A National Pollutant Release Inventory for Canada: The Final Report of the Multi-stakeholder Advisory Committee

(December 1992)

Canada

Environment Canada Environnement Canada

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1. INTRODUCTION

> "To develop a better understanding of the nature and quantity of toxic substances being released in Canada, the Government will develop a national data base for hazardous pollutants being released, from industrial and transportation sources. The reporting requirements for industry will be established by 1992, with the first reports scheduled for public release no later than 1994."
> The Green Plan

This report deals with the design of the data base for pollutants, called the National Pollutant Release Inventory (NPRI). The NPRI's benefits to the Canadian public, industry and governments will be to:

(1) identify priorities for action;

(2) encourage voluntary action to reduce releases;

(3) allow tracking the progress of release reductions;

(4) improve public understanding; and

(5) support targeted regulatory initiatives.

Since the fall of 1991, the NPRI Multi-stakeholder Advisory Committee (hereafter referred to as the Committee), has been developing an NPRI program for recommendation to the federal Minister of the Environment. The Committee is composed of representatives from industry, environmental groups, labour, provincial governments, Environment Canada and other federal government departments.

THE CONSULTATIVE APPROACH

Environment Canada decided to use a consultative approach in designing the NPRI and, in September 1991, invited representatives of 10 stakeholders' groups to comment on the NPRI in general, and on the consultative approach under consideration. The stakeholders subsequently agreed to a consultative process for the design of the NPRI.

This was the origin of the Multi-stakeholder Advisory Committee at the centre of the consultation process. Either directly or through work groups, the Committee dealt with the issues related to the NPRI design. Between December 1991 and September 1992, the Committee held five two-day meetings and approximately 17 work group meetings and conference calls.

The Committee issued its interim report in September 1992. This interim report, outlining the Committee's draft recommendations as well as issues it had yet to resolve, formed the basis for information sessions held in Halifax, Montreal, Ottawa, Toronto, Windsor, Calgary and Vancouver. The Committee also received 12 briefs from stakeholder groups at this time.

Subsequent to the information sessions, the Committee met three times for a total of four days to consider public feedback and to formulate the recommendations in this report.

THE COMMITTEE'S CONCLUSIONS

The Committee faced the challenge of reconciling members' differing viewpoints throughout its deliberations. Although it succeeded in achieving a large measure of consensus on the NPRI design, a number of issues remain either unresolved or require further work. Nevertheless, the Committee recommends that implementation of the NPRI begin in 1993, and continue in subsequent years. With this report, the Committee believes it has created the basis for an effective and efficient National Pollutant Release Inventory.

THE STRUCTURE OF THE COMMITTEE REPORT

The substance of this report is organized into five main parts:

- **Chapters 2 and 3**
  The agreed-upon purpose of the NPRI, and the principles underlying its design.
- **Chapter 4**
  Consensus recommendations to the federal Minister of the Environment on the NPRI design for the 1993 reporting year.
- **Chapter 5**
  Unresolved issues on which Committee members could not agree on a recommendation to the Minister of the Environment.
- **Chapter 6 and 8**
  Consensus recommendations on issues requiring further study and the consultative mechanism by which work should be pursued.
- **Chapter 7**
  Proposals for harmonizing the NPRI with other inventories.

2. PRINCIPLES

In the course of its deliberations, the Committee developed a set of guiding principles that reflect its vision of the NPRI. Although it will take time to fully implement many of them, they are intended to provide guidance for the NPRI's future evolution. The principles are as follows:

1. The United States Environmental Protection Agency's Toxic Release Inventory (TRI) and the Canadian Chemical Producers Association's National Emission Reduction Master Plan (NERM) are useful models for the NPRI. But while the experience derived from these proven systems should be taken into account, the NPRI design should seek to improve upon them.

2. The NPRI's coverage should be comprehensive. All facilities meeting the reporting conditions should report their releases, unless the information can be better obtained by other means and incorporated into the NPRI data base in a compatible form.

   At the same time, however, it may be reasonable to exempt certain types of facilities from reporting. Exemptions would include cases where determining the quantity of an NPRI substance used or released may be unusually difficult, or when reporting would be an unreasonable burden for a particular type of facility Finally, the Committee would formally exempt certain kinds of facilities that are unlikely to meet the reporting conditions, simply to avoid any unforeseen difficulties.

3. In its deliberations over which substances to include on the NPRI list, the Committee debated whether to emphasize toxicity, or the fact of release as the determining criterion. In the end, the Committee agreed that the NPRI substances list should comprise substances of concern that are released to the Canadian environment; it should not be a "toxic" substances list.

   Guided by this objective, the Committee developed a list of general criteria that should govern the selection of substances for the NPRI list, namely:

   - manufactured, processed or otherwise used in Canada;
   - of health and/or environmental concern;
   - released into the Canadian environment; and,
   - present in the Canadian environment, including air, water and land.

4. Reporting to the NPRI should be made as simple as possible; it should not unreasonably burden reporting facilities.

5. The NPRI data base and annual report should present as complete a picture as possible of the release sources of NPRI substances. Environment Canada should

add to the data from reporting sources, any available information on releases from non-reporting sources (as in instances of urban run-off). Even if the release quantity is not known, the sources should be named.

6. The reporting requirements of the NPRI and other government pollutant release inventories should be harmonized to reduce the burden on those facilities that must report to several inventories.

7. The NPRI should facilitate public access to information on environmental releases collected in other inventories; it should provide "one-stop shopping" for release information.

8. All information in the NPRI data base should be accessible to the public, except in instances where the reporting facility can demonstrate that its data should be treated as confidential business information.

9. The Committee endorses the Green Plan commitment that the NPRI should be implemented in 1993, so that information on 1993 releases can be made publicly available in 1994. The Committee has therefore focused on the issues that must be resolved to meet this timetable.

10. Over time, the NPRI should evolve in response to public, government and industry needs. The Committee intends its recommendations as a starting point for the inventory; issues it has not fully addressed should be discussed when considering future revisions to the NPRI.

3. THE PURPOSE OF THE NPRI

The Committee has agreed on the following statement of purpose for the NPRI:

Substances released into the environment have the potential to adversely affect human health and the environment. The purpose of the National Pollutant Release Inventory should be to provide comprehensive, national data on releases of specified substances to air, water and land.

To be nationally significant, the NPRI should include the major releases from all Canadian sectors-industrial, transportation, government, commercial and others-and be harmonized to meet local, regional, provincial and federal government needs. Data collection and management should be done in a cost-effective manner. Release data should be easily accessible to the public.

The inventory should support a wide number of environmental initiatives, including pollution prevention and abatement. It should help to:

1. **Identify priorities for action.** Knowledge of the substances released into the environment is necessary to: identify priorities for action.

2. **Encourage voluntary action to reduce releases.** The availability of data will encourage emitters to be proactive in reducing releases.

3. **Allow tracking of progress in reducing releases.** To monitor progress effectively, industry, society and governments require a readily available inventory that is regularly updated.

4. **Improve public understanding.** The public should have the right to information on substances released to the environment.

5. **Support targeted regulatory initiatives.** The availability of data should help governments to target their programs in the most effective manner.

4. RECOMMENDATIONS OF THE MULTI-STAKEHOLDER ADVISORY COMMITTEE

The NPRI Multi-stakeholder Advisory Committee recommends that implementation of the NPRI begin in 1993, and continue in subsequent years. The Committee believes that the NPRI should provide significant benefits to the Canadian public, industry and governments (as described in the statement of purpose, chapter 3 of this report).

In this chapter, the Committee recommends to the Minister for the Environment the design of the NPRI for the 1993 reporting year. The Committee believes that through these recommendations the NPRI can achieve its stated purpose, while respecting its underlying principles (chapter 2). As experience with the NPRI is gained, however, the recommendations may require review. For this reason, the focus is on 1993.

4.1. NPRI IMPLEMENTATION USING SECTION 16 OF CEPA

Section 16 of Canadian Environmental Protection Act (CEPA) should be; used as the legislative authority for the inventory in order to allow the NPRI to begin operating as soon as possible. This section of CEPA enables the Minister to "publish a notice requiring any person described in the notice to provide the Minister with such information and samples referred to in subsection (2) as may be in the possession of that person or to which that person may reasonably be expected to have access."

4.2. CONDITIONS UNDER WHICH A FACILITY MUST REPORT TO THE NPRI

The Committee recommends that any facility meeting condition A, as outlined below, report to the NPRI once a year on each substance meeting condition B:

Condition A

A facility with 10 or more full-time employees, or part-time employees who work the equivalent number of hours.

An employee is considered to work full time if he or she works 2,000 hours per year. Therefore, any facility whose employees collectively work 20,000 or more person-hours a year would meet this condition.

Condition B

A facility that manufactures, processes, or otherwise uses[2] 10 tonnes or more per year of a substance on the NPRI list, at a concentration of 1 % or greater.

The substance may be used or produced intentionally or as a by-product; it may be in a pure or impure form; or it may be part of a mixture in a 1 % or greater concentration. In

all cases, only the quantity of each individual substance is to be considered in determining whether it has to be reported.

These conditions are similar to those used for reporting to the United States Toxic Release Inventory (U.S. TRI), thus facilitating comparisons between the two countries. They are also based on the principle that the NPRI should not pose an unreasonable burden on facilities that have to report. Condition A takes into account the facility's size, as well as the technical expertise likely to be available. Condition B is intended to make it easy for facilities to determine whether or not they have to report.[3]

4.3. EXEMPTED FACILITIES

Facilities involved in the following activities should be exempt from reporting into the NPRI:

4.3.1. The distribution or retail sale of fuels

Facilities such as service stations or pipelines, involved in the distribution or retail sale of fuels, would be unreasonably burdened by reporting to the NPRI. These facilities do not have reasonable access to the type of expertise necessary to report to the NPRI, and it is more practical to obtain release estimates by other means (marketing data, for example).

4.3.2. The maintenance and repair of transportation equipment

It would be unreasonably burdensome for facilities that maintain and repair transportation equipment to report to the NPRI; information on the quantity of NPRI substances in some products they use, such as oils and lubricating fluids, is not readily available. Therefore, it would be difficult to determine whether they used 10 tonnes or more of a particular NPRI substance in a given year.

4.3.3. Wholesale or retail sales of manufactured articles or products

One would not expect facilities involved in the wholesale or retail sales of manufactured articles or products to meet the reporting conditions. However, to avoid any unforeseen problems from arising, these facilities should be formally exempt from reporting to the NPRI.

4.3.4. Education: universities, colleges and schools

Facilities involved in education would be unreasonably burdened if they had to report to the NPRI. These facilities use small quantities of many different mixtures, which may or may not contain NPRI substances. In addition, they may not have a centralized purchasing system through which to track the quantities used. Therefore, it would be difficult to determine whether they used 10 tonnes or more of a particular NPRI substance in a given year. However, commercial activities in educational facilities should not be exempt from reporting to the NPRI.

4.3.5. Research and testing

Research and testing laboratories would be unreasonably burdened by the need to report, given the difficulty of determining whether or not they meet the 10-tonne reporting condition. The difficulty comes from the fact that these facilities use small quantities of many different mixtures, that may or may not contain NPRI substances. Therefore, it would be difficult to determine whether they used 10 tonnes or more of a particular NPRI substance in a given year.

4.3.6. The growing, harvesting and management of renewable natural resources, but not their processing

The Committee does not expect facilities involved in growing, harvesting and managing renewable natural resources (such as fisheries, forestry and agriculture), to meet the reporting conditions. To avoid unforeseen problems, however, these facilities should be formally exempt from reporting to the NPRI.

On the other hand, facilities that process natural resources, such as pulp and paper mills and food processing plants, should not be exempt from reporting.

4.3.7. Mining

Facilities that mine materials containing listed substances are exempt from reporting, those engaged in processing these mined materials are not exempt. Therefore, facilities engaged in milling and smelting should not be exempt from reporting.

4.3.8. Oil and gas wells

Facilities engaged in drilling or operating oil and gas wells are exempt from reporting. The natural variability in the composition of crude oil and gas would make reporting difficult.

Processors of crude oil and natural gas, such as gas processing plants, synthetic crude plants and large-scale heavy oil operations, should not be exempted from reporting to the NPRI.

4.4. THE EXEMPTION OF ARTICLES AND PRODUCTS FROM REPORTING

NPRI substances contained in articles manufactured and shipped by a facility should be exempt from reporting; such a transaction does not have to be reported as a release or a transfer. Similarly, NPRI substances incorporated in articles that a facility buys but does not process, are also exempt from reporting requirements.

While not dissenting from this recommendation, the environmental groups and labour representatives expressed concerns about exempting articles and products, because they

are a potentially significant source of releases. They believe that releases resulting from the use or disposal of articles and, products should be tracked.

4.5. THE NPRI LIST OF SUBSTANCES FOR 1993

The Committee has agreed that the 178 substances appended to this report should serve as the NPRI list of substances during 1993, the first reporting year.

The list was derived from the 1990 U.S. TRI List, after deleting substances or classes of substances that are either not used in Canada at all, or are used in quantities smaller than one tonne per year, according to the CEPA Domestic Substances List (DSL). The one tonne cutoff was chosen as a reasonable compromise between the possible under-reporting of quantities to the DSL, and the NPRI reporting condition of 10 tonnes. These substances accounted for less than 1 % of the mass of all TRI substances on the DSL (and, presumably, for a very small proportion of their total potential releases to the Canadian environment).

Also removed from the list were pesticides, ozone-depleting substances and certain regulated or banned substances. The Committee's discussion of these substances can be found in section 5.3.1.

About two thirds of the substances that were deleted from the TRI are not used in Canada, and so are not on the DSL. Should these substances (or any others) enter the Canadian marketplace, however, they will come to Environment Canada's attention through the New Substances Notification Regulations of CEPA, and, could then be added to the NPRI list.

4.6. AN AUTOMATED REPORTING FORM

The Committee recommends the use of an automated form on a micro-computer diskette for reporting, with a paper form available, for exceptional cases only.

The automated reporting form should be designed so that the facility identification information need be entered only once, no matter how many substances a facility reports.

Both Environment Canada and industry will realize considerable savings by using a computer-based system for reporting and processing NPRI information.

4.7. FACILITY IDENTIFICATION INFORMATION TO BE REPORTED

The Committee recommends that facilities reporting to NPRI provide the following identification information:
(Please see Appendix 7 for a table of these data elements)

- Company name
- Facility name, location, latitude and longitude

- Parent company information
- Number of employees
- SIC code(s), either U.S. or Canadian
- A Residual Discharge Information System (RDIS) or Domestic Substances List (DSL) number(s)
- Name of a facility contact
- Provision for existing provincial operating permit identification numbers
- Signature of a facility executive on a covering letter

4.8. THE SUBSTANCE-SPECIFIC INFORMATION TO BE REPORTED

The Committee recommends that, for each NPRI substance manufactured, processed or otherwise used in a concentration of 1 % or greater, and in a quantity equal or greater than 10 tonnes per year, facilities should provide the following information:
(Please see Appendix 7 for a table of these data elements)

4.8.1. Substance identification

The substance name and Chemical Abstracts Service Registry number, as well as the activities involving the substance at the facility (for example: imported; produced as a by-product; used as a reactant, and so on).

4.8.2. On-site releases of the substances

The quantity of the substance released from the site to air, water and land, as well as the method for estimating the release. Release of the substance into public sewers that discharge without treatment should be reported, as should the name(s) of receiving streams and bodies of water.

4.8.3. The seasonal breakdown of releases.

When the normal distribution of releases of 25% per quarter varies more than 10 percentage points (that is, if in a quarter, releases amount to less than 15% or more 35% of the total released) facilities should report the percentage of releases in each seasonal quarter. This will be relevant for facilities that produce in batches instead of continuously, and the information will help to assess the environmental impact of the substances under different conditions (as in the summer, for example, when evaporation rates are higher and rivers flow at a lower level).

4.8.4. Off-site transfers of the substance in waste

The total quantity of the substance shipped in waste off-site; the percentage that went to recovery, reuse and recycle, destruction, public sewers with treatment and containment facilities; and the name and address of the facility to which the substance was transferred.

4.8.5. Reasons for a change in quantities released or transferred

If the quantity of an NPRI substance released or transferred has changed significantly since the last report, facilities should be asked to indicate whether this is because of:
(1) changes in production levels;
(2) changes in estimation methods;
(3) pollution prevention and abatement;[4]
(4) other reasons (including spills, accidents or breakdowns); or
(5) no significant change.

If two or more factors caused the change, the facility would be asked to indicate the significant ones. A change of less than 10% should not be considered significant.

Facilities should be allowed up to 10 lines of text in each NPRI substance report (Part B of the form), to more fully describe reasons for any change in the amounts released or transferred. The purpose is to learn why the quantities of a substance released or transferred have changed. This information would only have to be provided starting in a facility's second reporting year.

4.8.6. Anticipated releases and transfers

The facility should list the reductions in releases and transfers it expects to occur in each of the next three years. Users of this information should be told that these figures are projections, not goals or objectives. Release quantities can change for many reasons, including changes in business conditions and product lines. Facilities are required to report anticipated releases and transfers to encourage them to make reductions, not to obligate them.

4.9. REPORTING RELEASES OR TRANSFERS OF ONE TONNE OR LESS

In cases where NPRI substances (a) meet the reporting, conditions, and (b) are released or transferred in quantities of one tonne or less; facilities would have to indicate only whether the total releases or transfers are in the following ranges: 1 to 9.9 kg; 10 to 99.9 kg; or 100 to 999.9 kg.

For this provision, the quantities released and quantities transferred should be assessed separately. If, for example, a facility released more than a tonne and transferred less than a tonne, only the transfers could be reported in the simplified manner. Releases would have to be reported in the usual manner.

The Committee is recommending this provision to, reduce the administrative burden of NPRI, without significantly affecting the overall quantity of release information reported. But since a report would still be required, the NPRI data base would indicate that the facility uses and releases the NPRI substance(s).

4.10. TECHNIQUES FOR ESTIMATING RELEASES

Facilities should be able to choose the best available method to prepare their estimates of releases. The estimating techniques are: monitoring data; mass balance calculations; emission factor estimates; and engineering estimates. The chosen method(s) should be reported on the NPRI form.

4.11. THE LEVEL OF EFFORT REQUIRED FROM REPORTING FACILITIES

In keeping with the principle that the NPRI should not unreasonably burden facilities, the Committee recommends that they be allowed to submit a best estimate of releases, based on a reasonable effort. Section 16 of CEPA, the legal basis for the NPRI, requires facilities to provide information to which they "may reasonably be expected to have access."

4.12. ASSISTANCE TO REPORTING FACILITIES

Within its available budget, Environment Canada will provide guidance and assistance to reporting facilities, including training workshops, methodology manuals and telephone assistance.

4.13. RECORD KEEPING

Facilities should be required to keep working papers, estimation calculations and data supporting their reports for at least three years. Duly appointed inspectors should be able to review background papers, examine facilities and their records in accordance with the CEPA Enforcement and Compliance policy.

4.14. MAKING NPRI INFORMATION AVAILABLE

Making release data available to the public is a major objective of the NPRI. To this end, the Committee has prepared proposals on how NPRI data should be made available (please see appendices). However, in light of the limitations on NPRI resources and the importance of launching inventory operations, the Committee has chosen to make two general recommendations, leaving the remaining proposals for further discussion during 1993 (please see section 6.4 and appendices).

The Committee recommends that all non-confidential data in the NPRI should be accessible to the public. This includes data on the substances released and transferred by individual facilities.

The Committee also endorses the Green Plan commitment to publish the NPRI annual report for 1993 before the end of 1994.

4.15. CHARACTERIZING RELEASES FROM NON-REPORTING SOURCES

The Committee recommends that in the 1993 reporting year, the NPRI describe all the sources and quantities of selected released substances. This would require that any

available information on releases from non-reporting sources (such as urban run-off or households), be added to the information from reporting sources. Even if the quantity of release is not known, the source should be named.

In making this recommendation, the Committee is expanding on a Green Plan commitment for Environment Canada to include releases of NPRI substances from the combustion of transportation fuels. The information will be included in the NPRI data base.

[2] Terms in this phrase specific to this report maybe found in the definitions listed in the appendices at the back of the report.

[3] The U.S. TRI requires facilities in the manufacturing sector (SIC codes 20 to 39) that have 10 or more full-time employees to report if they (a) manufacture or process 25,000 pounds or more of TRI substances; or (b) otherwise use 10,000 pounds or more of a TRI substance.

[4] 4. Committee members differ as to whether or not item 3 should be split into two distinct activities, pollution prevention (the reduction or elimination of wastes at source) and pollution abatement (the reduction of releases). Labour, environmental groups and the government of Ontario favour this option; they want to encourage pollution prevention. Industry and the other government representatives prefer to keep the item as it is because the concept of pollution prevention is insufficiently defined at present.

5. UNRESOLVED ISSUES

The Committee was not able to agree on all the issues it discussed. This chapter describes the issues that remain unresolved at this time.

5.1. ISSUES RELATED TO THE PURPOSE OF THE NPRI

The following are issues related to the NPRI purpose on which Committee members could not reach a consensus for recommendation to the Minister of the Environment. (The Committee's consensus statement on this issue is in chapter 3.)

5.1.1. Emergency response planning

Committee members from labour and environmental groups have proposed that the NPRI should serve emergency response planning purposes. At present, the public cannot easily tap into an available data base to find out about the risk of a catastrophic accident in their community. The NPRI could fill this need.

Industry and government representatives (except Ontario) do not believe that emergency response planning should be a purpose of the NPRI. These stakeholders maintain that emergency response issues are best resolved through existing multistakeholder groups like the Major Industrial Accidents Council of Canada. (MIACC), for which a group of experts is already, addressing all aspects of the subject.

The Ontario Ministry of the Environment representative does not object to including emergency response as an NPRI purpose.

This issue is addressed in more detail in section 5.4.2.

5.1.2. Tracking reductions in the use of "toxic" substances

- Environmental group and labour representatives have proposed that the inventory should be used to track reductions in the total quantity of NPRI substances used. In their view, the NPRI should include information on the amounts of each NPRI substance that each reporting facility used, produced, generated as a by-product, consumed, recycled, or transferred in or out as product.[5]

  These Committee members believe such information is essential to measuring the progress in reducing hazardous substance use, and to determining priorities for future government and industry environmental programs. They also believe that these data would alert the public to hazardous substances handled by workers; incorporated into consumer products; transported, over neighbourhood roads, rails and waterways; or stored in communities.

- On the other hand, government representatives (except Ontario) do not agree that the NPRI should be used to track the use of hazardous substances. They believe that expanding the NPRI into a use inventory goes far beyond the Green Plan commitment. It would also add greatly to the cost of maintaining the NPRI data base. In their view, the primary NPRI goal is to track substances released into the environment, not to monitor their use. Finally, these committee members point out that many NPRI substances are not considered to be "toxic" (under CEPA), nor is it proposed that they be banned or phased out of use.

- Dissenting from this view, the Ontario Ministry of the Environment representative supports using the NPRI to track reductions in the use of priority toxic substances.

- Industry members do not agree that the NPRI should be used to track toxic substances' use. They maintain that:

(1) The NPRI should focus on its objective of establishing a comprehensive data base of substance releases for Canada. Each additional datacollection/reporting requirement diverts scarce and valuable resources from achieving this key, objective.

(2) With very few exceptions, the quantity of a substance manufactured, processed or otherwise used has no correlation with releases or environmental impact.

(3) Including "use" information in the NPRI would support arguments that quantity of substance can be correlated to releases, resulting in an incorrect prioritization of environmental issues.

(4) Requiring such data to be reported would substantially increase the complexity and cost of the reporting process, out of proportion to its value. The cost is not insignificant for reporters.

(5) Detailed use information, unlike data on releases, is confidential business information and would unduly complicate handling of NPRI data.

(6) While some stakeholders believe that information on substance use will help to encourage pollution prevention, it is not clear how this would occur. There is, in fact, no national definition of pollution prevention in Canada. Hence it is extremely difficult to determine how reporting use, rather than releases, will encourage pollution prevention. Pollution prevention has to be broadly defined to allow the maximum flexibility in reducing society's overall impact on the

environment.

(7) The NPRI cannot be used to establish a toxic use inventory without considerable policy debate, as well as significant changes to the existing NPRI format.

5.1.3. Measuring progress towards pollution prevention

- Representatives of the Ontario government, environmental groups and labour have proposed that the NPRI should measure progress towards pollution prevention. These Committee members define pollution prevention as any action that reduces or eliminates the creation of pollutants at their source. Pollution prevention is therefore achieved through raw material substitution, product reformulation, process redesign or improved maintenance and operations. It is the option of choice in the pollution management hierarchy of a number of jurisdictions (including Ontario and the U.S. Environmental Protection Agency), because it reduces the amount of waste requiring future management.

  These same stakeholders believe that the NPRI should track pollution prevention. The NPRI should gather information on the quantity of NPRI substances recycled, treated or used for energy recovery on-site. With these data, the NPRI could serve as a basis for estimating the total chemical waste created by a facility, as well as any reductions in waste resulting from pollution prevention measures.

- Industry and the federal government do not believe that the NPRI should monitor pollution prevention at this time. In the absence of a commonly accepted definition of pollution prevention, they believe that requests for such data are premature.

5.2. ISSUES RELATED TO THE REPORTING CONDITIONS

Committee members could not agree on a recommendation to the Minister of the Environment on the following issues related to the reporting conditions. (The consensus recommendations on this issue are in section 4.2.)

5.2.1. An "or" release reporting condition

Environmental groups and labour have proposed that an additional reporting condition be added to conditions A and B, namely:

C. *or* the release of one tonne or more of an NPRI substance per year.

This third condition would be an *or* condition. If conditions A and B are met and the proposed condition C is not met, the facility would have to report the substance. If one or

both of conditions A and B are not met, but condition C is met, the facility would still have to report.

The labour and environmental group committee members believe this release condition would ensure that all significant releases to the environment are reported. They are particularly concerned that substantial releases of unintentional by-products could be missed without this third condition.

Under the current proposal, a facility would have to produce up to 10 tonnes of a substance as a by-product before being obliged to report it. Because they are usually unwanted, by-products could be released to the environment in significant quantities (up to 9,999 kg) without having to be reported.

For some releases, such as persistent toxic substances for example, the reporting condition should be lower than one tonne.

- The representative of the Ontario Ministry of the Environment supports using the "or" condition for priority contaminants. These contaminants would have to be selected in the future.

- Industry and government representatives do not agree with this condition. The data from the U.S. TRI show that releases below one tonne account for only a small percentage of total releases. They are concerned about how facilities can comply without assuming an unreasonable burden; this condition would require all facilities to estimate all NPRI substances they release in order to determine their need to report.

5.2.2. An "and" release reporting condition

Industry representatives have proposed that an additional reporting condition be added, namely:

C. *and* the release of one tonne or more of an NPRI substance per year.

Under this condition, a facility that meets conditions A and B would not have to report on NPRI substances it is releasing in quantities smaller than one tonne per year.

Industry representatives believe this condition would reduce industry's reporting burden without impairing the quality of information in the NPRI. They maintain that releases of one tonne or less are a small proportion of the total weight of all releases, so the NPRI would still approximate the quantity of substances being released.

Representatives of the environmental groups, labour, and federal and provincial governments who disagree with this condition maintain that for some facilities,

particularly smaller ones, a release of one tonne is significant. Releases of this magnitude would also be of interest to the people living near such a facility.

5.2.3. Reviewing the 10-tonne reporting condition

Environmental groups and labour representatives proposed that the 10-tonne quantity in reporting condition B should be reviewed and lowered for the 1994 reporting year. They believe that releases of substances manufactured, processed or otherwise used in quantities of less than 10 tonnes per year can have a significant impact on the environment and on human health.

Industry and government agree with the rest of the Committee that the 10-tonne reporting condition should be reviewed after the results of the 1993 reporting year have been analyzed. However, they would want to examine these results before deciding whether the 10-tonne level should be decreased, increased or maintained.

5.3. ISSUES RELATED TO THE NPRI LIST OF SUBSTANCES

Committee members could not agree on a recommendation to the Minister of the Environment on the following issue related to the NPRI list of substances.
(The consensus recommendations on this issue can be found in section 4.5.)

5.3.1. Substances of special interest

The Committee believes that the NPRI's credibility will be compromised if it does not deal with substances that have high public visibility, namely: PCBs, dioxins, furans, pesticides, PAHs and ozone-depleting substances. Members could not agree, however, on which of the following two options should be followed, either:

Option (1)

> to include these substances on the NPRI list with appropriate reporting conditions (that is, less than the current 10 tonnes); or,

Option (2)

> to devote a, section of the NPRI annual report to these substances. Using available information, a description of the substances' status would be prepared.

- The environmental groups and labour representatives favour option 1, that is, including these substances on the NPRI list. They believe that their effects on human health and the environment justify the additional cost (for double reporting or monitoring) of adding them to the list.

- Representatives of governments (except Ontario) and industry favour option 2, that is, devoting a section of the NPRI annual report to these substances. With data already collected for other regulations and programs, they believe it would be more efficient to re-use these same data for the NPRI. Furthermore, placing substances such as PCBs, dioxins and furans on the NPRI list would require the development of specific reporting conditions and specialized technical guidance for estimating releases.

- The Ontario Ministry of the Environment representative supports implementing option 2 in the first year of reporting, with a view to implementing option 1 in future years after issues related to reporting conditions, duplication and technical guidance have been resolved.

5.4. ISSUES RELATED TO THE INFORMATION TO BE REPORTED

Committee members could not agree on a recommendation to the Minister of the Environment on-the following issues related to the information that should be reported. (Consensus recommendations on this issue are in sections 4.7 and 4.8.)

5.4.1. Reporting quantity information

Under this requirement, facilities would report the quantity of the NPRI substance employed in each "use" category in the substance identification section of the NPRI form (please see section 4.8.1.). If appropriate, a facility could claim this information as confidential.

Collecting quantity data would serve four objectives:

(1) To determine how well the NPRI meets its goal of being a comprehensive, national inventory. This could be accomplished by comparing the total quantities of a substance manufactured and imported by reporting facilities, with the total quantity of the substance used in Canada (according to Statistics Canada data). From such an analysis, Environment Canada could estimate of the degree of compliance with the NPRI.

(2) To determine whether a change in the quantity of a substance released or transferred stems from a change in the quantity manufactured, processed or otherwise used, rather than from a change in releases and transfers. Reporting facilities are already asked to explain changes in the quantities released or transferred (please see section 4.8.5.); quantity data would shed more light on this point, particularly when increased releases or transfers are proportionally lower on a production-normalized basis.

(3) To help governments in setting priorities for their emission-reduction programs, by identifying the releases and transfers with greatest potential for reductions. All other things being equal, the larger the release's proportion of the substance manufactured, processed or otherwise used, the greater the potential for reductions.

(4) To calculate release factors (quantity released, as a proportion of the quantity used) for similar facilities. This could easily be done in the data base using SIC codes. Canadian release factors are lacking, particularly for land and water, and the availability of additional release factors could make reporting easier for industry.

- The federal and provincial governments, labour and environmental groups believe these objectives justify collecting quantity data. They maintain that in most cases, quantity information should be readily available to reporting facilities; it will be required to estimate releases and transfers. However, these Committee members recognize industry's concern about the burden this requirement could impose on reporters. They propose further study to resolve this concern.

- The representatives from industry are opposed to the reporting of quantity information because they believe:

(1) The NPRI should focus on establishing a comprehensive data base of releases for Canada. Each additional data collection/reporting requirement diverts scarce and valuable resources from achieving this key objective.

(2) With very few exceptions, the quantity of a substance manufactured, processed, or otherwise used has no correlation with releases and environmental impact.

(3) The inclusion of quantities manufactured in the NPRI would support arguments that the quantity of a substance can be correlated to releases. This would lead to misplacing the priorities on environmental issues.

(4) Requiring such data to be reported would substantially increase the complexity and cost of the reporting process, out of proportion to its value. The cost is not insignificant for reporters.

(5) Detailed information on quantities, unlike data on releases, is confidential business information and would unduly complicate handling of NPRI data.

(6) One potential use for quantity information in the NPRI would be to develop "made in Canada" release factors. However, based on point 2 above, these factors would have limited validity across a broad industrial spectrum, and should be assigned a low priority.

(7) Environment Canada could correlate quantity data from NPRI reporters with existing data on the quantity of NPRI substances in Canada (from Statistics Canada). Thus they could determine the proportion of releases being captured by the NPRI. But since existing data bases for NPRI substances are incomplete, the validity of this approach is questionable. Finally, there is no reason to suspect that the existing NPRI rules (on thresholds and reporting quantities) are not appropriate.

5.4.2. The maximum quantity of the substance on-site at any time during the year

There is consensus among Committee members that the public should be aware of potentially catastrophic releases, as well as what is being done to deal with these risks. Disagreement persists, however, about the NPRI's role in achieving this objective.

- Environmental groups and labour representatives on the Committee believe the NPRI has an important role to play in emergency planning. The purpose for requesting the maximum on-site quantity at any one time during the year is to allow citizens to evaluate for themselves the risk of a major accident occurring at a facility in their community.

  At present, there are no easily accessible data bases from which the public can find out about the risk of a catastrophic accident in their community.

  Representatives of environmental groups and labour disagree with the position of industry and government representatives that emergency planning issues should be left to other forums (please see below). Although these forums may be valuable, the information that they gather is neither complete (because industry participation is voluntary), nor is it accessible to the public.

- The representatives of governments (except Ontario) and industry believe that collecting this information is inappropriate for the NPRI. Forums of experts and community representatives are already addressing the range of emergency planning issues on an ongoing basis. The Major Industrial Accidents Council of Canada is one example. Furthermore, the 10-tonne reporting condition will provide the concerned public with a list of facilities using NPRI substances in their community. Knowing the maximum quantity on site would add little.

- Employee and community safety are of utmost importance to Canadian industry. To this end, industry supports emergency preparedness and participates in community response/planning activities (in Edmonton and Sarnia, for example) as well as supporting MIACC activities.

In addition, industry representatives believe that quantifying maximum amounts of substances on site would be difficult for facilities that have many different mixtures, containing varying amounts of a particular NPRI substance. Therefore, asking for this data would additionally burden reporters for little or no added benefit.

- The Ontario Ministry of the Environment representative has no objections to collection of this information.

5.4.3. On-site energy recovery and treatment

Facilities would be required to report the amount of a substance subjected to on-site energy recovery or treatment to determine if an emission reduction is due to these factors, or results from less waste generated on-site.

- Representatives of the Ontario government, environmental groups and labour favour inclusion of this data element. They believe it enables the tracking of what is, in their view, pollution prevention.

- Representatives of industry and the federal government are opposed to the inclusion of this data element. They maintain that, without a commonly accepted definition of pollution prevention, it is premature to request such data for the NPRI.

5.4.4. The production activity index

The production activity index is the ratio of the previous reporting year's production level to that of the the current year. Each facility would determine its own measurement methodology in the first year, and continue to use that method in future years.

This ratio would indicate whether a change in the amount released or transferred is due to a change in the level of production.

- Industry representatives are concerned about the difficulty of calculating a meaningful production activity index under certain circumstances, including: when a substance is used in various applications; when, the way a substance is used does not have a direct relationship to production (for example, solvents for cleaning); and when a substance is used to make product A one year, end product B the next.

- Representatives of governments (except Ontario) would prefer to have quantity information (please see section 4.5.1.), rather than a production activity index.

- The Ontario government, environmental groups and labour favour requiring a production activity index. They believe it effectively indicates changes in production and use of NPRI substances, particularly since the quantity information will likely be confidential.

5.5. CONFIDENTIALITY

Committee members agree that facility-specific data on releases and transfers should be made publicly available. They also agree that truly confidential information should be protected, although they did not define what information could be considered "truly confidential." They did not agree, however, on whether the confidentiality regime governing the NPRI should be modified or not.

At present, any information supplied pursuant to a notice under Section 16 of CEPA (the legal basis for the NPRI), may be accompanied by the supplier's request that the information remain confidential.

Environment Canada applies the following administrative criteria to determine the validity of a confidentiality claim:

(1) The information is confidential to the company.

(2) The company has taken, and intends to continue to take, measures reasonable under the circumstances to maintain the information's confidentiality.

(3) The information is not, and has not been, reasonably obtainable by third persons by legitimate means, except with the consent of the company.

(4) The information is not available to the public.

(5) Disclosure of the information may reasonably be expected to substantially harm the competitive position of the company.

(6) Disclosing the information may reasonably be expected to result in a material financial loss to the company or a material financial gain to the company's competitors.

If one or more of the above criteria is not applicable to a particular claim, that claim would not be valid.

Requests for confidential information submitted in response to Section 16 notices are subject to the requirements of CEPA, the Access to Information Act, and the Privacy Act. Should a member of the public seek access to information claimed as confidential, he or she would have to use the mechanisms in CEPA and the Access to Information Act.

- Environmental groups and labour believe that these confidentiality provisions are inconsistent with the NPRI objective to make release data publicly available. This could produce problems that frustrate the intent, and harm the credibility of the NPRI. For example, a facility might attempt to use confidentiality provisions to hide data on releases from the public.

  These same stakeholders would like to see the confidentiality regime that applies to the NPRI be revised to more closely resemble that of the U.S. TRI. Under the TRI, the onus for demonstrating confidentiality rests with the reporting facility. They would like the Committee to recommend that a task group be formed to design a confidentiality regime consistent with the NPRI.

- Industry believes that experience with the NPRI will demonstrate whether the confidentiality regime will create problems. They point out that there are relatively few trade secret claims in the United States, and expect the same situation to prevail in Canada. Furthermore, they are concerned that if use or quantity information were ever collected by the NPRI, a revised confidentiality regime could deprive facilities of the protection they need for this sensitive information. In sum, the industry representatives will support modifications to the confidentiality regime governing NPRI if experience shows that the public access objectives are not being achieved.

[5] The U.S. TRI does not include this information, but the states of Massachusetts and New Jersey collect it with the TRI data.

6. RECOMMENDATIONS FOR FURTHER WORK

The Committee recommends that additional work be undertaken on the following issues. Discussions should be pursued through the consultative mechanism described in chapter 8 of this report.

6.1. EVALUATING THE COSTS OF NPRI REPORTING

U.S. experience with the TRI showed that, on average, each reporting facility requires about 50 hours annually to report on the release of each particular substance. No equivalent data exist for the proposed NPRI, but it is expected to impose less of a burden on most reporting facilities because of its design.

The Committee therefore recommends that the cost for Canadian facilities reporting to the NPRI be estimated during the trial run[6] based on the information gathered then. It should be made available to stakeholders and senior Environment Canada officials beginning in June 1993, and again after the first reporting year is completed. As well, an analysis of costs and benefits should accompany any changes to NPRI considered for the reporting years beyond 1994.

6.2. ISSUES RELATED TO THE NPRI LIST OF SUBSTANCES

6.2.1. Characterizing the substances on the 1993 list

The Committee believes that the list of 178 substances is acceptable for launching the NPRI, but it recommends that available data on the substances be examined to characterize their related health and environmental concerns. This information will help to determine whether the substances on the list really belong there. It will also be useful for informing stakeholders and the public about the properties and potential effects of NPRI substances. Environment Canada representatives have agreed to undertake this work.

6.2.2. Candidate substances for addition to the NPRI list

A candidate list of 78 substances has been prepared for possible addition to the NPRI (please see appendices). This list was derived from the 10 lists of hazardous substances below. It includes substances that were (a) on two or more of the lists, (b) on the Domestic Substances List in quantities greater than one tonne, and (c) were not on the NPRI list of substances.

The Committee recommends that the health and environmental concerns posed by these substances should be assessed to determine whether they merit inclusion on the NPRI substances list in future years.

The candidate list was derived from:

- The CEPA Priority Substances List, 1988

- The Federal-Provincial, Advisory Committee on Air Quality List, 1989

- The Great Lakes Water Quality Agreement (GLWQA), Annex 1, 1988

- The Great Lakes Water Quality Agreement (GLWQA), Annex 10, 1988

- The Ontario Ministry of the Environment MISA List (EMPPL), 1988

- The CCME Interim Assessment Criteria for Contaminated Sites List, 1991

- The Ontario Ministry of the Environment Clean Air Program List, 1987

- The IJC Working List of Chemicals in the Great Lakes Basin, 1986

- The Mayor Industrial Accidents Council of Canada Interim List, 1991

- The U.S. EPA Superfund Chemicals List, 1991

There are many other lists of substances, prepared for different purposes. They use different criteria in different media and geographical areas. However, the above ten lists are believed to encompass many of the substances in the Canadian environment that are of concern.

6.2.3. Greenhouse gases

The Committee recommends that greenhouse gases (carbon dioxide, methane, and nitrous oxide) be considered for inclusion on the NPRI list.

Environment Canada proposed that greenhouse gases be on the NPRI list. The proposal suggested requesting information on either (a) the amount and type of fossil fuels consumed by the reporting facilities; or (b) the amount of greenhouse gases released, calculated using conversion factors supplied with the NPRI form; or (c) the amount released based on other methods of estimation.

This proposal would require a reporting condition developed specifically for greenhouse gases, since the 10-tonne condition used for other NPRI substances could include sources such as shopping centres, whose releases are better captured by other means. Another approach would be to ask only facilities that already report to include releases of greenhouse gases.

In keeping with its desire for a comprehensive inventory, the Committee agrees with the Environment Canada proposal in principle. However, it is divided on the time and manner of implementation.

Including greenhouse gases in the 1993, reporting year would establish the NPRI as the primary reporting mechanism for these releases; no institutionalized greenhouse gas inventories now exist. On the other hand, delaying the inclusion of greenhouse gases until the reporting details are ironed out would allow the time for considering all the issues involved.

One such issue, for example, is whether data on greenhouse gas releases should be categorized as a by-product of energy use or fossil fuel use. Under Environment Canada's proposal, a facility's shift from oil to electricity would result in that facility's reporting reduced greenhouse gas releases to the NPRI. If the electricity was generated hydraulically, the reduction would be real; if it was generated by coal, there would be little or no actual reduction.

Other issues requiring consideration include the need to harmonize NPRI's approach with that of other departments (such as Energy, Mines and Resources Canada, which has a mandate to collect information on energy use under the authority of the Energy Efficiency Act); the sources from which release data should be gathered; and the reporting conditions under which greenhouse gases should be reported.

In summary, the representatives of federal and provincial governments, environmental groups, labour and the Canadian Chemical Producers Association (CCPA) are in favour of including greenhouse gases on the 1993 NPRI list of substances. Industry representatives (except CCPA) favour first working out how the data would be collected before putting greenhouse gases on the list. They do not believe this can be accomplished before the 1994 reporting year.

6.2.4. Processes for adding, deleting and qualifying substances on the NPRI list

The Committee recommends that a process be developed by which the NPRI substances list can be modified by addition, deletion or qualification. (Please see the NPRI substances list in the appendices for examples of qualified substances.)

Among other things, this process should take into account the health and environmental concerns associated with the substance; the likelihood of its use in sufficient quantity to be reported; and expert judgment on the interactions between toxicity, exposure, persistence and so on. The process should allow any person, stakeholder or government to request the addition, deletion or qualification of a substance; it should include an opportunity for public comment.

6.3. REVIEW OF FACILITY EXEMPTIONS

In section 4.3, the Committee recommended that several types of facilities be specifically exempted from NPRI reporting. The Committee recommends review of these exemptions after experience is gained during 1993. Additional information should be gathered from these sectors regarding their ability or difficulty in reporting.

6.4. ISSUES RELATED TO PUBLISHING NPRI INFORMATION

Making release data easily accessible to the public is a major NPRI objective. The Committee has proposed means by which NPRI data should be made available (please see the appendices). However, the Committee is also aware of the limitations on NPRI resources, and the importance of getting the inventory up and running. Therefore, the Committee is recommending the following topics for further discussion during 1993.

6.4.1. Methods of access and dissemination

There are various ways in which information gathered by the NPRI could be disseminated to the public, namely: an electronic data base accessible by modem; a CD-ROM; an annual report; and a telephone support service. The telephone service would provide user support for the electronic versions of the data base, and respond to requests for paper copies of specific information in the NPRI. The Committee recommends evaluation of these methods in terms of users' needs, and the cost of implementation.

6.4.2. The NPRI annual report

The Committee envisages an NPRI report composed of 13 volumes or sections: a national report, 10 provincial reports and two temtorial reports. The national report would contain information from all parts of Canada, as well as inter-provincial comparisons. The provincial reports would detail the geographic distribution of releases within each province.

The NPRI report could present the data in figures and tables, accompanied by some discussion in the text. It should be structured to allow the tracking of trends. As a general

rule, the quantities of substances released and those that are transferred should be listed separately, not added together.

The Committee recommends that these proposals be evaluated in terms of their cost and practicability.

6.5. A SPECIFIC LEGISLATIVE AUTHORITY FOR THE NPRI

The Committee (government members excepted) recommends investigation of an amendment to CEPA specifically tailored to the objectives and characteristics of the NPRI. The following reasons motivate the Committee's recommendation:

(1) Section 16 was not designed for use by an inventory with an annual reporting cycle.

(2) An explicit legislative authority would clarify rules governing the operation of the NPRI and give them a more permanent status.

(3) The use of Section 16 of CEPA limits what can be done to implement the NPRI. For example, under Section 16, suppliers cannot be required to notify customers of the presence of NPRI substances in the chemicals they sell, as is required by the U.S. TRI.

Government members of the Committee did not participate in the discussion of this recommendation because it is beyond their mandate to recommend changes to legislation.

The environmental groups would prefer the development and adoption of a specific legislative authority for the NPRI during the parliamentary review of CEPA in 1993.

6.6. A FIVE-YEAR REVIEW OF THE NPRI

The Committee recommends that a comprehensive review of the NPRI be undertaken after five years of operations. It should reconsider all aspects of the NPRI-reporting conditions, costs, the list of substances and so on-in the light of experience gained, and the current state-of-the-art of environmental protection.

[6] The trial run is a test of the NPRI system that will be held in the first half of 1993. Sixty facilities have volunteered to complete and/or comment on the NPRI form and methodology manual.

7. HARMONIZATION OF INVENTORY ACCESS AND REPORTING REQUIREMENTS

The Committee believes that the NPRI should harmonize reporting requirements for a wide variety of emission inventories. In fact, harmonizing federal and provincial release, inventories with the NPRI would lead to significant cost savings for industry and governments. It would also facilitate public access to release information.

There are technical and jurisdictional barriers to harmonization, but the Committee believes they can be overcome. The Committee recognizes the efforts made to harmonize inventories to date, and trusts that work in this direction will continue.

The Committee was particularly interested in the harmonization of inventories for nitrogen oxides (NOx), sulfur oxides (SOx), volatile organic compounds (VOC), carbon monoxide (CO) and particulates. Provincial environment agencies currently collect information on these releases and forward it to Environment Canada. The Committee believes that such a harmonized, one-window system could save time and money for both reporters and governments.

Creating such a system will require new data-collection arrangements between the federal and provincial governments, and the Committee urges that these arrangements be put in place as soon as possible. Also, since these inventories collect far more detailed information than the NPRI, modifications will be required in order to achieve harmonization.

7.1. HARMONIZING INVENTORY REPORTING

The Committee recommends an evaluation of the degree to which data collection by Environment Canada and other federal and provincial agencies could be consolidated in the NPRI. To this end, the Committee proposes three steps:

(1) Identify all current and planned requests by all levels of government for release inventory data.

(2) Develop appropriate mechanisms with the provinces to harmonize provincial and federal requests, preferably within the NPRI. As part of this step, the Committee recommends that, starting in 1994, inventory reporting follow a common annual cycle. Thus, facilities would receive all inventory reporting requests, including that of the NPRI, at the same time.

(3) Where harmonization is not possible, inform stakeholders of the reasons.

7.2. FACILITATING ACCESS TO INVENTORY DATA

The Committee recommends that efforts toward harmonization should also facilitate access to inventory data. Ideally, the NPRI should contain information on releases collected through other inventories, thus offering the public "one-stop shopping."

8. THE NPRI CONSULTATIVE MECHANISM

Stakeholders on the NPRI advisory committee wish to express their appreciation to Environment Canada for their consultative approach to the NPRI design. The Committee believes that this approach has both increased the acceptance of the inventory, and improved its design. For the same reasons, the Committee is proposing further consultation on the issues it has identified as needing additional work (please see chapter 6).

8.1. THE PROCESS FOR FURTHER CONSULTATION

The Committee recommends a consultation process that would allow stakeholders flexibility in choosing their preferred level and type of participation. This mechanism could accommodate any number of interested stakeholders; if many stakeholders are interested, a workshop could be held; if a few are interested, then a work group conference might be appropriate.

The process would use the following elements:

(1) An NPRI consultation advisory committee, composed of no more than eight stakeholders (with two representatives each from industry, environmental groups/labour/other non-governmental organizations, provincial governments, and the federal government). Its mandate would be limited to advising on the consultation process; it would not debate issues of substance.

(2) A core list of the industry associations, non-governmental organizations, and government agencies with a direct, ongoing interest in the NPRI. This would serve as the source list for participants in the consultation.

(3) A list of companies, non-governmental organizations, government agencies and individuals to be kept informed of NPRI developments and news through regular mailings.

(4) An NPRI consultation work plan describing the issues and timetable for the discussions.

The process would work as follows:

Environment Canada would propose a consultation work plan to the consultation advisory committee. After review, the committee would recommend the appropriate consultation mechanism for each issue, such, as a work group, committee, workshop, and so on.

The consultation work plan would then be mailed to both the core list and the information list. Those on the core list would be given the opportunity to register and participate in

each consultation. Those on the information list would be asked to contact their representative on the consultation advisory committee, or an association on the core list to which they belong, if they wished to participate.

The consultation advisory committee would examine the stakeholders' responses, propose any changes needed in the process, or adjustments to the number and types of participants. Once the consultation was over, the committee would review the record to ensure that it was conducted to all stakeholders' satisfaction.

The Committee considered, but decided against, proposing formation of a permanent NPRI advisory committee. Given the issues to be discussed and the interests of stakeholders, they were concerned about an imbalance in the participation of the various stakeholder groups. Allowing more flexibility in the choice of participants, and how they take part, would be more efficient and effective than a standing advisory committee.

The Committee recommends that the future approach to consultations be similar to the one used over the past year. The consultation should try to:

(a) identify areas of agreement among stakeholders;

(b) resolve disagreements, and

(c) where agreement is not reached, identify the differing views.

APPENDIX 1: LIST OF NPRI SUBSTANCES

Entry	Name	CASRN
1	Acetaldehyde	75-07-0
2	Acetone	67-64-1
3	Acetonitrile	75-05-8
4	Acrylamide	79-06-1
5	Acrylic acid	79-10-7
6	Acrylonitrile	107-13-1
7	Allyl alcohol	107-18-6
8	Allyl chloride	107-05-1
9	Aluminum (fume or dust)	7429-90-5
10	Aluminum oxide (fibrous forms)	1344-28-1
11	Ammonia	7664-41-7
12	Ammonium nitrate (solution)	6484-52-2
13	Ammonium sulfate (solution)	7783-20-2
14	Aniline	62-53-3
15	Anthracene	120-12-7
16	Antimony (and its Compounds)	N.A.
17	Arsenic (and its Compounds)	N.A.
18	Asbestos	1332-21-4
19	Benzene	71-43-2
20	Benzoyl chloride	98-88-4
21	Benzoyl peroxide	94-36-0
22	Benzyl chloride	100-44-7
23	Biphenyl	92-52-4
24	Bis(2-ethylhexyl) adipate	103-23-1
25	Bis(2-ethylhexyl) phthalate	117-81-7
26	Bromornethane	74-83-9
27	1,3-Butadiene	106-99-0
28	Butyl acrylate	141-32-2
29	n-Butyl alcohol	71-36-3
30	sec-Butyl alcohol	78-92-2
31	tert-Butyl alcohol	75-65-0
32	Butyl benzyl phthalate	85-68-7
33	1,2-Butylene oxide	106-88-7
34	Butyraldehyde	123-72-8

35	C.I. Acrd Green 3	4680-78-8
36	C.I. Basic Green 4	569-64-2
37	C.I. Basic Red 1	989-38-8
38	C.I. Disperse Yellow 3	2832-40-8
39	C.I. Food Red 15	81-88-9
40	C.I. Solvent Orange 7	3118-97-6
41	C.I. Solvent Yellow 14	842-07-9
42	Cadmium (and its Compounds)	N.A.
43	Calcium cyanamide	156-62-7
44	Carbon disulfide	75-15-0
45	Carbon tetrachloride	56-23-5
46	Catechol	120-80-9
47	Chlorine	7782-50-5
48	Chlorine dioxide	10049-04-4
49	Chloroacetic acid	79-11-8
50	Chlorobenzene	108-90-7
51	Chloroethane	75-00-3
52	Chloroform	67-66-3
53	Chloromethane	74-87-3
54	Chloromethyl methyl ether	107-30-2
55	Chromium (and its Compounds)	N.A.
56	Cobalt (and its Compounds)	N.A.
57	Copper (and its Compounds)	N.A.
58	Cresol (mixed isomers)	1319-77-3
59	m-Cresol	108-39-4
60	o-Cresol	95-48-7
61	p-Cresol	106-44-5
62	Cumene	98-82-8
63	Cumene hydroperoxide	80-15-9
64	Cyanides (ionic)	N.A.
65	Cycbhexane	110-82-7
66	Decabromodiphenyl oxide	1163-19-5
67	2,4-Diaminotoluene	95-80-7
68	Dibutyl phthalate	84-74-2
69	o-Dichlorobenzene	95-50-1
70	p-Dichlorobenzene	106-46-7
71	1,2-Dichloroethane	107-06-2
72	Dichloromethane	75-09-2

73	2,4-Dichlorophenol	120-83-2
74	1,2-Dichloropropane	78-87-5
75	Diethanolanvne	111-42-2
76	Diethyl phthalate	84-66-2
77	Diethyl sulfate	64-67-5
78	Dimethyl phthalate	131-11-3
79	Dimethyl Sulfate	77-78-1
80	4,6-Dinitro-o-cresol	534-52-1
81	2,4-Dinitrotoluene	121-14-2
82	2,6-Dinitrotoluene	606-20-2
83	Dinitrotoluene (mixed isomers)	25321-14-6
84	Di-n-odyl phthalate	117-84-0
85	1,4-Dioxane	123-91-1
86	Epichlorohydrin	106-89-8
87	2-Ethoxyethanol	110-80-5
88	2-Ethoxyethyl acetate	111-15-9
89	Ethyl acrylate	140-88-5
90	Ethylbenzene	100-41-4
91	Ethyl chloroformate	541-41-3
92	Ethylene	74-85-1
93	Ethylene glycol	107-21-1
94	Ethylene oxide	75-21-8
95	Ethylene thiourea	96-45-7
96	Formaldehyde	50-00-0
97	Hexachlorocyclopentadiene	77-47-4
98	Hexachloroethane	67-72-1
99	Hydrazine	302-01-2
100	Hydrochloric acid	7647-01-0
101	Hydrogen cyanide	74-90-8
102	Hydrogen fluoride	7664-39-3
103	Hydroquirione	123-31-9
104	Isobutyraldehyde	78-84-2
105	Isopropyl alcohol	67-63-0
106	4,4-Isopropylidenediphenol	80-05-7
107	Isosafrole	120-58-1
108	Lead (and its Compounds)	N.A.
109	Malefic anhydride	108-31-6
110	Manganese (and its	N.A.

	Compounds)	
111	Mercury (and its Compounds)	N.A.
112	Methanol	67-56-1
113	2-Methoxyethanol	109-86-4
114	2-Methoxyethyl acetate	110-49-6
115	Methyl aprylate	96-33-3
116	Methyl tert-butyl ether	1634-04-4
117	4,4'-Methylenebis(2-chloroaniline)	101-14-4
118	Methylenebis(phenylisocyanate)	101-68-8
119	4,4'-Methylenedianiline	101-77-9
120	Methyl ethyl ketone	78-93-3
121	Methyl iodide	74-88-4
122	Methyl isobutyl ketone	108-10-1
123	Methyl methacrylate	80-62-6
124	Michler's ketone	90-94-8
125	Molybdenum trioxide	1313-27-5
126	Naphthalene	91-20-3
127	Nickel (and its Compounds)	N.A.
128	Nitric acid	7697-37-2
129	Nitribtriacetic acid	139-13-9
130	Nitrobenzene	98-95-3
131	Nitroglycerin	55-63-0
132	p-Nitrophenol	100-02-7
133	2-Nitropropane	79-46-9
134	N,N-Dimethylaniline	121-69-7
135	N-Nitrosodiphenylamine	86-30-6
136	Peracetic acid	79-21-0
137	Phenol	108-95-2
138	p-Phenylehediamine	106-50-3
139	o-Phenylphenol	90-43-7
140	Plpsgene	75-44-5
141	Phosphoric acid	7664-38-2
142	Phosphorus (yellow or white)	7723-14-0
143	Phthalic anhydride	85-44-9
144	Propionaldehyde	123-38-6
145	Propylene	115-07-1
146	Propylene oxide	75-56-9

147	Pyridine	110-86-1
148	Quinoline	91-22-5
149	p-Quinone	106-51-4
150	Safrole	94-59-7
151	Selenium (and its Compounds)	N.A.
152	Silver (and its Compounds)	N.A.
153	Styrene	100-42-5
154	Styrene oxide	96-09-3
155	Sulfuric acid	7664-93-9
156	1,1,2,2-Tetrachloroethane	79-34-5
157	Tetrachloroethylene	127-18-4
158	Thiourea	62-56-6
159	Thorium dioxide	1314-20-1
160	Titanium tetrachloride	7550-45-0
161	Toluene	108-88-3
162	Toluene-2,4-diisocyanate	584-84-9
163	Toluene-2,6-diisocyanate	91-08-7
164	Toluenediisocyanate (mixed isomers)	26471-62-5
165	1,2,4-Trichlorobenzene	120-82-1
166	1,1,2-Trichloroethane	79-00-5
167	Trichloroethylene	79-01-6
168	1,2,4-Trimethylbenzene	95-63-6
169	Vanadium (fume or dust)	7440-62-2
170	Vinyl acetate	108-05-4
171	Vinyl chloride	75-01-4
172	Vinylidene chloride	75-35-4
173	Xylene (mixed isomers)	1330-20-7
174	m-Xylene	108-38-3
175	o-Xylene	95-47-6
176	p-Xylene	106-42-3
177	Zinc (and its Compounds)	N.A.
178	Zinc (fume or dust)	7440-66-6

APPENDIX 2: CANDIDATE SUBSTANCES FOR ADDITION TO THE NPRI LIST

Substance	CAS Number
1,2,3,4-Tetrachlorobenzene	634662
1,2,3-Trichlorobenzene	87616
1-Methylnaphthalene	90120
2,2 Butoxyethoxy ethanol	112345
2,6 Di-t-butyl-4-methylphenol	128370
2-Mercaptobenzothiazole disulfide	120785
2-Methylnaphthalene	91576
Acetic Acid	64197
Acetylene	74862
Ammonium chloride	12125029
Amyl acetate	123922
Arsenic acid	7778394
Benzoic Acid	65850
Benzyl alcohol	100516
Boron	7440428
Boron trifluoride	7637072
Bromine	7726956
Calcium carbide	75207
Calcium cyanide	592018
Calcium hydroxide	1305620
Calcium hypochlorite	7778543
Calcium oxide	1305788
Chromic acid	7738945
Cupric sulfate	7758987
Dibutyltin dilaurate	77587
Diethyl ether (Ethyl ether)	60297
Diethylamine	109897
Dimethyl disulfide	624920
Dimethyl phenol (Xylenol)	1300716
Dimethyl sulfide	75183
Dimethylamine	124403
Diphenyl ether	101848
Diphenylamin	122394
Dodecyl benzene sulfonic acid	1886813

Ethanol	64175
Ethylenediaminetetraacetic acid (EDTA)	60004
Fluorine	7782414
Formic acid	64186
Furfural	98011
Hydrogen sulfide	7783064
Inorganic fluorides	
Isopren	78795
Lithiurri	7439932
Methane	74828
Methyl mercaptan	74931
Mineral fibres	
Molybdenum	7439987
Monomethylamine	74895
Oleic acid	112801
Organotin compounds	
Palladium	7440053
Particulate matter	
Phosphorus oxychloride	10025873
Phthalic Acid Esters	
Polycyclic Aromatic hydrocarbons	
Potassium cyanide	151508
Potassium hydroxide	1310583
Propionic acid	79094
Propionic anhydride	123626
Propyl alcohol	71238
Sodium bichromate (sodium dichromate)	10588019
Sodium bisulfite	7631905
Sodium chlorate	7775099
Sodium cyanide	143339
Sodium hydroxide	1310732
Sulphyr dioxide	7446095
Sulphyr hexafluoride	2551624
Tellurium	13494809
Tetrachlorobenzenes	
Tetraethyl lead	78002
Tetrahydrofuran	109999
Tin	7440315

Titanium	7440326
Trichlorobenzenes	12002481
Trimethylamine	75503
n-Butyl acetate	123864
n-Butylamine	109739
n-Hexane	110543

APPENDIX 3: THE NATIONAL POLLUTANT RELEASE INVENTORY CONSULTATION TERMS OF REFERENCE

INTRODUCTION

Release inventories are a valuable source of information for setting priorities for pollution reduction programs, tracking progress for voluntary, or regulated release reductions, forecasting release trends, and for estimating releases from proposed facilities. In order to provide a more comprehensive list of major releases, the federal government's Green Plan contains the following commitment:

> "To develop a better understanding of the nature and quantity of toxic substances being released in Canada, the Government will develop a national database for hazardous pollutants being released from industrial and transportation sources. The reporting requirements for industry will be established by 1992, with the first reports scheduled for public release no later than 1994."

As part of its activities to set up such a data base, to be called the, National Pollutant Release Inventory (NPRI), Environment Canada is undertaking the consultation process described in these terms of reference. The process is scheduled to last from November 1991 to December 1992. Ongoing contact with Environment Canada will be maintained through the Director of the Regulatory Affairs and Program Integration Branch and her staff, who are responsible for the NPRI.

THE OBJECTIVES OF THE CONSULTATION PROCESS

The objectives of the consultation process are to obtain recommendations from stakeholders on:

1. The design, implementation and operation of a publicly accessible National Pollutant Release Inventory.

2. How to provide a more complete picture of the sources and magnitude of pollutant and other releases to the environment in Canada by combining the information from the NPRI with information compiled in a variety of inventories, either existing or underdevelopment.

3. Any further consultation that might be required for the completion or implementation of the NPRI as well as its relationship to other release inventories.

THE CONSULTATION PROCESS

The consultation process consists of the following elements:

Information mailings on the progress of the NPRI and the consultation process will be sent regularly to all interested stakeholders.

The Multi-stakeholder Advisory Committee (MSAC) whose main task will be to prepare the recommendations of the NPRI consultation to the Director of the Regulatory Affairs and Program Integration of Environment Canada. MSAC will prepare draft recommendations on the NPRI for feedback from stakeholders. In the light of these comments, MSAC will finalize the recommendations.

Work groups composed of stakeholder and Environment Canada representatives will be formed as needed to deal with specific technical issues.

A **trial run** to test the NPRI reporting format in the field and Environment Canada's data-handling system will take place in September 1992.

Regional Information sessions on the draft recommendations prepared by the MSAC will beheld prior to the workshop.

The submission of **written briefs** to the NPRI secretariat by those who so desire. Stakeholders with specific technical or policy concerns are encouraged to submit briefs.

The **report of the Multi-stakeholder Advisory Committee** containing the final recommendations on the design of the NPRI and other matters relating to releases inventories which will result from the consultation process. In addition, a report on the consultation process will be prepared by the consultation facilitator.

PARTICIPATION

Participation in the consultation is open to all interested stakeholders, that is, groups that have an interest in the issues under discussion, will be affected by the NPRI, and/or can contribute to the elaboration of the NPRI. Groups and organizations fitting this description include, but are not limited to those from the business sector; the voluntary sector (health and environmental groups); labour; and governments (federal and provincial, and other levels as required).

RESPONSIBILITIES OF PARTICIPANTS

Participants in the consultation process will be expected to make every effort to ensure that the views they express during the consultation reflect those of their particular constituency of interest, not just their personal viewpoints or those of their organization. It is also expected that they will communicate the fact of their participation and the positions they will be taking on various issues to interested members of their respective

constituencies. The one exception to this particular rule is the submission of briefs, which are meant to enable the expression of specific points of view.

Recognizing the time necessary for participants to get feedback from their constituencies, Environment Canada and the consultation facilitator will endeavour to provide discussion materials well in advance of meetings (generally three weeks ahead).

It is recognized that, because of financial and/or organizational constraints, not all participants have the means to communicate regularly with all members of their constituency. Environment Canada and the consultation facilitator will assist participants facing such constraints to develop appropriate means of communication with their constituency.

THE MANDATE OF THE MULTI-STAKEHOLDER ADVISORY COMMITTEE

The MSAC is responsible for preparing the recommendations to Environment Canada on the NPRI that result from the consultation process. In doing so, it will consider the opinions and concerns expressed by stakeholders at regional information sessions and through briefs and letters.

More specifically, the mandate of the MSAC is to:

- Identify and describe issues related to the objectives of the consultation process (see above), that are of concern to stakeholders and governments.
- Advise and assist in the development of the background information and analysis necessary for dealing with these issues, as well as on the establishment of work groups which may be required.
- Discuss proposals prepared by Environment Canada, by work groups or-by stakeholders with a view to:
    - identifying the areas of agreement;
    - resolving disagreements; and
    - identifying the differing views on any remaining areas of disagreement among stakeholders and governments.
- Prepare a final report that will contain the recommendations on matters where consensus has been achieved, explanations of any disagreements that persist among stakeholders, and the description of any additional issues that need to be resolved.
- Advise and assist the consultation facilitator in ensuring that the consultation process meets the needs and expectations of the stakeholders, and that it is run in a cost-effective manner.
- Review the final report of the consultation process.
- Provide a communications link between participants in the consultation process and their constituency.

The membership of the Advisory Committee has been drawn from industry, government (federal and provincial), and non-government organizations (health, environment, labour).

Each of these three sectors has been allocated a maximum of eight seats on the MASC. The Director of the Regulatory Affairs and Program Integration Branch of Environment Canada as well as the staff of the NPRI consultation secretariat will also attend MSAC meetings. Interested stakeholders who are not members may attend MSAC meetings as observers. MSAC meetings will be conducted by the consultation facilitator.

WORK GROUPS

Work groups composed of stakeholder and government representatives will be formed as appropriate to deal with specific technical issues requiring in-depth discussion. The MSAC will be consulted as to the need for and the membership of such groups.

THE ROLE OF THE FACILITATOR

The consultation will be facilitated by an independent facilitator, Raymond Vles of Pat Delbridge Associates. He is responsible for all matters related to the consultation process: the organization and facilitation of the Multi-stakeholder Advisory Committee, the preparation of agendas, and the management of the consultation process so that its objectives are attained.

The facilitator also serves as a point of contact for any persons or organizations, participant or nonparticipant, who have concerns or questions about the consultation process.

THE REPORT OF THE CONSULTATION PROCESS

A report on the consultation process will be prepared by the facilitator for the end of 1992. The report will describe the consultation process, and present the issues raised during the consultation. The Multistakeholder Advisory Committee will review the report before it is finalized. The report will be a public document.

EXPENSES

Limited funds will be made available by Environment Canada to cover travel, accommodation and other reasonable out-of-pocket expenses for those participants from the voluntary sector who require financial assistance to participate in the consultation.

FOR ADDITIONAL INFORMATION

Please contact:
Raymond Vles
Pat Delbridge Associates
(514) 495-7980

Gordon Pope
Special Advisor

Environment Canada
(819) 953-1654

APPENDIX 4: DEFINITIONS FOR THE NPRI

Article
A manufactured item that is formed to a specific shape or design during manufacture, that has end-use functions dependent in whole or in part upon its shape during end use, and that does not release a listed substance under normal conditions of the processing or otherwise use of that item at the facility.

Facility
All buildings, equipment, structures and other stationary items that are located on a single site or on contiguous or adjacent sites, and are owned or operated by the same person.

Full-time employee
A total of 2,000 work-hours per year. This definition is dependent only on the number of hours worked by all employees at the facility, during the calendar year, and not on the number of persons working.

Manufacture
To produce, prepare, compound, or import a substance listed in the NPRI. The term "manufacture" includes the generation of a listed substance as a by-product or impurity.

Otherwise use
Any use of a listed substance at a facility that does not fall under the definitions of "manufacture" or "process."

Process
The preparation of a listed substance, after its manufacture, for distribution in commerce. Processing includes preparation of the substance in the same physical state or chemical form as that received by a facility, or preparation that produces a change in physical state or chemical form.

Releases
The quantities of NPRI substances released on-site to air, water, or land.

Transfers
The quantities of NPRI substances sent off-site for treatment.

APPENDIX 5: COMMITTEE PROPOSALS FOR MAKING NPRI INFORMATION AVAILABLE TO THE PUBLIC

Facilitating public access to release data is a major objective, of the NPRI, and to this end the Committee has prepared proposals on the means by which NPRI data should be disseminated. However, given the limited resources available to NPRI and the priority for getting the inventory up and running, the Committee chose to include only general recommendations in its report (please see section 4.14 and 6.4).

This appendix contains the Committee's detailed proposals on how NPRI information could be made available. These proposals require further discussion during 1993.

1. ELECTRONIC ACCESS TO THE NPRI DATABASE

The public should have access to the NPRI data base by modem (possibly through the Canadian Centre for Occupational Health and Safety), through CD-ROM, and through a telephone support service. The latter would provide user support for the electronic versions of the data base, and respond to requests for a paper copy of specific information in the NPRI.

Information that is not confidential should be accessible. The public should be able to obtain release information for individual facilities.

2. THE NPRI ANNUAL REPORT

The NPRI annual report should consist of 13 volumes or sections: a national report, 10 provincial reports and two territorial reports. The national report would contain information from all parts of Canada as well as inter-provincial comparisons. The provincial reports would contain more detailed information on the geographic distribution of releases within each province.

The introduction to the NPRI report should describe very clearly what the NPRI does and does not do.

The NPRI report should use figures and tables to present the data, accompanied by some discussion in the accompanying text. The use of maps to show the geographic distribution of releases should only be used in the provincial reports; maps showing the distribution of releases among provinces would not be very meaningful.

The NPRI report should be structured so that trends in releases can be tracked in future reports.

As a general rule, quantities of releases and transfers should be listed separately, rather than added together.

3. THE ORGANIZATION OF INFORMATION IN THE ANNUAL REPORT

There are four variables that can be used to organize NPRI release data: by substance, by the receiving media, by the sector that is releasing (two or four digit SIC codes, as appropriate), and by geographic area. These variables should be combined in a variety of ways in the NPRI report (with releases and transfers listed in separate columns), as follows:

- Environmental distribution of releases and transfers
- Releases and transfers by province
- Releases and transfers by sector
- Releases and transfers by substance class
- Environmental distribution of releases and transfers by substance class
- The environmental distribution of releases and transfers of each sector
- Basis of estimate for releases and transfers
- The top 25 municipalities with the largest releases and transfers
- The 50 facilities with the largest releases and transfers
- The 10 parent companies with the largest releases and transfers
- Environmental distribution of the 25 substances with the largest releases and transfers
- Releases and transfers in each province by substance class
- Releases and transfers of each sector by substance class
- Off-site transfers sent out of province and received from out-of-province
- Releases and transfers within each substance class by sector
- The number of forms by maximum amount code for the top 25 substances (ranked by number of forms)
- Releases and transfers on the basis of estimate by type of release and transfer

The national report should also contain a summary table (or tables if necessary) that would show, for each NPRI substance:

The number of facilities reporting the substance

- The amount released
- The percentage released to air, water, and land
- The amount transferred
- The reason for concern about the substance
- The applicable federal and provincial regulations and/or standards, taking care to note those cases where an absence of releases makes standards unnecessary

The NPRI report should rank the NPRI substances by the severity of their impact and the quantity released. This could be done by showing the releases of the 10 or 20 substances of greatest concern; and/or the amounts released for the various types of impacts, such as carcinogens, bio-accumulating substances, etc. Some MSAC members have cautioned that such a ranking of substances may not be feasible.

The NPRI report should give information on the international and inter-provincial transfers of NPRI substances.

APPENDIX 6: MEMBERS OF THE NPRI MULTI-STAKEHOLDER ADVISORY COMMITTEE

Peter Baltais	Canadian Petroleum Products Institute
Brian Bell	Mining Association of Canada
Esther Chamberland	Union Quebecoise pour la conservation de la nature
Ron Chaplin	Canadian Association of Petroleum Producers
Rick Coronado	Canadian Labour Congress
Hugh Eisler	Canadian Steel Environmental Association
Guy Ethier	Industry, Science and Technology Canada
Mike Frost	Canadian Pulp and Paper Association
Dr. Doug Hallett**	representative for SODA New Brunswick
Don Hames	Canadian Chemical Producers' Association
William Hockett	Motor Vehicles Manufacturers'Association
Doreen Henley	Canadian Manufacturers' Association
John Jackson	Great Lakes, United (past president)
E.E. Marks	Environment Canada
Amardeep Khosla	Canadian Manufacturers of Chemical Specialties
Chow-Seng Liu	Alberta Environment
Paul Muldoon	Pollution Probe
Jim Smith	Ontario Ministry of the Environment
Ron Solman	Environment Canada
Tom Tseng	Environment Canada (Ontario Region)
Bruce Walker	STOP, Montreal
Frank Wandelmaier	Health and Welfare Canada
Tony Wakelin	British Columbia Environment

NPRI OFFICE

Gordon Pope	Special Advisor for the NPRI

FACILITATOR FOR THE MULTI-STAKEHOLDER ADVISORY COMMITTEE

Raymond Vles	Pat Delbridge and Associates

* Resigned in September 1992 because of other commitments

** Resigned in November 1992 because of work load commitments

APPENDIX 7: TABLE OF RECOMMENDED NPRI DATA ELEMENTS TO BE REPORTED

PART A: FACILITY IDENTIFICATION

1.0 Company name

2.0 Facility identification and address

- 2.1 Facility name
- 2.2 Street address
- 2.3 City
- 2.4 Lot number
- 2.5 Concession number
- 2.6 Township
- 2.7 Country
- 2.8 Province
- 2.9 Postal Code

3.0 Facility contact

- 3.1 Name
- 3.2 Position
- 3.3 Telephone number
- 3.4 Facsimile number

4.0 Number of employees at the facility

5.0 Mailing address (if different from above)

- 5.1 Street address
- 5.2 P.O. box number
- 5.3 City
- 5.4 Province
- 5.5 Postal code

6.0 Facility location

- 6.1 Latitude: degrees, minutes, seconds
- 6.2 Longitude: degrees, minutes, seconds

7.0 SIC codes (Enter Canadian or U.S)

- 7.1 Canadian SIC code(s)

7.2 US SIC code(s)

8.0 Residual Discharge Information System Number

9.0 Domestic Substances List Number

10.0 Provincial operating permit number (if required by province)

11.0 Parent company information

11.1 Name of parent company
11.2 Street address
11.3 Box number
11.4 City
11.5 Province
11.6 Postal code

12.0 Approval for release to Environment Canada

12.1 Executive contact name
12.2 Position
12.3 Signature
12.4 Date

PART B: SUBSTANCE-SPECIFIC RELEASE INFORMATION

1.0 Substance Identity

1.1 Chemical Abstracts Service Registry Number
1.2 Substance or substance category

2.0 Utilisation of the substance at the facility

2.1 Manufacture the substance:

a) Produce
b) Import

If produce or import:

c) For on-site use/processing
d) For sale/distribution
e) As a byproduct

f) As an impurity

2.2 Process the substance

a) As a reactant

b) As a formulation component

c) As an acticle component

d) Repackaging only

2.3 Otherwise use the substance:

a) As a chemical processing aid

b) As a manufacturing aid

c) Ancillary or other use

3.0 On-site releases of the substance to the environment

Report the vasis of estimate code and the releases in tonnes for the following:

3.1 Air releases

3.1.1 Stack/point

3.1.2 Substance storage/handling

3.1.3 Fugitive

3.1.4 Spills

3.1.5 Other non-point

3.2 Underground injection

3.3 Releases to surface waters

3.3.1 Direct discharges

3.3.2 Spills

3.3.3 Leaks

3.3.4 Receiving streams and water bodues codes from item 7

3.4 Releases to land

3.4.1 Landfill

3.4.2 Landfarm

3.4.3 Spills

3.4.4 Leaks

3.4.5 Other

3.5 Total releases

3.6 Seasonal breakdown of releases by percentage in each quarter (To be completed if, in a quarter, releases amount to less than 15% or greater than 35% of the total released

4.0 Progress In reduction of releases

4.1 Total releases

a) input total from 3.5

4.2 Releases reported in previous year

a) input previous year's total from 3.5

4.3 Reasons for changes in quantities released:

a) Changes in production levels

b) Changes in estimation method

c) Pollution prevention and abatement

d) Other (e.g. accidents, spills or breakdowns)

e) No significant change

f) Up to 10 lines of text to more fully describe the reasons for a change in quantities released (optional)

4.4 Anticipated releases for the next three reporting years

5.0 Transfers of the substance In waste to off-site locations

5.1 Total quantity of substance transferred (tonnes)

5.2 Destiny of the substance (report percent of 5.1 and location code(s) from item 8)

5.2.1 Recovery/reuse/recycle

a) Material recovery/recycle

b) Burning/energy recovery

5.2.2 Destruction

a) Incineration

b) Bio-oxidation

5.2.3 Municiple sewage treatment plant

5.2.4 Containment

a) Landfill

b) Underground injection

c) Other storage

6.0 Progress In reduction-of transfers

6.1 Total transfers

a) Input total from 5.1 in tonnes

6.2 Transfers reported in previous year

a) Input previous year's total from 5.1 in tonnes

6.3 Reason for changes in quantities transferd

a) Changes in production levels

b) Changes in estimation method

c) Pollution prevention and abatement

d) Other (e.g. accidents, spills or breakdowns)

e) No significant change

f) Up to 10 lines of text to more fully describe the reasons for a change in quantities released (optional)

6.4 Anticipated transfers for the next three reporting years

7.0 List of names of receiving streams and water bodies

Please list the names below using one code for each stream or water body name. Enter the code(s) under item 3.3.4 in part B.

Code A: Stream name 1

Code B: Stream name 2, etc.

8.0 Identification of off-site facilities, to which waste is being sent

Please list the names below using one code for each off-site waste treatment facility. Enter the code(s) under item 5.2 in part B.

Code A: Off-site facility name 1

Street address

Box number

City

Province/state/etc.

Postal code/zip code/etc.

Country

Code B: Off-site facility name 2, etc.