Legislation

Finns unveil EU priorities

Four new draft directives on air quality are amongst Finland's top priorities for its presidency of the EU. The proposed measures include an air quality directive to limit benzene and carbon monoxide concentrations in ambient air, and a proposal to set targets for ambient levels of ground level ozone. A national 'emissions ceiling' directive will limit emissions of sulfur dioxide, nitrogen dioxides, volatile organic compounds and ammonia. The large combustion plants directive aims towards further reductions in emissions from power generation and other large facilities. (See *JEM*, 1999, **1**(4), 59N).

The air quality directive is likely to receive the quickest passage, although member states remain split over limit values for benzene. Southern countries are likely to push for a limit higher than the 5 $\mu g\ m^{-3}$ proposed by the Commission, while Nordic countries are in favour of stricter limits. The emissions ceiling and LCP directives will be progressed in parallel, followed by the ozone directive if time allows.

Other major negotiations falling under the Finns responsibility, include a proposal for mandatory strategic environmental assessment of infrastructure plans and programmes, and a proposal to set minimum standards for environmental audits.

Finland assumed the presidency, which rotates between EU member states every six months, from the beginning of July and holds it until the end of the year.

Finnish Presidency: http://presidency.finland.fi

EPA cleans up waterways

Revisions to the Clean Water Act regulations, aimed at improving the quality of 20 000 waterways were announced by President Clinton in August. Under the EPA proposal, the agency will work with state and local governments to develop more comprehensive assessments of water bodies, so as to identify those at risk from pollution and/or failing water quality standards. Clean-up plans and timetables will be developed (within 5 years for 'high priority' waters), where necessary with stricter discharge limits for both point and non-point sources.

Implementation of the proposals is likely to involve changes to EPA's Total Maximum Daily Load, Water Quality Standards and National Pollutant Discharge Elimination System programs. Details at:

EPA Office of Water: www.epa.gov/owow/tmdl/proprule.html

Progress on Lake Superior plan

Agencies in the US and Canada have published detailed targets for reducing pollution discharges into Lake Superior. The move is an important element of the Lake Superior Lakewide Management Plan (LaMP), which is part of the bilateral US-Canadian program to restore and protect the Lake Superior basin.

LaMP Stage 2 targets pollutants which impair or are likely to impair human health and wildlife, and beneficial uses of the lake. Critical pollutants are mercury, PCBs, dieldrin/aldrin, chlordane, DDT and metabolites, toxaphene, dioxins, hexachlorobenzene (HCB), and octachlorostyrene (OCS). These are all persistent in the environment and bio-accumulate in animals and humans causing cancers, neurological diseases and chronic health problems.

The report sets schedules for reducing these critical pollutants across the Lake Superior basin which will be updated and reported on in future stages.

Environment Canada: www.ec.gc.ca

EU enforces water laws

The European Commission has announced a new round of legal actions against EU member states for non-compliance with European laws on water quality. Firstly, a series of infringement actions are being taken out for failing to implement the 1991 nitrates directive. Both Germany and Luxembourg are being referred to the European Court of Justice, while the Netherlands, France and Belgium have been sent 'reasoned opinions' (final warnings). The directive, which aims to reduce nitrate pollution from agriculture, is one of the most poorly implemented of all EU environmental laws, and infringement actions are already underway against 12 of the 15 member states.

Another key problem area is the 1991 urban wastewater directive. Greece has been referred to the European Court for inadequate compliance with the directive. Along with Germany, Greece is also to be sent a reasoned opinion on a 1998 amendment to the directive clarifying requirements for urban wastewater discharges in areas sensitive to eutrophication. Neither country has implemented the legislation within national law. Ireland, Finland, Portugal and the UK are also to be ticked off for minor infringements in particular areas of water quality legislation.

OP pesticide ban

EPA has announced cancellation agreements and risk reduction strategies for two organophosphates which are amongst the oldest and most widely used pesticides. Specific uses of the pesticide methyl parathion are to be eliminated, while allowable residues for azinphos methyl are to be lowered for a wide variety of fruit and vegetable products. The Agency says the move is aimed particularly at reducing risks to children's health from pesticide exposure.

EPA has set a rigorous 18-month schedule for completing its review of all 39 organophosphates. Several other older, widely used pesticides are also being targeted for priority review within the next year and a half, including atrazine, aldicarb and carbofuran. The review is part of a move to more protective health-based standards, as required under the 1996 Food Quality Protection Act (FQPA).

EPA Office of Pesticide Programs: www.epa.gov/pesticides

Cadmium tops EU agenda

A draft directive banning cadmium in batteries was amongst the first

environmental measures to be considered by the new EU commissioners when they started work in September. Under an extension to the 1991 directive on battery waste, the Commission is seeking to introduce a ban on all batteries containing cadmium by 2008. Member states would also be required to ensure that 75% of consumer and 95% of industrial batteries are recycled. The main target is rechargeable batteries made of nickel cadmium.

Industry is resisting the move, claiming that viable alternatives to rechargeable Ni–Cd batteries have yet to be developed—especially for high capacity applications such as power tools. It is arguing instead for the opportunity to set up an EU-wide battery collection scheme, which would ensure the recycling of 75% of Ni–Cd batteries by 2004. The Commission's Environment Directorate says the recycling target is unattainable, whereas research shows nickel hydride batteries present an economically feasible substitute. Although currently 20–100% more expensive, it says prices of nickel hydride technology should drop dramatically over the next five years. Other parts of the Commission are believed to be more sympathetic to the industry's view, however.

International Cadmium Association: tel.+32 2 7770560

Environmental quality

Europe's 'weather forecast'

The European environment remains 'under serious pressure' according to a major survey of environmental quality and trends published by the European Environment Agency (EEA). In what it calls a 'weather forecast' through to 2010, the Agency says the unsustainable development of sectors such as transport, energy, agriculture and tourism represents a major barrier to environmental improvement. In transport and agriculture, in particular, the Agency finds 'no indication of significant eco-efficiency gains ...up to 2010'.

Amongst the positive developments noted are the significant cuts in ozone-depleting substances and reductions in acidification and phosphorous discharges to rivers. Overall, however, the agency says there has been insufficient decoupling of pollution emissions from GDP. The outlook foresees these trends continuing through to 2010, with particular problem areas in greenhouse gas emissions, chemicals and waste. Lack of data continues to hinder projections in some areas, such as soil quality, biodiversity and pesticides in groundwater. Other areas remain uncertain due to socio-economic developments.

In chemicals, the report notes that 'total chemicals production is on a rising trend while minimal risk assessment analysis is not carried out for 75% of the large volume chemicals on the market'. Emissions or discharges of some heavy metals, like cadmium and copper, and of hazardous chemicals from industry, transport and agriculture, such as pesticides, are expected to rise.

The study, the fourth of the EEA's 'state-of-the-environment' reports, describes primarily the 15 EU member states but also covers the EFTA countries and the 11 accession countries. The report diagnoses and measures the situation for most recent years available, and also assesses future trends. The baseline 'business-as-usual' scenario assumes a 45% increase in economic growth over the period 1990–2010 and a 50% increase in final consumption between 1995–2010.

Environment in the European Union at the Turn of the Century, European Environment Agency, Copenhagen, 1999. Available at: www.eea.eu.int

The *State of the Environment Reporting Information System (SERIS)* is a gateway to information about the state of the environment in European countries and regions: www.eea.eu.int/frdb.htm.

Experts count cost of Balkans conflict

Teams of UN experts visited Yugoslavia over the summer to assess the environmental impact of the Kosovo crisis.

In July a team of 12 scientists visited industrial sites across the country taking soil and groundwater samples. The experts also collected data on earlier (pre-conflict) pollution incidents and gathered data such as maps and records of air pollution and hazardous wastes. Speaking to reporters at the end of the visit, Pekka Haavisto, chairman of the Balkans Task Force, said it was too early to reach any firm conclusions on the overall impact of the conflict.

Further missions in August looked at the impacts on the Danube, the region's biodiversity and human health. The BTF was due to report to the UN Secretary-General in September.

Balkans Task Force: www.grid.unep.ch/btf

Equal right-to-know

Data on toxic chemical releases across North America are available in a new report from the North American Commission for Environmental Co-operation (CEC). The report, entitled *Taking Stock,* presents an international picture of the releases and transfers of toxic chemicals by industrial facilities.

This third annual report covers the situation in 1996, drawing on data from the US Toxics Release Inventory (TRI) and the Canadian National Pollutant Release Inventory (NPRI). Comparable data from Mexico's environmental agencies will be included in future editions.

At a recent CEC Council Meeting in Banff, the three countries agreed to step up efforts to improve the comparability of data between their right-to-know programs.

North American Council for Environmental Cooperation: www.cec.org

Ireland feels pressure

Environmental indicators issued by the Irish government highlight the increasing pressure on the country's environment from the high rate of economic growth. In the first quantitative study of the country's environmental performance, the Irish EPA presents data for fifty indicators over a ten-year period. A series of twelve headline indicators is identified for which regular monitoring will be undertaken to provide a snapshot view of progress over time. These focus on key issues for national policy such as phosphorus levels in soil.

In line with other recent studies (see *JEM*, 1999, **1**(3), 61N), the results show particular pressures in controlling river pollution, where eutrophication from

agriculture is a major problem. Waste management is also a significant problem, with arisings of household and commercial wastes increasing by 62% since 1995.

Irish EPA: www.epa.ie

German water management 'unsustainable'

Water management policy in Germany is becoming increasingly unsustainable according to a highly critical report from the country's environment agency.

In a study of prospects for water management through to 2020, Umweltbundesamt says the overall water pollution situation has not improved significantly over the last 20 years. The report goes on to point the finger firmly at non-industrial sources such as households, transport and agriculture. Of the 820 000 tonnes of nitrogen entering watercourses in Germany each year, 60% is from agricultural sources. This needs to be halved over the next 20 years as part of a sustainable water management regime.

Other practices singled out in the report as 'unsustainable' include the escalating compensation payments to farmers, the increased use of pesticides and the further development of lignite mining. Although some have argued that privatisation would be the best way forward, the agency sees public ownership as being more conducive for the necessary policy changes.

Umweltbundesamt: www.umweltbundesamt.de

California plans groundwater inventory

The State of California has launched an initiative to improve the quality of information on groundwater resources.

Under the 3-year project, the Department of Water Resources (DWR) will prepare a statewide inventory of groundwater data, develop a model groundwater regulation for local governments, and create guidelines for evaluating local groundwater management plans. Data collected from local water agencies will be combined with well-drillers' reports and DWR information on the state's 500 groundwater basins.

DWR is organising statewide consultation from end of August, with a draft report due by 2001 and a final report in 2002.

California Department of Water Resources: Debra Carlisle, Project Manager: carlisle@water.ca.gov

Chemical hazards

Momentum grows for phthalate ban

Pressures for an EU-wide ban on phthalate plasticisers grew over the summer as two of the EU's largest members, Germany and France, moved towards restrictions.

France introduced a one-year ban from beginning of July on childcare items made from soft PVC containing phthalate softeners. The decree halts the sale, import, export and manufacture of items such as teethers and dummies and requires the removal of all articles currently in circulation.

Germany is due to finalise a similar law by the autumn following a critical report from the country's environment agency. In its study, published in June, Umweltbundesamt said the use of flexible PVC should be phased out completely because of risks from plasticising agents, and that cadmium and lead should be phased out as stabilisers in rigid PVC. Representatives of Germany's PVC industry said the report used old data and had not been subject to peer review.

To date eight European countries have introduced or are in the process of introducing bans on these chemicals following increasing concerns over the migration of phthalates from PVC items into saliva (see *JEM*, 1999, **1**(3–4)). These latest moves are significant in that Germany and France are the largest countries to adopt a ban. Britain and the Netherlands have opted instead for migration tests and the other largest members Spain and Italy are still undecided. The European Commission is due to pronounce a new policy covering all uses of PVC by the end of the year.

Meanwhile, the EU's use of the precautionary principle in this and other areas of environmental policy has been criticised by a leading academic. In a pamphlet published by the European Science and Environment Forum (ESEF), an environmental science association, Bill Durodié of the London School of Economics argues that the EU's approach to environmental policies is leading to a 'paralysing sensitivity to risk'. Citing the phthalates case as an example, Durodié says there is 'not a single shred of evidence that they have ever harmed a human being', and that recent moves towards legal restrictions are the result of 'unsubstantiated scientific papers'. His wider argument is that the precautionary approach is not 'a zero cost-option either financially or socially' and that an urgent and wide-ranging critique is needed of the usage, costs and limitations of this approach.

We will be looking at the phthalates debate in a future issue of JEM. Meanwhile why not tell us what you think about the scientific evidence and how it is being used and interpreted?

'Fields of Action and Criteria for a Precautionary and Sustainable Substance Control Policy, illustrated by the example of PVC', from www.umweltbundesamt.de; 'Poisonous Dummies: European Risk Regulation after BSE', from www.esef.org

Russia focuses on toxics

Russia and other countries of the 'Commonwealth of Independent States' (CIS) are having to face up to the legacy of inadequate management of toxic substances. In two separate meetings over the summer, experts from these and other countries meet with international organisations to focus on solutions for public health and the environment.

The first meeting, in Moscow, addressed technologies for treatment and destruction of polychlorinated biphenyls and obsolete pesticides. A subsequent meeting, held in St Petersburg, addressed data collection needs based on the Pollutant Release and Transfer Register (PRTR) model. Pilot PRTRs are already being set up in Kazakhstan, the Russian Federation, Ukraine and Uzbekistan.

Both meetings were facilitated by UNEP as part of a major programme to

strengthen national chemicals management in CIS countries.

UNEP: www.chem.unep.ch/prtr

Extension to PIC list

Two toxic agricultural chemicals have been added to the list subject to strict global trade controls under the UN's prior informed consent (PIC) procedure. At a recent meeting, signatories to the Rotterdam Convention voted to add binapacryl, a fungicide and miticide, and toxaphene, an insecticide, to a list of five industrial chemicals and 22 pesticides already on the list of PIC-controlled substances. Four other substances are also being considered for inclusion on the list—bromacil, ethylene dichloride, ethylene oxide and maleic hydrazide.

The Convention, which mainly aims to protect developing countries from trade in dangerous chemicals, has been signed by more than 60 countries since its agreement last year. Under the PIC regime, exporters of chemicals must obtain consent of the receiving country before trading in a listed substance.

UNEP PIC website: www.pic.org

Further progress on TBT and asbestos

Further progress has been made towards legislation, reported in previous issues of JEM, banning two classes of carcinogenic chemicals.

At its meeting in London in July, the International Maritime Organisation (IMO) called for a conference within two years to finalise a treaty banning tributyltin (TBT). At the meeting major shipping countries supported the adoption of an international treaty by 2001. Use of anti-fouling paints containing poisonous organotin compounds would be prohibited from 2003, with an outright ban from 2008. (see *JEM*, 1999, **1**(1), 11N).

In a separate move, the European Commission has formalised its long-proposed ban on white asbestos (see *JEM*, 1999, **1**(4), 62N). The regulation, in the form of an amendment to the dangerous substances directive (76/769), requires all EU states to phase out white asbestos, also known as chrysotile, by 2005. Nine EU countries already have restrictions and the main effect is to harmonise regulations across the EU. However, the move has been heavily criticised by Canada, the main exporter of chrysotile, as infringing WTO rules.

IMO: www.imo.org; European Commission: http://europa.eu.int/comm

Public and occupational health

Diesel studies need more data

On-going efforts to estimate the risk of lung cancer from exposure to diesel engine emissions would benefit from improved exposure measurements and further analysis of existing worker studies. These are the main findings of a major study on diesel epidemiology issued by the US's Health Effects Institute (HEI).

For the study, HEI's Diesel Epidemiology Expert Panel reviewed recent literature on risk of lung cancer mortality associated with diesel exhaust exposure. The Panel noted that the data sets were complex and that assumptions made by some of the investigators should be re-examined.

The Panel's 10 recommendations to improve risk assessment in the future include: improved models for historical reconstruction of exposures; development of an improved marker specific to diesel particulate matter; and reliable estimates of historical exposures. Non-cancer health outcomes and biomarker development should also be considered.

Diesel Emissions and Lung Cancer: Epidemiology and Quantitative Risk Assessment, Health Effects Institute, June 1999. Available at www.healtheffects.org

PDBE study sparks exposure fear

A study of brominated flame retardants has shown new evidence of occupational exposure for workers in the electronics equipment recycling industry. The study by Swedish scientists found levels of PBDE (polybrominated diphenyl ethers) in blood up to 70 times higher than normal for staff at an electronics dismantling plant.

The study also found evidence for the bioavailability of BDE-209, a high molecular mass compound not previously thought to bioaccumulate. DecaBDE is a high volume production chemical, produced in quantities of around 30 000 tonnes per year. The research team said the evidence for the bioavailability of BDE-209 should lead to greater efforts to reduce environmental concentrations.

The report will add to pressures in Sweden for a ban on PBDE and related compounds following a critical report from the National Chemical Inspectorate earlier this year (see *JEM*, 1999, **1**(3), 40N).

In the light of the findings, the Bromine Science and Environment Forum, representing the world bromine industry, has launched its own investigation into how to minimise workers' exposure. The new study involves testing workers from recycling facilities across Europe and will be completed by the end of the year.

'Flame retardant exposure: polybrominated diphenyl ethers in blood from Swedish workers', Environmental Health Perspectives, vol.107, no.8, August 1999. http://ehis.niehs.nih.gov

Weak evidence for EMF cancers

Risk of cancer and other diseases from electric and magnetic fields (EMFs) around power lines is weak according to a recent scientific review. The report by the US National Institute of Environmental Health Sciences (NIEHS) follows six years of intensive research. NIEHS looked at the extremely low frequency EMFs surrounding both power distribution lines and low voltage electric distribution systems in the home.

While the report finds some evidence that EMF exposure 'cannot be recognized as entirely safe', it concludes: 'The NIEHS believes that the probability that EMF exposure is truly a health hazard is currently small. The weak epidemiological associations and lack of any laboratory support for these associations provide only marginal scientific support that exposure to this agent is causing any degree of harm.'

The strongest evidence for health effects comes from statistical associations observed with childhood leukemia and chronic lymphocytic leukemia in occupationally exposed adults such as electric utility workers, machinists and welders. NIEHS recommends that research on these 'lingering concerns' should continue, together with efforts to reduce occupational exposures.

The NIEHS report is available online at: www.niehs.nih.gov/emfrapid/

News

Research activity

Air quality innovation

A new database using highly innovative analytical techniques will help measure airborne pollutants from manufacturing plants and other sources with greater accuracy.

Developed by the US's National Institute of Standards Technology (NIST), the Quantitative Infrared Database has been designed to calibrate and verify measurements made with infrared-based analytical instruments in field monitoring of hazardous air pollutants. According to NIST, the database is the first to assess infrared spectra for priority volatile organic compounds (VOCs) using new Fourier transform infrared (FTIR) techniques approved by EPA. Measurements were made on primary gas standards prepared and verified at NIST.

From an initial 21 VOCs, researchers plan to expand the database to around 100 of the 189 compounds regulated under the Clean Air Act. The database is supplied on CD-ROM with updates available over the Internet.

In addition to emissions monitoring, NIST says the technique has potential applications in monitoring CFC gases in semiconductor manufacturing, measuring the components of natural gas and detecting gaseous chemical weapons.

NIST Standard Reference Data Program: www.gases.nist.gov

Shared water prize

The 1999 Stockholm Water Prize has been awarded jointly to scientists from the US and Switzerland. James J. Morgan, a professor at the California Institute of Technology, Pasadena, and Werner Stumm, emeritus professor at the Federal Institute of Technology, Zürich, share the prize for their outstanding contributions to aquatic chemistry.

Their citation said that over the past two decades the two scholars have contributed significantly to understanding how phosphorus, iron, manganese and other substances react in water, leading to many practical applications in water and wastewater filtration. They were also credited with fundamental discoveries that helped validate the concept of acid rain and understanding of how metals and other substances are transported in the environment.

The prize honours outstanding research, action or education in the field of water, and is administered by the Stockholm International Water Institute on behalf of the Stockholm Water Foundation.

SIWI: www.siwi.org

New pesticides group for EPA

EPA's Office of Pesticide Programs is to set up an expert group to advise on communication on pesticides. The Inert Disclosure Stakeholder Workgroup will advise the Pesticide Program Dialogue Committee (PPDC) on ways to make information on pesticide inert ingredients more widely available. An inert ingredient is any ingredient that is not 'pesticidally active', as opposed to active ingredients which prevent, destroy or repel pests.

EPA has charged the Group to review current OPP policy, provide a forum for open discussions on disclosure principles, and examine options for communicating with the public. Appointees will be announced shortly drawn from a variety of public and business organisations.

In a separate measure, EPA is also consulting on various science policy issues relating to implementation of the Food Quality Protection Act (FQPA) and tolerance assessment. Current consultation covers application of the 'FQPA 10-Fold Safety Factor'. Related policy issues and an expected timetable are listed at the website of the Tolerance Reassessment Advisory Committee (TRAC).

EPA Office of Pesticide Programs: www.epa.gov/opp; TRAC: www.epa.gov/pesticides/trac/science

Sampling methodology reduces clean-up costs

A new methodology for identifying sampling locations for contaminated groundwater has been developed by researchers at the University of Illinois. The researchers claim the technique can reduce the costs of long-term sampling and monitoring of contaminated sites.

To ensure compliance with legislation contaminated sites may require many hundreds of wells and determining the most cost-effective number and placement can be problematic. The Illinois methodology consists of a groundwater fate-and-transport simulation and several plume-interpolation modules. It also includes a monitoring plan selection process based on what the research team call a 'genetic algorithm'. This identifies optimal subsets of monitoring wells through a process of 'natural selection'.

'Results have shown that our methodology is very effective at both reducing monitoring costs and accurately quantifying the mass of contaminant in the plume', said team leader Barbara Minsker.

Expert groups for Institute

The UK's Institute for Occupational Safety & Health (IOSH) has set up two new specialist groups in response to members' requirements.

The Healthcare Specialist Group supports safety and risk practitioners working in the National Health Service or private healthcare sector. The Environmental Specialist Group is the first topic-based group within IOSH. The Institute says it is recognition that boundaries between OSH and environmental management are becoming increasingly blurred.

The Institute has also issued a policy paper on education, calling for occupational health and safety issues to be integrated into the school curriculum.

IOSH: www.iosh.co.uk

HSE explains research

The UK Health and Safety Executive has published guidelines clarifying the business context of its research activities. In the guidelines HSE describes the priority health and safety issues requiring future research. It also outlines some of the key influences on HSE's business needs and on its research programmes over the next few years. As such, the guidelines provide a link between annual statements on strategic planning and research strategy.

Guidelines for HSE's Research Programmes. Available at www.open.gov.uk/hse/hsehome.htm

News

Publications

Environmental expenditures

A report by *Eurostat* on provides, for the first time, harmonised statistics on environmental protection expenditures (EPE) by government, industry and economic-oriented response indicators.

The report shows that total EPE expenditure in the EU accounted for 1% of GDP or 186 euro per capita in 1995. From 1992 to 1995, EU total expenditure as a percentage of GDP increased by 13%, while EU expenditure per capita increased by 36%. Total EPE grew from 53.2 billions euro in 1992 to 65.5 billions euros in 1995—an increase of 23%. The report shows that Germany's share was the highest with 27.5% in 1992 and 33.3% in 1995, followed by France with 14.3% in 1992 and 14.1% in 1995 and The Netherlands with a share falling from 7.8% in 1993 to 6.5% in 1995. The UK had the largest share of total EPE by industry with 21.3% in 1994, followed by Germany and The Netherlands:

Environment Protection Expenditure (EPE) in Member States 1988–96, Eurostat, cat: CA-16–98–732-EN-C, 144 pp., €32

Consultation on occupational exposure limits

The UK Health and Safety Commission has published a consultation document on proposed changes to the approved list of occupational exposure limits (OELs). The document lists 18 changes to Maximum Exposure Limits (MELs) and Occupational Exposure Standards (OESs). If approved, these changes will come into force early in 2000.

HSC has also published the 1999 supplement to EH64, its reference document on occupational exposure limits, containing new summaries for 8 substances.

Proposals for maxiumum exposure limits, occupational exposure standards and biological monitoring guidance values, CD150/99. See www.open.gov.uk/hse/condocs/index.htm. EH64: Summary criteria for occupational exposure limits, ISBN 0 7176 24651 X, £10. Both available through HSE Books (tel: +44 (0)1787 881165) or the Stationery Office.

Pesticides Trust

Environmental pressure group the Pesticides Trust has published the latest issue of its newsletter (No. 44) with articles on GM crops, pesticide policy in the EU, reproductive effects of pesticides in women, and a report on endosulfan in Australian beef.

Full contents list and subscription details available at: www.gn.apc.org/pesticidestrust/

Events

Environment Japan '99: The 16th JETRO Import Fair. 20–23 October 1999, Osaka, Japan. An international trade fair, to be held alongside the New Earth '99 Conference. Details from www.environmentjapan.org

The 1999 Right-to-Know Conference and Exhibition. 25–28 October 1999, Denver, CO. Organised by the National Environmental Health Association.

Occupational Exposure Databases and Their Application for the Next Millennium. 1–3 November 1999, London, UK. Organised by the American Conference of Governmental Industrial Hygienists. Details at: www.achig.org/events/oedb99.htm

Measurement for success: UK National Measurement Conference '99. 2–4 November 1999, Brighton, UK. Incorporates BEMC '99—The 9th International Conference on Electromagnetic Measurement. Details from NMP Conference Secretariat, National Physical Laboratory. e-mail: nmp_sec@npl.co.uk

1999 Eastern Analytical Symposium. 14–19 November 1999, Somerset, NJ, United States. Details from EAS Program Committee, e-mail: easinfo@aol.com

Fourth Workshop on Biosensors and Biological Techniques in Environmental Analysis. 1–3 December 1999, Menorca, Spain. Organised by the International Association of Environmental Analytical Chemistry and the Institut Menorquí d'Estudis. Details from dbcqam@cid.csic.es

Conservation 2000. 15–17 December 1999, New Orleans, LO. Conference sponsored by US EPA and US Department of Agriculture presenting accomplishments and lessons learned from local, state and federal programmes for soil and water quality.

Tools for Urban Water Resource Management and Protection: A National Conference. 7–10 February 2000, Chicago, IL. National conference for local urban water quality practitioners.

Third Biennial Freshwater Spills Symposium. 6–8 March 2000, Albuquerque, NM. Information exchange on freshwater oil spills.

10th Annual West Coast Conference on Contaminated Soils and Water. 20–23 March 2000, Mission Valley, California, USA. Details from the Association for the Environmental Health of Soils: www.aehs.com/wcc2000web/wchomepage2000.html

8th International Conference on ElectroAnalysis. 11–15 June 2000, Bonn, Germany. European Society for ElectroAnalytical Chemistry and Society for ElectroAnalytical Chemistry. Details from www-upb.ipc.kfa-juelich.de/upb/aktuell/ESEAC2000_en.htm

30th International Symposium on Environmental Analytical Chemistry. 13–16 June 2000, Espoo, Helsinki, Finland. Details from International Association of Environmental Analytical Chemistry, e-mail: iaeacmfrei@access.ch or tiina.harju@vtt.fi

News

Fourth International Symposium on Speciation of Elements in Biological, Environmental and Toxicological Sciences. 25 June–1 July 2000, Whistler, B.C., Canada. Details from Evert Nieboer, McMaster University, Hamilton, ON, Canada, tel: +1 905 525 9140; fax: +1 905 522 9033; e-mail: nieboere@fhs.mcmaster.ca; http: //www.science.mcmaster.ca/speciation/

25th International Conference on Heavy Metals in the Environment. 6–10 August 2000, Ann Arbor, MI. Details from www.sph.umich.edu/eih/heavymetals/

26th International Congress on Occupational Health. 27 August–1 September 2000, Singapore. The Annual Meeting of the International Commission on Occupational Health (ICOH). Details from ICOH2000, e-mail: icoh2000@post1.com or see www.icoh.org.sg

X2001: Conference on Exposure Assessment in Epidemiology and Practice. 10–13 June 2001, Göteborg, Sweden. Details from x2001@ymk.gu.se or see www.ymk.gu.se

A New Era of Occupational Hygiene: The 5th IOHA International Scientific Conference. 10–14 June 2002, Bergen, Norway. Details from bjorg.hollund@isf.uib.no

Web bytes

Pesticide guidance

OECD has added new and revised guidelines for industry when making data submissions for pesticides registration. The revisions relate to the main text and several appendices. The guidance is accessible at OECD's Pesticide Registration website:

www.oecd.org/ehs/pestgd03.htm

Pesticide assessments

New or revised assessments on pesticides from EPA:

- Executive summaries for the OP pesticides: ethoprop, fenamiphos, phorate and terbufos
- Revised health risk assessment for chlorethoxyfos, cadusafos, and sulfotepp
- Revised health and environmental risk assessment for methyl parathion, bensulide and profenofos

EPA Office of Pesticide Programs: www.epa.gov/pesticides

PCB exposure

The US Agency for Toxic Substances and Disease Registry (ATSDR) has posted a paper entitled 'Public Health Implications of Exposure to Polychlorinated Biphenyls' on its website. The study finds elevated PCB levels in human populations in the Great Lakes basin, and developmental deficiencies and neurological problems in children whose mothers ate PCB-contaminated fish during pregnancy.

ATSDR: http://atsdr1.atsdr.cdc.gov:8080/

Transport update

The Health Effects Institute, the US research centre on air quality and transport, has issued its latest newsletter. Coverage includes a report on the annual conference held in May this year, and an update on HEI's strategic plan.

Available at www.healtheffects.org

Environmental Impact Assessment

Environmental Impact Assessment (EIA) for projects and Strategic Environmental Assessment (SEA) for policies, plans and programmes ensure that significant environmental impacts are identified, assessed and respected in the decision-making process in which the public can participate.

Environmental Assessment: www.europa.eu.int/comm/dg11/eia/home.htm