degree of containment, and upon the control measures prevailing, e.g. provision of control and safety devices, local exhaust ventilation, general ventilation, personal protection, atmospheric monitoring and systems of work generally.

Following that description of the problem posed by hazardous chemicals in their introductory chapter, Carson and Mumford have two very elementary chapters: (1) Terminology and (2) General Principles of Chemistry. Personally, I would have relegated the Terminology chapter to the appendix and may very well have omitted the Basic Chemistry chapter in this very "applied" text.

Physicochemistry (vapour pressure, gas–liquid solubility, density, immiscibility, vapour flashing, critical temperature, etc.) are covered in Chapter 4.

For me, the book really begins with the Toxic Chemical chapter (Chapter 5). Hazard recognition, types of toxic chemicals (irritants, sensitizers, asphyxiants, poisons and carcinogens) are discussed. Risk assessment and risk control are covered. Included in this chapter is a 30-page table containing data on hygiene standards (TWA and STEL; both US and UK limits are given) and air odour thresholds. This table is one of a very large number of data-containing tables in the book. Another extensive table contains data on the risk control area; it is a 13-page long table containing a list of substances assigned a R45 or R49 (carcinogen) risk. As indicated, the amount of data in this chapter is large. I counted 58 separate data-containing tables.

Subsequent chapters are entitled Flammable Chemicals, Reactive Chemicals, Cryogens, Compressed Gases, Monitoring Techniques, Radioactive Chemicals, Safety By Design, Operating Procedures, Marketing, Transport of Chemicals, Chemicals and the Environment: Sources and Impact, and Chemicals in the Environment: Monitoring and Protection.

There is one short appendix reporting on selected UK legislation relevant to environmental protection and occupational health and safety in relation to chemicals.

One is impressed by the amount of information and advice provided by the authors. In my opinion, it is an excellent book.

Gary F. Bennett

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Proceedings of the Twenty-fifth Arctic and Marine Oil Spill Program (AMOP) Technical Seminar

Environment Canada, Ottawa, Ontario, Canada, 2002, 2 vol., no price given, 1369 pp. ISBN: none

Held in June 2002 in Calgary, Alberta, under the auspices of the Environmental Protection Service, Environmental Technology Advancement Directorate of Environment Canada, this annual seminar published 88 peer reviewed papers presented by both Canadian and foreign authors. Prominent among these authors is M.F. Fingas of Environment Canada who is author or co-author of 10 of these papers; he serves on the Editorial Board of this journal.

I was impressed by the wide range of paper topics and their geographical sources. By my count, papers came from 14 countries in addition to the US and Canada and they were

submitted by authors from 18 universities world wide. Of course government agencies involved spill response and cleanup were responsible for the majority of the papers. The variety of topics also was impressive. As one would expect, the 88 papers are printed under session headings shown below (the number of papers in each section is shown in parentheses):

1. Physical and chemical properties and behaviour of spilled oil (7)
2. Containment and recovery (5)
3. Detection, tracking, and remote sensing (3)
4. Activity updates and contingency planning (14) There are several biological topic papers appearing in this section also including biological treatment of PCB-contaminated soil.
5. Oil fingerprinting (13)
6. Technical seminar on chemical spills (5)
7. Oil spill treating agents (5)
8. In-situ burning (2)
9. Shoreline protection and cleanup (2)
10. Biological effects of oil and hydrocarbons and oil biodegradation (11)
11. Spill modelling (7)
12. Arctic spill countermeasures (7)
13. Recent spill experiences (1)
14. Papers from poster presentations (6)

One paper submitted by Fingas of Environment Canada discussed testing at OHMSETT of water-in-oil emulsions. This test was of interest to me personally as I visited the OHMSETT facility many years ago, recalling Edison's Research Laboratory Director referring to it as "a national treasure." Given my bias, I was very interested in the paper by Nolan et al., entitled "OHMSETT—What are we up to now? 2002 in review."

I quote from the introduction of the paper to illustrate the importance of this facility. "OHMSETT (an acronym for Oil and Hazardous Materials Simulated Environmental Test Tank) was originally built and operated from the Environmental Protection Agency in the early 1970s along with the assistance of the US Coast Guard. The facility was developed to improve oil spill response capability and efficiency through performance testing of existing equipment and through the research and development of new technologies. The facility's main feature is an outdoor, above ground, concrete tank with dimensions of 203 m long, 20 m wide and a water depth of 2.4 m. The tank is filled with 984 million 1 of salt water. Ocean conditions are simulated with a wave generating system and a wave dampening artificial beach. Moveable bridges tow equipment at speeds up to 3.3 m/s." It is, indeed, an impressive structure.

Environment Canada is to be commended for their efforts in annually sponsoring this conference and quickly publishing the proceedings.

Gary F. Bennett

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