. The specific property use as it pertains to a building is the occupancy.

**Occupied.** An area with persons present. A hotel (general property use) could be occupied, but the restaurant (specific property use) not occupied; likewise, the restaurant could be occupied, but its storeroom (area of origin) not occupied.

**Overhaul.** The act of making a fire scene safe after it is controlled, such as extinguishing or removing burned material, checking inside walls and hidden spaces, etc. For wildland fires, see *Mop-Up*.

**Overheat.** Destruction of material by heat without self-sustained combustion. Removal of the heat source will stop the destruction. Overheat is the stage before ignition.

**Overpressure.** A transient air pressure, such as the shock wave from an explosion, that is greater than the surrounding atmospheric pressure.

**Portable.** An object, device, or appliance that can normally be moved by one person, is designed to be used in multiple locations, and requires no tools to install.

**Prescribed Fire.** Any fire ignited by management actions to meet specific objectives. A written, approved prescribed fire plan must exist prior to ignition. The controlled application of fire to wildland fuels in either their natural or their modified state under specified environmental conditions that allow the fire to be confined to a predetermined area and, at the same time, to produce the intensity of heat and rate of spread required to attain planned resource management objectives.

**Principal Meridian.** There are 45 principal meridians defined in the United States. They are identified at the end of this appendix.

**Property.** A thing of value. Specific (fixed) property refers to those things that make up the Earth's surface (e.g., water, land, roadways, structures, buildings). Mobile property refers to those things that normally move in relation to the Earth's surface (e.g., ships, airplanes, trains, trucks, automobiles).

**Property Inventory.** Information known about a property before an emergency occurs. This knowledge is in two parts: that which is general in character and has to do with external features (such as location, water supply, and construction), and that which is specific in character relating to internal features (such as interior finish, vertical openings, or suppression systems).

**Property Use.** The use to which a property is put. A building, for example, could serve as a garage or a hospital or a department store. The use of property does not define any of the other important fire-related details of a property such as access, ownership, size, internal weaknesses in fire defense, or construction.

**Public Land Survey System.** The Land Ordinance of 1785 established the Public Land Survey System in the United States. The surveys cover 30 States; other survey systems are used by the founding 13 States, Kentucky, Tennessee, Maine, Vermont, West Virginia, Texas, and Hawaii.

**Range.** Ranges are numbered east and west of the principal meridian. The first three digits are the range number and the fourth digit indicates a full or partial range (0 = full, 1 = 1/4, 2 = 1/2, and 3 = 3/4). The fifth character (E or W) indicates direction from the principal meridian.

**Rekindle.** The redevelopment of a fire after it was thought to have been extinguished by the original fire service response. Fire service response to a rekindle should be treated as a separate incident.

**Reportable Fire.** Any unfriendly, hostile fire that comes to the attention of an agency keeping fire records. Included are fires that may be discovered in progress or discovered after extinguishment.

**Response.** The deployment of an emergency service resource to an incident.

**Room.** The space or area bounded by walls. The walls may be fire rated and impede fire spread or not fire rated (e.g., mesh screen), which may impede exiting of personnel.

**Scorch.** Discoloring (browning or blackening) of a material, a characteristic of the overheat condition. Removal of the heat source will stop the destruction.

**Section.** Sections are numbered 1–36 beginning in the northeast corner for all but the very earliest principal meridians. Sections 1–6 are the northern most tier and are numbered east to west. Sections 7–12 are the next tier south of the first tier and are numbered west to east. The remaining sections follow the same pattern. Each section is nominally 640 acres, although some sections vary from the standard.

**Smoldering.** Self-sustaining combustion of a material without any flame evident.

**Stationary Object.** Any object, device, or appliance that is not fastened but that is not readily moved from one place to another in normal use (e.g., a refrigerator).

**Story.** That portion of a building between the upper surface of any floor and the upper surface of the floor next above, except that the topmost story is that portion of a building between the upper surface of the topmost floor and the upper surface of the roof deck above.

**Structure.** An assembly of materials forming a construction for occupancy or use to serve a specific purpose. This includes, but is not limited to, buildings, open platforms, bridges, roof assemblies over open storage or process areas, tents, air-supported structures, and grandstands.

**Structure Fire.** Any fire inside a structure whether it involves the structure or not, or any fire under or touching a structure that involves the structure.

**Subsection.** Sections can be subdivided into successive quarters and described as the NE quarter, NW quarter, SE quarter, and SW quarter (each approximately 160 acres). Each quarter can be quartered again to describe 40-acre parcels. For example, the SE/4 of the NW/4 would be the 40-acre parcel NW of the section center (read small parcel to large parcel).

**Toxic Material.** Any material that may constitute a hazard to life or health, either temporary or permanent, from exposure by contact, inhalation, or ingestion.

**Township.** Townships are numbered north and south of the principal base line. The first three digits are the township number, and the fourth digit indicates a full or partial township (0 = full, 1 = 1/4, 2 = 1/2, and 3 = 3/4). The fifth character (N or S) indicates direction from the baseline.

**Urban–Wildland Interface Area.** The geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels.

**Urban–Wildland Interface Fire.** Any fire, other than prescribed fire, where fire suppression tactics were influenced by a geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels (Incident Type 632).

**Vacant.** No furnishings or equipment are present.

**Wildland Fire.** Any fire involving vegetative fuels, other than prescribed fire, that occurs in the wildland. A wildland fire may expose and possibly consume structures (Incident Type 141).

**Wildland.** Land in an uncultivated, more or less natural state and covered by timber, woodland, brush, or grass. An area in which development is essentially nonexistent except for roads, railroads, power lines, and similar facilities.

## Abbreviations for States and Provinces

The following State and province abbreviations are consistent with the Federal Information Processing Standard (FIPS).

### U.S. States

AK	Alaska	02	MT	Montana	30
AL	Alabama	01	NC	North Carolina	37
AR	Arkansas	05	ND	North Dakota	38
AZ	Arizona	04	NE	Nebraska	31
CA	California	06	NH	New Hampshire	33
CO	Colorado	08	NJ	New Jersey	34
CT	Connecticut	09	NM	New Mexico	35
DC	District of Columbia	11	NV	Nevada	32
DE	Delaware	10	NY	New York	36
FL	Florida	12	OH	Ohio	39
GA	Georgia	13	OK	Oklahoma	40
HI	Hawaii	15	OR	Oregon	41
IA	Iowa	19	PA	Pennsylvania	42
ID	Idaho	16	RI	Rhode Island	44
IL	Illinois	17	SC	South Carolina	45
IN	Indiana	18	SD	South Dakota	46
KS	Kansas	20	TN	Tennessee	47
KY	Kentucky	21	TX	Texas	48
LA	Louisiana	22	UT	Utah	49
MA	Massachusetts	25	VA	Virginia	51
MD	Maryland	24	VT	Vermont	50
ME	Maine	23	WA	Washington	52
MI	Michigan	26	WI	Wisconsin	55
MN	Minnesota	27	WV	West Virginia	54
MO	Missouri	29	WY	Wyoming	56
MS	Mississippi	28			

### U.S. Territories and Possessions

AS	American Samoa	60	PR	Puerto Rico	72
CZ	Canal Zone	67	PW	Palau	70
DD	Department of Defense		UM	U.S. Minor Outlying Islands	74
FM	Federated States of Micronesia	64	VI	Virgin Islands	78
GU	Guam	66	OO	Other	00
MH	Marshall Islands	68			
MP	Northern Mariana Islands	69			

## Abbreviations for Street Types

The following street type abbreviations are from the US Postal Service

ALY	Alley	FLD	Field	LNDG	Landing
ANX	Annex	FLDS	Fields	LOOP	Loop
ARC	Arcade	FLS	Falls	MALL	Mall
AVE	Avenue	FLT	Flat	MDW	Meadow
BCH	Beach	FLTS	Flats	MDWS	Meadows
BG	Burg	FRD	Ford	MEWS	Mews
BGS	Burbs	FRDS	Fords	ML	Mill
BLF	Bluff	FRG	Forge	MLS	Mills
BLFS	Bluffs	FRGS	Forges	MNR	Manor
BLVD	Boulevard	FRK	Fork	MNRS	Manors
BND	Bend	FRKS	Forks	MSN	Mission
BR	Branch	FRST	Forest	MT	Mount
BRG	Bridge	FRY	Ferry	MTN	Mountain
BRK	Brook	FT	Fort	MTNS	Mountains
BRKS	Brooks	FWY	Freeway	MTWY	Motorway
BTM	Bottom	GDN	Garden	NCK	Neck
BYP	Bypass	GDNS	Gardens	ORCH	Orchard
CIR	Circle	GLN	Glen	OVAL	Oval
CIRS	Circles	GLNS	Glens	PARK	Park
CLF	Cliff	GRN	Green	PASS	Pass
CLFS	Cliffs	GRNS	Greens	PATH	Path
CLB	Club	GRV	Grove	PIKE	Pike
CMN	Common	GRVS	Groves	PKY	Parkway
CMNS	Commons	GTWY	Gateway	PKYS	Parkways
COR	Corner	HBR	Harbor	PL	Place
CORS	Corners	HBRs	Harbors	PLZ	Plaza
CP	Camp	HL	Hill	PNE	Pine
CPE	Cape	HLS	Hills	PNES	Pines
CRES	Crescent	HOLW	Hollow	PR	Prairie
CRK	Creek	HTS	Heights	PRT	Port
CRST	Crest	HWY	Highway	PRTS	Ports
CSWY	Causeway	HVN	Haven	PSGE	Passage
CT	Court	INLT	Inlet	PT	Point
CTR	Center	IS	Island	PTS	Points
CTRS	Centers	ISLE	Isle	RADL	Radial
CTS	Courts	ISS	Islands	RAMP	Ramp
CURV	Curve	JCT	Junction	RD	Road
CV	Cove	JCTS	Junctions	RDG	Ridge
CVS	Coves	KNL	Knoll	RDGS	Ridges
CYN	Canyon	KNLS	Knolls	RDS	Roads
DL	Dale	KY	Key	RIV	River
DM	Dam	KYS	Keys	RNCH	Ranch
DR	Drive	LCK	Lock	ROW	Row
DRS	Drives	LCKS	Locks	RPD	Rapid
DV	Divide	LDG	Lodge	RPDS	Rapids
EST	Estate	LF	Loaf	RST	Rest
ESTS	Estates	LGT	Light	RT	Route
EXPY	Expressway	LGTS	Lights	RUE	Rue
EXT	Extension	LK	Lake	RUN	Run
EXTS	Extensions	LKS	Lakes	SHL	Shoal
FALL	Fall	LN	Lane	SHLS	Shoals

SHR	Shore	TER	Terrace	VLG	Village
SHRS	Shores	TPKE	Turnpike	VLGS	Villages
SKWY	Skyway	TRAK	Track	VLY	Valley
SMT	Summit	TRCE	Trace	VLYS	Valleys
SPG	Spring	TRFY	Trafficway	VW	View
SPGS	Springs	TRL	Trail	VWS	Views
SPRS	Spurs	TRLR	Trailer	WALK	Walk
SPUR	Spur	TRWY	Throughway	WALK	Walks
SQ	Square	TUNL	Tunnel	WALL	Wall
SQS	Squares	UN	Union	WAY	Way
ST	Street	UNS	Unions	WL	Well
STA	Station	UPAS	Underpass	WLS	Wells
STRA	Stravenue	VIA	Viaduct	XING	Crossing
STRM	Stream	VIS	Vista	XRD	Crossroad
STS	Streets	VL	Ville		

## Principal Meridians

This table defines the code, meridian name, abbreviation, and States included for the principal meridians in the United States. The Land Ordinance of 1785 established the Public Land Survey System (PLSS). The survey covers 30 States. The Bureau of Land Management and U.S. Department of Interior defined these codes.

Abbreviation	Meridian Name	Code	States
1	First Principal	01	IN, OH
2	Second Principal	02	IL, IN
3	Third Principal	03	IL
4	Fourth Principal	04	IL, MN, WI
5	Fifth Principal	05	AR, MN, MO, ND, SD
6	Sixth Principal	06	CO, KS, NE, SD, WY
BH	Black Hills	07	SD
BO	Boise	08	ID
CHI	Chickasaw	09	MS
CHO	Choctaw	10	MS
CIM	Cimarron	11	OK
CR	Copper River	12	AK
FB	Fairbanks	13	AK
GSR	Gila and Salt River	14	AZ
HUM	Humboldt	15	CA
HUN	Huntsville	16	AL
IN	Indian	17	OK
LOU	Louisiana	18	LA
MI	Michigan	19	MI, OH
MT	Principal	20	MT
MD	Mt. Diablo	21	CA, NV

APPENDIX C • GLOSSARY

Abbreviation	Meridian Name	Code	States
NAV	Navajo	22	AZ
NM	New Mexico	23	CO, NM
SH	St. Helena	24	LA
SS	St. Stephens	25	AL, MS
SL	Salt Lake	26	UT
SB	San Bernardino	27	CA
SEW	Seward	28	AK
TAL	Tallahassee	29	AL
UIN	Uintah	30	UT
UTE	Ute	31	CO
WA	Washington	32	MS
WIL	Willamette	33	OR, WA
WR	Wind River	34	WY
OHI	Ohio	35	OH
GMR	Great Miami River	36	OH
MUS	Muskingum River	37	OH
OR	Ohio River	38	OH
SC1	First Scioto River	39	OH
SC2	Second Scioto River	40	OH
SC3	Third Scioto River	41	OH
ELL	Ellicotts Line	42	OH
12M	12 Mile Square	43	OH
KR	Kateel River	44	AK
UMI	Umiat	45	AK

## Abbreviations Used in Manual

ADD	attention deficit disorder	ICC	Interstate Commerce Commission
ADHD	attention deficit hyperactive disorder	LCD	liquid crystal display
AED	automatic external defibrillator	LOC	level of consciousness
AES	automatic extinguishing system	LP	liquid propane
ALS	advanced life support	LPG	liquefied petroleum gas
ARFF	Aircraft Rescue and Firefighting	MRI	magnetic resonance imaging
ATF	Alcohol, Tobacco, and Firearms	MSDS	Material Safety Data Sheets
ATM	automatic teller machine	NAERG	North American Emergency Response Guidebook
ATV	all-terrain vehicle	NFDC	National Fire Data Center
BATF	Bureau of Alcohol, Tobacco, and Firearms	NFDRS	National Fire Danger Rating System
BLS	basic life support	NFIRS	National Fire Incident Reporting System
CAS	Chemical Abstract Service	NIBRS	National Incident-Based Reporting System
CAT	computerized axial tomography	NIFC	National Interagency Fire Center
CGI	combustible gas indicators	OB	obstetrics
CPR	cardio-pulmonary resuscitation	OD	overdose
CRG	NFIRS 5.0 Complete Reference Guide	OMB	Office of Management and Budget
CVA	cerebrovascular accident	ORI	Originating Agency Identifier
DOT	Department of Transportation	PASS	Personal Alert Safety System
ECF	emergency care facility	PLSS	Public Land Survey System
EGTA	esophageal gastric tube airway	psi	pounds per square inch
EKG	electrocardiogram	RIBC	rigid intermediate bulk container
EMS	emergency medical service	SCBA	self-contained breathing apparatus
EMT	emergency medical technician	SCUBA	self-contained underwater breathing apparatus
ET	endotracheal tube	TIA	transient ischemic attack
FBI	Federal Bureau of Investigation	UCR	Uniform Crime Reporting
FD	fire department	UPS	uninterrupted power supply
FDID	fire department identification	USFA	United States Fire Administration
FIBC	flexible intermediate bulk containers	V-Fib	ventricular fibrillation
FID	Federal identifier	V-Tach	ventricular tachycardia
FIPS	Federal Information Processing Standard	VIN	vehicle identification number
GFI	ground fault interrupter		
HazMat	hazardous material		
HVAC	heating, ventilation, and air conditioning		



## **Appendix D**

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# **IDENTIFICATION OF CHEMICALS AND HAZARDOUS MATERIALS**

**APPENDIX D • CHEMICAL IDENTIFICATION**

Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
1-(Chloromethyl)-4-nitrobenzene	0702000			1,2-Propylenediamine	1537000	2258	
1-(2-Tolyl) thiourea	0292001		614-78-8	1,3-Butadiene	0059004	1010	106-99-0
1,1,1-Trichloroethane	0389000	2831	71-55-6	1,3-CPD	0137002	2048	77-73-6
1,1,1,2,2-Tetrachloroethane	0374005	1702	79-34-5	1,3-Cyclopentadiene dimer	0137003	2048	77-73-6
1,1,1,2-Trichloro-1,2,2-trifluoroethane	1715000			1,3-D	0135001	2047	542-75-6
1,1-DCE	1834000			1,3-Dichloro-2-propanone	0127002	2649	534-07-6
1,1-Di-(tert-butylperoxy) cyclohexane	0859000	2179		1,3-Dichloroacetone	0127000	2649	534-07-6
1,1-Dichloroethane	0130000	2362	75-34-3	1,3-Dichloropropene	0135002	2047	542-75-6
1,1-Dichloroethylene	0408002	1303	75-35-4	1,3-Dimethylbenzene	0412002	1307	
1,1-Diethoxyethane	0001003	1088	105-57-7	1,3-Dinitrobenzene	0166002	1597	
1,1-Difluoroethane	0147001	1030	75-37-6	1,3-Pentadiene	0319000		504-60-9
1,1-Difluoroethylene	0908000	1959		1,4- Butenediol	0607000		
1,1-Dimethylethane	0238001	1969	75-28-5	1,4-Benzoquinone	0041001	2587	106-51-4
1,1-Dimethylethyl hydroperoxide	0068002		75-91-2	1,4-Butynediol	0072000	2716	110-65-6
1,1-Dimethylethylamine	0065003	2734	75-64-9	1,4-Cyclohexadiene dioxide	0041003	2587	106-51-4
1,1-Dimethylhydrazine	0159000	1163	57-14-7	1,4-Dichloro-2-butene	1839003		
1,1-Oxy-bis-(2-chloroethane)	0129006	1916	111-44-4	1,4-Dichlorobenzene	0128001	1592	106-46-7
1,2,3,4-Diepoxybutane	0138004		1464-53-5	1,4-Dichlorobutene	1839002		
1,2,3,5-Tetramethyl benzene	1662000			1,4-Dicyanobutane	0015002	2205	111-69-3
1,2,3,7,8-Pentachlorodibenzo-furans	1453000			1,4-Diethylenedioxiide	0169001	1165	123-91-1
1,2,3-Trichloropropane	1712000			1,4-Dihydroxy-2-butyne	0072004	2716	110-65-6
1,2,4-Trichlorobenzene	1701000	2321		1,4-Dimethylbenzene	0412003	1307	
1,2-Butylene oxide	0067000	3022	106-88-7	1,4-Dinitrobenzene	0166003	1597	
1,2-DCE	0131002	1150	540-59-0	1,4-Dioxane	0169000	1165	123-91-1
1,2-Diaminoethane	0191002	1604	107-15-3	1,4-Epoxybutane	0379001	2056	109-99-9
1,2-Dibromo-3-chloropropane	0853000	2872		1-Acetoxyethylene	0403003	1301	108-05-4
1,2-Dibromoethane	0192002	1605	106-93-4	1-Acetoxypropane	0347002	1276	109-60-4
1,2-Dichloroethane	0193001	1184	107-06-2	1-Amino-2,4-dinitrobenzene	0165001	1596	97-02-9
1,2-Dichloroethylene	0131000	1150	540-59-0	1-Amino-2-propanol	0243001		78-96-6
1,2-Dichloropropane	0351001	1279	78-87-5	1-Aminobutane	0064001	1125	109-73-9
1,2'-Dichlorotriethylamine	0180001	2734	538-07-8	1-Bromo-3-methylbutane	0595000	2341	
1,2-Diethoxyethane	0195001	1153	629-14-1	1-Bromobutane	0056000	1126	109-65-9
1,2-Diethylhydrazine	0145000		1615-80-1	1-Bromopropane	0598000		
1,2-Dimethoxyethane	0150000	2252	110-71-4	1-Butanethiol	0070001	2347	109-79-5
1,2-Dimethylbenzene	0412001	1307		1-Butene oxide	0067001	3022	106-88-7
1,2-Dinitrobenzene	0166001	1597		1-Butyl acetate	0061002	1123	123-86-4
1,2-Epoxybutane	0067003	3022	106-88-7	1-Butylene oxide	0067002	3022	106-88-7
1,2-Epoxyethane	0199004	1040	75-21-8	1-Chloro-1-propene	0710000		
1,2-Epoxypropane	0353002	1280	75-56-9	1-Chloro-2,3-epoxypropane	0172001	2023	106-89-8
1,2-Ethylene dichloride	0193005	1184	107-06-2	1-Chloro-2-cyanoethane	0102001	3276	542-76-7
1,2-Propanediol-1-methacrylate	0236001		27813-02-1	1-Chloro-2-nitrobenzene	0097001	1578	
				1-Chloro-4-methylbenzene	0104001	2238	106-43-4
				1-Chlorobutane	0094003	1127	109-69-3

APPENDIX D • CHEMICAL IDENTIFICATION

Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
1-Chloropropane	0708000	1278		2,2-Dimethyl octanoic acid	0938000		
1-Chloropropylene	0713000			2,2-Dimethylbutane	0300001	1208	75-83-2
1-Decene	0816000			2,2-Dimethylpropane	0942000	2044	
1-Fluoroethene	0407002	1860	75-02-5	2,2-Dimethylpropane-1,3-diol	0943000		
1-Heptene	0220001	2278	592-76-7	2,3,7,8-Tetrachlorodibenzofurans	1649000		
1-Hexanol	1152000	2282		2,3,7,8-Tetrachlorodibenzo-p-dioxin(TCDD)	1650000	2378	
1-Hexene	0222002	2370	592-41-6	2,3-Butylene oxide	0618000		
1-Isocyanobutane	0069003	2485	111-36-4	2,3-Dichloropropene	0877000	2047	
1-Methoxyethylene	0409002	1087	107-25-5	2,3-Dihydropyran	0912000	2376	
1-Methyl ethyl alcohol	0242004	1219	67-63-0	2,4,5-TP (or Silvex)	1691000	2765	
1-Methyl naphthalene	1310000			2,4,5-Trichlorophenoxyacetic acid	1707000	2765	
1-Methyl pyrrolidone	1327000			2,4,5-Trichlorophenoxyacetic acid, sodium salt	1708000		
1-Methyl-1-phenylethene	0244003	2303	98-83-9	2,4,6-Trichlorophenol	1706000	2020	
1-Methyl-2-aminoethanol	0243003		78-96-6	2,4,6-Trichloro-s-triazine	0113001	2670	108-77-0
1-Methylbutadiene	0319001		504-60-9	2,4,6-Trimethyl aniline	1737000		
1-Methylethylamine	0245002	1221	75-31-0	2,4-D	0122000	2765	94-75-7
1-Methylhydrazine	0282002	1244	60-34-4	2,4-Diaminotoluene	0385002	1709	95-80-7
1-Nitropropane	0308001	2608	108-03-2	2,4-Dichlorophenol	0875000		
1-Octene	0313002		111-66-0	2,4-Dichlorophenoxyacetic acid	0122002	2765	94-75-7
1-Pentanol	0032005	1105	71-41-0	2,4-Dimethyl phenol	0939000	2261	
1-Pentene	1461000	1108		2,4-Dinitro-1-aminobenzamine	0165002	1596	97-02-9
1-Pentyl alcohol	0032006	1105	71-41-0	2,4-Dinitroaniline	0165000	1596	97-02-9
1-Phenyl-2-thiourea	0328003	2767	103-85-5	2,4-Dinitrobenzamine	0165003	1596	97-02-9
1-Phenylpropane	0348002	2364	103-65-1	2,4-Dinitro-o-cresol	0167002	1598	534-52-1
1-Propanethiol	0342001	2402	107-03-9	2,4-Dinitrophenol	0168004		51-28-5
1-Propene	0350004	1077	115-07-1	2,4-Dinitrotoluene	0951000	2038	
1-Propyl acetate	0347003	1276	109-60-4	2,4-DNP	0168005		51-28-5
1-Propylene	0350005	1077	115-07-1	2,4-Pentadione	0320005	2310	123-54-6
1-Tetradecene	1653000			2,4-TDI	0386002	2078	584-84-9
1-Tridecene	1720000			2,4-Toluenediamine	0385000	1709	95-80-7
1-Undecene	1761000			2,5-Dioxahexane	0150003	2252	110-71-4
2-Chloronaphthalene	0703000			2,6-Diethyl aniline	0889000		
2-(2,4,5-Trichlorophenoxy) propanoic acid	1709000	2765		2,6-Xylidine	1784000	1711	
2-(2,4,5-Trichlorophenoxy) propanoic acid,	1835000			2-Acetylaminofluorene	0417000		
2-(2-Aminoethoxy)ethanol	0441000	3055		2-Amino-2-methyl-1-propanol	0444000		
2,2',2''-Trichlorotriethylamine	0399001		555-77-1	2-Aminoethanol	0174001	2491	141-43-5
2,2'-Diaminodiethylamine	0143004	2079	111-40-0	2-Aminoisobutane	0065001	2734	75-64-9
2,2'-Dichlorodiethyl ether	0129000	1916	111-44-4	2-Aminopentane	0140001	1154	109-89-7
2,2-Dichloroisopropyl ether	0872000	2490		2-Aminopropane	0245001	1221	75-31-0
2,2'-Dichlorotriethylamine	0880000			2-Aminopyridine	0023001	2671	
				2-Bromobutane	0591000	2339	

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
2-Bromoethyl ethyl ether	0593000	2340		2-Hexanone	0271001	1224	591-78-6
2-Bromopentane	0596000			2-Hexene	1153000		
2-Bromopropane	0057000	2344	75-26-3	2-Hydroperoxy-2-methylpropene	0068003		75-91-2
2-Butanone	0280001	1193	78-93-3	2-Hydroxyethyl acrylate	1160000		
2-Butenal	0106001	1143	4170-30-3	2-Hydroxyisobutyronitrile	0005002	1541	75-86-5
2-Butyne-1,4-diol	0072001	2716	110-65-6	2-Hydroxypropionitrile	0250003	3275	78-97-7
2-Butynediol	0072002	2716	110-65-6	2-Hydroxypropylamine	0243002		78-96-6
2-Chloro-1,3-butadiene	0100003	1991	126-99-8	2-Hydroxytriethylamine	0141004	2686	100-37-8
2-Chloro-1-ethanol	0189002	1135	107-07-3	2-Isopropylcyanohydrin	0005004	1541	75-86-5
2-Chloroacetaldehyde	0090001	2232	107-20-0	2-Methoxy-2-methylpropane	0270002	2398	1634-04-4
2-Chloroacrylic acid, methyl ester	0275001		80-63-7	2-Methoxyethanol	0197005	1188	109-86-4
2-Chlorobuta-1,3-diene	0100004	1991	126-99-8	2-Methyl lactonitrile	0005005	1541	75-86-5
2-Chlorobutane	0693000	1127		2-Methyl-1,3-butadiene	0241002	1218	78-79-5
2-Chloroethane sulfonyl chloride	0697000			2-Methyl-1-butene	1281000	2459	
2-Chloroethanol	0189001	1135	107-07-3	2-Methyl-1-butenone	0287003	1246	814-78-8
2-Chloroethyl chlorocarbonate	0095001	2742	627-11-2	2-Methyl-1-nitroanthraquinone	1312000		
2-Chloroethyl vinyl ether	0698000			2-Methyl-1-pentene	1317000		
2-Chlorophenylthiourea	0098000		5344-82-1	2-Methyl-2-butene	1282000	2460	
2-Chloropropane	0709000	2356		2-Methyl-2-hydroxy-3-butyne	1305000		
2-Chloropropene	0711000	2456		2-Methyl-2-pentene	1318000		
2-Chloropropionic acid	0101001	2511	598-78-7	2-Methyl-2-propenoic acid	0255003	2531	79-41-4
2-Cyano-2-propanol	0005001	1541	75-86-5	2-Methyl-4-pentanone	0285003	1245	108-10-1
2-Cyanoethyl alcohol	0190001		109-78-4	2-Methyl-5-vinyl pyridine (MVP)	1331000	3073	
2-Cyanohydrin	0190002		109-78-4	2-Methyl-6-ethyl aniline	1298000		
2-Cyanopropane	0240001	2284	78-82-0	2-Methylacrylic acid, methyl ester	0290002	1247	80-62-6
2-Cyanopropene	0264001	3079	126-98-7	2-Methylbutadiene	0241003	1218	78-79-5
2-Diethylaminoethanol	0141002	2686	100-37-8	2-Methylpropane	0238002	1969	75-28-5
2-Dimethylaminoethanol	0930000	2051		2-Methylpropene	0239001	1055	115-11-7
2-Ethoxyethanol	0196001	1171	110-80-5	2-Methylpropenenitrile	0264003	3079	126-98-7
2-Ethoxyethyl ethyl ether	0195004	1153	629-14-1	2-Nitrophenol	1399000	1663	
2-Ethyl hexanoic acid	1052000			2-Nitropropane	0308002	2608	79-46-9
2-Ethyl hexanol	1053000			2-Nitrotoluene	0310002	1664	
2-Ethyl hexylamine	1054000	2276		2-Oxetanone	0344002	1993	57-57-8
2-Ethyl toluene	1071000			2-Pentene	1462000		
2-Ethyl-3-propyl acrolein	1065000			2-Phenyloxirane	0363002		96-09-3
2-Fluoroacetic acid	0208002	2642	144-49-0	2-Phenylpropane	0246003	1918	98-82-8
2-Fluoroaniline	1096000	2941		2-Phenylpropylene	0244004	2303	98-83-9
2-Fluoroethanol	0194001		371-62-0	2-Propanol	0242005	1219	67-63-0
2-Formylfuran	0216001	1199	98-01-1	2-Propanone	0004003	1090	67-64-1
2-Furaldehyde	0216003	1199	98-01-1	2-Propen-1-amine	0018005	2334	107-11-9
2-Furfural	0216004	1199	98-01-1	2-Propenal	0010004	1092	79-06-1
2-H-1,4-oxazine	0298003	2054	110-91-8	2-Propenamine	0018004	2334	107-11-9
2-Heptanone	0267003	1110	110-43-0	2-Propenenitrile	0013004	1093	107-13-1

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
2-Propenoic acid	0012007	2218	79-10-7	3-Propanolide	0344003	1993	57-57-8
2-Propenol	0017006	1098	107-18-6	3-Trifluoromethylaniline	1731000	2948	
2-Propenyl bromide	0019004	1099	106-95-6	4,4'-DDT	0811000	2761	
2-Propenyl chloroformate	0021002	1722	2937-50-0	4,4'-Diaminodiphenyl ether	0832000		
2-Propyl chloroformate	0247003	2407	108-23-6	4,4'-Isopropylidenediphenol	1186000		
2-Propylamine	0245003	1221	75-31-0	4,4'-Methylene bis-			
2-Propynol	0343003	1986	107-19-7	(2-chloroaniline)	1292000		
2-Pyrrolidone	1551000			4,4'-Methylene bis-			
2-Thiopropene	0163004	1164	75-18-3	(2-methylaniline)	1293000		
2-Thiourea	0382003		62-56-6	4,4'-Methylene dianiline	1295000		
3-(1-Methyl ethyl) phenyl methyl carbamate	1299000			4,4'-Thiodianiline	1679000		
3,3'-Dichlorobenzidine	0869000			4,6-Dinitro-o-cyclohexyl phenol	0950000	9026	
3,3'-Diethylthiadicarbocyanine iodide	0171002		514-73-8	4-Aminoazobenzene	0439000		
3-Aminopropene	0018001	2334	107-11-9	4-Aminobutyl diethoxymethyl silane	0440000		
3-Aminopropylene	0018002	2334	107-11-9	4-Amino-N,N-dimethylaniline	0160001		99-98-9
3-Aminopyridine	0023002	2671		4-Aminopropiophenone	0445000		
3-Bromo-1-propene	0019002	1099	106-95-6	4-Aminopyridine	0023003	2671	
3-Bromopropylene	0019003	1099	106-95-6	4-Bromophenyl phenyl ether	0597000		
3-Bromopropyne	0058000	2345	106-96-7	4-Chloro-1-methylbenzene	0104002	2238	106-43-4
3-Buten-2-one	0297001	1251	78-94-4	4-Chlorophenyl phenyl ether	0705000		
3-Buteno-beta-lactone	0149002	2521	674-82-8	4-Chlorotoluene	0104003	2238	106-43-4
3-Chloropropanenitrile	0102002	3276	542-76-7	4-Dimethyl aminoazobenzene	0929000		
3-Chloropropene	0020003	1100	107-05-1	4-Fluoroaniline	1097000	2941	
3-Chloropropionitrile	0102000	3276	542-76-7	4-Fluorotoluene	1098000	2388	
3-Chloropropyl octyl sulfoxide	0714000			4-Methyl-1-pentene	0291000	2288	691-37-2
3-Chlorotoluene	0716000	2238		4-Methyl-2-pentanol	0284004	2053	108-11-2
3-Hexene	1154000			4-Methyl-2-pentene	1319000		
3-Hydroxy-1-propyne	0343002	1986	107-19-7	4-Methyl-3-penten-2-one	1841004	1229	141-79-7
3-Hydroxypropionitrile	0190005		109-78-4	4-Methylene	0149004	2521	674-82-8
3-Methoxybutyl acetate	1267000			4-Nitroaniline	1380000	1661	
3-Methyl nitrosoaminopropionitrile	1313000			4-Nitrobiphenyl	1382000		
3-Methyl-1-butene	1283000	2561		4-Nitrophenol	1401000	1663	
3-Methyl-2-butanone	0269000	2397	563-80-4	4-Nitropyridine-1-oxide	1402000		
3-Methyl-3-butene-2-one	0287002	1246	814-78-8	4-Nitrotoluene	0310004	1664	
3-Methylbut-2-one	0269002	2397	563-80-4	4-Pyridinamine	0023009	2671	
3-MIC	0284006	2053	108-11-2	4-Pyridylamine	0023010	2671	
3-Nitrophenol	1400000	1663		4-Thiapentanal	1674000	2785	
3-Nitrotoluene	0310003	1664		5-Nitroacenaphthene	1379000		
3-Nitrotoluol	0310007	1664		5-Nitro-o-anisidine	1381000		
3-Pentanone	0146005	1156	96-22-0				

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
7H- Dibenzo (C,G) carbazole	0850000			Acetylene	0009000	1001	74-86-2
				Acetylene dichloride	0131001	1150	540-59-0
A-150	0411001	1305	75-94-5	Acetylene tetrachloride	0374001	1702	79-34-5
AA	0017002	1098	107-18-6	Acetylene trichloride	0390001	1710	79-01-6
Acetal	0001000	1088	105-57-7	Acetylenogen	0076001	1402	75-20-7
Acetaldehyde	0002000	1089	75-07-0	Acetylsilicon trichloride	0022001	1724	107-37-9
Acetaldehyde cyanohydrin	0250001	3275	78-97-7	Acridine	0419000	2713	
Acetaldehyde ethylacetal	0001001	1088	105-57-7	Acroleic acid	0012001	2218	79-10-7
Acetamide	0414000			Acrolein	0010000	1092	79-06-1
Acetene	0188001	1038	74-85-1	Acryldehyde	0010001	1092	79-06-1
Acetic acid (more than 80%)	1840001	2789	64-19-7	Acrylamide	0011000	2074	79-06-1
Acetic acid (solution in water 1-80%)	1840000	2790	64-19-7	Acrylic acid	0012000	2218	79-10-7
Acetic acid anhydride	0003001	1715	108-24-7	Acrylic acid, butyl ester	0062001	2348	141-32-2
Acetic acid bromide	0007001	1716	506-96-7	Acrylic acid, chloride	0014001	9188	814-68-6
Acetic acid chloride	0008001	1717	75-36-5	Acrylic acid, ethyl ester	0176001	1917	140-88-5
Acetic acid, dimethylamide	0151001		127-19-5	Acrylic acid, methyl ester	0263001	1919	96-33-3
Acetic acid, ethinyl ester	0403001	1301	108-05-4	Acrylic amide	0011001	2074	79-06-1
Acetic acid, methyl ester	0261001	1231	79-20-9	Acrylonitrile	0013000	1093	107-13-1
Acetic acid, n-butyl ester	0061001	1123	123-86-4	Acryloyl chloride	0014000	9188	814-68-6
Acetic acid, n-propyl ester	0347001	1276	109-60-4	Acrylyl chloride	0014002	9188	814-68-6
Acetic acid, vinyl ester	0403002	1301	108-05-4	Actidione	0117001		66-81-9
Acetic aldehyde	0002001	1089	75-07-0	Actidone	0117002		66-81-9
Acetic anhydride	0003000	1715	108-24-7	Adipic acid	0420000		
Acetic chloride	0008002	1717	75-36-5	Adipic acid dinitrile	0015001	2205	111-69-3
Acetic ester	0175001	1173	141-78-6	Adiponitrile	0015000	2205	111-69-3
Acetic ether	0175002	1173	141-78-6	Alachlor	0421000		
Acetoacetone	0320001	2310	123-54-6	Alcide	0088001	9191	10049-04-4
Acetocyanohydrin	1819000			Aldicarb	0016000	2757	116-06-3
Acetol	0001002	1088	105-57-7	Aldifen	0168003		51-28-5
Acetone	0004000	1090	67-64-1	Aldrin	0422000	2761	
Acetone cyanohydrin	0005000	1541	67-64-1	Algrain	0177001	1170	64-17-5
Acetone thiosemicarbazide	0415000			Alkyl benzene sulfonic acids	0423000		
Acetonitrile	0006000	1648	75-05-8	Allene	0424000	2200	
Acetophenone	0416000			Allene-methyl acetylene mixture	0262001	1060	
Acetyl acetone	0320002	2310	123-54-6	Allethrin	0425000	2902	
Acetyl anhydride	0003002	1715	108-24-7	Allyl acetate	0426000	2333	
Acetyl bromide	0007000	1716	506-96-7	Allyl alcohol	0017000	1098	107-18-6
Acetyl chloride	0008000	1717	75-36-5	Allyl aldehyde	0010002	1092	79-06-1
Acetyl ether	0003003	1715	108-24-7	Allyl bromide	0019000	1099	106-95-6
Acetyl ketene	0149001	2521	674-82-8	Allyl chloride	0020000	1100	107-05-1
Acetyl oxide	0003004	1715	108-24-7	Allyl chlorocarbonate	0021001	1722	2937-50-0
Acetyl peroxide solution	0418000	2084		Allyl chloroformate	0021000	1722	2937-50-0
				Allyl ether	0427000		

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Allyl ethyl ether	0428000	2335		Amiton oxalate	0447000		
Allyl iodide	0429000	1723		Amitrole	0448000		
Allyl isothiocyanate	0430000	1545		Ammonia	0024000	1005	7664-41-7
Allylal	0017001	1098	107-18-6	Ammonia monohydrate	0027001		1336-21-6
Allylamine	0018000	2334	107-11-9	Ammonia solution	0027002		1336-21-6
Allylic alcohol	0017003	1098	107-18-6	Ammonia water	0027003		1336-21-6
Allyltrichlorosilane	0022000	1724	107-37-9	Ammonia, anhydrous	0024002	1005	7664-41-7
alpha-Bromotoluene	0044001	1737	100-39-0	Ammonium acetate	0449000		
alpha-Chlorobenzaldehyde	0043002	1736	98-88-4	Ammonium aminoformate	0026001	9083	1111-78-0
alpha-Chloropropionic acid	0101000	2511	598-78-7	Ammonium benzoate	0025000	9080	1863-63-4
alpha-Chlorotoluene	0045001	1738	100-44-7	Ammonium bicarbonate	0452000		
alpha-Cumene hydroperoxide	0107001	2116	80-15-9	Ammonium bifluoride	0453000	1727	
alpha-Endosulfan	0992000			Ammonium bisulfite	0454000	2693	
alpha-Methacrylic acid	0255002	2531	79-41-4	Ammonium bromide	0455000		
alpha-Methylacrylic acid	0255001	2531	79-41-4	Ammonium carbamate	0026000	9083	1111-78-0
alpha-Methyl benzyl alcohol	1280000	2937		Ammonium carbonate	0456000	9084	
alpha-Methyl styrene	0244002	2303	98-83-9	Ammonium chloride	0457000	9085	
alpha-Naphthyl amine	1355000	2077		Ammonium chromate	0458000	9086	
alpha-Pinene	0337000	2368	80-56-8	Ammonium citrate	0459000	9087	
alpha-Tolunitrile	0324001	2470	140-29-4	Ammonium dichromate	0460000	1439	
Aluminum (dust)	0431000	1396		Ammonium fluoborate	0461000	9088	
Aluminum borohydride	0432000	2870		Ammonium fluoride	0462000	2505	
Aluminum chloride	0433000	1726		Ammonium formate	0463000		
Aluminum fluoride	0434000			Ammonium gluconate	0464000		
Aluminum nitrate	0435000	1438		Ammonium hydroxide	0027000	2672	1336-21-6
Aluminum oxide	0436000			Ammonium hydroxide (10-35% in water)	0027004	2672	1336-21-6
Aluminum phosphide	0437000	1397		Ammonium hydroxide (35-50% in water)	0027005	2073	1336-21-6
Aluminum sulfate	0438000			Ammonium hypophosphite	0465000		
Aluminum, triisobutyl	0395001		100-99-2	Ammonium iodide	0466000		
AMFO	0034001	0331		Ammonium lactate	0467000		
AM-FOL	0024001	1005	7664-41-7	Ammonium lauryl sulfate	0468000		
Aminic acid	0214001	1779	64-18-6	Ammonium molybdate	0469000		
Aminobenzene	0035002	1547	62-53-3	Ammonium monosulfide	0029001	2683	12135-76-1
Aminocyclohexane	0118001	2357	108-91-8	Ammonium nitrate	0470000	1942	
Aminoethane	0178001	1036	75-04-7	Ammonium nitrate fertilizers	0471000	2072	
Aminoethyl ethanol amine	0442000			Ammonium nitrate:fuel oil	0034002	0331	
Aminoethylethandiamine	0143001	2079	111-40-0	Ammonium nitrate-phosphate mixture	0472000	2070	
Aminohexahydrobenzene	0118002	2357	108-91-8	Ammonium nitrate-sulfate mixture	0473000	2069	
Aminomethane	1831000			Ammonium nitrate-urea solution	0474000		
Aminophen	0035001	1547	62-53-3	Ammonium oleate	0475000		
Aminopyridine	0023000	2671					
Aminotoluene	0387001	1708					
Amiton	0446000	3017					

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Ammonium oxalate	0476000	2449		Antimony pentafluoride	0503000	1732	
Ammonium pentaborate	0477000			Antimony potassium tartrate	0504000	1551	
Ammonium perchlorate	0028000	1442	7790-98-9	Antimony tribromide	0505000	1549	
Ammonium perchlorate high explosive	0028001	1442	7790-98-9	Antimony trichloride	0506000	1733	
Ammonium perchlorate oxidizer	0028002	1442	7790-98-9	Antimony trifluoride	0507000	1549	
Ammonium permanganate	0478000	9190		Antimony trioxide	0508000		
Ammonium persulfate	0479000	1444		Antimony (powder)	0501000	2871	
Ammonium phosphate	0480000			ANTU	0509000	1651	
Ammonium picrate (wet)	0481000	1310		Aqua fortis	0302002		7697-37-2
Ammonium rhodanate	0031000	9092	1762-95-4	Aqueous ammonia	0027006		1336-21-6
Ammonium silicofluoride	0482000	2854		Aramite	0510000		
Ammonium stearate	0483000			Arctic	0273001	1063	74-87-3
Ammonium sulfamate	0484000	9089		Argon	0511000	1006	
Ammonium sulfate	0485000			Arsenic	0512000	1558	
Ammonium sulfide	0029000	2683	12135-76-1	Arsenic acid	0513000	1561	
Ammonium sulfite	0030000	9090	10196-04-0	Arsenic butter	0036001	1560	7784-34-1
Ammonium sulfocyanide	0031001	9092	1762-95-4	Arsenic chloride	0036002	1560	7784-34-1
Ammonium tartrate	0486000	9091		Arsenic dichloroethane	0186001	1892	598-14-1
Ammonium thiocyanate	0031002	9092	1762-95-4	Arsenic disulfide	0514000	1557	
Ammonium thiosulfate	0487000	9093		Arsenic hydride	0037001	2188	7784-42-1
AMS	0244001	2303	98-83-9	Arsenic pentoxide	0515000	1559	
Amthio	0031003	9092	1762-95-4	Arsenic trichloride	0036000	1560	7784-34-1
Amyl alcohol	0032000	1105	71-41-0	Arsenic trihydride	0037002	2188	7784-42-1
Amyl methyl ketone	0267001	1110	110-43-0	Arsenic trioxide	0516000	1561	
Amyl phthalate	0494000			Arsenic trisulfide	0517000	1557	
Amylol	0032002	1105	71-41-0	Arsenous chloride	0036003	1560	7784-34-1
Amyltrichlorosilane	0033000	1728	107-72-2	Arsenous trichloride	0036004	1560	7784-34-1
AN/FO	0034000	0331		Arsine	0037000	2188	7784-42-1
Anhydrol	0177002	1170	64-17-5	Asbestos	0518000	2212	
Anhydrous ammonia	0024003	1005	7664-41-7	Asphalt	0519000	1999	
Anhydrous ethanol	0177003	1170	64-17-5	Asphalt blending stocks: roofers flux	0520000	1999	
Anhydrous hydrobromic acid	0228001	1048	10035-10-6	Asphalt blending stocks: straight run residue	0521000	1999	
Anhydrous hydrofluoric acid	0231001	1052	7664-39-3	asym-Dimethylhydrazine	0159001	1163	57-14-7
Aniline	0035000	1547	62-53-3	Atrazine	0522000		
Aniline oil	0035003	1547	62-53-3	Auramine	0523000		
Anisole	0498000	2222		Avitrol	0023007	2671	
Anisoyl chloride	0499000	1729		Azabenzene	0354001	1282	110-86-1
Anone	0116001	1915	108-94-1	Azacyclohexane	0338001	2401	110-89-4
Ansul ether 121	0150001	2252	110-71-4	Azacyclopropane	0198001	1185	151-56-4
Anthion	0340001	1492	7727-21-1	Azide	0357001	1687	26628-22-8
Anthracene	0500000			Azine	0354002	1282	110-86-1
Antimony pentachloride	0502000	1730					

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Azirane	0198002	1185	151-56-4	Benzoic acid	0549000		
Aziridine	0198003	1185	151-56-4	Benzoic acid amide	0038001		
Barium	0524000	1400		Benzoic aldehyde	1838004		100-52-7
Barium carbonate	0525000	1564		Benzoic trichloride	0042001	2226	98-07-7
Barium chlorate	0533000	1445		Benzol	0039001	1114	71-43-2
Barium cyanide	0534000	1565		Benzonitrile	0040000	2224	100-47-0
Barium nitrate	0535000	1446		Benzophenone	0550000		
Barium perchlorate	0536000	1447		Benzoquinone	0041000	2587	106-51-4
Barium permanganate	0537000	1448		Benzotrichloride	0042000	2226	98-07-7
Barium peroxide	0538000	1449		Benzoyl chloride	0043000	1736	98-88-4
BCME	0133001	2249	542-88-1	Benzoyl peroxide	0551000	2085	
BD	0059001	1010	106-99-0	Benzoylamide	0038002		
Benomyl	0539000			Benzyl acetate	0552000		
Bentazon	0540000			Benzyl alcohol	0553000		
Benzal chloride	0047001	1886	98-87-3	Benzyl amine	0554000		
Benzaldehyde	1838000	1989	100-52-7	Benzyl bromide	0044000	1737	100-39-0
Benzaldehyde	1838001	1990	100-52-7	Benzyl carbonyl chloride	0046001	1739	501-53-1
Benzamide	0038000			Benzyl chloride	0045000	1738	100-44-7
Benzenamine	0035004	1547	62-53-3	Benzyl chlorocarbonate	0046002	1739	501-53-1
Benzene	0039000	1114	71-43-2	Benzyl chloroformate	0046000	1739	501-53-1
Benzene arsonic acid	0541000			Benzyl cyanide	0324003	2470	140-29-4
Benzene chloride	0093001	1134	108-90-7	Benzyl dichloride	0047002	1886	98-87-3
(Chloromethyl) benzene	0045002	1738	100-44-7	Benzyl dimethyl amine	0555000	2619	
Benzene fluoride	0209001	2387	462-06-6	Benzyl dimethyl octadecyl ammonium chloride	0556000		
Benzene hexachloride	0542000	2729		Benzyl ether	0124001		103-50-4
Benzene methylal	1838003		100-52-7	Benzyl iodide	0557000	2653	
Benzene nitro	1842001	1662	98-95-3	Benzyl nitrile	0324004	2470	140-29-4
Benzene phosphorous dichloride	0327001	2798	644-97-3	Benzyl oxide	0124002		103-50-4
Benzene sulfonyl chloride	0543000	2225		Benzyl trichloride	0042003	2226	98-07-7
Benzeneacetonitrile	0324002	2470	140-29-4	Benzyl trimethyl ammonium chloride	0558000		
Benzenecarbonal	1838002		100-52-7	Benzyl violet	0559000		
Benzenecarbonyl chloride	0043001	1736	98-88-4	Benzylene chloride	0047003	1886	98-87-3
Benzenehexahydride	0115001	1145	108-94-1	Benzylidene chloride	0047000	1886	98-87-3
Benzenenitrile	0040001	2224	100-47-0	Beryllium	0560000	1567	
Benzenethiol	0326001	2337	108-98-5	Beryllium chloride	0561000	1566	
Benzenol	0323003		108-95-2	Beryllium fluoride	0562000	1566	
Benzidine	0544000	1885		Beryllium nitrate	0563000	2464	
Benzin	0299001		8030-30-6	Beryllium oxide	0564000	1566	
Benzo (A) anthracene	0545000			Beryllium sulfate	0565000	1566	
Benzo (A) pyrene	0546000			beta-Butyrolactone	0606000		
Benzo (B) fluoranthene	0547000			beta-Chloroprene	0100001	1991	126-99-8
Benzo (GHI) perylene	0548000						

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
beta-Endosulfan	0993000			Boroethane	0125001	1911	19287-45-7
beta-Methyl acrolein	0106006	1143	4170-30-3	Boron bromide	0048001	2692	10294-33-4
beta-Propiolactone	0344004	1993	57-57-8	Boron chloride	0049001	1741	10294-34-5
BHA	0566000			Boron fluoride	0050001	1008	7637-07-2
BHC, alpha-	0567000			Boron hydride	1820000		
BHC, beta-	0568000			Boron tribromide	0048000	2692	10294-33-4
BHC, delta-	0569000			Boron trichloride	0049000	1741	10294-34-5
BHC, gamma-	0570000			Boron trifluoride	0050000	1008	7637-07-2
BIC	0069001	2485	111-36-4	Boron trifluoride; dimethyl etherate	0585000	2965	
Bicyclopentadiene	0137001	2048	77-73-6	Bottled gas	0252001	1075	68476-85-7
Biethylene	0059002	1010	106-99-0	BPL	0344001	1993	57-57-8
Bimethyl	0173002		74-84-0	Brimstone	0365002	1350	7704-34-9
Biocide	0010003	1092	79-06-1	Brom	0051001	1744	7726-95-6
Biogas	0257002		74-82-8	Bromacil	0586000		
Bioxirane	0138001		1464-53-5	Bromadiolone	0587000		
Biphenyl	0571000			Bromide fluoride	0052001	1745	7789-30-2
Bis-(2-aminoethyl) amine	0143002	2079	111-40-0	Bromine	0051000	1744	7726-95-6
Bis-(2-chloro-1-methyl ethyl) ether	0574000	2490		Bromine chloride	0588000	2901	
Bis-(2-chloroethoxy) methane	0572000			Bromine cyanide	0110000	1889	506-68-3
Bis-(2-chloroethyl) ether	0129001	1916	111-44-4	Bromine fluoride	0053001	1746	7787-71-5
Bis-(2-chloroisopropyl) ether	0573000	2490		Bromine pentafluoride	0052000	1745	7789-30-2
Bis-(2-ethyl hexyl) adipate	0575000			Bromine trifluoride	0053000	1746	7787-71-5
Bis-(2-ethyl hexyl) phthalate	0576000			Bromoacetic acid	0589000	1938	
Bis-(chloromethyl) ether	0133002	2249	542-88-1	Bromoacetone	0590000	1569	
Bis-(chloromethyl) ketone	0127001	2649	534-07-6	Bromoacetyl bromide	0054000	2513	598-21-0
Bismuth oxychloride	0577000			Bromoallylene	0019001	1099	106-95-6
Bis-O,O-diethylpyrophosphoric anhydride	0377002		107-49-3	Bromobenzene	0055000	2514	108-86-1
Bisphenol A	0578000			Bromochloromethane	0592000	1887	
Bisphenol A diglycidyl ether	0579000			Bromocyan	0110001	1889	506-68-3
Bisulfite	0367001	1079	7446-09-5	Bromoethanoyl bromide	0054001	2513	598-21-0
Bithionol	0580000			Bromoethene	0404001	1085	593-60-2
Bitoscanate	0581000			Bromoethylene	0404002	1085	593-60-2
Bivinyll	0059003	1010	106-99-0	Bromoform	0594000	2515	
B-K Liquid	0360001	1791	7681-52-9	Bromofume	0192001	1605	106-93-4
Blasting oil	0306002	0143	55-63-0	Brom-o-gas	0268001	1062	74-83-9
Bleach	0360002	1791	7681-52-9	Bromomethane	0268002	1062	74-83-9
Blue oil	0035005	1547	62-53-3	Bromophenylmethane	0044002	1737	100-39-0
Bolero	0582000			Bromopropyne	0058001	2345	106-96-7
Bondolane A	0364001		126-33-0	Bromotrifluoroethylene	0599000	2419	
Bonoform	0374002	1702	79-34-5	Bromotrifluoromethane	0600000	1009	
Boric acid	0583000			Brucine	0601000	1570	
Borneol	0584000	1312		Butadiene	0059000	1010	106-99-0

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Butadiene diepoxide	0138002		1464-53-5	Butyric acid chloride	0075002	2353	141-75-3
Butadiene dioxide	0138003		1464-53-5	Butyric acid nitrile	0074002	2411	109-74-0
Butal	0073001	1129	123-72-8	Butyric acid, ethyl ester	0182001	1180	105-54-4
Butaldehyde	0073000	1129	123-72-8	Butyric acid, methyl ester	0272001	1237	623-42-7
Butanal	0073003	1129	123-72-8	Butyric chloride	0075003	2353	141-75-3
Butane	0060000	1011	106-97-8	Butyronitrile	0074000	2411	109-74-0
Butane nitrile	0074001	2411	109-74-0	Butyryl chloride	0075000	2353	141-75-3
Butanedione	0602000	2346		BZCF	0046003	1739	501-53-1
Butanethiol	0070002	2347	109-79-5				
Butanoyl chloride	0075001	2353	141-75-3	C.I. acid blue 9, diammonium salt	0734000		
Butene	0066001	1012	25167-67-3	C.I. acid blue 9, disodium salt	0735000		
Butyl acetic acid	0077001	2829	142-62-1	C.I. acid green 3	0736000		
Butyl acid phosphate	0608000	1718		C.I. basic green 4	0737000		
Butyl acrylate	0062000	2348	141-32-2	C.I. basic red 1	0738000		
Butyl alcohol	0063002	1120	75-65-0	C.I. disperse yellow 3	0739000		
Butyl aldehyde	0073004	1129	123-72-8	C.I. food red 15	0741000		
Butyl benzyl phthalate	0614000			C.I. food red 5	0740000		
Butyl bromide	0056001	1126	109-65-9	C.I. solvent orange 7	0742000		
Butyl butyrate	0615000			C.I. solvent yellow 14	0744000		
Butyl chloride	0094001	1127	109-69-3	C.I. solvent yellow 3	0743000		
Butyl ethanoate	0061003	1123	123-86-4	C.I. vat yellow 4	0747000		
Butyl ether	0619000	1149		Cacodylic acid	0633000	1572	
Butyl ethylene	0222001	2370	592-41-6	Cadmium acetate	0635000		
Butyl isocyanate	0069002	2485	111-36-4	Cadmium bromide	0636000		
Butyl isovalerate	0621000			Cadmium chloride	0637000		
Butyl mercaptan	0070000	2347	109-79-5	Cadmium fluoroborate	0638000		
Butyl methyl ether	0623000	2350		Cadmium nitrate	0639000		
Butyl nitrite	0624000	2351		Cadmium oxide	0640000		
Butyl toluene	0629000	2667		Cadmium stearate	0641000		
Butyl, decyl, cetyl-eicosyl methacrylate	0617000			Cadmium sulfate	0642000		
Butyl-2-propenoate	0062003	2348	141-32-2	Cadmium (powder)	0634000		
Butylacetone	0267002	1110	110-43-0	CADOXTBH	0068001		75-91-2
Butylamine	0064002	1125	109-73-9	Calcium	0643000	1401	
Butylated hydroxyanisole	0613000			Calcium acetylde	0076002	1402	75-20-7
Butylene	0066000	1012	25167-67-3	Calcium arsenite	0644000	1574	
Butylethylamine	0181001	2734	13360-63-9	Calcium carbide	0076000	1402	75-20-7
Butylsilicon trichloride	0071001	1747	7521-80-4	Calcium chlorate	0645000	1452	
Butyltrichlorosilane	0071000	1747	7521-80-4	Calcium chloride	0646000		
Butynediol	0072003	2716	110-65-6	Calcium chromate	0657000	9096	
Butyral	0073005	1129	123-72-8	Calcium cyanide	0658000	1575	
Butyraldehyde	0073002	1129	123-72-8	Calcium fluoride	0659000		
Butyric acid	0630000			Calcium hydride	0660000	1404	
				Calcium hydroxide	0661000		

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Calcium hypochlorite	0662000	1748		Carbon oxychloride	0329002	1076	75-44-5
Calcium nitrate	0663000	1454		Carbon oxyfluoride	0084003	2414	353-50-4
Calcium oxide	0664000	1910		Carbon oxysulfide	0085002	2204	463-58-1
Calcium peroxide	0665000	1457		Carbon sulfide	0081003	1131	75-15-0
Calcium phosphate	0666000			Carbon tet	0083003	1846	56-23-5
Calcium phosphide	0667000	1360		Carbon tetrachloride	0083000	1846	56-23-5
Calcium resinate	0668000			Carbona	0083001	1846	56-23-5
Camphene	0669000	9011		Carbonic acid anhydride	0080001	1013	124-38-9
Camphor oil	0670000	1130		Carbonic acid gas	0080002	1013	124-38-9
Cantharidin	0671000			Carbonic acid, diethyl ester	0142001	2366	105-58-8
Caproic acid	0077000	2829	142-62-1	Carbonic anhydride	0080003	1013	124-38-9
Caprolactam	0672000			Carbonic difluoride	0084001	2414	353-50-4
Capronic acid	0077002	2829	142-62-1	Carbonic ether	0142002	2366	105-58-8
Caprylene	0313001		111-66-0	Carbonic oxide	0082001	1016	630-08-0
Capsine	0167001	1598	534-52-1	Carbonochloride acid, ethyl ester	0185001	1182	541-41-3
Captan	0673000	9099		Carbonyl chloride	0329003	1076	75-44-5
Carbachol	0078001		51-83-2	Carbonyl fluoride	0084000	2414	353-50-4
Carbachol chloride	0078000		51-83-2	Carbonyl sulfide	0085000	2204	463-58-1
Carbacholin	0078002		51-83-2	Carene	0676000		
Carbacholine dichloride	0078003		51-83-2	Casing head gasoline	0217001	1203	8006-61-9
Carbacryl	0013001	1093	107-13-1	Caswell No.805	0361001	1692	57-24-9
Carbamic acid, ammonium salt	0026002	9083	1111-78-0	Catechol	0677000		
Carbamide peroxide	0401001	1511	124-43-6	Caustic potash solution	0647000	1814	
Carbamiotin	0078004		51-83-2	Caustic soda	0359002		1310-73-2
Carbamoyl dimethyl chloride	0154001	2262	79-44-7	Caustic soda, solution	0359003		1310-73-2
Carbamyl	0016001	2757	116-06-3	Cellon	0374003	1702	79-34-5
Carbaryl (solid)	0674000	2757		Certox	0361002	1692	57-24-9
Carbide	0076003	1402	75-20-7	Cesium	0678000	1407	
Carbinol	0260001	1230	67-56-1	CHA	0118003	2357	108-91-8
Carbofuran	0079000	2757	1563-66-2	Chloral	0086000	2075	75-87-6
Carbolic acid	0323004		108-95-2	Chloramben	0679000		
Carbolic oil	0675000	2821		Chlorbisan	0680000		
Carbon bisulfide	0081001	1131	75-15-0	Chlordane, flammable liquid	0681000	2762	
Carbon bisulphide	0081002	1131	75-15-0	Chlordecone	0682000		
Carbon chloride	0083002	1846	56-23-5	Chlorex	0129002	1916	111-44-4
Carbon dichloride oxide	0329001	1076	75-44-5	Chlorfenvinfos	0683000		
Carbon difluoride oxide	0084002	2414	353-50-4	Chloride of phosphorous	0335001	1809	7719-12-2
Carbon dioxide	0080000	1013	124-38-9	Chlorine	0087000	1017	7782-50-5
Carbon disulfide	0081000	1131	75-15-0	Chlorine cyanide	0111001	1589	506-78-5
Carbon monoxide	0082000	1016	630-08-0	Chlorine dioxide	0088002	9191	10049-04-4
Carbon nitride	0109001	1026	460-19-5	Chlorine dioxide hydrate	0088000	9191	10049-04-4
Carbon oxide	0082002	1016	630-08-0	Chlorine dioxide hydrate (frozen)	0088003	9191	10049-04-4
Carbon oxide sulfide	0085001	2204	463-58-1	Chlorine fluoride	0089001	1749	7790-91-2

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Chlorine monoxide	0684000			Chloromethyl cyanide	0091002	2668	107-14-2
Chlorine pentafluoride	0685000	2548		Chloromethyl ether	0133004	2249	542-88-1
Chlorine peroxide	0088004	9191	10049-04-4	Chloromethyl ethyl ether	0700000	2354	
Chlorine sulfide	0366001	1828	10545-99-0	Chloromethyl methyl ether	0701000	1239	
Chlorine trifluoride	0089000	1749	7790-91-2	Chloromethyloxirane	0172002	2023	106-89-8
Chlormephos	0686000			Chloronitrobenzene	0097000	1578	
Chlormequat chloride	0687000			Chlorophenyl methane	0045003	1738	100-44-7
Chloro methyl sulfane	0258001	3246	124-63-0	Chloropicrin	0099000	1580	76-06-2
Chloro(chloromethoxy)methane	0133003	2249	542-88-1	Chloropicrin: methyl chloride	0706000	1582	
Chloroacetaldehyde	0090000	2232	107-20-0	Chloropivaloyl chloride	0707000	9263	
Chloroacetaldehyde monomer	0090002	2232	107-20-0	Chloroprene	0100000	1991	126-99-8
Chloroacetic acid	0688000	1751		Chloropropene	0020002	1100	107-05-1
Chloroacetic acid chloride	0092001	1752	79-04-9	Chloropropham	0712000		
Chloroacetic acid, ethyl ester	0184001	1181	105-39-5	Chloropropylene	0020004	1100	107-05-1
Chloroacetic acid, methyl ester	0274001	2295	96-34-4	Chloropropylene oxide	0172003	2023	106-89-8
Chloroacetic chloride	0092002	1752	79-04-9	Chlorosulfane	0369001	1828	10025-67-9
Chloroacetone	0689000	1695		Chlorosulfonic acid	0103000	1454	7790-94-5
Chloroacetoneitrile	0091000	2668	107-14-2	Chlorosulfuric acid	0103001	1454	7790-94-5
Chloroacetophenone	0690000	1697		Chlorothalonil	0715000		
Chloroacetyl chloride	0092000	1752	79-04-9	Chlorotoluene	0104000	2238	106-43-4
Chloroaldehyde	0090003	2232	107-20-0	Chlorotrifluoride	0089002	1749	7790-91-2
Chloroallylene	0020001	1100	107-05-1	Chlorotrifluoroethane	0718000	1983	
Chlorobenzene	0093000	1134	108-90-7	Chlorotrifluoroethylene	0394001	1082	79-38-9
Chlorobenzilate	0692000			Chlorotrifluoromethane	0719000	1022	
Chlorobutadiene	0100002	1991	126-99-8	Chlorotrimethylsilane	0398001	1298	75-77-4
Chlorobutane	0094000	1127	109-69-3	Chloroxuron	0720000		
Chlorocarbonic acid, ethyl ester	0185002	1182	541-41-3	Chlorpyrifos	0105000	2783	2921-88-2
Chlorocyan	0111002	1589	506-78-5	Chlorthiophos	0721000		
Chlorocyanogen	0111003	1589	506-78-5	Chlorylen	0389001	2831	71-55-6
Chlorodibromomethane	0695000			Choline chloride carbamate	0078005		51-83-2
Chlorodifluoromethane	0696000	1018		CHP	0107002	2116	80-15-9
Chloroethanal	0090004	2232	107-20-0	Chromic acetate	0722000	9101	
Chloroethane	1825000			Chromic acid	0723000	1755	
Chloroethanenitrile	0091001	2668	107-14-2	Chromic anhydride	0724000	1463	
Chloroethanol	0189003	1135	107-07-3	Chromic sulfate	0729000	9100	
Chloroethene	0405001	1086	75-01-4	Chromium (dust)	0730000		
Chloroethyl chloroformate	0095000	2742	627-11-2	Chromium oxychloride	0731000	1758	
Chloroethylene	0405002	1086	75-01-4	Chromous chloride	0732000	9102	
Chloroform	0096000	1888	67-66-3	Chrysene	0733000		
Chloroformic acid, isopropyl ester	0247001	2407	108-23-6	Cinnamenol	0362001	2055	100-42-5
Chloroformyl chloride	0329004	1076	75-44-5	cis-Butene	0066002	1012	25167-67-3
Chlorohydrins	0699000			Citric acid	0745000		
Chloromethane	0273002	1063	74-87-3	Citrus red No.2	0746000		

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Clorox	0360003	1791	7681-52-9	Cresylate spent caustic solution	0788000		
CO	0082003	1016	630-08-0	Crimidine	0789000	2588	
Coal gas	0748000	1023		Croton oil	0790000		
Coal naptha	0039002	1114	71-43-2	Crotonal	0106003	1143	4170-30-3
Coal oil	0249001	1223	8008-20-6	Crotonaldehyde (E)	0106004	1143	4170-30-3
Cobalt	0749000			Crotonaldehyde (Stabilized)	0106000	1143	4170-30-3
Cobalt acetate	0750000			Crude oil	0791000		
Cobalt bromide	0751000			CTFE	0394002	1082	79-38-9
Cobalt carbonyl	0752000			Cumene	0246001	1918	98-82-8
Cobalt chloride	0753000			Cumene hydroperoxide	0107000	2116	80-15-9
Cobalt fluoride	0754000			Cumyl hydroperoxide	0107003	2116	80-15-9
Cobalt formate	0755000	9104		Cupferron	0792000		
Cobalt nitrate	0756000			Cupriethylene diamine solution	0793000	1761	
Cobalt sulfamate	0757000			Curmol	0246002	1918	98-82-8
Cobalt sulfate	0758000			Cyanazine	0794000		
Cocculus	0759000	1584		Cyanoacetic acid	0108000		372-09-8
Coconut oil:edible	0760000			Cyanoacetonitrile	0254001	2647	109-77-3
Colchicine	0761000			Cyanobenzene	0040002	2224	100-47-0
Collodion	0762000	2059		Cyanobromide	0110002	1889	506-68-3
Copper	0763000			Cyanoethane	0346001	2404	107-12-0
Copper acetate	0764000	9106		Cyanoethylene	0013002	1093	107-13-1
Copper acetoarsenite	0765000	1585		Cyanogen	0109000	1026	460-19-5
Copper arsenite	0766000	1586		Cyanogen bromide	0110003	1889	506-68-3
Copper bromide	0767000			Cyanogen chloride	0111000	1589	506-78-5
Copper chloride	0768000	2802		Cyanogen iodide	0112000		506-78-5
Copper cyanide	0769000	1587		Cyanogen monoiodide	0112001		506-78-5
Copper fluoroborate	0770000			Cyanomethane	0006001	1648	75-05-8
Copper formate	0771000			Cyanomethanol	0213001		107-16-4
Copper glycinate	0772000			Cyanotoluene	0324005	2470	140-29-4
Copper iodide	0773000			Cyanuric chloride	0113000	2670	108-77-0
Copper lactate	0774000			Cycasin	0795000		
Copper naphthenate	0775000			Cyclobutane	0796000	2601	
Copper nitrate	0776000			Cycloheptane	0114000	2241	291-64-5
Copper oxalate	0777000			Cycloheptatriene	0797000	2603	
Copper subacetate	0778000			Cycloheptene	0798000	2242	
Copper sulfate	0779000			Cyclohexane	0115000	1145	108-94-1
Copper sulfate, ammoniated	0780000	9110		Cyclohexanol	0799000		
Copper tartrate	0781000	9111		Cyclohexanone	0116000	1915	108-94-1
Coumaphos	0782000	2783		Cyclohexanone peroxide	0800000	2119	
Coumatetralyl	0783000			Cyclohexatriene	0039003	1114	71-43-2
Creosote, coal tar	0784000	1993		Cyclohexene	0801000	2256	
Cresols	0786000	2076		Cyclohexenyl trichlorosilane	0802000	1762	
Cresyl glycidyl ether	0787000			Cycloheximide	0117000		66-81-9

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Cyclohexyl acetate	0804000	2243		Diallate	0829000		
Cyclohexyl isocyanate	0805000	2488		Diallyl ether	0831000	2360	
Cyclohexylamine	0118000	2357	108-91-8	Diallylamine	0830000	2359	
Cyclohexylketone	0116002	1915	108-94-1	Diamide	0223002		302-02-2
Cyclohexylmethane	0276001	2296	108-87-2	Diamine	0223004		302-02-2
Cyclopentane	0119000	1146	142-29-0	Diamine hydrate	0223003		302-02-2
Cyclopentanol	0806000	2244		Diamine sulfate	0224001		10034-93-2
Cyclopentanone	0807000	2245		Diaminotoluene	0385001	1709	95-80-7
Cyclopentene	0120000	2246	142-29-0	Diammonium sulfate	0833000		
Cyclopentimine	0338002	2401	110-89-4	Diammonium sulfide	0029002	2683	12135-76-1
Cyclopropane	0121000	1027	95-75-7	Diammonium sulfite	0030001	9090	10196-04-0
Dakins solution	0360004	1791	7681-52-9	Diatol	0142003	2366	105-58-8
Dalapon	0809000	1760		Diazan	0171001		514-73-8
DCE	0408001	1303	75-35-4	Diazinon	0836000	2783	
DCEE	0129003	1916	111-44-4	Diazomethane	0837000		
DCP	0137004	2048	77-73-6	Dibenzo (A,E) pyrene	0838000		
DDC	0154002	2262	79-44-7	Dibenzo (A,H) anthracene	0845000		
DDD	0810000	2761		Dibenzo (A,H) pyrene	0846000		
DEA	0140002	1154	109-89-7	Dibenzo (A,I) pyrene	0847000		
DEAE	0141001	2686	100-37-8	Dibenzo (A,J) acridine	0848000		
Decaborane	0123000	1868	17702-41-9	Dibenzo (A,L) pyrene	0849000		
Decaborane tetrahydride	0123002	1868	17702-41-9	Dibenzofuran	0851000		
Decaborane(14)	0123001	1868	17702-41-9	Dibenzoyl peroxide	0852000	2087	
Decabromodiphenyl oxide	0812000			Dibenzyl ether	0124000		103-50-4
Decahydronaphthalene	0813000	1147		Diborane	0125000	1911	19287-45-7
Decaldehyde	0814000			Diborane hexahydride	0125002	1911	19287-45-7
Decanoic acid	0815000			Dibromoethane	0192003	1605	106-93-4
DEK	0146001	1156	96-22-0	Dibromomethane	0126000	2664	74-95-3
Demeton	0820000			Dibutyl phenol	0860000		
Demeton-s-methyl	0821000			Dibutyl phthalate	0861000		
DEN	0140003	1154	109-89-7	Dicamba	0863000		
Denatured alcohol	0177004	1170	64-17-5	Dichlobenil	0864000		
DETA	0143003	2079	111-40-0	Dichlone	0865000		
Deuterium	0822000	1957		Dichloricide	0128002	1592	106-46-7
Dextrose solution	0823000			Dichloro-1,2-propane	0351002	1279	78-87-5
Diacetone alcohol	0824000	1148		Dichloroacetic acid	0866000	1764	
Diacetone alcohol peroxide	0825000	2163		Dichloroacetic acid, methyl ester	0278001	2299	116-54-1
Diacetyl	0826000	2346		Dichloroacetyl chloride	0867000	1765	
Diacetylmethane	0320003	2310	123-54-6	Dichloroacetylene	0868000		
Diaflan	0394003	1082	79-38-9	Dichlorobromomethane	0870000		
Diakon	0290001	1247	80-62-6	Dichlorobutene	1839001	2920	
Dialifos	0828000	3018		Dichlorodifluoromethane	0871000	1028	
				Dichlorodimethylsilane	0155001	1162	75-78-5

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Dichlorodimethylsilicon	0155002	1162	75-78-5	Diethyl ether	0144000	1155	60-29-7
Dichloroethane	0193002	1184	107-06-2	Diethyl glycol	0195003	1153	629-14-1
Dichloroether	0129004	1916	111-44-4	Diethyl oxide	0144001	1155	60-29-7
Dichloroethyl ether	0129005	1916	111-44-4	Diethyl phthalate	0901000		
Dichloroethylarsine	0186002	1892	598-14-1	Diethyl stilbestrol	0902000		
Dichloroethylphenylsilane	0204001	2435	1125-27-5	Diethyl sulfate	0903000	1594	
Dichloroethylsilane	0187001	1183	1789-58-8	Diethyl sulfide	0904000	2375	
Dichloromethane	0132000	1593	75-09-2	Diethyl zinc	0905000	1366	
Dichloromethyl benzene	0047004	1886	98-87-3	Diethylaluminum chloride	0887000		
Dichloromethyl ether	0133000	2249	542-88-1	Diethylaluminum hydride	0888000		
Dichloromethylphenylsilane	0873000			Diethylamine	0140000	1154	109-89-7
Dichloromethylsilane	0279001	1242	75-54-7	Diethylaminoethanol	0141000	2686	100-37-8
Dichloromonofluoromethane	0874000	1029		Diethylene ether	0169002	1165	123-91-1
Dichlorophenoxyacetic acid	0122001	2765	94-75-7	Diethylene glycol	0894000		
Dichlorophenoxyacetic esters	0876000			Diethylene glycol dibutyl ether	0895000		
Dichlorophenyl phosphine	0327002	2798	644-97-3	Diethylene glycol dimethyl ether	0896000		
Dichlorophenylarsine	0325001	1556	696-28-6	Diethylene glycol monobutyl ether	0897000		
Dichlorophenyltrichlorosilane	0134000	1766	27137-85-5	Diethylene glycol monobutyl ether acetate	0898000		
Dichloropropene	0135000	2047	542-75-6	Diethylene glycol monoethyl ether	0899000		
Dichloropropionic acid	0878000	1760		Diethylene glycol monomethyl ether	0900000		
Dichloropropylene	0135003	2047	542-75-6	Diethylene oxide	1823000		
Dichlorosilane	0136000	2189	4109-96-0	Diethylene oximide	0298001	2054	110-91-8
Dichlorosilicone	0136001	2189	4109-96-0	Diethylenetriamine	0143000	2079	111-40-0
Dichlorosulfane	0366002	1828	10545-99-0	Diethylenimine oxide	0298002	2054	110-91-8
Dichlorotetrafluoroethane	0879000	1958		Diethylethanolamine	0141003	2686	100-37-8
Dichlorvos	0882000	2783		Diethylketone	0146000	1156	96-22-0
Dicofol	0883000			Difluorine	0207002		7782-41-4
Dicrotophos	0884000			Difluorine monoxide	0316001	2190	7783-41-7
Dicyan	0109002	1026	460-19-5	Difluorochloromethane	0906000	1018	
Dicyanogen	0109003	1026	460-19-5	Difluorodichloromethane	0907000	1028	
Dicyanomethane	0254002	2647	109-77-3	Difluoroethane	0147000	1030	75-37-6
Dicyclopentadiene	0137000	2048	77-73-6	Difluorophosphoric acid	0909000	1768	
Dieldrin	0885000	2761		Diglycidyl ether	0910000		
Diepoxybutane	0138000		1464-53-5	Diheptyl phthalate	0911000		
Diesel	0139001			Dihydrogen dioxide	0232001	2015	7722-84-1
Diesel fuel	0139000	1202		Dihydrogen selenide	0233001	2202	7783-07-5
Diethanol amine	0886000			Dihydroxirene	0199001	1040	75-21-8
Diethyl	0060002	1011	106-97-8	Diisobutyl amine	0913000	2361	
Diethyl benzene	0891000	2049		Diisobutyl carbinol	0914000		
Diethyl carbamazine citrate	0892000						
Diethyl carbonate	0142000	2366	105-58-8				
Diethyl cellosolve	0195002	1153	629-14-1				
Diethyl chlorophosphate	0893000						

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Diisobutyl ketone	0916000	1157		Dimethylacetamide	0151000		127-19-5
Diisobutyl phthalate	0917000			Dimethylacetone	0146002	1156	96-22-0
Diisobutylene	0915000	2050		Dimethylamide acetate	0151002		127-19-5
Diisodecyl phthalate	0918000			Dimethylamine solution	0928000	1160	
Diisononyl phthalate	0919000			Dimethylaminobenzene	0153001	2253	121-69-7
Diisooctyl phthalate	0920000			Dimethylalanine	0153002	2253	121-69-7
Diisopropanol amine	0921000			Dimethylbenzyl hydroperoxide	0107004	2116	80-15-9
Diisopropyl benzene (all isomers)	0922000			Dimethylcarbamic chloride	0154003	2262	79-44-7
Diisopropyl benzene hydro- peroxide	0923000	2171		Dimethylcarbamoyl chloride	0154000	2262	79-44-7
Diisopropyl ether	0924000	1159		Dimethylcarbinol	0242001	1219	67-63-0
Diisopropylamine	0148000	1158	108-18-9	Dimethyldichlorosilane	0155000	1162	75-78-5
Diketene	0149000	2521	674-82-8	Dimethylene diamine	0191001	1604	107-15-3
Dimefox	0925000	3018		Dimethylene oxide	0199002	1040	75-21-8
Dimethoate	0926000			Dimethylenimine	0198004	1185	151-56-4
Dimethylamine, anhydrous	0152000	1032	124-40-3	Dimethylethanolamine	0933000	2051	
Dimethyl	0173003		74-84-0	Dimethylmethane	0341001	1978	74-98-6
Dimethyl adipate	0927000			Dimetilan	0948000		
Dimethyl carbonate	0931000	1161		Di-n-amyl phthalate	0835000		
Dimethyl cellosolve	0150002	2252	110-71-4	Di-n-amylamine	0834000	2841	
Dimethyl disulfide	0156000	2381	624-92-0	Di-n-butyl amine	0854000	2248	
Dimethyl ether	0157000	1033	115-10-6	Di-n-butyl ether	0855000	1149	
Dimethyl formamide	0158000	2265	68-12-2	Di-n-butyl ketone	0857000		
Dimethyl glutarate	0934000			Di-n-butyl phthalate	0862000		
Dimethyl hexane dihydro- peroxide	0935000	2174		Dinitrobenzene	0166000	1597	
Dimethyl hydrogen phosphite	0936000			Dinitrochlorobenzene	0949000	1577	
Dimethyl ketone	0004001	1090	67-64-1	Dinitrocresol	0167003	1598	534-52-1
Dimethyl mercury	0937000			Dinitrogen monoxide	0311002		10024-97-2
Dimethyl monosulfide	0163001	1164	75-18-3	Dinitrogen tetroxide	0305001	1067	10102-44-0
Dimethyl phenylamine	0153003	2253	121-69-7	Dinitro-o-cresol	0167000	1598	534-52-1
Dimethyl phosphorochlorido- thioate	0161000	2267	2524-03-0	Dinitrophenol (dry)	0168000		51-28-5
Dimethyl phthalate	0940000			Dinitrophenol (solution)	0168001		51-28-5
Dimethyl polysiloxane	0941000			Dinitrophenol (wetted with >15% water)	0168002		51-28-5
Dimethyl succinate	0944000			Di-n-octyl phthalate	0956000		
Dimethyl sulfate	0162000	1595	77-78-1	Dinofan	0168006		51-28-5
Dimethyl sulfide	0163000	1164	75-18-3	Dinonyl phthalate	0952000		
Dimethyl sulfoxide	0945000			Dinoterb	0953000		
Dimethyl terephthalate	0946000			Di-n-propylamine	0170001	2383	142-84-7
Dimethyl tetracholorterephthalate	0947000			Diocetyl adipate	0954000		
Dimethyl thiophosphoryl chloride	0161001	2267	2524-03-0	Diocetyl phthalate	0955000		
Dimethyl zinc	0164000	1370	544-97-8	Diocetyl sodium sulfosuccinate	0957000		
				Dioform	0131003	1150	540-59-0
				Dioxathion	0958000		

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Dioxygen	0315002		7782-44-7	DMSO	0980000		
DIPA	0148001	1158	108-18-9	DNA	0165004	1596	97-02-9
Dipentene	0959000	2052		DNBP	0981000		
Diphacinone	0960000			Dodecanol	0982000		
Diphenamide	0961000			Dodecene	0983000		
Diphenyl	0962000			Dodecyl benzene	0984000		
Diphenyl amine	0963000			Dodecyl benzene sulfonic acid	0985000	2584	
Diphenyl amine chloroarsine	0964000	1698		Dodecyl benzene sulfonic acid, calcium	0986000		
Diphenyl ether	0966000			Dodecyl benzene sulfonic acid, isopropyl amine	0987000		
Diphenyl methane diisocyanate	0967000	2489		Dodecyl benzene sulfonic acid, sodium salt	0988000		
Diphenyldichlorosilane	0965000	1769		Dodecyl benzene sulfonic acid, triethanolamine	0989000		
Diphosgene	0329005	1076	75-44-5	Dodecyl diphenyl ether disulfonate	0990000		
Diphosphorus pentasulfide	0333001	1340	1314-80-3	Dodecyl methacrylate	0994000		
Dipotassium persulfate	0340002	1492	7727-21-1	Dodecyl sulfate, diethanolamine salt	0996000		
Diproanoate	0106005	1143	4170-30-3	Dodecyl sulfate, magnesium salt	0997000		
Dipropylamine	0170000	2383	142-84-7	Dodecyl sulfate, sodium salt	0998000		
Dipropylene glycol methyl ether	0970000			Dodecyl sulfate, triethanolamine salt	0999000		
Dipropylene glycol	0968000			Dodecyl/pentadecyl methacrylate	0995000		
Dipropylene glycol dibenzoate	0969000			Dodecyltrichlorosilane	1000000	1771	
Diquat	0971000	2781		Dorlone	0135004	2047	542-75-6
Direct black 38	0972000			Doryl	0078006		51-83-2
Direct blue 6	0973000			Dowcide 7	0318001	3155	87-86-5
Direct brown 95	0974000			Dowclene LS	0389002	2831	71-55-6
Disulfoton	0975000	2783		Dowfume	1826000		
Disulfur dichloride	0369002	1828	10025-67-9	Dowtherm	0991000		
Disulfuric acid	0314001	1831	8014-95-7	Dry ice	0080004	1013	124-38-9
Di-tert-butyl peroxide	0858000	2102		Dursban	0105001	2783	2921-88-2
Dithane A-4	0166007	1597		Dutch oil	0193003	1184	107-06-2
Dithiabutane	0156001	2381	624-92-0	EB	0179001	1175	100-41-4
Dithiazanine iodide	0171000		514-73-8	ECH	0172004	2023	106-89-8
Dithiobiuret	0976000			ED	0186003	1892	598-14-1
Ditridecyl phthalate	0977000			EDB	0192004	1605	106-93-4
Diundecyl phthalate	0978000			EGM	0197001	1188	109-86-4
Diuron	0979000			EGME	0197002	1188	109-86-4
Divinyl	0059005	1010	106-99-0	Elemental phosphorous	0331002		7723-14-0
Divinylene oxide	0215001	2389	110-00-9	Endosulfan	1001000	2761	
DMA	1822000						
DMAC	0151004		127-19-5				
DMCC	0154004	2262	79-44-7				
DMF	0158001	2265	68-12-2				
DMFA	0158002	2265	68-12-2				
DMH	0159002	1163	57-14-7				
DMPD	0160002		99-98-9				
DMS	0163002	1164	75-18-3				

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Endosulfan sulfate	1004000			Ethoxylated pentadecanol	1019000		
Endothion	1005000			Ethoxylated tetradecanol	1020000		
Endrin	1006000	2761		Ethoxylated tridecanol	1021000		
Endrin aldehyde	1007000			Ethyl acetate	0175000	1173	141-78-6
EPI	0172005	2023	106-89-8	Ethyl acetoacetate	1023000		
Epichlorohydrin	0172000	2023	106-89-8	Ethyl acetylene	1024000	2452	
EPN	1008000			Ethyl acrylate	0176000	1917	140-88-5
Epoxy propane	0353001	1280	75-56-9	Ethyl alcohol	0177000	1170	64-17-5
Epoxyethane	0199003	1040	75-21-8	Ethyl aluminum dichloride	1025000		
Epoxyethylbenzene	0363001		96-09-3	Ethyl aluminum sesquichloride	1026000		
Erythrene	0059006	1010	106-99-0	Ethyl amyl ketone	1027000	2271	
Estradiol 17 b	1009000			Ethyl azinphos	1029000		
Estrone	1010000			Ethyl bromide	1031000	1891	
Ethanal	0002002	1089	75-07-0	Ethyl bromoacetate	1032000	1603	
Ethanamine	0178002	1036	75-04-7	Ethyl butanoate	0182002	1180	105-54-4
Ethane dinitrate	0109004	1026	460-19-5	Ethyl butanol	1033000	2275	
Ethane (compressed gas)	0173000		74-84-0	Ethyl butyl ether	1034000	1179	
(Diethylamino) ethane	0392001	1296	121-44-8	Ethyl butyrate	0182000	1180	105-54-4
Ethane (refrigerated liquid)	0173001		74-84-0	Ethyl carbamate	1036000		
Ethanediol dimethyl ether	0150004	2252	110-71-4	Ethyl carbonate	0142004	2366	105-58-8
Ethanenitrile	0006002	1648	75-05-8	Ethyl cellosolve	0196002	1171	110-80-5
Ethanethiol	0202001	2363	75-08-1	Ethyl chloride	0183000	1037	75-00-3
Ethanoic acid	1840002		64-19-7	Ethyl chloroacetate	0184000	1181	105-39-5
Ethanoic anhydride	0003005	1715	108-24-7	Ethyl chlorocarbonate	0185003	1182	541-41-3
Ethanol	0177005	1170	64-17-5	Ethyl chloroformate	0185000	1182	541-41-3
Ethanolamine	0174000	2491	141-43-5	Ethyl chloromethanoate	0185004	1182	541-41-3
Ethanoyl bromide	0007002	1716	506-96-7	Ethyl chlorothioformate	1037000	2826	
Ethanoyl chloride	0008003	1717	75-36-5	Ethyl cyanide	0346002	2404	107-12-0
Ethene	0188002	1038	74-85-1	Ethyl cyclohexane	1038000		
Ethenoxide	0199005	1040	75-21-8	Ethyl ethanoate	0175003	1173	141-78-6
Ethenylbenzene	0362002	2055	100-42-5	Ethyl ether	0144003	1155	60-29-7
Ether	0144002	1155	60-29-7	Ethyl formate	0200000	1190	109-94-4
Etherin	0188003	1038	74-85-1	Ethyl glycol	0196004	1171	110-80-5
Ethienocarb	1011000			Ethyl glyme	0195005	1153	629-14-1
Ethine	0009001	1001	74-86-2	Ethyl hexaldehyde	1051000	1191	
Ethinylcarbinol	0343001	1986	107-19-7	Ethyl hexyl tallate	1055000		
Ethinylestradiol	1012000			Ethyl hydrosulfide	0202002	2363	75-08-1
Ethion	1013000	2783		Ethyl isocyanate	0201000	2481	109-90-0
Ethoprophos	1014000			Ethyl ketone	0146003	1156	96-22-0
Ethoxy triglycol	1022000			Ethyl lactate	1057000	1192	
Ethoxydihydropyran	1015000			Ethyl mercaptan	0202000	2363	75-08-1
Ethoxyethylbenzene	1016000			Ethyl methacrylate	1058000	2277	
Ethoxylated dodecanol	1017000			Ethyl methane sulfonate	1059000		
Ethoxylated nonylphenol	1018000			Ethyl methanoate	0200001	1190	109-94-4

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Ethyl methyl ether	1060000	1039		Ethylene glycol diethyl ether	0195000	1153	629-14-1
Ethyl methyl ketone	0280002	1193	78-93-3	Ethylene glycol dimethyl ether	0150005	2252	110-71-4
Ethyl monochloroacetate	0184002	1181	105-39-5	Ethylene glycol ethyl ether	0196003	1171	110-80-5
Ethyl nitrate	1061000	1993		Ethylene glycol isopropyl ether	1044000		
Ethyl nitrile	0006003	1648	75-05-8	Ethylene glycol methyl ether	0197003	1188	109-86-4
Ethyl nitrite	0203000	1194	109-95-5	Ethylene glycol monobutyl ether	1045000	2369	
Ethyl oxide	1821000			Ethylene glycol monobutyl ether acetate	1046000		
Ethyl phenol	1836000			Ethylene glycol monoethyl ether	0196000	1171	110-80-5
Ethyl phosphonothioic dichloride	1062000	2927		Ethylene glycol monoethyl ether acetate	1047000	1172	
Ethyl phosphorodichloridate	1063000	2927		Ethylene glycol monomethyl ether	0197000	1188	109-86-4
Ethyl pirimifos	1064000			Ethylene glycol phenyl ether	1048000		
Ethyl propenoate	0176002	1917	140-88-5	Ethylene oxide	0199000	1040	75-21-8
Ethyl rhodanate	0205001		542-90-5	Ethylene tetrachloride	0375001	1897	127-18-4
Ethyl S	0180002	2734	538-07-8	Ethylene thiourea	1049000		
Ethyl silicate	1066000	1292		Ethylene trichloride	0390002	1710	79-01-6
Ethyl sulfate	1067000	1594		Ethylenediamine	0191000	1604	107-15-3
Ethyl sulfhydrate	0202003	2363	75-08-1	Ethylenediamine tetracetic acid	1040000	9117	
Ethyl sulfocyanate	0205002		542-90-5	Ethyleneimine	0198000	1185	151-56-4
Ethyl t-butyl ether	1035000			Ethylformic acid	0345001	1848	79-09-4
Ethyl t-butyl ether	1070000			Ethylidene norbornene	1056000		
Ethyl thiocyanate	0205000		542-90-5	Ethylidene chloride	0130001	2362	75-34-3
Ethyl vinyl ether	0406001	1302	109-92-2	Ethylidene dichloride	0130002	2362	75-34-3
Ethyl-2-propenoate	0176003	1917	140-88-5	Ethylimine	0198005	1185	151-56-4
Ethyl-3-ethoxypropionate	1050000			Ethylphenyldichlorosilane	0204000	2435	1125-27-5
Ethylaldehyde	0002003	1089	75-07-0	Ethyltrichlorosilane	0206000	1196	115-21-9
Ethylamine	0178000	1036	75-04-7	Ethyne	0009002	1001	74-86-2
Ethylbenzene	0179000	1175	100-41-4	ETN	0178003	1036	75-04-7
Ethyl-bis-(2-chloroethyl) amine	0180000	2734	538-07-8	ETOH	0177006	1170	64-17-5
Ethylbutylamine	0181000	2734	13360-63-9	Eufin	0142005	2366	105-58-8
Ethyl-dichloroarsine	0186000	1892	598-14-1	F-12	1072000	1028	
Ethyl-dichlorosilane	0187000	1183	1789-58-8	F-22	1073000	1018	
Ethylene	0188000	1038	74-85-1	FAA	0208001	2642	144-49-0
Ethylene bromide	0192005	1605	106-93-4	Fenamiphos	1074000		
Ethylene carboxylic acid	0012002	2218	79-10-7	Fenitrothion	1075000		
Ethylene chloride	0193004	1184	107-06-2	Fensulfothion	1076000	2783	
Ethylene chlorohydrin	0189000	1135	107-07-3	Ferric ammonium citrate	1077000	9118	
Ethylene cyanohydrin	0190000		109-78-4	Ferric ammonium oxalate	1078000	9119	
Ethylene dibromide	0192000	1605	106-93-4	Ferric chloride	1079000	1773	
Ethylene dichloride	0193000	1184	107-06-2	Ferric fluoride	1080000	9120	
Ethylene fluoride	0147002	1030	75-37-6				
Ethylene fluorohydrin	0194000		371-62-0				
Ethylene glycol	1041000						
Ethylene glycol acetate	1042000						
Ethylene glycol diacetate	1043000						

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Ferric glycerophosphate	1081000			Formic acid, isopropyl ester	0248001	2408	625-55-8
Ferric nitrate	1082000	1466		Formic acid, methyl ester	0281001	1243	107-31-3
Ferric sulfate	1083000	9121		Formic ether	0200003	1190	109-94-4
Ferrous ammonium sulfate	1084000	9122		Formothion	1103000		
Ferrous chloride	1085000	1759		Formparanate	1104000		
Ferrous fluoroborate	1086000			Formyl hydrazino-4-(5-nitro-2-furyl)thiazole	1105000		
Ferrous oxalate	1087000			Formyl trichloride	0096001	1888	67-66-3
Ferrous sulfate	1088000	9125		Formylic acid	0214002	1779	64-18-6
Firedamp	0257003		74-82-8	Fosthietan	1106000		
FKS	0210001	1778	16961-83-4	Fosvex	0377003		107-49-3
Flue gas	0082004	1016	630-08-0	Freon 10	0083004	1846	56-23-5
Fluometil	1089000			Freon 12	1107000	1028	
Fluoboric acid	1090000	1775		Freon 150	0193006	1184	107-06-2
Fluometuron	1091000			Freon 152	0147003	1030	75-37-6
Fluoranthene	1092000			Freon 20	0096002	1888	67-66-3
Fluorene	1093000			Freon 22	1108000	1018	
Fluoric acid	0231002	1052	7664-39-3	Freon 40	0273003	1063	74-87-3
Fluorine monoxide	0316002	2190	7783-41-7	Freon F12	1109000		
Fluorine oxide	0316003	2190	7783-41-7	Fuberidazole	1110000		
Fluorine (compressed gas)	0207000	1045	7782-41-4	Fuel oil #1	1828000		
Fluorine (cryogenic liquid)	0207001	9192	7782-41-4	Fuel oil #2	0139002		
Fluoroacetamide	1094000			Fuel oil #4	0139003		
Fluoroacetic acid	0208000	2642	144-49-0	Fumaric acid	1111000		
Fluoroacetyl chloride	1095000			Fumette	0259001		558-25-8
Fluorobenzene	0209000	2387	462-06-6	Fuming sulfuric acid	0314002	1831	8014-95-7
Fluoroethanoic acid	0208003	2642	144-49-0	Furadan	0079001	2757	1563-66-2
Fluoroethene	0407001	1860	75-02-5	Furadan 3G	0079002	2757	1563-66-2
Fluoroethylene	0407003	1860	75-02-5	Furaldehyde	0216002	1199	98-01-1
Fluorophosgene	0084004	2414	353-50-4	Furan	0215000	2389	110-00-9
Fluorosilicic acid	0210000	1778	16961-83-4	Furfural	0216000	1199	98-01-1
Fluorosulfonic acid	0211000	1777	7789-21-1	Furfuryl alcohol	1112000	2874	
Fluorosulfuric acid	0211001	1777	7789-21-1	Furodan	0079003	2757	1563-66-2
Fluosilicic acid	0210002	1778	16961-83-4	Fusel oil	1113000	1201	
Fonofos	1099000	2783					
Forane 22B	1100000			GAA	0012003	2218	79-10-7
Formaldehyde cyanohydrin	0213000		107-16-4	Gallic acid	1114000		
Formaldehyde (solution)	0212001	2209	50-00-0	Gallium trichloride	1116000		
Formaldehyde (solution, flammable)	0212000	1198	50-00-0	Gallium, metal	1115000	2803	
Formalin	0212002		50-00-0	Gasoline	0217000	1203	8006-61-9
Formamide	1101000			GDME	0150006	2252	110-71-4
Formetanate hydrochloride	1102000			Germane	1117000	2192	
Formic acid	0214000	1779	64-18-6	Gettysolve B	0221001	1208	110-54-3
Formic acid, ethyl ester	0200002	1190	109-94-4	Glacial acetic acid	1840004		64-19-7

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Glacial acrylic acid	0012004	2218	79-10-7	Hexachlorophene	1140000	2875	
Glutaraldehyde solution	1118000			Hexadecyl sulfate, sodium salt	1141000		
Glycerine	1119000			Hexadecyl trimethyl ammonium chloride	1142000		
Glycerol trinitrate	0306003	0143	55-63-0	Hexaethyl tetraphosphate and compressed gas	1143000	1612	
Glycidaldehyde	1120000	2622		Hexafluoroacetone	1144000	2420	
Glycidyl methacrylate	1121000			Hexafluoroethane	1145000	2193	
Glycinol	0174002	2491	141-43-5	Hexafluosilicic acid	0210003	1778	16961-83-4
Glycol cyanohydrin	0190003		109-78-4	Hexahydroaniline	0118004	2357	108-91-8
Glycol dimethyl ether	0150007	2252	110-71-4	Hexahydrobenzene	0115002	1145	108-94-1
Glycol methyl ether	0197004	1188	109-86-4	Hexahydropyridine	0338003	2401	110-89-4
Glycolonitrile	0213002		107-16-4	Hexahydrotoluene	0276002	2296	108-87-2
Glyconitrile	0213003		107-16-4	Hexamethyl phosphoramidate	1147000		
Glyme	0150008	2252	110-71-4	Hexamethylene	0115003	1145	108-94-1
Glyme-1	0195006	1153	629-14-1	Hexamethylene diamine	1148000	2280	
Glyoxal	1122000			Hexamethylene diisocyanate	1149000	2281	
Gly-oxide	0401002	1511	124-43-6	Hexamethylene tetramine	1151000	1328	
Glyphosate	0218000		1071-83-6	Hexamethyleneimine	1150000	2493	
Grain alcohol	0177007	1170	64-17-5	Hexane	0221000	1208	110-54-3
Grasex	0086001	2075	75-87-6	Hexanedinitrile	0015003	2205	111-69-3
Halon 10001	0283001	2644	74-88-4	Hexanoic acid	0077003	2829	142-62-1
Halon 1001	0268003	1062	74-83-9	Hexanon	0116003	1915	108-94-1
HCl	0229002		7647-01-0	Hexene	0222000	2370	592-41-6
HCN	0230001	1051	74-90-8	Hexone	0285001	1245	108-10-1
Hendecane	1123000	2330		Hexyl acetate	1155000		
Heptachlor	1124000			Hexylene	0222003	2370	592-41-6
Heptachlor epoxide	1125000			Hexylene glycol	1156000		
Heptachlorodibenzofurans	1126000			HF	0231003	1052	7664-39-3
Heptachlorodibenzo-p-dioxins	1127000			HN1	0180003	2734	538-07-8
Heptamethylene	0114001	2241	291-64-5	Hydracrylonitrile	0190004		109-78-4
Heptane	0219000	1206	142-82-5	Hydrazine hydrate	0223005		302-02-2
Heptanoic acid	1128000			Hydrazine hydrogen sulfate	0224002		10034-93-2
Heptanol	1129000			Hydrazine monosulfate	0224003		10034-93-2
Heptyl acetate	1130000			Hydrazine sulfate	0224000		10034-93-2
Heptylene	0220002	2278	592-76-7	Hydrazine (<64%)	0223000	2030	302-02-2
Hexachloroacetone	1131000	2661		Hydrazine (anhydrous or >64%)	0223001	2029	302-02-2
Hexachlorobenzene	1132000	2729		Hydrazinium sulfate	0224004		10034-93-2
Hexachlorobutadiene	1133000	2279		Hydrazoic acid, sodium salt	0357002	1687	26628-22-8
Hexachlorocyclohexanes	1134000			Hydrazomethane	0282001	1244	60-34-4
Hexachlorocyclopentadiene	1135000	2646		Hydrochloric acid	0225000	1789	7647-01-0
Hexachlorodibenzofurans	1136000			Hydrochloric ether	0183001	1037	75-00-3
Hexachlorodibenzo-p-dioxins	1137000			Hydrocyanic acid	0230003	1051	74-90-8
Hexachloroethane	1138000	9037		Hydrocyanic acid, sodium salt	0358001	1689	143-33-9
Hexachloronaphthalene	1139000						

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Hydrocyanic acid, solution	0230002	1051	74-90-8	Iron (powder)	1164000		
Hydrofluoric acid	0226000	1790	7664-39-3	Iron carbonyl	0237001	1994	13463-40-6
Hydrofuran	0379002	2056	109-99-9	Iron pentacarbonyl	0237000	1994	13463-40-6
Hydrogen arsenic	0037003	2188	7784-42-1	Isobenzan	1165000		
Hydrogen bromide	0228000	1048	10035-10-6	Isobutane	0238000	1969	75-28-5
Hydrogen bromide, anhydrous	0228002	1048	10035-10-6	Isobutanol	1166000	1212	
Hydrogen carboxylic acid	0214003	1779	64-18-6	Isobutenyl methyl ketone	1841001	1229	141-79-7
Hydrogen chloride (gas)	0229000	1050	7647-01-0	Isobutyl aldehyde	1167000	2045	
Hydrogen chloride (refrigerated liquid)	0229001	2186	7647-01-0	Isobutyl formate	1169000	2393	
Hydrogen chloride (solution)	0225001	1789	7647-01-0	Isobutyl methyl carbinol	0284001	2053	108-11-2
Hydrogen cyanide	0230000	1051	74-90-8	Isobutyl methyl ketone	0285002	1245	108-10-1
Hydrogen dioxide	0232002	2015	7722-84-1	Isobutylamine	1168000	1214	
Hydrogen fluoride	0231000	1052	7664-39-3	Isobutylene	0239000	1055	115-11-7
Hydrogen fluoride, solution	0226001	1790	7664-39-3	Isobutylene	0291001	2288	691-37-2
Hydrogen hexafluorosilicate	0210004	1778	16961-83-4	Isobutyric acid	1170000	2529	
Hydrogen iodide, anhydrous	1157000	2197		Isobutyronitrile	0240000	2284	78-82-0
Hydrogen nitrate	0302003		7697-37-2	Isocumene	0348001	2364	103-65-1
Hydrogen oxide	0232003	2015	7722-84-1	Isocyanatoethane	0201002	2481	109-90-0
Hydrogen peroxide (>60%)	0232000	2015	7722-84-1	Isocyanic acid, ethyl ester	0201001	2481	109-90-0
Hydrogen peroxide (35% solution)	1158000	2014		Isocyanic acid, methyl ester	0286001	2480	624-83-9
Hydrogen phosphide	0330001	2199	7803-51-2	Isodecaldehyde	1171000		
Hydrogen selenide	0233000	2202	7783-07-5	Isodrin	1172000		
Hydrogen sulfate	0368001	1830	7664-93-9	Isofluorophate	1173000		
Hydrogen sulfide	0234000	1053	7783-06-4	Isohexene	0291002	2288	691-37-2
Hydrogen (compressed gas)	0227000	1049	1333-74-0	Isooctaldehyde	1174000	1191	
Hydrogen (cryogenic liquid)	0227001	1966	1333-74-0	Isooctane	1175000	1262	
Hydroquinone	1159000	2662		Isooctyl alcohol	1176000		
Hydrosulfuric acid	0234001	1053	7783-06-4	isooctyl ester	1710000		
Hydroxyacetoneitrile	0213004		107-16-4	Isopentadiene	0241001	1218	78-79-5
Hydroxybenzene	0323005		108-95-2	Isopentane	1177000	1265	
Hydroxylamine	0235000		7803-49-8	Isophorone	1178000		
Hydroxylamine sulfate	1161000	2865		Isophorone diamine	1179000	2289	
Hydroxypropionitrile	0250002	3275	78-97-7	Isophorone diisocyanate (IPDI)	1180000	2290	
Hydroxypropyl acrylate	1162000			Isophthalic acid	1181000		
Hydroxypropyl methacrylate	0236000		27813-02-1	Isoprene	0241000	1218	78-79-5
Hypochlorite	0360005	1791	7681-52-9	Isopropanol	0242000	1219	67-63-0
Hyponitrous ether	0203001	1194	109-95-5	Isopropanolamine	0243000		78-96-6
Indeno(1,2,3-CD)pyrene	1163000			Isopropene cyanide	0264002	3079	126-98-7
Inerton-DW-DMC	0155003	1162	75-78-5	Isopropenyl acetate	1182000	2403	
Inerton-DMCS	0155004	1162	75-78-5	Isopropenyl benzene	0244000	2303	98-83-9
Iodine cyanide	0112002		506-78-5	Isopropenyl methyl ketone	0287001	1246	814-78-8
Iodomethane	0283002	2644	74-88-4	Isopropyl alcohol	0242003	1219	67-63-0
				Isopropyl bromide	0057001	2344	75-26-3
				Isopropyl chloride	1183000	2356	

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Isopropyl chlorocarbonate	0247002	2407	108-23-6	Lead fluoride	1206000	2811	
Isopropyl chloroformate	0247000	2407	108-23-6	Lead fluoroborate	1207000	2291	
Isopropyl cyanide	0240002	2284	78-82-0	Lead iodide	1208000		
Isopropyl cyclohexane	1184000			Lead nitrate	1209000	1469	
Isopropyl ether	1185000			Lead phosphate	1210000		
Isopropyl formate	0248000	2408	625-55-8	Lead stearate	1211000		
Isopropyl methyl ketone	0269001	2397	563-80-4	Lead sulfate	1212000	1794	
Isopropyl nitrate	1188000	1222		Lead sulfide	1213000		
Isopropyl nitrile	0240003	2284	78-82-0	Lead tetraacetate	1214000		
Isopropyl percarbonate,	1189000			Lead thiocyanate	1215000		
Isopropyl peroxydicarbonate	1190000	2133		Lead thiosulfate	1216000		
Isopropyl propionate	1191000	2409		Lead tungstate	1217000		
Isopropyl-3-methylpyrazolyl dimethylcarbamate	1187000			Lentin	0078007		51-83-2
Isopropylamine	0245000	1221	75-31-0	Leptophos	1218000		
Isopropylbenzene	0246000	1918	98-82-8	Lewisite	1219000		
Isopropylcyanohydrin	0005003	1541	75-86-5	Li	0253001	1415	7439-93-2
Isopropylidene acetone	1841002	1229	141-79-7	Lindane	1220000	2761	
Isothiocyanic acid, methyl ester	0288001	2477	556-61-6	Linseed oil	1221000		
Isothiourea	0382001		62-56-6	Liquefied natural gas	0251000	1972	74-82-8
<b>JP-1</b>	<b>0249002</b>	<b>1223</b>	<b>8008-20-6</b>	Liquefied petroleum gas	0252000	1075	68476-85-7
<b>Kepone</b>	<b>1192000</b>			Liquid chlorine	0087001	1017	7782-50-5
Kerosene	0249000	1223	8008-20-6	Liquid oxygen	0315003		7782-44-7
Kerosine	0249003	1223	8008-20-6	Litharge	1222000		
Ketene	1193000			Lithium	0253000	1415	7439-93-2
Ketene dimer	0149003	2521	674-82-8	Lithium aluminum hydride	1223000	1410	
Kwik-Kil	0361003	1692	57-24-9	Lithium bichromate	1224000		
<b>Lacquer</b>	<b>1194000</b>	<b>1263</b>		Lithium borohydride	1225000	1413	
Lacquer thinner	1195000	1263		Lithium chromate	1226000		
Lactic acid	1196000			Lithium hydride	1227000	1414	
Lactonitrile	0250000	3275	78-97-7	Lithium metal	0253002	1415	7439-93-2
Lasiocarpine	1197000			LNG	0251001	1972	74-82-8
Laughing gas	0311003		10024-97-2	Lorsban	0105002	2783	2921-88-2
Lauric acid	1198000			LOX	0315004		7782-44-7
Lauroyl peroxide	1199000	2124		LPG	0252002	1075	68476-85-7
Lauroyl peroxide (<42%)	1200000	2893		Luprisol	0345002	1848	79-09-4
Lauryl mercaptan	1201000			Lye	0359004		1310-73-2
Lead	1202000			<b>Madone</b>	<b>0116004</b>	<b>1915</b>	<b>108-94-1</b>
Lead acetate	1203000	1616		Magnesium perchlorate	1229000	1475	
Lead arsenate	1204000	1617		Magnesium phosphide	1230000	2011	
Lead chloride	1205000	2291		Magnesium (powder)	1228000	1418	
				Malathion	1231000	2783	
				Maleic acid	1232000	2215	
				Maleic anhydride	1233000	2215	

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Maleic hydrazide	1234000			Methacetone	0146004	1156	96-22-0
Malonic acid dinitrile	0254003	2647	109-77-3	Methacrolein diacetate	1258000		
Malonic dinitrile	0254004	2647	109-77-3	Methacrylaldehyde	1259000	2396	
Malonic mononitrile	0108001		372-09-8	Methacrylic acid	0255000	2531	79-41-4
Malononitrile	0254000	2647	109-77-3	Methacrylic acid chloride	0256001		920-46-7
m-Aminopyridine	0023004	2671		Methacrylic anhydride	1260000		
Maneb	1235000	2968		Methacryloyl chloride	0256000		920-46-7
Manganese (dust)	1236000			Methacryloyloxyethyl isocyanate	1261000		
MAOH	0284002	2053	108-11-2	Methaldehyde	0212003		50-00-0
MAPP gas	0262002	1060		Methallyl chloride	1262000		
Marsh gas	0257004		74-82-8	Methamidophos	1263000		
MB	0268004	1062	74-83-9	Methanal	0212004		50-00-0
MBK	0271002	1224	591-78-6	Methane carboxylic acid	1840005		64-19-7
MCB	0093002	1134	108-90-7	Methane sulfonyl chloride	0258000	3246	124-63-0
m-Chloronitrobenzene	0097002	1578		Methane sulfonyl fluoride	0259000		558-25-8
m-Dinitrobenzene	0166004	1597		Methane sulfuryl chloride	0258004	3246	124-63-0
MEA	1824000			Methane trichloride	0096003	1888	67-66-3
MEK	0280003	1193	78-93-3	Methane (compressed gas)	0257000	1971	74-82-8
Melamine	1237000			Methane (cryogenic liquid)	0257001	1972	74-82-8
Melinite	0336002		88-89-1	Methanearsonic acid, sodium salt	1264000		
Mephosfolan	1238000			Methanecarbonitrile	0006004	1648	75-05-8
Mercaptobenzene	0326002	2337	108-98-5	Methanephosphonyl chloride	0293001	9602	676-97-1
Mercaptodimethur	1239000	2784		Methanesulfonic acid chloride	0258003	3246	124-63-0
Mercaptomethane	0289001	1064	74-93-1	Methanethiol	0289002	1064	74-93-1
Mercuric acetate	1240000	1629		Methanoic acid	0214004	1779	64-18-6
Mercuric ammonium chloride	1241000	1630		Methanol	0260000	1230	67-56-1
Mercuric chloride	1242000	1624		Methiocarb	1265000		
Mercuric cyanide	1243000	1636		Methomyl	1266000		
Mercuric iodide	1244000	1638		Methoxycarbonylethylene	0263003	1919	96-33-3
Mercuric nitrate	1245000	1625		Methoxychlor	1268000		
Mercuric oxide	1246000	1641		Methoxyethyl mercuric acetate	1269000		
Mercuric sulfate	1248000	1645		Methoxyethylene	0409001	1087	107-25-5
Mercuric sulfide	1249000			Methoxymethyl isocyanate	1270000	2605	
Mercuric thiocyanate	1250000	1646		Methyl 2-benzimidazole carbamate	1278000		
Mercurous acetate	1251000	1629		Methyl 2-chloroacrylate	0275000		80-63-7
Mercurous chloride	1252000			Methyl 2-chloropropenoate	0275002		80-63-7
Mercurous nitrate	1253000	1627		Methyl 2-methyl-2-propenoate	0290003	1247	80-62-6
Mercury	1254000	2809		Methyl acetate	0261000	1231	79-20-9
Mercury oxide	1255000	1641		Methyl acetic acid	0345003	1848	79-09-4
Mesityl oxide	1841000	1229	141-79-7	Methyl acetic ester	0261002	1231	79-20-9
Mestranol	1256000			Methyl acetoacetate	1271000		
Mesyl chloride	0258002	3246	124-63-0	Methyl acetone	1272000	1232	
Metaldehyde	1257000	1332		Methyl acetylene	1273000		
meta-Xylene	0412005	1307					

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Methyl acetylene-allene mixture	0262003	1060		Methyl isobutyl carbinol	0284000	2053	108-11-2
Methyl acetylene-propadiene mixture	0262000	1060		Methyl isobutyl ketone	0285000	1245	108-10-1
Methyl acrylate	0263000	1919	96-33-3	Methyl isocyanate	0286000	2480	624-83-9
Methyl acrylonitrile	0264000	3079	126-98-7	Methyl isopropenyl ketone	0287000	1246	814-78-8
Methyl alcohol	0260002	1230	67-56-1	Methyl isopropyl ketone	0269003	2397	563-80-4
Methyl amyl acetate	1274000	1233		Methyl isothiocyanate	0288000	2477	556-61-6
Methyl amyl alcohol	0284003	2053	108-11-2	Methyl ketone	0004002	1090	67-64-1
Methyl amyl ketone	0267000	1110	110-43-0	Methyl mercaptan	0289000	1064	74-93-1
Methyl azinphos	1276000	2783		Methyl mercaptopropionaldehyde	1306000		
Methyl azoxymethanol acetate	1277000			Methyl mercuric dicyanamide	1307000		
Methyl benzoate	1279000	2938		Methyl mercury	1308000		
Methyl bromide	0268000	1062	74-83-9	Methyl methacrylate	0290000	1247	80-62-6
Methyl butenol	1284000			Methyl methane sulfonate	1309000		
Methyl butyl ketone	0271000	1224	591-78-6	Methyl methanoate	0281002	1243	107-31-3
Methyl butyrate	0272000	1237	623-42-7	Methyl monochloroacetate	0274002	2295	96-34-4
Methyl carbinol	0177008	1170	64-17-5	Methyl mustard	0288002	2477	556-61-6
Methyl carbylamine	0286002	2480	624-83-9	Methyl n-butyrate	0272003	1237	623-42-7
Methyl cellosolve	0197006	1188	109-86-4	Methyl nitrite	1311000	2455	
Methyl chloride	0273000	1063	74-87-3	Methyl orthosilicate	1314000	2606	
Methyl chloroacetate	0274000	2295	96-34-4	Methyl oxide	0157002	1033	115-10-6
Methyl chloroformate	1286000	1238		Methyl parathion	1315000	2783	
Methyl chloromethyl ether	1287000	1239		Methyl PCT	0161002	2267	2524-03-0
Methyl cyanide	0006005	1648	75-05-8	Methyl pentyl ketone	0267004	1110	110-43-0
Methyl cyclohexanone	1288000	2297		Methyl phenkapton	1320000		
Methyl cyclopentadiene dimer	1289000			Methyl phosphonic dichloride	0293000	9602	676-97-1
Methyl cyclopentadienyl manganese tricarbonyl	1290000			Methyl phosphonothioic dichloride	0294000	1760	676-98-2
Methyl dichloroacetate	0278000	2299	116-54-1	Methyl phosphonous dichloride	1321000	2845	
Methyl dichloroarsine	1291000	1556		Methyl phosphorous dichloride	0294001	1760	676-98-2
Methyl dichloroethanoate	0278002	2299	116-54-1	Methyl propenoate	0263002	1919	96-33-3
Methyl disulfide	0156002	2381	624-92-0	Methyl propionate	1324000	1248	
Methyl ether	0157001	1033	115-10-6	Methyl propyl ether	1325000	2612	
Methyl ethyl ketone	0280000	1193	78-93-3	Methyl propyl ketone	1326000	1249	
Methyl ethyl pyridine	1300000	2300		Methyl rhodanate	0295001		556-64-9
Methyl fluoroacetate	1301000			Methyl salicylate	1328000		
Methyl fluorosulfate	1302000			Methyl styrene	0410001	2618	25013-15-4
Methyl formal	1303000	1234		Methyl sulfate	0162001	1595	77-78-1
Methyl formate	0281000	1243	107-31-3	Methyl sulfhydrylate	0289003	1064	74-93-1
Methyl heptyl ketone	1304000			Methyl sulfide	0163003	1164	75-18-3
Methyl hydride	0257005		74-82-8	Methyl sulfocyanate	0295002		556-64-9
Methyl hydroxide	0260003	1230	67-56-1	Methyl tert-butyl ether	0270000	2398	1634-04-4
Methyl iodide	0283000	2644	74-88-4	Methyl thiocyanate	0295000		556-64-9
Methyl isobutenyl ketone	1841003	1229	141-79-7	Methyl vinyl ether	0409003	1087	107-25-5
				Methyl vinyl ketone	0297000	1251	78-94-4
				Methyl zinc	0164001	1370	544-97-8

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Methylacryl chloride	0256002		920-46-7	MIBC	0284005	2053	108-11-2
Methylaldehyde	0212005		50-00-0	MIBK	1830000		
Methylamine (anhydrous)	0265000	1061	74-89-5	MIC	0286003	2480	624-83-9
Methylamine (solution)	0266000	1235	74-89-5	Michler's ketone	1336000		
Methylaziridine	0352001	1921	75-55-8	MIK	0285004	1245	108-10-1
Methylbenzene	0384001	1294	108-88-3	Mineral naphtha	0039004	1114	71-43-2
Methylbenzol	0384002	1294	108-88-3	Mineral oil	1337000		
Methylchloroform	0389003	2831	71-55-6	Mineral spirits	0299002		8030-30-6
Methylcyclohexane	0276000	2296	108-87-2	Miostat	0078008		51-83-2
Methylcyclopentane	0277001	2298	96-37-7	MIPK	0269004	2397	563-80-4
Methyldichlorosilane	0279000	1242	75-54-7	Mirbane oil	1842004	1662	98-95-3
Methylene	0350001	1077	115-07-1	Mirex	1338000		
Methylene acetone	0297002	1251	78-94-4	MIT	0288003	2477	556-61-6
Methylene bichloride	0132001	1593	75-09-2	MITC	0288004	2477	556-61-6
Methylene bis-(phenyl isocyanate) (or MBI)	1294000	2489		MMA	1832000		
Methylene bromide	0126001	2664	74-95-3	MME	0290004	1247	80-62-6
Methylene chloride	0132002	1593	75-09-2	MMH	0282003	1244	60-34-4
Methylene cyanide	0254005	2647	109-77-3	MNBK	0271003	1224	591-78-6
Methylene cyanohydrin	0213005		107-16-4	m-Nitrophenol	1394000	1663	
Methylene dibromide	0126002	2664	74-95-3	m-Nitrotoluene	0310001	1664	
Methylene dichloride	0132003	1593	75-09-2	Molecular oxygen	0315005		7782-44-7
Methylene diisocyanate	1296000			Molten phosphorous	0331003		7723-14-0
Methylene oxide	0212006		50-00-0	Molybdenum trioxide	1340000		
Methylethylamine	1297000			Monoallylamine	0018003	2334	107-11-9
Methylethylene	0350002	1077	115-07-1	Monobutylamine	0064003	1125	109-73-9
Methylhydrazine	0282000	1244	60-34-4	Monochlorethane	0183002	1037	75-00-3
Methylmethane	0173004		74-84-0	Monochlorobenzene	0093003	1134	108-90-7
Methyl-n-butanoate	0272002	1237	623-42-7	Monochloroethylene	0405003	1086	75-01-4
Methylol	0260004	1230	67-56-1	Monochloromethane	0273004	1063	74-87-3
Methyloxirane	0353003	1280	75-56-9	Monochlorotetrafluoroethane	1341000		
Methylpentamethylene	0277002	2298	96-37-7	Monochlorotrifluoromethane	1342000		
Methylpentane	1316000	2462		Monocrotaline	1343000		
Methylpiperidine	1322000	2399		Monocrotophos	1344000		
Methyltetrahydrofuran	1329000	2536		Monoethanolamine	0174003	2491	141-43-5
Methyltrichloroacetate	1330000	2533		Monoethylamine	0178004	1036	75-04-7
Methyltrichloromethane	0389004	2831	71-55-6	Monoethyldichlorosilane	0187002	1183	1789-58-8
Methyltrichlorosilane	0296000	1250	75-79-6	Monofluoroacetate	0208005	2642	144-49-0
Metolachlor	1332000			Monofluorobenzene	0209003	2387	462-06-6
Metolcarb	1333000			Monofluoroethene	0407004	1860	75-02-5
Mevinphos	1334000	2783		Monoisopropanolamine	0243004		78-96-6
Mexacarbate	1335000	2757		Monomethylamine	0265001	1061	74-89-5
MFA	0208004	2642	144-49-0	Monomethylhydrazine	0282004	1244	60-34-4
MFB	0209002	2387	462-06-6	Morpholine	0298000	2054	110-91-8
				Motor fuel	0217002	1203	8006-61-9
				Motor spirit	0217003	1203	8006-61-9

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Mous-con	0413001	1714		n-Amyl nitrate	0492000	1113	
Mouse-Rid	0361004	1692	57-24-9	n-Amyl nitrite	0493000		
MPTD	0294002	1760	676-98-2	Naphtha	0299000		8030-30-6
MSF	0259002		558-25-8	Naphtha: coal tar	1351000	2553	
MTBE	0270003	2398	1634-04-4	Naphtha: stoddard solvent	1352000	1271	
m-Toluidine	0387002	1708		Naphtha: VM & P	1353000		
Muriatic acid	1827000			Naphthalene	1354000	1334	
Muriatic ether	0183003	1037	75-00-3	Naphthylthiourea	1356000	1651	
Mustard gas	1345000			Naphthylurea	1357000	1652	
Muster	0218001		1071-83-6	Naramycin	0117003		66-81-9
MVK	0297003	1251	78-94-4	Natural gas	1829000		
MVP (2-Methyl-5-vinyl pyridine)	1346000	3073		Naturium	0356000	1428	7440-23-5
m-Xylene	0412004	1307		n-Butane	0060001	1011	106-97-8
m-Xylene	0412009	1307		n-Butanol	0603000	1120	
Myrcene	1347000			n-Butene	0066003	1012	25167-67-3
N-(2-chlorophenylthiourea)	0098001		5344-82-1	n-Butyl acetate	0061000	1123	123-86-4
N-(2-methylphenyl) thiourea	0292000		614-78-8	n-Butyl acrylate	0062002	2348	141-32-2
N,N'-bis(2-aminoethyl)- 1,2-ethanediamine	0393001	2259	112-24-3	n-Butyl alcohol	0609000	1120	
N,N'-Diacetyl benzidine	0827000			n-Butyl bromide	0056002	1126	109-65-9
N,N'-diacetyl benzidine	0843000			n-Butyl carbinol	0032004	1105	71-41-0
N,N'-Dibutyl hexamethylene diamine	0856000			n-Butyl chloroformate	0616000	2743	
N,N'-dibutyl hexamethylene diamine	0881000			n-Butyl isocyanate	0069000	2485	111-36-4
N,N-diethyl aniline	0890000	2432		n-Butyl mercaptan	0070003	2347	109-79-5
N,N'-diethylaniline	1069000			n-Butyl methacrylate	0622000	2227	
N,N-diethylethanamine	0392002	1296	121-44-8	n-Butylamine	0064000	1125	109-73-9
N,N-dimethyl carbamoyl chloride	0154005	2262	79-44-7	n-Butylaniline	0612000	2738	
N,N-dimethyl cyclohexylamine	1837000			n-Butylchloride	0094002	1127	109-69-3
N,N-dimethyl formamide	0158003	2265	68-12-2	n-Butylene	0066005	1012	25167-67-3
N,N-dimethylacetamide	0151003		127-19-5	n-Butyric acid	0631000	2820	
N,N-dimethylaniline	0153000	2253	121-69-7	n-Decyl acrylate	0817000		
N,N-dimethyl-p-phenylenediamine	0160000		99-98-9	n-Decyl alcohol	0818000		
Nabam	1348000			n-Decyl benzene	0819000		
Nafenopin	1349000			n-Dipropylamine	0170002	2383	142-84-7
Naled	1350000			Nemex	0135005	2047	542-75-6
N-aminoethyl piperazine	0443000	2815		Neodecanoic acid	1358000		
N-aminoethyl piperazine	0450000			Neohexane	0300000	1208	75-83-2
n-Amyl acetate	0488000	1104		Neon	1359000	1065	
n-Amyl alcohol	0032001	1105	71-41-0	Neoprene	0100005	1991	126-99-8
n-Amyl chloride	0490000	1111		N-ethyl butylamine	0181002	2734	13360-63-9
n-Amyl mercaptan	0491000	1112		N-ethyl cyclohexylamine	1039000		
				N-ethylaniline	1028000	2272	
				N-ethylbutylamine	0181003	2734	13360-63-9
				N-formyldimethylamine	0158004	2265	68-12-2
				n-Heptane	0219001	1206	142-82-5

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
n-Heptene	0220000	2278	592-76-7	Nitrogen gas	0304002		7727-37-9
n-Hexaldehyde	1146000	1207		Nitrogen liquid	0304003		7727-37-9
n-Hexane	0221002	1208	110-54-3	Nitrogen monoxide	0303002	1660	10102-43-9
Nickel	1360000	2881		Nitrogen mustard	1389000		
Nickel acetate	1361000			Nitrogen mustard hydrochloride	1390000		
Nickel ammonium sulfate	1362000	9138		Nitrogen mustard N-oxide	1391000		
Nickel bromide	1363000			Nitrogen mustard N-oxide hydrochloride	1392000		
Nickel carbonyl	0301000	1259	13463-39-3	Nitrogen oxide	0303004		
Nickel chloride	1364000			Nitrogen oxychloride	0309002	1069	2696-92-6
Nickel cyanide	1365000	1653		Nitrogen tetroxide	0305002	1067	10102-44-0
Nickel fluoroborate	1366000			Nitrogen trifluoride	1393000	2451	
Nickel formate	1367000			Nitrogen (compressed gas)	0304000	1066	7727-37-9
Nickel hydroxide	1368000	9140		Nitrogen (refrigerated liquid)	0304001	1977	7727-37-9
Nickel nitrate	1369000	2725		Nitroglycerin	0306000	0143	55-63-0
Nickel subsulfide	1370000			Nitroglycerin (1-10% solution in alcohol)	0306001	0144	55-63-0
Nickel sulfate	1371000			Nitromethane	0307000	1261	75-52-5
Nickel tetracarbonyl	0301001	1259	13463-39-3	Nitrophen	0168007		51-28-5
Nicotine	1372000	1654		Nitropropane	0308000	2608	
Nicotine sulfate	1373000	1658		Nitro-Sil	0024004	1005	7664-41-7
Nitrador	0167004	1598	534-52-1	Nitrostarch (dry or wetted with <20% water)	1403000	0146	
Nitralin	1374000			Nitrostarch (wetted with >20% water)	1404000	1337	
Nitric acid (fuming)	0302000	2032	7697-37-2	Nitrosyl chloride	0309000	1069	2696-92-6
Nitric acid (nonfuming, >40%)	0302001	2031	7697-37-2	Nitrosylsulfuric acid	1405000	2308	
Nitric oxide	0303000	1660	10102-43-9	Nitrotoluene	0310000	1664	
Nitric oxide (mixture with nitrogen tetroxide)	0303001	1975	10102-43-9	Nitrous acid, ethyl ester	0203002	1194	109-95-5
Nitrilotriacetic acid	1375000			Nitrous oxide (compressed gas)	0311000	1070	10024-97-2
Nitrilotriacetic acid, disodium salt	1376000			Nitrous oxide (cryogenic liquid)	0311001	2201	10024-97-2
Nitrilotriacetic acid, sodium salt	1377000			N-methylaniline	1275000	2294	
Nitrilotriacetic acid, trisodium salt	1378000			N-methylaniline	1285000		
Nitrobenzene	1842000	1662	98-95-3	N-methyl-methanamine	0152001	1032	124-40-3
Nitrobenzol	1842002	1662	98-95-3	N-nitrosodiethanolamine	1406000		
Nitrocarbol	0307001	1261	75-52-5	N-nitrosodiethylamine	1407000		
Nitrocellulose (with >25% Water)	1383000	2555		N-nitrosodimethylamine	1408000		
Nitrocellulose (with plasticizer >18%)	1384000	0343		N-nitrosodi-n-butylamine	1409000		
Nitrochlorobenzene	0097005	1578		N-nitrosodi-n-propylamine	1410000		
Nitrochloroform	0099001	1580	76-06-2	N-nitrosodiphenylamine	1411000		
Nitrocresols	1385000	2446		N-nitrosomethylethylamine	1412000		
Nitrocyclohexane	1386000			N-nitrosomethylvinylamine	1413000		
Nitroethane	1387000	2842		N-nitrosomorpholine	1414000		
Nitrofan	0167005	1598	534-52-1	N-nitroso-N-ethyl urea	1415000		
Nitrofen	1388000						
Nitrogen chloride oxide	0309001	1069	2696-92-6				
Nitrogen dioxide	0305000	1067	10102-44-0				

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
N-nitroso-N-methyl urea	1416000			Oil of vitrol	0368002	1830	7664-93-9
N-nitroso-N-methyl urethane	1417000			Olamine	0174004	2491	141-43-5
N-nitrosomonicotine	1418000			Oleic acid	1434000		
N-nitrosopiperidine	1419000			Oleic acid, potassium salt	1435000		
N-nitrosopyrrolidine	1420000			Oleic acid, sodium salt	1436000		
N-nitrososarcosine	1421000			Oleum	0314000	1831	8014-95-7
NO	0303003	1660	10102-43-9	o-Nitrobenzene	1842005	1662	98-95-3
n-Octane	0312001	1262	111-65-9	o-Nitrophenol	1395000	1663	
Nonane	1422000	1920		o-Nitrophenol	1433000		
Nonanol	1423000			o-Nitrotoluene	0310005	1664	
Nonene	1424000	2057		o-Phenyl phenate, sodium	1470000		
Nonylphenol	1425000			o-Phenyl phenate, sodium	1476000		
Norbormide	1426000			o-Phenyl phenol	1471000		
Norethisterone	0037004	2188	7784-42-1	o-Phenyl phenol	1477000		
n-Pentane	0321001	1265	109-66-0	Orange oil SS	1437000		
N-phenylthiourea	0328001	2767	103-85-5	Ordram (or molinate)	1438000		
N-phosphonomethylglycine	0218002		1071-83-6	ortho-Xylene	0412006	1307	
N-propanolamine	1509000			Orvinylocarbinol	0017004	1098	107-18-6
N-propanolamine	1529000			Osmium tetroxide	1439000	2471	
n-Propyl acetate	0347000	1276	109-60-4	o-Toluidine	0387003	1708	
n-Propyl benzene	0348000	2364	103-65-1	o-Tolyl thiourea	0292002		614-78-8
n-Propyl chloroformate	0349000	2740	109-61-5	Oxacyclopentadiene	0215002	2389	110-00-9
n-Propyl mercaptan	0342003	2402	107-03-9	Oxacyclopentane	0379003	2056	109-99-9
n-Propyl nitrate	1543000	1865		Oxalic acid	1440000		
n-Undecylbenzene	1757000			Oxalonitrile	0109005	1026	460-19-5
n-Undecylbenzene	1762000			Oxalyl cyanide	0109006	1026	460-19-5
				Oxammonium	0235001		7803-49-8
o-Aminopyridine	0023005	2671		Oxamyl	1441000		
o-Anisidine	0495000	2431		Oxane	0199006	1040	75-21-8
o-Anisidine hydrochloride	0496000			Oxetanone	0149005	2521	674-82-8
o-Chloronitrobenzene	0097003	1578		Oxide of nitrogen	0305003	1067	10102-44-0
o-Chloronitrobenzene	0097006	1578		Oxidoethane	0199007	1040	75-21-8
o-Chlorophenol	0704000	2021		Oxirane	0199008	1040	75-21-8
Octachloronaphthalene	1427000			Oxyacyclopropane	0199009	1040	75-21-8
Octamethyl diphosphoramide	1428000			Oxybenzene	0323006		108-95-2
Octane	0312000	1262	111-65-9	Oxydisulfoton	1397000		
Octanoic acid	1429000			Oxygen difluoride	0316000	2190	7783-41-7
Octanol	1430000			Oxygen (compressed gas)	0315000	1072	7782-44-7
Octene	0313000		111-66-0	Oxygen (refrigerated liquid)	0315001	1073	7782-44-7
Octyl epoxy tallate	1431000			o-Xylene	0412007	1307	
Octylene	0313003		111-66-0	Oxymethylene	0212007		50-00-0
o-Dinitrobenzene	0166005	1597		Ozone	1442000		
Oil of bitter almonds	1842006	1662	98-95-3				
Oil of turpentine	0400001	1299	8006-64-2	Paint thinner	1445000	1263	

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Paint, latex	1443000			Pentyltrichlorosilane	0033001	1728	107-72-2
Paint, oil base	1444000	1263		Peracetic acid	1463000	2131	
p-Aminopyridine	0023006	2671		PERC	0375003	1897	127-18-4
p-Aminopyridine	0023008	2671		Percarbamide	0401003	1511	124-43-6
Panfuran S	1446000			Perchlor	0375004	1897	127-18-4
p-Anisidine	0497000	2431		Perchloric acid	0322000	1873	7601-90-3
Paraformaldehyde	1447000	2213		Perchloroethylene	0375005	1897	127-18-4
Paraldehyde	1448000	1264		Perchloromethyl mercaptan	1464000	1670	
Paramoth	0128003	1592	106-46-7	Perchloryl fluoride	1465000	3083	
Paraquat	1449000	2781		Perclene	0375006	1897	127-18-4
Paraquat methosulfate	1450000			Perfluoroethylene	0378001	1081	116-14-3
Parathion	1451000	2783		Petrol	0217004	1203	8006-61-9
para-Xylene	0412008	1307		Petrolatum	1466000		
Parazene	0128004	1592	106-46-7	Petroleum	0299003		8030-30-6
Paris green	1452000	1585		Petroleum distillate	0299004		8030-30-6
p-Benzoquinone	0041002	2587	106-51-4	Petroleum ether	0299005		8030-30-6
PCE	0375002	1897	127-18-4	Petroleum gas, liquified	0252003	1075	68476-85-7
p-Chloro -m-cresol	0727000			Petroleum naphtha	1467000	1255	
p-Chloroaniline	0691000	2018		Petroleum solvent	0299006		8030-30-6
p-Chloro-m-cresol	0694000			Phenanthrene	1468000		
p-Chloronitrobenzene	0097004	1578		Phenic acid	0323007		108-95-2
p-Chloronitrobenzene	0097007	1578		Phenol trinitrate	0336003		88-89-1
p-Chloro-o-toluidine	0717000			Phenol (molten)	0323000	2312	108-95-2
p-Chlorotoluene	0104004	2238	106-43-4	Phenol (solid)	0323001	1671	108-95-2
PCP	0318002	3155	87-86-5	Phenol (solution)	0323002	2821	108-95-2
p-Cresidine	0785000			Phenyl alcohol	0323008		108-95-2
p-Cymene	0808000	2046		Phenyl bromide	0055001	2514	108-86-1
PDB	0128005	1592	106-46-7	Phenyl chloride	0093004	1134	108-90-7
p-Dichlorobenzene	0128000	1592	106-46-7	Phenyl ethylene	0362003	2055	100-42-5
Penta-2,4-dione	0320000	2310	123-54-6	Phenyl fluoride	0209004	2387	462-06-6
Pentaborane	0317000	1380	19642-22-7	Phenyl isocyanate	1474000	2487	
Pentaborane monohydride	0317001	1380	19642-22-7	Phenyl mercaptan	0326000	2337	108-98-5
Pentacarbonyliron	0237002	1994	13463-40-6	Phenyl phosphorous dichloride	0327000	2798	644-97-3
Pentachlorodibenzo-p-dioxins	1454000			Phenyl phosphorous thiodichloride	1478000	2799	
Pentachloroethane	1455000	1669		Phenyl silatrane	1479000		
Pentachlorophenate, sodium	1456000	2567		Phenyl trichloromethane	0042004	2226	98-07-7
Pentachlorophenol	0318000	3155	87-86-5	Phenylacetoneitrile	0324000	2470	140-29-4
Pentadecanol	1457000			Phenylamine	0035006	1547	62-53-3
Pentadecylamine	1458000			Phenylarsinedichloride	0325002	1556	696-28-6
Pentadione	0320004	2310	123-54-6	Phenylcarboxamide	0038003		
Pentaerythritol	1459000			Phenylcarbylamine chloride	1469000	1672	
Pentamethylene	0119001	1146	142-29-0	Phenylcyanide	0040003	2224	100-47-0
Pentane	0321000	1265	109-66-0	Phenyldichloroarsine	0325000	1556	696-28-6
Pentanoic acid	1460000	1760		Phenylenediamine	1472000	1673	

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Phenylethane	0179002	1175	100-41-4	Picfume	0099003	1580	76-06-2
Phenylhydrazine hydrochloride	1473000			Picoline	1493000	2313	
Phenyllic acid	0323009		108-95-2	Picral	0336004		88-89-1
Phenylmercuric acetate	1475000	1674		Picric acid (>10% water)	0336000	1344	88-89-1
Phenylmethane	0384003	1294	108-88-3	Picric acid (dry or <30% water)	0336001	0154	88-89-1
Phenylphosphine dichloride	0327003	2798	644-97-3	Picride	0099004	1580	76-06-2
Phenylthiocarbamide	0328002	2767	103-85-5	Picrotoxin	1494000	1584	
Phenylthiourea	0328000	2767	103-85-5	Pimelic ketone	0116005	1915	108-94-1
Phorate	1480000	3018		Pine oil	1495000		
Phosacetim	1481000			Pinene	0337001	2368	80-56-8
Phosfolan	1482000	2783		Piperazine	1496000	2579	
Phosgen	0329006	1076	75-44-5	Piperidine	0338000	2401	110-89-4
Phosgene	0329000	1076	75-44-5	Piperylene	0319002		504-60-9
Phosmet	1483000			Piprotal	1497000		
Phosphamidon	1484000			Platinum tetrachloride	1498000		
Phosphine	0330000	2199	7803-51-2	p-Nitrobenzene	0166006	1597	
Phosphoric acid	1485000	1805		p-Nitrobenzene	1842003	1662	98-95-3
Phosphoric sulfide	0333002	1340	1314-80-3	p-Nitrophenol	1396000	1663	
Phosphorochloridothioic acid, 0,0-dimethyl ester	0161003	2267	2524-03-0	p-Nitrotoluene	0310006	1664	
Phosphorus (black)	1487000			Polybrominated biphenyls	1499000	3152	
Phosphorus bromide	0334001	1808	7789-60-8	Polybutene	1500000		
Phosphorus chloride	0335002	1809	7719-12-2	Polychlorinated biphenyls	1501000	2315	
Phosphorus chloride oxide	0332001	1810	10025-87-3	Polyethylene polyamines	1502000		
Phosphorus hydride	0330002	2199	7803-51-2	Polyphosphoric acid	1503000		
Phosphorus oxide trichloride	0332002	1810	10025-87-3	Polypropylene	1504000		
Phosphorus oxychloride	0332000	1810	10025-87-3	Polypropylene glycol	1505000		
Phosphorus oxytrichloride	0332003	1810	10025-87-3	Polypropylene glycol methyl ether	1506000		
Phosphorus pentachloride	1488000	1806		Ponceau 3R	1507000		
Phosphorus pentafluoride	1489000	2198		Potassium	0339000	2257	7440-09-7
Phosphorus pentasulfide	0333000	1340	1314-80-3	Potassium arsenite	1508000	1678	
Phosphorus pentoxide	1490000	1807		Potassium binoxalate	1510000		
Phosphorus persulfide	0333003	1340	1314-80-3	Potassium bromate	1511000	1484	
Phosphorus tribromide	0334000	1808	7789-60-8	Potassium chlorate	1512000	1485	
Phosphorus trichloride	0335000	1809	7719-12-2	Potassium chromate	1513000		
Phosphorus trihydride	0330003	2199	7803-51-2	Potassium cyanide	1514000	1680	
Phosphorus trioxide	1491000	2578		Potassium dichloro-s-triazinetriene	1515000	2465	
Phosphorus (amorphous, red)	1486000	1338		Potassium dichromate	1516000	1479	
Phosphorus (dry or under water)	0331000	1381	7723-14-0	Potassium hydroxide	1517000	1813	
Phosphorus (white molten)	0331001	2447	7723-14-0	Potassium hydroxide solution	1518000	1814	
Phosphoryl chloride	0332004	1810	10025-87-3	Potassium iodide	1519000		
Phosvin	0413002	1714		Potassium oxalate	1520000		
Phthalic anhydride	1492000	2214		Potassium permanganate	1521000	1490	
Pic-chlor	0099002	1580	76-06-2	Potassium peroxide	1522000	1491	
				Potassium peroxysulfate	0340003	1492	7727-21-1

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Potassium persulfate	0340000	1492	7727-21-1	Propylene glycol	1538000		
Potassium silver cyanide	1523000			Propylene glycol ethyl ether	1539000		
Progesterone	1524000			Propylene glycol methyl ether	1540000		
Promecarb	1525000			Propylene glycol monometha crylate	0236002		27813-02-1
Prometryne	1526000			Propylene oxide	0353000	1280	75-56-9
Propadiene	1527000	2200		Propylene tetramer	1541000	2850	
Propane	0341000	1978	74-98-6	Propylene trimer	1542000	2057	
Propane sultone	1528000			Propyleneimine	0352000	1921	75-55-8
Propanethiol	0342000	2402	107-03-9	Propyl nitrile	0346004	2404	107-12-0
Propanoic acid	0345004	1848	79-09-4	Propynyl alcohol	0343004	1986	107-19-7
Propargite	1530000			Prothoate	1544000	2783	
Propargyl alcohol	0343000	1986	107-19-7	Prozoin	0345005	1848	79-09-4
Propargyl bromide	0058002	2345	106-96-7	Prussic acid	0230004	1051	74-90-8
Propellant 12	1531000	1028		Prussite	0109007	1026	460-19-5
Propenamide	0011002	2074	79-06-1	p-tert-Butyl phenol	0628000	2229	
Propene	0350003	1077	115-07-1	p-Toluene sulfonic acid	1689000	2585	
Propene acid	0012005	2218	79-10-7	p-Toluidine	0387004	1708	
Propene oxide	0353004	1280	75-56-9	p-Tolyl chloride	0104005	2238	106-43-4
Propene-3-yl trichlorosilane	0022002	1724	107-37-9	p-Tricresyl phosphate	1717000		
Propenenitrile	0013003	1093	107-13-1	PTU	0328004	2767	103-85-5
Propenoic acid	0012006	2218	79-10-7	p-Xylene	0412010	1307	
Propenoic acid, ethyl ester	0176004	1917	140-88-5	Pyrene	1545000		
Propenoic acid, methyl ester	0263004	1919	96-33-3	Pyrethrins	1546000	9184	
Propenol	0017005	1098	107-18-6	Pyridine	0354000	1282	110-86-1
Propenoyl chloride	0014003	9188	814-68-6	Pyriminil	1547000		
Propenyl alcohol	0017007	1098	107-18-6	Pyrogallic acid	1548000		
Propenyl chloride	0020005	1100	107-05-1	Pyrophosphoric acid, tetraethyl ester	0377004		107-49-3
Propiolactone	0344000	1993	57-57-8	Pyrosulfuryl chloride	1549000	1817	
Propionaldehyde	1532000	1275		Pyrrolidone	1550000		
Propionic acid	0345000	1848	79-09-4	Quinoline	1552000	2656	
Propionic anhydride	1533000	2496		Quinone	0041004	2587	106-51-4
Propionic nitrile	0346003	2404	107-12-0	R12	1555001	1028	
Propionitrile	0346000	2404	107-12-0	R20	0096004	1888	67-66-3
Propoxur	1534000			R22	1556001	1018	
Propyl bromide	0057002	2344	75-26-3	R40	0273005	1063	74-87-3
Propyl chlorocarbonate	0349001	2740	109-61-5	R50	0257006		74-82-8
Propyl chloroformate	0349002	2740	109-61-5	Range oil	0249004	1223	8008-20-6
Propyl cyanide	0074003	2411	109-74-0	Ratal	0413003	1714	
Propyl mercaptan	0342002	2402	107-03-9	Refrigerant 12	1555000	1028	
Propylacetone	0271004	1224	591-78-6	Refrigerant 22	1556000	1018	
Propylamine	1535000	1277					
Propylene	0350000	1077	115-07-1				
Propylene butylene polymer	1536000						
Propylene dichloride	0351000	1279	78-87-5				

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Refrigerant R717	0024005	1005	7664-41-7	Silvex	1583000	2765	
Resorcinol	1557000	2876		Simazine	1584000		
Rodeo	0218003		1071-83-6	Sinox	0167006	1598	534-52-1
Ro-Dex	0361005	1692	57-24-9	Skellysolve A	0321002	1265	109-66-0
Roundup	0218004		1071-83-6	Soda lye	0359005		1310-73-2
Rubbing alcohol	0242007	1219	67-63-0	Sodium	0356001	1428	7440-23-5
Rubidium	1558000	1423		Sodium 2-mercaptobenzothiazol solution	1607000		
Saccharin	1559000			Sodium alkyl sulfates	1586000		
Safrole	1560000			Sodium alkylbenzene sulfonates	1585000		
Salicylaldehyde	1561000			Sodium amide	1587000		
Salicylic acid	1562000			Sodium arsenate	1588000	1685	
Salt peter	1563000	1942		Sodium arsenite	1589000	2027	
Sand acid	0210005	1778	16961-83-4	Sodium azide	0357000	1687	26628-22-8
Sarin	1564000			Sodium bifluoride	1590000	2439	
sec-Butanol	0604000	1120		Sodium bisulfite	1591000	2693	
sec-Butyl alcohol	0610000	1120		Sodium borate	1592000		
sec-Butylamine	0611000			Sodium borohydride	1593000	1426	
sec-Propyl alcohol	0242006	1219	67-63-0	Sodium borohydride (15% or less)	1594000		
Selenic acid	1565000	1905		Sodium cacodylate	1595000	1688	
Selenium (powder)	1566000	2658		Sodium chlorate	1596000	1495	
Selenium dihydride	0233002	2202	7783-07-5	Sodium chlorate solution	1597000	2428	
Selenium dioxide	1567000	2811		Sodium chromate	1598000		
Selenium hexafluoride	1568000	2194		Sodium cyanide	0358000	1689	143-33-9
Selenium oxychloride	1569000	2879		Sodium dichloro-s-triazinetriene	1599000	2465	
Selenium trioxide	1570000			Sodium dichromate	1600000	1479	
Semicarbazide hydrochloride	1571000			Sodium ferrocyanide	1601000		
Sewer gas	0234002	1053	7783-06-4	Sodium fluoride	1602000	1690	
Sextone	0116006	1915	108-94-1	Sodium fluoroacetate	1603000	2629	
Silane	1572000	2203		Sodium fluorosilicate	1604000	2674	
Silica gel	1574000			Sodium hydrate	0359006		1310-73-2
Silica, crystalline	1573000			Sodium hydride	1605000	1427	
Silicochloroform	0391001	1295	10025-78-2	Sodium hydrosulfide solution	1606000	2922	
Silicofluoric acid	0210006	1778	16961-83-4	Sodium hydroxide (dry)	0359000	1823	1310-73-2
Silicon chloride	0355000	1818	10026-04-7	Sodium hydroxide (solution)	0359001	1824	1310-73-2
Silicon tetrachloride	0355001	1818	10026-04-7	Sodium hypochlorite	0360000	1791	7681-52-9
Silicon (powder)	1575000	1346		Sodium hypochlorite solution	0360006	1791	7681-52-9
Silver	1576000			Sodium methylate	1608000	1431	
Silver acetate	1577000			Sodium nitrate	1609000	1498	
Silver carbonate	1578000			Sodium nitrite	1610000	1500	
Silver iodate	1579000			Sodium oxalate	1611000		
Silver nitrate	1580000	1493		Sodium perchlorate	1612000	1502	
Silver oxide	1581000			Sodium persulfate	1613000		
Silver sulfate	1582000			Sodium phosphate	1614000	9147	

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Sodium phosphate tribasic	1615000			Sulfur hydride	0234004	1053	7783-06-4
Sodium phosphide	1616000	1432		Sulfur monochloride	0369000	1828	10025-67-9
Sodium saccharin	1617000			Sulfur oxide	0367005	1079	7446-09-5
Sodium selenate	1618000	2630		Sulfur oxychloride	0372003	1834	7791-25-5
Sodium selenite	1619000	2630		Sulfur pentafluoride	1637000		
Sodium silicate	1620000			Sulfur phosphide	0333004	1340	1314-80-3
Sodium sulfate	1621000			Sulfur subchloride	0369004	1828	10025-67-9
Sodium sulfide	1622000	1385		Sulfur tetrafluoride	0370000	2418	7783-60-0
Sodium sulfite	1623000			Sulfur trioxide	0371000	1829	7446-11-9
Sodium tellurite	1624000			Sulfur (molten)	0365001	2448	7704-34-9
Sodium thiocyanate	1625000			Sulfureted hydrogen	0234003	1053	7783-06-4
Solvent 111	0389005	2831	71-55-6	Sulfuric acid	0368000	1830	7664-93-9
Sorbitol	1626000			Sulfuric acid, dimethyl ester	0162002	1595	77-78-1
Spirits of turpentine	0400002	1299	8006-64-2	Sulfuric acid, fuming	0314003	1831	8014-95-7
Stannous fluoride	1627000			Sulfuric anhydride	0371003	1829	7446-11-9
Stearic acid	1628000			Sulfuric chlorohydrin	0103002	1454	7790-94-5
Sterigmatocystin	1629000			Sulfuric oxide	0371004	1829	7446-11-9
s-Tetrachloroethane	0374004	1702	79-34-5	Sulfuric oxychloride	0372002	1834	7791-25-5
Stibine	1630000	2676		Sulfurous acid	1636000	1833	
Stoddard solvent	0299007		8030-30-6	Sulfurous acid anhydride	0367002	1079	7446-09-5
Strontium chromate	1631000			Sulfurous acid, diammonium salt	0030002	9090	10196-04-0
Strychnine	0361000	1692	57-24-9	Sulfurous anhydride	0367003	1079	7446-09-5
Strychnine sulfate	1632000	1692		Sulfurous oxide	0367004	1079	7446-09-5
Styrene	0362000	2055	100-42-5	Sulfurous oxychloride	0381003	1836	7719-09-7
Styrene monomer	0362004	2055	100-42-5	Sulfuryl chloride	0372000	1834	7791-25-5
Styrene oxide	0363000		96-09-3	Supracide	1638000		
Styrene-7,8-oxide	0363003		96-09-3	Sweet spirit of nitre	0203003	1194	109-95-5
Styrol	0362005	2055	100-42-5	sym-Allene	0451000		
Styrolene	0362006	2055	100-42-5				
Suberane	0114002	2241	291-64-5	Tabun	1639000		
Sucrose	1633000			Tannic acid	1640000		
Sulfallate	1634000			Tar	1641000	1999	
Sulfan	0371001	1829	7446-11-9	t-Butanol	0063001	1120	75-65-0
Sulfinyl chloride	0381001	1836	7719-09-7	t-Butyl alcohol	0063000	1120	75-65-0
Sulfolane	0364000		126-33-0	t-Butyl methyl ether	0270001	2398	1634-04-4
Sulfolane W	0364002		126-33-0	t-Butylamine	0065000	2734	75-64-9
Sulfonyl chloride	0372001	1834	7791-25-5	TCE	0390003	1710	79-01-6
Sulfotep	1635000	1704		TCM	0096005	1888	67-66-3
Sulfur	0365000	1350	7704-34-9	TDI	0386001	2078	584-84-9
Sulfur anhydride	0371002	1829	7446-11-9	TEA	0392003	1296	121-44-8
Sulfur chloride	0369003	1828	10025-67-9	TEL	0376001	1649	78-00-2
Sulfur chloride oxide	0381002	1836	7719-09-7	Tellurium fluoride	0373001	2195	7783-80-4
Sulfur dichloride	0366000	1828	10545-99-0	Tellurium hexafluoride	0373000	2195	7783-80-4
Sulfur dioxide	0367000	1079	7446-09-5	Tellurium (powder)	1642000		

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Telmicid	0171003		514-73-8	Tetrahydronaphthalene	1661000		
Telmid	0171004		514-73-8	Tetrahydrothiophene-1	0364003		126-33-0
Telone 2	0135006	2047	542-75-6	Tetramethyl lead	1663000		
Telone C	0135007	2047	542-75-6	Tetramethyl silane	1664000	2749	
Temik	0016003	2757	116-06-3	Tetramethylene cyanide	0015004	2205	111-69-3
TEN	0392004	1296	121-44-8	Tetramethylene oxide	0379004	2056	109-99-9
TEP	0377005		107-49-3	Tetramethylene sulfone	0364004		126-33-0
TEPP	0377006		107-49-3	Tetran	0380001	1510	509-14-8
Terbufos	1643000			Tetranitromethane	0380000	1510	509-14-8
Terephthalic acid	1644000			Tetrasol	0083006	1846	56-23-5
Terphenyl	1645000			Thallium	1665000		
Terpinoline	1646000	2541		Thallium acetate	1666000		
tert-Butyl ether	0620000	1149		Thallium carbonate	1667000		
tert-Butyl hydroperoxide	0068000		75-91-2	Thallium nitrate	1668000	2727	
tert-Butyl peroxybenzoate	0625000	2097		Thallium sulfate	1669000	1707	
tert-Butylamine	0065002	2734	75-64-9	Thallos carbonate	1670000		
tert-Octyl mercaptan	1432000	3023		Thallos chloride	1671000		
Testosterone and its esters	1647000			Thallos malonate	1672000		
TETA	0393002	2259	112-24-3	Thallos sulfate	1673000		
Tetrabutyl titanate	1648000			THF	0379005	2056	109-99-9
Tetracarbonyl nickel	0301002	1259	13463-39-3	Thioacetamide	1675000		
Tetrachloroethane	0374000	1702	79-34-5	Thioacetic acid	1676000	2436	
Tetrachloroethylene	0375000	1897	127-18-4	Thiobencarb	1677000		
Tetrachloromethane	0083005	1846	56-23-5	Thiobutyl alcohol	0070004	2347	109-79-5
Tetrachlorosilane	0355002	1818	10026-04-7	Thiocarbamide	0382002		62-56-6
Tetrachlorotitanium	0383001	1838	7550-45-0	Thiocarbazide	1678000		
Tetrachlorvinphos	1651000			Thiocyanic acid, ethyl ester	0205003		542-90-5
Tetradecanol	1652000			Thiocyanomethane	0295003		556-64-9
Tetradecyl benzene	1654000			Thioethanol	0202004	2363	75-08-1
Tetraethyl dithiopyrophosphate	1655000	1704		Thioethyl alcohol	0202005	2363	75-08-1
Tetraethyl lead	0376000	1649	78-00-2	Thiofanox	1680000		
Tetraethyl pyrophosphate (liquid)	0377001	3018	107-49-3	Thiolane-1,1-dioxide	0364005		126-33-0
Tetraethyl pyrophosphate (solid)	0377000	2783	107-49-3	Thiomethyl alcohol	0289004	1064	74-93-1
Tetraethyl tin	1658000			Thionazin	1681000	3018	
Tetraethylene glycol	1656000			Thionyl chloride	0381000	1836	7719-09-7
Tetraethylene pentamine	1657000	2320		Thiophan sulfone	0364006		126-33-0
Tetraethylplumbane	0376002	1649	78-00-2	Thiophenol	0326003	2337	108-98-5
Tetrafluoroethylene	0378000	1081	116-14-3	Thiophosgene	1682000	2474	
Tetrafluorohydrazine	1659000	1955		Thiophosphoric anhydride	0333005	1340	1314-80-3
Tetrafluoromethane	1660000	1982		Thiosemicarbazide	1683000		
Tetrafluorosulfurane	0370001	2419	7783-60-0	Thiourea	0382000		62-56-6
Tetrahydro-1,4-oxazine	0298004	2054	110-91-8	Thiourea (2-chlorophenyl)	0098002		5344-82-1
Tetrahydrofuran	0379000	2056	109-99-9	Thiram	1684000	2771	

APPENDIX D • CHEMICAL IDENTIFICATION

Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Thorium dioxide	1685000			Trichloroamylsilane	0033002	1728	107-72-2
Thorium nitrate	1686000	2976		Trichlorobenzene	1700000	2321	
TIBAL	0395002		100-99-2	Trichloroborane	0049002	1741	10294-34-5
Titanium chloride	0383002	1838	7550-45-0	Trichloroboron	0049003	1741	10294-34-5
Titanium dioxide	1687000			Trichlorobutene	1702000	2322	
Titanium tetrachloride	0383000	1838	7550-45-0	Trichlorobutylsilane	0071002	1747	7521-80-4
Titanium(IV) chloride	0383003	1838	7550-45-0	Trichloroethanal	0086003	2075	75-87-6
TL 214	0186004	1892	598-14-1	Trichloroethene	0390006	1710	79-01-6
TL 69	0325003	1556	696-28-6	Trichloroethenyilsilane	0411002	1305	75-94-5
TMA	0397001	1083	75-50-3	Trichloroethyl silicon	0206002	1196	115-21-9
TNM	0380002	1510	509-14-8	Trichloroethylene	0390000	1710	79-01-6
TNT (dry or wetted with <30% water)	1688000	0209		Trichloroethylsilane	0206001	1196	115-21-9
Toluene	0384000	1294	108-88-3	Trichlorofluoromethane	1704000		
Toluene 2,4-diisocyanate	0386003	2078	584-84-9	Trichloroform	0096006	1888	67-66-3
Toluene diamine	0385003	1709	95-80-7	Trichloromethane	0096007	1888	67-66-3
Toluene diisocyanate	0386000	2078	584-84-9	Trichloromethyl benzene	0042005	2226	98-07-7
Toluene-2,4-diamine	0385004	1709	95-80-7	Trichloromethylsilane	0296001	1250	75-79-6
Toluidine	0387000	1708		Trichloromethylsilicon	0296002	1250	75-79-6
Toluol	0384005	1294	108-88-3	Trichloromonosilane	0391002	1295	10025-78-2
Tolu-sol	0384004	1294	108-88-3	Trichloronate	1705000		
Toxaphene	1690000	2761		Trichloronitromethane	0099005	1580	76-06-2
trans-2-Butenal	0106002	1143	4170-30-3	Trichlorophenyl silane	1711000		
trans-Butene	0066004	1012	25167-67-3	Trichlorophosphine	0335003	1809	7719-12-2
Tri	0389006	2831	71-55-6	Trichlorosilane	0391000	1295	10025-78-2
TRI	0390004	1710	79-01-6	Trichloro-s-triazinetrione	1713000	2468	
Triamiphos	1692000			Trichlorotoluene	0042006	2226	98-07-7
Triaziquone	1693000			Trichlorotrifluoroethane	1714000		
Triazofos	1694000			Trichlorovinylsilicon	0411003	1305	75-94-5
Tribromoborane	0048002	2692	10294-33-4	Tri-clor	0099006	1580	76-06-2
Tribromophosphine	0334002	1808	7789-60-8	Tridecane	1718000		
Tributyl phosphate	1696000			Tridecanol	1719000		
Tributylamine	1695000	2542		Tridecyl benzene	1721000		
Tricarbonyl methyl cyclopentadienyl manganese	1697000			Trien	0393003	2259	112-24-3
Trichlor	0390005	1710	79-01-6	Triethane	0389007	2831	71-55-6
Trichlorfon	1698000	2783		Triethanol amine	1722000		
Trichloro-(chloromethyl) silane	1703000			Triethoxysilane	1723000		
Trichloroacetaldehyde	0086002	2075	75-87-6	Triethyl aluminum	1724000		
Trichloroacetic acid	1699000	1839		Triethyl benzene	1725000		
Trichloroacetic acid chloride	0388001	2442	76-02-8	Triethyl phosphate	1728000		
Trichloroacetyl chloride	0388000	2442	76-02-8	Triethyl phosphite	1729000	2323	
Trichloroallylsilane	0022003	1724	107-37-9	Triethylamine	0392000	1296	121-44-8
				Triethylene glycol	1726000		
				Triethylene thiophosphoramidate	1727000		

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Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Triethylenetetramine	0393000	2259	112-24-3	Tris- (2-chloroethyl)amine	0399000		555-77-1
Trifluoroacetic acid	1730000	2699		Tris- (aziridinyl)phosphine oxide	1752000	2501	
Trifluoroboron	0050002	1008	7637-07-2	Trithene	0394005	1082	79-38-9
Trifluorochlorine	0089003	1749	7790-91-2	Trithion	1754000		
Trifluorochloroethylene	0394000	1082	79-38-9	Trixylenyl phosphate	1755000		
Trifluorovinyl chloride	0394004	1082	79-38-9	Trona	0048003	2692	10294-33-4
Trifluralin	1732000			Trypan blue	1756000		
Triisobutyl aluminum	0395000		100-99-2	TS160	0399002		555-77-1
Triisobutylalane	0395003		100-99-2	Turpentine	0400000	1299	8006-64-2
Triisobutylene	1733000	2324		Turpentine oil	0400003	1299	8006-64-2
Triisopropanol amine	1734000			Turpentine spirits	0400004	1299	8006-64-2
Trimethoxysilane	0396000	9269	2487-90-3	<b>UDMH</b>	<b>0159003</b>	<b>1163</b>	<b>57-14-7</b>
Trimethyl benzene	1738000	2325		Undecane	1758000	2330	
Trimethyl hexamethylene diamine	1739000	2327		Undecanoic acid	1759000		
Trimethyl hexamethylene diisocyanate	1740000	2328		Undecanol	1760000		
Trimethyl phosphite	1741000	2329		Unifume	0192006	1605	106-93-4
Trimethyl tin chloride	1742000			unsym-Dimethylhydrazine	0159004	1163	57-14-7
Trimethylacetic acid	1735000			Uracil mustard	1763000		
Trimethylacetyl chloride	1736000	2438		Uranium hexafluoride	1765000	2978	
Trimethylamine(anhydrous)	0397000	1083	75-50-3	Uranium metal (pyrophoric)	1764000	2979	
Trimethylchlorosilane	0398000	1298	75-77-4	Uranium peroxide	1766000		
Trimethylene	0121001	1027	95-75-7	Uranyl acetate	1767000	9180	
Trimethylmethane	0238003	1969	75-28-5	Uranyl nitrate	1768000	2981	
Trinitrobenzene (dry or wetted with <30% water)	1743000	0213		Uranyl sulfate	1769000		
Trinitrobenzene (wetted with >30% water)	1744000	1354		Urea	1770000		
Trinitrobenzoic acid (dry or wetted with <30% water)	1746000	1355		Urea hydrogen peroxide	0401004	1511	124-43-6
Trinitrobenzoic acid (wetted with >30% water)	1745000	0215		Urea peroxide	0401000	1511	124-43-6
Trinitroglycerin	0306004	0143	55-63-0	Urea, ammonium nitrate soln (w/aqua ammonia)	1771000		
Trinitrophenol	0336005		88-89-1	Urethane	1772000		
Trinitrotoluene (dry or wetted with <30% water)	1747000	0209		USAFST-40	0264004	3079	126-98-7
Trinitrotoluene (wetted with >30% water)	1748000	1356		<b>VAC</b>	<b>0403004</b>	<b>1301</b>	<b>108-05-4</b>
Tri-p-cresyl phosphate	1716000	2574		Valeraldehyde	1773000	2058	
Triphenyl tin chloride	1749000			Valeric acid	1774000	1760	
Tripropylene glycol	1750000			VAM	0403005	1301	108-05-4
Tripropylene glycol methyl ether	1751000			Vanadium	1775000	3285	
Tris-(2,3-dibromopropyl) phosphate	1753000			Vanadium oxychloride	0402001	2243	7727-18-6
				Vanadium oxytrichloride	0402000	2243	7727-18-6
				Vanadium pentoxide	1776000	2862	
				Vanadium trichloride oxide	0402002	2243	7727-18-6
				Vanadyl sulfate	1777000	2931	
				Vanadyl trichloride	0402003	2243	7727-18-6

## APPENDIX D • CHEMICAL IDENTIFICATION

Chemical Name	Chemical ID No.	UN No.	CAS No.	Chemical Name	Chemical ID No.	UN No.	CAS No.
Vapotone	0377007		107-49-3	Zectran	1785000		
VC	0405004	1086	75-01-4	Zinc	1786000	1436	
VCM	0405005	1086	75-01-4	Zinc acetate	1787000	9153	
VDC	0408003	1303	75-35-4	Zinc ammonium chloride	1788000	9154	
Vidden D	0135008	2047	542-75-6	Zinc arsenate	1789000	1712	
Vinyl A monomer	0403006	1301	108-05-4	Zinc bichromate	1790000		
Vinyl acetate	0403000	1301	108-05-4	Zinc borate	1791000		
Vinyl acetylene	1778000			Zinc bromide	1792000	9156	
Vinyl allyl ether	1779000			Zinc carbonate	1793000	9157	
Vinyl amide	0011003	2074	79-06-1	Zinc chloride	1794000	2331	
Vinyl benzene	0362007	2055	100-42-5	Zinc chromate	1795000		
Vinyl bromide	0404000	1085	593-60-2	Zinc dialkyldithiophosphate	1797000		
Vinyl carbinol	0017008	1098	107-18-6	Zinc dithionite	1798000	1931	
Vinyl chloride	0405000	1086	75-01-4	Zinc fluoride	1799000	9158	
Vinyl chloride monomer	0405006	1086	75-01-4	Zinc fluoroborate	1800000		
Vinyl cyanide	0013005	1093	107-13-1	Zinc fluorosilicate	1801000	2855	
Vinyl ethyl ether	0406000	1302	109-92-2	Zinc formate	1802000	9159	
Vinyl fluoride	0407000	1860	75-02-5	Zinc methyl	0164002	1370	544-97-8
Vinyl formic acid	0012008	2218	79-10-7	Zinc nitrate	1803000	1514	
Vinyl isobutyl ether	1780000	1304		Zinc oxide	1804000		
Vinyl methyl ether	0409000	1087	107-25-5	Zinc phenolsulfonate	1805000	9160	
Vinyl methyl ketone	0297004	1251	78-94-4	Zinc phosphide	0413000	1714	
Vinyl neodecanoate	1781000			Zinc potassium chromate	1806000		
Vinyl toluene	0410000	2618	25013-15-4	Zinc sulfate	1807000	9161	
Vinyl trichlorosilane	0411000	1305	75-94-5	Zinccyanide	1796000	1713	
Vinylethylene	0059007	1010	106-99-0	Zineb	1808000		
Vinylidene chloride	0408000	1303	75-35-4	Ziram	1809000		
Vinylsilicon trichloride	0411004	1305	75-94-5	Zirconium	1810000	2008	
Vorlex	0288005	2477	556-61-6	Zirconium acetate	1811000		
Vulnoc AB	0025001	9080	1863-63-4	Zirconium nitrate	1812000	2728	
Weedone	0122003	2765	94-75-7	Zirconium oxychloride	1813000		
White caustic	0359007		1310-73-2	Zirconium potassium fluoride	1814000	9162	
White phosphorus	0331004		7723-14-0	Zirconium sulfate	1815000	9163	
Wood alcohol	0260005	1230	67-56-1	Zirconium tetrachloride	1816000	2503	
Wood ether	0157003	1033	115-10-6	ZP	0413004	1714	
Woodtreat	0318003	3155	87-86-5	Zylylene dichloride	1817000		
Xenon	1782000	2036					
Xylene	0412000	1307					
Xylenol	1783000	2261					
Xylol	0412011	1307					
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