FORENSIC FIRE ANALYSIS INSTITUTE

FFAI Skill Sheet 6.2 Techniques of Cause Determination © Revised: 04-25-19

NFPA 1033 Standard for Professional Qualifications for Fire Investigator 2014 Edition
NFPA 921 Guide for Fire and Explosion Investigations 2017 Edition

Candidate: _____ **Date:** _____

Reference Source NFPA 1033 2014 Edition 1.3.7 (8, 9, 11, 13) 4.2.6, 4.2.8, 4.6.5, NFPA 921 2017 Chapter 19, Chapter 25

Expected Completion Time is: 45 Minutes

TASK: 4.2.6 Examine and remove fire debris, given standard equipment and tools, so that all debris is checked for fire cause evidence, potential ignition source(s) is identified, and evidence is preserved without investigator-inflicted damage or contamination.
4.2.8 Inspect the performance of building systems defeated and/or failed systems are identified, and the system's potential as a fire cause is recognized.
4.6.5 Formulate an opinion concerning cause for the fire, so that the opinion regarding cause for a fire is supported by the data, facts, records, reports, documents, and evidence.

PERFORMANCE OUTCOME: Identify and demonstrate a basic understanding of ignition processes, characteristics of ignition sources, and ease of ignition of fuels; types of fire cause evidence commonly found in various degrees of damage; and evidence-gathering methods and documentation.
-Types of failures. Identify alterations to, and failure indicators of building systems.
-Identify and implement analytical methods and procedures (e.g. hypothesis development and testing, systems analysis, time lines, link analysis, fault tree analysis, and data reduction matrixing). Conduct and document a matrix for assessment of first fuels and heat sources.

EQUIPMENT REQUIRED: Appropriate Personal Protective Equipment, standard equipment. Applicable research treatises regarding fuels and heat sources.

CONDITIONS: Given a prepared fire scene the candidate shall:

NO.	TASK STEPS	FIRST TEST		RETEST	
		Pass	Fail	Pass	Fail
1.	**Identify and don the appropriate level of head, eye, hand, and foot PPE**				
2.	**Identify all potential heat sources and fuels within the debris**				
3.	**Perform an assessment of heat sources and first fuels**				
4.	Implement analytical methods and procedures to assess first fuels and heat sources				
5.	**Provide written matrix of ignition source competency to show testing of hypotheses**				
6.	**Analyze potential ignition sources through various non-destructive and destructive means.**				
7	Analyze and differentiate damage cause by fire and damage caused by failures				
	Total:	**/7**		**/7**	

BOLD=Critical Criteria that must be successfully completed.
Skills must be completed with >75% pass rate. (6/7)

Examiner (Print & Sign)	**Date**	**Candidate**	**Date**
Retest Examiner (Print & Sign)	**Date**	**Candidate**	**Date**