

Operations

Fire Investigations

PURPOSE

To define the minimum practices pertaining to fire investigations.

SCOPE

All Department Personnel

REFERENCES

National Fire Protection Association Standard 921 (2008 edition)
National Fire Protection Association Standard 1033 (2009 edition)
New Jersey State Criminal Code N.J.A.C. 2C:17-1
New Jersey Administrative Code N.J.A.C 40A:14-118
Camden County Prosecutors Office Memo 12-10
State v. Henderson, 208 N.J. 208 (2011)
Michigan v. Clifford, 464 U.S. 287 (1984)
Michigan v. Tyler, 436 U.S. 499 (1978)
Miranda v. Arizona, 384 U.S. 436 (1966)
Federal Rules of Evidence, Rule 702
Camden County Fire Investigation Protocol (September 2012)

DEFINITIONS

Fire Investigation – A scientific method based investigation in accordance with NFPA 921 conducted to determine the origin and cause of a fire.

Arson Investigation – A systematic investigation in accordance with the New Jersey State Criminal Code conducted to determine the criminal element of a fire determined to be incendiary in nature during the fire investigation; including, but not limited to the apprehension and prosecution of the offender(s).

PROCEDURE

Qualifications

Fire Department personnel assigned to conduct fire investigations shall meet the following qualifications:

Fire Investigator

1. Firefighters employed full time by the Fire Department.
2. Shall not be under the age of twenty-one years (21) at the time appointment to the unit.
3. Meet the requirements for fire investigator as set forth by NFPA 1033
4. Complete and submit comprehensive Curriculum Vitae to the Supervising Fire Marshal.

Fire Investigations-Continued Qualifications-Continued

Fire Investigator

5. Eligible to be certified as a Fire Investigation Technician as outlined by the International Association of Arson Investigators within two years of being assigned to the unit.
6. Must maintain continuing education / recertification requirements as set forth by NFPA 1033 and the International Association of Arson Investigators
7. Additional requirements as deemed necessary by the Supervising Fire Marshal.

Arson Investigator

1. Full-time employees of the fire department.
2. Shall not be under the age of twenty-one years (21) at the time of appointment.
3. Meet the requirements for fire investigator as set forth by NFPA 1033.
4. Complete and submit comprehensive Curriculum Vitae to the Supervising Fire Marshal and Police Investigative Unit Commander.
5. Completion of the Arson Investigator program as outlined by the State of New Jersey, Division of Criminal Justice.
6. Minimum certification as a Fire Investigation Technician as outlined by the International Association of Arson Investigators.
7. Shall be sworn Law Enforcement Officers pursuant to N.J.A.C 40A:14-118 and shall have all law enforcement powers enumerated in such. Members so designated shall be issued identification cards and badges identifying them accordingly.
8. Shall maintain continuing education / recertification requirements as set forth by NFPA 1033 and the International Association of Arson Investigators.
9. Shall be required to comply with continuing education requirements (I.E. firearms qualification, use of force, interview / interrogation, evidence collection, etc.), as required by the State of New Jersey, Attorney General Guidelines, and the New Jersey Police Training Commission.
10. Additional requirements as deemed necessary by the Supervising Fire Marshal and Police Investigative Unit Commander.

Investigator Safety

Fire scenes by their very nature are dangerous places. Investigators need to be aware of these dangers and take the necessary precautions to avoid injuries.

Fire Investigations-Continued

Minimum number of Investigators

It will be the policy of the Fire Marshal's Office that a minimum number of two (2) investigators, or one (1) investigator and a fully staffed suppression company shall be present to conduct a scene investigation.

Exception:

The scene investigation is small enough that the on scene investigator determines his/her safety will not be compromised without additional manpower being present.

Additionally, at least one investigator will be furnished with a two-way radio which is monitored by the Camden County Communications Center. If only one investigator is present on the scene, and there are no other personnel present (I.E. Fire and Police), the Camden County Communications Center will perform status checks with the investigator working, every 15 minutes until such time that they have completed their on scene investigation.

Personal Protective Equipment

All personnel shall be donned in compliant personnel protective equipment. Compliant safety equipment, including safety shoes or steel toed boots, gloves, safety helmet, and non-flammable clothing should be worn at all times while investigating the scene.

The type and level of personal protective equipment and use of self-contained breathing apparatus will depend on the type and level of hazard present and is left at the discretion of the lead investigator.

Fire Scene Hazards

Many varying factors can influence the danger potential of a fire or explosion scene. The investigator should be constantly on the alert for these conditions and should ensure that all appropriate safety precautions are taken.

1. Re-kindles/Hot Spots

If performing activities soon after a fire has been extinguished, the investigator should be mindful of the possibility of a rekindle. The investigator should be alert for continued burning and should remain aware at all times of the fastest or safest means of egress. Consideration should be given to having a charged hose line in place during the scene investigation.

2. Structural Stability

Roofs, ceilings, partitions, load-bearing walls, and floors may have been compromised by the fire. Before entering structures involved in a fire, the investigator shall make a careful assessment of the stability and safety of the structure as well as an assessment of all loads, live or static.

Fire Investigations-Continued

Fire Scene Hazards-Continued

3. Utilities

The investigator shall determine the status of all utilities (i.e., gas, electric and water) within the structure under investigation. Determining the status of all utilities is necessary to prevent the possibility of electrical shock or inadvertent release of fuel gases or water during the course of the investigation.

Atmospheric Monitoring

As fire scene atmospheres may contain ignitable gas, vapors, and liquids, in addition to the by-products of combustion, the atmosphere should be tested using appropriate equipment to determine if such hazards exist before working in the area. The following atmospheric conditions represent an IDLH atmosphere and must be corrected prior to conducting an investigation.

- Oxygen Deficiency: < 19.5%
- Flammability: > 10% of the Lower Flammable Limit (LEL)
- Carbon Monoxide (CO): > 35 PPM
- Hydrogen Sulfide (H₂S): > 10 PPM

Atmospheric monitoring shall continue as long as investigators are working on the scene. In the event that any of the conditions above are present, all scene investigation operations shall cease until the condition is abated.

Investigation

The on duty fire investigator from the Pennsauken Fire Department shall be contacted in the following situations:

1. Fires that cause property damage and are not contained to the object of origin.
2. There is bodily injury, burns, or death (civilian or fire service related) as a result of or involving a fire.
3. There is a possibility of a criminal act being involved.
4. Fires suspicious in origin.
5. Fires involving leased motor vehicles.
6. Fires involving vehicles that have been repaired / serviced in the preceding 48 hours.
7. Any vehicle fire discovered unattended.
8. At the discretion of the Incident Commander.
9. At the request of the Police Department.

Fire Investigations-Continued Investigation-Continued

All other fires shall be investigated by the incident commander and appropriately documented in the fire department database.

The on duty fire investigator, upon arrival on the scene, shall become the lead investigator. In the event that the lead investigator position needs to change, a face to face communication shall be conducted between the outgoing and incoming lead investigators. The lead investigator, based upon information provided, shall make any additional notifications, and request any additional resources he/she deems necessary to assist with determining the origin and cause of the fire. The following is a listing of agencies that may be contacted for additional investigative resources during an investigation. Some of the below agencies have mandatory reporting requirements based on the nature and / or complexity of the incident.

Pennsauken Township Police Department

1. Shall be notified if there is a suspicion of, or evidence that a violation of the New Jersey Criminal Code N.J.A.C 2C has been committed
2. Shall be notified if there is a need to collect physical evidence other than photographs

Notification is made through the on scene patrolman.

Camden County Fire Marshals Office (CFM)

1. Shall be notified of any fire fatality.
2. Shall be notified of any fire where a firefighter or civilian injury requires hospital examination.
3. Shall be notified of any fire in a County building or on County property.
4. Shall be notified of any injury to a firefighter trainee or firefighter being trained on County property that requires hospital examination.
5. Shall be notified of any fire where a cause cannot be readily determined by the local fire investigator.

Notification is made by contacting the Camden County Communications Center at (856)783-4808 ext. 6200 and requesting the duty CFM.

Fire Investigations-Continued

Investigation-Continued

Camden County Prosecutors Office – Major Crimes - Arson Unit (PAU)

In addition to the County Fire Marshal, the County Prosecutor's Arson Investigation Unit.

1. Shall be notified of any fire fatality.
2. Shall be notified of any fire where a firefighter or civilian injury requires hospital examination.
3. Shall be notified of any fire where a cause cannot be readily determined by the local fire investigator and/or the County Fire Marshal.
4. Shall be notified of any fire where arson is immediately suspected or arson evidence is observed.
5. Shall be notified of any fire in a Place of Worship.
6. Shall be notified of Explosions, (no soda bombs).
7. Shall be notified of any special circumstances, including but not limited to, recurring or suspicious patterns of fire incidents.
8. May be notified upon request of local law enforcement, other agency, or governing body.
9. May be notified if the need for an accelerant detection canine is recognized or other technical assistance is needed.

Notification is made by contacting the Camden County Communications Center at (856)783-4808 ext. 6200 and requesting the duty PAU.

New Jersey Division of Fire Safety

1. Shall be notified by phone within 48 hours if there is a civilian death as a result of fire. A Fire Incident and Casualty Report shall be completed and submitted within 30 days.
2. Shall be notified via facsimile within 48 hours if there is a civilian burn or other injury as a result of a fire.
3. Shall be notified immediately if there is serious bodily injury (hospital admission), or a fatality to a firefighter as a result of the fire.
4. Shall be notified if the fire is located on a property owned and/or operated by the State of New Jersey.
5. Shall be notified during a fire or other emergency in a multiple occupancy residential building that displaces 10 or more residents. This will provide additional resources to displaced residents.
6. Shall be notified of fires on any school property via facsimile within 48 hours of the incident.
7. May be notified if the need for an accelerant detection canine is recognized, and the Camden County accelerant detection canine is unavailable, or other technical assistance is needed.

Notification is made by contacting the Mercer County Communications Center at 1-877-NJ-FIRES.

Fire Investigations-Continued Investigation-Continued

Camden County Sheriff's Department – Bomb Squad

Shall be notified when evidence of an improvised explosive device (IED) is located.

Notification is made by contacting the Camden County Communications Center at (856)783-4808 ext. 6200.

Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)

1. Shall be notified in the event of a death of any public safety personnel.
2. Shall be notified when the fire is involving an interstate commerce business.
3. May be notified for any forensic or analytical services.

Notification is made by contacting Agent Jesse D. Lampf at (215)669-0698 or by contacting the Camden County Communications Center at (856)783-4808 ext. 6200.

New Jersey State Police – Arson and Bomb Unit

1. May assist with the collection of evidence relating to improvised explosive device.
2. May assist with geographically large incident scene's.
3. May assist with the need for an accelerant detection canine.

United States Postal Service – Regional Postal Inspector

Shall be notified of all fires involving mail/packages or postal equipment.

Notification is made by contacting the USPS at 610-668-4500 Monday thru Friday 0800 to 1630 hours, or by contacting the USPS at 1-877-876-2455 outside of the above listed hours.

Pennsauken Township Construction Official

1. Shall be notified immediately of any structural damage, or damage to a building system due to a fire or other emergency incident.
2. A "Request for Action" shall be filed with the Building Department in writing within 24 hours post incident.

Notification is made by contacting the Camden County Communications Center at (856)783-4808 ext. 6200.

Fire Investigations-Continued

Investigation-Continued

Upon arrival of responding members from the outside agency's requested, the lead investigator shall conduct a briefing of all investigative team members on the basic incident information. This includes, but is not limited to the following:

1. Location of the incident.
2. Time.
3. Date.
4. Weather conditions.
5. Size of the incident.
6. Complexity of the incident.
7. Type of structure.
8. Occupancy/Use.
9. Nature of damage.
10. Extent of damage.
11. Known injuries/death civilian and/or fire service related.

Planning the Investigation

The lead investigator will develop a plan to organize the investigation team and delegate responsibilities. Based on the nature and size of the incident this plan may include, but is not limited to, the following responsibilities:

1. Leadership/Command Function.
2. Photography.
3. Note Taking/Report Writing.
4. Mapping/Diagramming.
5. Interviewing/Interrogation.
6. Scene Evaluation.
7. Evidence Collection/Preservation.

Conducting the Investigation

The scene investigation shall be conducted using the scientific method as described in NFPA 921. The parts of the investigation listed below are not comprehensive, but shall be included.

1. Conduct scene inspection.
2. Document scene through photography and/or diagramming.
3. Determine area of origin.
4. Determine the point of origin.
5. Investigate the cause, circumstances, conditions, and agencies that brought the heat source, fuel, and oxygen together.
6. Document and rule on all potential heat sources.
7. Recognize, document, and preserve evidence (according to acceptable and established practices within the State of New Jersey).
8. Interview witnesses.

Fire Investigations-Continued

Investigation-Continued

Conducting the Investigation-Continued

9. Review and analyze the data collected by the other investigators (if present).
10. Identify and collect data or information from appropriate sources.
11. Identify the cause of the fire and classify as one of the following:
12. **Accidental** – All fires for which the proven cause does not involve a deliberate human act to ignite or spread fire into an area where the fire should not be.
 - a. **Natural** – Involve fires caused without direct human intervention, such as lightning, earthquake, wind, and the like.
 - b. **Incendiary** – A fire deliberately ignited by human intervention regardless of motive or intent.
 - c. **Undetermined** – Whenever the cause cannot be proven, the fire is considered to be undetermined. The fire may still be under investigation, and the cause may be determined at later time.

Evidence Collection

Collecting evidence at a fire scene requires attention to documentation, and chain of custody with the purpose of maintaining the integrity of the evidence. The investigator shall ensure that he/she identify and properly document, collect, and preserve evidence for laboratory analyses, further investigations, and court proceedings, in accordance with NFPA 921, NJ State Law, the NJ State Police Evidence Manual, and other recognized national standards. This will ensure that critical evidence is not contaminated or lost prior to analysis and that the chain of custody is maintained.

To optimize the recovery and evaluation of physical evidence, evidence collectors shall:

1. Establish and maintain strict control of access to the scene.
2. Take precautions to prevent contamination or spoliation of evidence by:
3. Recognizing that fuel-powered tools and equipment present potential contamination sources and should be avoided.
4. Wear clean, protective outer garments, including footwear.
5. Use clean disposable gloves for collecting each item of evidence.
6. Use clean tools for collecting each item of evidence from different locations within a scene.
7. Place evidence in clean, unused containers, seal and label immediately.
8. Store and ship fire debris evidence collected from different scenes in separate packages.
9. Package liquid samples to prevent leakage and ship them separately from other evidence.
10. Store and ship fire debris evidence separately from other types of evidence.
11. Follow any specific laboratory requests/procedures.

Fire Investigations-Continued Investigation-Continued

Evidence Collection-Continued

12. Document the location of evidence, by whom the evidence was collected, date and time the evidence was found, and describe the evidence in the narrative of the final report. All evidence shall be documented by photographs prior to collection of the evidence, and after the evidence has been collected, but prior to removal from the scene.
13. Take special care when collecting evidence in any areas of origin (such as the first fuel ignited and ignition source) in cases where the fire is not accidental in nature.
14. Package evidence in accordance with the NJ State Police Office of Forensic Sciences Evidence Field Manual.
15. Place evidence in labeled containers for transportation and preservation. Evidence collected for laboratory identification of ignitable liquids must be immediately placed in clean, unused, vapor-tight containers, and then sealed. A package is considered sealed if the contents cannot readily escape and the seal/container has not been tampered with.

Approved Packaging Containers

1. Paper Bags
2. Boxes – sturdy cardboard
3. Manila envelopes
4. Small glass vials (liquid samples)
5. Metal cans

Approved Seals

1. Tamper proof evidence tape
2. Reinforced packaging tape
3. Heat seal
4. Evidence sealing tags

Label each container so that it is uniquely identified. Evidence container labels shall include all of the following information:

1. Name of the Agency.
2. Agency case number.
3. Item number.
4. Date Collected.
5. Investigators identification number (badge number).
6. Location where the evidence was collected.

Fire Investigations-Continued

Investigation-Continued

Evidence Collection-Continued

1. Collect and preserve suitable comparison samples but recognize that such samples may be unavailable.
2. When collecting liquid evidence, ensure that at least 1.0 ounce of liquid is collected for laboratory analysis to be effective.
3. Recognize the presence of other evidence, such as blood stains, shoe prints, latent prints, trace evidence, or video surveillance, and notify the Pennsauken Police Department for collection of such evidence.
4. Collect photographic evidence during all origin and cause investigations. All photographic evidence shall be transferred to compact disc immediately following departure from the incident scene. At no time shall the photographs collected be edited from the camera menu. After the compact disc of evidence is created and confirmation that all photographs have been transferred, all copies of the photographs on the camera or secure digital card shall be deleted. The compact disc shall be labeled in accordance with the aforementioned labeling requirements, and securely stored at fire administration.
5. Establishing and maintaining a chain of custody verifies the integrity of the evidence. The investigator shall ensure that the chain of custody is maintained at all times he/she is in possession of the evidence and shall:
 - a. Maintain written records documenting the sample number, description of the evidence, date and location where it was found, collector's name, and any additional comments in the fire department database.
 - b. Document in the fire department database all transfers of custody including the name of the recipient and the date, time, and manner of transfer.
 - c. Document in the fire department database the final disposition of the evidence (if known).
 - d. Once all physical evidence relating to the origin and cause of the fire has been collected and labeled, the lead investigator will transfer chain of custody of same evidence to the on scene Pennsauken Police representative. If no police representative is available, the lead investigator shall request a response from the on duty Prosecutors Arson Unit, and securely transfer custody to the agent for processing immediately following the scene investigation. In both cases an evidence/property receipt shall be secured from the agency processing the evidence and stored with the case file.

Fire Investigations-Continued Investigation-Continued

Interviewing

The investigator shall interview all potential witnesses during a fire investigation. All interviews shall be conducted and documented as follows:

1. Contemporaneous notes shall be taken, and documented in writing.
2. Contemporaneous notes shall be submitted with the origin and cause report, and maintained as a permanent part of the case file.
3. Each interview conducted shall be documented on a separate sheet of paper from all other interviews. All interviews shall be documented on a separate sheet of paper from investigation notes taken by the investigator during the course of the investigation.
4. If during the course of an interview the witness names a suspect, advises they can identify a suspect, or admits to committing any crime associated or not associated with that particular investigation, the interview shall be stopped and the Pennsauken Police Department immediately contacted to conduct a follow-up interview. All interviews up to that point shall be documented as contemporaneous notes and submitted as part of the case file.

Documentation

Documentation shall be completed as follows:

1. All documentation shall be recorded in the fire department database.
2. Basic demographic information of open investigations shall be inputted to the fire department database within forty-eight (48) hours of the completion of the scene evaluation.
3. All reports of closed investigations shall be completed within five (5) business days from the day the investigation was closed.
4. All hand written notes taken at the time of the investigation, scene interviews, or post incident interviews shall be included in the original case file.
5. All case files shall be securely stored at the fire administration building and access shall be granted in accordance with the Open Public Records Act N.J.S. 47:1A-1 et seq. and fire department policies and procedures.
6. All requests for reports shall be documented in writing to the Fire Official, and the report fee established by municipal ordinance charged accordingly to the requesting agency.

Exception:

Reports may be shared with other agency's assisting with the fire or arson investigation without charge of the report fee. This decision will be administered by the Fire Official.

Effective: November 1, 2012

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Fire Chief Joseph V. Palumbo, Sr.