

(6.4 lb/ft²). Simulations of the fires with a lower combustible fuel load showed little effect on the rate of fire progression.

Unlike the case for the two WTC towers, there was no widespread spraying of jet fuel to ignite numerous workstations or offices simultaneously. Rather, in the earlier hours of the fires, following the debris impact due to the collapse of WTC 1, the fire would have spread from one individual workstation or office to another.³ Thus, the fire spread would have been dependent on the office walls, the specific spacing of the cubicles, the ease of ignition of the furnishings, their combustible mass, and the extent of surface occlusion by foreign matter.

There were emergency power generators in WTC 7 (NIST NCSTAR 1-1J). The diesel fuel for these generators was stored within and under WTC 7. Properties of the emergency power systems are summarized in Table 1–2.

Table 1–2. Emergency power systems in WTC 7.

	Base Building System	Salomon Brothers System⁴	Mayor's OEM System
Fuel Storage Tank Capacities	Two 12,000 gal tanks	Two 6,000 gal tanks	Single 6,000 gal tank
Tank Locations	Below the loading dock	Below the loading dock	1 st floor
Locations of Generator(s)	Two on 5 th floor	Nine on the 5 th floor	Three on the 7 th floor
Day Tanks and Locations	Single 275 gal tank on the 5 th floor	None ^a	Single 275 gal day tank on the 7 th floor
Day Tank Pump Locations and Capacities	Two, on the 1 st floor; 4.4 gal/min	Two circulating pumps on 1 st floor, 70 gal/min	Two, on the 1 st floor, 12 gal/min
Ambassador (U.S. Secret Service) Modification	Generator and 50 gal day tank on 9 th floor; two pumps on the 1 st floor, 2.4 gal/min		
American Express Modification	Generator and 275 gal day tank on 8 th floor ^b ; two pumps on the 1 st floor, 2.8 gal/min		

a The NYCBC had a limit of one day tank per floor. Since there was a day tank on the 5th floor for the base generators, the SSB system used a pressurized fuel distribution system, in which pumps continuously circulated fuel whenever the generators were running. There was enough fuel (35 gal) in the valve rig and piping on the 5th floor to start the diesel engines, which, in turn, would supply power to operate the circulating pumps.

b The generator and day tank had been removed prior to September 11, 2001.

Figure 1–10 depicts the locations of the electrical generators, the day tanks, and the fuel lines that connected them to the below-ground fuel tanks.

³ The ingress of dust and debris through broken windows would have slowed this spread, especially near the south face of WTC 7, by depositing on horizontal surfaces and, thus, making ignition more difficult.

⁴ Renovations were made in 1988 and 1989 to the space leased by Salomon Brothers Inc. in WTC 7. In 1998, Smith Barney Inc. merged with Salomon Brothers Inc. to form Salomon Smith Barney. In 1999, Salomon Smith Barney Inc. merged with Citicorp Inc. to form Citigroup Inc.