

Utilization of the National Pollutant Release Inventory for Substances under Canada's Chemicals Management Plan

Submitted to:
Environment Canada

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Introduction

This paper examines the potential for using the National Pollutant Release Inventory (NPRI) as a public reporting mechanism on chemicals identified by Domestic Substances List (DSL) categorization. In addition, it supports the initial work of Environment Canada to investigate the results of categorization and the rationale to advance this work with effective engagement for the NPRI Working Group.

The categorization of 23,000 substances listed on the Domestic Substance List by Health Canada and Environment Canada has been a major achievement in taking stock of the thousands of substances that may be in commerce in Canada and identifying and prioritizing for further attention those substances of concern to human health and/or the environment. As a result of this work, over 4,000 substances have exhibited characteristics that may cause harm to human health and/or the environment and require

further action. This sobering finding speaks to the need to protect Canadians and their environment from risks associated with these chemicals and the need to establish an agenda that effectively aims to prevent releases and exposure of these substances and, in many cases, eliminating their use. It also speaks to the need to have on-going monitoring of the releases and transfers of these substances.

Under the Chemical Management Plan, announced in December 2006, these substances have been prioritized based primarily on the degree of risks /hazards posed and exposure data. Approximately 500 substances have been designated as high priorities for action. These substances are to be addressed through various mechanisms. In particular, and of relevance to this paper, are 193 of the high priority substances that are being addressed through a "Challenge" program¹. These substances have characteristics that indicate they are persistent, bioaccumulative **and** inherently toxic to non-human organisms (PBiT), or pose a high hazard to human health (based on evidence of carcinogenicity, mutagenicity, developmental toxicity or reproductive toxicity)². Another 2,600 are designated as "medium priority", while 1,200 are considered to be of "low concern".

The current focus of the government plan is on establishing management regimes over the next three years to address the substances identified under the "Challenge"³. As yet, no plan has been released to address those substances considered to be of "medium priority".

However, there is very limited information on many of the categorized substances and this information is not readily accessible to the public, nor in a form that is useful in terms of tracking releases of these substances to the environment, trends, pollution prevention actions and so on. Whatever measures are decided upon to "manage" these substances needs to be subject to public scrutiny. Public participation and access to information are critical components to ensure that there is effective engagement by the public.

Pollutant Inventories and the NPRI

Pollutant inventories, such as the NPRI, provide the public with access to information that is not otherwise readily available on releases and transfers of chemicals in their community, workplace or other areas in which they have a concern and interest.

¹ Refer to www.chemicalsubstances.gc.ca for more information on the Challenge program. Other components to address the top priority substances include: significant new activity controls (SNACs), the petroleum sector stream, and substances that are already in the assessment and management stream.

² The evidence from categorization indicates that these 193 substances meet the criterion for toxicity (section 64 (a), (c), CEPA 1999. Note: The approach followed by Health Canada is not necessarily in keeping with the CEPA criteria for categorization since Health Canada combined hazard and exposure information to determine their priorities).

³ These substances, along with their chemical profiles, are being published in batches of 15-30 substances every three months over a 3 year period. (Batch 1 was released February 3, 2007).

The NPRI is an annual mandatory facility-based public reporting system (under section 46, CEPA 1999). Presently, reporting to NPRI is required on 367 substances. For those facilities that meet reporting requirements, releases are reported to air, water, land, as well as transfers, disposal and recycling activities⁴.

The NPRI is a useful tool to track emission trends, pollution prevention strategies, the environmental performance of specific industrial sectors; and in disseminating information to the public and raising public awareness. However, the NPRI is under-utilized in a number of ways, such as in its potential capacity to track progress in pollution prevention and is limited to release and transfer data for a select number of substances.

The NPRI should be considered as a useful and effective tool in providing some essential information on substances that have been identified through categorization, information that is otherwise lacking, outdated and not publicly transparent.

At the same time, in order to achieve its full potential to assist the "Challenge" Program, there are a number of areas in the NPRI program in which improvements are needed, such as, thresholds for reporting, removing exemptions for specific facilities, requiring more information on pollution prevention activities, and data quality.

Status of Categorized Substances Reported to the NPRI

Out of the 193 high priority substances listed in the "Challenge" program, 31 are listed on the NPRI as discrete substances. Another 19 substances may be found within groups of substances that are listed on the NPRI. For example, a survey of the 30 Batch 1 and Batch 2 substances indicates that 8 of the Batch 1 substances and 5 of those in Batch 2 are listed on the NPRI. These substances have been identified as a high hazard to humans and of high likelihood of exposure to Canadians. None are PBiTs⁵.

But even for those substances listed on NPRI, the NPRI data on releases and transfers of Batch 1 substances is very limited.. This may possibly be attributed to the current NPRI threshold requirements for reporting (10 tonnes manufactured, produced or otherwise used for substances listed in Part 1⁶). This requires further investigation.

⁴ Reporting is mainly triggered by a set of thresholds based on the amounts of the substance that is manufactured, produced or otherwise used, or in some cases, release levels.

⁵ See attached spreadsheet on Batch 1 and 2 Substances and Substances in future batches.

⁶ http://www.ec.gc.ca/pdb/npri/npri_online_data_e.cfm.

Relevancy of NPRI on other substances (PiTs, BiTs) identified through Categorization

The following subsections provide rationale to further government efforts in integrating the substances identified through categorization under NPRI program.

Contribution to development of management regimes

A number of the categorized substances designated as high priority lack information, have outdated information, or have no systematic method of tracking uses and releases. Such information would better inform strategies to “manage” these substances and serve as a means of validating whether such strategies are accomplishing what they are purported to do – such as virtual elimination, prohibition, pollution prevention, etc.

Other issues of concern regarding the substances identified through the categorization process include:

- Substances may no longer be found in commerce but may still be released to the environment
- There are no means of tracking these substances in products.
- Information on substances in the “Challenge” program is sparse and outdated (see technical profiles).
- There is no government plan to date as to how to deal with the 2,600 “medium priority” substances. Nor is there a mechanism to track these and low-priority substances.
- For some substances, there are no Chemical Abstract Service (CAS) numbers, which may be due to trade secrets. This is an obstacle to finding out information on such substances.

Coordination with existing questionnaire

NPRI-like information is requested for the voluntary “Challenge” questionnaire for high priority substances, but there are inconsistencies with thresholds for reporting to the NPRI and those thresholds in the questionnaire. There is value in addressing these inconsistencies at the beginning part of the process. Another issue of concern with the existing questionnaire relates to the voluntary nature of the questionnaire. It does not provide the public transparency of a mandatory system such as the NPRI.

Improving the NPRI program: Linking Categorized Substances to the NPRI

The results of categorization present an opportunity to improve the use and scope of NPRI. Over the years, stakeholders have expressed a need to use the data from NPRI to evaluate effectiveness of current policies and regulations aimed at management of toxic substances. The results of the categorization process and Canada’s Chemical Management Plan have created some opportunities to track progress on reductions in releases of these substances, informing the priority setting process for moving toward screening assessments and decisions on these substances. At the same time, the dearth of

information and the lack of current information on some of the most hazardous substances identified by categorization stress the need for a mandatory reporting mechanism to track these substances.

Identifying substances for priority action

The proposed use of the rapid screening tool included in the Chemicals Management Plan to address substances of “low ecological concern” is a very specific aspect of the Plan that would benefit significantly from the utilization of the NPRI for updated data on releases and transfers of these substances. An NGO submission dated April 5th, 2007 on the proposed rapid screening approach outlined a list of concerns and expressed objections to the government proposal to use the rapid screening tool to “set aside” substances from further assessment. Instead, NGOs have expressed the need to use the rapid screening tool to *assist* in setting priorities for evaluation. The use of the NPRI to track such substances is viewed as a critical component of such an approach.⁷

Summary and Recommendations

Linking the categorized substances to the NPRI could be a strong component of the Public Right-to-Know. We support the following recommendations:

- 1) We support Environment Canada’s activities and active participation by the NPRI Working Group to investigate the results of categorization for the purposes of adding these substances to the NPRI.
- 2) It is our position that the NPRI program should be expanded to include reporting of all substances identified through categorization. The challenge before the government is not a matter of which substances should be added to the NPRI but how these substances can be added and in what timeframe.
 - i) It is essential that the 193 substances in the “Challenge” program be listed and tracked through the NPRI.
 - ii) Furthermore, the application of the NPRI program is highly relevant to tracking substances in the government’s proposed approach to address 1,200 low concern substances.
 - iii) A similar approach should be taken for the medium priority substances for which no plan for action by the government has been released.
- 3) Adjustments to the NPRI beyond adding substances are needed to incorporate the categorized substances. A systematic mechanism needs to be developed to carry out this task and would require substantive discussions within the NPRI Working Group.

⁷ Canadian Environmental Law Association, World Wildlife Fund Canada, York Region Environmental Alliance. April 5, 2007. Application of rapid screening tools for categorized substances of low ecological concern
Submitted to Environment Canada. Prepared for Canadian Environmental Network Toxics Caucus (9 pp.).

- 4) The NPRI Working Group should be given the responsibility and adequate resources to focus its work on integrating the substances identified through the categorization process.
- 5) A review of thresholds for reporting on these substances in addition to substances already being reported to the NPRI is a critical component of this work⁸.
- 6) Other aspects of the NPRI that require improvements include:
 - i) an enhancement of mandatory reporting in NPRI on pollution prevention activities;
 - ii) removal of exemptions from reporting; and
 - iii) add direct links to health and environmental issues for each substance being reported.

RCEN members will be pleased to work with Environment Canada to develop changes to the NPRI program so it can fulfill its potential to assist in the work under the government's "Challenge" program.

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⁸ Note: An Alternate Threshold (ATH) sub-group of the NPRI Working Group currently exists, but its mandate needs to be re-examined to incorporate this aspect.