



Toxic Chemicals Update

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REPORT ON THE RELATIVE RISK RANKING OF PESTICIDES

In March 2004, Environment Canada's Air and Toxics section published a surveillance report entitled, *A Relative Risk Ranking of Pesticides Used in Prince Edward Island*. Employing the paradigm 'Risk = Toxicity x Exposure', a relative risk ranking of agricultural pesticides was developed using a modified Chemical Hazard and Evaluation for Management Strategies (CHEMS) model (Swanson *et al.* 1997). The human health and ecotoxicological data, physical-chemical properties and release amounts were combined to yield a risk score for each pesticide. The risk scores results were used to produce a relative ranking of the group of substances under investigation. The report ranked 31 pesticides sold in PEI at a quantity greater than 1000 kg in 2001 and pesticide sales data was used as a surrogate for pesticide releases. Among the 31 active ingredients investigated, the highest ranked substances included chlorothalonil, diquat dibromide, mancozeb, metiram, carbofuran, endosulfan, and azinphos methyl.

For more information or to request copies of the report, contact Allison Dunn (902) 426-5037

NATIONAL POLLUTANT RELEASE INVENTORY (NPRI) UPDATE

The National Overview Report for the 2002 NPRI will be published in October 2004. The data for the calendar year 2002 is currently available on the NPRI website and the preliminary 2003 data will soon be accessible on the web site as well. The Pollutants in Atlantic Canada 2001 surveillance report was published in May 2004.

The reporting requirements for the 2003 reporting year were very similar to the 2002 reporting year. In the Atlantic Region, mineral processing facilities were targeted with a more intensive compliance and promotion strategy. Reports were received from 25 new facilities within this sector including quarries, mines, handling facilities and construction material plants; reporting a 9% increase over 2002. Upstream oil and gas facilities, including the offshore oil and gas platforms were captured for the first time in the 2003 NPRI. Overall, sectors in the Atlantic Region component of the NPRI received reports from 50 new facilities, a growth of roughly 18 percent.

The 2004 NPRI reporting requirements were outlined in a *Canada Gazette* notice published in January 2004. Changes to the reporting requirements for the 2004 reporting year are minor. Quantities of 323 substances released onsite, disposed of onsite and disposed of off site by industrial facilities in 2004 must be submitted to Environment Canada on or before June 1, 2005.

For the 2004 NPRI reporting year, facilities will be given the option of completing their NPRI report online. In 2005, the NPRI along with the Ontario Ministry of the Environment, British Columbia Ministry of Environment, Lands and Parks, Greater Vancouver Regional District, Alberta Environment, Environment Canada's Environmental Emergencies Regulations and Environmental Performance Agreements, and the Canadian Chemical Producers' Association will be launching the One-Window National Environmental Reporting System (OWNERS). This will allow facilities to submit reports to all of the partners' programs through a single reporting form, eliminating the need to update frequently-requested information for each program.

For More information on the NPRI please visit the web site at www.ec.gc.ca/npri/

Or contact the Atlantic Region at:
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REPORT ON WESCODYNE

Environment Canada has recently completed a report examining the potential aquatic risks associated with releases of Wescodyne to the marine environment from disinfection at salmonid aquaculture sites in the Atlantic Region.



Wescodyne is an iodophor compound that contains iodine as its active ingredient. Wescodyne is moderately persistent in water and sediment but not expected to bioaccumulate in aquatic organisms. Use pattern information indicates that Wescodyne is likely entering the marine environment via direct discharge to surface water from disinfection activities, however, the initial concentrations in the environment and the dispersion rates are not currently known. Based on preliminary calculations using limited data, and using the most conservative ecotoxicity values, it was calculated that Wescodyne may be entering the marine environment in Atlantic Canada in concentrations that pose unacceptable risks to marine aquatic receptors. Further research, including environmental sampling and toxicity testing, was recommended in order to determine typical environmental concentrations and the toxicity of those concentrations.

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PESTICIDE RUNOFF FROM POTATO FIELDS

Environment Canada has been investigating the effectiveness of buffer zones adjacent to potato fields in Prince Edward Island since 2001. Provincial legislation requires a 10 m buffer between potato fields and watercourses in order to decrease the amounts of particulates, nutrients, pesticides and organic matter entering waterways across PEI. This requirement was in response to the high number of pesticide-induced fish kills that have occurred in PEI during the past 10 years. Rain-induced surface runoff is collected at the edge of the field and also at a collection unit 10 m down slope of the field (and in several fields at greater distances) in the grassed buffer. Samples are analysed for pesticide concentrations and also toxicity to an aquatic invertebrate (*Daphnia magna*).

The 2001-2002 results have been summarized in a Surveillance Report entitled *An Assessment of Buffer Zone Effectiveness in Reducing Pesticide Runoff from Potato Fields in Prince Edward Island* (2001-2002). The 2001-2002 results indicated that the 10 m buffer was effective at reducing pesticide

concentrations but not as effective in reducing the toxicity of the runoff.

During the 2003 growing season, a total of twelve fields were selected for runoff sample collection at 0 m, 10 m, (and in one field at 20 m and in another field at 30 m). Ten of the fields were located in the Bedeque Bay watershed, one in the Mill River watershed and one in the Souris River watershed. A total of seven runoff events occurred during the 2003 field season. The chemistry and toxicity results are currently being analysed and interpreted.

During the 2004 growing season, a total of eleven fields were selected, with collectors at 0 m, 10 m, and in one field at 15 m and in another field at 20 m. Ten fields were located in the Bedeque Bay watershed, and one in the New London Bay watershed. A total of three runoff events occurred during the 2004 field season. The samples are currently being analysed for pesticide concentrations and toxicity to *Daphnia*.

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CCME ENVIRONMENTAL CODE OF PRACTICE FOR ABOVEGROUND AND UNDERGROUND STORAGE TANKS SYSTEMS CONTAINING PETROLEUM AND ALLIED PETROLEUM PRODUCTS*

The revised Canadian Council of Ministers of the Environment (CCME) *Code of Practice for Aboveground and Underground Storage Tanks* Containing Petroleum and Allied Petroleum Products available to order on the CCME website at www.ccme.ca/. Cost per copy \$32.50 plus GST, shipping and handling.

For further information contact:
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LEGISLATION UPDATE

CODE OF PRACTICE FOR THE ENVIRONMENTAL MANAGEMENT OF ROAD SALTS



On April 5, 2004 the Minister of the Environment, David Anderson, announced the release of the *Code of Practice for the Environmental Management of Road Salts*.

The Code applies to any public entity whose territory contains vulnerable areas potentially impacted by road salts, or that uses more than 500 tonnes of road salts per year on public roads in Canada.

The Code recommends that road authorities prepare salt management plans that identify actions they will take to improve their road salt management practices in salt storage, general salt use on roads, and snow disposal. Key elements recommended for inclusion on the plan include a commitment of the organization to implement the plan, an assessment of current practices, identification of action to be taken and identification of appropriate training to be undertaken by all levels in the organization. Also recommended are commitments to monitor progress towards the organization's objectives, to maintain records and to review the plan annually to ensure continued improvement.

Organizations that intend to prepare and implement Salt Management Plans are requested to indicate so in a brief letter to Environment Canada. Those Letters of Intent will be used as a measure of the success of this voluntary action to date. Salt Management Plans are to be developed over the winter of 2004 and the first progress reports from road authorities are to be provided at the end of June 2005. In the spring of 2009 Environment Canada and stakeholders will assess the success of the program and determine if additional control measures are warranted.

For more information visit the Road Salt website at:

<http://www.ec.gc.ca/nopp/roadsalt>
or

Contact Christine Garron of Environment Canada's Atlantic Regional Office at (902) 426-6317 or at christine.garron@ec.gc.ca



PROPOSED AMENDMENTS TO THE EXPORT AND IMPORT OF HAZARDOUS WASTES REGULATIONS (EIHWR)

Environment Canada has developed revisions to the 1992 EIHWR to incorporate new elements which are necessary to further contribute to the protection of the environment and human health, to adapt to evolving international obligations, to incorporate new authorities under CEPA 1999 and to modernize the EIHWR control regime.

Environment Canada has held three rounds of national multi-stakeholder consultations in the past three years on the proposed amendments to the EIHWR with attendance from industry, environmental non-governmental organizations, other government departments and provinces. The proposed revisions to the EIHWR were pre-published in Canada Gazette Part I on March 20th, 2004 followed by a 60-day comment period that ended on May 19th, 2004. All comments received are currently being reviewed. It is anticipated that the final regulations will be published in Canada Gazette Part II in 2005.

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ENVIRONMENTAL EMERGENCY REGULATIONS (IN FORCE)*

The *Environmental Emergency Regulations* were published in Canada Gazette Part II on September 10, 2003 and came into force on November 18, 2003. The regulations require owners of substances, of types and quantities specified in the regulations, to prepare environmental emergency plans. Schedule 1 to the regulations lists 174 substances categorized as flammable or hazardous. Schedule 1 also specifies the threshold limit beyond which the preparation of E2 plans is required. Threshold limits vary from 0.22 tonnes of 1% phosgene to 8,000 tonnes of 1% xylenes. A full copy of the regulations is available online at: <http://www.ec.gc.ca/CEPARRegistry/regulations/DetailReg.cfm?intReg=70&x=20&y=1>

The Implementation Guidelines for Part 8 of the Canadian Environmental Protection Act, 1999- Environmental Emergency Plans were developed to assist regulatees

in meeting the requirements of the regulations. The guidelines are available online at: http://www.ec.gc.ca/CEPARRegistry/guidelines/impl_guid/toc.cfm.

PROPOSED PETROLEUM AND ALLIED PETROLEUM PRODUCTS STORAGE TANK SYSTEMS REGULATIONS*



Environment Canada's response to comments received during consultation on the proposed *Federal Petroleum Products and Allied Petroleum Products Storage Tank Systems Regulations* is posted on the website at: www.ec.gc.ca/st-rs/

Public publication of the proposed Regulations in *Canada Gazette Part I* is targeted for the Spring of 2005

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SOLVENT DEGREASING REGULATIONS (IN FORCE)*

The *Solvent Degreasing Regulations* were published in Part II of the Canada Gazette August 13, 2003 and are now law. The Regulations will implement a freeze in consumption of trichloroethylene (TCE) and tetrachloroethylene (PERC) for three years, followed by a 65% reduction in consumption for the following years. The Regulations will apply to persons involved in degreasing operations (vapour and cold degreasing) who use more than 1000 kilograms of these solvents during a calendar year. An allowance system will set limits on the quantities of TCE and PERC that could be used each year, based on historical uses of these substances by the users. Allowance holders will be able to retire their allowance or to transfer it to other users. Sellers and users of TCE and PERC will be required to submit annual reports to Environment Canada.

Further information is available on the web at www.ec.gc.ca/nopp/degreet/ or by contacting the Solvent Degreasing Coordinator at Tel.: 1-866-944-9944 or e-

mail: tce@ec.gc.ca.

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INTERPROVINCIAL MOVEMENT OF HAZARDOUS WASTE REGULATIONS (IMHWR)

The *Interprovincial Movement of Hazardous Waste Regulations* (IMHWR) made pursuant to CEPA 1999 came into force on August 15, 2002. Their purpose is to maintain the manifest tracking and classification requirements, formerly set out under Transport Canada's legislation, to ensure that hazardous wastes are transported to and received only at authorized facilities for the environmentally-sound final disposal and recycling operations within Canada. These regulations are not intended to supersede the safety and transportation requirements set out under the Transportation of Dangerous Goods Regulations but rather to meet Environment Canada's mandate to protect human health and the environment.

There has been some confusion with respect to the meaning of the words "transport hazardous waste within Canada" as set out in subsection 3(1) of the IMHWR. "Movement within Canada" and "transport within Canada" is defined under the Interpretation section of CEPA 1999 as meaning the movement or transport between provinces." Furthermore, the act defines the term "province" to include territories.

In other words, the IMHWR require manifesting for movements of hazardous waste between provinces or territories. Requirements for manifesting movements of hazardous waste solely within a province or territory fall within provincial jurisdiction and thus depend on provincial or territorial regulations.

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* Source: ComproUpdate vol. 9 (2 and 3), vol. 10(1)



Federal Programs Division,
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OFFICE OF ENFORCEMENT

P.E.I. FISH KILLS – 2002

Prince Edward Island's unique geography and soil has provided island farmers with ideal conditions for a successful potato growing industry. This combination of geography and intensive potato farming practices, however, has generated an unexpected cost for islanders. During the summer of 2002, these factors combined with heavy rainfall caused significant run-off from potato fields into nearby waterways and culminated in 9 separate fish kill events and over 14,436 dead fish (mostly brook trout).

Environment Canada's Office of Enforcement is responsible for the pollution prevention provisions of the federal *Fisheries Act* which prohibits the release of deleterious substances into fish bearing waters. In response to the fish kill reports during 2002, EC Enforcement Officers took numerous water, sediment, foliage and tissue samples. The analysis showed the presence of the insecticide azinphos – methyl (trade name Guthion) and the pesticides chlorothalonil and linuron. In all cases, except one, laboratory personnel were unable to prove conclusively that the detected pesticide was the cause of the fish kill. As a consequence, only one case resulted in charges being laid.

The Wilmot River fish kill was successfully prosecuted in provincial court with the accused ordered to pay \$16,300, comprising a fine of \$ 3,500 and an additional \$12,800 to the Environmental Damages Fund. This was the first time in Canadian law that a farmer had successfully been prosecuted for the runoff of pesticides and thus provides case law for future cases.

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Note to Readers:

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