

A COMPREHENSIVE PROSECUTION REPORT FORMAT FOR ARSON CASES

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ABSTRACT. Arson investigations, in order to be successfully prosecuted, must be carefully documented in accordance with uniform guidelines and professional standards. This paper presents an update to a successful time-tested prosecution report format that covers these key components and provides prosecutors with sufficient background to both present cases to the grand jury as well as to guide them through the trial phase. Included in this paper are helpful report checklists along with cross references to essential sections of *NFPA 921*, *NFPA 1033*, and *ASTM* standards.

INTRODUCTION

Arson investigations, in order to be successfully prosecuted, must be carefully documented in accordance with various uniform guidelines and professional standards. Although several standardized narrative report formats have existed, no nationally recognized and standardized format presently exists.

In the last comprehensive study on successful arson prosecutions, the U.S. Department of Justice (US DOJ) identified three key components contained in investigative reports: (1) development evidence on the incendiary nature and origin of the fire, (2) gathering of sufficient evidence that clearly establishes a motive, and (3) the identification and linkage of the suspect to the crime (US DOJ, 1984).

This paper presents an update to a successful time-tested prosecution report format used in arson-for-profit cases (Icové, Wherry, and Schroeder, 1998). This updated format addresses the US DOJ key components and provides prosecutors with sufficient background to present cases to the grand jury as well as to guide them through the trial phase. Included are helpful report checklists along with cross references to essential sections guidelines and standards, as cited in Table 1 (Icové and Haynes, 2007).

Table 1. Suggested Areas to be Addressed in a Peer Review of a Complex Fire Investigation

Instructions: Check the appropriate block to indicate the presence or absence of the following information.		
YES	NO	
<input type="checkbox"/>	<input type="checkbox"/>	Scene secured (<i>NFPA 1033, 4.2.1</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Scene safety assessment conducted (<i>OSHA, 29 CFR Section 1910</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Exterior survey conducted (<i>NFPA 1033, 4.2.2; NFPA 906-2</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Interior survey conducted (<i>NFPA 1033, 4.2.3; NFPA 906-2</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Burn patterns interpreted (<i>NFPA 1033, 4.2.4; NFPA 906-2</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Burn patterns correlated (<i>NFPA 1033, 4.2.5; NFPA 906-2</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Fire debris examined and removed (<i>NFPA 1033, 4.2.6, ASTM 1188, ASTM E 1459</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Area(s) of origin reconstructed (<i>NFPA 1033, 4.2.7</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Building performance inspected (<i>NFPA 1033, 4.2.8</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Effects of explosions discriminated from other damage (<i>NFPA 1033, 4.2.9</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Scene diagrammed (<i>NFPA 1033, 4.3.1; NFPA 906-9</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Scene photographed (<i>NFPA 1033, 4.3.2; NFPA 906-8, ASTM E 1188</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative notes taken and preserved (<i>NFPA 1033, 4.3.3; NFPA 906</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Eyewitness evidence identified, preserved, collected, packaged (<i>NIJ Eyewitness Evid. Guide</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Evidence (physical, electronic, digital) identified, preserved, collected, packaged (<i>NFPA 1033, 4.4.1, 4.4.2; NFPA 906-7; ASTM E 620; ASTM E 860; ASTM E 1188, ASTM E 1459; NIJ Electronic Crime Scene Investigation Guide; FBI Guidelines for Imaging Technologies</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Evidence properly selected for analysis (<i>NFPA 1033, 4.4.3; NFPA 906-7; ASTM E 620, ASTM E 1492</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Chain of custody documented (<i>NFPA 1033, 4.4.4; NFPA 906-7</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Evidence properly disposed (<i>NFPA 1033, 4.4.5</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Interview plan developed (<i>NFPA 1033, 4.5.1</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Interviews/interrogations properly conducted (<i>NFPA 1033, 4.5.2, NFPA 906-6</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative information properly inventoried (<i>NFPA 906-0</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative information properly analyzed/correlated (<i>NFPA 1033, 4.5.3; ASTM E 620</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative information properly obtained/documentated (<i>NFPA 1033, 4.6.1; NFPA 906-1, 906-10, 906-11</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative information in file is interpreted/corroborated (<i>NFPA 1033, 4.6.2</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative information on victims/casualties documented (<i>NFPA 906-5, NIJ Death Investigation Guide</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative information need for fire modeling documented (<i>NFPA 921, ASTM E 1355, ASTM E 1472, ASTM E 1591, ASTM E 1895</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative information need for determining occurrence of room flashover documented (<i>NFPA 555</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Expert resources matched to needs, causation (<i>NFPA 1033, 4.6.3</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Motive/opportunity evidence established (<i>NFPA 1033, 4.6.4</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Person(s)/product(s) identified for responsibility (<i>NFPA 1033, 4.6.5</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Concise written report prepared (<i>NFPA 1033, 4.7.1; ASTM E 620, ASTM E 678, ASTM E 1020, ASTM E 1188, ASTM E 1492, ASTM E 1459, ASTM E 1546</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Investigative findings verbally presented (<i>NFPA 1033, 4.7.2</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Testimony clearly presented at legal proceedings (<i>NFPA 1033, 4.7.3</i>)
<input type="checkbox"/>	<input type="checkbox"/>	Public informational presentations are accurate (<i>NFPA 1033, 4.7.4</i>)

APPLICABLE GUIDELINES AND STANDARDS

The crucial issue surrounding a report of investigation is that it contains sufficient information that would allow an independent reviewer to arrive at a similar, if not the same conclusion. Protocols for this information already exist and are cited in the National Fire Protection Association's *Guide for Fire and Explosion Investigations (NFPA 921, 2008)* and in other government references (US DOJ, 2000). In addition, other guides and standards exist that knowledgeable investigators are encouraged to follow.

U.S. Department of Justice

Since the 1990s, the U.S. Department of Justice (US DOJ) has developed and disseminated a series of investigative guides and protocols covering the handling of various aspects of fire, arson, and related matters. These guides have now become standards of care for investigators. The following documents should be considered when composing a comprehensive prosecution report:

- *Crime Scene Investigation: A Guide for Law Enforcement*, NIJ Guide, January 2000. See also: *Crime Scene Investigation: A Reference for Law Enforcement*, NIJ Special Report, June 2004 (designed to accompany *Crime Scene Investigation: A Guide for Law Enforcement*)
- *Death Investigation: A Guide for the Scene Investigator*, NIJ Guide, November 1999
- *Electronic Crime Scene Investigation: A Guide for First Responders*, NIJ Guide, June 2001
- *Eyewitness Evidence: A Guide for Law Enforcement*, NIJ Guide, October 1999. See also: *Eyewitness Evidence: A Trainer's Manual for Law Enforcement*, NIJ Special Report, September 2003 (designed to accompany *Eyewitness Evidence: A Guide for Law Enforcement*)
- *Fire and Arson Scene Evidence: A Guide for Public Safety Personnel*, NIJ Guide, June 2000
- *Forensic Examination of Digital Evidence: A Guide for Law Enforcement*, NIJ Special Report, April 2004
- *A Guide for Explosion and Bombing Scene Investigation*, NIJ Guide, June 2000
- *Postconviction DNA Testing: Recommendations for Handling Requests, Issues and Practices*, September 1999
- *Using DNA to Solve Cold Cases*, NIJ Special Report, October 2002
- *What Every Law Enforcement Officer Should Know About DNA Evidence*, Brochure, September 1999

In addition to the NIJ investigative guides, the Federal Bureau of Investigation (FBI) has working committees that provide specific guidance on the use of digital evidence. With the increased use of digital cameras, it is important for photographs taken by investigators that are used, enhanced, and stored to be maintained with integrity, since they may later come under close scrutiny. The following documents should be considered when composing a comprehensive prosecution report:

- FBI. 1999. *Definitions and Guidelines for the Use of Imaging Technologies in the Criminal Justice System*. Forensic Science Communications 1 (October): No. 3.
- FBI. 2004. *Scientific Working Group on Imaging Technology (SWGIT) References/Resources*, Forensic Science Communications (March).

NIJ and FBI publications are cited on the Internet websites, nij.ncjrs.gov and www.fbi.gov, respectively.

National Fire Protection Association

Like the U.S. Department of Justice and FBI investigative guides, the following NFPA documents have become standards of care for fire investigators. The following documents should be considered when composing a comprehensive prosecution report:

- *NFPA Fire Protection Handbook*, 2003 Edition.
- *NFPA 555 - Guide on Methods for Evaluating Potential for Room Flashover*. 2000
- *NFPA 906 - Guide for Fire Incident Field Notes*. 1998
- *NFPA 921 - Guide for Fire and Explosion Investigations*. 2008
- *NFPA 1033 - Standard for Professional Qualifications for Fire Investigator*. 2009

The contact information for obtaining additional information can be website www.nfpa.org or NFPA, 1 Batterymarch Park, Quincy, Massachusetts, USA 02169-7471, telephone number (617) 770-3000.

American Society for Testing and Materials

American Society for Testing and Materials (ASTM) standards for years has provided guidance in fire testing and forensics. The following documents should be considered when composing a comprehensive prosecution report:

- *ASTM E 620-04 Standard Practice for Reporting Opinions of Technical Reports*. Committee E30.11 on Interdisciplinary Forensic Science Standards.
- *ASTM E 678-98 Standard Practice for Evaluation of Technical Data*. Committee E30.05 on Forensic Engineering Sciences.
- *ASTM E 860-07 Standard Practice for Examining and Testing Items That Are or May Become Involved in Products Liability Litigation*. Committee E-30.05 on Forensic Engineering Sciences.
- *ASTM E 1020-96 Standard Practice for Reporting Incidents*. Committee E30.05 on Forensic Engineering Sciences.
- *ASTM E 1188-05 Standard Practice for Collection and Preservation of Information and Physical Items by a Technical Investigator*. Committee E 30.05 on Forensic Engineering Sciences.
- *ASTM E 1355-05 Standard Guide for Evaluating the Predictive Capability of Deterministic Fire Models*. Committee E 05.33 on Fire Safety Engineering.
- *ASTM. E 1138-89 Terminology of Technical Aspects of Products Liability Litigation*. Committee E 30.40 on Technical Aspects of Products Liability Litigation (Withdrawn 1995).
- *ASTM E 1459-92 (Re-approved 1998) Standard Guide for Physical Evidence Labeling and Related Documentation*. Committee E 30.01 on Criminalistics.
- *ASTM E 1472-03 Standard Guide for Documenting Computer Software for Fire Models*. Committee E 05.33 on Fire Safety Engineering.
- *ASTM E 1492-92 (Re-approved 1999) Standard Practice for Receiving, Documenting, Storing, and Retrieving Evidence in a Forensic Science Laboratory*. Committee E 30.01 on Criminalistics.
- *ASTM E 1546-00 Standard Guide for Development of Fire-Hazard-Assessment Standards*. Committee E 05.33 on Fire Safety Engineering.
- *ASTM E 1591-00 Standard Guide for Obtaining Data for Deterministic Fire Models*. Committee E 05.33 on Fire Safety Engineering.
- *ASTM E 1895-04 Standard Guide for Determining Uses and Limitation of Deterministic Fire Models*. Committee E 05.33 on Fire Safety Engineering.

The contact information for obtaining additional information can be obtained off the Internet website www.astm.org or at ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA, 19428-2959, USA, telephone number: (610) 832-9585.

COMPREHENSIVE PROSECUTION REPORT FORMAT

Shown in Table 2 is a suggested format of suggested items for preparing a comprehensive prosecution report. The report is an update to a successful time-tested prosecution report format used in arson-for-profit cases (Icove, Wherry, and Schroeder, 1998). Its format is similar to that used in formal FBI reports. Examples of these reports are posted to the FBI's Freedom of Information Act (FOIA) "Reading Room" website. An excellent example of an arson/homicide is the FBI's 713 page prosecution report for the Mississippi Burning (MIBURN) case, found at <http://foia.fbi.gov/foiaindex/miburn.htm>.

ABOUT THE AUTHORS

David J. Icove is an internationally recognized forensic fire engineering expert with over 35 years of experience as an arson investigator on the Federal, state, and local levels. Dr. Icove is co-author of *Combating Arson-for-Profit* and *Forensic Fire Scene Reconstruction*, which are leading textbooks in the fire investigation field. He has served as a principal member of the *NFPA 921 Technical Committee on Fire Investigations* since 1992. He is a registered Professional Engineer and a Certified Fire and Explosion Investigator.

Michael W. Dalton is a Detective in the Knox County Sheriff's Department, where he supervises the Fire Investigation Unit of the Knox County Fire Marshal's Office. He is a nationally recognized expert in forensic aspects of fire and arson investigation, particularly in crime scene documentation. Det. Dalton serves as the lead instructor in fire scene investigations at the University of Tennessee's National Forensic Academy, located at the Oak Ridge National Laboratory, Oak Ridge, Tennessee.

REFERENCES

- Icove, D. J., & Haynes, G. (2007). Guidelines for Conducting Peer Reviews of Complex Fire Investigations. *Fire and Materials*. San Francisco: Interscience Communications.
- Icove, D. J., Wherry, V. B., & Schroeder, J. D. (1998). *Combating Arson-for-Profit: Advanced Techniques for Investigators*. Columbus, Ohio: Battelle Press.
- NFPA 921 (2008). *Guide for Fire and Explosion Investigations*. National Fire Protection Association, Quincy, MA.
- U.S. Department of Justice. (1984). *Arson Investigation and Prosecution: A Study of Four Major American Cities*. Washington, DC: National Institute of Justice.
- U.S. Department of Justice. (2000). *Fire and Arson Scene Evidence: A Guide for Public Safety Personnel*, NIJ Guide, June 2000.

**Table 2. Format of Suggested Items to be included
in Comprehensive Prosecution Reports**
Adapted from: Icové, D. J., Wherry, V. B., & Schroeder, J. D. (1998).

TITLE PAGE	<ul style="list-style-type: none"> • Title of investigation • Case status • Identification of investigating agencies and lead investigating officers • Caution Statement (e.g., “Armed and Dangerous”) • Distribution Copy Count
TABLE OF CONTENTS	Comprehensive table of contents outlining the major sections of the Prosecution Report.
NARRATIVE OF OFFENSE	<p>The narrative concisely states the basis for the investigation and describes the facts surrounding the offense. A thorough narrative succinctly answers the following questions:</p> <ul style="list-style-type: none"> • WHO is involved (all persons discovered to be connected in any way with the matter under investigation)? • WHAT happened (what took place, what offense was committed, what was the purpose of the offense)? • WHEN did it happen (fix time or period crime was carried out, either by witnesses or evidence. This also puts the prosecutor on notice for any Statute of Limitations problems)? • WHERE did it happen (jurisdiction)? • HOW did it happen (modus operandi)?
PROSECUTIVE STATUS	<p>Describes when the case facts were submitted to the prosecutor during the course of investigation and the results of prosecutive actions taken.</p> <ul style="list-style-type: none"> • Complaint/warrant filed • Indictment • Arrest
DEFENDANT(S)	<p>A comprehensive listing of the defendant(s).</p> <ul style="list-style-type: none"> • Name, sex, date and place of birth • Physical descriptors (height, weight, eyes, hair, complexion) • Social Security number • Driver’s license number • Occupation • Relationship to incident • Home/work addresses, county, telephone numbers • Statute charged with and by whom • Date of preliminary hearing • Attorney for suspect • Expected testimony and defense • Statements taken and by whom? (Fire Marshal’s hearing, Grand Jury, Insurance Company, or Local/State/Federal Agent) • Previous criminal history

INTRODUCTION	<ul style="list-style-type: none"> • Case Number • Date and time of Incident • Type of Incident: <ul style="list-style-type: none"> ○ Fire, explosion, bombing, other crimes
SUBJECT(S)	<ul style="list-style-type: none"> • Owner(s) <ul style="list-style-type: none"> ○ Address, county ○ Telephone numbers • Occupant(s) <ul style="list-style-type: none"> ○ Address, county ○ Telephone numbers • Victim(s) (other than owner, occupant) <ul style="list-style-type: none"> ○ Address, county ○ Telephone numbers
BACKGROUND INFORMATION	<ul style="list-style-type: none"> • Investigation Requested by: <ul style="list-style-type: none"> ○ Name, agency, address, county ○ Telephone numbers • Dispatching agency • Time and date dispatched • Time of arrival and departing from scene • Custody of fire scene • Authority to enter scene • Conditions on arrival • Estimated damages • Assisting agency • Weather conditions (temperature, wind direction and speed, reports of lightning or rain) • Names of other agencies and investigators involved, including case/file numbers
PROPERTY DESCRIPTION	<p><u>Building</u></p> <ul style="list-style-type: none"> • Occupancy classification • Area description • Construction type • Number of stories • Overall dimensions • Diagram • Legal ownership • Security at time of fire (doors, windows, other) • Alarm/protection systems (company, contact person) • Utilities status (on/off- electric, gas, water, phone, other along with contact persons) • Exterior • Interior • Heating/cooling systems • Electrical service • Code violations noted

	<p><u>Vehicle</u></p> <ul style="list-style-type: none"> • Type of vehicle • Make, year, and model • VIN or serial number • Overall dimensions • Diagram • Exterior conditions • Fuel system • Engine compartment • Interior conditions • Alarm/security systems • Legal ownership • Prior damage noted
INSURANCE	<ul style="list-style-type: none"> • Full name(s) of insured • Policy number • Insurance company • New/renewal • Inception dates of policy, including renewal dates • Coverage under policy (building, contents, business interruption) • Previous insurance • Prior losses, claims, cancellations • Insurance agent • Insurance adjuster • Insurance investigator • Insurance attorney • Lienholder/mortgagee • Loss payments (building, contents)
FIRE ORIGIN AND CAUSE	<ul style="list-style-type: none"> • Discovered and reported by whom? • Actions and observations of firefighters • Extinguishment procedures • Fire Origin and Cause: <ul style="list-style-type: none"> ○ Level of fire origin ○ Area of fire origin ○ Point of fire origin ○ Ignition sequence (heat source, material first ignited, equipment) ○ Fire, flame, and smoke spread ○ Construction and contents of area of the origin • Itemized fact statements: <ul style="list-style-type: none"> ○ Burn patterns ○ Evidence locations ○ Natural/accidental causes ○ Fire and smoke progression ○ Hypotheses considered ○ Hypotheses eliminated

BOMB OR INCENDIARY DEVICE DESCRIPTION	<ul style="list-style-type: none"> • Nature of device (explosive, incendiary, hoax device) • Fusing (type, initiation, functioning) • Filler (low, high, chemical/mechanical) • Incendiary • External container • Placement of device • Delivery of device • Damages • Nature of target • Incident preceded by threat or warning? • Who received threat or warning? • Disposition of device • Personnel involved in the disposition of device
EVIDENCE	<p>A list of evidence, where it was found, who obtained it, its present physical location.</p> <ul style="list-style-type: none"> • Itemized evidence tag number • Description • Location found • Condition • How packaged and marked • Laboratory used and case number • Chain of custody and disposition
PHOTOGRAPHS AND DIAGRAMS	<p>Comprehensive inventory of all photographs keyed to scene diagrams taken by investigators or furnished by others.</p> <ul style="list-style-type: none"> • Photo number • Photo description • Photographer • Type of camera and film • Photo processing lab
PROPERTY	<ul style="list-style-type: none"> • List an inventory made by investigator of the property found in the building or vehicle during the examination of the fire scene. • List items reported stolen or removed prior to the fire. Cross-reference the above two lists with the proof of loss.
DOCUMENTARY EVIDENCE AND RECORDS	<ul style="list-style-type: none"> • Incident reports (dispatch, fire, and police) • Identification records (criminal histories, arrest records) • Laboratory and scientific reports • Insurance (application, claims, proof of loss, statements, correspondence, underwriting reports) • Utility service records • News media (newspaper, video) • Mortgage/lien holder deeds • Contracts • Inspection reports • Corporation/partnership filings • Property leases

	<ul style="list-style-type: none"> • Tax records • Accounting records (audits, tax returns, financial statements) • Pending/past litigation
CASUALTY	<ul style="list-style-type: none"> • Name, address, telephone • Date and place of birth • Race, sex, ethnicity • Social Security number • Description and disposition of clothing • Description of injury • Circumstances of victim's activities pre- and post-fire • Victim's location, position • Treatment at scene • Medical examiner • Authority to move body • Photograph of victim's body prior to removal • Hospital transported to • Authority for autopsy • Laboratory tests performed and results • Notification of relative (when and by whom)
INTERVIEWS	<p>A comprehensive listing of potential witnesses, including a synopsis of expected testimony. The order of the witnesses should follow how they would appear in the Grand Jury and Trial.</p> <ul style="list-style-type: none"> • Name, sex, date and place of birth, ethnicity • Physical descriptors (height, weight, eyes, hair, complexion) • Social Security number • Driver's license number • Occupation • Relationship to incident • Home/work addresses, county, telephone numbers • Alternative contact • Interviewing officer • Location, date, duration, and witnesses of interview • Expected testimony • Statements taken and by whom? (Fire Marshal's hearing, Grand Jury, Insurance Company, or Local/State/Federal Agent)
MOTIVE	<p>The reason the investigator thought the suspect committed the crime. Provide the suspect's statement of the motive. State conflicting motives if different from confession or witness statements.</p>
METHOD(S) OF OPERATION	<p>Describe the method, system, or manner by which the arsonist entered the building or vehicle and set the fire. Include other actions committed before, during, or after the fire. Outline from what sources these conclusions were obtained.</p>

FINANCIAL REPORT	<p>Obtain the financial status of owners, occupants, and suspects using financial waiver, subpoena, or documentary search warrant.</p> <ul style="list-style-type: none"> • Bank accounts and balances • Outstanding loans or debts • Credit bureau check • Property listed for sale • Business and personal tax • Warranty and trust deeds • Federal tax liens • Better Business Bureau reports
PENDING COURT ACTIONS	<p>Defendant's name, date of hearing, section charged under, presiding judge, prosecutor, and disposition of the case.</p>