

*Chemical Weapons Destruction and Explosive Waste / Unexploded Ordnance Remediation*. Robert Noyes, Noyes Publishing, Park Ridge, NJ, 1997, \$64.00, 235 pages. ISBN: 1-8155-1406-9.

World War II and the cold war have left the United States with a very expensive legacy: massive cleanup of military and weapons production sites. The Department of Defence (DOD) conceivably could spend \$50 to \$100 billion for: (1) chemical weapons destruction, (2) explosive waste remediation, and (3) unexploded ordnance clearance and extraction.

There are three DOD programs that require the utilization of somewhat unusual or different technologies that have not been well-documented in prior works. They are:

1. Chemical weapons destruction,
2. Remediation of explosive, contaminated soils and lagoons,
3. Unexploded ordnance detection, clearance, and extraction.

Subchapters of this book are devoted to incineration and its alternatives for chemical weapon destruction such as molten salt oxidation, fluidized bed combustion, molten metal pyrolysis, plasma arc pyrolyzation, steam gasification, wet air oxidation, supercritical water oxidation, and chemical neutralization. A separate chapter discusses Canada's experience with chemical agent destruction.

Methods used to dispose of explosive wastes are discussed in the second major section of the book. they are biological treatment process (including treatment with white rot fungi) and thermal/oxidation processes (such as UV oxidation, wet air oxidation, low temperature thermal desorption and hydrothermal process).

The problem of unexploded ordnance is discussed in the third and final section of the book. Detection/location/identification, retrieval, propellant and explosives disposal by extraction, reuse, and conversion to basic chemicals comprise the bulk of this chapter. The book ends with a 15-page chapter entitled, "Destroying and Recycling Materials resulting from Dismantling Nuclear Weapons".

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*Methods for the Determination of Metals and Inorganic Chemicals in Environmental Samples*. USEPA, Environmental Monitoring Systems Laboratory, Noyes Publishing, Park Ridge, NJ, 1997, \$64.00, 535 pages. ISBN: 1-8155-1398-4.

This supplement to the EMSL-Cincinnati publication, "Methods for the Determination of Metals in Environmental Samples" was prepared to revise and place in the Environmental Monitoring Management Council (EMMC) format certain spectrochemical methods used for metals analyses in regulatory compliance monitoring programs. Fourteen different analyses are detailed. Also included in this supplement is a new method, Method 200.15 Determination of Metals and Trace Elements in Water by Ultrasonic Nebulization Inductively coupled Plasma-Atomic Emission spectrometry. This method is intended for analysis of ambient waters with possible limited use in