

MEMORANDUM

June 12, 2018



U.S. DEPARTMENT
OF HOUSING
AND URBAN
DEVELOPMENT

To: Suzanne Israel Tufts
Assistant Secretary for Administration, Office of Administration, A

From: 
Brian T. Pattison
Assistant Inspector General for Evaluation, Office of Inspector General, G

Subject: Final Evaluation Report – Fire Safety Planning for the Weaver Building Needs Improvement (2018-OE-0002)

Please see the attached final report on our evaluation of the smoke detection and alert system during an incident on December 21, 2017. It contains three findings and three recommendations. The report will be posted to our website within 3 days.

In your response to our draft report, you agreed with the findings and recommendations. Your response, along with our comments to it, are included in appendix A. Based on your response, we consider recommendation 1 “resolved-open” and recommendations 2 and 3 “unresolved-open.” We will contact your office within 90 days to discuss your proposed management decisions, unless we hear from your office sooner.

We appreciate the assistance you and your staff provided throughout the evaluation. If you have any questions, please contact Director Paul Bergstrand at (202) 402-2728.

Attachment

cc

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Rena Holland, Director, Office of Disaster Management and National Security, AHD
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U.S. Department of Housing and Urban Development

Office of Inspector General
Office of Evaluation



**Fire Safety Planning for the Weaver
Building Needs Improvement**

Program Evaluations Division



Executive Summary

Fire Safety Planning for the Weaver Building Needs Improvement

Report Number: 2018-OE-0002

June 12, 2018

Why We Did This Evaluation

The Robert C. Weaver Federal Building serves as headquarters for the U.S. Department of Housing and Urban Development (HUD). Thousands of people occupy it daily.

Smoke and fire alert systems are designed to provide a reasonable level of safety from hazards created by fire or other dangerous conditions. We began this evaluation after questions surfaced about how the smoke detection and alert system of the Weaver Building worked and was supposed to work during an incident on December 21, 2017.

Results of Evaluation

On December 21, 2017, smoke spread from a malfunctioning air-handling unit on the 11th floor to parts of many other floors. While a smoke detector in an air duct functioned properly and the fire department was notified, there was no audible alarm or public announcement to notify occupants to evacuate. People in one suite described the smoke as “heavy” and “thick.”

HUD and the General Services Administration believe that the fire safety system operated as designed. To sound an audible alarm for this incident, a person would have had to pull a manual alarm. However, no one did. Without an audible alarm or public notification, confusion spread about what was happening, how widespread the threat was, and what people should do.

We found that the occupant emergency plan for the Weaver Building did not accurately describe the fire safety system or how occupants were to report a fire or other emergencies; specifically, when to use manual pull stations. The plan did not comply with regulations that require employers to explain the preferred means of reporting emergencies and to list procedures for reporting a fire or other emergency.

Additionally, on March 22, 2018, we sent a memorandum to the Assistant Secretary for Administration to inform her that fire drills had not been conducted at the Weaver Building for years, which posed a danger to occupants of the building. The Assistant Secretary responded to our memorandum by saying that a drill was being planned. On March 28, the fire drill took place. We are encouraged by the Office of Administration’s quick action, but a process is needed to ensure that drills occur at least every year.

Recommendations

To improve fire safety planning for the Weaver Building, we make the following recommendations to the Assistant Secretary for Administration:

1. update the occupant emergency plan so that it lists the ways occupants are to report fires or other emergencies,
2. periodically provide training on the occupant emergency plan once it is updated, and
3. create a process to help ensure that fire drills for the Weaver Building occur at least every year.

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Introduction

Objectives

Our objectives were to determine how the smoke detection and alert system was supposed to work, whether the smoke detection and alert system worked as intended during the morning of December 21, 2017, and whether fire drills were being conducted.

Background

On December 21, 2017, smoke spread throughout parts of the Robert C. Weaver Federal Building. No audible alarm sounded during this incident. Smoke and fire alert systems are designed to provide a reasonable level of safety from hazards created by fire or other dangerous conditions. We began this evaluation out of concern that the smoke detection and alert system may not have worked properly (for example, no audible alarms) during the incident.

The Weaver Building is headquarters for the U.S. Department of Housing and Urban Development (HUD) and is owned by the General Services Administration (GSA). Thousands of people occupy it daily. HUD's Office of Administration, Office of Facilities Management Services, is responsible for facilities management, including safety and environmental health. The Office of Administration's Office of Disaster Management and National Security is responsible for emergency preparedness, including fire drills. GSA is responsible for the design, maintenance, and testing of the fire safety system.

Scope and Methodology

We completed this evaluation under the authority of the Inspector General Act of 1978 as amended and in accordance with the Quality Standards for Inspection and Evaluation issued by the Council of the Inspectors General on Integrity and Efficiency (January 2012).

Scope

This evaluation focused on a single incident, when smoke spread throughout parts of the Weaver Building on December 21, 2017. We expanded our scope during fieldwork to include the frequency of fire drills.

Methodology

We interviewed HUD officials in the Office of Administration to learn how the smoke detection and alert system is intended to operate and how it operated on the day of the incident. We surveyed HUD Office of Inspector General (OIG) employees to learn what they saw, smelled, and heard during the incident. We reviewed

- the occupant emergency plan for the Weaver Building,
- schematics of the Weaver Building,

- testing and maintenance records for the fire safety system of the Weaver Building, and
- communication from the fire safety system of the Weaver Building to a MegaCenter.¹

Finally, GSA gave us its analysis of the incident and a description of the fire safety system in the Weaver Building.

Limitations

GSA and HUD share responsibility for the fire safety system of the Weaver Building. For example, GSA installed, tested, and maintained the system. GSA told us that the system functioned as designed during the incident. Because GSA is outside our jurisdiction, we did not review the specifics of the design and functionality of the system.

¹ MegaCenters monitor alarm systems, closed-circuit television networks, and wireless dispatch communications for Federal facilities around the Nation. They are operated by the U.S. Department of Homeland Security, Federal Protective Service.

Findings

The Smoke Detection System Worked as Designed, Although No Audible Alarms Sounded, Creating Confusion Among Building Occupants

HUD and GSA officials told us that the smoke detection system worked as designed during the incident on December 21, 2017. The smoke and an odor were caused by a bearing and belt malfunction on an air-handling unit on the 11th floor of the Weaver Building in an unoccupied mechanical area. A smoke detector in a fan duct for the air handler activated and sent a signal to a Federal Protective Service MegaCenter at 8:05 a.m. The activation of the smoke detector caused the supply and return of air to shut down. Emergency response personnel from the District of Columbia Fire Department arrived and determined that there was no fire.

The air-handling unit that malfunctioned services 1/8 of the building. The smoke and odor migrated through the air-handling unit from the 11th floor throughout the other floors serviced by this unit. The smoke was smelled on many floors but was perhaps worst on the 8th floor in a suite occupied by OIG employees. We surveyed OIG employees to learn what they saw, smelled, and heard during the incident. Two people who saw the smoke in one 8th floor suite described it as “heavy,” and others said the odor was “noxious,” “electrical,” and of “burning rubber.” One person said that “... thick grey smoke began to come out of every HVAC [heating, ventilation, and air conditioning] vent in sight. The room began to rapidly fill with a smoky chemical haze.”

Despite the heavy smoke and noxious odor, no audible alarm sounded or public announcement occurred instructing people to evacuate. Several OIG employees instructed staff to evacuate on their own initiative. However, because the incident occurred early in the morning, starting around 8:05 a.m., people continued to come into the affected areas as others evacuated. Without an audible alarm or public notification, confusion spread about what was happening, how widespread the threat was, and what people should do.

According to GSA, the smoke detection system worked as designed because a message was sent to the MegaCenter and the fire department sent emergency response personnel. GSA said that people in areas affected by smoke should have manually activated an audible alarm by pulling an alarm at an alarm station.

At the time of our fieldwork, GSA was installing a new fire safety system. This system included smoke detectors in occupied areas, which did not exist at the time of the incident. A HUD official said that the new detectors became operational on March 28, 2018. This same official said the new smoke detectors sound an audible alarm when activated. While the new system is operational and the old system has been taken offline, some of the new detectors were still being tested as late as May 9, 2018.

The Occupant Emergency Plan for the Weaver Building Needs Improvement

The occupant emergency plan for the Weaver Building needs to be updated so that it accurately describes the fire safety system and how occupants are to report a fire or other emergencies.² As previously discussed, the air handler that malfunctioned services 1/8 of the Weaver Building. During the incident, smoke spread from the 11th floor to at least the 2nd floor for this 1/8 of the building. GSA said that occupants who saw smoke should have pulled a manual alarm to sound an alarm. GSA also said that there was no record of a manual activation of the fire alarm system. According to our survey of OIG employees, at least 13 people saw smoke. Additionally, the smell of smoke spread to at least the 2nd floor. Yet no one followed GSA's suggested protocol by pulling a manual alarm.

The U.S. Department of Labor's Occupational Health and Safety Administration (OSHA) requires employers to explain to each employee the preferred means of reporting emergencies, such as manual pull box alarms, public address systems, radio, or telephones.³ OSHA also requires employers to list procedures for reporting a fire or other emergency in their occupational emergency plans.⁴ However, the occupant emergency plan for the Weaver Building does not state under what circumstances employees are to activate an alarm at a manual pull station. The plan notes that these stations are located on each floor near stairwell exit doors and that pull boxes activate the alarm system, but it also says that the fire alarm system is activated automatically when a smoke detector goes off. It does not say that smoke detectors would not produce an audible sound or that there were no smoke detectors in most of the occupied spaces of the Weaver Building.⁵ Based on the actions of individuals affected by this incident and the lack of a clear explanation to employees of the preferred method for reporting a fire, a significant number of occupants of the Weaver Building may not know when to pull a manual alarm.

HUD Had Not Conducted Fire Drills in Years

We were unable to determine when HUD last conducted a fire drill because officials could not produce records showing when one last occurred. One official with whom we spoke said the last one was in 2015, and another said the last one was before the shooting at the Navy Yard, which was in September 2013. GSA requires agencies that occupy its buildings to participate in at least one fire drill per year.⁶

Email correspondence we reviewed showed that dates for a drill in 2016 were discussed but the drill did not occur. We asked the emergency management specialist, whose role is to help

² While there was no fire during this incident, for the purposes of this report, we consider that a smoke event constitutes a "fire or other emergency."

³ 29 CFR (Code of Federal Regulations) 1910.165(b)(4)

⁴ 29 CFR 1910.38(c)(1)

⁵ The audible alarms in the Weaver Building at the time of the incident were those in the childcare center, the sprinklers, and the manual pull stations. Smoke detectors in the ducts, elevators, and computer room send a signal to a MegaCenter but would not produce an audible alarm. There were no smoke detectors in the hallways or occupied areas for most of the building.

⁶ 41 CFR 102-74.360(a)

coordinate fire drills, why a drill did not occur in 2016. He said the drill did not take place due to a misunderstanding of the drill's purpose, the priority of it, and a lack of support from management. We also saw evidence of a planning meeting in December 2016, during which an evacuation drill was discussed for the spring of 2017, but this drill did not occur. When asked about the potential risk of not having drills, the emergency management specialist said that the Weaver Building is a highrise with two to three thousand people in it. If something catastrophic happened and the people that work in the building were not prepared to react to the events, the specialist believed it would be devastating.

On March 22, 2018, we sent a memorandum to the Assistant Secretary for Administration to inform her that fire drills at the Weaver Building had not been conducted for years, which posed a danger to occupants of the building.⁷ The Assistant Secretary responded to our memorandum by saying that a drill was being planned. On March 28, the fire drill took place.

⁷ See appendix B for the memorandum.

Recommendations

On December 21, 2017, smoke spread from a malfunctioning air-handling unit on the 11th floor to parts of many other floors. While a smoke detector in an air duct functioned properly and the fire department was notified, there was no audible alarm or public announcement to notify occupants to evacuate. This condition occurred because no one pulled a manual alarm. Additionally, fire drills had not been conducted for years. To improve fire safety planning for the Weaver Building, we make the following three recommendations to the Assistant Secretary for Administration.

1. Update the Occupant Emergency Plan so That It Lists the Ways Occupants Are To Report Fires or Other Emergencies

After GSA reviewed the smoke incident, it recommended that HUD address the protocol for manually activating the building fire alarm in its emergency action plan. While the occupant emergency plan describes the location of pull stations and states that they activate the building alarm system, the plan does not specify under what circumstances the use of a pull box is preferred and should be used instead of relying on an automatic activation from a smoke detector. It also does not state that smoke detectors do not produce an audible alarm in most cases. The plan should be updated to state when occupants should use a manual pull station to report a fire or other emergency.

2. Periodically Provide Training on the Occupant Emergency Plan Once It Is Updated

Because no one pulled the manual alarm on the day of the incident, training is needed on the proper way to report a fire or another emergency. Additionally, OSHA requires employers to explain to each employee the preferred means of reporting emergencies. While an updated occupant emergency plan will be a useful reference, proactively training HUD employees on a recurring basis will help HUD meet this requirement.

3. Create a Process To Help Ensure That Fire Drills for the Weaver Building Occur Every Year

We are encouraged that the Office of Administration conducted a fire drill before the issuance of this report. Yet we identified insufficient support for fire drills in the past. A more rigorous process is needed to ensure that fire drills occur at least every year so that this critical safety exercise is taken seriously by HUD's future leaders.

Appendixes

Appendix A – Agency Comments and OIG Response

Response From the Office of Administration

Reference to OIG Comments



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
WASHINGTON, DC 20410-3000
OFFICE OF ADMINISTRATION

MEMORANDUM FOR: Brian T. Pattison, Assistant Inspector General for Evaluation,
Office of Inspector General, G

FROM: *[Signature]* Suzanne Israel Turts, Assistant Secretary for Administration,
Office of Administration, A

SUBJECT: Office of Administration's Response to HUD Office of Inspector
General (Office of Evaluation) Report Titled: "Fire Safety
Planning for the Weaver Building Needs Improvement (2018-OE-
0002)"

Thank you for the opportunity to review the draft report, titled "Fire Safety Planning for the Weaver Building Needs Improvement". We agree with the findings of the report and support the recommendations, which are currently being addressed. As you are aware, fire safety planning is a critical issue for the Department, and one that I personally feel is paramount to the safety of our employees. In support of the Deputy Secretary, this past winter I asked the Office of Administration (OA) to review and update evacuation procedures for the building, improve employee awareness of evacuation procedures, increase recruitment of employee volunteers who fulfill critical roles in executing this program, and directed that a drill be conducted as soon as practical, with regularly scheduled drills going forward. We successfully completed the evacuation drill in March 2018, and we are now in the process of updating the Occupant Emergency Plan (OEP) and establishing a process for continual improvement focused on the safety and wellbeing of HUD employees.

1. Update the occupant emergency plan so that it lists the ways occupants are to report fires and other emergencies.

Comment 1

OA agrees with the recommendation and will augment the section of the Occupant Emergency Plan as recommended by the findings by June 29, 2018.

2. Periodically provide training on the occupant emergency plan once it is updated.

Comment 2

OA agrees with the recommendation and will hold annual training for all HUD employees and will conduct quarterly training for all HUD staff who help execute the plan, including all volunteers.

3. Create a process to help ensure that fire drills for the Weaver Building occur at least every year.

Comment 3

OA agrees with the recommendation and will plan and conduct fire drills for the Weaver Building annually.

OIG's Comments to the Office of Administration's Response

- Comment 1** The Office of Administration agreed with recommendation 1 and said it will augment the occupant emergency plan by June 29, 2018. This plan meets the intent of the recommendation. The Office of Administration should provide us with the revised plan when it is complete. The status of recommendation 1 is “resolved-open.”
- Comment 2** The Office of Administration agreed with recommendation 2 and said it will hold annual training for all HUD employees and will conduct quarterly training for all HUD staff members who help execute the plan, including volunteers. The Office of Administration should provide us with an estimated target date for these trainings within 90 days of this report's issuance so that we can reach agreement on its management decision. The status of recommendation 2 is “unresolved-open.”
- Comment 3** The Office of Administration agreed with recommendation 3 and said it will plan and conduct fire drills in the Weaver Building annually. This plan does not meet the intent of the recommendation. Because fire drills within the Weaver Building did not occur for years, a rigorous process is needed. Such a process will help ensure that this critical safety exercise is taken seriously by HUD's future leaders. To meet the intent of this recommendation, the Office of Administration should create and document a process for holding fire drills at least annually. Within 90 days of the issuance of this report, the Office of Administration should provide us with a proposed management decision outlining its plan for meeting recommendation 3. The status of recommendation 3 is “unresolved-open.”

Appendix B – OIG Memorandum About the Lack of Fire Drills

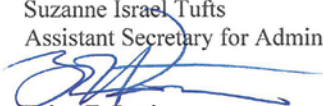
MEMORANDUM

March 22, 2018



U.S. DEPARTMENT
OF HOUSING
AND URBAN
DEVELOPMENT

To: Suzanne Israel Tufts
Assistant Secretary for Administration, Office of Administration, A1

From: 
Brian T. Pattison
Assistant Inspector General for Evaluation, Office of Inspector General, G

Subject: Management Alert – Fire Drills Needed for the Robert C. Weaver Building

The purpose of this memorandum is to alert you that HUD has not been conducting fire drills at the Robert C. Weaver Federal Building. This building serves as headquarters for the U.S. Department of Housing and Urban Development (HUD). Thousands of employees, contractors, and visitors occupy it daily. A General Services Administration regulation requires that agencies occupying Federal buildings participate in at least one fire drill per year.¹ The Office of Administration's Office of Disaster Management and National Security is responsible for ensuring that these drills occur. We were unable to determine when HUD last conducted a fire drill because officials could not produce records showing when one last occurred. One official with whom we spoke said the last one was in 2015, and another said the last one was before the shooting at the Navy Yard, which was in September of 2013.

We found this deficiency during our ongoing evaluation of a smoke incident on December 21, 2017. We are alerting you of this problem before issuing our report because of the danger it poses to the safety of the occupants in HUD headquarters. A formal recommendation on this topic may be included in the forthcoming report about the smoke incident. However, we encourage you to plan a fire drill for 2018 as soon as possible and ensure that fire drills occur at least annually thereafter.

cc:

Rena Holland, Director, Disaster Management and National Security Division, AHD
Michael Schimmenti, Director, Facilities Management Services, AHD
Mikko Makarainen, Audit Liaison, A1
Sherise Holden, Audit Liaison, A1

¹ 41 CFR § 102-74.360(a)

Appendix C – Acknowledgements

This report was prepared under the direction of Brian T. Pattison, Assistant Inspector General for Evaluation, and Paul H. Bergstrand, Director of the Program Evaluations Division. The Office of Evaluation staff members who contributed are recognized below.

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Other Contributors

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Appendix D – Acronyms

ACRONYM	DEFINITION
GSA	General Services Administration
HUD	U.S. Department of Housing and Urban Development
OIG	Office of Inspector General
OSHA	Occupational Safety and Health Administration



The Office of Inspector General is an independent and objective oversight agency within the U.S. Department of Housing and Urban Development. We conduct and supervise audits, evaluations, and investigations relating to the Department's programs and operations. Our mission is to promote economy, efficiency, and effectiveness in these programs while preventing and detecting fraud, abuse, and mismanagement.

Report fraud, waste, and mismanagement in HUD programs and operations by

Completing this online form: <https://www.hudoig.gov/report-fraud>
Emailing the OIG hotline: hotline@hudoig.gov
Faxing the OIG hotline: (202) 708-4829

Sending written information to

U.S. Department of Housing and Urban Development
Office of Inspector General Hotline (GFI)
451 7th Street SW, Room 8254
Washington, DC 20410

Whistleblowers are protected by law.

<https://www.hudoig.gov/fraud-prevention/whistleblower-protection>

Website

<https://www.hudoig.gov/>



U.S. DEPARTMENT OF
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Program Evaluations Division