

Environmental Events

OSHA Noise Control Management Course, Dec. 7. Cambridge, Mass. Contact Gloria A. Cianci, Bolt, Beranek & Newman Inc., 50 Moulton St., Cambridge, Mass. 02138

The Approaching Toxics Era, Dec. 7. Washington, D.C. Jan. 13. Los Angeles, Calif. Contact Carl Gosline, MCA, 1825 Conn Ave., N.W., Washington, D.C. 20009.

The American Chemical Society's Mid-Atlantic Regional Meeting call for papers, by January 15. Contact: Dr. Wm. A. Sheppard, Experimental Station, Du Pont Company, Wilmington, Del. 19898

Environmental Regulation of Industry, December 13-14. New York City, January 13-14. Los Angeles. Contact Nancy Hinman, Practising Law Institute, 810 7th Ave. New York, N.Y. 10019.

Toxic Substances Control Act Conference, Dec. 13-14. Arlington, Va. Contact Executive Enterprises Inc., 10 Columbus Circle, New York, N.Y. 10019

Preparation of Environmental Impact Statements, Dec. 13-15. Washington, D.C. Contact Director, Continuing Engineering Education, George Washington University, Washington, D.C. 20052

New Concepts of Occupational Medicine Under OSHA, Dec. 15-17. Orlando, Fla. Contact the Industrial Health Foundation, 5231 Centre Ave., Pittsburgh, Pa. 15222

Seminars on Transportation of Hazardous Materials, Dec. 14-15. Memphis, Tenn. Contact Sandra D. Cureton, MTH-301, Office of Hazardous Materials Operations, U.S. Department of Transportation, Washington, D.C. 20590.

Symposium on Chemical Dispersants for the Control of Oil Spills, Jan. 11-12. Dallas, Tex. Contact: Dr. Wm. E. Mott, Mail Station D 237 ERDA, Washington, D.C. 20545

Course on Laboratory Safety, Jan. 17-19. Austin, Tex. Contact Harry Mandy, University of Texas System, 201 W. 7th St. Austin, Tex. 78701

Energy Law & Regulations Seminar, Jan. 27-28. Washington, D.C. Contact Nancy McNeerney, Government Institutes, Inc. 4733 Bethesda Ave., N.W., Washington, D.C. 20014

Drinking Water Comes Clean in Tests; Pesticide Level Is Only Parts Per Trillion

The level of pesticides in the nation's drinking water is extremely low and is expected to decline further, a study by the Environmental Protection Agency reveals.

In a recently completed national survey, 350 water supplies were analyzed for the presence of aldrin, dieldrin and DDT. Where detected at all, the substances were found in concentrations at the parts per trillion level (see measurements story on this page).

EPA says that pesticide traces found in drinking water are very small compared

with other sources of human exposure, such as residues on food.

Pesticide levels in the general environment and drinking water are expected to decline naturally because of EPA bans, the agency says.

EPA conducted the survey to obtain data on which to base possible regulations that would set maximum permissible levels of the pesticides in drinking water.

The agency says it has little data on technology to treat or remove the chemicals at the low concentrations present.

Of some 689 water samples analyzed, dieldrin was found in 115 at levels ranging from four to 80 ppt. Only six of the samples exceeded 20 ppt and only two exceeded 30 ppt.

One of the latter samples also contained aldrin at a concentration of 14 ppt. Only two samples had DDT in measurable quantities—at 20 and 32 ppt.

EPA is now collecting data to assess the feasibility of setting limits on organic chemicals in drinking water. Research is underway on health effects, contamination sources, treatment and removal technology and analytical techniques.

Another study of the seasonal distribution of haloforms (such as chloroform) and other synthetic chemicals also is progressing. It should be completed early in 1977.

Revision Expected In Air Regulations

National air quality criteria will be revised during the next three years to agree with recommendations by the former National Air Quality Advisory Committee of the Environmental Protection Agency.

William K. Talley, EPA's assistant administrator for research and development, says the timetable calls for revised drafts on photochemical oxidants (and related hydrocarbons) by August 1977; nitrogen oxides by February 1978; carbon monoxide by August 1978; sulfur oxides (and associated particulates) by August 1979; and particulate matter by August 1979.

One Part Per Trillion Is a Very Finely-Split Hair

TRACE CONCENTRATION UNITS

Worker exposure to certain chemicals is limited to a few parts per million. Regulations reduce an industrial waste discharge to one part per billion. Pesticide residues are found in drinking water in the low parts per trillion.

Extremely low measurements, and laws and regulations based on them, are growing more commonplace as science perfects increasingly sophisticated sensors.

Such infinitesimal figures probably don't register with most people. Only scientists and plant managers trying to get exposures and effluents down to levels as fine as frog hair comprehend and appreciate their meaning.

Shedding light on the subject, Dr. Warren B. Crummett of The Dow Chemical Company has made some comparisons that put the figures in perspective (see table).

They are being used by Dow's Ronald O. Kagel during his presentation on "Analytical Problems with Plant Effluents" at MCA's symposiums on The Approaching Toxics Era. The final two are scheduled for December 7 in Washington and January 13 in Los Angeles.

UNIT	1 part per million	1 part per billion	1 part per trillion
Length	1 inch/16 miles	1 inch/16,000 miles	1 inch/16,000,000 miles (A six-inch leap on a journey to the sun.)
Time	1 minute/2 years	1 second/32 years	1 second/320 centuries
Money	1¢/\$10,000	1¢/\$10,000,000	1¢/\$10,000,000,000
Weight	1 ounce/31 tons potato chips	1 pinch salt/10 tons potato chips	1 pinch salt/10,000 tons potato chips
Volume	1 drop vermouth/80 "fifths" gin	1 drop vermouth/500 barrels gin	1 drop vermouth/250,000 hogsheads of gin
Area	1 sq. ft./23 acres	1 sq. ft./36 sq. mi.	1 sq. in./250 sq. mi.
Action	1 bogey/3,500 golf tournaments	1 bogey/3,500,000 golf tournaments	1 bogey/3,500,000,000 golf tournaments
	1 lob/1,200 tennis matches	1 lob/1,200,000 tennis matches	1 lob/1,200,000,000 tennis matches
Quality	1 bad apple/2,000 barrels	1 bad apple/2,000,000 barrels	1 bad apple/2,000,000,000 barrels
Rate	1 dented fender/10 car lifetimes	1 dented fender/10,000 car lifetimes	1 dented fender/10,000,000 car lifetimes

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