DCSS (DCL) Data Center
Fire Suppression Procedures

May 18, 2015

Summary:

This document is intended for personnel who have access to the data center in DCL. The objective is to provide an awareness of the fire suppression system and locations of the equipment. The DCSS personnel are trained to deal with the fire suppression system in the event of activation due to fire. If an alert is activated, it is strongly recommended that everyone leave the data center immediately. The system is designed to provide two stage stages of notification. A single smoke detector will activate the 1st alarm horn/strobes. The agent release sequence has not begun at this stage. If a second adjacent smoke detector is activated, the 2nd Alarm horn/strobes will be activated and the 30 seconds agent delay timer has begun. The room will be filled with chemical to extinguish any fire by depriving it of oxygen. The agent does not pose a health hazard to an individual when exposure is less than five minutes, chemical is toxic but not deadly. It is not corrosive that it could destroy computers or any electronics in the data center.

Prolonged overexposure may cause potential health effects: To central nervous system depression with dizziness, suffocation, if air is displaced by vapors. Based on animal data, the component material, Ethane and Pentafluoro may cause irregular heart beat with a strange sensation in the chest: “Heart Thumping”, apprehension, lightheadedness, feeling of fainting, dizziness, weakness.
**Document Review and Approval**

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DCSS Fire Suppression Procedures

There are two DCSS Fike 25 Fire Suppression and Detection systems that protect the DCSS (DCL) Data Center spaces. These systems will release the fire retardant agent (ECARO 25, or FM 25) in 30 seconds after the alarms go off. The two systems are separate and do not interact simultaneously.

The systems are located in rooms 1440 and L441.

- In order to discharge the Fike system in 1440 or in L441, two smoke detectors have to trip in two different zones within the same area (1440 or L441).
- The first alarm sends an alarm to UIUC Public Safety and the Urbana Fire Department. When the alarm is tripped you will hear an alarm sound and the strobe light in the computer room and control room will be activated. The first alarm is triggered by one smoke detector in alarm condition.
- You have 30 seconds after the 2nd alarm is sounded to abort/disarm the release of the agent. The second alarm is triggered by second smoke detector in alarm condition.
- There are abort stations (yellow push buttons) and manual activation stations (red push buttons) located by each door in the L441 and 1440 data center spaces.
- You can delay the release of the agent by depressing the yellow button on the abort stations. Depressing the abort button only stops the clock on the release of the agent. When the button is released, restarts 30 seconds timer count down. It is recommended that you hold the button until you have someone at the Fike Controller panel to reset the system. If you are across the room, you may not have enough time to get across the room before the agent is discharged.
- You can manually discharge the fire suppression by removing the safety ring and depressing the red button at one of the manual release stations in the server rooms. This will discharge the agent immediately.
- If the system discharges, the system will automatically shut down the HVAC supply in the data center space(s) in which the system discharges.
• If you are in any of the two areas when the system discharges, exit the room immediately and close the doors to the data centers.
• If the Fike system discharges, the agent it will create a fog like environment and slowly clear out. The data center is to remain shut until deemed safe by the fire department personnel.
• The agent is not considered harmful, though it can still produce toxic by-products if an open flame is present. Occupants in the space should exit quickly when a fire suppression system is activated.
• Call the UIUC Public Safety immediately at 911.
• Do not re-enter the room until agent has dissipated and the all clear is given and the agent has dissipated. Once the all clear is given, you should be able to enter the room after fifteen minutes.

UIUC Facilities Management Phone Numbers for notification

Emergency dial 911  
UIUC F&S (Shop 25) 217-333-0340 Notify of a Fire Suppression Outage  
UIUC Public Safety 217-333-1216  
DCSS on-call (217)552-8387

How to disarm/abort the DCSS (DCL) Fike Fire Suppression System

1. Call Public Safety, 333-1216, and inform them the system will be disabled.  
   a. DCL Room L441: trouble 1-55, alarm 1-56  
   b. DCL Room 1440: trouble 1-59, alarm 1-60  
2. Call F&S, 333-0340, ask for Shop 25 and inform them.  
3. Turn the key on Suppression Agent Switch to Disarmed position, before proceeding to next step. This physically stops suppression agent from being dumped.  
4. Press Acknowledge button on panel to acknowledge alarms.  
5. System will now be in a disabled state.
How to arm/enable the DCSS (DCL) Fike Fire Suppression System

1. Call Public Safety, 333-1216, and inform them the system will be enabled.
   - DCL Room L441: trouble 1-55, alarm 1-56
   - DCL Room 1440: trouble 1-59, alarm 1-60
2. Call F&S, 333-0340, ask for Shop 25 and inform them.
3. Clear all alarms by pressing the reset button on panel, this may take up to 1 minute to clear the alarms.
4. **DO NOT ENABLE SYSTEM WHEN ANY ALARMS ARE PRESENT. THIS COULD CAUSE THE AGENT TO DUMP.**
5. Press the Acknowledge button on panel if needed.
6. Once alarms are cleared, turn the key on the Suppression Agent Disarmed Switch to Armed position and press the reset button at the panel. This will physically enable the agent tank(s).
7. Call Public Safety, 333-1216, and inform them the system has been enabled.

Locations of Fire Suppression control panels, manual pull stations, & abort release stations.

1) DCL Room 1440 (Primary Data Center) is protected by the Fike Fire Suppression system.
   a. The system control panel is located in 1452 (Data Center Operations) small closet on the south side of this space.
   b. The manual pull stations are located in the following areas in room 1440:
      i. Attached to Fike tank location, north wall of 1440
      ii. At each entrance, M3 and M1 (red buttons)
   c. The abort stations are located in the following areas in room 1440.
      i. To the left and inside of the M3 exit door of 1440, near the fire extinguisher (yellow button).
ii. To the right and inside of the M1 exit door in 1440 (yellow button).

2) Room L441 (primary data center) is protected by the Fike Fire Suppression system.
   a. The L441 Fike system uses the control panel in 1452.
   b. The manual pull stations are located in the following areas in room L441.
      i. L441A, the UPS room, attached to tank
      ii. At each entrance/exit (red button)
   c. The abort release stations are located in the following areas in room 1440, L441.
      i. At each entrance/exit (yellow button)
This main control panel in 1452 can be found in the closet
These strobe lights are located in 1452
This is located in 1440 left side near the double doors
Manual activation/deactivation override switch near the tank in room 1440
This is located on the left side of 1440 M3 exit door

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This is located on the left side wall of L441 rear exit door
Fire Suppression Tank located in L441
Manual activation/deactivation override switch in L441A
Fire Suppression tank in L1441A with manual activation/deactivation override switch

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