

produced large amounts of visible smoke that would have emanated from the exhaust louvers; however, no such smoke discharge was observed.

- The 5th Floor was the only floor with a pressurized fuel line supplying nine of the emergency power generators on that floor. Two 6,000 gallon underground tanks supplied these nine generators, were always kept full for emergencies, and were full on September 11, 2001.
- Both 6,000 gallon tanks were found to be damaged and empty in the rubble pile several months after the collapse. This raised the possibility that the fuel may have contributed to a fire on Floor 5, a possibility that could not be distinguished from the fuel being consumed or dissipated in the burning rubble fire subsequent to the collapse of WTC 7.
- The gas temperatures from a pool fire on the 5th floor would have exceeded the boiling point of the coolant for the diesel generators in not much more than an hour, leading to engine failure. With all nine generators out of commission, there would have been no power to operate the fuel pumps for more than an hour or two, and the fires would have burned out well before columns in the region of the fire, including Column 79, experienced significant loss of strength.
- The day tanks on Floors 5 (supplying the remaining two emergency generators), 7, 8, and 9 that supplied fuel to the emergency generators on those floors did not contain enough fuel to be a significant contributor to the combustible load on the floors where fires were observed; it is unlikely that the tanks would have been re-supplied because of multiple safeguards in the fuel delivery system. In addition, none of the day tanks was located near the location of critical Column 79.
- FDNY personnel reported that they did not see any indication of burning liquid fuels before the building collapsed.

16. Role of Hypothetical Blast Events. Hypothetical blast events did not cause the collapse of WTC 7. NIST concluded that blast events could not have occurred and found no evidence of any blast events.

- The minimum explosive charge (lower bound) required to fail a critical column (i.e., Column 79) would have produced a pressure wave that would have broken windows on the north and east faces of the building near Column 79. Such a blast event would have resulted in a sound level of 130 to 140 decibels (a sound level consistent with a gunshot blast or a jet plane that is 10 to 20 decibels louder than a rock concert in front of speakers), at a distance of at least half a mile (if unobstructed by surrounding buildings, for example, along Greenwich Street). There were no witness reports of such a loud noise, nor was such a noise heard on audio tracks of videotapes that recorded the WTC 7 collapse.
- Prior to preparing a column for controlled demolition, walls and/or column enclosures and SFRM would have to be removed and replaced without being detected. Preparing the column includes steps such as cutting sections with torches (which produces noxious and odorous fumes) and careful placement of charges and an initiation device. Controlled demolition usually prepares most, if not all, interior columns in a building with explosive charges, not