



NIH Division of the Fire Marshal

Administrative Interpretation 20-1

Technical Incident Investigations

Code References: NFPA 1, Fire Code (2018), NFPA 921, Guide for Fire and Explosion Investigations (2017), NFPA 1033, Standard for Professional Qualifications for Fire Investigators (2014), and NFPA 1730, Standard on Organization and Deployment of Fire Prevention Inspection and Code Enforcement, Plan Review, Investigation, and Public Education Operations (2019).

Policy: Technical investigation of significant fire, explosion, or hazardous materials incidents on the NIH Bethesda and Poolesville campuses shall be done in a systematic and scientific manner in accordance with the above references and this interpretation. Analogous procedures should be followed for incidents at the Research Triangle Park campus, the Rocky Mountain Lab campus, and the NIH-owned portions of Ft. Detrick.

Responsibilities:

1. The NIH Division of Fire and Rescue Services (DFRS) is responsible for notifying the NIH Division of the Fire Marshal (DFM) of the need for technical investigations on the Bethesda campus and protecting physical evidence at incident scenes to the maximum extent possible.
2. The NIH Division of Police (DP) is responsible for notifying the DFM of the need for technical investigations on the Poolesville campus.
3. The NIH Division of Occupational Health and Safety (DOHS) will be consulted as necessary prior to DFM personnel initiating investigations of incidents in laboratories and animal holding areas.
4. The DFM shall conduct technical investigations of significant incidents. DFM shall have the authority to retain control of the incident scene after release by DFRS or DP, collect and store evidence, interview witnesses and other involved parties, and limit access as per NFPA 1 (Sec. 1.7.11) and NFPA 1730 (Sec. 8.7).
5. The DFM shall also provide the DFRS with a notification list that contains after-hours investigation team contact information.
6. The DP is responsible for criminal investigation of incendiary fires.

7. The determination of when the incident scene may be turned over to the Office of Research Facilities for recovery is the responsibility of the DFM, DFRS, DP and/or DOHS depending on the cause of the incident and condition of the scene.

Threshold Requirements:

Significant incidents that require a technical investigation are those meeting one or more of the following elements:

1. Incidents involving the loss of life or serious injury.
2. Incidents where expert cause and origin determination may be required as a basis for criminal investigation.
3. Incidents during which there was a loss of primary and emergency power.
4. Incidents during which a fire protection system or feature failed or reacted in an unexpected manner.
5. Incidents where an investigation would be in the best interest of the NIH, based on probable significant lessons to be learned, liability potential, political impact, community relations, or other unusual circumstances.
6. Incidents within the Clinical Research Center and other patient care areas, for required documentation to The Joint Commission.

Investigation Process:

Technical investigations will be conducted by a DFM investigation team consisting of a Fire Protection Engineer and a Fire Protection Specialist/Inspector who are trained, qualified, and certified for the level of investigation needed as determined by DFM and the guidelines in NFPA 1033. The team approach is used to provide enhanced technical evaluation of incidents as needed for a court of inquiry or other fact-finding bodies. The DFM team will determine if assistance will be requested from an investigations team with the U.S. Bureau of Alcohol, Tobacco, Firearms, and Explosives or the U.S. Chemical Safety Investigations Board.

Scene and Evidence Examination:

The incident scene examination will be conducted in a manner that allows investigators time to thoroughly document the scene, collect evidence, take photos, accurately identify the area and point of origin (if possible), determine the first fuel ignited, and the heat source. With this information, the investigation team will develop one or more hypotheses of the incident cause, test such hypotheses, and select a final hypothesis.

Cause Determination:

Once the incident scene examination has been conducted, the investigation team will make a ruling as to the cause of the incident and will classify fires as accidental, natural, undetermined, or incendiary as defined by NFPA 921. Incendiary fires will be referred to the DP for further criminal investigation.

Investigation Report:

The DFM technical investigation team will produce a draft technical report. The Fire Marshal or Deputy Fire Marshal will review the draft report, determine if a technical or peer review is required in accordance with NFPA 921, and approve the final report. The final report will contain the incident cause and origin (where determined), and recommendations to prevent the recurrence of similar incidents and to protect NIH staff, visitors, patients, mission, and property if similar incidents occur.

Supersedes: December 16, 2005 Fire Investigations memorandum.

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