

**The Department of Defense Kuwait Oil Fire Health Risk Assessment  
(The Persian Gulf Veterans' Registry)**

**INTRODUCTION**

Even before the end of Operation Desert Storm, the Department of Defense (DoD) began to assess the likely health impacts of the conflict's most visible icon--billowing smoke from 600 burning Kuwaiti oil wells, ignited by retreating Iraqi troops. Then, just as the last fires were extinguished, the Congress made its own specific demands for information about health risks to each smoke-exposed military participant (in Public Law 102-190 and later expanded on in Public Law 102-585). DoD responded with the Kuwait Oil Fire Health Risk Assessment, the heart of which is a computer-based geographical information system (GIS). The completed part of the risk assessment is based on actual measurements of contaminant levels taken while troops and smoke coexisted in the Persian Gulf. An ongoing part will eventually produce estimates of health risks based on "modeled" contaminant levels where and when no actual measurements were taken.

The Office of Technology Assessment was directed in Public Law 102-585 to assess whether DoD's project "meets the provisions of the law under which it was mandated," to assess its "potential utility . . . for scientific study and assessment of the intermediate and long-term health consequences of military service in the Persian Gulf theater of operations during the Persian Gulf War," and to address some other related questions. A requirement that OTA assess the Department of Veterans Affairs Persian Gulf War Veterans' Health Registry (which was mandated in the same public laws as the DoD effort) was met by a report in October 1993.<sup>1</sup>

This Background Paper describes briefly the work on DoD's Kuwait Oil Fire Health Risk Assessment to date, including the results of a pilot study of health risks, and then answers the questions addressed to OTA in PL 102-585. This review relies heavily on the work of a consultant expert in chemical risk assessment who studied the DoD project for OTA (the consultant's report is available from OTA).<sup>2</sup> His work is based on a variety of contacts with the U.S. Army Environmental Hygiene Agency (EHA; recently renamed the U.S. Army Center for Health Promotion and Preventive Medicine, but referred to in this report as EHA), which has major responsibility for this task within DoD, except for determining troop locations. That latter task falls to the U.S. Army and Joint Services Environmental Support Group (ESG), the Army's experts on military records. OTA's consultant (and OTA staff) gathered information from ESG on their activities relevant to this review.

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<sup>1</sup>U.S. Congress, Office of Technology Assessment, "The Department of Veterans Affairs Persian Gulf Veterans' Health Registry, 1993.

<sup>2</sup>Risks of Radiation and Chemical compounds, "The DoD Persian Gulf Oil Fire GIS Modeling Project: A Review and Evaluation," submitted to OTA September 1994.