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BLAST EFFECTS ON CIVIL WORKS STRUCTURES

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The US Army Engineer Research and Development Center is developing a methodology to assess the vulnerability of major civil works structures, particularly dams and navigation locks, to blast effects from explosions. Historical data and previous research on aerial bombing attacks against these structures is extended to cover explosions from sabotage to terrorist attacks. The current work involves small-scale experiments and hydrocode modeling of the response of embankment dams, concrete dams, and steel gate structures to various explosion sources, such as demolition charges, truck bomb explosions in the reservoir, etc. This paper presents background information that describes the scope and nature of the current investigations.

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