Summary of the Consultative Meeting on the Development of the *Taking Stock 1999* Report on North American Pollutant Releases and Transfers

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NORTH AMERICAN
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Introduction

The North American Commission for Environmental Cooperation (NACEC) organized a public meeting in Mexico City, Mexico on 5 and 6 March 2001 as a forum for exchanging ideas and obtaining stakeholder input in the development of the *Taking Stock—1999* report. *Taking Stock* is an annual report which analyses publicly available data from the Canadian National Pollutant Release Inventory (NPRI), the U.S. Toxics Release Inventory (TRI) and wherever possible from the Mexican *Registro de Emisiones y Transferencia de Contaminants* (RETC).

Over one hundred people from industrial associations, non-governmental groups, academia and government, from Canada, Mexico and the U.S., attended the meeting. The list of participants is attached as Annex A. A discussion paper entitled "Consultations for the *Taking Stock*—1999 report on North American Pollutant Releases and Transfers," was circulated in advance to provide background for the meeting (available from NACEC).

This document summarizes the discussions held on the various options presented in the background paper and additional topics raised by participants. A "Response to Comments" document will also be prepared, based on the oral and written comments received, which will outline the proposed directions for *Taking Stock—1999*.

This summary presents:
1. Country updates for Canada, United States and Mexico
2. NACEC update
3. Discussions on the *Taking Stock—1999* report

Meeting Summary

Greg Block, Director of Programs, NACEC, welcomed participants and provided an overview of the two-day meeting which, in addition to the consultations on the *Taking Stock* report, included a roundtable discussion on Mexico's PRTR program on Monday afternoon and a special session on tools that use PRTR data on Tuesday. Summaries of these two additional sessions are available from NACEC.

1. Country Updates

1.1 Update on the National Pollutant Release Inventory (NPRI) in Canada

François Lavallée of Environment Canada described current progress with the NPRI. He noted several new developments:

- Addition of 73 new substances to the list of chemicals for 1999 reporting, bringing the total to 268 chemicals
- Addition of dioxins, furans and polycyclic aromatic hydrocarbons (PAHs) at alternate thresholds for 2000 reporting
- Removal of the 10 employee threshold for certain sectors
- Improved timeliness through separation of the data from the report release, with 1999 data released in December 2000
- A permanent process for adding and deleting chemicals

He also noted a number of topics that are or will be addressed through ongoing stakeholder consultations, including:

- Adding criteria air contaminants for 2002 reporting
- Framework for adding substances at alternate thresholds
- Adding Canadian Environmental Protection Act chemicals
- Possible addition of greenhouse gas chemicals for 2003 reporting
- Integration with the Ontario Ministry of Environment monitoring program

On 19 February 2001, the federal Minister of Environment announced an action plan that reflects the emphasis on clean air as a ministerial priority. Part of the plan calls for the preparation of yearly inventories of criteria air contaminants and greenhouse gases.

Canada had also been active internationally on PRTRs, including involvement in the Intergovernmental Forum for Chemical Safety (IFCS) meeting in Brazil (October 2000) and the organization of a PRTR workshop during that event, as well as an initiative to support PRTR development in Chile.

For more information, see the NPRI website at <www.ec.gc.ca/pdb/npri>.

During the discussion, participants voiced support for the recently signed US/Canada Ozone Annex, the addition of criteria air contaminants to NPRI, and lowering thresholds. It was noted that the new monitors for particulate matter (PM2.5) to support the clean air announcement would be shortly in place using newly approved funds. The NPRI office is working to integrate Ontario's announced monitoring program, but it was noted that the Ontario program may be delayed.

1.2 Update on the Toxics Release Inventory (TRI) in the United States

Maria Doa of the U.S. Environmental Protection Agency highlighted recent developments in the TRI program:

- The addition of 7 new sectors for 1998 reporting and the significant effect on reporting- with 67% of releases due to these new sectors

- A 5% reduction in releases from manufacturing sectors from 1995- 1998, and a 45% decrease in releases over ten years from 1988-1998
- A new rule on persistent, bioaccumulative and toxic (PBT) chemicals for the 2000 reporting year, which sets criteria for persistence and bioaccumulation (toxicity criteria were set previously)
- Lowering of the reporting thresholds to 10 or 100 pounds for PBT chemicals
- Addition of dioxins and furans at 0.1 gram threshold for 2000 reporting year
- A new rule on lead which would lower the threshold to 100 pounds for the 2001 reporting year (now under review by the new administration)
- New guidance manuals on PBTs, dioxins, and draft manuals for mercury, pesticides and PAHs
- New and updated guidance for specific chemicals: lead, ethyl glycol, ammonia and others
- New and updated manuals for industry sectors

Maria Doa responded to a series of questions following her presentation. She explained that TRI classifies total releases as all on-site releases plus those off-site transfers that are similar in nature to on-site releases (i.e., off-site transfers to disposal and all off-site transfers of metals except those to recycling). She noted that there is currently a lawsuit about the new industry reporting on metals in waste rock. The EPA intends to propose definitions for production-related waste by the end of this year. As to the quality of the PBT data, EPA did delay the new guidance to improve it, but it is also EPA's experience that the first year of reporting under new requirements is often not as good as subsequent years.

For more information, see the TRI web site at <www.epa.gov/tri>.

1.3 Update on *Registro de Emisiones y Transferencia de Contaminants (RETC)* in Mexico

Juan Barrera Cordero of the Instituto Nacional Ecologia (INE) outlined the current status of the Mexican RETC. He discussed the three phases of the RETC:

- The generation of the report by the company,
- The processing of the information at INE, and
- The dissemination of the information.

With respect to the first phase, report generation, he noted that a voluntary standard for reporting has recently been passed, which was the result of negotiation between industry and authorities. In addition, approximately 12 companies from the paper and cellulose sectors who are members of the Global Environmental Management Initiative also reported to the RETC and received positive recognition for their efforts.

In the second phase, the processing of information, Juan Barrera noted that a new RETC form approved by COFEMER **(**Comisión Federal de Mejora Regulatoria**)** will be published shortly. All changes to the form need to be approved by COFEMER.

Juan Barrera noted the following obstacles to the full implementation of the RETC program:

- Lack of legal foundation for the RETC
- The need to change many laws to obtain a clear legal framework
- The difficulty for companies to develop requested information, when many do not have an environmental program
- The need for training to assist companies
- The loss of interest in the RETC from companies who now see the matter as not urgent until the legal system is in place
- Companies do not generally see the RETC as a useful tool
- The need for automatic procedures to input the data
- The need to work with the states, which differ greatly in capacity

In the third phase of information dissemination, Juan Barrera noted the development of two national reports. The publication of the second report is expected in one or two months, and will be available on the internet. There have been disagreements between industry and non-governmental groups on the availability and the use of information. The industry has been seeking assurance that the information will be used in limited ways, which they feel ensures protection of confidential business information. The nongovernmental groups are encouraging public access to information.

During the discussion, the voluntary nature of the RETC program means that PROFEPA is not involved, and Juan Barrera suggested that the NGOs could consider guaranteeing to industry that they will use the information within limits. It was noted that this is an opportune time to develop PRTRs, as companies are in the process of developing environmental management systems.

In response to a question as to when Mexico will reach a similar level to Canada and the United States, Juan Barrera noted that the process is a collective and political process, rather than a critical path process. The differences in the PRTRs reflect real differences of participants, and that closer contact between actors is essential. The need to change laws was seen as a challenge to establishing the RETC. The law could not be changed by a unilateral act of authority, but would require social and political support. Some participants noted that this had already happened when the National Coordinating Group worked together to produce the National Executive Proposal for the RETC. This proposal outlined the legal support required and had a longer list of chemicals than the recently published NMx guideline. Some participants felt that since 1997-98 progress on the PRTR has stopped, and that the nongovernmental groups have been shut out of the process. They felt the real issue is the need to generate political will to move the RETC forward by giving legal authority to the RETC. They noted the need for Mexico to comply with its international commitments to create a PRTR.

Many participants voiced their support for a mandatory PRTR in Mexico. Public access to PRTR data was felt to improve the quality of the data, improve the understanding of the problem and level the playing field among industries. One participant suggested various ways to make a crossover to a mandatory system—by limiting the number of chemicals or by limiting it to specific regions or industrial sectors for an initial phase.

Many participants also noted the need to reconvene the National Coordinating Group to discuss the development of the RETC and to give NGOs a consultative role.

Participants noted that less than five percent of companies voluntarily reported in each of the first two reporting cycles of RETC, and that the data were of poor quality. The third reporting cycle is currently being finished. Some participants felt that additional reporting could be expected following the recent publication of the voluntary standard in November 2000.

A state representative suggested presenting the need for a PRTR to the upcoming meeting of the National Association of State Environmental Agencies in July in Monterrey. This would assist in coordinating PRTR efforts with state governments.

2. NACEC Update

2.1 Current Status of NACEC's Pollutant Release and Transfer Register (PRTR) Project

Erica Phipps, Program Manager for NACEC's PRTR project, noted the increasing emphasis on PRTRs internationally and highlighted several ongoing activities, including those of the Organization for Economic Cooperation and Development (OECD), the European Union, and the Intergovernmental Forum for Chemical Safety. She then provided a summary of new features of the soon-to-be-released *Taking Stock 1998* report:

- New sectors: of the seven new sectors added to TRI, five can be included in the matched dataset for *Taking Stock*: electric utilities, hazardous waste management facilities, solvent recovery facilities, coal mining and chemical wholesale distributors
- Inclusion of data on transfers to recycling and energy recovery for the first time
- New method of classification using on- and off-site releases, transfers to recycling, other transfers for further management and total reported amounts
- Analyses covering four years of data, 1995-1998
- New two volume format, with Volume 1 an extended executive summary and Volume 2 presenting the more detailed data tables and analyses
- Special feature on pollution prevention activity reporting

The matched dataset for 1998 in the *Taking Stock 1998* report will include reporting by the new TRI industries and NPRI data for those same industries. These industries have reported to NPRI since its beginning in 1993. The other additional data for the 1998 report will be transfers to recycling and energy recovery. These are new categories of NPRI reporting; they have been reported to TRI since 1991. In the 1998 report, total releases will include on-site releases as well as off-site releases, which include off-site transfers to disposal and all off-site transfers of metals except those to recycling. The 1998 report will include analyses of trends for four years of data. The trend analyses will not include, for 1998, the new TRI industry sectors nor the transfers to recycling and energy recovery because no data are available for earlier years. The 1998 data report is expected to be released in spring 2001.

This meeting was held to elicit comments and suggestions for the *Taking Stock 1999* report. Erica Phipps explained that all comments and suggestions are welcome and, in particular, the NACEC

will be soliciting comments until the end of March. At that time, a "Response to Comments" document will be prepared that will outline and respond to the suggestions made, and lay out the approach to be used in developing *Taking Stock—1999*.

2.2 Development of NACEC's PRTR Web Site

Catherine Miller of Hampshire Research Institute gave a preview of the NACEC PRTR web site. The web site will allow users to do customized searches and analyses of the matched data sets used in the *Taking Stock* reports. Users can generate customized tables by chemical, by sector, for facilities or by geographic region, and for specific years (1995-1998) or to view multi-year trends. The site will be available in English, French and Spanish and is slated for release at the same time as the *Taking Stock—1998* report in the spring of 2001.

2.2 North American Criteria Air Contaminants Report

Paul Miller, Air Quality Program Manager at NACEC, described a new project to pull together inventories of criteria air contaminants from the three countries. This project under the NACEC Air Program grew from comments at last year's Consultative Group meeting. Possible contaminants to include are SO2, NOx, VOCs, PM 2.5, PM 10, total suspended particulates, carbon monoxide and lead. The project could assist with atmospheric modeling and track trends, support reciprocity in data exchange among the countries, provide transparency in cross border trading, and give public access to environmental information. The first step in the project is to collect available information from federal, state and other governmental agencies, and involve interested stakeholders in the report development. An initial report could be ready for the spring of 2002.

For more information contact Paul Miller at NACEC (514) 350- 4300.

3. Discussions on *Taking Stock—1999*

Participants discussed nine possible ideas for the *Taking Stock—1999* report, based on the discussion document that was distributed in advance of the meeting.

The ideas, in approximate order of participant's interest, were:

1. Children's health and the environment
2. Ozone depleters
3. Watershed and airshed based analyses
4. Cross border analyses/recycling
5. New chemicals
6. Presentation of data for new sets of specific chemical lists/sub-groups
   - High production volume chemicals
   - Persistent bioaccumulative toxics
   - Persistent organic pollutants
   - Volatile organic compounds
   - Endocrine disruptors
   - Regulatory lists
7. Estimation methods

8. Integration with NACEC web site

New ideas from participants were also solicited, and they included:

- Encouraging mandatory reporting in Mexico
- Voluntary and mandatory systems
- Systems based analysis
- Trade and environment topics
- Analyses of the new sectors
- Benzene

3.1 Children's Health and the Environment

The NACEC Council has called for the development of a special feature on children's health and the environment as part of the *Taking Stock* series. Many participants expressed an interest in a such an analysis, due to the importance of children's environmental health as an issue of public concern. Other participants felt that such a large topic would be beyond the scope of the *Taking Stock* report and would require significant resources that could take away from other analyses.

Two general themes were heard during the discussion on children's health. Some participants stressed the need to link the special feature closely to PRTR data to be appropriate to include in the *Taking Stock* report. Others noted the potential benefits of broadening the scope of inquiry beyond PRTR data. Several methods to link to PRTR data were suggested:

- analyze PRTR reporting of heavy metals and phthalates;
- analyse PRTR data using the U.S. Centers for Disease Control and Prevention (CDC) chemical biomonitoring list;
- use of the California Proposition 65 list of chemicals;
- use of other regulatory lists;
- use of emergency planning lists and occupational health lists;
- take a regional approach, perhaps presenting PRTR data from Saint John's, New Brunswick, Canada, in combination with hospital statistics, and data from previous studies on transboundary pollution;
- link volatile organic compounds reported to PRTRs to ground level ozone and to asthma;
- present the health effects pyramid, a diagrammatic presentation of the increasing seriousness of effects from increasing exposure to a particular pollutant and focus on the lower levels of the pyramid.

One participant noted that the synergistic and cumulative effects of chemicals, which can be important, are not usually considered. Another participant noted that they had not been very successful in linking PRTR data and hospital admissions.

Many participants expressed interest in examining indigenous children and health, but this was generally seen as beyond the scope of the *Taking Stock* report. One participant noted that contaminant body burdens and fish advisories could be included.

3.2 Ozone Depleters

For the 1999 report, there is the opportunity to analyze CFCs, HCFCs and halons for the first time, as NPRI has added these chemicals for 1999 reporting.

Participants were generally supportive of analyses on ozone depleting chemicals because of public concern about these substances and their environmental significance, because it relates to an international treaty, the Montreal Protocol, and as an opportunity to tell a positive story about reductions over time.

In addition, the data could be analyzed using the established ozone depletion potentials, a system designed to reflect the differing destructive ability of some CFCs, HCFCs and halons.

A few participants noted the ongoing public confusion between “good and bad” ozone, with ozone depleters destroying the “good” upper stratospheric ozone, which protects the earth from harmful ultraviolet light and volatile organic compounds which contribute to the “bad” ground level ozone, causing smog and poor air quality. The analysis of ozone depleters could be coupled with an analysis of volatile organic compounds to clarify the difference between “good and bad” ozone.

3.3 Watershed/Airshed Analyses

Participants were interested in a watershed and/or airshed based analysis, which can provide a regional picture of PRTR data, add value to the PRTR data, integrate information and provide additional context to PRTR data.

Some specific suggestions for watersheds to examine were: the Mississippi River, the Great Lakes, coastal waters, and the Gulf of Maine and the Bight of California—areas where NACEC is already involved. Analyses could also include ecozones, permit data and depositional data.

It was noted that Environment Canada—Ontario regional office may have an interest in pursuing a Great Lakes report, and that this would be verified. Some felt that a Great Lakes report could overlap or conflict with the work and mandate of the International Joint Commission (IJC). Others felt that this would assist and complement the IJC activities, perhaps using the Lakewide Management plans as a starting basis.

Participants were also very interested in airshed based analyses, noting work done by the IJC on one- and two-day airsheds arond the Great Lakes, and how this had expanded the zone of interest around the Great Lakes.

3.4 Cross Border Analyses

Conducting analyses of transfers to disposal and recycling across borders was supported because it fits NACEC's mandate of a North American perspective and is difficult to do with the data supplied on the internet.. The discussion centered on transfers to recycling. Some participants felt that recycling is a positive activity that needs to be presented in a positive way in the report. It was also noted that recycling should be placed in the context of the pollution prevention hierarchy, which presents source

reduction as the best method, followed by recycling and treatment, with release and disposal as last resorts. Other participants noted that many recycling facilities have become Superfund sites, and recommended the inclusion of lists of individual recycling and energy recovery facilities to aid communities in their understanding of such sites.

3.5 New Substances

Of the 73 new chemicals added to NPRI for 1999 reporting, approximately 45 chemicals can be matched to TRI. Due to the diversity of newly added chemicals, participants felt it would not make sense to treat them as a group. Rather, they suggested pulling out sub-groups of the chemicals in order to increase understanding of environmental and health issues. The ozone depleters are the most obvious group within the newly added chemicals.

3.6 New Sets of Chemical Lists/Subgroups

Participants were also interested in new subgroupings of chemicals of the over 200 matched chemicals in the 1999 report as a focus for analysis. Some of the new groupings suggested are:

- High production volume chemicals
- Persistent bioaccumulative toxics
- Persistent organic pollutants
- Volatile organic compounds
- Endocrine disruptors
- Regulatory lists

US EPA has identified a set of high production volume (HPV) chemicals, i.e., chemicals that are produced and/or imported in annual volumes of more than one 1 million pounds. EPA is reviewing the health and environmental information available for these chemicals. Approximately one-third of TRI chemicals are HPV chemicals.

Participants suggested that chemicals considered persistent, bioaccumulative and toxic could be analyzed as a group. Others suggested that this analysis would be best left for the *Taking Stock —2000* report, when additional reporting from several PBTs such as dioxins and furans would be available.

Other participants suggested that the twelve chemicals listed on the Persistent Organic Pollutants (POPs) treaty (the Rotterdam Convention) for immediate phase-out and eventual elimination be analyzed as a group. However, most of these are pesticides, which are not on the matched list. Of the 12 POPs, none are on the matched chemical list for 1999. For the 2000 reporting year, however, hexachlorobenzene, dioxins and furans will be on the matched list since they were added to the NPRI and/or TRI lists.

Volatile organic compounds (VOCs) are compounds of carbon that participate in atmospheric photochemical reactions. Sources of these chemicals include industrial boilers and processes, burning of fossil fuels, steam, electric boilers and gas turbines, motor vehicles and natural sources. Participants generally supported an analysis of VOCs as it is linked to an issue of public concern, poor air quality and smog, and could be tied into children's health issues. One participant suggested analyzing just VOC releases to air, or fugitive VOC emissions from organic chemical or petrochemical facilities. Some

participants noted that the sources that report to PRTRs would be a small part of the total releases of VOCs, so additional context would be required. Several participants noted that the VOC analysis had the potential to be trilateral. The analysis could also draw from the newly signed Ozone Annex between Canada and the US.

Several participants suggested an analysis of endocrine disruptors could be a valuable addition to *Taking Stock*. Others felt that this was premature until some consensus exists on a list of endocrine disruptors, and more chemicals suspected of endocrine disruption are added to the PRTR lists.

Many participants liked the idea of analyzing the data using regulatory lists, however most also recognized the difficulties in choosing a regulatory list. Some suggested the California Proposition 65 list of carcinogens and reproductive toxins, emergency planning lists and occupational health lists. One participant noted that the Border List of Lists provides a regulatory breakout for 3,000 chemicals. Regulatory lists were seen to be important to communities. Participants suggested the creation of an appendix indicating how the matched chemicals are regulated in the three countries.

3.7 Estimation methods

The discussion on estimation methods led to a broader discussion on data quality and governmental actions to ensure data quality. Maria Doa noted that the EPA verifies data upon receipt, sends a copy of the data back to the facility for confirmation and has a site survey team to audit data provided by facilities. François Lavallée noted that Environment Canada performs the first two of these functions, but not the third, and that they are anticipating increasing action on data quality. It was clarified that the proposed analysis in the *Taking Stock* report would look at estimation methods reported as used by sector and media, rather than seek to verify information provided by the facilities.

Some participants suggested that an analysis of estimation methods used in PRTRs would be very useful, because it could lead to improvement of the PRTRs. Others felt that estimation methods might not be of public interest and that, while direct measurement was seen to be generally more accurate, in some situations mass balance or other methods can give accurate answers. One participant noted that the term “mass balance” has a controversial history as it was used to describe materials accounting. Another participant noted that facilities in The Netherlands are only allowed to use methods other than direct measurement if they are below a certain trigger volume of releases.

3.8 Integration with Web Site

Participants were very supportive of the new NACEC PRTR web site, which will allow customized queries based on the matched data sets used for the *Taking Stock* reports. When asked about the appropriate balance between the web site and the report, participants saw the web site as a good complement to the hard copy report. Several participants expressed concern that the web site not replace the report, as the report was a handy reference, minimized problems of downloading large amounts of information, could be used by people lacking access to the Internet, effectively describes overall trends, and provides comparisons and context not as easily obtained from a web query.

NACEC was encouraged to find ways to increase the distribution of a smaller, less technically written document to a broader audience.

Several suggestions were made on the web site: ensure sufficient context for the data, provide links to relevant sections of the *Taking Stock* report, post the report in sections for downloading, post the full dataset for downloading and make downloading easy, provide details of changes in reporting systems over the years, consider the issue of archiving the website as it is updated, add economic data, link to other sites and add comparisons wherever possible. It was clarified that the carcinogen list will be updated annually and applied to the all years of data.

3.9 Ideas Raised by Participants

Many participants expressed an interest in encouraging mandatory reporting under the Mexican RETC. Any analyses or actions that would encourage mandatory reporting were supported. The participants felt that the analyses in the *Taking Stock* report should strive to be trilateral as much as possible.

Participants were also interested in analyses of PRTR data reported under mandatory and voluntary programs. Previous *Taking Stock* reports did analyze the matched data using the voluntary ARET and EPA 33/50 lists.

Participants also noted the potential to take a systems approach in *Taking Stock* reports, perhaps by analyzing nutrients such as ammonia and phosphoric acid. The cycle of nutrients could provide a sense of the interconnectedness of the ecosystem, and the role of these inputs.

Other participants were interested in an analysis of the role of the new sectors in the matched data. They noted that 67% of releases were from the newly reporting sectors to TRI.

One participant suggested that benzene might make a good case study because it is released from point and non-point sources, is a carcinogen, contributes to poor air quality, is the subject of regulations for some sectors, and could show a decline in releases over time.

Appendix A: List of Participants