

**DETERMINING
INCENDIARY
FIRE CAUSE**

January 2014

INTRODUCTION

Detective Paul Makuc and K-9 Baxter

&

Detective Wayne Opdenbrouw and K-9 Elway

Connecticut State Police

Fire & Explosion Investigation Unit

Critical Investigation Steps



- **Receiving the Call**
- **Arrival at the Scene**
- **LEGAL ENTRY**
- **Assessing the Incident**
- **Consider Available Resources**
- **Interviews**
- **Documentation**
- **Processing the Scene**
- **Evidence Collection**
- **Concluding the Report**

INCENDIARY v. ARSON

INCENDIARY

An incendiary fire is a fire that has been deliberately ignited under circumstances in which the person knows the fire should not be ignited.

Incendiary is a fire cause classification

ARSON

Arson is the crime of maliciously and intentionally, or recklessly, starting a fire or causing an explosion

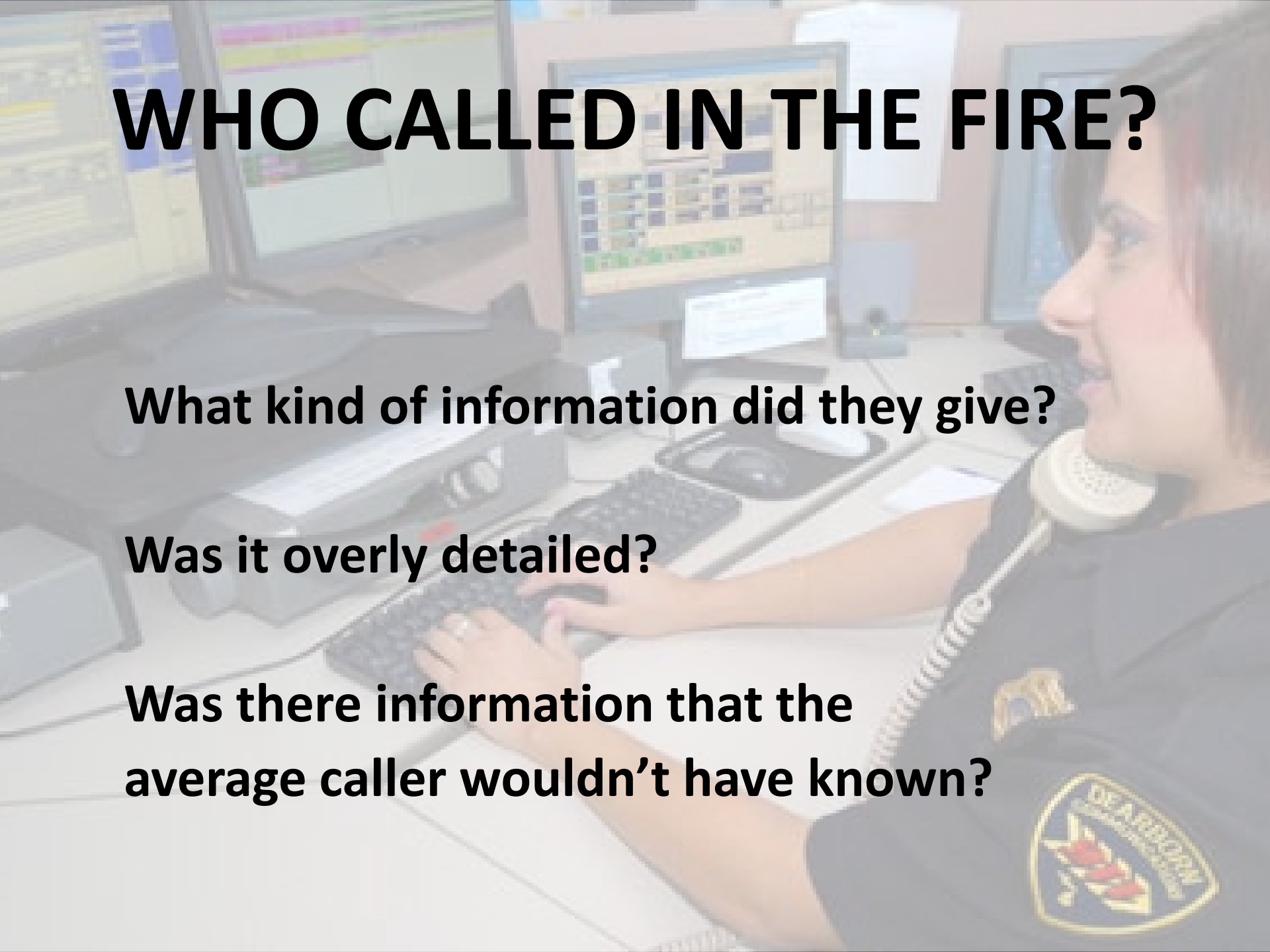
Arson is a legal charge and should not be used by fire investigators to classify the cause of a fire

WHO CALLED IN THE FIRE?

What kind of information did they give?

Was it overly detailed?

Was there information that the average caller wouldn't have known?



RESPONSE DELAYS

A night scene of a fire scene. A red pickup truck is parked in a parking lot, surrounded by yellow caution tape. In the background, there are trees and a white pickup truck. The scene is illuminated by a bright light source, possibly a fire or a spotlight, creating a high-contrast environment.

Was there any incident of any kind that delayed you from getting to the fire scene as quickly as you normally would?

Barriers such as locked gates?

Obstacles?

Other incidents?

APPROACHING THE SCENE

Did you notice any vehicles leaving the scene?

What was the description of the vehicle?

Any license plate state or numbers?



SMOKE OBSERVATIONS



**When you first arrived,
what color of smoke did
you observe?**

FLAME OBSERVATIONS

A photograph of a two-story house with a fire burning in the windows. The house has light-colored siding and a dark roof. The fire is visible through the windows on the second floor, appearing as bright orange and yellow flames. The sky is clear and blue.

Where did you see open flame?

What color and size was the flame?

Were there any explosions?

WITNESS OBSERVATIONS




Did you see any familiar faces in the crowd?

Was anyone being overly helpful to you?

Did anyone look odd, or simply not fit the time and place of the fire?

Was anyone wearing unusual clothing?

PHOTOS & VIDEO

A black surveillance camera is mounted on a white wall above a window. The window is covered in a dark, smoky or sooty substance, suggesting a fire. The camera has a circular lens with a grid of small lights around it. The wall and window frame show signs of wear and rust.

Was there anyone taking
photographs or video of the
fire?

Did you identify who it was?

Firefighters?

Fixed & Mobile Surveillance
Cameras

CONDITIONS OF DOORS & WINDOWS



Were any doors or windows open or ajar?

Did you note whether any doors or windows or any other building openings had signs of forced entry?

Did you note the quality and condition of locking mechanisms?

Broken locks?

Broken Glass?

Locked with no damage?



ENTRY

How did you gain entry into the building?

If entry was forced, what kind of tool was used?

Who forced entry?

**SPECIFIC DETAILS ARE EXTREMELY
IMPORTANT**

INITIAL OBSERVATIONS

Upon entry into the building what did you first observe?

Were there any sprinkler systems that were operating?

Were there any obstacles that you encountered that seemed out of the ordinary?

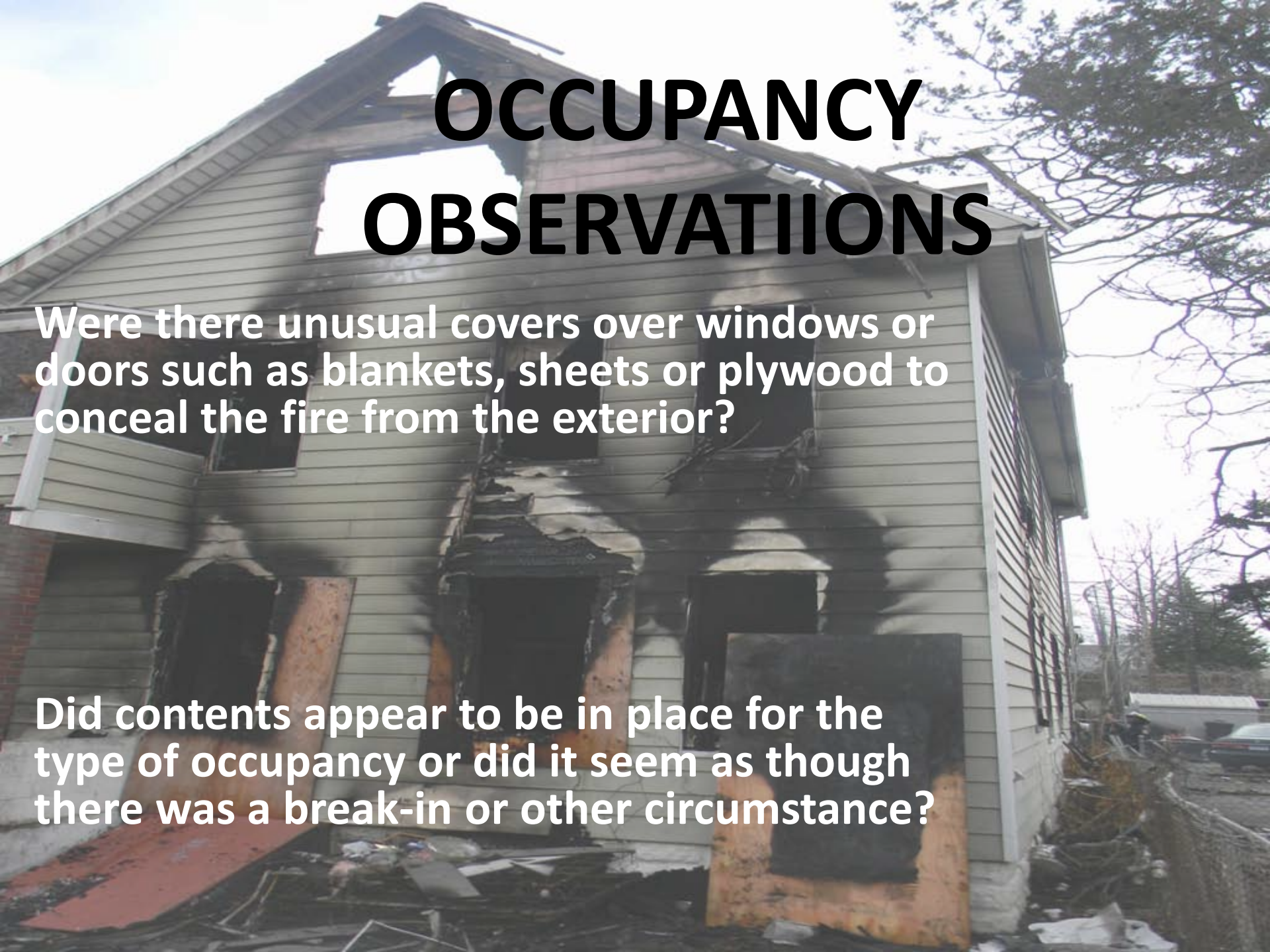
ALARM OBSERVATIONS

A white smoke detector is mounted on a wall. The detector is circular with a red top ring. The top ring has the words "TEST" and "RESET" visible. The detector is surrounded by a thick plume of white smoke that is rising from the bottom. The background is a textured, light-colored wall.

- **Burglar alarms?**
- **Fire/Smoke/Sprinkler Alarms?**
- **Tampered with?**
- **Disabled?**

Burglar alarms?
Fire/Smoke/Sprinkler Alarms?
Tampered with?
Disabled?





OCCUPANCY OBSERVATIONS

Were there unusual covers over windows or doors such as blankets, sheets or plywood to conceal the fire from the exterior?

Did contents appear to be in place for the type of occupancy or did it seem as though there was a break-in or other circumstance?

SUPPRESSION OBSERVATIONS

What was the method of attack used to extinguish the fire?

How much water was used to extinguish the fire?

How did the fire react when water was applied?

How long did it take to get the fire under control?

FIRE BEHAVIOR



Where was the seat of the fire?

Did you observe multiple areas of fire origin?

Did you notice anything unusual about the spread of the fire?

How quickly did the fire spread?

UNUSUAL BURN OR POUR PATTERNS

Burn through holes
Trailers

4





BUILDING CONDITIONS

Doors and windows propped open?

Holes cut in floors and walls?

MULTIPLE POINTS OF ORIGIN

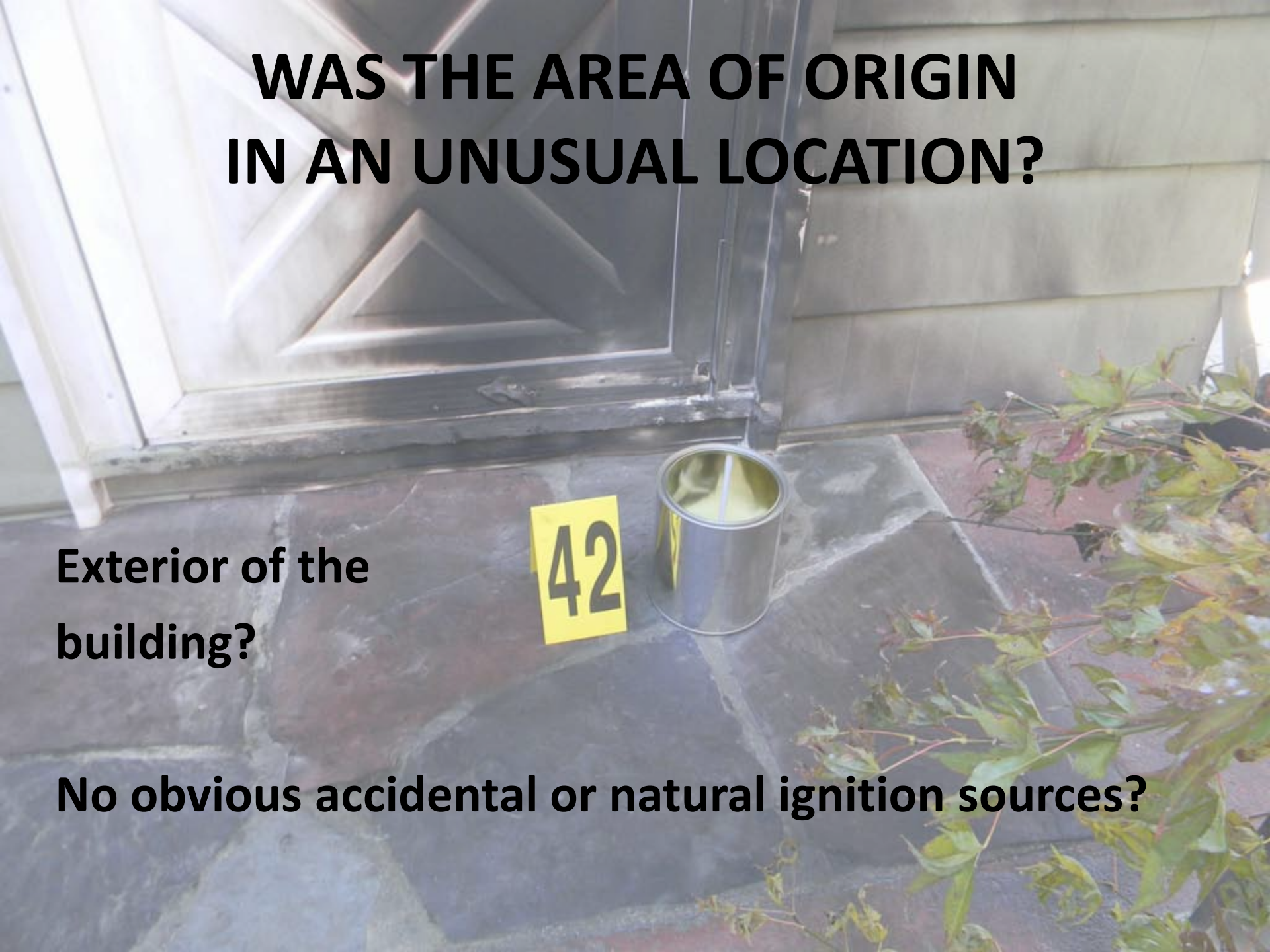
A photograph of a living room with a fire burning in two separate locations. One fire is on the left side of the room, and another is on the right side. The room contains a sofa, a chair, and a table. The fire is bright yellow and orange, and the room is filled with smoke.

**Two or more
NON COMMUNICATING
points of fire origin**

WAS THE AREA OF ORIGIN IN AN UNUSUAL LOCATION?

**Exterior of the
building?**

No obvious accidental or natural ignition sources?



ODORS? CONTAINERS? IGNITION SOURCES?



Did you detect any unusual odors, such as gasoline, chemicals or propane in the building?

Did you observe any flammable liquid containers in the building?

Were the containers located in appropriate locations?

Did you observe any incendiary devices?





BUILDING CONTENTS

A photograph of a room with a wooden cabinet, a window with curtains, and a Christmas tree on the floor. The room appears to be in a state of disarray or being prepared for an event. The floor is carpeted and there is some debris on it.

Presence/Absence of furnishings

Personal belongings

Clothing

Pets

PROPERTY STATUS & CONDITION

Maintenance

For Sale

Foreclosure



OWNER/OCCUPANCY OBSERVATIONS

Did the owner or occupant arrive at the scene while you were there?

Did you get their identity?

What was their overall appearance?

Can you remember exactly what clothing they were wearing?

Did you detect any unusual odors on them?

Was their clothing appropriate for the time of day, weather conditions, etc?

OWNER/OCCUPANT BEHAVIOR

Did you speak to the owner or occupant?

What was their reaction to the fire?

Can you remember details about what they told you?

Did you observe them speaking to anyone else at the scene; neighbors or bystanders?

STATE OF CONNECTICUT
DEPARTMENT OF PUBLIC SAFETY
DIVISION OF STATE POLICE

Case Number: 1924-0000089
Date: 11/11/10
Time: 10:00 AM
Officer: Tom Archer

WITNESS STATEMENT of Thomas P. Archer
at 60 Blue St. Seaside State of Conn: CT Date of Birth: 11/11/10

I make the foregoing statement, without fear, threat, or promise, I have been advised that any statement I make herein which I do not believe to be true, and which statement is intended to reflect in the performance of his/her official function, is a crime under C.G.S. Section 53-127.

I am speaking with Detective Deegan today about my knowledge of the fire that occurred at the Seaside Neighborhood Church which is on Seaside, January 1st 2012. I was watching in my other lot, which is on my property. I believe I was about 11:30pm. I looked out my window towards the church. I saw smoke coming from the front bell tower of the church. I saw smoke coming on and that is when I ran outside to see what was going on. I saw smoke coming from the roof inside of my house and called 911 to report the fire.

By affixing my signature to this statement, I acknowledge that I have read it and/or have had it read to me and it is true to the best of my knowledge and belief.

Witness: Det. Tom Archer Date: 11/11/10 Signature: Tom Archer

Personally appeared the signer of the foregoing statement and made oath before me to the truth of the matters contained herein.

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OWNER/OCCUPANT ACTIONS



Did they act unusually nervous?

Did they ask about anything particular regarding the fire or contents of the building?

Did they enter the building at anytime after the fire?

Did they remove anything from the building?

NEIGHBORS & WITNESSES



What did they see?

What did they hear?

Previous history?

PREVIOUS HISTORY



Is there a history of previous fires at this location?

Is there a history of previous fires with the same owner or occupant?

SCENE SECURITY

A two-story house with yellow horizontal siding and black shutters. The house has a dark roof and a white door. A yellow police tape with the text "POLICE LINE DO NOT CROSS" is stretched across the front of the property. The sky is blue with some clouds.

What steps were taken to secure the building?

Was a fire or police watch posted and who was the scene turned over to when you left?



Yellow Lab



Black Lab



Chocolate Lab



Meth Lab





ACCELERANT DETECTION K9



Goals of the Accelerant Detection K9

- Address high volume of arsons
- Assist investigators
- Utilize diverse talents of K-9's
- Reduce work at lab



Accelerant Detection K9

- A dog trained to discriminate flammable and combustible liquid odors from normal pyrolysis odors

Accelerant Detection K9

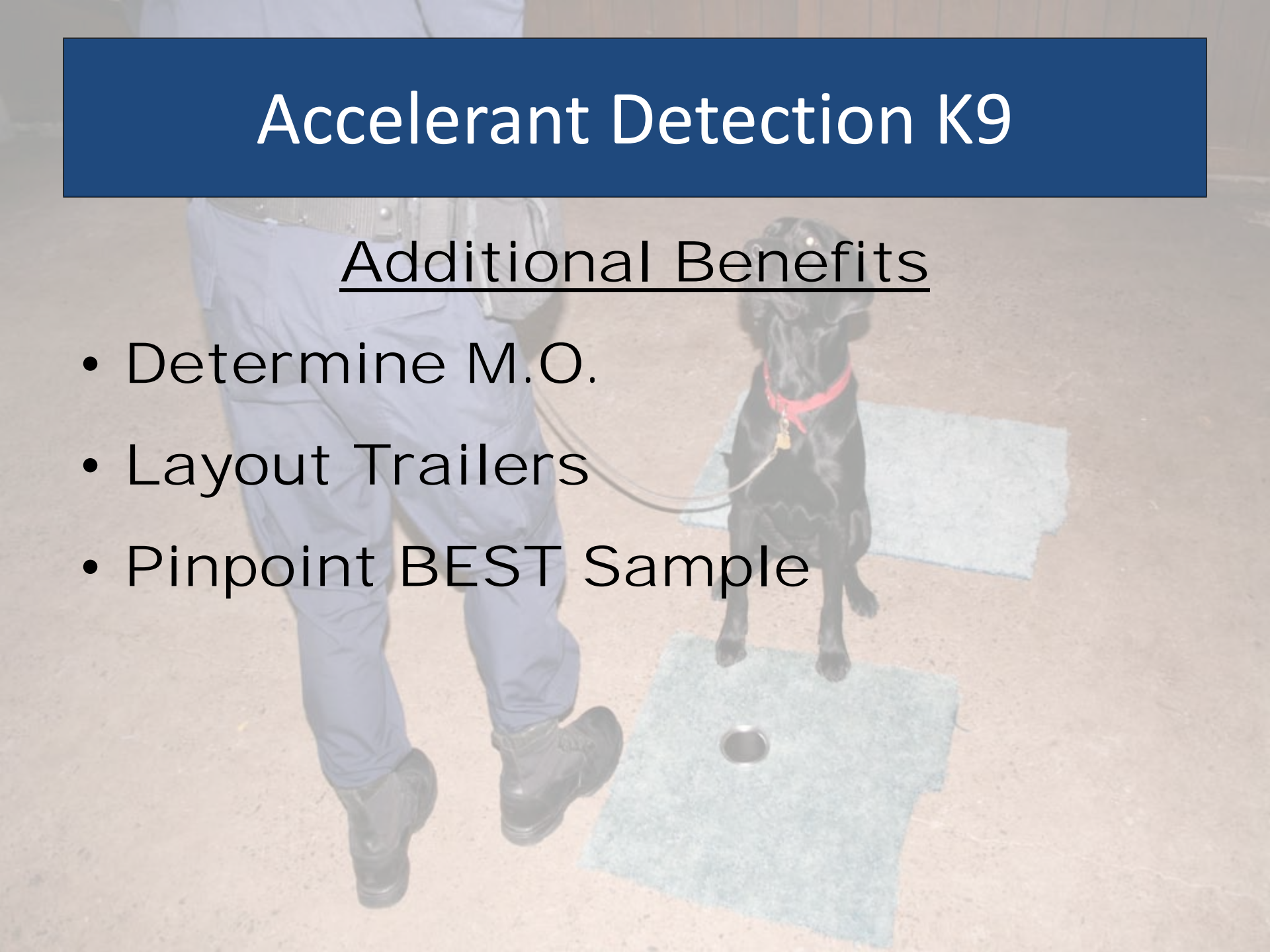
Benefits

- Greater Sensitivity
- Greater Selectivity
- Speed
- Survey Large Areas
- Deterrent

Accelerant Detection K9

Additional Benefits

- Determine M.O.
- Layout Trailers
- Pinpoint BEST Sample



Accelerant Detection K9

Considerations

- Area of Search
- Potential Contamination

Accelerant Detection K9

CLOTHING LINE-UPS



ORIGIN & CAUSE REPORT

**Fire investigations require
complete, accurate
written reports
concluding the
origin and cause
of the fire**



ORIGIN & CAUSE REPORT

Based on the scene processing,
identify the first fuel ignited,
the ignition source capable of
lighting that fuel, and how the
fuel and the ignition source
came together



THE CONCLUSION

Based on the fire scene examination and witness statements, it is the combined conclusion of the fire investigators that the fire originated...*(describe location in detail)* and was caused by the *describe ignition scenario*.

(an open flame consistent with a match or a lighter)

The fire is ruled as **INCENDIARY**



REMEMBER

There are occasions when there is no physical evidence of the ignition source, but an ignition sequence can be hypothesized based on other data





GIRL SCOUTS

Because next time, you'll just buy the damn cookies

State Police Message Center

24 hr Callout

800.842.0200

Or

860.685.8190



CONNECTICUT STATE POLICE
Fire & Explosion Investigation Unit

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Accelerant Detection K-9 Baxter #9047

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Division of State Police

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