Crude Oil Transmission Study

An Assessment of the Social, Economic and Environmental Impacts Resulting from Oil Spillage and Disruption Caused by A Major Earthquake in the New Madrid Seismic Zone

by Ronald Eguchi

Abstract

In 1989, the National Center for Earthquake Engineering Research launched a multi-year, multi-disciplinary study of the seismic vulnerability of an important lifeline system. The production and delivery of crude oil is critical to every major industry and business sector in the United States This nation's most crucial crude oil system traverses the midwest and is subject to seismic hazards posed by the New Madrid Seismic Zone (NMSZ). To understand fully the significance of this system, particularly after major disasters such as earthquakes, it is necessary to quantify the level of seismic vulnerability of this system and the impact that may result should oil be released or disrupted. To address these questions, NCEER formed a multi-disciplinary team representing researchers in seismic hazard assessment, component vulnerability analysis, system reliability analysis, and socio-economic impact analysis.

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