DOE/Sandia National Laboratories
Large LNG Pool Fire Testing and Modeling Program

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Abstract

The increasing demand for natural gas will significantly increase the number and frequency of Liquefied Natural Gas (LNG) tanker deliveries to ports across the U.S. Because of the increasing number of shipments and facility siting applications, concerns about the potential for an accidental spill or release of LNG have increased. In addition, since the incidents surrounding September 11, 2001, concerns have increased over the impact that an attack on hazardous or flammable cargoes, such as those carried by LNG ships could have on public safety and property. The risks and hazards from an LNG spill will vary depending on the size of the spill, environmental conditions, and the site at which the spill occurs. Risks include fatalities or injuries to people, property damage to the LNG ship and equipment, and significant economic impact due to long-term interruptions in the LNG supply. With the growing dependence on imported LNG to meet increasing U.S. natural gas demands, damage or disruption from a spill to LNG import terminals or harbor facilities could curtail LNG deliveries and impact natural gas supplies. Therefore, methods to ensure the safety, security, and reliability of current or future LNG terminals and LNG shipments are important from both public safety and property perspectives, as well as from a regional, energy reliability standpoint.