



Figure 5-26 Debris generated after collapse of WTC 7.

5th Floor Scenarios. From a structural standpoint, the most likely event would have been the collapse of Truss 1 and/or Truss 2 located in the east end of the 5th and 6th floors. These floors are believed to have contained little if any fuel other than the diesel fuel for the emergency generators, making diesel oil a potential source of fire. As noted in Section 5.4, the fuel distribution system for the emergency generators pumped oil from tanks on the lower floors to the generators through a pipe distribution system. The SSB fuel oil system was a more likely source of fire around the transfer trusses. The SSB pump is reported as a positive displacement pump having a capacity of 75 gpm at 50 psi. Fuel oil was distributed through the 5th floor in a double-wall iron pipe. A portion of the piping ran in close proximity to Truss 1. However, there is no physical, photographic, or other evidence to substantiate or refute the discharge of fuel oil from the piping system.

The following is, therefore, a hypothesis based on potential rather than demonstrated fact. Assume that the distribution piping was severed and discharged up to 75 gpm onto the 5th floor in the vicinity of Truss 1. Seventy-five gpm of diesel fuel have the potential of approximately 160 megawatts (MW) of energy. If this burning diesel fuel formed pools around Truss 1, it could have subjected members of that truss to temperatures significantly in excess of those experienced in standard fire resistance test furnaces (see Appendix A). If the supply tanks were full at the start of the discharge, there was enough fuel to sustain this flow for approximately 3 hours. If the assumed pipe rupture were incomplete and the flow less, the potential burning rate of the discharged oil would be less, but the duration would be longer. At even a 30-gpm flow