

Considerations when using the 2003 NPRI Database

Changes to the 2003 NPRI

Changes to the 2003 NPRI reporting requirements merit special attention when using NPRI data. These changes are specified in the following paragraphs.

- The definitions of "release" and "disposal" changed in 2002 so that substances sent to landfill, land application or underground injection, are treated consistently whether they occur on site or off site. This change does not affect the amount of information collected, but simply reclassifies the activities that have been reported to the NPRI. The new format for the reporting of information is as follows:
 - Releases include: pollutant releases to air and water, and that disperse material on land, such as spills and leaks
 - Disposals include: pollutants sent to landfill, land treatment or underground injection (on site or off site), and pollutants transferred off-site for treatment prior to final disposal.

Calculations for off-site disposals and transfers for treatment prior to final disposal have not changed from previous years. It should be noted that "anticipated releases" include releases and on-site disposals (due to how data was entered in previous years), and "anticipated disposals" only include off-site disposals and transfers for treatment prior to final disposal. Recycling remains unchanged from previous years. More detailed information on the affected database fields is provided in the structure file for the 2003 database.

- NPRI release data for certain substances should not be aggregated as a measure of identifying 'worst polluters'. This is especially true for the following:
 - "Volatile Organic Compounds" (VOCs) is a group of over 100 substances that include substances reportable to the NPRI on an individual basis (i.e. benzene and methanol); and
 - "Total Particulate Matter (TPM)" includes the finer particulate groupings of Particulate Matter less than 10 microns (PM10) and Particulate Matter less than 2.5 microns (PM2.5), which are also listed separately on the NPRI.
- Reporting to the NPRI is based on specific criteria and thresholds, so CAC releases reported to the NPRI may represent only a portion of the total releases from industrial and commercial activities in Canada. For more information on CAC emissions and the comprehensive CAC inventory, which include the emission estimates from all industrial and commercial activities, transportation vehicles, domestic activities, and natural sources, please see the [Air Pollutant Emissions web site](#).
- New Substances
 - Carbonyl sulphide has been added as a Part 1 substance with 10 tonne and 1% concentration reporting threshold.
 - Phosphorus (total) has been added as a Part 1 substance with 10 tonne and 1% concentration reporting threshold. This does not include "phosphorus (yellow or white)" which is listed separately.
 - 13 individually listed nonylphenols and ethoxylates have been replaced by "Nonylphenol and its ethoxylates" (this grouping includes additional nonylphenols, ethoxylates and derivatives in addition to the 13 listed in 2002).
 - 4-*tert*-octylphenol has been replaced with "Octylphenol and its ethoxylates" (this grouping includes additional octylphenols and ethoxylates not listed in 2002).
 - 60 selected Volatile Organic Compound (VOC) substances with additional reporting criteria have been added under Part 5 with a 1 tonne reporting threshold.
- Exemption Change for Oil and Gas Sector
 - The exemption from reporting for the Upstream Oil and Gas sector has changed. Only exploration and drilling activity remains exempt. More detailed information is available in the document titled "2003 NPRI Reporting Requirements for the Oil & Gas Sector". Copies can be obtained from your regional NPRI Office.
- Facility Information
 - The Business Number is now required. Business Numbers (9 digit registration number) can be found on all forms issued to a business by Canada Customs and Revenue Agency.

- Definition of facility now includes "offshore installations" as well as pipeline installations and contiguous facilities.
- Addition of 60 individual Volatile Organic Compounds (VOCs)
 - Volatile Organic Compounds (VOCs) are an aggregate grouping of almost 1000 organic substances that readily volatilize. VOC substances of interest to the NPRI are those that contribute to the formation of ground-level ozone and secondary particulate matter. Environment Canada has identified a list of 60 individual VOCs that will require reporting to the NPRI starting with the 2003 reporting year. These VOCs have been grouped as Part 5 substances

Units of Measure

The units of measure depend upon the substance being reported. Generally, release, disposal and recycling quantities are reported in tonnes. However, for substances with alternate reporting thresholds, these quantities are reported in kilograms or grams.

<i>Substance</i>	<i>Units</i>
241 core substances	tonnes
Mercury ¹	kilograms
*Cadmium ¹	kilograms
*Arsenic ¹ , hexavalent chromium compounds, *lead ² , *tetraethyl ¹ lead	kilograms
Polycyclic aromatic compounds (PAHs)	kilograms
Hexachlorobenzene (HCB)	grams
Dioxins/furans	grams (toxic equivalent)
CAC	tonnes

1 and its compounds

2 and its compounds, except tetraethyl lead; does not include lead (and its compounds) contained in stainless steel, brass or bronze alloys

** Reduction of substance use from tonnes to kilograms*

A Note on the NPRI Data Files Distributed by Environment Canada

The NPRI data files for the 2003 reporting year are available in Microsoft (MS) Access and MS Excel format. Environment Canada has published the 2001, 2002 and 2003 data as reported by facilities, which includes 'NULL' values. This affects how the information can be accessed and queried (for more information on this issue, see below). For previous year's information, data is available in dBase format. In this file format, 'NULL' values cannot be stored and zeros were used as place holders.

More Information on 'NULL' values in the NPRI

With the addition of micro-pollutants (e.g. PAHs, Dioxins and Furans) the use of "zero-nulls" had to be discontinued as these pollutants could have valid 'NULL' and zero entries for the same 'Basis of Estimation' code.

Due to the current structure of the database, queries using Microsoft Access will work correctly only if you are using aggregate functions (e.g. Sum, Count). If you attempt to perform an arithmetic operation (add, subtract, multiply, or divide) you will receive 'NULL' as the answer if any of the fields in your query contains a 'NULL' (highly probable). When using MS Access and attempting to perform an arithmetic operation on the NPRI data, you are required to use the undocumented NZ function (it converts a NULL to a zero) to achieve the correct result to your query (e.g. NZ ([AIRSTA_V]) + NZ ([AIRSTO_V]), notice how each field is encapsulated by NZ. This can lead to very long queries and also severely limits the utility of the built-in

query builder.). To perform arithmetic operations, Excel worksheets are recommended since Excel ignores 'NULL' valued entries.

If you have any questions please contact the NPRI Office at npri@ec.gc.ca or (819) 953-1656.