

RELATED TERMS

- Science Officer
- Doppler Technology
- National Weather Service



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- Search and Rescue
- Fire

LESSON LEARNED

Large-Scale Building Collapse: On-Site Weather Monitoring

SUMMARY

Following a large-scale building collapse, incident command (IC) should be aware that adverse weather can threaten the overall stability of the collapsed building and hamper the progress of search and rescue operations. On-site weather monitoring, including the use of Doppler technology, can help ensure that changes in weather patterns will be noted immediately and operations adjusted accordingly.

DESCRIPTION

At 9:02 am on April 19, 1995, a massive terrorist bomb ripped through the Alfred P. Murrah Federal Building in Oklahoma City, collapsing major portions of the structure. A weather report received the morning of the incident, predicted rain by that afternoon and the possibility of high winds, thunderstorms, and tornados in the days to come. Such adverse weather might threaten the stability of the collapsed structure and lead to delays in search and rescue operations. IC thus recognized the need for vigilant, on-site weather monitoring for the duration of operations.

IC directed an Oklahoma City Fire Department (OCFD) Science Officer to set up an on-site weather "station" and to continuously monitor approaching weather patterns. The weather monitoring equipment included Doppler technology, which could pinpoint the location of any rotation (early stages of a tornado) from miles away with an accuracy of three feet. From this on-site weather station, IC received weather updates every 15 minutes and a full report every hour for the duration of operations. In addition, the National Weather Service provided critical safety warnings to the IC.

Following a large-scale building collapse, incident command should consider establishing an on-site weather monitoring station. On-site weather monitoring helps ensure that any changes in approaching weather patterns will be noted immediately and operations adjusted accordingly.

For more information on adverse weather and necessary precautions, see [Lesson Learned: Monitoring Weather Conditions and Taking Necessary Precautions \(LLIS.gov ID# 6659\)](#).

CITATION

- The City of Oklahoma City. *Final Report: Alfred P. Murrah Federal Building Bombing, April 19, 1995*. July 1996. ([LLIS.gov ID# 9849](#))

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