

Air Emissions from the Treatment of Soils Contaminated
with Petroleum Fuels and Other Substances
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This report updates a 1992 report that summarizes available information on air emissions from the treatment of soils contaminated with fuels. Soils contaminated by leaks or spills of fuel products, such as gasoline and jet fuel, are a nationwide concern. Air emissions during remediation are a potential problem because of the volatile nature of many of the fuel components and the remediation processes themselves, which may promote or result in contaminant transfer to the vapor phase. Limited information also is included on air emissions from the treatment of soils contaminated with hazardous wastes.

The report will allow staff from state and local regulatory agencies, as well as staff from EPA regional offices, to assess the different options for cleaning up soil contaminated with fuels. Seven general remediation approaches are addressed in this report. For each approach, information is presented about the remediation process, the typical air emission species of concern and their release points, and the available air emissions data. Control technologies for each remediation approach are identified and their reported efficiencies are summarized. Cost data are given for each remediation approach and for its associated control technologies. Emission estimation methods (EEMs) for each remediation approach are presented along with a brief case study. An uncertainty and sensitivity analysis was also prepared for each EEM.

A 1992 report was initially revised in 1995 in fulfillment of EPA Contract No. 68-D2-0160, Work Assignment 62, by Radian Corporation. The 1992 report also was prepared by Radian Corporation.

This second revision to the 1992 report was prepared in 1996 in fulfillment of EPA Contract No. 68-D3-0035, Work Assignment II-92, by E.H. Pechan & Associates, Inc., 2880 Sunrise Boulevard, Suite 220, Rancho Cordova, CA 95742.

The electronic version of this report does not include the figures or appendices listed below. To obtain copies of these pages, please contact Susan Thorneloe of the U.S. Environmental Protection Agency by phone (919-541-2709), fax (919-541-7885), or e-mail (Thorneloe.Susan@epamail.epa.gov).

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