

converted to an estimate of the average exposure during the actual working day by judgement whether the exposure during periods not measured would have been the same as one of the measurements, or zero (e.g., periods out of the workplace) or about the same as the average. Then, the estimated average for the whole working day of H h is converted to a reference 8-h time-weighted average by multiplying by $H/8$. The error is apparent as soon as you choose an example where the sampling periods do not add up to the full work day, or to 8 h. Unfortunately, official guidance on both sides of the Atlantic is confused on this issue.

Numbers and consistency in general have not been thoroughly checked in this book. Paracelsus died in 1591 on p. 4 or in 1541 on p. 21. The British 1833 Act was an act to protect the sanitation, morals and education of apprentices in textile mills (p. 50), not a workmen's compensation act (p. 4). The corresponding F temperature to 36°C is wrong in the text on p. 255, but right in the adjacent table. The discussion in 4-4 (p. 83) of the vacated OSHA PEL for silica is clear and brief, with a throwaway remark that the constant 2 added to the denominator is there to limit the concentration of respirable dusts with less than 1% SiO_2 to 5 mg/m^3 . Because the adjacent table is wrong, the enquiring reader will calculate that the limit actually reduces to 5 mg/m^3 for respirable quartz, and to 2.5 for respirable tridymite or cristobalite.

Given the large amount of useful information packed into this text, it seems churlish to comment on the errors: but there are enough to cause confusion and throw slight doubt on other materials.

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The Complete Guide to Hazardous Waste Regulations RCRA, TSCA, HMTA, OSHA, and Superfund, Travis P. Wagner, John Wiley and Sons, New York, NY, 3rd edn., 1999, US\$69.95, 536 pp., ISBN: 0-471-29248-6

US Environmental law are complex. RCRA (the Resource Conservation and Recovery Act) is exceedingly complex (the author notes it is "frustratingly complex"). Thus, the need for a book (or books) explaining the requirements of the law but more imperatively guiding one to compliance with its multitude of provisions.

To illustrate my point regarding the law's complexity (and attendant voluminous regulations resulting from it), let me quote from the section on Recycling Hazardous Wastes:

"It is intuitively understood that the legitimate reuse, recycling, and reclamation of hazardous waste is far more beneficial than treatment and/or disposal. However, recycling activities also have environmental and public health impacts. In fact, many of the early Superfund sites were former recycling facilities. Thus, EPA has been faced with a major challenge: promoting the reuse, recycling, and reclamation of hazardous waste while ensuring that it is done in a manner protective of human health and the

environment. This balancing act has been a constant struggle for EPA since the inception of the RCRA program.

In addition, the legal constraints of RCRA are such that subsequent recycling regulations have become quite complex. Under Subtitle C of RCRA, EPA has the authority to regulate hazardous wastes; hazardous wastes, however, are defined in the statute as a subset of *solid* wastes. Thus, EPA has developed the hazardous waste recycling regulations around a series of regulations that either include wastes and secondary materials in the definition of solid waste, or exempt those materials from that definition.”

Point made.

The book jacket notes (and I concur) that the author goes beyond summarization of the law to help industry professionals truly understand regulations and how they relate to real world situations. To accomplish this task, he employed very useful techniques: flow charts, text boxes, tables, and checklists to allow a facility manager to review his/her site’s compliance status.

In addition to a detailed step-by-step review of RCRA’s provisions, Wagner discusses HMTA (Hazardous Material Transportation Act and its requirements for hazardous waste transportation), Superfund, CERCLA (Comprehensive Environmental Response and Cleanup Liability Act) and the cleanup of prior contaminated sites and spills.

Also discussed are regulations governing the spillage (cleanup thereof) and disposal of PCBs. RCRA corrective action, a program designed to clean up releases of hazardous wastes and/or hazardous constituents from hazardous waste treatment, storage or disposal facilities (TSPF), is discussed in Chap. 9.

In summary, Wagner has done an excellent job of describing all facets of the very complex US hazardous waste law. A small point, the OSHA (the Occupational Safety and Health Act) is highlighted on the book cover but is not discussed, although safety and handling hazards were a recurrent theme throughout the book. I would also note the author does an excellent job of citing the sections of the law (referring to the US Code of Federal Regulations) he is discussing.

The book has several appendices of which I note the following:

- List of RCRA Hazardous Wastes, CERCLA Reportable Quantities, and EPCRA Reportable Quantities.
- Information Sources (mainly USEPA, office addresses are given with telephone numbers plus web sites, the latter being the first such list I have seen in a text. State EPA addresses and telephone numbers plus web sites also are given.).

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Biofiltration for Air Pollution Control. Joseph S. Deviny, Marc A. Deshusses and Todd S. Webster, Lewis Publishers, Boca Raton, FL, 1998, \$69.95, 299 pp., ISBN: 1-56670-289-5

Firmly established in Europe, biofiltration technology has recently been introduced to North America and is being actively researched and utilized industrially.